



FINANCIAL
REPORTING
FACULTY

The Effects of Mandatory IFRS Adoption in the EU: A Review of Empirical Research

October 2014

Information for Better Markets

An initiative from the ICAEW Financial Reporting Faculty

The Effects of Mandatory IFRS Adoption in the EU: A Review of Empirical Research forms part of the *Information for Better Markets* thought leadership programme of ICAEW's Financial Reporting Faculty.

ICAEW operates under a Royal Charter, working in the public interest. As a world leading professional accountancy body, ICAEW provides leadership and practical support to over 142,000 members in more than 160 countries, working with governments, regulators and industry to ensure the highest standards are maintained.

The ICAEW Financial Reporting Faculty provides its members with practical assistance and support with IFRS, UK GAAP and other aspects of business reporting. It also comments on business reporting issues on behalf of ICAEW to standard setters and regulators. Its *Information for Better Markets* thought leadership programme subjects key questions in business reporting to careful and impartial analysis so as to help achieve practical solutions to complex problems. The programme focuses on three key themes: disclosure, measurement and regulation.

We welcome comments and enquiries on this report and on the other aspects of the *Information for Better Markets* programme. To contact us, please email bettermarkets@icaew.com.

© ICAEW 2014

All rights reserved. If you want to reproduce or redistribute any of the material in this publication, you should first get ICAEW's permission in writing. ICAEW will not be liable for any reliance you place on the information in this publication. You should seek independent advice.

ISBN 978-1-78363-174-2

TECDIG13559

The Effects of Mandatory IFRS Adoption in the EU: A Review of Empirical Research

Contents

Contents	3
Foreword	5
Executive summary	6
1. Introduction	11
1.1 The background to Regulation 1606/2002	12
1.2 Regulation 1606/2002 and its objectives	12
1.3 Continuing controversy	13
1.4 Evidence-based policy	14
1.5 The costs and benefits of financial reporting standards	16
1.6 Institutions and incentives	16
1.7 Contribution, scope and structure of the report	17
1.8 Principal conclusions	20
2. Challenges for research and its interpretation	21
2.1 Introduction	22
2.2 Inherent limitations	22
2.3 Problems of scope	28
2.4 The value of research	29
3. Transparency	30
3.1 General points	31
3.2 Investment analysts' forecasting ability	34
3.3 Value relevance	39
3.4 Accounting quality	50
3.5 Other techniques for assessing transparency	61
3.6 Conclusions	64
4. Comparability	67
4.1 General points	68
4.2 Changes in comparability	69
4.3 Lack of comparability	76
4.4 Conclusions	81
5. The cost of capital	83
5.1 General points	84
5.2 Cost of capital: equity	84
5.3 Cost of capital: debt	91
5.4 Conclusions	94
6. Market liquidity	95
6.1 General points	96
6.2 Equity markets	96
6.3 Conclusions	102
7. Corporate investment efficiency	103
7.1 General points	104
7.2 The evidence	104
7.3 Discussion	106
7.4 Conclusions	106
8. Cross-border investment	107
8.1 General points	108
8.2 Cross-border FDI	108
8.3 Cross-border portfolio investment	110
8.4 Capital market integration	116
8.5 Conclusions	116
9. Other benefits	118
9.1 General points	119
9.2 Expropriation risk	119
9.3 Trade within the EU	121
9.4 Accounting-based performance assessment	121
9.5 Crash risk	123
10. Costs	124

10.1	General points	125
10.2	Preparation costs	125
10.3	Accounting-based compensation contracts	127
10.4	Accounting-based debt covenants	128
10.5	Wealth transfers	128
10.6	Changes in capital structure	129
10.7	Equity issues	130
10.8	Risk management	130
11.	The financial crisis	132
11.1	General points	133
11.2	The evidence	134
11.3	Discussion	136
11.4	Conclusions	139
12.	Conclusions	140
12.1	Introduction	141
12.2	The research evidence	141
12.3	Challenges emerging from the research findings	142
12.4	Problems of applying the research to policy	144
12.5	Institutional change and financial reporting reform	145
12.6	Banks, financial reporting and institutional structures	146
12.7	The way ahead	147
	Acknowledgements	149
	Bibliography	150

Foreword

In this report we summarise the findings of about 170 research papers on the effects of mandatory IFRS adoption in the EU. It is intended to assist interested parties in the debate on the future of IFRS in the EU by looking at what we can learn from empirical academic research on the costs and benefits of its implementation to date. It also provides a case study of the challenges involved in using empirical research to review the effects of major policy changes.

Views on policy issues come from diverse sources: empirical research – academic and non-academic, personal and anecdotal evidence, theories and prejudices. Nobody forms their views on major issues of public policy purely on the basis of academic research. But research should make it clearer what we do and do not know, and provide a surer basis for debate.

Although in this report we concentrate on academic empirical research, readers who look to such research evidence for clear and simple answers to complex policy questions will be disappointed. Much of the research on IFRS can be difficult to follow for those who are not mathematically inclined. It is founded on statistical techniques and arrives at conclusions that are expressed in terms of correlations, averages and probabilities. But where we are dealing with large populations, such techniques are essential. Individuals may know of particular cases where there were specific benefits or costs of IFRS adoption, but IFRS adoption affected thousands of companies over a number of years, and only statistical techniques can tackle problems on this scale.

Statistical techniques also impose greater rigour in establishing cause and effect. Personal experiences of apparent cause and effect can be deceptive. Links between smoking and cancer, for example, could not have been established by arguments between those who happened to know people who had smoked all their lives and never suffered any ill effects and those who knew smokers who suffered from cancer. Only statistical techniques can establish causal connections in such cases, and even then only as probabilities.

On many issues that arise from the EU's adoption of IFRS, the evidence is unclear and different researchers arrive at different answers. This is usually because they have applied different tests or looked at different samples or at different periods. But such apparent contradictions make it difficult for the reader of research to draw conclusions.

Often the results are unclear because of confounding factors. The adoption of IFRS in the EU was not a laboratory experiment. The world outside continued to change as IFRS came into effect in the EU, and some of the changes were induced by the EU itself as it sought to reform its financial services and capital markets. Disentangling the effects of all these changes is one of the challenges of accounting research, and different researchers arrive at different conclusions as to which changes had which effects.

And on some important questions related to the effects of IFRS adoption, there is relatively little research evidence.

None the less, the report finds that there is evidence of benefits following IFRS adoption in relation to financial reporting transparency and comparability, the cost of capital, market liquidity, corporate investment efficiency and cross-border capital flows. But the evidence on some of these matters is disputed and it is unclear how far the benefits identified are attributable to the adoption of IFRS or to other concurrent institutional changes, particularly in enforcement. What is clear is that the benefits found are uneven, varying with the institutions and incentives that apply for different companies in different countries.

We welcome feedback on this report and the issues it raises, including from those whose research we have cited if they disagree with how we have summarised their work or with our comments on it. We intend to produce a second and final version of the report in 2015, and will take any feedback into account in that edition. Please send comments to bettermarkets@icaew.com.

Executive summary

Chapter 1: Introduction

With effect from 2005, compliance with IFRS was made mandatory in the EU for the consolidated accounts of companies with securities traded on a regulated market ('publicly traded companies') by Regulation 1606/2002. The Regulation also required EU Member States 'to take appropriate measures to ensure compliance'. The Regulation's objectives were: improved transparency and comparability, better functioning of the internal market, the efficient and cost-effective functioning of the capital market, the protection of investors and maintenance of confidence in capital markets, and helping EU companies compete on an equal footing for capital within the EU and on world capital markets.

The Regulation was opposed by some people at the time, and the impact of IFRS in the EU has remained controversial since its implementation, especially since the financial crisis.

Policy makers often say that they want to make policy based on evidence, and they may look to academic researchers to provide them with impartial and reliable evidence. The costs and benefits of mandatory IFRS adoption in the EU would appear to provide an ideal topic on which researchers might support the work of policy makers, and in this report we summarise and discuss the findings of empirical academic research on this controversial subject. There already exist several excellent surveys of research into the effects of IFRS adoption, but the distinctive contribution of this report is as follows:

- It expressly addresses the objectives of Regulation 1606/2002.
- Its scope is restricted, as far as possible, to evidence from the EU.
- It is about two years more up-to-date than the major previous surveys.
- It gives fuller summaries of the underlying research literature than the previous surveys.
- It excludes, as far as possible, the literature on the effects of voluntary IFRS adoption in the EU.

It is not possible, however, to draw indisputable conclusions on the overall effects of mandatory IFRS adoption based on the available research. Different researchers arrive at different conclusions. Their conclusions are often qualified or applicable only to some companies or some countries. Much research covers mandatory IFRS adopters around the world, not just in the EU, and sometimes it is uncertain how far its conclusions apply to the EU specifically. And on some important aspects of the subject there is very little research.

But as we discuss below in more detail, it seems likely that there were overall benefits to transparency, comparability, the cost of capital, market liquidity, corporate investment efficiency and international capital flows associated with the mandatory adoption of IFRS in the EU, although it is unclear how far these benefits should be attributed to concurrent institutional changes.

Chapter 2: Challenges for research and its interpretation

The effects of mandatory IFRS adoption in the EU are an important topic, but one that presents challenges both for researchers as to how to draw conclusions from a mass of sometimes opaque and unpromising data, and for the readers of research as to how its findings should be interpreted. We identify and discuss a number of specific issues that affect this area of research. These include significant challenges arising from concurrent changes in other institutions, whose effects it is difficult to disentangle from those of IFRS adoption. Indeed, as the introduction of IFRS in the EU was part of a larger package of reforms, the Financial Services Action Plan, some might argue that it is more useful to look at the effects of IFRS adoption in the context of the package as a whole.

The challenges for accounting research do not mean that it cannot help policy makers on questions such as the effects of mandatory IFRS adoption in the EU. But they do mean that such research can be extremely difficult and that its findings may well be complex. Research should discipline the debate on policy, making clear which views can and which cannot be supported by research evidence, and where the evidence is unclear.

Chapter 3: Transparency

Research evidence differs on whether mandatory IFRS adoption improved the overall transparency of EU companies' financial reporting. On balance, the evidence suggests that there was an improvement, but that it was not experienced by all companies or in all countries. It is also unclear how far the improvement was attributable to concurrent changes in other institutions rather than to the adoption of IFRS.

Chapter 4: Comparability

Research evidence differs on whether mandatory IFRS adoption improved the comparability of EU companies' financial reporting. On balance, the evidence suggests that there was an improvement, but there is also ample evidence of continuing incomplete comparability in certain respects. In part, this is because IFRS allows choices; complete comparability is therefore not to be expected. But there is also evidence of continuing financial reporting differences because of differences in institutions and incentives among firms and countries.

Chapter 5: The cost of capital

Research evidence differs on whether mandatory IFRS adoption reduced the cost of equity and debt capital for EU companies. On balance, the evidence suggests that there were reductions in the cost of equity capital and in the cost of bonds, but that they were not experienced by all companies or in all countries. It is also uncertain how far the improvements were attributable to concurrent changes in other institutions rather than to the adoption of IFRS. The effects of mandatory IFRS adoption in the EU on the cost of loans, as opposed to bonds, are unclear.

Research evidence indicates that the stock market anticipated the effects of mandatory IFRS adoption, which makes the measurement of these effects, where they include stock market data, less certain.

Chapter 6: Market liquidity

Research evidence differs on whether mandatory IFRS adoption increased the liquidity of the equity market for EU companies as a whole. On balance, the evidence suggests that there was an increase, but that it was not experienced in relation to all companies or all countries. It is also unclear how far the increase was attributable to concurrent changes in other institutions rather than to the adoption of IFRS. We are not aware of any research on the effects of mandatory IFRS adoption in the EU on liquidity in bond markets.

Chapter 7: Corporate investment efficiency

While the subject has not been heavily researched (we have identified just five papers), the available evidence suggests an improvement in the efficiency of corporate investment following mandatory IFRS adoption. It is not clear how far the papers on this subject have allowed for the possibility that other concurrent institutional changes in the EU intended to increase the efficiency of capital markets may be relevant to their findings.

Chapter 8: Cross-border investment

Researchers appear to agree that there was increasing cross-border investment – both foreign direct investment and foreign portfolio investment – following mandatory IFRS adoption, but also agree that it was not experienced uniformly by all companies or all

countries. Again, it is not clear how far the papers on this subject have allowed for the possibility that other concurrent institutional changes in the EU may be relevant to increases in cross-border capital flows.

Chapter 9: Other benefits

There is research evidence suggesting a number of other possible benefits of mandatory IFRS adoption:

- reduced expropriation risk (ie, the risk that outsiders' share of a firm's income and wealth will be expropriated by insiders);
- increased trade within the EU;
- increased use of accounting information of foreign peer companies in monitoring managers' performance (ie, in deciding how much they should be paid and whether they should be replaced); and
- reduced risk of stock market price crashes.

None of these topics is heavily researched (usually there are just one or two papers on each question), and in some cases it would be wrong to put much weight on the findings, particularly in those instances where much of the evidence comes from outside the EU.

Chapter 10: Costs

There is little research evidence on the continuing incremental costs of IFRS for preparers. But there is evidence of some other, possibly unexpected costs (ie, negative effects) of IFRS adoption:

- reduced use of accounting-based measures in managers' pay contracts;
- reduced use of accounting-based covenants in debt contracts;
- wealth transfers, in both directions, between shareholders and lenders;
- changes in capital structure that would not otherwise have been made;
- capital issues that would not otherwise have been made; and
- changes for the worse in some aspects of risk management using financial instruments, although these may well be accompanied by other changes for the better.

None of these topics is heavily researched (just one or two papers on each question), and again in some cases it would probably be wrong to put much weight on the findings, particularly in those instances where much of the evidence comes from outside the EU.

Chapter 11: The financial crisis

While to date there is no research evidence that financial reporting was a significant contributor to the banking crisis in the EU, more research based on EU financial institutions is needed before conclusions can be drawn on this question.

Evidence from the US suggests that financial reporting requirements for the use of fair value did not have a significant role **during** the crisis, but this conclusion is not necessarily applicable to the EU.

We are not aware of any research into the potential role of fair value accounting or the incurred loss method of loan-loss provisioning in the years **before** the crisis either in the US or the EU.

Chapter 12: Conclusions

The research evidence on the potential benefits of mandatory IFRS adoption in the EU is generally not conclusive. But on balance it seems likely that there were overall benefits to transparency, comparability, the cost of capital, market liquidity, corporate investment efficiency and international capital flows. The research evidence also clearly shows that these benefits were unevenly distributed among different firms and different countries. Due to differences in institutions and incentives, there may have been either negligible benefits or even costs rather than benefits for particular firms or countries.

The research evidence that supports these conclusions is often drawn from databases that are focused on larger publicly traded companies, which may impart a bias to the findings, but it is not clear in which direction. One effect of this sample bias is that eastern European companies are often under-represented in international research on the effects of IFRS adoption.

It is unclear how far the benefits found to follow mandatory IFRS adoption are attributable to the change of financial reporting standards or to concurrent changes in other institutions.

There is virtually no research evidence on some other costs that may have been incurred by firms, eg, increased preparation costs. Partly for this reason, overall conclusions on net costs and net benefits do not emerge from the research findings.

While to date there is no research evidence that financial reporting was a significant contributor to the banking crisis in the EU, more research based on EU financial institutions is needed before conclusions can be drawn on this question.

As financial reporting reform is part of a broader package of institutional reforms, its success may be judged in part by its effects on surrounding institutions, and this success may also be determined by changes (or the lack of them) in surrounding institutions.

For researchers, there remain plenty of unanswered questions surrounding the effects of IFRS adoption in the EU:

- Where existing findings appear to contradict one another, it would be helpful to investigate why this is the case so that apparent anomalies in the research record are either removed or explained.
- It would be helpful to know more about a number of important questions on which little is currently known, such as the role of financial reporting in relation to the financial crisis, and the effects of IFRS adoption in eastern Europe.
- The links between financial reporting and its surrounding institutions need further exploration. In particular, although important work has been done to explore some of the connections between financial reporting changes, concurrent institutional changes and capital market effects, this might profitably be extended to cover other possible effects of IFRS adoption.

For policy makers, the research findings summarised in this report will not end controversy on the effects of IFRS adoption in the EU, but they should help to form views on what has been achieved to date and what needs to be done in the future. Perhaps the most significant point to emerge from the research is the importance of institutions and incentives. The balance of evidence suggests that the objectives of Regulation 1606/2002 have been achieved to some extent. But differing institutions and incentives inevitably mean that its effects vary from firm to firm and from country to country. And the objectives may well have been achieved to some, at present undetermined, extent by concurrent institutional changes forming part of the Financial Services Action Plan.

If the EU wishes to achieve further progress in financial reporting and to reap the benefit of these improvements, it may make most sense to look at the incentives for those involved in

the financial reporting process and at the institutions that surround it, as well as to engage in the global debate on the future development of IFRS.

There are also more general lessons for policy makers who wish to base their decisions on research evidence:

- Where researchers arrive at findings that are apparently inconsistent with previous research, sometimes they try to explain the inconsistencies, but sometimes they do not. No doubt the differences are usually attributable to differences in samples, in periods covered and in methodologies. Investigating differences may be difficult and time-consuming, and the incentives for researchers to do so appear to be weak. It may therefore be worthwhile for policy makers to commission additional research specifically to look into and explain such apparent anomalies.
- Some topics in relation to the effects of IFRS adoption that are of interest to policy makers in the EU are under-researched. Where policy makers know that they will need to make or review decisions, and wish to be able to rely on research in doing so, they may need to take a more active approach to ensuring that all relevant aspects of the question have been adequately researched.

1. Introduction

EU companies have had to comply with IFRS since 2005. Mandating IFRS in the EU was controversial then and remains controversial now. Can academic research tell us whether the policy has been a success?

1.1 The background to Regulation 1606/2002

At the close of the 20th century there was concern at the highest levels in the EU that its fragmented capital markets were an obstacle to raising capital for EU businesses in the cheapest and most efficient way. In an increasingly globalised world, this posed a threat to the continuing competitiveness of the EU and to the standard of living enjoyed by its peoples. This concern resulted in a Financial Services Action Plan, first developed in 1998, that provided the framework for a number of measures to reform EU capital markets and their regulation. These measures included the Market Abuse Directive, which addressed insider trading and market manipulation, the Transparency Directive, which as its name suggests was intended to make the provision of information by publicly traded companies more transparent, and financial reporting reform.

The EU was also concerned that its existing financial reporting regime – based on Company Law Directives negotiated many years previously – had done too little to harmonise accounting across the EU and had become out of date for companies that wished to raise capital on international markets. Some EU companies, where permitted to do so by national laws, had reacted to this problem by preparing consolidated accounts in accordance with US GAAP.

Adopting US GAAP was not a feasible policy solution for the EU as a whole, even if it made sense for some companies. Another option would have been to move to a system of EU accounting standards, but at a time of increasing globalisation of capital markets a more international solution was ultimately considered desirable. International Accounting Standards (IAS), set by the International Accounting Standards Committee (IASC), provided at least the basis for such a solution and as the quality of IAS improved it became possible to think of them as a realistic alternative to some form of EU GAAP. When in May 2000 IOSCO (the International Organization of Securities Commissions) announced its endorsement of IAS, the standards could be taken more seriously as a potential global GAAP.

In June 2000, the European Commission announced a plan to introduce reforms that would require all EU publicly traded companies to prepare their consolidated accounts in accordance with IAS. The intention was that adoption of IAS would lead to greater transparency and comparability of financial reporting across the EU, which would in turn lead to a lower cost of capital for business and increased cross-border capital flows. The Commission's decision eventually led, two years later, to EU Regulation 1606/2002. By this time, following the reconstitution of the IASC as the International Accounting Standards Board (IASB), IAS had been collectively renamed International Financial Reporting Standards (IFRS).¹

1.2 Regulation 1606/2002 and its objectives

Regulation 1606/2002 introduced requirements for the consolidated accounts of companies in the EU whose securities are traded on regulated markets in the EU to be prepared in accordance with IFRS as adopted by the EU. The requirements applied to most EU publicly traded companies with effect from accounting periods ending on or after 31 December 2005. They applied with effect from accounting periods ending on or after 31 December 2007 to EU publicly traded companies that had only debt securities publicly traded or that had been complying with US GAAP in preparing their consolidated accounts, where Member States opted to allow such a delay. The Regulation does not require EU publicly traded companies that do not prepare consolidated accounts to comply with IFRS as adopted by the EU.

The Regulation allows Member States to allow or require publicly traded company entity accounts and private company consolidated and entity accounts to be prepared in accordance with IFRS.

¹ Individual International Accounting Standards that existed at the time of the change kept the old name.

For companies whose securities are publicly traded on unregulated markets (eg, the Open Market in Germany and the Alternative Investment Market in the UK), whether they are permitted or required to use IFRS depends on the requirements of national legislation and those of the relevant market. In some cases, such companies were required to adopt IFRS for their consolidated accounts for accounting periods ending on or after 31 December 2007.

The Regulation also requires EU Member States 'to take appropriate measures to ensure compliance' with IFRS. The EU had already established in 2001 the Committee of European Securities Regulators (CESR), which among other things was intended to promote harmonisation of regulatory approaches to the enforcement of IFRS across the EU. CESR was succeeded by the European Securities Markets Authority (ESMA) in 2011.

Dispersed at various places through the Regulation are indications of its objectives. They are stated to be: improved transparency and comparability, better functioning of the internal market, the efficient and cost-effective functioning of the capital market, the protection of investors and maintenance of confidence in capital markets, and helping EU companies compete on an equal footing for capital within the EU and on world capital markets.

The Regulation lays down an approval procedure for IFRS standards to be individually adopted by the EU for the purposes of compliance with the Regulation's requirements. While it is correct to refer to 'IFRS as adopted by the EU' in this context, we refer simply to 'IFRS' as the differences between IFRS as issued by the International Accounting Standards Board (IASB) and IFRS as adopted by the EU have been irrelevant for the great majority of publicly traded companies.² Since IFRS adoption in 2005, there has been one 'carve out' from IFRS by the EU, relating to fair value hedging requirements and particularly relevant to banks; the number of banks that have taken advantage of the carve out appears to be small.

1.3 Continuing controversy

Shortly after the mandatory adoption of IFRS, ICAEW was appointed by the European Commission to review its implementation in the EU. The work done for the report, *EU Implementation of IFRS and the Fair Value Directive* (2007),³ included an online survey, which found that a clear majority of both investors and preparers thought that IFRS adoption had improved the quality of financial statements.

The Commission also supported a programme of empirical research, from 2007 to 2010, into the early effects of mandatory IFRS adoption through the INTACCT Research Training Network of European universities and accounting researchers. The key findings of the INTACCT research are discussed in Peter F. Pope and Stuart McLeay, 'The European IFRS experiment: objectives, research challenges and some early evidence' (2011).⁴

There has never been unanimous support for IFRS adoption in the EU. Some people opposed its adoption from the outset. And in the 2007 ICAEW survey, 24% of users and 14% of preparers thought that IFRS had made the quality of financial statements worse. These are significant minorities.

Research on the issues raised by the internationalisation of accounting standards goes back at least to the 1980s. And about the time of IFRS implementation in the EU, academic writers identified what would become some of the key issues in practice. For example, Ray Ball's 2006 paper, 'International Financial Reporting Standards (IFRS): pros and cons for investors',⁵ set out questions that have subsequently framed much of the work of empirical researchers. In this paper, Ball suggested that:

² There may be temporary exceptions to this generalisation where delays in EU endorsement have delayed mandatory adoption or prevented early adoption of new standards.

³ Full references are given in the Bibliography.

⁴ Based on a paper given at the ICAEW Information for Better Markets Conference in December 2010.

⁵ Based on his ICAEW P. D. Leake Lecture given on 8 September 2005. Other papers that appeared about the time of IFRS adoption in the EU include Katherine Schipper, 'The introduction of International Accounting Standards in Europe: implications for international convergence' (2005) and Stephen A. Zeff,

‘The notion that uniform standards alone will produce uniform financial reporting seems naïve, if only because it ignores deep-rooted political and economic factors that influence the incentives of financial statement preparers and that inevitably shape actual reporting practice... The incentives of preparers ... and enforcers ... remain primarily local, and inevitably will create differences in financial reporting quality...’

He also commented that: ‘Fair value accounting has not yet been tested by a major financial crisis, when lenders in particular could find that “fair value” means “fair weather value”.’

The ICAEW report for the European Commission was published in October 2007, just weeks after the UK’s first major bank rescue of the financial crisis. As the situation deteriorated, and financial crisis was followed by recession, a number of critics in the EU blamed IFRS either for causing the crisis or for exacerbating it. And since the financial crisis, there has remained a significant level of criticism of IFRS in the EU. Indeed, EU Regulation 258/2014⁶ states that ‘The crisis in the financial markets which has unfolded since 2008 has put the issue of financial reporting ... at the centre of the Union’s political agenda’.

Partly in response to these continuing concerns, the European Commission decided in 2013 to evaluate the effects of mandatory adoption of IFRS in the EU, and this decision was put on a statutory footing by Regulation 258/2014, which specifies that it should submit a report by 31 December 2014. The Commission’s report is required to cover the findings of its evaluation of Regulation 1606/2002, ‘including, where appropriate, proposals for amending that Regulation with a view to improving its functioning, as well as on governance arrangements for all relevant institutions’.

1.4 Evidence-based policy

Policy makers often say that they want to make policy based on evidence, and they may look to academic researchers to provide them with evidence that is impartial and reliable. The effects of mandatory IFRS adoption in the EU appear to provide an ideal topic on which researchers might support the work of policy makers in this way.

In this report we summarise and discuss the findings of empirical academic research on the effects of mandatory IFRS adoption in the EU. There is a large amount of empirical research on the subject available to policy makers; in the course of writing the report, we have reviewed approximately 170 papers that we found to be relevant. ICAEW is submitting separately its views on the effects of IFRS in the EU and on the policy that the EU should follow in relation to IFRS. In doing so, it draws on the relevant research evidence as well as on other sources of information.

The report will, we hope, provide not only a valuable resource to those who wish to join in the debate on the future of IFRS in the EU and around the world, but also a useful discussion of some of the key issues that arise when policy makers wish to use empirical accounting research to help them arrive at defensible policy conclusions or to evaluate the effects of earlier decisions.⁷

Although the substantial body of empirical research reported here should be useful to policy makers, its messages are often not as clear or as consistent as might be wished. For example, different researchers arrive at different conclusions. Their conclusions are often qualified or applicable only to some companies or some countries. Much research covers

‘Some obstacles to global financial reporting comparability and convergence at a high level of quality’ (2007). Earlier papers by Ball are also important.

⁶ This regulation deals with a number of financial reporting-related matters, such as EU financial support for the IASB.

⁷ Helpful recent discussions of this subject in the context of accounting standard setting include Marco Trombetta, Alfred Wagenhofer and Peter Wysocki, ‘The usefulness of academic research in understanding the effects of accounting standards’ (2012) and Ralf Ewert and Alfred Wagenhofer, ‘Using academic research for the post-implementation review of accounting standards: a note’ (2012).

mandatory IFRS adopters around the world, not just in the EU, and it is sometimes uncertain how far its conclusions apply to the EU specifically.

And on some important aspects of the question – such as the costs to preparers of complying with IFRS and the possible role of IFRS in the financial crisis – there is very little research. This may be because the relevant evidence is unavailable to researchers, or not readily available, or is not regarded as appropriate for academic research. For example:

- The processes of preparing, auditing and using financial reporting information are all private and generally unavailable to researchers. For preparers and auditors, and sometimes for users, they result in public outcomes, which are available to researchers. But these outcomes do not necessarily provide a reliable indication of how the outcomes were arrived at, including what considerations were important in arriving at them.⁸
- Although publicly traded companies' accounts are published, they are not always readily accessible or accessible in a form that facilitates data processing. So researchers often rely on information from commercial databases, which may not provide a complete body of evidence for the population being studied.
- Opinions matter, but scientific opinion polling is difficult and expensive, and – although there have been some promising exceptions in recent years – asking people what they think is something that relatively few accounting researchers regard as an appropriate method of research.⁹

Also, research evidence is usually aggregated in order to arrive at conclusions. People's personal experiences may well be at odds with such aggregated findings. If, for example, particular users have found that IFRS adoption made financial reporting in the EU more transparent or more comparable, they will not be persuaded by research evidence that adoption did not have this effect. Equally, if particular users found that IFRS adoption had no benefits, they will not be persuaded by research evidence to the contrary.

Such conflicts discredit neither the findings of research nor the validity of individual experience. Aggregated findings do not purport to tell us that every individual or every firm received identical benefits or incurred identical costs as a result of IFRS adoption.¹⁰ But research should discipline debate on those matters for which evidence is available. If particular users experience costs or benefits, then their experience should not be disregarded. But there is a common tendency for people to overgeneralise from their own experience, and it is not unknown for people to form strong views on the basis of inadequate evidence. Policy makers should be able to use research, where relevant and reliable research is available, to counter these tendencies.

Some participants in the debate on IFRS – as on any important subject of public debate – are frankly uninterested in the evidence. They have formed their views one way or the other and they are not going to let evidence get in the way of their strong convictions. Policy makers, who have to respond to feelings and opinions as well as to evidence, have to bear in mind such views, which may be held by important participants in the debate, as 'facts' that have to be accommodated. Policy making may to this extent be political rather than evidence-based. This is probably unavoidable, but it must be better for policy makers to know what the research evidence is rather than to be in ignorance of it. Only in this way can they understand what is known from research, where views are unsupported by research evidence or in conflict with it, and where the research evidence is unclear.

⁸ Surveys or case studies may be helpful in getting behind what is publicly disclosed.

⁹ This may be in part because they do not know how trustworthy the answers are.

¹⁰ It would sometimes be helpful to users of accounting research, especially where it may be used for policy purposes, if key statistical findings could be presented in a way that shows how the distribution of data varies around the average outcome. This would give a more complete picture of the underlying phenomena.

1.5 The costs and benefits of financial reporting standards

Financial reporting standards can promote social welfare by improving the information that firms disclose (increased transparency) or by improving its comparability. They can impose costs through the costs of the standard-setting process, costs to preparers, and costs to users. But these costs may be lower than the costs of alternative arrangements, eg, preparers and users agreeing financial reporting requirements company by company, which are likely to be prohibitively expensive.

Improvements in transparency reduce the uncertainties surrounding a company (lowering estimation risk) and reduce the information asymmetries between different groups, eg, insiders and outsiders (reducing adverse selection problems)¹¹. Outside investors, for example, will seek a higher price for their investment ('price protection') to defend themselves against the risks of uncertainty and the risks that insiders with superior information will take advantage of them. Reducing uncertainties and information asymmetries allows outside investors to reduce their demand for price protection, and therefore allows companies to raise capital at lower cost. A reduced cost of capital has benefits across the economy as, other things being equal, the lower the cost of capital, the more investment there will be by companies, and the more economic growth.

Improved transparency can have other benefits. It enables better monitoring – of managers by owners, and of insider shareholders by outsider shareholders. This facilitates owner/outside shareholder interventions in the management of the business and protects them from managers/inside shareholders expropriating their assets ('expropriation risk').

Increased comparability produces benefits in two ways. Understanding financial reporting imposes a cost on investors, and they may therefore be deterred from investing in companies that employ financial reporting systems with which they are not already familiar. If firms in different countries adopt a common system, investors are more likely to understand the financial statements of firms in these countries and therefore to invest in them. Increasing international comparability therefore lowers a barrier to cross-border investment.

Investors also use information about one company to draw inferences about other companies. Increased comparability facilitates this process. In effect, the increased comparability also increases transparency.

There may be downsides to standardisation, though, if standardised financial reporting requirements reduce firms' ability to report information that is relevant to their particular circumstances or to particular investors or if the standards are ill-suited to a particular country's culture and institutions. It cannot be assumed, therefore, that compliance with any given set of standards will necessarily be beneficial. And, as we noted earlier, where benefits are detected across a class of firms in aggregate, which is usually the level at which research studies are conducted, it cannot be assumed that all firms in the class or all their investors benefit. Aggregate results showing benefits of IFRS adoption may well include particular cases in which there are no benefits or even net costs. So the findings of research on the effects of standards in aggregate may, contrary to appearances, be compatible with data from other sources or from smaller samples that give different results.

1.6 Institutions and incentives

The benefits of adopting a particular set of accounting standards do not arise simply through stating that they have been adopted. Investors make implicit judgements about how reliable information is and whether it does indeed comply with the standards that it purports to comply with. So the benefits of accounting standards depend to a large extent on supporting institutions: eg, for enforcement, education, and professional competence and integrity.

¹¹ 'Adverse selection' problems arise where one party to a transaction can take advantage of the other's ignorance to charge too high a price or to pay too low a price. See ICAEW, *Financial Reporting Disclosures: Market and Regulatory Failures* (2013), Appendix 1.

'Enforcement' in this context has a wider meaning than that often attributed to it by non-academics, who may well think of it as relating purely to the activities of regulators, such as the SEC in the US. In accounting research, and in this report, 'enforcement' is generally used to cover all the ways in which institutions and procedures are employed to ensure that managers who prepare accounts comply with requirements. Enforcement in this sense encompasses the roles of corporate governance, auditors, regulators and the courts.

The quality of financial reporting and the benefits that can be derived by adopting a particular set of accounting standards also depend on the strength of preparers' incentives to make high quality disclosures. For example, if a publicly traded company is in effect controlled by a small group of owner-managers (perhaps because of a high degree of family ownership), and outside investors have little say in its affairs, then the managers may have little incentive to establish a reputation for high quality financial reporting. The intended effects of adopting high quality accounting standards can be frustrated where such incentives prevail.

Equally, it may sometimes be a merit in accounting standards that, by reducing the role of judgement, they allow little scope for managers' incentives to affect the quality of reporting.

Preparers' incentives depend to a large extent on the surrounding institutions. IFRS is designed for firms that depend on public markets to raise capital and for cultures in which taking advantage of inside information is generally frowned on. To the extent that a firm raises capital privately, either from equity investors or banks, its incentives for high quality public reporting are reduced. To the extent that taking advantage of inside information is regarded as acceptable, incentives for high quality public reporting are again reduced. Other aspects of the institutional framework – such as corporate governance, auditing, and securities regulation – also affect preparers' incentives and therefore the likely quality of their financial reporting.

Because the quality of financial reporting depends to a large extent on supporting institutions and preparers' incentives, the benefits of adopting a particular set of standards are variable and can be hard to assess. We may therefore expect that the findings of research on the effects of IFRS adoption will be variable. We may also expect that where apparent benefits or costs are detected, it will need to be assessed whether they are in fact attributable – wholly or to some extent – to concurrent changes in supporting institutions or in preparers' incentives, and that it may be extremely difficult to disentangle exactly which causes are operative and to what extent.

As the value of financial reporting depends to a large extent on its surrounding institutions, there is perhaps an implication that in seeking to improve the quality of financial reporting we are also seeking to change the surrounding institutions. In the EU this was explicitly the case as accounting reform was part of a broader programme of capital market and financial services reforms. Indeed, to some extent a major reform of financial reporting only makes sense and can only work as part of such a broader programme. For example, if high quality financial reporting is most useful where financing is provided through international capital markets, then improvements in financial reporting make most sense where it is wished to replace local, private and 'insider' sources of finance with international, public and 'outsider' sources. Looking at financial reporting reform in this way also affects how we measure its success (see Section 12.5).

1.7 Contribution, scope and structure of the report

1.7.1 Contribution

This report reviews and summarises empirical research on the effects of mandatory IFRS adoption in the EU. Several excellent reviews of the research literature on the effects of IFRS adoption already exist, and in preparing this report we have found the following particularly helpful:

- Philip Brown, 'International Financial Reporting Standards: what are the benefits?' (2011).¹²
- Ulf Brüggemann, Jörg-Markus Hitz and Thorsten Sellhorn, 'Intended and unintended consequences of mandatory IFRS adoption' (2013).
- Peter F. Pope and Stuart J. McLeay, 'The European IFRS experiment: objectives, research challenges and some early evidence' (2011).
- Ann Tarca, 'The case for global accounting standards: arguments and evidence' (2012).

There are also important earlier surveys based largely on research into voluntary IFRS adoption. This report is not intended to supersede or compete with these survey papers, which are all written by highly regarded researchers and are likely to remain valuable sources for some time to come. The distinctive contribution of this report is as follows:

- It expressly addresses the objectives of Regulation 1606/2002.
- Its scope is restricted, as far as possible, to evidence from the EU.
- It is about two years more up-to-date in terms of the papers reviewed than any of the surveys listed above.
- As we are not constrained by the space available for a paper published in a learned journal, it gives fuller summaries of the underlying research literature than the previous surveys.
- It excludes, as far as possible, the literature on the effects of voluntary IFRS adoption in the EU, whose findings, as we explain below (Section 1.7.3), may well not apply to mandatory adoption.

1.7.2 Scope of the evidence reviewed

To ensure the report's timely publication, it is restricted to a review of English-language academic research on the effects of mandatory IFRS adoption in the EU.

We have not reviewed work in languages other than English, which is increasingly the international language of accounting research, especially on international accounting issues. But no doubt there is work in languages other than English that provides useful evidence on the mandatory adoption of IFRS in particular countries.

We have not reviewed the non-academic literature, such as surveys by accounting firms and reports by regulators.

We have not restricted the review to published research, but have included unpublished papers where they are relevant. This raises questions about the quality and reliability of some of the research that we use. Published research goes through an editorial and peer review process widely regarded as a guarantee of quality. Unpublished research has not passed the same tests and may therefore be of doubtful quality. But while we are in no position to judge individual papers in this respect, we note that many unpublished papers are work of high quality, which may in due course be published, and that the quality of journals and the papers that appear in them varies.

1.7.3 Issues addressed

As noted, Regulation 1606/2002 empowers EU Member States to permit voluntary IFRS adoption where it is not required. Also, some Member States permitted voluntary adoption before 2005. Although the effects of voluntary adoption are an interesting question, we do not

¹² Based on a paper given at the ICAEW Information for Better Markets Conference in December 2010.

address them in this report. Where firms have a choice as to whether to adopt IFRS, findings on the effects of adoption are likely in at least some respects to be more favourable than they would be for mandatory adoption as it seems reasonable to assume that firms will adopt IFRS voluntarily if they expect net benefits and will not adopt it if they foresee net costs. Their expectations may be wrong of course, which is one reason why research on voluntary adoption is of interest. But because voluntary adopters are unlikely to be typical of the population of firms to which mandatory adoption applies and for other reasons (eg, the effects of greater comparability where there is mandatory adoption), the effects of voluntary adoption do not provide useful evidence on the effects of mandatory adoption.¹³

The Regulation also mandates unspecified changes in enforcement, where these were necessary in order to meet the requirement to ensure compliance with IFRS. Again, although the effects of these changes are an interesting question, we do not address them directly. We address them to some extent indirectly as an important issue in the research surveyed in the report is to assess how far any effects that follow mandatory IFRS adoption are the results of adoption or the results of simultaneous changes in enforcement (or of other changes occurring at the same time).

Ideally, the report would examine the evidence on whether mandatory IFRS adoption in the EU has achieved all the objectives outlined in Regulation 1606/2002 and on the costs incurred in doing so. In practice, there does not appear to be relevant research evidence on some of the objectives identified in the Regulation and there is very little research on costs.

The Regulation's objectives do not match particularly well the way in which the body of research literature is structured, which to a large extent is in accordance with research streams established within the past few decades. The mismatch between the Regulation's objectives and the way in which research is structured is unfortunate, but we have thought it more useful to organise the report around the Regulation's objectives rather than around what researchers may regard as a more appropriate way of categorising their work.

For example, one research stream examines questions of 'accounting quality', usually but not necessarily in terms of certain features of accounting measurement, such as earnings management. Another stream examines questions of 'value relevance' (ie, the degree of association between financial reporting numbers and stock market prices or movements in stock market prices), although this is also regarded by some researchers as a component of accounting quality. For reasons that we explain later in the report (Chapter 3), we treat both these research streams as primarily relevant to the Regulation's objective of transparency. But researchers within these traditions do not necessarily see their work as addressing this issue, and they may well feel that the way we have categorised their research does some violence to what they see as the appropriate way of describing it. Similar problems no doubt apply to the ways in which we have categorised other research topics.

It may also be argued that in practice it is difficult to disentangle the various benefits identified as objectives in the Regulation. These benefits can mostly be divided into financial reporting benefits and capital market benefits that are effects of the financial reporting benefits. Increased transparency and increased comparability are financial reporting benefits. Where such benefits exist they should give rise to capital market benefits: ie, more efficient and cost-effective functioning of the capital market (including a lower cost of capital and increased liquidity), helping EU companies compete on an equal footing for capital within the EU and on world capital markets, and improving investor protection and maintaining confidence in capital markets.

Where such capital market benefits arise, they are therefore – to the extent that they are attributable to financial reporting changes – in themselves evidence of improved transparency or of improved comparability or of both at the same time. So the division of the evidence on these topics may be regarded as somewhat artificial. While this is an important point, it

¹³ A further point made by some researchers is that IFRS before 2005, when voluntary adopters complied with it, was significantly different in certain respects from IFRS in 2005, when it became mandatory.

remains convenient to divide up topics along the lines of the Regulation. But in drawing overall conclusions, it will be useful to bear in mind that they should all fit together, and that evidence of one type of benefit (or cost) may also in fact be evidence of other types of benefit (or cost).

We address the objectives of Regulation 1606/2002 as follows in the remainder of the report:

- **Improved transparency.** The research evidence on this is reviewed in Chapter 3.
- **Improved comparability.** The research evidence on this is reviewed in Chapter 4.
- **Efficient and cost-effective functioning of the capital market.** This objective can be interpreted in a number of different ways. From the point of view of preparers, perhaps the most important practical effect of increased efficiency in the capital market is that they should experience a lower cost of capital. The research evidence on this is reviewed in Chapter 5. From the point of view of investors, a more important practical effect may be improved liquidity. The research evidence on this is reviewed in Chapter 6. Another important test of whether the capital market is functioning effectively is how efficient corporate investment policies are. We review the evidence on this in Chapter 7.
- **Helping EU companies compete on an equal footing for capital within the EU and on world capital markets.** The research evidence on this is reviewed in Chapter 8.
- **Better functioning of the internal market.** As the functioning of the capital market is a discrete objective in the Regulation, 'better functioning of the internal market' must refer to other aspects of the internal market, principally trade in goods and services, including the labour market. We review the evidence on this in Chapter 9, which covers a number of topics on which the research literature is not extensive, but appears to identify other benefits of IFRS adoption.
- **Protection of investors and maintenance of confidence in capital markets.** There appears to have been little research on this question. One aspect of it on which some work has been done is the effect of mandatory IFRS adoption on the risks that outside investors will have their money expropriated by managers or insider investors. We review the research on this in Chapter 9. However, the claim that mandatory IFRS adoption exacerbated or helped to cause the financial crisis of 2007-08 would, if correct, imply that the change damaged investor protection and confidence in markets. We review the evidence on IFRS and the financial crisis in Chapter 11.

We are aware of only a limited amount of academic research on the costs of mandatory IFRS adoption in the EU. What there is, we review in Chapter 10; this chapter too covers a number of topics on which the research literature is not extensive, but which in these cases appears to identify costs of IFRS adoption. If mandatory IFRS adoption helped to cause or exacerbated the financial crisis of 2007-08, this would of course be a significant cost in itself.

In Chapter 12, we set out some overall conclusions. But first we highlight some of the challenges in researching the effects of mandatory IFRS adoption and in interpreting the research evidence (Chapter 2).

1.8 Principal conclusions

We discuss all these issues in detail in the course of the report, and enter appropriate caveats in doing so. But, very broadly, it seems likely that there were overall benefits to transparency, comparability, the cost of capital, market liquidity, corporate investment efficiency and international capital flows associated with the mandatory adoption of IFRS in the EU, although it is unclear how far the benefits should be attributed to other concurrent institutional changes. These benefits vary among firms and among countries.

2. Challenges for research and its interpretation

Researchers face considerable challenges in identifying the effects of IFRS adoption. And it can be difficult to know how to interpret their findings. But it's important to understand what the evidence can tell us.

2.1 Introduction

The effects of mandatory IFRS adoption in the EU are an important topic, but one that presents challenges both for researchers as to how to draw conclusions from a mass of sometimes opaque and unpromising data, and for the readers of research as to how its findings should be interpreted.

Some of these challenges are limitations inherent to accounting research generally – and indeed to much research in the social sciences (Section 2.2). Difficulties of interpretation also arise from the fact that research on the effects of IFRS adoption is often not restricted to the EU and that, in the published results, findings for the EU are not usually separated from findings for non-EU countries (Section 2.3).

An additional set of challenges is involved in applying the research to arrive at policy conclusions. We discuss these in Chapter 12.

What all these challenges add up to is not that research into questions such as the effects of mandatory adoption of IFRS in the EU is necessarily inconclusive, but that it is extremely difficult. We discuss this point in Section 2.4.

2.2 Inherent limitations

2.2.1 Confounding factors

We have already noted that some problems of interpreting the evidence regarding IFRS adoption arise from the concurrent effects of changes in surrounding institutions and preparers' incentives. Researchers do their best to 'control' for such confounding factors, but the controls are not necessarily fully effective (see below), and there may be confounding factors of which they are unaware. Many researchers in stating their conclusions warn of this latter problem.

But it is also possible to argue that the introduction of IFRS in the EU should be seen as part of a larger package of reforms, and that it is more useful to look at the effects of IFRS adoption in the context of the package as a whole. We return to this question too in Chapter 12.

2.2.2 Control samples

A common method of controlling for confounding factors is to look at a parallel sample that is not affected by the change being examined – in the same way that a test on a new drug will involve observing a sample of people who take it (the test sample or treatment sample) and a parallel sample who do not (the control sample or benchmark sample).

Accounting researchers construct control samples with varying degrees of precision. Sometimes they simply compare, eg, results for countries that adopt IFRS with results for countries that do not. Such comparisons can be a bit crude as there may be many differences between the test and control samples in such populations that would affect the results other than the differences arising from adopting/not adopting IFRS. Sometimes researchers prepare carefully constructed control samples, matching company-by-company the characteristics of firms in the test sample with those of firms in the control sample.

Even a carefully constructed control sample can give misleading results if it is affected by unidentified concurrent changes. For example, researchers investigating the effects of mandatory IFRS adoption often assume that there are no changes in other institutions. Ironically, in view of the subject of their study, they sometimes justify this assumption by arguing that institutions tend not to change and that it can therefore be reasonably assumed that they have not done so. Yet a comparison of EU companies with, eg, US companies around the period of mandatory IFRS adoption may well be affected by changes in accounting standards in the US and/or by simultaneous changes in other institutions.

Ray Ball, Xi Li and Lakshmanan Shivakumar, 'Mandatory IFRS adoption, fair value accounting and information in debt contracts' (2013), even exclude the US from their control sample on the basis that the process of convergence between US GAAP and IFRS, in place formally or informally since the 1990s, 'pollutes the US as a control'. That is, US GAAP has become too similar to IFRS to be validly used in tests as something that is different from IFRS – rather as though people who smoke American cigarettes were to be used as a control group for testing the effects of smoking on Europeans. If this view is accepted, then many of the control samples in other papers are 'polluted' and therefore of doubtful validity. The effect of this problem, where US firms are used as a control, is that the effects of IFRS adoption – whether good or bad – are likely to be understated as the control sample will to some extent show similar effects to the test sample.

2.2.3 Population bias

It is not just the control sample that can be polluted. The test sample – indeed, the test population – may be as well. For example, many EU companies voluntarily adopted IFRS before its adoption became mandatory. Voluntary adopters may be expected, assuming they behave rationally, to benefit from adoption, while those firms that could have been voluntary adopters, but chose not to be, might reasonably be expected to benefit less from IFRS adoption; in effect, they chose to be mandatory adopters, which involves self-selection problems. Where samples select themselves, they tend not to be typical of the whole population. Including in the test population of mandatory adopters firms that could have adopted IFRS but chose not to, may therefore skew the results negatively. For this reason, some researchers (but only some), exclude, eg, German firms from test samples of mandatory adopters because voluntary IFRS adoption was common in Germany.

2.2.4 Sample bias

Brüggemann et al (2013) argue that 'extant literature on the capital market effects of mandatory IFRS adoption may suffer from a systematic bias towards large [publicly traded] companies'. There were approximately 7,250 publicly traded companies in the EU in 2005 that complied with the requirement to prepare IFRS accounts: 5,460 equity issuers and a further 1,790 bond issuers.¹⁴ Most research samples do not include anything like this number of firms from the EU. It seems plausible, as Brüggemann et al (2013) suggest, that many of these samples are systematically biased.

The bias arises because researchers often use commercial databases for their raw data about matters such as stock market prices, bid-ask spreads, and accounting information, and these databases usually focus on larger publicly traded companies. For smaller publicly traded companies there is presumably insufficient demand for such information to justify the costs of providing it in commercial databases.

The bias matters because it is not clear that larger and smaller publicly traded companies are likely to benefit to the same extent from high quality financial reporting and internationally comparable disclosures, such as IFRS is intended to secure. There are arguments both ways:

- Some would argue that larger publicly traded companies are inherently more likely to benefit from such financial reporting changes and that this is confirmed by, eg, the greater tendency among larger publicly traded companies to adopt IFRS voluntarily.
- Others would argue that smaller publicly traded companies are particularly disadvantaged by their relatively poor information environment and that significant improvements in financial reporting transparency and comparability are therefore likely to be disproportionately to their benefit.

¹⁴ Committee of European Securities Regulators, *CESR's Review of the Implementation and Enforcement of IFRS in the EU* (2007).

So the bias in the data used by researchers may well affect their findings, but it is not clear whether unbiased data would lead to more positive or more negative findings in relation to the overall effects of mandatory IFRS adoption.

The data in Brüggemann et al (2013), Table 4 (using data from CESR), also show that one effect of the sample bias they identify is that eastern European firms are often largely excluded from researchers' test samples. There were 798 publicly traded companies in eastern Europe that adopted IFRS in 2005. These companies are often under-represented in international accounting research.

This problem is compounded by a separate issue, which is that the EU is not static. Bulgaria, Croatia and Romania have all joined the EU since 2005. The effects of IFRS adoption in these countries are therefore necessarily excluded from research that focuses on firms that adopted IFRS in 2005.

So the findings of research, based on average results weighted towards western Europe, may not hold for the eastern European members of the EU. It may be argued that they should benefit especially from IFRS adoption, as a means of attracting foreign capital, but there are arguments on the other side of the question (eg, do they have the accounting infrastructure to implement IFRS effectively?) and it would be useful to know what the facts are. The question may be difficult to investigate, though, as in a number of cases financial reporting requirements in eastern Europe were to a greater or lesser extent based on IFRS before mandatory EU requirements became operative in these countries.

Another bias may arise because many samples exclude financial firms. They are excluded deliberately because the financial sector differs in important respects from the rest of the corporate sector. Some of the differences relate to financial reporting – eg, insurers comply with different requirements from other firms and banks are far more likely to be materially affected by fair value requirements. Others relate to their distinctive business models, which can make comparisons based on, eg, turnover or capital ratios unhelpful. None the less, the financial sector is a significant part of the EU economy, so to the extent that it is excluded from the scope of research, findings may be unrepresentative of the generality of publicly traded companies.

2.2.5 The anticipation problem

People act so as to anticipate future events. If researchers seek to measure the impact of an event purely by looking at what happens after it, they may therefore underestimate its effects, some of which may precede it. Strictly, of course, it is nonsense to speak of an event's effects preceding it. But the subjects of study in financial reporting research are sometimes chains of events over a period of time, ie, in the case of IFRS adoption, various events spread over a number of years that made mandatory adoption in the EU more or less likely or that affected the form that adoption would take, followed by actual adoption. In the period before actual adoption, some of the effects of adoption may be anticipated by the market, and so reflected in market prices, as adoption becomes more or less likely and as views on its likely costs and benefits change.

It is difficult enough to be confident about the effects of a major event such as IFRS adoption even when research focuses on what follows it. Working out which of its effects preceded it, ie, were anticipated by the market, is even more difficult. None the less a number of studies have tackled this task. We review them in Chapter 5, 'The cost of capital', as they are particularly relevant to this issue.

2.2.6 The transition problem

Even when IFRS adoption occurs, the change is not clear-cut. Firms may release information in advance of actual results so as to prepare the market for what is to come, they produce interim results before they produce full-year results, and investors use information from other firms to estimate what IFRS information from a firm in which they are interested might look like. Studies that treat pre-adoption and post-adoption periods as contiguous but separate

therefore risk treating periods when there is in fact information available on a mixture of bases as though they belong clearly in one category or the other.

One of the features of any major transition is likely to be that people learn as they go along. This seems to have been true of the adoption of IFRS, and one of the findings of research is that preparers, users and investors all show signs of taking time to learn about IFRS. As Brown (2011) explains:

‘When faced by complicated change in the environment, people do not fully adjust their behaviour overnight. In the case of IFRS adoption, standard-setters, preparers and those who issue guidance to them, auditors,¹⁵ analysts and other users of financial statements, and regulators, can all take a significant amount of time to adapt.’

So there are in effect two transitions:

- The changeover from pre-IFRS to IFRS is a gradual one.
- People gradually learn how to apply IFRS and how to use IFRS information.

A number of researchers have tried to overcome this problem by looking at longer periods (eg, missing out a transitional year), but this creates new problems as the longer the period studied the more difficult it is to eliminate confounding factors. By the time the sample period reaches 2007, the effects of the financial crisis are beginning to be felt and, by 2008, the recession has an impact.

2.2.7 The short period problem

Brüggemann et al (2013) point out that:

‘The results of the literature on intended consequences could simply be artefacts of the short history of mandatory IFRS adoption, reflecting a combination of idiosyncratic, transitory effects of first-time adoption and low statistical power due to relatively short analysis periods.’

Ideally, researchers would have decades of data and would therefore be able to place short-term changes (such as what appear to be the immediate effects of IFRS adoption) into the context of long-term patterns. In practice, they often have to rely on a few years’ data surrounding the adoption of IFRS. This can sometimes give the appearance of ad hocery for explanations that fit the data available for the period under review, but that do not appear to have been tested to see how well they work for longer periods.

Again though, longer analysis periods, while useful in some ways, also bring additional problems of interpretation, including the effects of changes in IFRS and in alternative GAAPs, and a general multiplication of confounding factors.

2.2.8 Surprise and predictability

Financial reporting has two antithetical functions. On the one hand, it is expected to convey news (surprises), and much accounting research therefore measures in various ways the news content of financial reporting information, for example by looking at how stock market prices respond to it. The assumption is that the greater the response, the more useful the information must be.

On the other hand, financial reporting is also meant to help make the future more predictable (no surprises). Some accounting research therefore measures how well the market is able to

¹⁵ Vivien Beattie, Stella Fearnley and Tony Hines, *Reaching Key Financial Reporting Decisions: How Directors and Auditors Interact* (2011), report finding a number of instances ‘where the auditors had made an error in the first year of IFRS implementation ... which then required correction in the following year’ (p310).

anticipate financial reporting results. From this point of view, lack of market response to accounting information may be taken as evidence that previous financial reporting (and other) disclosures have done a good job in aiding predictability.

This creates a situation where both market response to accounting disclosures and the lack of such a response can be interpreted as evidence of the usefulness of financial reporting information. Conversely, both can be interpreted as evidence of its uselessness (lack of market response shows that the information lacks value, while response shows a failure to have provided adequate predictive information). The problem is relevant to research on IFRS adoption as there is a risk that both the presence and the absence of market responses to accounting disclosures could be interpreted as either positive or negative effects of adoption.

Both functions of financial reporting (providing surprises and avoiding them) are important, but to disentangle their effects researchers need to know how far accounting surprises should have been surprises and how far they should have been predictable. It is not clear to what extent this is feasible.

2.2.9 Changes in IFRS

Empirical accounting research is a branch of history. It looks at particular phenomena in a particular place at a particular time; it is not a study of timeless relationships. The phenomena it studies are subject to constant change, and in any study involving accounting standards one of the key changes is likely to be in the standards themselves. As Brown (2011) points out, 'IFRS are not static: new standards are being introduced and existing standards revised frequently. One implication is that early results may no longer hold.' This needs to be borne in mind in considering the implications of research looking at a period that is now some distance in the past – as is the case for most of the research surveyed in this report.

2.2.10 Proxies

Many of the concepts that are used in debating accounting issues are vague and ambiguous or describe phenomena that are well-defined in principle but not directly observable. Problems of this sort affect such basic concepts as 'transparency', 'high quality accounting', 'effective enforcement' and 'cost of capital'.¹⁶ This poses a problem for accounting researchers who, in order to produce credible work, have to attach precise meanings to ambiguous terms and to use 'proxies' for what they cannot observe. These proxies may be constructed by the researcher, borrowed from other researchers (who may have constructed them for a different purpose) or observed from phenomena that are thought to provide a useful substitute for the unobservable phenomena.

Such proxies may be more or less convincing. We look below at just two of the proxy problems that affect research into the effects of mandatory adoption of IFRS.

Enforcement. One phenomenon that is not directly observable is the quality of enforcement of accounting standards. Researchers have often used very rough proxies for this, such as indices for 'The rule of law' developed by the World Bank.¹⁷ And sometimes the data that underlie these proxies are quite old; it is not unusual for them to include some data from the 1980s.

As simultaneous changes in enforcement are an important confounding factor in assessing the impact of IFRS adoption, it is unfortunate that the proxies for them are so rough and often based on old data. A more specific and up-to-date set of proxies has recently been developed by Philip Brown, John Preiato and Ann Tarca, 'Measuring country differences in enforcement of accounting standards: an audit and enforcement proxy' (2014). This gives significantly different results from those used by researchers hitherto. It is too soon to say whether the

¹⁶ The cost of capital is not directly observable because it is a forward-looking concept based on expected cash flows. Researchers use a variety of ways to estimate it. See Christine A. Botosan, 'Disclosure and the cost of capital: what do we know?' (2006).

¹⁷ This issue is discussed in Pope and McLeay (2011). A frequent assumption is that enforcement is worse in code law than in common law countries; it is far from obvious that this is universally correct.

Brown et al (2014) measures will become generally accepted as superior proxies, but their acceptance would require reworking of a number of findings in the existing research literature.

GAAP differences. An important issue in looking at the effects of IFRS adoption is how far IFRS differs from the preceding national GAAP. Researchers typically do not observe these differences directly but instead use a small number of proxies that have become established in the literature. Although these proxies attempt to measure the same thing, they give very different results, so it is difficult to know how far they can be relied on.¹⁸ Also, the main proxies used are based on a 2001 survey,¹⁹ so would not in any case provide the ideal basis for calculating the extent of differences in 2005. Vedran Capkun, Daniel W. Collins and Thomas Jeanjean, 'The effect of IAS/IFRS adoption on earnings management (smoothing): a closer look at competing explanations' (2013), point out that:

'Major changes in [IFRS] standards occurred in 2005. When it became clear that the EU would likely adopt IAS/IFRS, the IASB published a draft "Improvements to IFRS", issued May 2002. Following this draft, after a period of comments (due process), 14 out of 34 IAS (in force as of 2002) were revised or improved in December 2003. In addition, IAS 32 and 39 were amended in 2004. All these changes became effective for the 2005 fiscal year. In addition, six new IFRS were issued between 2002 and 2005, of which five IFRS were in force as of beginning of 2005'.

Some papers use more obviously relevant measures for GAAP differences. For example:

'We use as a proxy for the differences between local GAAP and IFRS a firm-level measure of the actual reported reconciliation component between IFRS and local GAAP earnings. This is available because firms were required in the first year of IFRS adoption to report the reconciliation between their last reported local GAAP accounts and IFRS. Therefore, we calculate the absolute difference between the firm's local GAAP earnings for 2004 and the reconciled IFRS earnings for 2004, as a percentage of absolute local GAAP earnings.'²⁰

But one disadvantage of this proxy, as the authors point out, is that it excludes differences in disclosures, which may well be more important than measurement differences. Another is that there may have been errors on initial adoption of IFRS, so that the reconciliations provided in the first year of adoption may not give an entirely accurate picture of the differences between IFRS and prior local GAAP.

2.2.11 Correlation and causality

Researchers are usually careful to point out that correlation is not the same as causality. Two phenomena (A and B) whose incidence is found to be correlated, if the correlation is not a coincidence, may be causally connected in various ways:

- A may be a cause of B.
- B may be a cause of A.
- A and B may be effects of some third phenomenon (or set of phenomena).
- Or the causal relationship may be a mixture of these possibilities. For example, there may be a feedback effect such that A causes more B, which in turn causes more A. And there may be some third factor at work that also causes more A and/or B.

¹⁸ This issue too is discussed in Pope and McLeay (2011).

¹⁹ Christopher Nobes (ed.), *GAAP 2001: A Survey of National Accounting Rules Benchmarked against International Accounting Standards* (2001).

²⁰ Joanne Horton, George Serafeim and Ioanna Serafeim, 'Does mandatory IFRS adoption improve the information environment?' (2013).

Researchers do their best to identify cause and effect when they can, but often it is not possible to do so with any confidence, and there always remains the possibility that there is some factor at work that they have failed to identify – a correlated omitted variable.

2.2.12 Economic significance

To eliminate as far as possible the effects of chance, researchers have to check that the correlations they find are statistically significant. Finding statistically significant correlations in complex data with multiple variables is difficult and may well be regarded as an important achievement in its own right, so that the results are deemed worthy of publication in learned journals. It is often unclear whether the results are economically significant – ie, whether they matter.²¹ Sometimes authors focus clearly on the economic significance of their findings, but sometimes data on economic significance are not published, and sometimes they are published but are buried in the statistical tables.

2.3 Problems of scope

A number of countries around the world – including Australia, Hong Kong and South Africa – made IFRS mandatory at the same time as the EU, with effect for 2005 accounts. IFRS also became mandatory in Norway with effect from 2005, Switzerland is often regarded by researchers as having made IFRS mandatory with effect from 2005,²² while Singapore is often viewed as having made it mandatory in 2003.²³ It is therefore natural for researchers who are investigating the effects of mandatory IFRS adoption to extend the scope of their work beyond the EU.

This approach gives valid answers for the global effects of mandatory IFRS adoption, but for our purposes it is unfortunate as it means that data for countries outside the EU may affect the results. Researchers usually do not analyse their results by country. As they may be looking at 20 or more countries, publishing such an analysis would presumably require a good deal of space and the findings for many of the individual countries, for which the samples are often small, would not be particularly reliable. Also, individual country results may not be of interest to the researcher. Where the results are not broken down by country, it is usually impossible for the reader to judge how far they may differ as between EU and non-EU countries. We note this issue where it arises in the course of the report.

In some cases, researchers do provide separate data for the EU, in which case there is no problem, or in ‘robustness’ or ‘sensitivity’ tests they check whether their findings (or some of them) are affected by the inclusion of EU firms. Where such tests establish that the paper’s results are unaffected by the inclusion of EU firms, this suggests – but does not necessitate – that the results are also applicable to the EU. What we really need to know is what the results would be if non-EU firms were excluded.

We are not criticising researchers’ decisions to include, eg, Norway and Switzerland in their samples. If the researchers are studying Europe (or the world), then it is obviously right to include them. If they are studying the European Economic Area (EAA), then it is right to include Norway. Nor do we suggest that it is likely that results are significantly affected in many cases by the inclusion of Norway or Switzerland. But the scope of this report is simply the EU.

²¹ Jerold L. Zimmerman, ‘Myth: external financial reporting quality has a first-order effect on firm value’ (2013), argues that much accounting research focuses on phenomena of only minor economic significance. Economic significance is discussed in Thomas R. Dyckman and Stephen A. Zeff, ‘Some methodological deficiencies in empirical research articles in accounting’ (2014), and Elisabetta Barone and Stuart McLeay, ‘Economic impact and statistical significance: interpreting research into regulatory effects’ (2014).

²² Swiss companies to which the requirements applied had – and still have – a choice between IFRS and US GAAP. Swiss companies that are not multinational are permitted to continue using Swiss GAAP.

²³ The 2003 requirement was to present financial statements complying with Singapore Financial Reporting Standards. Singapore FRS was already very similar to IFRS in 2003 and has continued to move closer to IFRS since then. Singapore currently expects to have fully adopted IFRS by 2018.

2.4 The value of research

This long list of challenges may give the impression that research into the effects of mandatory IFRS adoption in the EU is doomed to be inconclusive, and so can have little value for policy makers. Such an impression would be incorrect. What these challenges do show is that accounting research on large questions of policy can be extremely difficult and requires highly talented researchers, and that the answers it gives can be complex, showing great diversity in results across different countries, different types of firm, and over time. It does not give simple answers.

Even where the findings of research are to some degree inconclusive because researchers arrive at apparently conflicting results, it may none the less be possible to arrive at a reasonable conclusion as to what seems to be the most likely answer. At a number of places, this is what we have done in this report. We suspect that the same need to arrive at conclusions that seem to fit the evidence best, rather than being able to state definitively what is and what is not the case, characterises many areas of research related to policy debates. It is not a special feature of accounting research.

Also, as we stated in the previous chapter, research should discipline the debate on policy, making clear which views can and which cannot be supported by research evidence, and where the evidence is unclear. Notwithstanding all the difficulties involved, we believe that the findings of research that we summarise in this report should make an important contribution to the debate on the future of financial reporting in the EU.

3. Transparency

Better financial reporting should mean greater transparency. But how can we measure transparency? And how has IFRS adoption affected it?

3.1 General points

3.1.1 Introduction

Financial reporting is transparent to the extent that it allows readers to understand the reporting firm's financial performance and financial position.²⁴ Researchers cannot measure transparency directly. But they research other phenomena, which can be taken as evidence of transparency. Three major areas of research that may be regarded as providing evidence on transparency are:

- investment analysts' forecasting ability;
- value relevance; and
- accounting quality.

We explain the sense in which we use all these terms below.

There are a number of other areas of research that have received much less attention, but which may also cast light on the transparency of financial reporting. These include:

- stock return synchronicity (ie, the extent to which share prices move together);
- predicting future cash flows;
- predicting credit default swap (CDS) spreads;
- assessment of default risk; and
- share trading volume.

Again, where appropriate, we explain below the sense in which we use these terms. We are also aware of one academic study that asks a sample of interested parties directly whether IFRS adoption has brought greater transparency.

If these different techniques do indeed provide evidence of the same thing – transparency, we would expect them to give consistent results. That is, an improvement in accounting quality should, other things being equal, be accompanied by an increase in value relevance and an improvement in forecasting and so on. Where this is not the case, there is on the face of it an anomaly that requires explanation.

Some researchers may consider that we are defining 'transparency' too broadly and that it should refer specifically to the extent and relevance of disclosures and not to questions of recognition and measurement, which also affect accounting quality, forecasting ability and value relevance. While there is nothing wrong in principle with such a narrower definition, we believe that it is appropriate to regard improvements in recognition and measurement as improvements in transparency. Also, as Regulation 1606/2002 refers simply to 'transparency' and not to improvements in recognition, measurement and disclosure, it is convenient for present purposes to consider them all together, rather than as discrete objectives.

Conversely, some researchers may consider that we are defining 'accounting quality' too narrowly by distinguishing it from the other forms of evidence for transparency, and that all the research streams that we have identified as relevant to transparency are really about accounting quality. Again, there is nothing wrong with such a broader definition, and our categorisation is a purely pragmatic one; it is convenient for present purposes to group the research in the way that we have done.

²⁴ Mary E. Barth and Katherine Schipper, 'Financial reporting transparency' (2008), provide a different definition of transparency and discuss the various ways that researchers can measure it.

It can be argued that any capital market benefits associated with financial reporting changes are also evidence of increased transparency or of increased comparability or of both at the same time. It is the increased transparency and/or increased comparability that produce the capital market benefits. In particular, increased market liquidity is often taken to be evidence of increased transparency. We look at all these capital market benefits in Chapters 5-8 below, and it should be borne in mind that they may also be evidence of increased transparency.

3.1.2 Investment analysts' forecasting ability

If a firm's reporting becomes more transparent, one effect of this could be to make it easier for outsiders to forecast its future results. One way of assessing this is to look at whether the change of information leads to improved accuracy in investment analysts' forecasts. A number of the studies that look at forecast accuracy also look at forecast dispersion. The significance of forecast dispersion is that improved transparency should decrease analyst uncertainty, which should be evidenced in reduced dispersion of their forecasts (Section 3.2).

It is not necessarily the case that improved transparency will lead to better forecasting and fewer surprises. For example, advocates of fair value accounting argue that it is more transparent than historical cost information, but it may also be inherently more volatile and less predictable. In which case, analysts' forecasts of accounting earnings might become less accurate even though (fair value advocates would argue) there has been an increase in transparency. I.e, some accounting systems may produce accounting numbers that are inherently more predictable than others, without necessarily being more helpful for valuation purposes. Researchers have to guard against such problems where they arise.

Conversely, increased forecast accuracy could be caused by increasing earnings manipulation so that earnings are in line with forecasts. This would not be an increase in transparency.

It is also possible that improved forecast accuracy is attributable not to increased transparency in the individual firm's financial reporting, but to increased comparability (including through increased transparency in other firms' financial reporting), or indeed to other changes in the information environment that are unconnected to financial reporting.

We are aware of one study that looks at the effect of mandatory IFRS adoption on the credibility of analysts' recommendations. Although this is a separate topic from the accuracy of analysts' forecasts, we include it in Section 3.2 as it could be argued that if mandatory IFRS adoption improves the credibility of analysts' recommendations, this is presumably because the market believes that they are based on more accurate forecasts.

3.1.3 Value relevance

Value relevance studies look for correlations between disclosures of financial reporting (and other) information and stock market prices or changes in stock market prices. Views differ on whether findings of value relevance (ie, findings that there is a correlation between disclosures and stock market prices) are indicators of increased transparency.

For example, Shyam Sunder, 'IFRS monopoly: the Pied Piper of financial reporting' (2011),²⁵ sets out two arguments against the relevance of value relevance studies:²⁶

- The stock market is not the only user of financial reporting information, and what is useful for the stock market is not necessarily useful for other users.

²⁵ Based on a paper given at the ICAEW Information for Better Markets Conference in December 2010.

²⁶ The classic discussion of these issues is Robert W. Holthausen and Ross L. Watts, 'The relevance of the value-relevance literature for financial accounting standard setting' (2001) and Mary E. Barth, William H. Beaver and Wayne R. Landsman, 'The relevance of the value relevance literature for financial accounting standard setting: another view' (2001).

This is correct, and it is a limitation of value relevance studies. However, to the extent that we are interested in assessing the usefulness of accounting disclosures in providing information for stock market valuation purposes, value relevance studies do appear to be relevant.

- Financial reporting disclosures would be perfectly correlated with stock market prices – and therefore show perfect value relevance – if they simply disclosed the company's market capitalisation, but this information would be of no value because it would simply tell the market what it knows already.

Again this is correct, but many value relevance studies focus on earnings or components of earnings or balance sheet items, rather than the balance sheet as a whole. Other studies do look at the correlation between the book value of equity and market capitalisation, and while a constantly perfect correlation between the two would indeed imply that the book value of equity is in itself uninformative to the stock market, this is unlikely to be a problem under current accounting conventions.

Sunder (2011) also notes that in any case the findings of value relevance studies in relation to IFRS are mixed. We look at the findings of these studies in detail below (Section 3.3).

Although value relevance studies identify correlations between accounting numbers and stock market prices (or changes in prices), these correlations cannot, without further investigation, establish a causal relationship between the financial reporting disclosures and the prices (or changes in prices).

3.1.4 Accounting quality

'Accounting quality' is a concept much-used by researchers; as we have noted above, some would regard it as covering all the research that we identify as relevant to transparency. But most research papers that refer explicitly to accounting quality focus on a small group of financial reporting issues affecting the measurement of net income and of assets that are subject to impairment. These papers usually look at a number of phenomena that are taken as evidence of poor accounting quality (Section 3.4).

- Relatively smooth income from year to year is taken to indicate deliberate income smoothing.
- Relatively high accruals (see below) in relation to net income are taken to indicate deliberate manipulation of profit.²⁷
- Relative slowness in making provisions for losses is taken to be a sign of deliberate manipulation of both profit and the balance sheet. Tests for this sign of poor accounting quality are described as 'timely loss recognition' studies.
- Timely loss recognition may be regarded as one half of a broader practice - 'conditional conservatism', which is a greater readiness to recognise bad news than good news in accounts. A decline in conditional conservatism is regarded as a sign of declining accounting quality.

'Accruals' in this context refer to the difference between cash flows on the one hand and costs and revenues as they are measured in financial reporting on the other.

²⁷ Ray Ball, 'Accounting informs investors and earnings management is rife: two questionable beliefs' (2013), questions whether many papers that purport to identify such 'earnings management' in fact do so. Martin Walker, 'How far can we trust earnings numbers? What research tells us about earnings management' (2013), reviews the research literature and points out that it cannot be assumed that all earnings management is 'bad'.

3.1.5 Other techniques for assessing transparency

Other techniques for assessing the transparency of financial reporting information have received less attention from researchers, at least in the context of IFRS adoption. We review the limited research on these matters in Section 3.5.

Stock return synchronicity. The theory underlying this approach is that when a more informative reporting system is introduced, there is an initial decrease in synchronicity in stock price movements as the new system produces more firm-specific information. However, once investors are accustomed to the new system, their ability to forecast future results improves, firm-specific surprises become less common, and stock return synchronicity reaches a higher level than before the new system was introduced (Section 3.5.1).

Predicting future cash flows and CDS spreads. A further way of assessing whether changes in financial reporting can improve forecasts does not involve looking at either forecasts or expectations, but compares the reported data with subsequent results and calculates the correlation between the two. This method measures the information's utility in predicting future outcomes – in the cases we look at, cash flows (Section 3.5.2) and CDS spreads, a measure of insolvency risk (Section 3.5.3).

Assessment of default risk. In theory, improved transparency should allow the market to distinguish better among firms with, eg, a high or low risk of default. We look at the evidence on this in Section 3.5.4.

Share trading volume. It can be argued that if financial reporting provides fresh information to the market, this should be reflected in increased share trading at the time of the disclosures. Different market participants will interpret the information in different ways – some more positively, some more negatively – leading to differences of view on the share price, which stimulate trading. We look at the evidence on this in relation to IFRS adoption in Section 3.5.5.

It has also been argued, though, that improved disclosure should reduce uncertainty and diversity of opinion among market participants, and therefore lead to reduced share trading.²⁸ There may also be a tension between the theory underlying the share trading volume approach and the research on dispersion in analysts' forecasts, which assumes that better information reduces differences in market participants' views. So findings on increased share trading may be open to more than one interpretation.

3.2 Investment analysts' forecasting ability

3.2.1 Research findings

The following studies look at evidence on changes in the accuracy and dispersion of analysts' forecasts following mandatory IFRS adoption.

Panel 3.1: Wang et al (2008)

Xin Wang, Danqing Young and Zili Zhuang, 'The effects of mandatory adoption of International Financial Reporting Standards on information environments', look at the effects of mandatory IFRS adoption on the accuracy and dispersion of analysts' forecasts in 17 European countries for 2003-2006. Of the 17 countries covered, two – Norway and Switzerland – are outside the EU. Of the 1,438 firms in the sample, 9% are non-EU.

The authors find that 'analysts' forecast errors and dispersion are significantly lower in the post-IFRS period than in the pre-IFRS period for mandatory firms'. They also find that

²⁸ See, eg, Thomas J. Linsmeier, Daniel B. Thornton, Mohan Venkatachalam and Michael Welker, 'The effect of mandated market risk disclosures on trading volume sensitivity to interest rate, exchange rate, and commodity price movements' (2002).

analysts' forecast errors and dispersion are 'significantly lower in the period 2005-2006 than in the period 2003-2004 for firms that voluntarily adopted IFRS before 2005'.

The authors divide the countries covered into legal origin groups and into code law/common law groups. They find lower forecast errors and dispersion for the English legal origin group, lower forecast errors for the French legal origin group, a marginal decrease in dispersion for the Scandinavian legal origin group, and no change for the German legal origin group. The code law group (the French, German and Scandinavian origin groups added together) show no change in forecast accuracy or dispersion.

The English legal origin group and the common law group are identical, consisting of the UK (432 companies) and Ireland (13 companies); so the UK dominates these two groups.

Panel 3.2: Beuselinck et al (2010)

Christof Beuselinck, Philip Joos, Inder K. Khurana and Sofie Van der Meulen, *Mandatory Adoption of IFRS and Analysts' Forecasts Information Properties*, look at the effects of mandatory IFRS on the accuracy and dispersion of analysts' forecasts in 16 European countries for 2003-2007. Of the 16 countries covered, two – Norway and Switzerland – are outside the EU. The sample size is 1,364 firms. 9% of firm-year observations are for non-EU firms.

The authors find that 'forecasts become more accurate under IFRS and [that] there are smaller forecast differences among analysts'. They investigate how far the increase in the precision of forecasts is attributable to better public information and how far to better private information. They find that it is attributable to both, and that the proportionate contributions of public and private information remain unchanged after mandatory IFRS adoption. This implies that the increased public information derived from IFRS adoption prompts a parallel increase in private information gathering.

Panel 3.3: Byard et al (2011)

Donal Byard, Ying Li and Yong Yu, 'The effect of mandatory IFRS adoption on financial analysts' information environment', look at analysts' forecasts for mandatory adopters in Europe for 2003-2006. As a control, they compare the accuracy of these forecasts with those for firms that had already voluntarily adopted IFRS by 2003. They argue that any differences should therefore be due to mandatory adoption, rather than to other concurrent changes (which would affect mandatory and voluntary adopters alike). The sample includes two countries, Norway and Switzerland, that are not part of the EU. Of the 1,168 firms in the test sample, 5% are non-EU.

The authors find that 'analysts' absolute forecast errors and forecast dispersion decrease relative to [the] control sample only for those mandatory IFRS adopters domiciled in countries with both strong enforcement regimes and domestic accounting standards that differ significantly from IFRS.'

They also find that 'for mandatory adopters domiciled in countries with both weak enforcement regimes and domestic accounting standards that differ significantly from IFRS, ... forecast errors and dispersion decrease more for firms with stronger incentives for transparent financial reporting.'

Panel 3.4: Tan et al (2011)

Hongping Tan, Shiheng Wang and Michael Welker, 'Analyst following and forecast accuracy after mandated IFRS adoptions', look at analysts' forecasts for mandatory adopters in 25 countries for the two accounting years preceding, and the two accounting years following mandatory IFRS adoption for each firm. Of the 25 countries in the sample, seven are outside the EU. Of the 3,280 firms in the sample, 32% are from countries outside the EU.

The authors find that mandatory IFRS adoption improves foreign analysts' forecast accuracy

by 16% on average. They do not find that it affects the accuracy of local analysts' forecasts. The number of observations for foreign analysts is 18,482 firm-years and for local analysts 12,010 firm-years.

The authors warn that 'many of the countries that we study adopt IFRS as part of a broader strategy to reform financial reporting. Our analyses do not allow us to determine conclusively whether IFRS adoption or some other part of the reform package is responsible for our results'.

Panel 3.5: Jiao et al (2012)

Tao Jiao, Miriam Koning, Gerard Mertens and Peter Roosenboom, 'Mandatory IFRS adoption and its impact on analysts' forecasts', look at the effects of mandatory IFRS adoption on the accuracy and dispersion of analysts' forecasts in 19 European countries for 2004 and 2006. Of the 19 countries covered, two – Norway and Switzerland – are outside the EU. The sample comprises 1,612 or 1,328 firms (for different tests); 12% non-EU.

The authors find that 'analyst forecasts have become more accurate and less dispersed after the adoption of IFRS'.

Panel 3.6: Choi et al (2013)

Young-Soo Choi, Ken Peasnell and Joao Toniato, 'Has the IASB been successful in making accounting earnings more useful for prediction and valuation? UK evidence', look at the accuracy of analysts' forecasts for UK mandatory IFRS adopters between 2003 and 30 September 2007 – stopping at that point to avoid the effects of the financial crisis. The sample comprises up to 1,173 firms (varying from year to year).

They find that 'analyst forecasts are more accurate and less dispersed under IFRS than under previous UK GAAP'. They identify a transition period when firms report their first results under mandatory IFRS. They find that 'this initial post-IFRS period exhibits a less pronounced and less significant effect on the accuracy of analyst forecasts and in the dispersion of forecasts'.

They also find that 'the results on forecast error and dispersion are concentrated in stable firms and are not present in growth firms.' They conjecture that this is 'attributable to financial reporting information being relatively less relevant for forming expectations about the future earnings of high growth firms than it is for more stable ones'.

Panel 3.7: Horton et al (2013)

Joanne Horton, George Serafeim and Ioanna Serafeim, 'Does mandatory IFRS adoption improve the information environment?', look at the accuracy of analysts' forecasts for mandatory IFRS, voluntary IFRS and non-IFRS firms in 46 countries for 2001-2007. Of the 46 countries covered by the paper, 25 are countries where IFRS was made mandatory, including seven countries outside the EU. The sample of mandatory adopters comprises 2,235 firms (34% non-EU).

The authors find that, 'after mandatory IFRS adoption, forecast accuracy and other measures of the quality of the information environment increase significantly more for mandatory adopters relative to nonadopters and voluntary adopters'. '[T]he larger the difference between IFRS earnings and local GAAP earnings the larger is the improvement in forecast accuracy.' They find 'no evidence suggesting that the increase in forecast accuracy is driven by earnings manipulation'.

They 'hold constant any information effects from IFRS adoption and find that the increase in forecast accuracy is partly driven by comparability effects'. They also 'hold constant any comparability effects from IFRS adoption and find that the increase in forecast accuracy is partly driven by information benefits'.

Panel 3.8: Panaretou et al (2013)

Argyro Panaretou, Mark B. Shackleton and Paul A. Taylor, 'Corporate risk management and hedge accounting', look at the relation between hedge accounting by mandatory IFRS adopters in the UK and the accuracy and dispersion of analysts' forecasts. Their sample of up to 183 firms (varies by year) covers non-financial firms in the FTSE 350 and they use data for 2003-2008.

They find that 'for firms that measure and report derivatives under IFRS ... analysts' forecast error and dispersion are significantly lower'.

Panel 3.9: Neel (2014)

Michael Neel, 'Accounting comparability and economic outcomes of mandatory IFRS adoption', looks at how far various effects of IFRS adoption, including changes in analyst forecast accuracy and dispersion, are attributable to changes in comparability or to changes in accounting quality. The test sample is 1,861 firms (23% non-EU) from 23 countries (six non-EU). There is a benchmark sample of 6,652 firms, mainly from the US and Japan. The period covered is 2001-2008.

The author finds that 'reduced forecast errors are generally restricted to [mandatory IFRS] adopters with an increase in comparability; although greater income smoothing can, in at least one [test] specification, result in more accurate forecast results.' Also, 'IFRS adoption appears to only be associated with a decrease in forecast dispersion among adopters with an increase in comparability.'

The author finds that these results continue to hold if the test sample is restricted to firms from countries with weak legal enforcement (based on a general 'rule of law' measure) and if firms from countries that Christensen et al (2013) (see Panel 6.4) identify as experiencing concurrent improvements in enforcement are excluded.

Panel 3.10: Preiato et al (2014)

John Preiato, Philip Brown and Ann Tarca, 'A comparison of between-country measures of legal setting and enforcement of accounting standards', look at the accuracy and dispersion of analysts' forecasts for mandatory IFRS firms, voluntary IFRS firms and non-IFRS firms in 39 countries for 2003-2009. To help analyse the results they construct indices for auditing and for accounting enforcement for 2002, 2005 and 2008. Of the 39 countries in the sample, 23 are countries where IFRS was made mandatory, including eight countries outside the EU. For mandatory adopters, 33% of the 99,373 firm-year observations are for non-EU firms.

The authors find 'little evidence that mandatory ... use of IFRS per se is accompanied by improvements in the information environment leading to lower error or less dispersion in analysts' forecasts, once we control for the degree of enforcement'. They note that this is contrary to the findings of other studies and they suggest that 'A possible explanation for our contrary results is that other studies have often focused on EU countries and the immediate post adoption period. In contrast, we include a longer time period ..., and we explicitly allow for variation in degree of enforcement.'

André et al (2012), reported at Panel 4.11 in relation to comparability, find significant reductions in analyst forecast errors and dispersion following mandatory IFRS adoption in the EU.

The following study looks at the credibility of analysts' forecasts, measured by the strength of market reaction to them.

Panel 3.11: Charitou et al (2012)

Andreas Charitou, Irene Karamanou and Anastasia Kopita, 'Financial analyst stock recommendations and corporate disclosures: complements or substitutes?', look at stock

market price responses to analyst upgrades and downgrades, before and after mandatory IFRS adoption. The sample is 6,894 upgrades and downgrades for mandatory adopters from 14 EU countries over the period 2003-2007. There is a control sample of voluntary adopters.

The authors find 'stronger market reactions to recommendation revision announcements in the post-IFRS period for both downgraded and upgraded stocks'. They also find that this result 'is more pronounced in countries with a strong level of legal enforcement'. The strength of legal enforcement appears to be assessed based on general 'rule of law' indices.

3.2.2 Discussion

With the important exception of Preiato et al (2014), and subject to the qualifications noted below, these studies are agreed in finding that mandatory adoption of IFRS in the EU increased the accuracy of analysts' forecasts and, where they address this question, reduced the dispersion of analysts' forecasts. Charitou et al (2012), though about the credibility of analysts' recommendations rather than the accuracy or dispersion of their forecasts, can also be interpreted as evidence of increased forecast accuracy following mandatory IFRS adoption.

Qualifications to this generally positive summary are:

- Some of the studies go beyond the EU to varying extents. While we have no reason to conclude that their findings would not hold for samples restricted to the EU, we cannot show that they would.
- Two of the studies – Choi et al (2013) and Panaretou et al (2013) – are restricted to the UK, and Panaretou et al (2013) is also restricted to a specific issue.
- With two exceptions – Panaretou et al (2013) and Preiato et al (2014) – their evidence does not go beyond 2007.
- Tan et al (2011) find that the improvement in accuracy only applies to foreign analysts. This is consistent with an overall improvement, but it is interesting that there is no improvement for domestic analysts.
- Byard et al (2011) find that the improvement in accuracy and reduction in dispersion are limited to countries with both 'strong enforcement regimes and domestic accounting standards that differ significantly from IFRS'. They also find that in some cases preparer incentives affect the strength of improvements in accuracy and dispersion.
- Choi et al (2013) find that the improvements in accuracy and dispersion are less pronounced for the initial post-IFRS period.
- Horton et al (2013) find that some of the improvement in accuracy is due to increased comparability rather than increased transparency. Similar to Byard et al (2011), though not quite the same, they find that 'the larger the difference between IFRS earnings and local earnings the larger is the improvement in forecast accuracy'.
- Neel (2014) finds that the improvements in accuracy and dispersion are restricted to firms that experience an improvement in comparability.
- Wang et al (2008) find variation in the results depending on countries' legal origin, and no overall improvement for code law countries.

As the various studies are looking at differently framed questions, with different samples and for different periods, it is conceivable that all their findings are consistent. It may be difficult, though, to reconcile the findings of Byard et al (2011) that the improvements in forecast accuracy and dispersion are restricted to countries with both 'strong enforcement regimes and domestic accounting standards that differ significantly from IFRS' with those of Choi et al (2013) and Wang et al (2008) for the UK. The general view among practitioners and to some

extent among researchers is that domestic accounting standards in the UK were significantly closer to IFRS than were those of other countries – and indeed Byard et al (2011) classify the UK as a ‘low differences’ country. On this basis, it is perhaps the findings of Choi et al (2013) and Wang et al (2008), rather than those of Byard et al (2011), that are surprising as adoption of IFRS might not have been expected to bring a significant increase in transparency for UK firms.

But on one measure of differences²⁹ the UK ranks as a ‘high divergence’ country. On this basis, the findings of Byard et al (2011), rather than those of Choi et al (2013) and Wang et al (2008), are the surprising ones. In our view, the consensus that the UK was a ‘low differences’ country is probably correct, but we note that alternative views are possible.

Preiato et al (2014) potentially cast all the previous studies in a new light. Their results raise the possibility that other researchers’ findings of increased forecast accuracy and reduced forecast dispersion are attributable to better auditing and enforcement of financial reporting rather than to the adoption of IFRS. Although their findings are not analysed so as to present separate results for the EU, it is relevant that they find significant improvements in audit and enforcement in the EU between 2002 and 2005. For example, looking at changes between 2002 and 2005 in the three EU countries with the largest number of publicly traded companies: for France the combined audit and enforcement Preiato et al (2014) index rises from 34 to 48, for Germany from 18 to 42, and for the UK from 32 to 54. As the Preiato et al (2014) indices are much more closely related to financial reporting than the very general indices used by other researchers, and are more up to date, it is at least plausible that their findings provide a more accurate analysis of what actually happened. But until there is further research on these issues, the question must remain an open one.

3.3 Value relevance

3.3.1 Research findings: equity markets

There have been so many studies looking at the effects on value relevance of mandatory IFRS adoption in the EU in relation to equity markets, and the papers’ scope and results are so varied, that it is probably most helpful to tabulate them. We accordingly do so in Tables 3.1-3.11 below. Table 3.1 summarises pan-EU studies. Tables 3.2-3.11 summarise country studies on, respectively: Finland, France, Germany, Greece, Italy, Poland, Portugal, Spain, Sweden and the UK.

Table 3.1: Research on value relevance: pan-EU studies

Paper	Key findings
<p>Platikanova and Nobes (2006): Petya Platikanova and Christopher Nobes, ‘Was the introduction of IFRS in Europe value-relevant?’</p> <p>Number of countries covered: 13 (1 non-EU: Norway)</p> <p>Firms in sample: 3,907 (4% non-EU)</p> <p>Period covered: 2003-2005</p>	<p>The authors look at the information asymmetry component (‘AIC’) of the bid-ask spread to assess value relevance. If value relevance increases, the AIC should fall. Mandatory adoption is deemed to have been in effect from the start of 2005. As the data do not go beyond the end of 2005, mandatory reporting on an IFRS basis to that point will have been interim reports and reconciliations for 2004.</p> <p>The authors find that the AIC component of the bid-ask spread does not decrease after IFRS adoption. The results are analysed by country and by country-group, based on</p>

²⁹ Constructed by Yuan Ding, Ole-Kristian Hope, Thomas Jeanjean and Hervé Stolowy, ‘Differences between domestic accounting standards and IAS: measurement, determinants and implications’ (2007). By contrast, Kee-Hong Bae, Hongping Tan and Michael Welker, ‘International GAAP differences: the impact on foreign analysts’ (2008), classify the UK as a low differences country.

	country legal origins. The results are mixed: eg, AIC increases for UK firms, indicating a decrease in value relevance.
<p>Capkun et al (2008): Vedran Capkun, Anne Cazavan-Jeny, Thomas Jeanjean and Lawrence A. Weiss, 'Earnings management and value relevance during the mandatory transition from local GAAPs to IFRS in Europe'</p> <p>Number of countries covered: 9 (1 non-EU: Norway)</p> <p>Firms in sample: 1,722 (6% non-EU)</p> <p>Period covered: 2004</p>	<p>The authors look at the value relevance of the 2004 local GAAP and IFRS comparatives, and of the reconciliation between the two, in mandatory adopters' 2005 accounts. Their results are 'consistent with ... IFRS earnings disclosures being value relevant'. But they also find that the value relevance of the book value of equity 'is limited to the Local GAAP reports'.</p>
<p>Wang et al (2008): See Panel 3.1 above.</p>	<p>The authors find evidence that the value relevance of earnings increases after mandatory IFRS adoption – for both mandatory and voluntary adopters. For mandatory adopters, this is based on higher abnormal returns³⁰ and a higher information content of earnings in firms' total information environments. For voluntary adopters, it is based only on higher abnormal returns.</p> <p>The authors find value relevance improvements on both bases for the French and Scandinavian groups legal origin groups, on one basis for the English legal origin group, and on neither basis for the German legal origin group. The code law countries as a whole show improvements on both bases.</p>
<p>Morais and Curto (2009): Ana Isabel Morais and José Dias Curto, 'Mandatory adoption of IASB standards: value-relevance and country-specific factors'</p> <p>Number of countries covered: 14</p> <p>Firms in sample: 6,977</p> <p>Period covered: 2000-2005</p>	<p>The authors compare the value relevance of net income and equity book value under local GAAP and voluntary IFRS adoption (2000-2004) and under mandatory IFRS adoption (2005). They find that 'the value relevance of financial information during the period companies applied mandatory IAS/IFRS is higher than for the period during which they applied local accounting standards.' They also find that 'the value relevance of accounting information during the period companies applied IASB standards voluntarily is lower than the value relevance under mandatory application of IASB standards.'</p>
<p>Aharony et al (2010): Joseph Aharony, Ran Barniv and Haim Falk, 'The impact of mandatory IFRS adoption on equity valuation of accounting numbers for security investors in the EU'</p>	<p>The authors look at changes in value relevance of three items between the last year under national GAAP and the first year of mandatory IFRS. The three items are: goodwill, research and development</p>

³⁰ Abnormal returns are the difference between the return on the purchased security and the market return over a given period.

<p>Number of countries covered: 14 (1 non-EU – Norway)</p> <p>Firms in sample: 2,298 (4% non-EU)</p> <p>Period covered: 2004-2005</p>	<p>expense, and revaluation of property, plant and equipment.</p> <p>Their findings suggest that ‘the adoption of ... IFRS has increased the value relevance of the three accounting numbers for investors in equity securities in the EU.’ These findings apply for all three items in all 13 EU countries, except for goodwill in Italy, and research and development expense in Denmark, Portugal and the UK. For Portugal, there are no data for this item; for the other three exceptions, there are statistically insignificant increases in value relevance.</p> <p>The authors also find evidence that ‘the higher the deviation of the three domestic GAAP-based accounting items from their corresponding IFRS values, the greater the incremental value relevance to investors from the switch to IFRS.’</p>
<p>Devalle et al (2010): Alain Devalle, Enrico Onali and Riccardo Magarini, ‘Assessing the value relevance of accounting data after the introduction of IFRS in Europe’</p> <p>Number of countries covered: 5 (France, Germany, Italy, Spain and the UK)</p> <p>Firms in sample: 3,721</p> <p>Period covered: 2002-2007</p>	<p>The authors find that, for the sample as a whole, ‘IFRS are found to have increased value relevance of earnings, while value relevance of book value of equity has decreased.’</p> <p>The findings for individual countries are reported in the relevant tables below.</p>
<p>Agostino et al (2011): Mariasosaria Agostino, Danilo Drago and Damiano B. Silipo, ‘The value relevance of IFRS in the European banking industry’</p> <p>Number of countries covered: 15</p> <p>Firms in sample: 221</p> <p>Period covered: 2000-2006</p>	<p>The authors find that for the sample as a whole the value relevance of earnings increased after IFRS adoption.</p> <p>For equity book value the results are ‘less clear-cut’, but the authors state that its value relevance ‘tends to decrease and to be insignificant’. However, the authors find that the value relevance of equity book value increases for banks that are larger and that are rated (ie, by credit ratings agencies), which they classify as ‘more transparent banks’.</p>
<p>Aubert and Grudnitski (2011): François Aubert and Gary Grudnitski, ‘The impact and importance of mandatory adoption of International Financial Reporting Standards in Europe’</p> <p>Number of countries covered: 12 (2 non-EU: Norway and Switzerland)</p> <p>Firms in sample: 3,530 (9% non-EU)</p>	<p>The authors look at, among other things, the value relevance of IFRS and local GAAP earnings for 2004 disclosed in firms’ 2005 accounts. They find that there is ‘no statistical support for any of the samples that accounting information produced under IFRS was any more value relevant than the accounting information derived using [local GAAP].’</p>

Period covered: 2004	
<p>Clarkson et al (2011): Peter Clarkson, J. Douglas Hanna, Gordon D. Richardson and Rex Thompson, 'The impact of IFRS adoption on the value relevance of book value and earnings'</p> <p>Number of countries covered: 15 (2 non-EU: Australia and Norway)</p> <p>Firms in sample: 1,624 in common law countries (55% non-EU); 1,864 in code law countries (6% non-EU)</p> <p>Period covered: 2004</p>	<p>The authors look at information disclosed for 2004, on local GAAP and IFRS bases, in mandatory adopters' 2005 accounts. They divide the sample into common law and code law groups and find similar value relevance for earnings and book values on the two bases for each group.</p>
<p>Sahut et al (2011): Jean-Michel Sahut, Sandrine Boulerne and Frédéric Teulon, 'Do IFRS provide better information about intangibles in Europe?'</p> <p>Number of countries covered: 10 (1 non-EU: Norway)</p> <p>Firms in sample: 1,855 (4% non-EU)</p> <p>Period covered: 2002-2007</p>	<p>The authors' results 'suggest that the book value of other intangible assets [ie, other than goodwill] ... has more informative value for explaining the price of the share and stock market returns ... under IFRS than local GAAP'. But 'the financial information conveyed by capitalized goodwill [appears] to be less relevant under IFRS than with local GAAP'.</p>
<p>Barth et al (2012): Mary E. Barth, Wayne R. Landsman, Mark Lang and Christopher Williams, 'Are IFRS-based and US GAAP-based accounting amount comparable?'</p> <p>Number of countries covered: 27 (11 non-EU)</p> <p>Firms in sample: 3,400 (35% non-EU; of the 17,714 firm-year observations, 24% are non-EU)</p> <p>Period covered: 1992-2009</p>	<p>This paper, as its title indicates, looks primarily at comparability between IFRS and US GAAP accounting amounts. But one of the ways it does this is by looking at 'value relevance comparability'.</p> <p>The authors find that US GAAP amounts are more value relevant than IFRS amounts before and after adoption, but that the gap between the two narrows after adoption. This perhaps implies an increase in value relevance for the IFRS amounts.</p>
<p>Zéghal et al (2012): Daniel Zéghal, Sonda M. Chtourou and Yosra M. Fourati, 'The effect of mandatory adoption of IFRS on earnings quality: evidence from the European Union'</p> <p>Number of countries covered: 15</p> <p>Firms in sample: 1,547</p> <p>Period covered: 2002-2004, 2006-2007</p>	<p>The authors find a decrease in the value relevance of net income and equity book value following IFRS adoption.</p>
<p>Barth et al (2014): Mary E. Barth, Wayne R. Landsman, Danqing Young and Zili Zhuang, 'Relevance of differences between net income based on IFRS and domestic standards for European</p>	<p>The authors look at information disclosed for 2004, on domestic GAAP and IFRS bases, in mandatory adopters' 2005 accounts. The sample is divided into three country groups: English, Scandinavian and French/German.</p>

<p>firms'</p> <p>Number of countries covered: 15 (2 non-EU: Norway and Switzerland)</p> <p>Firms in sample: 276 financial firms, 925 non-financial firms</p> <p>Period covered: 2004</p>	<p>The authors look at the value relevance of the net income and book value adjustments to IFRS for 2004, and at 10 specific income adjustments arising from differences in particular standards.</p> <p>The authors find that 'for both financial and non-financial firms pooled across country groups ... the aggregate net income and equity book value adjustments are significantly positively associated with share prices incremental to domestic net income and equity book value.'</p> <p>They also find that 'net income adjustments relating to different individual standards are incrementally value relevant for financial and non-financial firms. Most notably, the adjustment to net income relating to IAS 39 [<i>Financial Instruments: Recognition and Measurement</i>] is value relevant for financial firms but not non-financial firms.' For financial firms, this is the case for all three country groups.</p>
--	---

Table 3.2: Research on value relevance: Finland

Paper	Key findings
<p>Lantto (2007): See Panel 3.13 below.</p>	-
<p>Schadewitz and Vieru (2007): Hannu Schadewitz and Markku Vieru, 'How markets value and response to IFRS reconciliations adjustments in Finland'</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 86 or 46 for different tests</p> <p>Period covered: 2004</p>	<p>The authors look at the effects of IFRS/Finnish GAAP reconciliation adjustments for 2004. They report that 'Some evidence of value relevance is found in IFRS adjustments on earnings but not with IFRS adjustments in shareholders' equity.'</p>
<p>Jarva and Lantto (2012): See Panel 3.22 below.</p>	<p>The authors find that 'book values of assets and liabilities measured under IFRS are no more value relevant than they are under [Finnish Accounting Standards]'</p>

Table 3.3: Research on value relevance: France

Paper	Key findings
<p>Devalle et al (2010): See Table 3.1 above.</p>	<p>The authors find that for France 'value relevance of earnings has ... increased, while that of book value of equity has decreased'.</p>

Table 3.4: Research on value relevance: Germany

Paper	Key findings
<p>Guenther et al (2009): Nina Guenther, Bernhard Gegenfurtner, Christoph Kaserer and Ann-Kristin Achleitner,</p>	<p>The authors look at the value relevance of net income and equity book value. They report mixed findings, but state that 'By and</p>

<p><i>International Financial Reporting Standards and Earnings Quality: The Myth of Voluntary vs. Mandatory Adoption</i></p> <p>Number of countries covered: 1</p> <p>Firms in sample: 124 (maximum number of mandatory adopters – sample varies from year to year. The paper also looks at voluntary adopters)</p> <p>Period covered: 1998-2008</p>	<p>large, [the] results suggest that value relevance did not clearly increase or decrease after IFRS adoption no matter whether IFRS was chosen on a voluntary or a mandatory basis.'</p>
<p>Paananen and Lin (2009): Mari Paananen and Hengshiu Lin, 'The development of accounting quality of IAS and IFRS over time: the case of Germany'</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 107-448 (varies for different periods)</p> <p>Period covered: 2000-2006</p>	<p>The authors compare the value relevance of accounting information prepared in accordance with IAS/IFRS for three periods: 2000-2002 (voluntary), 2003-2004 (voluntary) and 2005-2006 (mandatory). They find that 'earnings and book value of equity are becoming less value relevant' during the mandatory IFRS period compared with the two voluntary IAS/IFRS periods.</p>
<p>Devalle et al (2010): See Table 3.1 above.</p>	<p>The authors find that for Germany 'value relevance of earnings has increased after the introduction of IFRS, while that of book value of equity has decreased'.</p>

Table 3.5: Research on value relevance: Greece

Paper	Key findings
<p>Bellas et al (2007): Athanasios Bellas, Kanellos Toudas and Konstantinos Papadatos, 'The consequences of applying International Accounting Standards (IAS) to the financial statements of Greek companies'</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 83 (it is stated that 'an overwhelming majority' of the firms in the sample were mandatory adopters, so voluntary adopters do not appear to have been excluded)</p> <p>Period covered: 2004-2005</p>	<p>The authors find that IFRS book value has greater value relevance than Greek GAAP book value, but that Greek GAAP net income has greater value relevance than IFRS net income. Taking book value and net income together, the authors find that Greek GAAP amounts have greater value relevance than IFRS amounts.</p>
<p>Karampinis and Hevas (2011): Nikolaos I. Karampinis and Dimosthenis L. Hevas, 'Mandating IFRS in an unfavorable environment: the Greek experience'</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 203 (maximum – sample varies from year to year)</p>	<p>The authors find 'insufficient empirical evidence to support that mandatory IFRS adoption had a positive impact on the value relevance of accounting earnings reported by Greek firms.'</p>

Period covered: 2002-2007	
Tsalavoutas et al (2012): Ioannis Tsalavoutas, Paul André and Lisa Evans, 'The transition to IFRS and the value relevance of financial statements in Greece' Number of countries covered: 1 Firms in sample: 210-249 Period covered: 2001-2008	The authors find 'no significant change' in 'the combined value relevance of book value of equity and net income before and after the mandatory transition to IFRS in Greece'. They also find, however, that the value relevance of the book value of equity is 'significantly greater' after IFRS adoption, while there is 'some evidence' of a decrease in the value relevance of net income.

Table 3.6: Research on value relevance: Italy

Paper	Key findings
Morricone et al (2009): Serena Morricone, Raffale Oriani and Maurizio Sobrero, 'The value relevance of intangible assets and the mandatory adoption of IFRS' Number of countries covered: 1 Firms in sample: 267 Period covered: 1996-2006	The authors find that 'Italian companies experienced a statistically significant decrease in the value relevance of intangible assets after the accounting standards change. In particular, IFRS adoption had a negative effect on the value relevance of goodwill.' They also find that 'the aggregate of the other intangible assets ... exhibits overall lower value relevance after IFRS adoption.'
Paglietti (2009): Paola Paglietti, 'Investigating the effects of the EU mandatory adoption of IFRS on accounting quality: evidence from Italy' Number of countries covered: 1 Firms in sample: 160 Period covered: 2002-2007	The author finds that 'book value of equity and earnings under IFRS are jointly and systematically more value relevant than the corresponding [Italian GAAP] amounts. In addition, ... earnings increase their relative value relevance more than book value of equity when moving to IFRS'. She also finds that 'IFRS adoption particularly increases the value relevance for financial companies'.
Devalle et al (2010): See Table 3.1 above.	The authors find that for Italy 'the value relevance of both earnings and book value of equity has ... decreased'.

Table 3.7: Research on value relevance: Poland

Paper	Key findings
Dobija and Klimczak (2010): Dorota Dobija and Karol Marek Klimczak, 'Development of accounting in Poland: market efficiency and the value relevance of reported earnings' Number of countries covered: 1 Firms in sample: 43-133 (varies from year to year) Period covered: 2001-2008 (also covers 1997-2000 for other purposes)	The authors find no improvement in the value relevance of earnings after mandatory adoption of IFRS.

Table 3.8: Research on value relevance: Portugal

Paper	Key findings
Oliveira et al (2010): Lídia Oliveira, Lúcia Lima Rodrigues and Russell Craig, 'Intangible assets and value relevance: evidence from the Portuguese stock exchange' Number of countries covered: 1 Firms in sample: 32 on average (varies from year to year) Period covered: 1998-2008	The authors find that 'the change to IAS/IFRS appears to have had no effect on the value relevance of the book value of equity' and that in the case of earnings 'their value relevance declined with the adoption of IAS/IFRS'. They also find that 'For identifiable intangibles as a whole, the change to IAS/IFRS had no impact on their value relevance. However, evidence suggests there is a positive effect on the value relevance of goodwill.'

Table 3.9: Research on value relevance: Spain

Paper	Key findings
Callao et al (2007): Susana Callao, José I. Jarne and José A. Laínez, 'Adoption of IFRS in Spain: effect on the comparability and relevance of financial reporting' Number of countries covered: 1 Firms in sample: 26 Period covered: 2004-2005	The authors look at, among other things, the effect of IFRS adoption on Spanish firms' book to market ratio. Their data come from the firms' first interim accounts prepared under IFRS, which give information for the preceding full-year and interim periods on both IFRS and Spanish GAAP bases. The authors find that 'the gap between book and market value is wider when IFRS are applied than when Spanish standards are utilized.'
Devalle et al (2010): See Table 3.1 above.	The authors find that for Spain 'value relevance of both earnings and book value of equity has decreased'.

Table 3.10: Research on value relevance: Sweden

Paper	Key findings
Paananen (2008): Mari Paananen, 'The IFRS adoption's effect on accounting quality in Sweden' Number of countries covered: 1 Firms in sample: 376 Period covered: 2003-2006 (but most tests compare 2004 and 2006)	The author finds 'some indications' of a decline in value relevance for earnings and book value of equity following IFRS adoption, but it is not statistically significant.

Table 3.11: Research on value relevance: UK

Paper	Key findings
Paananen and Parmar (2008): Mari Paananen and Nimita Parmar, 'The adoption of IFRS in the UK' Number of countries covered: 1 Firms in sample: 876 on average (varies from	The authors find no overall increase in value relevance following IFRS adoption, but do find an increase in the value relevance of the book value of equity and a decrease in the value relevance of 'abnormal earnings' ('earnings minus the normal return on the book value of shareholders' equity').

<p>year to year)</p> <p>Period covered: 2003-2006</p>	
<p>Devalle et al (2010): See Table 3.1 above.</p>	<p>The authors find that for the UK 'the value relevance of both earnings and book value of equity has increased'.</p>
<p>Horton and Serafeim (2010): Joanne Horton and George Serafeim, 'Market reaction to and valuation of IFRS reconciliation adjustments: first evidence from the UK'</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 297</p> <p>Period covered: 2004</p>	<p>The authors look at the value relevance of reconciliation adjustments made by firms to adjust the 2004 comparatives in their 2005 accounts for the differences between UK GAAP and IFRS. In a number of cases, firms announced these adjustments ahead of their first IFRS results.</p> <p>The authors find 'significant negative abnormal returns ... for firms reporting a negative reconciliation adjustment on UK GAAP earnings. Abnormal returns around the reconciliation adjustment are associated with the magnitude of the earnings reconciliation.'</p> <p>They also find that 'While the informational content of the positive earnings adjustment is value-relevant before disclosure, for negative earnings adjustments it is value relevant only post disclosure, consistent with managers delaying the communication of bad news until IFRS compliance.'</p> <p>The authors also find that a number of specific IFRS adjustments are value relevant but that 'only impairment of goodwill and deferred taxes reveal new information'.</p>
<p>Samarasekera et al (2012); Nelly Samarasekera, Millicent Chang and Ann Tarca, 'IFRS and accounting quality: the impact of enforcement'</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 495 (246 cross-listed with a control sample of 249 not cross-listed)</p> <p>Period covered: 2000-2008</p>	<p>The authors find increased value relevance for their sample as a whole (cross-listed and not cross-listed), for earnings and book value of equity, following IFRS adoption.</p>
<p>Amel-Zadeh et al (2013): Amir Amel-Zadeh, Jonathan Faasse, Kevin Li and Geoff Meeks, 'Has accounting regulation secured more valuable goodwill disclosures?'</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 228-305 (varies from year to year; there is also a control sample of Alternative Investment Market firms – non-adopters for the specific years in question – for some tests)</p>	<p>The authors' findings 'suggest that goodwill impairment [required under IFRS], in contrast to goodwill amortisation [the predominant UK practice pre-IFRS], is negatively associated with market values' – ie, it is value relevant.</p> <p>They also find that 'following the adoption of IFRS the value relevance of earnings and prior goodwill increased'. However, 'the value relevance of impairments [a minority practice in the UK pre-IFRS] decreased suggesting that investors assigned higher reliability to the</p>

Period covered: 1997-2011 (2005-2006 for some tests)	more stringent impairment test under UK GAAP compared to IFRS.'
Choi et al (2013): See Panel 3.6 above.	The authors find that 'the value relevance of reported earnings is significantly larger' under IFRS.

It can be argued that if financial reporting provides fresh information to the market, this should be reflected in increased return volatility, ie, more volatile share prices at the time of the disclosures. The following study looks at this aspect of value relevance.

Panel 3.12: Landsman et al (2012)

Wayne R. Landsman, Edward L. Maydew and Jacob R. Thornock, 'The information content of annual earnings announcements and mandatory adoption of IFRS', look at the effects of mandatory IFRS adoption on, among other things, abnormal return volatility. The sample comprises 10,499 firm-years (31% non-EU) for firms from 16 countries (five non-EU). The period covered is 2002-2007. There is a control sample of non-IFRS adopters, mainly from Japan and Canada.

The authors find that 'firms from IFRS adopting countries experienced a greater increase in abnormal return volatility ... than firms from non-IFRS adopting countries'. They also find that 'firms from countries with strong enforcement experienced a greater change ... than firms from countries with weak enforcement.'

We also report here a Finnish study that uses survey techniques to assess whether additional information provided under IFRS is regarded as useful.

Panel 3.13: Lantto (2007)

Anna-Maija Lantto, 'Does IFRS improve the usefulness of accounting information in a code-law country', reports the result of an opinion survey of Finnish financial analysts (20), preparers (20) and auditors (30). The questions asked focus on whether information provided under IFRS, but not under Finnish GAAP, is considered relevant (financial analysts) and whether information provided under IFRS, but not under Finnish GAAP, that requires the use of judgment is considered reliable (preparers and auditors). The questions for investment analysts use the word 'useful' rather than 'relevant', and the questions for preparers and auditors use the words 'gives "true view"' rather than 'reliable'. The questionnaire was emailed in November 2005, before the first year of mandatory IFRS adoption had been completed.

The author finds that the survey responses of the financial analysts 'support the notion that new information provided by IFRS is relevant'. On reliability, 'Even though the results show that managers and auditors deem information prepared under many IFRS/IAS standards reliable, the results show that they are, overall, neutral towards the reliability of information prepared by using judgment under IFRS.'

3.3.2 Research findings: credit markets

A small number of papers look at various aspects of value relevance in relation to credit markets.

Panel 3.14: Florou et al (2013)

Annita Florou, Urska Kosi and Peter F. Pope, 'Are international accounting standards more credit relevant than domestic standards?', look at whether the credit relevance of financial statements, defined as their ability to explain credit ratings, is higher after mandatory IFRS adoption. Their sample comprises 202 firms over the period 2000-2009. The sample is from 17 countries, four of them non-EU, and 25% of the firms in the sample are non-EU. The credit

ratings are from Standard & Poor's. They also compare the firms in the test sample with a matched control sample of US firms.

The authors find an improvement in credit relevance for mandatory IFRS adopters, but a decline in credit relevance for the US firms in the matched sample over the same period. They also find that 'the increase in credit relevance is particularly pronounced ... for IFRS adopters with large first-time [adoption reconciliation adjustments], where the impact of IFRS is expected to be greater'.

The authors test whether their findings are different if they exclude the five countries (four of them from the EU), where Christensen et al (2013) (see Panel 6.4), identify significant enforcement changes about the time of mandatory IFRS adoption. Their exclusion does not affect the result.

The authors interpret their findings as 'indicating that IFRS provide more reliable and informative financial statements to creditors than the domestic GAAP financial statements that they replace'. They caution, though, that their findings might not apply to ratings from other agencies.

Panel 3.15: Bhat et al (2014)

Gauri Bhat, Jeffrey L. Callen and Dan Segal, 'Credit risk and IFRS: the case of credit default swaps', look at the effect of mandatory IFRS adoption on the pricing of credit default swaps (CDSs). In matched samples, the test sample comes from 12 countries (two non-EU) and comprises 105 firms (21 non-EU), the control sample is 234 US firms. The period covered is 2003-2008. The authors find that 'the adoption of IFRS did not change the credit risk informativeness of [the] accounting variables [tested] as reflected in CDS spreads'.

Panel 3.16: Wu and Zhang (2014)

Joanna Shuang Wu and Ivy Xiyang Zhang, 'The adoption of internationally recognized accounting standards: implications for the credit markets', look at the sensitivity of credit ratings to accounting information, including mandatory IFRS adoption. Their sample of mandatory adopters comprises 1,917 firm-years (22% for non-EU companies) from 18 countries (six non-EU) and covers 1990-2007. Credit relevance is measured by the sensitivity of Moody's credit ratings to various accounting ratios.

The authors find that 'mandatory adoption is associated with significant increases in the credit relevance of accounting information [but] only in countries with stronger rule of law'. It is not clear from the paper which countries are regarded as having a stronger rule of law, but it is indicated that Germany and the UK do not come into this category.

3.3.3 Discussion

There are substantial differences in the research findings on the effects of mandatory IFRS adoption on value relevance in relation to equity markets. In the case of the 13 pan-European studies reported at Table 3.1, the clear majority (nine out of 13) find some increase in value relevance after IFRS adoption, more so for earnings than for the book value of equity. Two papers – Aubert and Grudnitski (2011) and Clarkson et al (2011) – have no significant findings either way. Sahut et al (2011) find decreased value relevance for goodwill, but increased value relevance for other intangibles. Devalle et al (2010), who find increased value relevance for earnings, find reduced value relevance for the book value of equity. Platikanova and Nobes (2007) find an increase in the information asymmetry component of bid-ask spreads (suggesting reduced transparency). Zéghal et al (2012) find reduced value relevance for both earnings and book value of equity.

There is no obvious explanation for all these differences, except that they must reflect differences in samples, periods covered and methodology. Four of the 13 papers are based on comparative information for 2004, and another three go no further than 2005. The common law sample in Clarkson et al (2011) is predominantly non-EU, so presumably should be

disregarded anyway for our purposes. And 24% of the sample in Barth et al (2012) are non-EU firms, which may affect their findings.

The findings that most require explanation are perhaps those of Zéghal et al (2012). The authors extend their sample to financial statements for 2006 and 2007, which is further than most of the other studies go, and may help to explain their distinctive findings. It would be useful to be able to compare the paper's findings for IFRS adopters with a control sample of non-adopters.

Value relevance studies look at the relationship between financial reporting information and share prices or changes in share prices, and on that basis we include Landsman et al (2012), which looks at share price volatility, as a value relevance study. It provides support for the view that IFRS adoption increased value relevance, but as 31% of its sample is non-EU, it is not clear how far its findings are applicable to the EU.

The findings for the country studies are even more mixed, as might be expected given that the broader studies average out the findings for particular countries. Overall, the findings of the country studies seem to be evenly balanced, but with findings for the UK generally indicating an increase in value relevance following IFRS adoption. It is possible that the differences in the country findings reflect differences in the quality of the financial reporting environment and enforcement (discussed in, eg, Lee et al (2008) – see Panel 5.9), but even for individual countries it is not clear what the overall findings are.

Morricone et al (2009) suggest that their negative findings in relation to the value relevance of goodwill may reflect the introduction of a more discretionary approach to goodwill measurement under IFRS (based on impairment testing) 'in a reporting environment characterized by a weak corporate governance system and low financial transparency'. They also point out that Italian GAAP (unlike IFRS) allowed the recognition of internally generated intangibles, which might help explain their negative findings for other intangibles. Aharony et al (2010)'s findings on goodwill for Italy, a statistically insignificant increase in value relevance after IFRS adoption, do not square with those of Morricone et al (2009). This may reflect the different periods covered by the two studies: 11 years in the case of Morricone et al (2009) and two years in the case of Aharony et al (2010).

The three papers on value relevance and credit markets follow the usual pattern of divergent but not necessarily incompatible findings. Florou et al (2013) find that financial reporting information is better able to explain credit ratings after IFRS adoption. Conversely, Bhat et al (2014) find that mandatory IFRS adoption has no effect on the informativeness of accounting data for the pricing of credit default swaps. The test sample for this paper is not particularly large (105 firms). Wu and Zhang (2014) find that IFRS adoption increases the credit relevance of accounting information, but only in countries with a stronger rule of law. The paper's categorisation of countries in this respect is somewhat surprising in some cases. All three of these papers have significant non-EU samples.

3.4 Accounting quality

3.4.1 Research findings

As with value relevance, there have been a large number of studies looking at the effects on accounting quality of mandatory IFRS adoption in the EU, and again their scope and results are so varied, that it is probably most helpful to tabulate them. We accordingly do so in Tables 3.12-3.19 below. Table 3.12 summarises pan-EU studies. Tables 3.13-3.19 summarise country studies on, respectively: Finland, France, Germany, Greece, Italy, Sweden, and the UK and Ireland.

Table 3.12: Research on accounting quality: pan-EU studies

Paper	Key findings
<p>Cai et al (2008):³¹ Lei Cai, Asheq Rahman and Stephen Courtenay, 'The effect of IFRS and its enforcement on earnings management: an international comparison'</p> <p>Number of countries covered: 14 EU; 7 non-EU mandatory adopters; 11 non-adopters</p> <p>Firms in sample: 5,887 mandatory adopters in, eg, 2006 (varies from year to year: for the 2006 mandatory adopters 39% are non-EU)</p> <p>Period covered: 2000-2006</p>	<p>The paper does not distinguish between voluntary adopter firms and non-adopters before mandatory adoption or between voluntary adopter firms and mandatory adopters after mandatory adoption.</p> <p>For mandatory adopters as a whole, the authors find an increase in earnings management in 2005 relative to 2004, but a decrease in 2006 relative to 2004. Using the mean reported results, the mandatory adopters show an increase in earnings management for 2005 relative to a group of non-adopting countries (excluding the US) and a decrease relative to the US. For 2006 (v 2004), the mandatory adopters show a decrease in earnings management relative to both the group of non-adopting countries (excluding the US) and the US. It is not clear how far these results are statistically significant.</p>
<p>Callao and Jarne (2010): Susana Callao and José Ignacio Jarne, 'Have IFRS affected earnings management in the European Union?'</p> <p>Number of countries covered: 11</p> <p>Firms in sample: 1,408</p> <p>Period covered: 2003-2006</p>	<p>The authors find an increase in discretionary accruals following IFRS adoption. At the country level, there is a statistically significant increase in only France, Spain and the UK.</p>
<p>Chen et al (2010): Huifa Chen, Qingliang Tang, Yihong Jiang and Zhijun Lin, 'The role of International Financial Reporting Standards in accounting quality: evidence from the European Union'</p> <p>Number of countries covered: 15</p> <p>Firms in sample: 2,074-3,132 (varies from year to year)</p> <p>Period covered: 2000-2007</p>	<p>The authors find evidence of less management of earnings towards a target, a smaller magnitude of discretionary accruals, and higher accruals quality. They also find evidence of more earnings smoothing and less timely recognition of large losses. Overall, the authors interpret their findings as showing a marginal improvement in accounting quality.</p>
<p>Piot et al (2010): Charles Piot, Pascal Dumontier and Rémi Janin, 'IFRS consequences on accounting conservatism within Europe'</p> <p>Number of countries covered: 22</p> <p>Firms in sample: 5.464</p> <p>Period covered: 2001-2008</p>	<p>The authors find that 'conditional conservatism, as proxied by the asymmetric timeliness of [accounting recognition of] bad vs good news, has <i>decreased</i> under IFRS'. They also find that 'the country-level magnitude of this IFRS effect is positively associated with the distance between IFRS and pre-existing local GAAP' – ie, the larger the change in accounting on adoption of IFRS, the larger the decrease in conditional</p>

³¹ Cai et al (2014), reported later in this table, appears to be in substance an extension of this paper.

	<p>conservatism.</p> <p>The authors comment that 'generalizing the use of IFRS under the <i>one size fits all</i> principle appears to be counterproductive'.</p>
<p>Aubert and Grudnitski (2011): See Table 3.1 above. In some respects the accounting quality tests in this paper differ in coverage from that reported in Table 3.1.</p> <p>Number of countries covered: 12 or 11 (2 non-EU: Norway and Switzerland)</p> <p>Firms in sample: 3,530 (9% non-EU) or 3,480 (10% non-EU)</p> <p>Period covered: 2004</p>	<p>The authors find that, for the sample as a whole, the timeliness of loss recognition is greater under IFRS than under local GAAP, but the results, they say, only 'hinted of statistical significance'.</p> <p>For accruals quality, they find 'some degree of statistical significance for IFRS producing higher accrual quality than [local GAAP] for firms in the Greek, Finnish and Swedish samples.' These country results are repeated in the relevant tables below.</p>
<p>García Osma and Pope (2011): Beatriz García Osma and Peter F. Pope, 'Strategic balance sheet adjustments under first-time IFRS adoption and the consequences for earnings quality'</p> <p>Number of countries covered: 20 (6 non-EU)</p> <p>Firms in sample: 3,570 (35% non-EU)</p> <p>Period covered: 1999-2008</p>	<p>The authors find no evidence of a consistent improvement in earnings quality across all IFRS adoption countries. They find that abnormal balance sheet adjustments on IFRS adoption tend to be associated with lower earnings quality in subsequent periods. They also find that such adjustments are less likely in countries with stronger enforcement mechanisms.</p>
<p>Gebhardt and Novotny-Farkas (2011): Günther Gebhardt and Zoltan Novotny-Farkas, 'Mandatory IFRS adoption and accounting quality of European banks'</p> <p>Number of countries covered: 12</p> <p>Firms in sample: 90 (all banks)</p> <p>Period covered: 2000-2007</p>	<p>The authors look at whether the transition from local GAAP to mandatory IFRS affected accounting quality in relation to loan loss provisions. They find that the change to IFRS reduces income smoothing (an improvement in quality), but also reduces timely loss recognition (a reduction in quality). They also find that the reduction in income smoothing is less pronounced in countries with stricter banking supervision and widely dispersed bank ownership and for EU banks cross-listed in the US.</p>
<p>Houqe et al (2011): Muhammad Nurul Houqe, Tony van Zijl, Keitha Dunstan and Wares Karim, 'The effect of IFRS adoption and investor protection on earnings quality around the world'</p> <p>Number of countries covered: 46 (33 non-EU, including non-IFRS adopters)</p> <p>Firms in sample: 5,926-19,442 (varies from year to year; 84% of firm-years are non-EU)</p> <p>Period covered: 2000-2007</p>	<p>The authors find that mandatory IFRS adoption in an environment of weak investor protection does not improve earnings quality (measured by the extent of discretionary accruals), but that mandatory IFRS adoption does improve earnings quality where investor protection is stronger. The paper does not present separate results for the EU, but the authors find that excluding the EU from their sample does not affect their findings.</p>

<p>Leventis et al (2011): Stergios Leventis, Panagiotis E. Dimitropoulos and Asokan Anandarajan, 'Loan loss provisions, earnings management and capital management under IFRS: the case of EU commercial banks'</p> <p>Number of countries covered: 18(1 non-EU: Switzerland)</p> <p>Firms in sample (all banks): 56 (and 35 voluntary adopters)</p> <p>Period covered: 1999-2008</p>	<p>The authors find that earnings management using loan loss provisions is significantly reduced after IFRS adoption. They also find that earnings management is more pronounced for riskier banks.</p>
<p>Sun et al (2011): Jerry Sun, Steven F. Cahan and David Emanuel, 'How would the mandatory adoption of IFRS affect the earnings quality of US firms? Evidence from cross-listed firms in the US'</p> <p>Number of countries covered: 23 (6 non-EU)</p> <p>Firms in sample: 189 (average – varies from year to year. All cross-listed in the US)</p> <p>Period covered: 2000-2008</p>	<p>The authors examine the effects of mandatory IFRS adoption on five measures of earnings quality. They find evidence of improved earnings quality for just two: 'small positive earnings' and 'earnings persistence'. As cross-listed firms for the pre-IFRS period effectively had to comply with US GAAP, the findings appear to provide evidence of compliance with IFRS leading, in these two respects, to higher earnings quality than does compliance with US GAAP.³²</p>
<p>Aubert and Grudnitski (2012): François Aubert and Gary Grudnitski, 'Analysts' estimates: what they could be telling us about the impact of IFRS on earnings manipulation in Europe'</p> <p>Number of countries covered: 21 (3 non-EU: Norway, Switzerland and Turkey)</p> <p>Firms in sample: 1,857 in 2006 (varies from year to year; 14% of the total firm-years in the sample are for non-EU firms)</p> <p>Periods covered: 1997-2003, 2006-2008</p>	<p>The paper is based on the theory that the gap between reported earnings and investment analysts' after-the-event earnings consensus (a basis for forecasting future earnings) is a measure of earnings manipulation.</p> <p>The authors find 'a decline in the magnitude of the proxy for earnings manipulation coincidental with IFRS adoption'. They suggest that this is because 'financial reporting under IFRS helps analysts separate permanent from transitory earnings better than under local accounting regimes'.</p>
<p>Barth et al (2012): See Table 3.1 above.</p>	<p>As noted earlier, this paper looks primarily at the comparability of US GAAP and IFRS amounts before and after IFRS adoption. However, the authors find an increase in 'accounting system comparability' after IFRS adoption, which their findings suggest is partly attributable to accounting quality improvements among IFRS adopters relating to earnings smoothing, accrual quality and timeliness.</p>
<p>Zéghal et al (2012): See Table 3.1 above.</p>	<p>The authors find evidence of a reduction in earnings management (an improvement in</p>

³² The authors, from universities in Canada and New Zealand, express surprise that it should be possible to achieve higher earnings quality than under US GAAP.

	<p>accounting quality), but also of reductions in timeliness – see below – and conditional conservatism (deteriorations in accounting quality), following mandatory IFRS adoption.</p> <p>For two of the three criteria used in judging earnings management, the results are driven by firms in those countries ‘where the distance between the pre-existing national GAAP and IFRS is important’.</p> <p>Timeliness is defined as ‘the ability of earnings to reflect good news and bad news incorporated in [stock market] returns’.</p>
<p>Ahmed et al (2013): Anwer S. Ahmed, Michael Neel and Dechun Wang, ‘Does mandatory adoption of IFRS improve accounting quality? Preliminary evidence’</p> <p>Number of countries covered: 20 (6 non-EU; 15 other non-EU, non-IFRS countries are used for benchmark purposes)</p> <p>Firms in sample: 1,631 (18% from non-EU countries. There are a further 1,631 non-EU firms in the benchmark sample)</p> <p>Period covered: 2002-2004, 2006-2007</p>	<p>The authors find evidence of an increase in income smoothing, a significant increase in aggressive reporting of accruals, and a significant reduction in timeliness of loss recognition. They do not find evidence consistent with a change in meeting or beating earnings targets. All these findings are relative to the results for non-IFRS firms. Overall, the authors interpret their findings as showing a decrease in accounting quality.</p> <p>The authors report that ‘the effects we observe hold mainly for IFRS adopters in strong enforcement countries’. They suggest that the explanation may be that ‘because IFRS are principles-based standards, they are looser than domestic standards, on average’, and ‘looser standards are more difficult to enforce’.</p>
<p>Capkun et al (2013): Vedran Capkun, Daniel W. Collins and Thomas Jeanjean, ‘The effect of IAS/IFRS adoption on earnings management (smoothing): a closer look at competing explanations’</p> <p>Number of countries covered: 29 (8 non-EU)</p> <p>Firms in sample: 3,853 (16% non-EU)</p> <p>Period covered: 1994-2009</p>	<p>The authors find an increase in earnings management for both voluntary and mandatory adopters following mandatory adoption of IFRS in 2005. They also find that ‘firms from countries with less (more) local GAAP flexibility exhibit greater (less) evidence of increases in earnings smoothing following mandatory adoption of IFRS’.</p> <p>The authors’ explanation for their findings is that ‘Compared to earlier IAS/IFRS standards and many countries’ domestic GAAP standards, ... the IFRS standards that went into effect in 2005 provide greater flexibility of accounting choices because of vague criteria, overt and covert options, and subjective estimates that are allowed under these principle-based standards.’</p>
<p>André et al (2014): Paul André, Andrei Filip and Luc Paugam, ‘Impact of mandatory IFRS adoption on conditional conservatism in Europe’</p> <p>Number of countries covered: 16 (2 non-EU:</p>	<p>The authors ‘document an overall decline of the degree of conditional conservatism and a greater decline in strong enforcement countries’. They also ‘demonstrate that the decline of conditional conservatism is more pronounced for firms carrying intangible</p>

<p>Norway and Switzerland)</p> <p>Firms in sample: 7,251 firm-year observations (7% non-EU)</p> <p>Period covered: 2002-2007.</p>	<p>assets and goodwill in their balance sheets, items for which impairment tests rely on unverifiable fair value estimates.'</p>
<p>Cai et al (2014):³³ Lei Cai, Asheq Rahman and Stephen Courtenay, 'The effect of IFRS adoption conditional upon the level of pre-adoption divergence'</p> <p>Number of countries covered: 31 (8 non-EU mandatory adopters; 9 non-EU non-adopters)</p> <p>Firms in sample: 4,795 mandatory adopters in, eg, 2005 (varies from year to year: for the 2005 mandatory adopters 37% are non-EU)</p> <p>Period covered: 2000-2009</p>	<p>The study does not distinguish between voluntary adopter firms and non-adopters before mandatory adoption or between voluntary adopter firms and mandatory adopters after mandatory adoption.</p> <p>For mandatory adopters as a whole, the authors finds an increase in earnings management in the first year of IFRS adoption relative to the last year before IFRS, but a decrease in the first two, three, four and five years of IFRS adoption relative respectively to the last two, three, four and five years before adoption. They also find that IFRS adopters show a reduction in earnings management over the period 2004-2009 relative to a control sample of US and Canadian firms.</p> <p>The authors divide their sample into countries that show high or low divergence between prior local GAAP and IFRS, and countries that have high or low levels of enforcement. They find that 'countries experience a greater drop in earnings management when they have a higher level of divergence from IFRS prior to IFRS adoption. More specifically, high divergence countries with higher levels of enforcement benefit the most followed by high divergence countries with lower levels of enforcement.' They do not find statistically significant results for low divergence-high enforcement countries or for low divergence-low enforcement countries.</p>
<p>Zhuang et al (2014): Zili Zhuang, Bin Ke and Danqing Young, 'Mandatory IFRS adoption and accounting conservatism'</p> <p>Number of countries covered: 17 (2 non-EU: Norway and Switzerland)</p> <p>Firms in sample: 2,111 non-financial (5% non-EU); 480 financial (4% non-EU)</p> <p>Period covered: 2004-2007</p>	<p>The authors look at the prior year reconciliations between local GAAP and IFRS given in the first year of IFRS adoption, and compare conditional conservatism on the two bases disclosed. They divide the sample firms into non-financial and financial, and countries into strong and weak legal enforcement groups.</p> <p>The authors state that: 'For non-financial firms, we find little evidence that the mandatory IFRS adoption results in significant changes in the degree of</p>

³³ As noted above, this paper appears to be in substance an extension of Cai et al (2008). There are a published discussion and a reply to the discussion for this paper: Pathak (2014) and Rahman et al (2014).

	accounting conservatism for firms domiciled either in strong legal enforcement countries or weak legal enforcement countries. For financial firms we find some weak evidence that the mandatory IFRS adoption results in an increase in accounting conservatism for firms domiciled in strong legal enforcement countries but we find a significant decrease in accounting conservatism for firms domiciled in weak legal enforcement countries.'
--	---

Table 3.13: Research on accounting quality: Finland

Paper	Key findings
Aubert and Grudnitski (2011): See Tables 3.1 and 3.12 above. Firms in sample: 158 Finnish firms.	The authors find evidence that IFRS adoption is associated with higher accruals quality for Finnish firms.
Jarva and Lantto (2012): See Panel 3.22 below.	The authors find that 'earnings under IFRS are no more timely in reflecting publicly available news than earnings under [Finnish Accounting Standards]'

Table 3.14: Research on accounting quality: France

Paper	Key findings
Jeanjean and Stolowy (2008): Thomas Jeanjean and Hervé Stolowy, 'Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption' Number of countries covered: 3 (Australia, France and the UK) Firms in sample: 321 French firms Period covered: 2002-2003, 2005-2006	The authors look at the level of earnings management to avoid losses, comparing 2002-2003 with 2005-2006. For the French companies in their sample, they find a statistically significant increase in this form of earnings management.
Zéghal et al (2011): Daniel Zéghal, Sonda Chtourou and Yosra Mnif Sellami, 'An analysis of the effect of mandatory adoption of IAS/IFRS on earnings management' Number of countries covered: 1 Firms in sample: 353 Period covered: 2003-2006	The authors find that mandatory adoption of IFRS is associated with a reduction in earnings management for their sample as a whole, and for companies with good corporate governance or that depend on foreign financial markets.

Table 3.15: Research on accounting quality: Germany

Paper	Key findings
Christensen et al (2008): Hans B. Christensen, Edward Lee and Martin Walker, 'Incentives or standards: what determines accounting quality changes	The authors test for changes in earnings management and timely loss recognition. Based on these tests, they find no accounting quality improvements for mandatory IFRS

<p>around IFRS adoption?’</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 177 (mandatory adopters; the paper also looks at voluntary adopters)</p> <p>Period covered: 1993-2006</p>	<p>adopters.</p>
<p>Guenther et al (2009): See Table 3.4 above.</p>	<p>The authors find that conditional conservatism increases for mandatory IFRS adopters, but that discretionary accruals also increase. However, they attribute these findings to the impact of financial market developments and economic cycles rather than the change of standards.</p>
<p>Paananen and Lin (2009): See Table 3.4 above.</p>	<p>The authors find evidence of increased income smoothing and less timely loss recognition following mandatory IFRS adoption.</p> <p>The authors draw attention to the changes in IFRS that came into effect in 2005, which involved greater use of fair value, and suggest that their overall findings are ‘mainly driven’ by the changes in accounting standards.</p>
<p>Salewski et al (2014): Marcus Salewski, Torben Teuteberg and Henning Zülch, ‘Short-term and long-term effects of IFRS adoption on disclosure quality and earnings management’</p> <p>Number of countries covered: 1</p> <p>Firms in sample: 2,590 firm-year observations for earnings management; 1,502 for disclosure quality</p> <p>Period covered: 1995-2012</p>	<p>The authors compare earnings management under German GAAP with the first four years under IFRS and the second four years under IFRS. They also compare disclosure quality over the same three periods, using the disclosure scores of the annual report ‘beauty contest’ of a German business magazine. The tests combine voluntary and mandatory IFRS adopters.</p> <p>The authors find that discretionary accruals are higher than under German GAAP in the first four years of IFRS adoption, but not in the second four years; there is ‘no significant change’ between the German GAAP period and the second IFRS period.</p> <p>Disclosure quality is higher in the first IFRS period than under German GAAP, and higher still in the second IFRS period.</p> <p>Although the sample combines voluntary and mandatory IFRS adopters, the authors test whether this makes a difference. They conclude that ‘our overall result ... does not differ between voluntary and mandatory adopters’.</p>

Table 3.16: Research on accounting quality: Greece

Paper	Key findings
Aubert and Grudnitski (2011): See Tables 3.1 and 3.12 above. Firms in sample: 238 Greek firms.	The authors find evidence that IFRS adoption is associated with higher accruals quality for Greek firms.
Karampinis and Hevas (2011): See Table 3.5 above.	The authors find that mandatory IFRS adoption results in a minor increase in conditional conservatism.

Table 3.17: Research on accounting quality: Italy

Paper	Key findings
Marra et al (2011): Antonio Marra, Pietro Mazzola and Annalisa Prencipe, 'Board monitoring and earnings management pre- and post-IFRS' Number of countries covered: 1 Firms in sample: 222 Period covered: 2003-2006	The authors find a decrease in earnings management, measured by abnormal working capital accruals, following mandatory IFRS adoption. They also find that, following IFRS adoption, independent board members and audit committees are more effective in constraining earnings management – measured by abnormal working capital accruals and small positive earnings.

Table 3.18: Research on accounting quality: Sweden

Paper	Key findings
Paananen (2008): See Table 3.10 above.	The author finds 'some indications of a decrease in financial reporting quality measured as smoothing of earnings [and] timely loss recognition'.
Aubert and Grudnitski (2011): See Tables 3.1 and 3.12 above. Firms in sample: 323 Swedish firms.	The authors find evidence that IFRS adoption is associated with higher accruals quality for Swedish firms.

Table 3.19: Research on accounting quality: UK and Ireland

Paper	Key findings
Aussenegg et al (2008): Wolfgang Aussenegg, Petra Inwinkl and Georg Schneider, 'Earnings management and local vs international accounting standards of European public firms' Number of countries covered: 2 ³⁴ (UK and Ireland) Firms in sample: 1,650 Period covered: 1995-2005	The authors find evidence that earnings management in the UK and Ireland taken together does not change on adoption of IFRS.

³⁴ This study in fact looks at 17 countries, of which 15 are in the EU. But it mixes data from voluntary adopters with data from mandatory adopters. Fortunately, it separates out some results by region. One region comprises the UK and Ireland, which had virtually no voluntary adopters, so the result for this region shows an effect of mandatory adoption.

Jeanjean and Stolowy (2008): See Table 3.14 above. Firms in sample: 403 UK firms.	The authors look at the level of earnings management to avoid losses, comparing 2002-2003 with 2005-2006. For the UK companies in their sample, they do not find a statistically significant change in this form of earnings management.
Beattie et al (2011): See Panel 3.17 below.	-
Samarasekera et al (2012): See Table 3.11 above.	The authors find that for their sample as a whole (cross-listed firms and firms that are not cross-listed) there is less management towards earnings targets after IFRS adoption. They find that earnings smoothing and timely loss recognition improve only for the cross-listed firms. They attribute this to improved enforcement in the countries where the cross-listings are (Germany and the US).
Bayerlein and Al Farooque (2012): Leopold Bayerlein and Omar Al Farooque, 'Influence of a mandatory adoption on accounting practice: evidence from Australia, Hong Kong and the United Kingdom' Number of countries covered: 3 (2 non-EU: Australia and Hong Kong) Firms in sample: 54 (18 UK) Period covered: 2003, 2006	The authors find for 12 of the 18 UK companies in their sample that their 2003 accounting policy disclosures do not make it possible to determine what accounting policy they have followed for deferred tax. This is no longer the case for any of the 18 companies in 2006.

One study obtains preparers' and auditors' views on the effects of IFRS adoption on accounting quality:

Panel 3.17: Beattie et al (2011)

Vivien Beattie, Stella Fearnley and Tony Hines, *Reaching Key Financial Reporting Decisions: How Directors and Auditors Interact*, look primarily at how CFOs, audit committee chairs and audit engagement partners in the UK 'interact with each other to reach agreement on key financial reporting issues as the financial statements are finalized' (p3). The data comprise 498 questionnaire responses from individuals in these categories and nine company case studies. The research was carried out in 2007-2008. Although the study was not directed at the effects of IFRS adoption, it obtained some views on the subject.

The authors find that 'The introduction of IFRS is not believed to have improved the quality of UK financial reporting, due to excessive complexity and high disclosure volume... This complexity also impedes effective communication with users. IFRS is generally seen as a rules-based system where compliance and box-ticking have become increasingly dominant and judgements based on process, evidence and precedent have tended to replace judgements based on principles such as substance over form and the use, where necessary, of the true and fair view override' (pp331-332).

Pope and McLeay (2011) note that 'it is possible that the flexibility offered by IFRS, especially in first-time implementation choices, might have reduced transparency in some firms' – a point supported by the evidence of García Osma and Pope (2011) (Table 3.12). The following paper finds evidence of earnings management in the comparative information provided by mandatory compliers in the transition to IFRS.

Panel 3.18: Capkun et al (2011)

Vedran Capkun, Anne Cazavan-Jeny, Thomas Jeanjean and Lawrence A. Weiss, 'Setting the bar: earnings management during a change in accounting standards', look at the 2004 reconciliations between local GAAP and IFRS in mandatory adopters' 2005 accounts and the effects of accounting choices allowed under IFRS 1, *First-time Adoption of International Financial Reporting Standards*. Their sample is 1,635 firms from nine EU countries.

The authors find that 'firms with negative earnings under local GAAP are more likely to report positive local GAAP-to-IFRS reconciliations than firms with positive earnings under local GAAP'. They also find that 'firms with high positive earnings under local GAAP are more likely to report negative local GAAP-to-IFRS reconciliations than other firms'. The implication is that firms with poor results under local GAAP are taking the opportunity to improve their results retrospectively, while firms with good results under local GAAP are taking the opportunity to lower the comparative figures for 2004 so that their 2005 results look relatively better – with positive results, the authors find, for executive compensation.

In relation to earnings management, this paper is an updated version of Capkun et al (2008), reported in Table 3.1 above, which we do not therefore report again here.

Mandatory IFRS adoption does not remove differences in accounting quality that arise from the differing incentives faced by reporting firms. The following study provides evidence of firm-level differences in reporting quality under mandatory IFRS:

Panel 3.19: Verriest et al (2013)

Arnt Verriest, Ann Gaeremynck and Daniel B. Thornton, 'The impact of corporate governance on IFRS adoption choices', look at the impact of corporate governance differences on the 2005 accounts of 223 mandatory IFRS adopters (2% non-EU) from 15 European countries (including Norway and Switzerland from outside the EU).

The authors find that the transparency of IFRS restatements for 2004 from local GAAP to IFRS and compliance with a number of specific IFRS standards for 2005 are both higher for firms with better corporate governance. They state that these results 'suggest substantial heterogeneity across firms in reporting quality around IFRS adoption in Europe'.

3.4.2 Discussion

The 18 pan-EU studies reported in Table 3.12 are so widely varied that it is impossible to draw any general conclusions from them. As usual, no doubt differences in samples, periods covered and methodologies explain much of the variation in results.

A number of these papers – Cai et al (2008), García Osma and Pope (2011), Houqe et al (2011) and Cai et al (2014) – include large proportions of non-EU firms in their samples. Houqe et al (2011) confirm that excluding EU firms would not affect their findings, but as EU firms provide only 16% of their total sample (although they must form a much larger proportion of mandatory IFRS adopters in the sample), this may not mean that their findings apply to EU firms.

Cai et al (2014) do not analyse their results between EU and non-EU countries, but they do provide results by country. From these, it appears that the role of enforcement may be more important for the EU countries than appears from the paper's overall findings. For the EU, eight of the nine high enforcement countries show a reduction in earnings management, and three of the five low enforcement countries show an increase in earnings management. Four of the seven low divergence countries in the sample are non-EU, and it is difficult to draw strong conclusions from the three EU countries in this category.

However, even if we disregard the studies that have high proportions of non-EU firms in their samples, the overall picture does not become any clearer.

The picture is equally unclear for the individual country studies, which even for particular countries are at variance with one another. As with the value relevance papers, there is no obvious explanation for all these differences, except that they must reflect differences in samples, periods covered and methodology. In the present state of knowledge, therefore, it seems unsafe to attempt to draw conclusions on the effects of IFRS adoption on such matters as income smoothing, accruals, and timely loss recognition across the EU, except that the effects differ among firms and among countries.

One paper that may be of particular interest, although it only looks at one country (Germany) is Salewski et al (2014), which comes much closer to the present day in terms of data collection than other papers – its sample extends to 2011. No doubt it is more difficult to assess the effect of a change of standards the longer they are in place, and indeed the authors, as we see below, do not attribute the change purely to mandatory IFRS adoption. But the paper suggests that there is an improvement in accounting quality under IFRS as time goes by.

The authors put forward the following explanation for their results on earnings management: 'In the early stage of IFRS accounting, compliance was lower as all parties involved (preparers, auditors, and users) were in the process of accumulating the necessary experience. Moreover, firms likely did not change their accounting dramatically at one point in time but transitioned gradually towards IFRS which might have impacted comparisons of the last years of local GAAP accounting to the first years of accounting under IFRS. Additionally, the extraordinary effects of the first-time adoption rules of IFRS 1 diminish over time. Further, both emerging guidelines and common interpretations and the creation of the German Financial Reporting Enforcement Panel in 2004 are likely to have contributed to a stepwise increase in accounting quality'.

Salewski et al (2014) allow four years for the improvement to take effect (comparing years 1-4 with years 5-8), which seems to be a long time, and it would be interesting to know what the results would look like allowing a shorter period for the benefits to emerge. The authors state that 'The results are robust to other reasonable specifications of the phases', but do not enlarge on the point. It would be useful to have more research that looks into the longer-term effects of IFRS adoption.

3.5 Other techniques for assessing transparency

3.5.1 Stock price synchronicity

The following study, using changes in stock return synchronicity, looks at evidence on changes in the accuracy of market expectations following mandatory IFRS adoption.

Panel 3.20: Beuselinck et al (2009)

Christof Beuselinck, Philip Joos, Inder K. Khurana and Sofie Van der Meulen, 'Mandatory IFRS reporting and stock price informativeness', look at changes in stock return synchronicity following mandatory IFRS adoption. The theory underlying the paper is that when a more informative information system is introduced, there is an initial decrease in synchronicity as the new system produces more firm-specific information. However, once users are accustomed to the new system, their ability to forecast future results improves, firm-specific surprises become less common, and stock price synchronicity reaches a higher level than before the new system was introduced.

The sample is 2,071 firms from 14 EU countries, and the periods covered are 2003-2004, 2005 and 2006-2007. There is a control sample of EU firms that were not required to adopt IFRS until 2007.

The authors find that 'synchronicity decreases in the mandatory adoption year (2005) and subsequently increases in the post-adoption years' – to a level 4.7% higher than before IFRS adoption. They also find that 'For firms from countries with weak enforcement regimes, there

is a decrease in synchronicity in 2005 and in the post-IFRS adoption years’.

3.5.2 Predicting future cash flows

Two studies match reported information before and after mandatory IFRS adoption in the EU with subsequent cash flow outcomes to assess how useful it is in predicting such outcomes. Again, greater transparency would be expected to lead to more accurate forecasts.

Panel 3.21: Atwood et al (2011)

T. J. Atwood, Michael S. Drake, James N. Myers and Linda A. Myers, ‘Do earnings reported under IFRS tell us more about future earnings and cash flows?’, look at correlations between current earnings and future earnings and future cash flows. The sample is 27,231 firms (56% non-EU) from 25 countries (13 non-EU) reporting under IFRS (voluntary and mandatory). The period covered is 2002-2008.

The authors find that ‘earnings reported under IFRS are less persistent and are no more or less associated with future cash flows than earnings reported under non-US [domestic accounting standards].’ They find that their results are unaffected if voluntary IFRS adopters are excluded from the sample.

Panel 3.22: Jarva and Lantto (2012)

Henry Jarva and Anna-Maija Lantto, ‘Information content of IFRS versus domestic accounting standards: evidence from Finland’, look at the reconciliations between IFRS and Finnish GAAP for 2004 provided in Finnish mandatory adopters’ 2005 IFRS accounts and compare the two alternative earnings figures for 2004 with cash flows for 2005. They then extend the sample to cover data for the periods before and after mandatory IFRS adoption – 1999-2003 and 2005-2009. The sample size is 94 firms.

They find that for the reconciliation year 2004 ‘IFRS earnings provide marginally greater information content than [Finnish GAAP] earnings for predicting future cash flows’. But looking at the longer period (1999-2003 v 2005-2009), ‘there is no clear pattern with respect to the prediction of future cash flows’.

The findings of these two papers, other than those of Jarva and Lantto (2012) for 2004, are on the face of it inconsistent with those reported in other studies for earnings forecasts and the accuracy of market expectations. Possible explanations include:

- Analysts do not simply extrapolate past earnings so as to forecast future cash flows, nor does the market do so in forming its expectations of future cash flows. For example, the extrapolation approach excludes any benefit to forecasting that would be obtained from increased comparability. So it is quite possible that studies on any given set of companies can show different results for information’s usefulness in predicting future outcomes on the basis assessed by these papers from those that would be obtained for earnings forecasts and the accuracy of market expectations.
- Only a minority of the observations in Atwood et al (2011) are for EU companies, so its results may well not apply to the EU.
- The findings of Jarva and Lantto (2012) relate to Finland only, and because other studies on earnings forecasts and the accuracy of market expectations do not give separate results for Finland we do not in fact know whether the other studies’ findings are consistent with those of Jarva and Lantto (2012).³⁵
- Jarva and Lantto (2012) suggest their results may be affected by the fact that larger Finnish publicly traded companies typically adopted IFRS voluntarily before 2005. These companies were excluded from the sample. It is therefore possible that what their

³⁵ Wang et al (2008) do give separate results for Finland, but they are not statistically significant.

findings reflect is that mandatory IFRS has, in the respect examined by this paper, less benefit for smaller Finnish publicly traded companies than for larger ones.

Without further information, it is impossible to know which of these explanations is correct.

3.5.3 Predicting CDS spreads

The following study looks at the effects of mandatory IFRS adoption on accounting-based prediction models for CDS spreads. As usual, greater financial reporting transparency would be expected to lead to more accurate predictions.

Panel 3.23: Kraft and Landsman (2014)

Pepa Kraft and Wayne R. Landsman, 'Effect of mandatory IFRS adoption on accounting-based prediction models for CDS spreads', estimate accounting-based prediction models for CDS spreads and assess the effects of IFRS adoption on their accuracy. The sample is 2,991 firm-years (16% non-EU) for firms from 16 countries (three non-EU: Australia, Hong Kong and Norway). The sample is divided into financial and non-financial firms. US firms provide a control sample. The period covered is 2000-2012.

The authors find that 'mean and median absolute percentage prediction errors are greater for both financial and non-financial firms after mandatory IFRS adoption.' They also find that, 'Although US firms also exhibit an increase in mean and median absolute percentage prediction errors over the same period, ...the increase is significantly greater for firms in countries that adopted IFRS mandatorily.'

The authors comment that 'our findings suggest that although mandatory adoption of IFRS could have increased accounting quality and provided capital market benefits to equity investors, there is no clear evidence of similar benefits for debt investors.'

3.5.4 Assessment of default risk

The following paper looks at the assessment of default risk. Greater financial reporting transparency would be expected to lead to more accurate assessments.

Panel 3.24: Charitou et al (2012)

Andreas Charitou, Irene Karamanou and Neophytos Lambertides, 'Who are the losers of IFRS adoption in Europe? An empirical examination of the cash flow effect of increased disclosure', look at the effects of mandatory IFRS adoption on firms' default risk. The sample is 710 firms (3% non-EU) from 19 European countries (one non-EU: Norway). The period covered is 2000-2006. The sample is divided into 295 losers (whose default risk rises following IFRS adoption) and 415 winners (whose default risk falls following IFRS adoption).

The authors find that 'loser firms exhibit the same financial characteristics, or better, as winner firms in the pre-IFRS period', but that after IFRS adoption, 'loser firms exhibit deteriorating characteristics, with smaller increases in their Tobin's q ³⁶ valuations, greater increases in leverage, and poorer return performance.'

The authors interpret these findings as follows: 'in the pre-IFRS period loser firms were able to conceal their true type and mimic high-type firms by exhibiting the same or even more favorable financial characteristics. The enhanced disclosure associated with IFRS adoption, however, reveals the firm's true type, enabling the market to differentiate between the two types of firms and adjust the estimation of [default risk] accordingly.'

³⁶ Tobin's Q is the ratio between the market value of assets (including firms) and their replacement cost (the replacement cost of a firm is the replacement cost of its assets). Tobin's approach of using replacement costs rather than book values removes variations attributable to changes in the cost of assets. The usual approach among accounting and finance researchers is to use book values rather than replacement costs.

3.5.5 Trading volume

Landsman et al (2012), reported above at Panel 3.12 in relation to value relevance, also look at the effect of mandatory IFRS adoption on share trading volumes. As explained earlier, increased trading volume can be taken as evidence of improved information. The authors find that 'firms in IFRS adopting countries experienced a greater increase in ... abnormal trading volume than firms from non-IFRS adopting countries.' As with their findings on value relevance, they also find that 'firms with strong enforcement experienced a greater change ... than firms from countries with weak enforcement.' Horton and Serafeim (2010), reported at Table 3.11 above in relation to value relevance, also find 'positive trading activity for firms reporting a negative reconciliation adjustment on UK GAAP earnings' after adopting IFRS.

On the other hand, Schadewitz and Vieru (2007), reported at Table 3.2 above in relation to value relevance, find that 'no excess trading after the release of IFRS reconciliation adjustments [is] evidenced' for their sample of Finnish firms.

3.5.6 Opinion surveys

Nadia Albu and Cătălin Nicolae Albu, 'International Financial Reporting Standards in an emerging economy: lessons from Romania' (2012), interviewed 22 interested parties in Romania following IFRS adoption there in 2007.³⁷ Those interviewed included preparers, auditors, users and others, and the interviews were conducted between November 2008 and January 2012. The authors report that 'All of our interviewees indicated that benefits had materialised, at least to some extent, in the form of increased transparency'.

3.6 Conclusions

On **forecast accuracy and dispersion**, the research seems to be consistent in showing at least some improvements in accuracy and reductions in dispersion. But if Preiato et al (2014) are correct, and if their findings apply to the EU (it is not clear that they do), the improvements are attributable to better auditing and enforcement rather than the change of standards.

The majority of pan-EU **value relevance** studies show improvements in relevance, although the nature and scope of the improvements they identify are variable, and the individual country studies seem to be evenly split. The one study that focuses on the effects of mandatory IFRS adoption on share-trading volumes (Landsman et al 2012) finds evidence suggesting that IFRS adoption increased the information content of financial reporting, but a large proportion of the sample (31%) are non-EU firms, so it is not clear whether its findings would hold for the EU. The three papers on credit relevance seem to be sufficiently varied to make any overall conclusion impossible. Taking the value relevance studies as a whole, the most reasonable conclusion seems to be that it is likely, based on the majority of pan-European studies, that IFRS adoption increased the value relevance of financial reporting information for equity markets across the EU as a whole.

In the present state of knowledge, it seems unsafe to attempt to draw overall conclusions on the effects of IFRS adoption on the various aspects of **accounting quality** – such matters as income smoothing, accruals and timely loss recognition – across the EU, except that the effects on these different proxies for accounting quality differ among firms and among countries.

The papers using **other techniques** also give varied answers. The paper on stock price synchronicity, the paper on assessment of default risk, and the paper based on an opinion survey all suggest greater transparency following IFRS adoption. However, the opinion survey is based on a small sample of interviewees and only relates to one country (Romania). The two papers that find increased share trading volume associated with IFRS adoption (suggesting increased transparency), are significantly wider in scope than the one that finds

³⁷ Romania had been moving towards IFRS for some time before this, and the authors note that one academic paper treats it as complying with IFRS with effect from 1999.

no increase, and should presumably be given greater weight. The one paper on predicting CDS spreads suggests less transparency following IFRS adoption. It seems reasonable to disregard the two studies on the usefulness of financial reporting information in predicting future cash flows on the grounds that it is not clear that the increasing predictability of future cash flows using only previous earnings data from the same company is indeed an indicator of increased transparency.

On balance, and with the significant exception of the paper on predicting CDS spreads, this miscellaneous group of papers gives a positive answer on transparency, but none of the topics addressed in these papers has been heavily researched, and it would probably be wrong to place much weight on them in the overall assessment of IFRS adoption's effects on transparency. But in general they seem to point in the same direction as other research findings.

Can the mixed results on various aspects of accounting quality be reconciled with the (on balance) positive results on forecast accuracy and dispersion and on value relevance?

Studies of accounting quality of the sort we have examined here focus on measurements of earnings or its components (accruals, losses). They do not assess the quality of the full body of accounting disclosures. By contrast, analysts use all the information at their disposal. It is therefore possible that the total information provided by IFRS is more transparent than that provided by its predecessors (as the results for forecast accuracy and dispersion imply), while there has been no overall improvement in 'earnings quality'. However, it would be useful to have research that looks into possible explanations for the differences between the two sets of results.

It is more difficult to identify a possible explanation for the tension between the results on accounting quality and the results on value relevance. Both deal with earnings or their components. But value relevance studies also look at the balance sheet and its components, so the focus of accounting quality studies on earnings might, in some circumstances, explain differences in findings between accounting quality and value relevance studies. However, this does not appear to be the explanation for the differences identified in this report, as the case for an increase in value relevance following IFRS adoption is stronger using the earnings-based findings than using the balance-sheet-based findings. An alternative explanation is that value relevance studies tend to focus on total earnings while accounting quality studies focus on components of earnings. So it is possible that total earnings become more informative while particular components of earnings decline in quality. However, again it would be useful to have research that looks into possible explanations for the differences between the two sets of results.

Overall, taking into account all the papers reviewed in this chapter, we conclude that the balance of research evidence suggests an improvement in transparency following IFRS adoption, although the evidence is far from clear.

These overall conclusions may appear to be at variance with Brüggenmann et al (2013), who state that 'It is ... still largely an open question whether financial statements have become more transparent ... following mandatory IFRS adoption, as measured by detailed financial reporting outcomes.' But some of the key words in this conclusion are 'as measured by detailed financial reporting outcomes'. Brüggenmann et al (2013) are in this statement referring to financial reporting evidence – ie, accounting quality studies and value relevance studies³⁸ – as opposed to 'capital markets' effects.

On the basis of the accounting quality studies alone, it is indeed impossible to say whether transparency improved after IFRS adoption. Brüggenmann et al (2013) discuss only four studies that they classify as 'value relevance'. Of these, three find evidence of increased

³⁸ They also refer to 'compliance and accounting choice studies', which we treat as affecting comparability rather than transparency. The studies they refer to showing non-compliance after IFRS adoption do not compare this with the degree of non-compliance before adoption, so do not provide evidence on changes in transparency.

value relevance, while one (Bhat et al (2014) on credit default swap spreads) finds no significant evidence either way. On balance, therefore, these studies appear to support a finding of increased transparency. We refer above to more pan-EU value relevance studies that support the same conclusion. Brüggemann et al (2013) also report that ‘evidence of positive capital market³⁹ ... effects is positive and almost unanimous’. Brüggemann et al (2013) classify studies on forecasting accuracy as capital markets studies, and it is mainly on the basis of this evidence and the pan-EU value relevance evidence that we conclude that transparency did improve. Overall, therefore, we believe that our conclusions are consistent with those of Brüggemann et al (2013).

³⁹ Brüggemann et al (2013) also classify one paper as a ‘capital markets’ study that we classify as a ‘value relevance’ study: ie, Landsman et al (2012). This paper is one of those detecting positive effects.

4. Comparability

Common accounting standards across the EU are meant to ensure greater comparability. But how can we assess comparability? And has IFRS adoption improved it?

4.1 General points

Comparability in financial reporting is not a well-defined concept or a directly measurable phenomenon.⁴⁰ Researchers have employed a variety of methods to try to measure it and to assess whether it has changed. These can be loosely grouped as follows:

Methods based on financial reporting information. These involve looking at changes in:

- accounting policies. Increased (reduced) uniformity in accounting policies among firms is taken to be evidence of increased (reduced) comparability;
- the similarity of correlations between earnings or accruals and cash flows. Increased (reduced) similarity in the correlations between earnings or accruals and cash flows for different firms is taken to be evidence of increased (reduced) comparability; or
- the dispersion of accounting measures. Reduced (increased) dispersion of accounting measures for a population of firms is taken to be evidence of increased (reduced) comparability.

Methods based on analysts' forecasts. These involve looking at changes in:

- analysts' perceptions of how far earnings reflect firms' underlying economics in a comparable way. Increased (reduced) perceptions that earnings reflect firms' underlying economics in a comparable way are taken to be evidence of increased (reduced) comparability; and
- the accuracy of analysts' forecasts that reflect changes in comparability. Increased (reduced) accuracy in such forecasts is taken to be evidence of increased (reduced) comparability.

Methods based on stock market returns. These involve looking at the similarity of correlations between accounting data and stock market returns for different firms. Increased (reduced) similarity in the correlations is taken to be evidence of increased (reduced) comparability.

Methods based on 'information transfers'. These involve looking at the effects of information about one firm on how another firm is assessed. Increased (reduced) information transfers are taken to be evidence of increased (reduced) comparability.

Opinion surveys. We are also aware of one academic study that asks a sample of interested parties directly whether IFRS adoption has brought greater comparability.

The connection between most of these methods and comparability probably requires no further explanation, but the significance of those based on correlations between different items of accounting data or between accounting data and stock market returns may do.

The idea that underlies these correlation studies is that accounting is an attempt to portray economic reality. It is therefore useful to see how accounting measures compare with some independent measure of economic reality. Cash flows and stock market returns are taken to be examples of such independent measures. Correlations can be worked out between one set of firms' earnings (or some other financial reporting measure) and its cash flows or stock market returns. The correlations show how financial reporting measurements 'map' to economic reality for the firms in question. They can then be compared to the same correlations for other sets of firms. The greater the similarity between the correlations, the greater the similarity between the way the two sets of firms' financial reporting data map to

⁴⁰ The concept of comparability is discussed in Zeff (2007), Mary E. Barth, 'Global comparability in financial reporting: what, why, how, and when?' (2013) and Richard Macve, 'What should be the nature and role of a revised Conceptual Framework for International Accounting Standards?' (2014).

economic reality and, therefore, it is assumed, the greater the comparability of their financial reporting.

The attraction of this approach is that it appears to overcome the problem that simply requiring all firms to follow the same standards might achieve uniformity rather than comparability. It can be argued that common standards are a 'one-size-fits-all' approach, and may not reflect firms' underlying economic realities. But if similar financial reporting measurements map to similar economic realities, this suggests that genuine comparability has been achieved.

An argument against this approach, at any rate where it uses cash flows as the measure of economic reality, is that a one-to-one correspondence between accounting income and cash flows for all firms (perfect comparability) would of course imply that accrual accounting was no longer being used. This is a rather similar argument to one that has been made against value relevance studies (discussed in Section 3.1.3), which points out that balance sheets that are perfectly value relevant are no longer providing any information (at least not in total). As with the value relevance argument, the point is correct, but as long as firms are in fact using accrual accounting it raises a purely hypothetical possibility.

As noted earlier, it can be argued that any capital market benefits associated with financial reporting changes are also evidence of increased comparability or of increased transparency or of both at the same time. We look at these benefits in Chapters 5-8 below, and it should be borne in mind that they may also be evidence of increased comparability.

We review in detail below the evidence on whether mandatory IFRS adoption in the EU has changed comparability (Section 4.2), and we review the evidence showing that comparability remains imperfect in Section 4.3.

Cross-border investment. While changes in patterns of cross-border investment reflect many factors (see Chapter 8), they may provide evidence of changes in cross-border financial reporting comparability.

4.2 Changes in comparability

4.2.1 Research findings

The studies in this section look at whether comparability increased or declined following the mandatory adoption of IFRS. We arrange them below to reflect the different methods of assessing comparability discussed above.

The following three papers use methods based on financial reporting information: respectively, accounting policies, the similarity of correlations between accruals and cash flows, and dispersion of accounting measures.

Panel 4.1: Cairns et al (2011)

David Cairns, Dianne Massoudi, Ross Taplin and Ann Tarca, 'IFRS fair value measurement and accounting policy choice in the United Kingdom and Australia', look at the effects of IFRS adoption on comparability for items where IFRS permits or requires fair value measurements. The paper covers comparability within the UK, within Australia, and between Australia and the UK. For our purposes, we will focus on comparability within the UK. The UK sample is 114 firms and the period covered is 2005, ie, the year of mandatory IFRS adoption.

The authors find increased comparability within the UK in accounting for property (ie property that comes under IAS 16, *Property, Plant and Equipment*), held-for-trading financial instruments, derivatives and share-based payments. They find decreased comparability in accounting for investment property and other financial assets and liabilities.

Panel 4.2: Beuselinck et al (2007)

Christof Beuselinck, Philip Joos and Sofie van der Meulen, 'International earnings comparability', look at the comparability of accounting earnings for 14 EU countries over four periods: 1991-1993, 1997-1999, 2001-2003 and 2005. The sample comprises 25,110 firm-year observations. Comparability is measured by looking at the correlation between accruals and cash flows.

The authors find that comparability is affected by firm-specific incentives – arising from the equity capital market, debt financing and labour markets – intensified by a country's institutional framework, and that these effects continue in 2005 after mandatory adoption of IFRS. They comment that: 'Overall, our results suggest that the accrual model is converging in the EU over a 15 year period, long before the mandatory implementation of IFRS.' They also state that: 'our results suggest the mandatory introduction of IFRS in 2005 did not instantly bring about the expected improvement in earnings comparability across Europe.'

Panel 4.3: Jones and Finley (2011)

Stewart Jones and Aimee Finley, 'Have IFRS made a difference to intra-country financial reporting diversity?', look at changes in intra-country and intra-industry financial reporting diversity following mandatory IFRS adoption. To do this, they compute coefficients of variance (a measure of dispersion) for a number of accounting measures before and after mandatory IFRS adoption and see how they have changed. Their sample covers 23 countries – all but two (Australia and Norway) in the EU. 23% of the 81,560 firm-years sampled are for non-EU companies. The pre-IFRS period covered is 1994-2004 and the post-IFRS period is 2006. They find 'generally strong statistical evidence indicating reduced financial reporting diversity ... across all sampled countries and industries and over most if not all time frames examined'. For statistical reasons, their findings are for all countries taken together and for all industries taken together. They do not have results for individual countries or individual industries.

The following two papers use methods based on analysts' forecasts: respectively, analysts' perceptions of how far earnings reflect firms' underlying economics in a comparable way, and the accuracy of analysts' forecasts that reflect changes in comparability

Panel 4.4: Dargenidou and McLeay (2010)

Christina Dargenidou and Stuart McLeay, 'The impact of introducing estimates of the future on international comparability in earnings expectations', look at the consensus of analysts' forecasts for mandatory IFRS adopters in the EU and assess them 'with respect to the degree to which they reflect the underlying economics of the firm'. The sample covers up to 1,780 mandatory adopters in 14 EU countries, for three periods between 2000 and 2006. They find evidence that 'under IFRS, users perceive earnings as recognising economic events in a comparable manner across countries.' They also find that country-specific factors in earnings forecasts decline.

Panel 4.5: Horton et al (2013)

Joanne Horton, George Serafeim and Ioanna Serafeim, 'Does mandatory IFRS adoption improve the information environment?', as reported at Panel 3.7 above, look at the accuracy of analysts' forecasts for mandatory IFRS, voluntary IFRS and non-IFRS firms in 46 countries for 2001-2007. The sample of mandatory adopters is 2,235 firms (34% non-EU). The analyst sample is 1,329 individuals.

To assess the effects of comparability, the analysts are divided into three groups according to changes in the firms that they cover:

First group: analysts covering only firms that use a single local GAAP before IFRS adoption (eg, firms that are all from the UK), but that after adoption cover a mixture of firms that report under IFRS and firms that use a single local GAAP. For these analysts, comparability is expected to decrease.

Second group: analysts covering only firms that use a single local GAAP before IFRS

adoption, but that after adoption cover firms that all report under IFRS. For these analysts, comparability is expected to be unchanged.

Third group: analysts covering a mixture of firms that use multiple local GAAPs before IFRS adoption (eg, some firms from the UK, some from Spain), but that after adoption cover firms that all report under IFRS. For these analysts, comparability is expected to increase.

Consistent with expectations, the authors find that 'forecast accuracy improves more for analysts with portfolios that move from Local GAAP to IFRS compared to Local GAAP to Multiple GAAP. Moreover, this effect is even greater for analysts with portfolios that move from Multiple GAAP to IFRS.' They accordingly conclude that the increase in forecast accuracy for mandatory adopters 'is partly driven by comparability effects'.

The following paper uses methods based on stock market returns.

Panel 4.6: Lang et al (2010)

Mark H. Lang, Mark G. Maffett and Edward L. Owens, *Earnings Comovement and Accounting Comparability: the Effects of Mandatory IFRS Adoption*, look at 'changes in cross-country financial statement comparability around mandatory IFRS adoption'. Accounting comparability is measured using the idea that 'given a similar set of economic transactions (as reflected in stock returns), firm j should produce similar earnings to firm i '. That is, where accounting is comparable, firms with similar stock market returns should have similar accounting returns (measured by taking earnings as a return on the market value of equity).

The authors look at 1,317 mandatory adopters (38% from non-EU countries) from 26 countries (eight non-EU). They compare these with a sample of non-IFRS adopters for the period 2001-2006. They find that accounting comparability increases for both groups after IFRS adoption, but more for non-adopters. They comment that 'this finding suggests the imposition of IFRS did little to increase accounting comparability relative to the worldwide trend'.

The authors then reassess the data, controlling for firm-level and country-level characteristics. Once they do this, they find that accounting comparability 'increased less for adopters than non-adopters in the post-adoption period'. This suggests that, overall, 'IFRS adoption ... did not increase accounting comparability'.

The following four papers use methods based on information transfers. The more internationally comparable financial reporting becomes, the more information announcements by a firm (an 'announcer') in one country can be used to assess the prospects of similar firms ('non-announcers') in other countries. This information transfer process should be reflected in share price movements. The first three of these studies look at this aspect of comparability. The fourth looks at directors' and officers' share purchases in their own companies, and is in effect about how far information transfers reduce their profitability.

Panel 4.7: Alves et al (2010)

Paulo Alves, Peter F. Pope and Steven Young, *European Cross-Border Information Transfers and the Impact of Accounting Standards Regime Changes*, look at, among other things, the effects of mandatory IFRS adoption in Europe on cross-border information transfers. The announcer sample is 6,918 announcements by 2,871 firms from 27 European countries for 1997-2007. The total sample of announcers and non-announcers is 212,272 firm-year observations for 5,764 firms from 30 European countries. The data must include some observations from firms in non-EU countries, but are not analysed by country.

The authors' results provide 'no evidence of a link between the financial statement impact of the transition to IFRS and changes in the magnitude of cross-border [information transfers] in response to IFRS adoption.'

Panel 4.8: Kim and Li (2012)

Yongtae Kim and Siqi Li, 'The externality effect of international financial reporting convergence: evidence from cross-border information transfers', look at the effects of mandatory IFRS adoption in the EU on information transfers in the EU. The sample is 830 firms (661 mandatory adopters and 169 voluntary adopters) from 18 EU countries. The periods covered are 2002-2004 and 2006-2008, ie, excluding the year of mandatory adoption. The voluntary adopters are included for control purposes.

The authors find evidence that, following mandatory IFRS adoption, 'investors of IFRS firms react more strongly to earnings announcements of other IFRS industry peers when both are in countries with strong legal enforcement, and that improved information quality and comparability both contribute to this change.' They also find that 'the increase in information transfers after 2005 is evident only when announcers and nonannouncers are from countries with a high level of information barriers [see below].' The authors comment that 'This evidence suggests that accounting standard harmonization reduces the effect of other information barriers.'

Information barriers are deemed to exist where two countries do not have a common border and a common language.

Panel 4.9: Brochet et al (2013)

François Brochet, Alan D. Jagolinzer and Edward J. Riedl, 'Mandatory IFRS and financial statement comparability', use evidence on directors' and officers' share purchases in the companies they work for to assess whether mandatory IFRS adoption increases comparability.

Their argument is that share purchases by directors and officers, which the authors refer to as 'insider trading' although there is no suggestion of illegality, may benefit from asymmetric information. The extent to which they benefit from it is measured by the abnormal returns obtained through the share purchases. The authors argue that the information asymmetry giving rise to such abnormal returns may be reduced by improved disclosures made by the firm on adoption of IFRS. But it may also be reduced by increased comparability arising from other countries' adoption of IFRS. Investors use information about other companies to adjust their expectations for the companies in which they invest. The more that information about other companies is comparable, therefore, the more information asymmetries are reduced.

The sample for the study is share purchases in 663 UK listed companies for the period 2003-2006. The authors restrict their study to the UK because the similarities between UK GAAP and IFRS mean that the adoption of IFRS would not be expected to produce a significant reduction in information asymmetries purely because of changes in the firm's own disclosures. Any actual reduction in information asymmetry following adoption of IFRS should therefore be attributable to improved comparability because of other countries' adoption of IFRS.

The authors find abnormal returns to 'insider' purchases decreasing following IFRS adoption across all the different return periods reviewed: five days, one month, three months and six months. This is consistent with their hypothesis that IFRS adoption increases comparability.

Panel 4.10: Wang (2014)

Clare Wang, 'Accounting standards harmonization and financial statement comparability: evidence from transnational information transfer', looks at the effects of mandatory IFRS adoption on international information transfers.

The paper is mainly based on two tests. The first compares information transfers between firms from different countries that are using the same accounting standards and firms from different countries that are not using the same accounting standards. This test is not explicitly about IFRS, therefore, but the paper appears to be directed at IFRS rather than at other forms

of transnational GAAP (eg, US GAAP). Also, this test is not confined to mandatory adopters, but includes information transfers from and to voluntary adopters.

The second test compares information transfers before and after IFRS adoption between voluntary IFRS adopting announcers and mandatory adopting and non-adopting non-announcers.

The samples for the first test are 136 announcing firms from 23 countries (12 non-EU) and 4,467 non-announcing firms from 46 countries (28 non-EU). 58% of the announcements are by EU firms and 49% of the non-announcer observations are for EU firms. The samples for the second test are 145 announcing firms from 18 countries (four non-EU) and 1,510 non-announcing firms from 43 countries (26 non-EU). 58% of the announcements are by EU firms and 51% of the non-announcer observations are for EU firms. Both tests cover the period 2001-2008.

In the first test, the author finds that 'both abnormal [stock market] price and [trading] volume reactions to earnings announcements are significantly higher for non-announcing firms using the same standards in comparison to non-announcing firms using different standards.' She also finds that 'the greater information transfer effect from using the same accounting standards is [statistically] significant only for announcing firms domiciled in countries with stricter enforcement regimes and stronger reporting incentives.'

In the second test, the author finds that 'non-announcing firms that are mandatory adopters experience [statistically] significant increases in market reactions to voluntary adopters' earnings signals post-mandatory adoption. Non-adopters, meanwhile, do not experience these increases in market reactions over the same period.'

The following three studies use multiple methods to assess comparability.

Panel 4.11: André et al (2012)

Paul André, Dionysia Dionysiou and Ioannis Tsalavoutas, 'Mandatory adoption of IFRS by EU listed firms and comparability: determinants and analysts' forecasts', look at the effects of mandatory adoption on comparability and on the accuracy and dispersion of analysts' forecasts. The sample is 187 EU companies and the periods covered are 2003, 2005 and 2010.

The authors use 'input' and 'output' measures of comparability. The input measures are based on firms' accounting policy and presentation choices. The output measures are based on correlations between earnings and stockmarket returns for firms in the same industry.

Comparing 2003 and 2005, the authors find 'significant convergence in firms' accounting practices (input comparability)' and that 'output comparability also significantly improves'. The authors find no further significant improvement in comparability in either inputs or outputs between 2005 and 2010. The overall lack of change in the comparability of inputs between 2005 and 2010 masks an increase in the comparability of presentation choices and a decrease in the comparability of measurement choices.

As noted above in Chapter 3, the authors find improvements in the accuracy and dispersion of analysts' forecasts following IFRS adoption. They find that these are associated with improvements in comparability.

Panel 4.12: Yip and Young (2012)

Rita W. Y. Yip and Danqing Young, 'Does mandatory IFRS adoption improve information comparability?', look at the effects of mandatory IFRS adoption in 17 European countries (two non-EU: Norway and Switzerland) on comparability. The sample is 6,256 firms (8% non-EU). The period covered is 2002-2007.

Three techniques are used to assess comparability: 'The first is the similarity of accounting

functions measure ... With this approach, ... information comparability can be defined as the similarity of firms' accounting functions that translate economic transactions into accounting data.' This method correlates accounting data, the return on assets, with stock market returns. 'The second proxy is the degree of information transfer, as measured by the association between the earnings surprise of an announcing firm and the contemporaneous stock price movements of other firms... The third proxy is the similarity of the information content of earnings ... and the information content of the book value of equity ..., as measured by the long-window association between stock price and earnings and the book price of equity.'

The authors find that 'the comparability of accounting information for similar firms from different countries is significantly greater in the post-IFRS period ... than in the pre-IFRS period ..., using all of the three comparability measures.' They also find evidence suggesting that 'both accounting convergence and higher quality accounting information are likely to be the mechanisms underlying the observed comparability improvement'.

Panel 4.13: Cascino and Gassen (2014)

Stefano Cascino and Joachim Gassen, 'What drives the comparability effect of mandatory IFRS adoption?', investigate the effects of mandatory IFRS adoption on comparability. Changes in comparability are measured based on correlations between accounting income and stock market returns and between accounting income and cash flows.

In one set of tests, the authors take 17,240 firm-year observations (29% non-EU) for mandatory adopters from 14 countries (four non-EU) and a control sample of 61,544 firm-year observations from firms in non-adopting countries (mainly from Japan and the US). The period covered is 2001-2008. They find that 'the overall effect of mandatory IFRS adoption on the comparability of financial accounting information appears to be marginal'. They also find that 'only firms with high compliance incentives [judged by auditor type, board independence and government ownership] experience an economically and statistically significant increase in comparability around IFRS adoption.'

In a second set of tests (for which the sample is not broken down by country), the authors look at changes in the comparability of publicly traded and private firms from the same country. They find that, 'post IFRS adoption, the accounting information of public firms adopting IFRS becomes less comparable to the information provided by local GAAP private firms from the same country'. However, in these tests, the authors also 'find a positive average comparability effect of mandatory IFRS adoption for European firms when we use private firms from the same country as a control group.'

Research reported earlier in relation to transparency is also relevant to whether mandatory IFRS adoption increased comparability. Tan et al (2011), reported at Panel 3.4, find that IFRS adoption increases the accuracy of foreign analysts' forecasts, but not that of local analysts, which suggests a comparability effect. Horton et al (2013), reported at Panel 3.7, find that improvements in analysts' forecast accuracy vary with the size of the difference between IFRS earnings and local GAAP earnings, which again suggests a comparability effect. And Horton et al (2013) find explicitly that 'the increase in forecast accuracy is partly driven by comparability effects'. Callao et al (2007), reported at Table 3.9, based on Spanish firms' first interim accounts under IFRS, state that 'local comparability has worsened... local comparability is adversely affected if both IFRS and local accounting standards are applied in the same country at the same time.'

Albu and Albu (2012), the Romanian opinion survey on the effects of IFRS adoption reported at Section 3.5.6 above in relation to transparency, also asked about comparability. The authors report that 'All of our interviewees indicated that benefits had materialised, at least to some extent, in the form of increased ... comparability'.

The findings of Chen Chen et al (2013) on improved investment efficiency, reported at Panel 7.3, imply increased comparability following mandatory IFRS adoption. And research reported later in relation to accounting-based performance assessment also seems to imply increased

international comparability following mandatory IFRS adoption. See Wu and Zhang (2010) in relation to CEO turnover, reported at Panel 9.4, and Ozkan et al (2012) in relation to executive pay, reported at Panel 9.5.

On the other hand, Christensen et al (2013), reported at Panel 6.4 below in relation to liquidity, argue that:

'[W]e show liquidity increases for voluntary IFRS adopters around the time of the IFRS mandate, but only in those countries with concurrent enforcement changes. This evidence is inconsistent with the notion that mandatory IFRS adoption has had widespread comparability (or spillover) effects, as these effects should not be confined to firms in a select few countries.'

Although this chapter focuses on comparability among mandatory IFRS adopters, it is worth noting the findings of Barth et al (2012) (reported at Table 3.1 above in relation to value relevance) that comparability of IFRS and US GAAP amounts increases after mandatory IFRS adoption.

4.2.2 Discussion

The results of these studies are mixed, for reasons that are not obvious, but on balance appear to support the view that mandatory IFRS adoption in the EU improved comparability, at least among adopters. But while the majority of these papers find evidence of improved comparability, a significant minority – Beuselinck et al (2007), Lang et al (2010), Cascino and Gassen (2014) and Alves et al (2010) – do not. Also, Liao et al (2012) (Panel 4.27 below) indicate declining comparability for French and German firms in 2007 and 2008.

One possible explanation for Lang et al (2010)'s findings is that their sample is distinctive. An unusually large proportion of the IFRS firms they look at (31%) are from Hong Kong and the Philippines, and almost none are from Australia. This compares with, for example, 10% for Hong Kong and the Philippines and 11% for Australia in the sample used by Horton et al (2013). It is possible, therefore, that Lang et al (2010) obtain different results from other researchers because they are looking at significantly different samples.

As these comments indicate, both Lang et al (2010) and Horton et al (2013) include a significant proportion of mandatory adopters from outside the EU: 38% and 34% respectively. It is impossible to know therefore how far their findings are applicable to the EU.

Like Lang et al (2010), though not to the same extent, Cascino and Gassen (2014) have a large (29%) non-EU component in their main sample, which may affect their results. Also, when they use European private companies as the control for European mandatory adopters, they do find a positive average comparability effect on IFRS adoption.

It is of interest that Lang et al (2010) find a worldwide trend towards greater comparability, which applies for mandatory IFRS adopters as well. The global trend presumably reflects, among other things, convergence around the world towards IFRS even in countries that do not adopt it. As regards the US, the largest non-adopter, IFRS and US GAAP have been moving closer since the 1990s. And for Singapore, which Lang et al (2010) classify as a non-adopter, local GAAP has since 2003 been so close to IFRS that some researchers treat it as a mandatory IFRS adopter from that date.

Questions about the applicability to the EU of these papers' findings are not restricted to those with negative findings on comparability. In particular, in addition to the points made in relation to Horton et al (2013), it is doubtful how far Wang (2011) can be viewed as a study of the effects of mandatory IFRS adoption in the EU. Of the two tests in the paper, the first is not framed as a study of the effects of IFRS, but as a study of the effects of common standards. However, it appears that the common standards are in fact IFRS. The first test also covers information transfers involving voluntary adopters prior to mandatory IFRS adoption. But 91% of the observations in this test are for 2005 or later, so it is likely that the results are driven by mandatory adoption. Perhaps more significant is that, in both tests, only about half the

observations are for EU firms, so it would be unsafe to assume that the results apply to the EU.

The findings of Cairns et al (2011) are a useful reminder that overall assessments of comparability mask divergent comparability effects for different items in different countries, depending on how the requirements of IFRS compare with those of prior national GAAP. In the case of investment properties, for example, UK GAAP required fair value, while IFRS allows a choice. The result is that, on adopting IFRS, some UK firms moved to historical cost, reducing comparability within the UK. Hans B. Christensen and Valeri Nikolaev, *Who Uses Fair Value Accounting for Non-Financial Assets after IFRS Adoption?* (2009), identify the same phenomenon for UK firms and the reverse for German firms. Under German GAAP, investment properties had to be measured at historical cost and, on adopting IFRS, some German firms moved to fair value, reducing comparability within Germany.⁴¹

In one respect, however, IFRS adoption will have reduced comparability across the EU. Martin Hoogendoorn, 'International accounting regulation and IFRS implementation in Europe and beyond – experiences with first-time adoption in Europe' (2006), writing as an auditor, states that 'Comparability is significantly impeded by the lack of balance sheet and income statement formats. This is even a step backwards compared to the EU Directives.'

Cascino and Gassen (2014) raise an important issue with their finding that comparability declines between publicly traded adopters and private company non-adopters in the same country. This cost has to be set against the benefits of any improvement in international comparability among adopters. Callao et al (2007) also appear to be raising this issue.

As with transparency, our overall conclusions may appear to be at variance with Brüggenmann et al (2013), who state that 'earnings ... comparability metrics typically do not improve' and that 'It is ... still largely an open question whether financial statements have become more ... comparable following mandatory IFRS adoption, as measured by detailed financial reporting outcomes.' It will be recalled from the discussion on transparency that Brüggenmann et al (2013) are referring to financial reporting evidence – ie, in this case, compliance and accounting choice studies and other studies looking at comparability – as opposed to 'capital markets' effects.

We concur with Brüggenmann et al (2013) that the evidence on comparability is mixed. Our more positive conclusion is based on looking at a larger number of studies, and the additional studies that we include are generally on the positive side. It also seems appropriate to include in this assessment those studies, referred to above, that are not primarily focused on financial reporting comparability, such as those relating to the accuracy of analysts' forecasts, improved investment efficiency, and executive performance comparisons. But the increase in comparability is not uniform, varying among countries and among firms, and in some respects comparability is clearly incomplete, as we discuss in the next section.

4.3 Lack of comparability

4.3.1 Research findings

The following studies find evidence of an initial or continuing lack of complete comparability following mandatory IFRS adoption.⁴² The methods used in these studies show less variety than those used to assess whether IFRS adoption changed levels of comparability. All but one of them focus on financial reporting evidence, with some looking at disclosure content (how far do firms disclose the same items of information?), some at accounting policy

⁴¹ This paper is primarily about how many firms adopt fair value for different items and their possible motives for doing so, rather than about comparability.

⁴² Christopher Nobes, 'The continued survival of international differences under IFRS' (2013) provides a review of the empirical literature on the survival of accounting differences under IFRS and an analysis of the reasons for their persistence.

choices, and some at non-compliance with requirements. One paper takes a different approach and looks at the valuation usefulness of earnings and book values.

The following two papers look at differences in disclosures.

Panel 4.14: Bischof (2009)

Jannis Bischof, 'The effects of IFRS adoption on bank disclosure in Europe', looks at the effects of adopting IFRS 7, *Financial Instruments: Disclosures*, for 171 banks (16 non-EU) in 28 European countries (3 non-EU) for 2006 and 2007. He finds that 'the effects of IFRS 7 adoption substantially vary across countries' and that 'regulatory activity by national supervisory authorities explains some of these differences'.

The author comments that 'Harmonization and, thereby, comparability of bank disclosures cannot be achieved by a common content of accounting standards alone; it is also necessary to agree on a uniform approach to the enforcement of those standards.'

Panel 4.15: Kvaal and Nobes (2013)

Erlend Kvaal and Christopher Nobes, 'International variations in tax disclosures', look at differences in tax disclosures under IFRS among firms in Australia, France, Germany, Spain and the UK. The sample is 161 firms and the data are taken from their 2008 accounts.

The authors find 'systematic differences between companies from different countries' and that 'users of IFRS financial statements from companies domiciled in different [countries] cannot expect to find similar tax disclosures in them.' They comment that their findings 'do not consistently indicate superior practice in one country compared with another'.

The inclusion of Australian companies does not appear to affect the overall findings.

The following six papers look at differences in accounting policy choices.

Panel 4.16: Kvaal and Nobes (2010)

Erlend Kvaal and Christopher Nobes, 'International differences in IFRS policy choice: a research note', look at the accounting policy choices and other practices of companies on 16 issues where IFRS allows a choice. The sample comprises 232 companies from five countries: Australia, France, Germany, Spain and the UK. The authors look at their 2005 accounts, the first year of mandatory IFRS adoption.

The authors find 'different national versions of IFRS practice' and 'show that companies not only have an opportunity to pursue pre-IFRS practices originating in their national GAAP, but also extensively use this opportunity'.

The inclusion of Australian companies does not affect the overall findings.

Panel 4.17: Cole et al (2011)

Vicky Cole, Joël Branson and Diane Breesch, 'Determinants influencing the de facto comparability of European IFRS financial statements', look at the 2009 accounting policy choices of 79 firms from Belgium, Germany, the Netherlands and the UK, covering 34 topics on which IFRS allows a choice. They find that for 20 of the 34 topics, 'less than 90% of the selected companies use the same accounting treatment'. They also find that a firm's country is 'the most important determinant influencing accounting choices'.

Panel 4.18: Nobes (2011)

Christopher Nobes, 'IFRS practices and the persistence of accounting system classification', looks at the accounting policy choices and other practices of companies on 13 issues where IFRS allows a choice. The sample comprises 287 companies from eight countries – Australia,

France, Germany, Italy, Spain, Sweden, the Netherlands and the UK – and is based on their 2008 accounts.

The author finds that the companies' accounting choices follow national profiles and can be classified into two groups: 'Anglo' (Australia and the UK) and 'continental' (the rest). He comments that 'after 30 years of harmonization led by the IASC/B and by the EU, international differences are clearly visible and countries form the same groupings as they did decades ago'. However, he also states that 'I do not suggest that there has been no harmonization in 30 years'.

Panel 4.19: Kvaal and Nobes (2012)

Erlend Kvaal and Christopher Nobes, 'IFRS policy changes and the continuation of national patterns of IFRS practice', look at the 2008 accounts of the companies examined in Kvaal and Nobes (2010) (Panel 4.16). Because of takeovers etc the sample is now reduced to 210 (v 232 in the earlier study).

The authors find that the national patterns of IFRS they previously identified have persisted, but that French and Spanish companies made more policy changes between 2005 and 2008 than companies from the other countries in the sample, and that these were 'nearly all ... away from previous national requirements'.

Again the inclusion of Australian companies does not affect the overall conclusions.

Panel 4.20: Haller and Wehrfritz (2013)

Axel Haller and Martin Wehrfritz, 'The impact of national GAAP and accounting traditions on IFRS policy selection: evidence from Germany and the UK', look at accounting policy choices under IFRS by German and UK firms in 2005 and 2009. The samples for 2005 are 182 German firms and 192 UK firms, and for 2009 213 German firms and 224 UK firms. Most of the firms in the German samples are voluntary adopters.

For 2005, the authors find 'significant evidence that firms tend to continue with accounting policies required or predominantly chosen under national GAAP.' Their results also 'suggest that accounting policy choice under IFRS differs between Germany and the UK for issues where respective national GAAP is different.'

For 2009, for five out of 14 topics the authors find evidence of 'significant movement in the direction of homogeneous application of IFRS', but find no statistically significant trend for the other nine topics. They state that: 'Overall, our 2009 results appear to suggest the continuation of national GAAP policies ... Moreover, our 2009 findings provide significant evidence that accounting policy choice under IFRS still differs between Germany and the UK for topics where respective national GAAP still differs.'

In relation to the inclusion of German voluntary adopters, the authors comment that, 'In most cases, we did not find significant differences in policy choices between early [ie, voluntary] IFRS adopters and non-early [ie, mandatory] IFRS adopters both in 2005 and 2009.'

Panel 4.21: Nobes and Perramon (2013)

Christopher Nobes and Jordi Perramon, 'Firm size and national profiles of IFRS policy choice', look at the accounting choices for 2008 of 155 small publicly traded companies in Australia, France, Germany, Spain and the UK and compares them with those of 155 large publicly traded companies from the same countries.

The authors find that small companies are more likely than large ones to continue to follow national accounting traditions under IFRS and that they are less worried about smoothing earnings. They comment that the paper 'provides further evidence that harmonisation of accounting practice is still far from complete' and that 'it is less complete for smaller listed companies than for large ones'.

The inclusion of Australian companies does not appear to affect the overall findings.

The following two studies look at non-compliance. The argument is that a common set of standards cannot secure comparable accounting if firms are not complying with some of their requirements.

Panel 4.22: Glaum et al (2013)

Martin Glaum, Peter Schmidt, Donna L. Street and Silvia Vogel, 'Compliance with IFRS 3- and IAS 36-required disclosures across 17 European countries: company- and country-level determinants', look at compliance with certain IFRS disclosure requirements in 2005, the year of mandatory adoption. The sample is 357 firms (5% non-EU) from 17 European countries (one non-EU: Switzerland). The standards in question are IFRS 3, *Business Combinations*, and IAS 36, *Impairment of Assets*.

The authors find evidence of 'substantial non-compliance', 'determined by company- and country-specific factors'. They also 'provide evidence that national culture in the form of the strength of national traditions ... impacts compliance'.

Panel 4.23: Goh et al (2013)

Lisa Goh, Philip Joos and Kazbi Soonawalla, 'Determinants and valuation implications of imperfect stock option disclosures', look at French publicly traded companies' compliance in 2005 with the stock option disclosure requirements of IFRS 2, *Share-based Payment*. They find that 'overall compliance with IFRS 2 disclosure requirements increases with US and UK institutional ownership, US cross-listing, provision of English language statements, and decreases with CEO and family ownership of the firm'.

The following three studies use multiple methods. The first looks at non-compliance and differences in disclosures; the second looks at non-compliance and accounting policy choices; and the third looks at non-compliance and variation in impairment practices.

Panel 4.24: Glaum et al (2007)

Martin Glaum, Donna L. Street and Silvia Vogel, *Making Acquisitions Transparent: An Evaluation of M&A-Related IFRS Disclosures by European Companies in 2005*, look at the M&A-related disclosures of 357 mandatory IFRS adopters (5% non-EU) for 2005. The sample is from 17 European countries (one non-EU: Switzerland).

The authors point to a number of instances of apparent non-compliance with IFRS, which reduces comparability. They also find that 'the information presented is often not as transparent as possible to investors, analysts and other users. This is because companies vary in their interpretation of IFRS and thus account for, or disclose, the effects of the transactions and other events in different ways... [T]he resulting heterogeneity of disclosures seriously hinders comparability.'

Panel 4.25: Bischof et al (2011)

Jannis Bischof, Ulf Brüggenmann and Holger Daske, 'Fair value reclassifications of financial assets during the financial crisis', look at the reaction of 302 IFRS-using banks in 39 countries (including 134 banks in 19 EU countries) to the IASB's October 2008 decision to allow an option to abandon fair value measurement for certain financial assets. They find that banks 'use the reclassification option to forgo the recognition of fair value losses and ultimately the regulatory costs of supervisory intervention'. They also find that 'Some banks ... use the reclassification option to withhold potentially material information by not complying with corresponding footnote disclosure requirements'. Separate results are not given for EU banks, so it is not clear how far the findings apply to them specifically as well as to the sample as a whole.

Panel 4.26: Amiraslani et al (2014)

Hami Amiraslani, George E. Iatridis and Peter F. Pope, *Accounting for Asset Impairment: A Test for IFRS Compliance across Europe*, look at accounting practices on impairment in 25 European countries (two non-EU: Norway and Switzerland) over the period 2006-2011. The samples for different tests vary from 324 firms (10% non-EU) to 4,474 (7% non-EU).

The authors find 'significant variations in compliance with disclosure requirements relating to impairments of non-current non-financial assets'. They divide the countries in their sample into three different clusters reflecting institutions and incentives likely to affect the quality of financial reporting. They find that 'there appear to be differences in the speed of recognition of economic losses through impairments across different country-clusters... Countries where enforcement is predicted to be stronger are found to recognize losses in a more timely fashion.'

Finally, the following paper looks at the valuation usefulness of financial reporting information as a basis for assessing comparability. The underlying idea is that comparable data from similar firms ought to have the same degree of valuation usefulness.

Panel 4.27: Liao et al (2012)

Qing Liao, Thorsten Sellhorn and Hollis A. Skaife, 'The cross-country comparability of IFRS earnings and book value: evidence from France and Germany', look at changes in the comparability of French and German firms' financial reporting information following mandatory IFRS adoption. The sample is up to 427 French firms and up to 429 German firms (numbers vary from year to year). The period covered is 2006-2008. The comparability of financial reporting information is assessed by investigating the valuation usefulness of earnings and book values after IFRS adoption.

The authors find that 'French and German IFRS earnings and book values are comparable in the year subsequent to IFRS adoption, but become less comparable in the years that follow.' They suggest that 'the relative comparability [in the year following adoption] is due to firms structuring their balance sheets in similar ways upon IFRS adoption'. They 'conjecture the diminishing comparability of IFRS earnings and book values is due to French and German managers making different implicit and explicit accounting choices'. In support of this, the authors 'document differences in accounting estimates, recognition of special items, and other equity reserves between French and German firms that help explain the decrease in comparability over time.'

Verriest et al (2013), reported at Panel 3.19 in relation to differences in accounting quality, find 'significant diversity in disclosure and compliance around IFRS adoption'. Indeed, 'more than half the sample firms fail to comply with at least one of the 15 mandatory disclosure and compliance items that [they] investigate.' This paper relates to firms' 2005 accounts.

Cascino and Gassen (2014), reported at Panel 4.13, also look at the 2006 accounts of samples of mandatory adopters in Germany (136 firms) and Italy (153 firms) to assess their compliance with IFRS requirements. They find evidence that 'the IFRS compliance of German and Italian firms varies systematically with country-, region-, and firm-level incentives.'

Differences in the value relevance of financial reporting information produced by EU firms can also provide evidence of continuing lack of complete comparability. We have not tried to find value relevance studies for EU firms to support this, but one that makes the point explicitly is Alessandro Mechelli and Riccardo Cimini, 'Is comprehensive income value relevant and does location matter? A European study' (2014). This paper uses financial reporting data from EU firms for the period 2006-2011 to examine the value relevance of comprehensive income (CI) and other comprehensive income (OCI). The authors find that CI and OCI are 'more value-relevant in those countries where entities have the need to disclose relevant information to attract funds available on the market ... and where the legal system reduces managers' ability to manipulate accounting amounts in order to reach their goals'. They comment that 'these

findings ... highlight that despite the use of the same accounting standards, different motivations for various IFRS practices could lead to different accounting choices’.

4.3.2 Discussion

Sunder (2011) points out that there can never be perfect comparability in financial reporting and states that ‘the application of IFRS across national jurisdictions has not been, and is unlikely to be, uniform, nor is it likely to generate comparability’. Indeed, as IFRS allows choices on a number of accounting issues, incomplete comparability is inevitable unless all firms make identical choices and judgements, which seems unlikely. All the papers referred to in this section provide evidence of incomplete comparability following the mandatory adoption of IFRS in the EU and there seems to be no reason to doubt this unanimous conclusion.

A small number of studies look at whether there has been any change in comparability in the years since IFRS adoption. The results are mixed.

- Kvaal and Nobes (2012) find that the national patterns of IFRS identified in Kvaal and Nobes (2010) persist even three years after the mandatory adoption of IFRS, but with some move away from previous national practices by the French and Spanish companies in the sample.
- Haller and Wehrfritz (2013) identify some ‘movement in the direction of homogeneous application of IFRS’ between 2005 and 2009 for their sample of German and UK firms.
- Liao et al (2012) identify national patterns of measurement in France and Germany reasserting themselves after an initial period of comparability in the year following IFRS adoption.

This is a subject on which it would be useful to have more and larger-scale research.

Kvaal and Nobes (2010) note that their sample is of very large companies, which are likely to be subject to pressures to comply with international accounting norms. National differences among smaller publicly traded companies may well therefore be even greater, and this conjecture is confirmed by the findings of Nobes and Perramon (2013). Smaller publicly traded companies attract less interest than larger ones from investors and analysts, so they have less incentive to meet international reporting norms.

Overall, there is indisputable evidence that in a number of respects comparability among IFRS firms in the EU is incomplete. This reflects:

- options in standards;
- national differences;
- differences in incentives at the firm level;
- individual differences of judgement and interpretation; and
- non-compliance.

None of this research suggests that comparability has not been improved by mandatory IFRS adoption. But the evidence that smaller companies have harmonised less than larger companies implies some qualification of the conclusions in Section 4.2 as they are based mainly on evidence relating to larger companies.

4.4 Conclusions

Research evidence differs on whether mandatory IFRS adoption improved the comparability of EU companies’ financial reporting. On balance, the evidence suggests that there was an

improvement, but there is also ample evidence of continuing incomplete comparability in certain respects. In part, this is because IFRS allows choices; complete comparability is therefore not to be expected. But there is also evidence of continuing financial reporting differences because of differences in institutions and incentives among firms and countries, and comparability may be weaker among smaller publicly traded companies than among larger ones.

5. The cost of capital

One of the key objectives in adopting IFRS in the EU was to reduce companies' cost of capital. Has this objective been achieved?

5.1 General points

The efficiency and effectiveness of capital markets can be viewed in various ways. From the point of view of preparers, perhaps the most important practical effect of increased efficiency in the capital market is that they should experience a lower cost of capital. The effect of changes in financial reporting on firms' cost of capital can be assessed by looking at correlations between these changes and the cost of capital. In Section 5.2 we look at the evidence in relation to the cost of equity capital and in Section 5.3 in relation to the cost of debt capital.

Not everybody involved in financial reporting is convinced that there is a connection between disclosure and the cost of capital.

Panel 5.1: Fox et al (2013)

Alison Fox, Gwen Hannah, Christine Helliard and Monica Veneziani, 'The costs of and benefits of IFRS implementation in the UK and Italy',⁴³ summarise interviews, conducted between January 2006 and May 2007 with 32 people involved in financial reporting in Ireland (5), Italy (8) and the UK (19). A number of those interviewed express scepticism that changes in disclosure affect the cost of capital.

In Section 5.2 we also consider the problem that capital markets may to some extent have anticipated the effects of IFRS adoption, and so research that focuses purely on post-adoption effects may be misleading.

From the point of view of investors, a more important practical effect may be improved market liquidity. The research evidence on this is reviewed in Chapter 6.

A lower cost of capital is important to the welfare of society generally, as the lower the cost of capital, the more investments are feasible and – assuming a direct relationship between investment and welfare – the higher the standard of living. It could be argued, however, that an equally important test of whether the capital market is functioning effectively is how efficiently firms' make capital investments as the efficient allocation of capital also affects social welfare. We look at the evidence on this in Chapter 7.

Changes in access to cross-border investment are likely to affect both the efficiency of capital markets and the cost of capital. We look at the evidence on IFRS and cross-border investment in Chapter 8.

Although we look separately at the evidence on market liquidity and cross-border investment, improvements in either should feed through into a lower cost of capital. And as corporate investment efficiency depends on, among other things, ease of access to capital markets, we would expect it too to be affected by access to cross-border capital flows. We may therefore expect a degree of consistency in the findings on all these topics, although this will not necessarily be the case.

5.2 Cost of capital: equity

5.2.1 Market anticipation: research findings

One problem in estimating the cost of capital effects of IFRS adoption is that they may to some extent have been anticipated by the market. For example, share prices may rise in anticipation of the benefits to be obtained by adopting IFRS, which would in itself – other things being equal – reduce firms' cost of capital. Brown (2011) notes that: 'For about 30 years there has been a research tradition of examining market reactions to events that

⁴³ More detail on this research is given in Theresa Dunne, Suzanne Fifield, Gary Finningham, Alison Fox, Gwen Hannah, Christine Helliard, David Power and Monica Veneziani, *The Implementation of IFRS in the UK, Italy and Ireland* (2008).

happened before an accounting standard was issued ... The events are chosen because they signalled a substantial change in the odds that a standard eventually would be issued.' This approach is used in the following four studies.

Panel 5.2: Comprix et al (2003)

J. Joseph Comprix, Karl A. Muller III and Mary Stanford, 'Economic consequences from mandatory adoption of IASB standards in the European Union', look at share price reactions to announcements increasing the likelihood that IFRS would be mandatory for EU companies. Their sample comprises 2,152 firms in 14 EU countries, and they look at market reactions to 11 announcements over the period 2000-2002.

The authors report that, among other things, they find 'evidence that the equity price reaction to announcements increasing the likelihood of adoption of [IFRS] is positively related to the number of new accounting disclosures' arising from the adoption of IFRS (because of differences between national GAAP and IFRS). They also find differences in price responses related to such matters as whether the firm has a Big 5 auditor and national corporate governance and enforcement regimes.

Panel 5.3: Christensen et al (2007)

Hans B. Christensen, Edward Lee and Martin Walker, 'Cross-sectional variation in the economic consequences of international accounting harmonization: the case of mandatory IFRS adoption in the UK', look at the effects on a sample of UK companies of changing expectations that they will be required to comply with IFRS.

The paper is based on the following reasoning. A large number of German companies voluntarily adopted IFRS before it became mandatory. They would have chosen to do so because they expected net benefits. It is possible for investors to identify UK companies with similar characteristics to the German companies that voluntarily adopted IFRS. Such UK companies might be expected to benefit from mandatory IFRS adoption. So as news emerges indicating or confirming that UK companies will be required to adopt IFRS, the stock market is likely to react positively to this news in the case of those companies likely to benefit from the change.

The authors accordingly identify UK companies with similar characteristics to those of German voluntary adopters (constructing a proxy for UK firms' willingness to adopt IFRS) and look at whether they benefit from news suggesting or confirming that they will be required to comply with IFRS. The paper covers reactions to news events for the period 1999-2000 and changes in the cost of equity capital for 1996-2004.

The authors report that 'we find evidence that the stock-price reaction of UK firms to announcements favorable (unfavorable) to mandatory IFRS adoption is positively (negatively) related to our proxy for UK firms' willingness to adopt IFRS... [W]e also study the long-run changes to the implied cost of equity of UK firms after the decision to mandate IFRS. We find that the change to the implied cost of equity is negatively related to our proxy for UK firms' willingness to adopt IFRS' – ie, firms expected to benefit from IFRS adoption show a lower cost of capital.

Panel 5.4: Pae et al (2008)

Jinhan Pae, Daniel B. Thornton and Michael Welker, 'Agency cost reduction associated with EU financial reporting reform', look at expectations of the effects of IFRS adoption on market valuations of firms where control is concentrated or where there is a divergence between shareholder voting rights and rights to cash flows. The valuation of such companies usually reflects a discount for lack of transparency and for expropriation risk.

To assess changes in this discount, the authors look at changes in Tobin's Q over the period 1999-2003, when mandatory IFRS adoption in the EU became 'virtually certain'. They also look at changes in Tobin's Q associated with five news events in 2001 indicating increased

likelihood of IFRS adoption in the EU. Very broadly, the authors measure Tobin's Q by comparing book values with market capitalisation. The higher the Tobin's Q ratio for a set of firms, the more highly they are valued. As the ratio takes book values into account, changes in it reflect changes other than changes in book value. The sample is 1,211 firms from 11 EU countries.

The authors find increases in Tobin's Q for firms where there is a concentration of control and an excess of the largest shareholder's voting rights over cash flow rights. They comment: 'These results are consistent with stronger reporting standards enhancing firm value by mitigating incentives for controlling shareholders to expropriate minority shareholders.' They also find that 'Increases in Tobin's Q associated with financial reporting reform are concentrated in EU firms that (1) are not cross-listed in the US, (2) have families as their largest shareholders, or (3) have a largest shareholder who holds 20 percent or more of the firm's cash flow rights. These results suggest that minority shareholders of firms with the most severe perceived information asymmetries are among the major beneficiaries of EU financial reporting reform.'

The authors also report, based on their analysis of the five 2001 news events, 'modest evidence that value increases due to anticipated IFRS adoption tended to occur over three-day windows bracketing announcements that increased the probability or accelerated the timing of IFRS adoption'.

Panel 5.5: Armstrong et al (2010)

Christopher S. Armstrong, Mary E. Barth, Alan D. Jagolinzer and Edward J. Riedl, 'Market reactions to the adoption of IFRS in Europe', look at price reactions to news events affecting the likelihood that IFRS as issued by the IASB would be mandatory for EU companies. Their sample comprises 3,265 firms (7% non-EU) in 18 European countries (two non-EU: Norway and Switzerland), and they look at market reactions to 16 announcements over the period 2002-2005. They also compare the market reactions for the sample firms with those for US firms at the same dates.

The authors find 'an incrementally positive reaction for firms with lower quality pre-adoption information, which is more pronounced for banks, and with higher pre-adoption information asymmetry, consistent with investors expecting net information quality benefits from IFRS adoption. We find an incrementally negative reaction for firms domiciled in code law countries [see below], consistent with investors' concerns over enforcement of IFRS in those countries. Finally, we find a positive reaction to IFRS adoption events for firms with high-quality pre-adoption information, consistent with investors expecting net convergence benefits from IFRS adoption.'

Code law countries: the authors classify all the countries in their sample as code law countries, except the UK and Ireland.

Daske et al (2008) (Panel 5.8 below) also appear to find market anticipation effects, for cost of capital and Tobin's Q, but in relation to fiscal year 2004 accounts. This study does not attempt to link its findings with any particular news events, and indeed has a completely different approach.

5.2.2 Market anticipation: discussion

Some of the key decisions on IFRS adoption were taken in 2000-2001. Comprich et al (2003), Christensen et al (2007) and Pae et al (2008) all include this period in their studies.

Comprich et al (2003) report a number of positive reactions to announcements that increased the likelihood of IFRS adoption, but different announcements prompted positive responses related to different factors in a way that is difficult to explain. Armstrong et al (2010) say of Comprich et al (2003) that it 'finds little ... evidence of a market reaction' to the events it covers; Daske et al (2008) say that it finds 'a weakly significant, but negative, market reaction'.

The evidence in Christensen et al (2007) is clearer, but is restricted to UK firms: the stock market reacts positively for firms expected to benefit from IFRS adoption and negatively for firms not expected to benefit.

The findings of Pae et al (2008) also seem clear enough: positive market reactions indicate that mandatory IFRS adoption is expected to increase transparency and reduce appropriation risks in certain categories of firm where these are of particular concern. These results raise a question about Christensen et al (2007), which is based on the assumption that firms for which there will be net benefits from IFRS adoption are more likely to be voluntary adopters. Pae et al (2008) remind us that there are conflicts of interest within firms, and that firms whose share price may benefit from increased transparency may have reasons for preferring to avoid it. The assumptions in Christensen et al (2007) may still be valid for most firms.

Armstrong et al (2010) find aggregate cumulative positive market reactions to the news events that they cover, but start in 2002 after some of the key announcements were made. The authors explain that the news events that they include affect the likelihood that EU firms would be required to comply with IFRS as issued by the IASB (as opposed to some EU variant of IFRS), which was not the focus of the news events covered in Comprix et al (2003), Christensen et al (2007) and Pae et al (2008). However, to get a full picture of how far expectations of mandatory IFRS adoption in the EU resulted in market anticipation of its benefits (and costs), it would be necessary to conduct a survey that covered both the earlier period dealt with by Comprix et al (2003), Christensen et al (2007) and Pae et al (2008) and the later period dealt with by Armstrong et al (2010).

Controlling for simultaneous price movements on the US market has an important effect on the findings of Armstrong et al (2010). Before making this adjustment the results tend to show negative price reactions to news that makes adoption of IFRS as issued by the IASB more likely, and positive reactions to news that makes it less likely. None of the price reactions to individual events is statistically significant, but the overall positive reaction, taking the 16 events as a whole and after adjusting for simultaneous price movements on the US market, is statistically significant.

As noted at Panel 5.5, Armstrong et al (2010) find an incrementally negative price reaction, by comparison with the US market, for companies in code law countries, which are in fact the majority of their sample. The overall positive reaction that they find must be attributable to the companies in the two common law countries: the UK and Ireland.

Daske et al (2008), although not looking at responses to news events, find evidence of positive anticipation effects in relation to fiscal year 2004 accounts. The very different approach of this paper means that it cannot really be tied in with the other papers referred to in this section, other than in relation to the key point that it does indeed appear to find evidence that the market anticipates IFRS adoption.

Overall, it seems reasonable to conclude from these five studies that the stock market anticipated both costs and benefits from IFRS adoption, and that it is therefore wrong in principle to draw conclusions on the effects of adoption purely by looking at what happened after adoption. Unfortunately, it is unclear exactly what costs and benefits the market anticipated; it is clear, though, that they varied from one jurisdiction to another and from one firm to another.

5.2.3 Changes in the cost of equity capital: research findings

The following studies look at correlations between the mandatory adoption of IFRS and changes in the cost of equity capital.

Panel 5.6: Hail and Leuz (2007)

Luzi Hail and Christian Leuz, 'Capital market effects of mandatory IFRS reporting in the EU: empirical evidence', look at the effects of mandatory IFRS adoption for 2,761 firms from 18

EU countries and compare them with about 25,000 voluntary adopters and non-adopters from the same EU countries and 33 non-EU countries. The paper covers the period 2001-2005, but for 2005 the sample is limited to firms with a 31 December year end. The tests include comparisons between the two years 2004 and 2005.

Using the data for the whole period 2001-2005, the authors 'find some evidence that the cost of capital is lower ... for those [firms] that adopted IFRS for the first time in 2005 [ie, mandatory adopters] (relative to non-IFRS firms). However, the effects are small in magnitude, depend on the choice of benchmark sample and are not robust to the introduction of firm-fixed effects.' The authors note that 'It is possible that the results are weakened due to anticipation effects in the market prior to mandatory IFRS reporting'. This possibility is explored in Daske et al (2008) – Panel 5.8 below.

Using the data for 2004 and 2005, the authors find an increase in the cost of equity capital of 11 basis points in the year of IFRS adoption, relative to non-adopters. The authors caution that this result is not controlled for firm characteristics or country-specific effects.

Regarding their results generally, the authors also 'caution to attribute the observed effects solely to the adoption of IFRS itself' as 'many EU countries have changed their enforcement (and governance) regimes, which could play a role in the findings'.

There is a substantial overlap between the evidence in this paper and that in Daske et al (2008), but the latter includes mandatory adopters from outside the EU and the two papers apply somewhat different tests.

Panel 5.7: Palea (2007)

Vera Palea, 'The effects of the IAS/IFRS adoption in the European Union on the financial industry', looks at changes in the cost of equity capital for EU banks following mandatory adoption of IFRS. The sample covers 35 banks from seven EU countries, including 18 from Italy and seven from Spain and none from Germany or the UK, and uses quarterly reports for the first three quarters of 2004 and for the first three quarters of 2005. The author finds that the cost of equity is lower in the post-IFRS period.

Panel 5.8: Daske et al (2008)

Holger Daske, Luzi Hail, Christian Leuz and Rodrigo Verdi, 'Mandatory IFRS reporting around the world: early evidence on the economic consequences', look at evidence from 26 countries around the world where there has been mandatory IFRS adoption. 38% of the 8,726 sample firms come from non-EU countries, notably Australia, Hong Kong, Singapore and South Africa, and 46% of the firm-years for mandatory adopters are for non-EU firms.

The sample covers 2001-2005 and, for the last of these fiscal years, only accounting periods ending 31 December 2005 (the first year of mandatory adoption for EU firms); EU firms with non-calendar year-ends are therefore excluded for fiscal year 2005. Hence the paper provides only 'early evidence' on mandatory IFRS adoption. The tests include comparisons between the two years 2004 and 2005.

Using the data for 2001-2005, the authors find an increase in the cost of equity capital in the year of IFRS adoption for mandatory adopters. They note that this may 'stem from transition effects, such as temporary difficulties in forecasting earnings'. They also note that it is possible that the market had anticipated benefits from mandatory IFRS adoption. Consistent with this hypothesis, they find that 'the cost of capital *decreases* by 26 basis points ... when we measure the effect one year before the mandatory adoption date'.

They also look at changes in Tobin's Q, but find that they are insignificant for mandatory adopters. However, Tobin's Q '*increases* by 7% when we measure the effect one year before the mandatory adoption date'.

The authors comment that, 'As several countries around the world revise their enforcement and governance regimes to support the introduction of IFRS, we suggest that our results likely reflect the joint effects of these institutional changes and the IFRS mandate.'

Panel 5.9: Lee et al (2008)

Edward Lee, Martin Walker and Hans B. Christensen, *Mandating IFRS: Its Impact on the Cost of Equity Capital in Europe*, look at the effects of mandatory IFRS adoption on the cost of equity capital in 17 European countries (two non-EU: Norway and Switzerland). The sample sizes in different tests are 18,336 firm-years and 18,900 firm-years (in both cases 11% of the observations are for non-EU firms). The period covered is 1995-2006.

The countries in the sample are classified into those with a higher- or lower-quality financial reporting environment and enforcement. This is based on five criteria: outsider rights; the importance of the equity market; ownership concentration; disclosure quality; and earnings management. On this basis, the UK, for example, scores 5, France and Spain score 1, and Germany and Italy score 0.

The authors report that 'We find no evidence of a reduction in the cost of equity capital among countries where there are relatively low financial reporting incentives and enforcement. Instead, we find a significant reduction in the high incentive group, mainly companies based in the UK.' For their sample as a whole, once confounding factors are taken into account, they do not find a statistically significant change in the cost of capital.

The authors comment that their findings may be surprising given that the UK is the country in the sample where prior national GAAP and IFRS were closest in disclosure quality, and they suggest that, for those companies with a greater demand for foreign capital, the result may be attributable to 'improved cross-border comparability in financial statements'.

Panel 5.10: Li (2010)

Siqi Li, 'Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital?', looks at changes in the cost of equity capital in the EU following mandatory IFRS adoption. The sample comprises 1,084 firms from 18 EU countries for the period 1995-2006. The number of firms in the sample varies from year to year and averages 488 for the pre-adoption period and 786 post-adoption.

The author finds that the average cost of capital for mandatory adopters falls from 9.24% to 8.77% after adoption. Excluding the transition period (2004-2005), the fall is from 9.78% to 8.92%.

The author also finds that mandatory adopters in strong legal enforcement countries experience a cost of capital reduction of 91 basis points, whereas mandatory adopters in poor legal enforcement countries (which include France and Germany) 'experience no significant change in the cost of equity capital after 2005'. The author also finds that for mandatory adopters in strong enforcement countries, the reduction in the cost of equity capital is significantly greater where there is a large increase in disclosures and where there is a large increase in comparability.

The author warns that, 'as EU countries have been making continuous efforts to strengthen their legal and enforcement systems ..., the finding of a reduced cost of equity might be a joint outcome of IFRS adoption and concurrent events such as recent institutional improvements.'

Panel 5.11: Daske et al (2013)

Holger Daske, Luzi Hail, Christian Leuz and Rodrigo Verdi, 'Adopting a label: heterogeneity in the economic consequences around IAS/IFRS adoption', look at the relationship between firms' different reporting incentives and the effects of IFRS adoption. In particular, the authors distinguish between firms that 'adopt [IFRS] merely in name without making material changes

to their reporting policies' ('label adopters') and firms that 'adopt [IFRS] as part of a broader strategy to increase their commitment to transparency' ('serious adopters'). The paper's focus is primarily on voluntary adopters, but its analysis is also extended to mandatory adopters.

The sample for mandatory adopters is from 26 countries, which include some non-EU countries (it is not stated which), and up to 7,252 firms (not analysed by country). As the focus of the paper is on voluntary adopters, more detail is given for that sample. The period covered for mandatory adopters is 2002-2005.

The authors find that on mandatory adoption (as on voluntary adoption) serious adopters experience a decrease in the cost of capital, whereas label adopters do not.

One study looks at a particular aspect of the cost of capital: IPO underpricing. When companies make initial public offerings (IPOs), their share price usually rises in the first day of trading. The difference between the offer price and the price at the end of the first day of trading measures the underpricing. To the extent that companies can reduce this underpricing, they can also reduce their cost of capital. The extent of underpricing is usually attributed to information asymmetries among market participants. So if IFRS adoption can reduce information asymmetries around IPOs, it should also reduce underpricing in these capital-raising exercises and thereby reduce the cost of capital.

Panel 5.12: Hong et al (2014)

Hyun A. Hong, Mingyi Hung and Gerald Lobo, 'The impact of mandatory IFRS adoption on IPOs in global capital markets', look at the effect of mandatory IFRS adoption on initial public offering (IPO) underpricing. Their test sample comprises 1,540 IPOs in 2003-2004 and 2006-2007, for firms in 20 countries (six non-EU). They use three benchmark samples from nine countries.

The authors 'find both a statistically and economically significant reduction in IPO underpricing following mandatory IFRS adoption.' They also find that 'the effects of mandatory IFRS adoption on IPO underpricing ... are greater for firms in countries experiencing large accounting changes, and that this relation is more pronounced among firms in countries with strong implementation credibility.'

The authors repeat their tests for the EU sample only and find that the results are qualitatively the same as for the full sample.

5.2.4 Changes in the cost of equity capital: discussion

Li (2010) provides probably the most important evidence of cost of equity capital benefits associated with mandatory IFRS adoption in the EU, but this paper's findings differ from those of Hail and Leuz (2007), Daske et al (2008) and Lee et al (2008). How can the differing results be reconciled?

- The coverage of Hail and Leuz (2007) and Daske et al (2008) ends in 2005, the first year of IFRS adoption, and, as Hail and Leuz (2007) point out, there may be transitional factors – eg, 'it may initially be harder for analysts to forecast firms' net earnings under IFRS' – that would lead to less favourable results for the first year of adoption. Li's sample continues into 2006. However, so does that of Lee et al (2008).
- Some of the comparisons in Hail and Leuz (2007) and Daske et al (2008) are purely between the two years 2004 and 2005. Li (2010) obtains more positive results for the reduction in cost of capital when the transition period (2004-2005) is excluded. Li (2010)'s results, as reported in Panel 5.10, imply that the cost of capital may have been unusually low in 2004, as her pre-adoption cost of capital for 1995-2003 is 9.78%, but for 1995-2004 is 9.24%. If this is the case, then 2004 may provide an unusually low basis for comparison. This is supported by further analyses in Daske et al (2008). First, they check what the data would be if they exclude 2004; they find that this results in a lower increase in the cost of capital for mandatory adopters. Then they see what the results would be if

mandatory adoption were assumed to have occurred a year earlier, ie, in 2004, and (as noted in Panel 5.8) they find that this results in a decrease in the cost of capital. They hypothesise that this may indicate that the cost-of-capital benefits of IFRS adoption are anticipated by the market.

- Some of the results in Leuz and Hail (2007) and Daske et al (2008) compare mandatory adopters with firms in countries where IFRS had not been adopted. Li (2010) does not do this, and so this control is missing in her tests. However, it is also missing in the tests of Lee et al (2008).

Overall, it is far from clear that the differing results from these papers can be reconciled.

Nor is it clear how far the findings of Daske et al (2013), that only 'serious adopters' experience a cost of equity capital benefit from mandatory IFRS adoption, are applicable to the EU or how many EU firms would be categorised as serious adopters.

Brüggemann et al (2013) note that the samples for Daske et al (2008) and a number of other studies – by implication including Hail and Leuz (2007) – may well be biased towards larger publicly traded companies and that there are reasons to expect the benefits of mandatory IFRS adoption to be greater for these companies than for smaller publicly traded companies. The same point appears to apply to the sample used in Li (2010). The findings of these studies may not, therefore, hold for smaller publicly traded companies or for the population of publicly traded companies as a whole. On the other hand, Hong et al (2014)'s findings of cost of capital benefits in relation to IPOs are presumably particularly relevant for smaller publicly traded companies.

The question of anticipation by the market, mentioned above, makes it difficult to know how much confidence to place in research that looks purely at the period around adoption. The stock market prices in future changes as soon as it becomes aware of them, and this will affect cost of capital calculations. Changes in the cost of capital after IFRS adoption will therefore reflect:

- adoption effects that had not been anticipated by the market (surprises); and
- resolution of uncertainties as effects that the market had expected, but not been sure about, are realised (confirmations).

As noted above, the overall effects of market anticipation on the cost of equity capital are unclear, which is perhaps an indication that they are in aggregate not very great in either a positive or a negative direction.

It seems reasonable to conclude that on balance the evidence at present points towards overall cost of equity capital benefits from mandatory IFRS adoption. But the evidence is not conclusive, and this result may in any case be valid only for some EU firms and in some EU countries. What is clear is that any cost of equity capital benefits vary significantly across firms and across jurisdictions.

5.3 Cost of capital: debt

5.3.1 Research findings

The debt market is arguably a more important source of finance for EU companies than the equity market; Florou and Kosi (2014) (Panel 5.14 below) note that 'during 2000-2011 the average European country had a corporate debt market almost twice the size of its equity market'.

There do not appear to be any studies, comparable to those reported above for equity markets, that look at debt market anticipation of the effects of mandatory IFRS adoption in the EU. Presumably such effects existed, so this is a gap in the research, possibly because of

data availability or because price movements in debt markets typically show less movement than those in equity markets and so tend to be less amenable to this kind of research.

The following studies look at correlations between the mandatory adoption of IFRS and access to debt capital and its cost.

Panel 5.13: Tai-Yuan Chen et al (2013)

Tai-Yuan Chen, Chen Lung Chin, Shiheng Wang and Chun Yao, 'The effect of mandatory IFRS adoption on bank loan contracting', compare changes in bank loan facilities for firms in countries that mandatorily adopt IFRS with those for firms in countries that do not adopt IFRS. The IFRS sample comprises 445 firms (30% non-EU) from 23 countries (seven non-EU). The number of loan facilities identified for these firms is 3,013 and the period covered is 2000-2009.

The authors report: 'We find that after controlling for loan- and firm-specific determinants of loan terms, interest rates, on average, increase by about 22 basis points after borrowers adopt IFRS mandatorily... In sharp contrast, interest rates to borrowers from non-IFRS countries decrease by about 6 basis points during the same period. Next, relative to the pre-adoption period, the proportion of loans using accounting-based financial covenants decreases significantly, while the proportion of loans with collateral provision increases significantly after IFRS are mandated. In addition, these changes are significantly larger than those for borrowers from non-IFRS countries during the same period. Finally, we find that loan maturity decreases [by] about one month after borrowers mandatorily adopt IFRS, representing a 2.3% decrease compared to the pre-IFRS period. In contrast, the loan maturity of borrowers from non-IFRS-mandating countries does not change materially during the same period.'

They also find that 'the ... increase in interest rates, the reduction in the use of accounting-based financial covenants, and the decrease in loan maturity primarily occur to borrowers which experience a greater increase in earnings smoothing or abnormal total accruals after mandatory IFRS adoption.'

Panel 5.14: Florou and Kosi (2014)

Annita Florou and Urska Kosi, 'Does mandatory IFRS adoption facilitate debt financing?', look at the effects of mandatory IFRS adoption on debt financing via bonds (public) and loans (private). Their paper covers the period 2000-2007. The mandatory IFRS adopters include non-EU companies, which in two of the tests provide 27% and 32% of the respective samples. However, the authors also perform some tests that distinguish EU from non-EU IFRS adopters. Mandatory adopters are compared with benchmark samples from non-IFRS countries – the majority in all cases from the US, but with large samples also in some cases from Japan.

The authors find that 'the likelihood of a firm accessing the bond market increases by 8.4% for mandatory IFRS adopters, relative to non-adopters, after the mandate' and that 'the cost of bonds to mandatory IFRS issuers decreases by 36.6 basis points in the post-IFRS period, relative to a benchmark sample of non-adopters'. No comparable effects are found for access to loans or for loan rates.

The authors find 'some evidence suggesting that the impact of mandatory IFRS adoption on both the propensity to issue a bond and the cost of bonds is primarily driven by firms in countries with large differences between local GAAP and IFRS'.

In additional tests, the authors divide the sample of mandatory adopters between EU and non-EU companies and find that, while EU companies still show bond market benefits from IFRS adoption, non-EU companies do not.

The authors also report 'evidence indicating the presence of debt market changes even for first-time [IFRS] adopters in EU countries that did not experience contemporaneous

enforcement and other institutional changes'. They caution, though, that they 'cannot entirely rule out the possibility that the reported beneficial debt financing effects of IFRS mandate reflect the joint outcome of IFRS adoption and other institutional reforms'.

Panel 5.15: Moscariello et al (2014)

Nicola Moscariello, Len Skerratt and Michele Pizzo, 'Mandatory IFRS adoption and the cost of debt in Italy and the UK', look at the effects of mandatory IFRS adoption on 74 Italian and 88 UK firms. The period covered is 2002-2008.

Overall, the authors 'cannot detect an impact of IFRS adoption on the cost of debt'. They do find, however, for the Italian firms, but not for the UK ones, that after IFRS adoption, interest cover becomes significant in explaining the cost of debt. The authors suggest that this is because the Italian firms' disclosures are more credible after IFRS adoption, in spite of Italy's weak legal environment.

5.3.2 Discussion

These papers have widely differing results showing either increases in interest rates after IFRS adoption, no change, or decreases.

Tai-Yuan Chen et al (2013) find that mandatory IFRS adoption has overall negative effects for firms that have bank loans: interest rates rise, requirements for collateral increase, and the period of loans decreases, though not to an economically significant extent (2.3%). As 30% of the IFRS firms in the sample are from non-EU countries, however, it is not certain that these findings are applicable to the EU. Florou and Kosi (2014) do not find a change in loan rates for mandatory IFRS adopters. It is not clear why there is this difference in the two papers' findings.

Moscariello et al (2014) are unable to find that IFRS adoption has any effect on the cost of debt for either Italian or UK firms. This is apparently inconsistent with the other papers reviewed here, but not necessarily incompatible with their findings as the other papers do not give separate results for Italian or UK firms.

By contrast, Florou and Kosi (2014) find that 'mandatory IFRS financial reporting can be beneficial for debt financing, but only in the case of bond markets where reliance on public financial reporting dominates [ie, is more important than] private communication'.

As noted at Panel 5.14, Florou and Kosi (2014) find evidence suggesting that the debt market changes they identify are probably unrelated to contemporary enforcement changes, although they are not certain about this. They note that this finding differs from some of the findings related to the equity market benefits of mandatory IFRS adoption. They suggest that a possible explanation is that 'debt contracting terms substitute for country-level creditor protection mechanisms', ie, changes in national enforcement regimes are less important because enforcement is determined at the contractual level.

The findings of Florou et al (2013) (Panel 3.14) and Wu and Zhang (2014) (Panel 3.16) appear to complement those of Florou and Kosi (2014). Pope and McLeay (2011) explain that Florou et al (2013):

'provide one potential explanation for the mechanism by which IFRS adoption affects the cost of debt. They show that issuer credit ratings from Standard and Poor's are better explained by financial statement information in the post-IFRS period. In other words, published financial statement numbers map onto credit ratings better when they are based on IFRS. This in turn suggests that credit analysts make fewer adjustments to published IFRS financial statement numbers. If analysts' adjustments represent a source of information risk, this could underpin an IFRS-related reduction in the credit risk premium.'

The positive results in Wu and Zhang (2014) are restricted to what they classify as strong rule of law countries, which are defined in a way that excludes, eg, Germany and the UK. Florou et al (2013) do not appear to test for this, so the two papers may or may not be consistent on this point. Different authors treat different countries as having a strong rule of law, so there is a degree of variability in such results for this reason among others.

While the findings of Florou and Kosi (2014), Florou et al (2013) and Wu and Zhang (2014) are broadly positive for IFRS, those of Ball et al (2013) (Panel 10.4) are broadly negative. They find, like Tai-Yuan Chen et al (2013), that use of accounting-based debt covenants declines with mandatory IFRS adoption. This does not necessarily imply an inconsistency among the papers as they are looking at different questions. Indeed, as Florou and Kosi (2014) point out, it is possible that the findings of Ball et al (2013) help explain their own. If the mandatory adoption of IFRS makes accounting-based debt covenants less attractive in the case of loans (see Section 10.4), it may also make loans less attractive relative to bonds as a source of debt. The positive effects of mandatory IFRS in relation to bonds may therefore be to some extent a consequence of its negative effects in relation to loans.

If IFRS adoption makes access to bond markets easier, it may also have effects on the providers of bank loans, who may change their behaviour accordingly (see Panel 11.8 below).

5.4 Conclusions

Research evidence differs on whether mandatory IFRS adoption reduced the cost of equity and debt capital for EU companies. On balance, the evidence suggests that there probably were reductions in the cost of equity capital and in the cost of bonds, but that they were not experienced by all companies or in all countries. It is also uncertain how far the improvements were attributable to concurrent changes in other institutions rather than to the adoption of IFRS. The effects of mandatory IFRS adoption in the EU on the cost of loans, as opposed to bonds, are unclear.

Research evidence indicates that the stock market anticipated the effects of mandatory IFRS adoption, which makes the measurement of these effects, where they include stock market data, less certain.

6. Market liquidity

Greater transparency in financial reporting should increase market liquidity, making it cheaper and easier to buy and sell shares at a fair price. Has IFRS adoption in the EU helped to achieve this?

6.1 General points

One effect of improved financial reporting transparency should be that there is improved liquidity in the company's shares. A liquid market for securities is one in which investors can readily buy and sell securities at their fair value. Where a market is illiquid it may be difficult to find buyers or sellers, except by taking a significant discount to fair value or paying a significant premium.

In accounting research, liquidity is often measured by the bid-ask spread on the share price, which, other things being equal, reflects the risk (to the market-maker, the investor's counter-party) in holding the company's shares. Improved disclosures should reduce both uncertainties surrounding the company's prospects and any advantages that insiders may have through holding information that is not available to the market. These changes should allow market-makers to reduce their bid-ask spreads. This reduction in transaction costs may also be reflected, via higher share prices, in a lower cost of capital to the company. However, the effects on liquidity can be assessed independently of changes in the cost of capital.

As improvements in liquidity are arguably a result of improved disclosure, and specifically of reduced information asymmetries among market participants, changes in liquidity are also treated as indicators of changes in information asymmetries – ie, as measures of improvements in disclosure.

Liquidity can also be measured by looking at:

- the number of trading days with zero returns, ie, no price change – the lower the number of such days, the higher the liquidity; and
- the price impact of trades – the lower the impact, the higher the liquidity.

Market liquidity in the EU was affected by other regulatory changes⁴⁴ about the time of IFRS adoption. And Philip Brown, 'How can we do better?' (2013), points out that, in addition to regulatory changes, other developments affecting liquidity about the time of IFRS adoption included:

'new trading platforms and protocols, amalgamations among market providers, the explosion in algorithmic trading, and the increasing popularity among financial institutions of trading in "dark pools."'

So it is important to disentangle the effects of different changes.

We look below at the evidence relating to the effect of mandatory IFRS adoption in the EU on liquidity in equity markets (6.2). There does not appear to be any comparable research in relation to debt markets, possibly for the same reasons that there seems to have been no research into debt market anticipation of IFRS adoption (see 5.3.1 above).

6.2 Equity markets

6.2.1 Research findings

The following studies look at the effects of mandatory IFRS adoption on market liquidity.

⁴⁴ See Hans B. Christensen, Luzi Hail and Christian Leuz, *Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement* (2014), who find that implementation of the Market Abuse Directive (MAD) and the Transparency Directive increased market liquidity for EU firms. Fatima Baalbaki Shibly and Pascal Dumontier, 'Investigating the role of information environment in EU capital markets: the case of IFRS and MAD' (2014), have similar results in relation to MAD.

Panel 6.1: Hail and Leuz (2007)

Luzi Hail and Christian Leuz, 'Capital market effects of mandatory IFRS reporting in the EU: empirical evidence', referred to at Panel 5.6 above in relation to the cost of capital, also look at the effects of mandatory IFRS adoption on liquidity.

The authors report that: 'the findings based on the price impact of trades and the frequency of zero-return days suggest improvements in market liquidity after IFRS reporting becomes mandatory. The results based on bid-ask spreads point in the same direction but are often statistically insignificant. We find that the liquidity results ... are significant for all three liquidity proxies when we introduce firm-fixed effects' – ie, when they adjust for differences in firms' circumstances.

As noted at Panel 5.6, the authors advise 'caution to attribute the observed effects solely to the adoption of IFRS itself' as 'many EU countries have changed their enforcement (and governance) regimes, which could play a role in the findings'.

There is a substantial overlap between the evidence in this paper and that in Daske et al (2008), but the latter includes mandatory adopters from outside the EU and the two papers apply somewhat different tests.

Panel 6.2: Daske et al (2008)

Holger Daske, Luzi Hail, Christian Leuz and Rodrigo Verdi, 'Mandatory IFRS reporting around the world: early evidence on the economic consequences', referred to at Panel 5.8 above in relation to the cost of equity capital, also look at the effects of mandatory IFRS adoption on liquidity. They find for mandatory IFRS adopters liquidity increases of, eg, 6% for bid-ask spreads (ie, 6% reductions in bid-ask spreads). It may be questioned why liquidity effects follow adoption, whereas cost of capital effects (see Panel 5.8) precede it. The authors comment that 'it seems plausible that liquidity proxies are less subject to anticipation and transitional effects'.

They find that the liquidity benefit occurs '*only* in countries where firms have incentives to be transparent and where legal enforcement is strong'. Of the 18 EU countries covered by the survey, only five (Germany, Ireland, the Netherlands, Sweden and the UK) come into this category. However, the liquidity benefit is also found to occur for EU firms as a whole; there is of course no inconsistency between this and the benefit's only being found in certain EU countries.

The authors' comment, quoted in Panel 5.8, that their findings probably reflect enforcement and governance changes as well as the introduction of IFRS, also applies to their findings on liquidity.

The findings of Daske et al (2008) as regards liquidity are developed in Christensen et al (2013) – see Panel 6.4.

Panel 6.3: Platikanova and Perramon (2009)

Petya Platikanova and Jordi Perramon, 'Economic consequences of the first-time IFRS introduction in Europe', look at the effects on market liquidity of mandatory IFRS adoption by 966 EU firms from four countries: France, Germany, Sweden and the UK. The period covered for the liquidity tests is one year before and one year after adoption. The paper also looks at prior year restatements given as comparatives in the first year of IFRS adoption.

The authors find increases in liquidity for the French and German firms, but report mixed findings for the Swedish and UK firms.

The authors also find that 'stocks are more liquid in the presence of a larger number of restating peers and for smaller restatements in net income relative to the industry benchmark'. The significance of the number of restating peers is taken to be that the greater

the number of peers the greater the comparability. The significance of the size of the restatements is taken to be that larger restatements generate greater uncertainty among investors.

Panel 6.4: Christensen et al (2013)

Hans B. Christensen, Luzi Hail and Christian Leuz, 'Mandatory IFRS reporting and changes in enforcement', revisit the examination in Daske et al (2008) of liquidity effects of mandatory IFRS adoption, in particular in the EU, although as in the earlier paper non-EU mandatory IFRS adopters are included and some EU countries are excluded. The sample covers fiscal years 2001-2009 and comprises 613,752 firm-quarter observations of bid-ask spreads (including IFRS non-adopters).

Although the focus of the paper is liquidity, this issue is chosen by the authors with the intention of raising broader questions about measuring the capital-market effects of IFRS adoption. They explain their choice as follows: 'We examine market liquidity because it has a clear theoretical link to reporting quality, can be measured over short intervals, and is less anticipatory in nature than other economic constructs like cost of capital.'

The authors conclude that 'the liquidity effects around IFRS introduction are ... limited to [four] EU countries that concurrently made substantive changes in reporting enforcement': namely, Finland, Germany, the Netherlands, and the UK. The authors in fact treat Norway as a fifth EU country in this category, on the grounds that it is a member of the European Economic Area and has adopted the EU capital market directives.

They note that: 'It is possible that IFRS reporting was a precondition for the enforcement changes to take place or, alternatively, that the liquidity effects would have been smaller without IFRS adoption. The majority of our tests cannot rule out either possibility. However, the ... sum of our results makes it unlikely that the change in accounting standards is the primary or even an important driver of the liquidity effects around IFRS adoption.'

The authors return to the question raised in Daske et al (2008) of why cost of capital effects precede adoption while liquidity effects follow it. They comment: 'While investors likely adjust market valuations or cost of capital estimates as soon as their expectations about future corporate transparency change, liquidity is less anticipatory because investors primarily worry about adverse selection and, hence, the level of transparency at the time they trade.'

The methodology and interpretations of Christensen et al (2013) are questioned by Mary E. Barth and Doron Israeli, 'Disentangling mandatory IFRS reporting and changes in enforcement' (2013). They suggest that a better interpretation of the findings of Christensen et al (2013) would be: 'In some cases, change in enforcement confers liquidity benefits. In some cases, the change in accounting standards to IFRS confers liquidity benefits. The largest benefits obtain when the change to IFRS reporting is combined with change in enforcement. In sum, ... IFRS reporting confers liquidity benefits, but ... to fully realize these benefits one also needs enforcement of the standards.' Barth and Israeli comment that: 'The benefits of enforcement depend on the quality of the standards being enforced, and the benefits of accounting standards rely on the strength of the enforcement of the standards.'

In 'Proper inferences or a market for excuses? The capital-market effects of mandatory IFRS adoption' (2013) Christensen, Hail and Leuz reject the criticisms in Barth and Israeli (2013). They accept that: 'IFRS adoption may have been a pre-condition for enforcement changes to have an effect, ie, it is possible that similar effects would not have occurred if the countries had still followed domestic GAAP.' But they argue that 'the conceptual basis for this hypothesis is not obvious as it implies that IFRS would be easier to enforce than prior local standards (eg, German or UK GAAP).'⁴⁵

⁴⁵ Ahmed et al (2013), reported at Table 3.12 above, argue that IFRS may be more difficult to enforce than prior national GAAPs. André et al (2014), also reported at Table 3.12, put forward a similar argument in relation to the impairment of intangibles under IFRS.

Panel 6.5: Daske et al (2013)

Holger Daske, Luzi Hail, Christian Leuz and Rodrigo Verdi, 'Adopting a label: heterogeneity in the economic consequences around IAS/IFRS adoption', referred to at Panel 5.11 above in relation to the cost of equity capital, also look at liquidity effects of IFRS adoption. It will be recalled that the authors distinguish between firms that 'adopt [IFRS] merely in name without making material changes to their reporting policies' ('label adopters') and firms that 'adopt [IFRS] as part of a broader strategy to increase their commitment to transparency' ('serious adopters'). The paper's focus is primarily on voluntary adopters.

The authors find that on mandatory adoption (as on voluntary adoption) serious adopters experience an increase in liquidity, whereas label adopters do not.

Panel 6.6: Shibly and Dumontier (2014)

Fatima Baalbaki Shibly and Pascal Dumontier, 'Investigating the role of information environment in EU capital markets: the case of IFRS and MAD', look at, among other things, the effect of mandatory IFRS adoption on the market liquidity of 1,534 firms from 14 EU countries. The period covered is 1999-2009. The test sample is compared with a benchmark sample of firms from Canada, Japan and the US.

The authors find that IFRS adoption has a positive effect on liquidity, but that this is 'more pronounced for small firms and for firms with weak analyst following'. They explain this finding, in relation to small firms, as follows: 'small firms operate in a poor information environment and disclose less information than larger ones, therefore accounting figures [count] more for them.' They do not investigate the potential differential effects of enforcement in different EU countries.

Neel (2014), reported at Panel 3.9 above in relation to the accuracy and dispersion of analysts' forecasts, also finds that 'on average mandatory adopters exhibit a positive IFRS effect on liquidity' measured by a reduction in the number of trading days with zero returns and that this result is driven by improvements in comparability rather than by changes in accounting quality. He also finds that this result holds if the test sample is restricted to firms from countries with weak legal enforcement (based on a general 'rule of law' measure) and if firms from countries that Christensen et al (2013) identify as experiencing concurrent improvements in enforcement are excluded.

Platikanova and Nobes (2006), reported at Table 3.1 above in relation to value relevance, find a decrease in the bid-ask spread in 2005 for their sample of mandatory adopters.

The following two studies look at liquidity effects of specific accounting standards on limited numbers of firms, primarily with the intention of assessing the effects of mandatory IFRS adoption on information asymmetry.

Panel 6.7: Muller et al (2011)

Karl A. Muller III, Edward J. Riedl and Thorsten Sellhorn, 'Mandatory fair value accounting and information asymmetry: evidence from the European real estate industry', look at the effects on information asymmetries, measured by bid-ask spreads, of disclosure of the fair value of investment properties on mandatory adoption of IFRS in accordance with IAS 40, *Investment Property*. The sample comprises an average of 86 property investment firms (9% non-EU) each year for the period 2003-2007. It covers 14 European countries (two non-EU: Norway and Switzerland).

The authors report that: 'Using as a control group firms that voluntarily provided ... fair values [for investment properties] prior to the mandatory adoption of IAS 40, we find that mandatory adoption firms exhibit a larger decline in information asymmetry, as reflected in lower bid-ask spreads. However, we also find that mandatory adoption firms continue to have higher information asymmetry than voluntary adoption firms, which appears partially attributable to the lower reliability of fair values reported by the mandatory adoption firms.'

As well as these differences at the firm level, the authors draw attention to the differing requirements of prior national GAAPs regarding fair value measurements of investment property. The UK, for example, required investment properties to be measured at fair value before mandatory IFRS adoption, so IFRS adoption would not have had significant effects in this respect.

Panel 6.8: Panaretou et al (2013)

Argyro Panaretou, Mark B. Shackleton and Paul A. Taylor, 'Corporate risk management and hedge accounting', reported at Panel 3.8 above in relation to the accuracy of analysts' forecasts, also look at the relation between hedge accounting by mandatory IFRS adopters in the UK and changes in bid-ask spreads. Their sample is restricted to non-financial firms in the FTSE 350.

They find that derivative users reporting under IFRS experience a decrease in information asymmetry, ie, a reduction in bid-ask spreads.

6.2.2 Discussion

The findings of Hail and Leuz (2007) and Daske et al (2008) in respect of liquidity appear to have been superseded by those of Christensen et al (2013). While the latter study confirms the findings of liquidity benefits in some EU countries coinciding with the mandatory adoption of IFRS, in interpreting their findings the authors attribute causality primarily to concurrent changes in enforcement rather than to the change in standards. Barth and Israeli (2013) dispute this interpretation and suggest that there is a joint effect of changes in both standards and enforcement. As they indicate in their reply, the authors of Christensen et al (2013) are unpersuaded by this critique.

In the presence of such differences in expert opinion among researchers, it seems unsafe to draw firm conclusions on causality. It is undisputed that there were liquidity benefits in some EU countries about the same time as mandatory adoption of IFRS, but it is unclear how far they are attributable to the adoption of IFRS.

As we mentioned in discussing research on the cost of capital, Brüggemann et al (2013) note that the samples for Daske et al (2008) and a number of other studies – by implication including Hail and Leuz (2007) and Christensen et al (2013) – may well be biased towards larger publicly traded companies. The findings of these studies may not, therefore, hold for smaller publicly traded companies or for the population of publicly traded companies as a whole. Shibly and Dumontier (2014) appear to allay this concern, as they find that the liquidity benefits of IFRS adoption are greater for smaller publicly traded companies than for larger ones.

The findings of Christensen et al (2013) depend on, among other things, correctly identifying those EU countries where there were significant changes in enforcement in 2005. In this respect their data appear to diverge at a number of points from the enforcement indices constructed in Brown et al (2014). Christensen et al (2013) identify specific years – and indeed specific quarters – for significant enforcement changes, while Brown et al (2014) do not, so in this respect their data are not directly comparable. Also, Christensen et al (2013)'s classification is binary – either there was a significant change in enforcement or there was not – while Brown et al (2014) construct indices based on scoring a number of different aspects of enforcement and adding them up to arrive at a total out of a potential maximum of 24.

While recognising these important differences between the two papers, it none the less seems reasonable to see how well their separate results for enforcement fit. Christensen et al (2013) list at Table 1 of their paper the countries for which they find significant enforcement changes between 2001 and 2005, while Brown et al (2014) list at Table 5 of their paper country enforcement indices for 2002 and 2005, from which the changes over this period (not allocated to specific years) can be calculated.

The five EU countries for which Christensen et al (2013) identify significant changes in enforcement between 2001 and 2005 are Estonia, Finland, Germany, the Netherlands and the UK. Estonia's change is allocated to 2003, before mandatory IFRS adoption, and so does not affect the paper's findings, and the country is in any case not covered in Brown et al (2014). For the other four countries, Brown et al (2014) show the following changes in enforcement indices:

Table 6.1: Changes in enforcement indices (1)

	2002	2005	Change
Finland	8	12	+4
Germany	5	19	+14
Netherlands	5	8	+3
UK	14	22	+8

While the changes for Germany and the UK certainly look significant, it is less clear that those for Finland and the Netherlands are. Brown et al (2014) show changes at least as significant as those for the Netherlands for six other EU countries over this period that are not counted as significant in Christensen et al (2013):

Table 6.2: Changes in enforcement indices (2)

	2002	2005	Change
Austria	5	8	+3
Belgium	12	22	+10
Denmark	12	22	+10
Greece	5	9	+4
Poland	2	6	+4
Spain	5	9	+4

Assessing the toughness of enforcement is a subjective matter, even when numerical scores are awarded, and no doubt this explains some of the differences between the two papers. But as the role of enforcement plays such a crucial role in the current debate on the effects of IFRS adoption in the EU, it would be useful if future research could investigate this matter further.

It should be noted that Christensen et al (2013) do not suggest that changes in enforcement are necessarily the only relevant concurrent changes at the time of IFRS adoption. They point out that 'other changes to financial reporting (eg, audit reforms) that are closely aligned with the concurrent enforcement changes could play into our findings.'

Brown et al (2014) in fact prepare indices for audit as well, reflecting changes in the audit environment. Finland, Germany, the Netherlands and the UK do indeed show significant changes in this index between 2002 and 2005:

Table 6.3: Changes in audit indices (1)

	2002	2005	Change
Finland	10	20	+10
Germany	13	23	+10
Netherlands	7	13	+6
UK	18	32	+14

But other EU countries show equally significant changes:

Table 6.4: Changes in audit indices (2)

	2002	2005	Change
Austria	12	18	+6
Belgium	12	18	+6
Denmark	15	27	+12
France	15	29	+14
Greece	7	17	+10
Ireland	15	21	+6
Italy	15	24	+9
Portugal	7	17	+10
Spain	14	26	+12
Sweden	17	25	+8

Again, the Brown et al (2014) indices are for changes over a period of three years, whereas Christensen et al (2013)'s focus is on identifying exactly when the changes occurred and matching this with liquidity changes.

The findings of Neel (2014), that liquidity improvements are associated with comparability improvements even when the five countries where Christensen et al (2013) identify enforcement changes are excluded, are not necessarily inconsistent with those of Christensen et al (2013). It is possible for liquidity improvements to be associated with country-level changes when the sample firms are grouped by country and to be associated with firm-level changes when the firms are grouped by firm-level characteristics. However, Neel (2014)'s findings do imply that firm-level changes as well as country-level changes are relevant to liquidity improvements.

Platikanova and Perramon (2009) find increased liquidity following mandatory IFRS adoption for firms in France and Germany, but report mixed findings for UK and Swedish firms. The differences between this paper and the findings of Christensen et al (2013) and its predecessors are presumably attributable to differences in samples and methodology, but it is not clear exactly why the differences arise.

Muller et al (2011) show an increase in liquidity for investment property firms that start to disclose the fair value of their investment properties following mandatory adoption of IFRS and the fair value disclosure requirements of IAS 40. The authors do not control for differences in enforcement regimes, so it is not possible to say whether this is a relevant factor in their findings.

Panaretou et al (2013) find an increase in liquidity for UK non-financial firms using derivatives following mandatory adoption of the hedge accounting requirements of IFRS. As with any limited-scope study, the boundaries of this study mean that its findings are compatible with the results of broader studies almost regardless of their findings.

6.3 Conclusions

The research evidence seems to agree that mandatory IFRS adoption in the EU was followed by increased liquidity in the equity markets for EU firms. But the evidence points to differences in whether, and the extent to which, this benefit arises in relation to particular types of firm and firms from different countries. It is also unclear how far the benefit is attributable to concurrent changes in other institutions.

We are not aware of any research on the effects of mandatory IFRS adoption in the EU on the liquidity of debt markets.

7. Corporate investment efficiency

Improvements in the efficiency of capital markets should make it easier for corporates to invest efficiently. Is there any evidence that IFRS adoption has helped EU firms in this way?

7.1 General points

There is a risk that improvements in the efficiency of capital markets will be seen as something purely of interest to investors or, from the point of view of companies, as simply a way of reducing their costs. While these are both useful developments, it is at least equally important that improvements in capital markets should lead to the more efficient allocation of resources: both by the capital market to firms and within firms. It is on the efficient allocation of capital among competing opportunities, as much as on the volume of investment, that social welfare depends. It is therefore important to look at the efficiency of corporate investment as a discrete outcome, and to consider changes in it as a potential consequence of mandatory IFRS adoption.

As with other potential benefits reviewed in this report, improved corporate investment efficiency is measured indirectly by researchers. One theory, underlying the papers reported at Panels 7.1 and 7.2, is that firms' investment levels should not be determined by what their cash flows happen to be. If their cash flows are unexpectedly high, they should distribute more to their shareholders rather than finding fresh investments to make that they would not have made otherwise. If they are unexpectedly low, they should raise funds externally rather than forgo worthwhile investments. Firms' investment efficiency can therefore be measured by how sensitive their investment levels are to their (lagged) cash flows: the greater the sensitivity, the less efficient the investment policy.

A second theory, also underlying tests in the paper reported at Panel 7.1, is that where investor protections (including financial reporting disclosures) are weak, managers will pursue 'sub-optimally conservative investment behaviors' – ie, 'to secure their consumption of perquisites', they will 'avoid value-enhancing risk-taking'. Risk-taking is measured by cash-flow volatility, so, on this theory, increased cash-flow volatility indicates greater investment efficiency. This approach assumes that the researcher can identify the optimal level of risk-taking.

Another way of assessing the effects of IFRS adoption on investment efficiency is to see whether firms' investment level becomes more responsive to their peers' performance as measured by financial reporting. This approach is adopted in the paper reported at Panel 7.3.

And if firms' investments become more efficient, this should result in greater productivity, which is the focus of the paper reported at Panel 7.4.

7.2 The evidence

Panel 7.1: Biddle et al (2011)

Gary C. Biddle, Carolyn M. Callahan, Hyun A. Hong and Robin L. Knowles, 'Does mandatory adoption of International Financial Reporting Standards increase investment efficiency?', look at the effects of mandatory IFRS adoption on investment efficiency, using measures of both investment/cash-flow sensitivity and risk-taking. Their sample is from 26 countries (eight non-EU) where IFRS was mandatorily adopted and comprises 7,220 firms (37% non-EU). They also employ a control sample of randomly selected firms from non-IFRS countries, but no details are given. The period covered is 2001-2008.

The authors find that mandatory adoption 'is associated with a shift towards a risk-adjusted optimal level while their investment-cash flow sensitivity decreases'. They also find that 'this association is more pronounced in countries with weak law enforcement institutions and higher ownership concentration.'

Panel 7.2: Schleicher et al (2012)

Thomas Schleicher, Ahmed Tahoun and Martin Walker, 'IFRS adoption in Europe and investment-cash flow sensitivity: outsider versus insider economies', look at the effects of

mandatory IFRS adoption on investment efficiency, using measures of investment/cash-flow sensitivity.

The authors argue that investment efficiency should be related to whether a country has an 'insider' economy, characterised by 'small stock markets, highly concentrated ownership, weak outside investor rights, poor disclosure levels and weak legal enforcement', or an 'outsider' economy, characterised by 'large stock markets, dispersed ownership, strong outside investor rights, high disclosure levels and strong legal enforcement'. The rationale here is that outsider economies find it easier to raise funds from outside sources when they have good investment opportunities, and that outside investors depend on legal enforcement of their rights and on high quality publicly reported information.

The sample in the paper comprises firms from two outsider economies (Norway, not in the EU, and the UK) and four insider economies (Greece, Italy, Portugal and Spain) and covers the period 2000-2007. There are 3,387 firm-year observations pre-IFRS and 2,268 post-IFRS.

The authors find that 'the investment-cash flow sensitivity of insider economies is higher than that of outsider economies pre-IFRS and that IFRS reduces the investment-cash flow sensitivity of insider economies more than that of outsider economies. Also, we find that small firms in insider economies have the highest sensitivity of investment to lagged cash flow pre-IFRS, and that they are no longer sensitive to lagged cash flow post-IFRS.'

Hong (2013) (see Panel 9.2 below), also finds evidence 'supporting the view that the average sensitivity of investment to cash flows for mandatory adopters is reduced around the IFRS mandate'.

Panel 7.3: Chen Chen et al (2013)

Chen Chen, Danqing Young and Zili Zhuang, 'Externalities of mandatory IFRS adoption: evidence from cross-border spillover effects of financial information on investment efficiency' (2013), look at the effects of mandatory IFRS adoption on information from one firm affecting the investment levels of another.

The theory underlying this paper is that firms that are prone to under- or over-investment will reduce their under- or over-investment (as appropriate) in response to information that their peers are achieving a higher return on assets (ROA). IFRS adoption can facilitate this process if it makes peers' performance more comparable. To test their hypothesis the authors partition their sample firms on the basis of high (low) leverage and low (high) cash balances into those that are prone to under- and (over-)invest, and use differences in returns on assets by comparison with peer firms as indicators of underperformance. Firms that are prone to under-invest should increase their investment level following information showing that their performance is relatively poor, while those prone to over-invest should decrease it.

The sample has 8,857 firm-year observations (7% non-EU) from 17 European countries (two non-EU: Norway and Switzerland) for the period 2000-2009.

The authors find that 'the spillover effect of a firm's ROA difference versus its foreign peers, but not domestic peers, on the firm's investment efficiency increases after IFRS adoption.' They also find that 'increased disclosure by both foreign and domestic peers after IFRS adoption has a spillover effect on a firm's investment efficiency.'

Panel 7.4: Banker et al (2014)

Rajiv Banker, Rong Huang and Yinghua Li, 'Do accounting standards matter for firm productivity? Evidence from mandatory IFRS adoption' (2014), look at the effects of mandatory IFRS adoption on firm productivity. Their sample is taken from 16 countries (five non-EU), and comprises 9,485 firm-years (22% non-EU) over the period 2002-2008, omitting 2005 (the year of adoption). There is a control sample of non-adopters, mainly from Japan and the US.

The authors find evidence that 'the production efficiency of mandatory IFRS adopters increases significantly after mandatory IFRS adoption'. They also find that 'post-adoption efficiency improves more for firms located in countries with large GAAP differences, firms experiencing a decrease in stock return volatility and analyst forecast dispersion, and firms experiencing a large increase in the number of comparable industry peers.'

In robustness checks, 'to alleviate the concern that the improvement in productivity may be driven by the change in legal enforcement, [the authors] separate [their] sample firms into mandatory EU adopters and mandatory non-EU adopters, and remove the five countries that experienced significant improvement in legal enforcement during our sample period (Christenson et al 2013)'. This does not affect their finding that production efficiency increases significantly after IFRS adoption. They also use 'alternative measures of production efficiency, such as the logarithm of sales per employee and GDP per capita (at the country-level).

7.3 Discussion

If we include evidence of improved productivity growth as evidence of improved investment efficiency, then all five of these papers – ie, including Hong (2013) – find evidence that mandatory IFRS adoption improves investment efficiency.

A significant proportion of the sample in Biddle et al (2011) comes from outside the EU, so it is possible that its findings do not apply to the EU. The sample in Schleicher et al (2012) comes entirely from the EU, the sample in Chen Chen et al (2013) comes overwhelmingly from the EU, that of Hong (2013) is very largely from the EU, and although the sample in Banker et al (2014) has a significant non-EU component, their robustness tests confirm that if the sample is restricted to EU firms it still shows a statistically significant productivity increase following IFRS adoption.

The methodology used by Banker et al (2014) for measuring productivity compares revenues with a mixture of costs and assets, and is therefore a mixture of profitability and gross return on assets. This approach is apparently an accepted one in research on productivity.

The finding in Banker et al (2014)'s robustness tests that mandatory IFRS adoption is correlated with GDP per capita growth could be of considerable importance in its own right. But GDP growth is a complex outcome of many factors, and this finding appears to merit further exploration.

It is not clear how far the papers on this subject have allowed for the possibility that other concurrent institutional changes in the EU intended to increase the efficiency of capital markets may be relevant to their findings.

7.4 Conclusions

While the subject has not been heavily researched, and some of the evidence that we have cited comes from outside the EU, it seems reasonable to conclude on the evidence available that mandatory IFRS adoption in the EU is associated with an improvement in investment efficiency at the firm level. As with other topics discussed in this report, the evidence suggests that any effects vary among firms and countries, depending on institutions and incentives. It would also be useful to investigate the effects of concurrent institutional changes intended to increase the efficiency of capital markets.

8. Cross-border investment

Greater financial reporting transparency and comparability should lower the barriers to international investment. Is this what has happened in the EU since adopting IFRS?

8.1 General points

Investors have a well-known bias against investing in foreign countries. This 'home bias' may be sensible where, among other things, investments involve information asymmetries that are to the disadvantage of the foreign investor or where there are additional costs involved in obtaining information about foreign investments.

IFRS adoption can reduce both problems if it brings greater transparency (reducing information asymmetries) and if it makes it less costly to understand foreign companies (because they are following a common set of accounting standards).

There are two main categories of cross-border capital flows: portfolio investments and foreign direct investment (FDI). The difference between the two categories is often one of degree rather than substance. For equity investments, for example, an investment that carries less than 10% of the voting power in the investee is conventionally regarded as a portfolio investment, while one that gives 10% or more is regarded as FDI. The distinction between the two categories is potentially significant in assessing the effects of financial reporting. It might be expected that FDI investors, who acquire whole companies or buy major stakes in them or buy other assets directly in a foreign country, would have private sources of information about potential investments. On the other hand, it might be expected that portfolio investors – to the extent that they rely at all on information about particular companies⁴⁶ – would rely to a greater extent on public sources of information, including financial reporting. So it cannot be assumed that mandatory IFRS adoption would affect both categories of investment in the same way.

We look below at research on the effects of mandatory IFRS adoption in the EU on FDI (8.2) and cross-border portfolio investment (8.3).

If barriers to cross-border capital flows are lowered, we should find that this results in increased international capital market integration. That is, companies with the same characteristics should, other things being equal, be valued in the same way in different markets and find it equally easy to raise capital. We look at the evidence on this at 8.4.

Increasing international capital flows is not necessarily to everyone's advantage. Firms in any given country benefit from domestic investors' home bias and lose from foreign investors' home bias. The overall effect should be that capital is allocated more efficiently – that is, to projects that promise a higher return. But as home bias in different countries diminishes and international capital flows increase, the effect for some firms and for some countries will be that they attract less capital.

8.2 Cross-border FDI

8.2.1 Research findings

The following studies look at the effects of mandatory IFRS adoption on international FDI. M&A activity, the subject of the study at Panel 8.2, is a component of FDI.

Panel 8.1: Márquez-Ramos (2011)

Laura Márquez-Ramos, 'European accounting harmonisation: consequences of IFRS adoption on trade in goods and foreign direct investments', looks, among other things, at the effects of mandatory IFRS adoption on FDI between countries in the EU. The sample covers FDI data for 2002-2007.

The author finds evidence that 'benefits exist in terms of ... FDI when IFRS are adopted'. In spite of this overall finding, a number of EU countries show decreases in FDI from other EU Member States over the period.

⁴⁶ They may be more interested in, eg, country risk or holding a diversified portfolio.

Panel 8.2: Francis et al (2012)

Jere R. Francis, Shawn X. Huang and Inder K. Khurana, 'The role of international GAAP in cross-border mergers and acquisitions', look at, among other things, the effect of mandatory IFRS adoption on cross-border merger and acquisition (M&A) activity. The sample covers 32 countries (13 from the EU) and compares M&A activity in 2004 and 2006.

The authors find that 'While there was an overall increase in M&A activity following the IFRS adoption, the increase was most pronounced for country pairs with low degree of similarity in GAAP in the pre-IFRS adoption period. In other words, acquirers in countries that adopted IFRS increased their cross-border M&A activity more post-IFRS adoption in countries where there were larger differences in GAAP in the pre-IFRS period. In addition, we find that countries adopting IFRS reduce their M&A activity in non-IFRS countries during the post-IFRS regime.'

Panel 8.3: Gordon et al (2012)

Lawrence A. Gordon, Martin P. Loeb and Wenjie Zhu, 'The impact of IFRS adoption on foreign direct investment', look at the effect of mandatory IFRS adoption on FDI. The sample includes 124 countries (adopters and non-adopters; 14 from the EU) and covers the period 1996-2008.

The authors 'find support for the argument that ... overall FDI inflows are positively associated with a country's decision to adopt IFRS... [T]his support is statistically significant for those countries classified as developing economies, but not for countries classified as developed economies.'

Panel 8.4: Charles Chen et al (2014)

Charles J. P. Chen, Yuan Ding and Bin Xu, 'Convergence of accounting standards and foreign direct investment', look primarily at the effects of convergence towards IFRS on FDI in the period 2000-2005. The sample covers 30 countries, 23 from the EU. The measure of FDI is the aggregate in- and outflow between pairs of countries.

The authors find that, 'First, FDI flows are positively associated with conformity to IFRS... Second, the positive relationship between FDI and IFRS conformity is stronger for country pairs with greater institutional differences... Third, FDI growth is positively associated with the degree of convergence from domestic accounting standards to IFRS during the period 2001 to 2005.'

8.2.2 Discussion

Márquez-Ramos (2011) finds evidence of increased FDI between EU countries following mandatory IFRS adoption.

Francis et al (2012) find evidence of increased cross-border M&A activity following mandatory IFRS adoption and that this increase is positively correlated with pre-IFRS accounting differences. 19 of the 32 countries they look at are non-EU, and so it is unclear how far their conclusions apply to the EU.

Gordon et al (2012) find evidence of increased levels of FDI following mandatory IFRS adoption, but while this is statistically significant for developing economies, it is not statistically significant for developed economies. Of the 124 countries covered by this study, only 14 are from the EU, so it seems unsafe to draw any conclusions from it regarding the EU. It might be expected that EU countries would at least figure largely in the 19 countries in the sample classified as developed, but in fact only five of them are from the EU. Most developed EU economies – including France, Germany, Italy and Spain – are excluded from the sample, presumably because of missing data.

Charles Chen et al (2014) find evidence of increased levels of FDI activity associated with convergence towards IFRS and that this relationship is stronger where institutional differences between countries are greater. They suggest that this indicates the greater need for accounting information in such cases. 23 of the 30 countries in the sample are from the EU, so it seems likely, but not necessarily the case, that the study's findings are applicable to the EU.

While all four studies agree in finding an association between increased FDI and mandatory IFRS adoption, in some cases there are problems in knowing how far their findings are applicable to the EU. It seems reasonable, though, on the basis of Márquez-Ramos (2011) and Charles Chen et al (2014), to conclude that EU countries have experienced increased FDI activity following IFRS adoption. What these studies do not show is whether the EU has on balance been a net gainer from increased FDI following IFRS adoption.

Also, it is not clear how far these studies have allowed for the possibility that other concurrent institutional changes in the EU may be relevant to increases in FDI.

8.3 Cross-border portfolio investment

8.3.1 Research findings

The following studies look at the effects of mandatory IFRS adoption on international portfolio investment.

Panel 8.5: Lee and Fargher (2010)

Gladys Lee and Neil Fargher, 'Did the adoption of IFRS encourage cross-border investment?', look at the effects of mandatory IFRS adoption on Australian investors' home equity bias. The sample comprises 40 countries: 21 IFRS adopters (16 from the EU) and 19 non-adopters. The period covered is 2002-2008.

The authors find 'evidence consistent with the mandatory adoption of IFRS encouraging greater foreign investment for investors', ie, reducing bias against foreign equities. They also find that this is positively associated with the degree to which pre-IFRS national GAAPs diverged from IFRS. They comment that 'This suggests that the increase in comparability of financial reports increases Australian investors' allocation of foreign equities.'

Panel 8.6: Yu (2010)

Gowoon Yu, 'Accounting standards and international portfolio holdings: analysis of cross-border holdings following mandatory adoption of IFRS' looks at changes in mutual fund holdings in firms following mandatory adoption of IFRS. The sample comprises 4,399 firms – 650 voluntary IFRS adopters, 3,474 mandatory adopters, and 274 non-adopters (which form a control group) – from 28 countries (nine non-EU) where IFRS was made mandatory. The period covered is 2000-2007.

The author finds that, following mandatory IFRS adoption, the proportion of shares held by foreign mutual funds increases by 270 percentage points for mandatory adopters, by 240 percentage points for voluntary adopters, and effectively remains unchanged for non-adopters.

The author also finds that the effect of mandatory IFRS adoption on foreign mutual fund holdings is positively correlated with the extent of national accounting differences before adoption, with geographical distance and with language differences. The implications are that IFRS adoption has a greater effect on foreign investment the more it reduces accounting differences, and that accounting harmonisation also reduces the deterrents to foreign investment otherwise imposed by language and distance.

In addition, the author finds that the effect of mandatory IFRS adoption on foreign mutual fund holdings is positively correlated with the degree of enforcement in each adopting country, although this result depends on which proxy is used to measure enforcement.

Panel 8.7: DeFond et al (2011)

Mark DeFond, Xuesong Hu, Mingyi Hung and Siqi Li, 'The impact of mandatory IFRS adoption on foreign mutual fund ownership: the role of comparability', look at the effects of mandatory IFRS adoption in 14 EU countries on the level of holdings of foreign mutual funds. The sample comprises 1,365 firms and the periods covered are 2003-2004 and 2006-2007. There is a benchmark sample of 8,995 firms from 10 non-IFRS countries.

The authors find that 'mandatory IFRS adoption results in a greater increase in foreign investment among companies in countries with strong implementation credibility [based on country measures of 'earnings quality'] that experience relatively large increases in uniformity. We also find that these are the only firms with a significant increase in foreign mutual fund ownership.'

Increases in uniformity are measured by dividing the number of companies in a sector across the EU after IFRS adoption with the number of companies in the given sector in each country before IFRS adoption. The rationale for this approach is that before IFRS adoption companies in any given sector could only, it is argued, be compared with other companies in the same sector in the same country (ie, using the same national GAAP). For example, the paper's sample includes 909 firms in the finance and real estate sector. Of these, four are Austrian. The increase in uniformity for these four firms is therefore 909 divided by 4, which is 227.25.

Panel 8.8: Khurana and Michas (2011)

Inder K. Khurana and Paul N. Michas, 'Mandatory IFRS adoption and the US home bias', look at the effects of mandatory IFRS adoption on US home bias in equity investment. The sample comprises 85 countries (25 EU): 22 (four EU) that use IFRS throughout the sample period, 33 (21 EU) that switch to IFRS during the sample period, and 30 that use domestic GAAP throughout the sample period. The period covered is 2003-2007, with each country's year of IFRS adoption omitted.

The authors find that 'US investment bias decreases for countries that mandate IFRS adoption, after controlling for country-fixed effects'. The authors also find that 'the reduction in the US home bias after the mandatory adoption of IFRS is greater for countries with larger differences between IFRS and their domestic accounting standards, and for countries with a stricter rule of law and a common law legal origin, and in countries with greater incentives to report higher quality financial information.'

The authors also find that their main result (reduction of US home bias) is not driven by the EU countries in the sample.

Panel 8.9: Shima and Gordon (2011)

Kim M. Shima and Elizabeth A. Gordon, 'IFRS and the regulatory environment: the case of US investor allocation choice', look at the effects of IFRS adoption on the level of US equity investment in different countries. The study covers voluntary and mandatory use of IFRS, 44 countries (14 from the EU) where IFRS was allowed or required, and the period 2003-2006.

The authors find that mandatory IFRS adoption 'is attractive to US investment only with a strong regulatory environment (legal standards and enforcement)'.

Panel 8.10: Amiram (2012)

Dan Amiram, 'Financial information globalization and foreign investment decisions', looks at the effects of mandatory IFRS adoption on foreign portfolio investments in equities. The full sample covers 104 countries: 59 adopters (including 25 from the EU) and 45 non-adopters.

For the main analysis, EU countries comprise 25 of the 51 mandatory adopters. The investment data are for 1997 and 2001-2006.

The author finds that 'foreign equity portfolio investments (FPI) increase in countries that adopt IFRS'. He also finds that 'this relation is driven by foreign investors from countries that also use IFRS. Moreover, the effect of accounting familiarity is more pronounced when investor and investee countries share language, legal origin, culture, and region.' He also finds that 'countries with lower corruption and better investor protection experience larger increases in FPI after they adopt IFRS relative to other IFRS users.'

As noted, there are a significant number of non-EU IFRS countries in the sample, so it is unclear how far the paper's conclusions apply to the EU specifically. In additional tests the author checks whether the inclusion of EU countries affects his findings. He concludes that it does not affect the finding that there is an FPI increase for countries that adopt IFRS. The author does not appear to have conducted the same checks for other results reported here.

Panel 8.11: Beneish et al (2012)

Messod D. Beneish, Brian P. Miller and Teri Lombardi Yohn, 'The impact of financial reporting on equity versus debt markets: macroeconomic evidence from mandatory IFRS adoption', look at changes in foreign investment volumes following mandatory IFRS adoption. The paper covers changes in foreign investment between 2003 and 2007, comparing 23 countries that are mandatory IFRS adopters (seven non-EU) with 24 countries that are non-adopters. Debt in this context means bonds rather than loans.

The authors find that 'adoption of IFRS is associated with an increase in total foreign investment [ie, equity plus debt] into the country's capital markets and that IFRS adoption has a significantly greater effect on foreign investment into the country's debt market than into the equity market'.

They also find 'increased foreign debt investment around IFRS adoption for countries with both low and high perceived governance quality prior to IFRS adoption, but increased foreign equity investment only for countries with high perceived governance quality prior to IFRS adoption'. The authors also argue that their evidence 'suggests that the increase in foreign investment is more likely a result of improved financial reporting quality rather than increased comparability.'

Panel 8.12: Brüggenmann et al (2012)

Ulf Brüggenmann, Holger Daske, Carsten Homburg and Peter F. Pope, 'How do individual investors react to global IFRS adoption?', look at the effects of mandatory IFRS adoption on share trading by individuals. The authors use data from the Open Market at Frankfurt Stock Exchange, which, they explain, 'is an unofficial trading segment designed for individual investors to trade foreign (ie, non-German) stocks'. The data cover the period January 2002 to June 2008. The firms traded are from 22 countries (five non-EU) where IFRS was made mandatory in 2005, and there is a control sample from 19 non-adopting countries.

The authors 'find that stocks experience a significant increase in Open Market trading volume following mandatory adoption of IFRS. This effect is more pronounced for attention-grabbing stocks (eg, stocks experiencing an increase in media coverage following IFRS adoption).'

Panel 8.13: Florou and Pope (2012)

Annita Florou and Peter F. Pope, 'Mandatory IFRS adoption and institutional investment decisions', look at the effects of mandatory IFRS adoption on the international holdings of institutional investors. The test sample of mandatory adopters comprises 3,865 firms (37% non-EU) from 24 countries (six non-EU) and the control sample of non-adopters is 6,987 firms from 21 countries, mostly from the US and Japan. The period covered is 2003-2006.

The authors find that, 'after controlling for standard economic determinants of institutional holdings, ... over the two-year period 2005-2006 institutional ownership increases by more than 4 percent and the number of institutional investors increases by almost ten [percent] for mandatory IFRS adopters, relative to non-adopters.'

They find that 'the positive IFRS effects on institutional holdings are concentrated among investors whose orientation and styles suggest they are most likely to benefit from higher quality financial statements. For example, institutional holdings in mandatory IFRS adopters increase significantly for active investors, but changes are much lower or insignificant for passive investors. Similarly, IFRS-related holdings increases are substantially higher for value and growth investors than for index and income investors.' They also find that 'the positive impact of mandatory IFRS adoption on institutional holdings is restricted to countries where enforcement and reporting incentives are strong and where divergence between local accounting standards and IFRS is relatively high'.

The authors also find that voluntary adopters 'experience an increase in institutional holdings following the mandating of IFRS' and conjecture that these results 'reflect comparability externalities after mandatory IFRS adoption by ... peers'.

In additional tests the authors limit the test sample to firms from EU countries. They find that 'all the main empirical findings and inferences at Table 6 [ie, not including those relating to investment style, enforcement etc] are qualitatively identical'.

Panel 8.14: Long Chen et al (2014)

Long Chen, Jeff Ng and Albert Tsang, 'The effect of mandatory IFRS adoption on international cross-listings', look at the effects of mandatory IFRS adoption on international cross-listings by firms from 34 countries: 17 IFRS adopters (11 EU), 17 non-adopters. Of the 1,232 cross-listings in the sample for IFRS adopters, 373 (30%) are for firms from non-EU countries. The periods covered are 2003-2004 and 2006-2007.

The authors find that 'firms that mandatorily adopt IFRS exhibit significantly higher cross-listing propensity and intensity following IFRS adoption. We also find that firms from mandatory IFRS adoption countries are more likely to cross-list their securities in countries also mandating IFRS and countries with larger and more liquid capital markets. We further find that IFRS adoption has a greater effect on mandatory IFRS adopters from countries with larger accounting differences from IFRS, lower disclosure requirements and less access to external capital prior to IFRS adoption.'

'Propensity' in this context is the likelihood that a firm will cross-list, while 'intensity' is the number of countries in which it cross-lists.

The authors find that their results for cross-listing propensity are more pronounced for the EU countries in the sample.

Panel 8.15: Hong et al (2014)

Hyun A. Hong, Mingyi Hung and Gerald Lobo, 'The impact of mandatory IFRS adoption on IPOs in global capital markets', has been reported at Panel 5.12 in relation to the cost of capital. The authors also look at the effect of mandatory IFRS adoption on the sources of IPO proceeds. As reported previously, their test sample comprises 1,540 IPOs in 2003-2004 and 2006-2007, for firms in 20 countries (six non-EU). They use three benchmark samples from nine countries.

The authors 'find a statistically and economically significant increase in the amount of capital raised from foreign markets' following mandatory IFRS adoption. They also find that 'the effects of mandatory IFRS adoption on ... proceeds raised from foreign markets are greater for firms in countries experiencing large accounting changes, and that this relation is more pronounced among firms in countries with strong implementation credibility.'

The authors repeat their tests for the EU sample only and find that the results are qualitatively the same as for the full sample.

8.3.2 Discussion

Lee and Fargher (2010) find evidence that mandatory IFRS adoption reduces Australian investors' bias against foreign equities and that this is associated with increases in comparability following mandatory IFRS adoption. The authors note that 'it is extremely difficult to isolate the direct impact of IFRS from the general trends towards globalization of investment'. Some of the paper's data on changes for individual countries are of interest (Appendix A of the paper). They show that for the 15 EU countries in the sample for which data were available for 2004 and 2006, the Australian bias against foreign equity investment rose in five cases and fell in 10. For the 19 non-IFRS countries in the sample, for the same years, the Australian bias against foreign equity investment rose in three cases and fell in 16. So the picture is complex.

Yu (2010) finds evidence of increasing international mutual fund holdings following mandatory adoption of IFRS and also evidence that the increase is associated with the degree of accounting differences pre-IFRS, with language differences and geographical distance and possibly with the degree of enforcement.

The samples in Yu (2010) are not broken down by country, so it is not clear how far they relate to the EU. Table 3.1 in the paper provides country-by-country information on the companies in the database used for the research, and this shows that 47% of the firm-years are for non-EU firms. If this is an indication of the position for the actual sample, then it would be unsafe to assume that the paper's findings necessarily apply to the EU.

DeFond et al (2011) find increases in foreign mutual fund holdings in EU firms following IFRS adoption. They also find that the only significant increases are for firms in countries with 'strong implementation credibility' and in country-sectors that experience 'relatively large increases in [accounting] uniformity'. The measures of implementation credibility are really measures of earnings quality and they date from a slightly earlier period, as they are taken from a paper published in 2003. The individual country-sector scores of increased uniformity seem somewhat doubtful as it is not clear that before IFRS adoption firms were only comparable with firms in the same sector in the same country. It would be interesting to consider, for example, to what extent before IFRS adoption the results of Irish firms were comparable with those of UK firms and how far the results of Austrian firms were comparable with those of German firms. It is also doubtful how far it is useful to treat finance and real estate as a single sector for the purpose of accounting comparisons.

Khurana and Michas (2011) find evidence that US home bias in equity investment decreases following mandatory IFRS adoption. They also find that 'the reduction ... is greater for countries with larger differences between IFRS and their domestic accounting standards, and for countries with a stricter rule of law and a common law legal origin, and in countries with greater incentives to report higher quality financial information.' 12 of the 33 countries that adopted IFRS during the period covered are not from the EU, so the paper's results are not necessarily applicable to the EU. However, the authors also find that the EU countries in the sample do not have a significant incremental effect on their main finding (reduction in US equity home bias following mandatory IFRS adoption), which implies that this finding probably (though not necessarily) applies to the EU.

Shima and Gordon (2011) find evidence that mandatory IFRS adoption leads to an increase in cross-border equity investment by US investors where there is 'a strong regulatory environment (legal standards and enforcement)'. The paper covers voluntary and mandatory IFRS adoption and of the 44 countries it covers, 14 are from the EU. The EU presumably forms a larger proportion of mandatory adopters, but the paper does not disclose details on this. Overall, it is not clear how far its findings should be regarded as applicable to the EU.

Shima and Gordon (2011)'s approach to the classification of legal systems may also be questioned. The classification is based on four different tests and is done from the specific

viewpoint of minority investors who wish to protect their rights. In itself this seems appropriate. But it may surprise some readers that, eg, Argentina's, Pakistan's and Zimbabwe's legal systems are classified as stronger than Germany's, each beating Germany 4-0 on the various tests employed. Enforcement is assessed separately.

Amiram (2012) finds evidence that FPI increases after mandatory IFRS adoption and that this result is driven by investments from other IFRS adopter countries. This effect 'is more pronounced when investor and investee countries share language, legal origin, culture, and region'. Also, 'countries with lower corruption and better investor protection experience larger increases in FPI after they adopt IFRS relative to other IFRS users.' Rather more than half of this paper's samples of mandatory adopters are from non-EU countries so it is unclear how far its results are applicable to the EU. However, the additional tests reported in the panel, establishing that the main finding (mandatory IFRS adoption is followed by increased FPI) is unchanged by the inclusion of EU countries suggests that the finding also applies to the EU, although this would not necessarily be the case.

Beneish et al (2012) find that mandatory IFRS adoption is associated with increased foreign equity and debt investment. For equity investment, this finding is restricted to those countries with 'higher perceived governance quality prior to IFRS adoption'.

Brüggemann et al (2012) find evidence of increased cross-border share trading by individuals following IFRS adoption, but this applies unevenly across firms.

Florou and Pope (2012) find evidence of increases in cross-border investment by institutions following mandatory IFRS adoption, and although their sample extends beyond the EU, they confirm that this finding remains applicable when the sample is restricted to EU countries. They also find that the increases are 'restricted to countries where enforcement and reporting incentives are strong and where divergence between local accounting standards and IFRS is relatively high'.

As some of the increases recorded by Florou and Pope (2012) are increases in the proportion of the total investment in a firm held by institutional investors (others are increases in the number of institutional investors in a firm), there must be corresponding reductions in the investments held by other groups, eg, as the authors point out, holdings of 'insiders and family block-holders'.

Long Chen et al (2014) find evidence that mandatory IFRS adoption increases international cross-listing propensity and intensity, and that these changes are associated with the extent of differences between national GAAP and IFRS. 30% of the cross-listings in the sample are for IFRS firms in non-EU countries, which may affect the results, but the authors find that the increased propensity to cross-list is in fact greater for EU mandatory adopters than for non-EU mandatory adopters. The position for EU countries in relation to their other findings is not stated.

Hong et al (2014) find evidence that IPOs raise increasing amounts of capital from foreign markets following mandatory IFRS adoption.

Overall, although there may be doubts about some of the papers' findings on specific points and in some cases the findings' applicability to the EU is unclear, there seems to be enough evidence – in particular from DeFond et al (2011), Florou and Pope (2012) and Hong et al (2014) – to support the conclusion that mandatory IFRS adoption has helped promote inward portfolio investment to the EU. However, there is also evidence that only some countries have benefited from this change and, as with FDI, the studies do not show whether the EU has on balance been a net gainer from increased cross-border portfolio investment following IFRS adoption.

Although several of these papers draw attention to the importance of enforcement and **differences** in institutions among countries, as with the studies on FDI, it is not clear how far these papers have allowed for the possibility that other concurrent institutional **changes** in the EU may be relevant to increases in cross-border portfolio investment.

We have commented elsewhere that much of the data on the effects of IFRS adoption may be biased towards larger publicly traded companies. The evidence of Hong et al (2014) regarding IPOs shows a benefit of IFRS adoption that is presumably of greater relevance to smaller public companies.

8.4 Capital market integration

8.4.1 Research evidence

If cross-border capital flows are increased by the greater transparency or greater comparability of financial reporting information, then this should result in a higher degree of integration of international capital markets. The evidence on this can be studied as a discrete topic:

Panel 8.16: Cai and Wong (2010)

Francis Cai and Hannah Wong, 'The effect of IFRS adoption on global market integration', look at the effect of IFRS adoption on the degree of integration of capital markets for the G8 countries: Canada, France, Germany, Italy, Japan, Russia, the UK and the US. Of these, the four EU countries are mandatory adopters during the period covered by the research (1995-2008). Integration is measured by the extent to which movements in the stock market indices for each country are correlated. They find that all countries' stock markets show increasing international integration over time, but that, 'compared to their non-adopting counterparts, the IFRS adopting countries seem to enjoy a greater integration of their capital market after IFRS adoption'.

8.4.2 Discussion

Cai and Wang (2010) interpret their findings as evidence that '[a]dopting IFRS seems to reduce the diversity of accounting practices, [and] thus enables the efficient movement of capital across borders' and this may indeed be the explanation of their findings. But it is possible that there are also unidentified factors relevant to the changes in degrees of integration. Table 4 in the paper gives quarterly data by country for the period 1999-2008. Looking at this data, Germany, over the period as a whole and because of changes in the integration data for the last two quarters, actually shows a greater degree of increasing integration with the four IFRS non-adopters than with the other three adopters. Indeed, the quarterly data show significant swings in the degree of integration – especially for the four non-adopters – that make it difficult to form a view on what the underlying trends are, and the authors rely principally on the split between the pre- and post-adoption periods as a whole where quarterly variations are averaged out.

Even so, it may be questioned how far stock market integration actually reflects accounting integration. For the period under review, Canadian GAAP was closely aligned with US GAAP, yet the data in the paper show that movements on its stock market, more closely aligned with movements on the US market pre-adoption – as one would expect – are more closely aligned with movements on the UK, French and Italian markets after IFRS adoption in Europe. It is difficult to explain this in terms of accounting changes.

8.5 Conclusions

Overall, the available evidence suggests that mandatory IFRS adoption in the EU was associated with both increased FDI and increased international portfolio investment. But countries and firms benefited unevenly from these changes. And it is not clear how far the papers on this subject have allowed for the possibility that other concurrent institutional changes in the EU may be relevant to increases in cross-border capital flows.

The research does not show whether the EU was a net gainer from increased international capital flows, ie, whether there were on balance more capital inflows or more capital outflows for the EU following IFRS adoption. Lowering barriers to the international movement of capital should help to ensure that capital is better allocated internationally, which should also promote the welfare of the global community, but not necessarily to the short-term advantage of all parts of it. Domestic providers of finance, for example, may find that their competitive position deteriorates, and their response to this could have either positive or negative consequences (see Panel 11.8 below).

9. Other benefits

Researchers have found some evidence for benefits of IFRS adoption that were probably not expected at the time. But it needs to be interpreted with caution.

9.1 General points

Researchers have identified a number of other possible benefits of mandatory IFRS adoption, which, with one exception (increased trade in goods and services), do not match those identified in Regulation 1606/2002. All of them, though, could be seen as flowing from the benefits that are identified in the Regulation. We discuss the evidence for these other benefits as follows:

- reduced risk of insiders expropriating outsiders' investments (9.2);
- increased trade in goods and services within the EU (9.3);
- improved accounting-based assessment of executive performance (9.4); and
- reduced risk of share price crashes (9.5).

None of these topics is heavily researched, and in some cases it would probably be wrong to put much weight on the findings, particularly in those instances where much of the evidence comes from outside the EU.

9.2 Expropriation risk

9.2.1 The evidence

Outside investors in firms that are under the control of a small number of insiders risk being exploited. In particular, they face a risk that their share of the firm's income and wealth will be expropriated by the insiders. This risk should be reduced by greater transparency, which allows outsiders to monitor insiders' actions better.

Panel 9.1: Botma (2009)

Folkert Botma, 'The impact of mandatory IFRS adoption on ownership structure', looks at the impact of mandatory IFRS adoption on expropriation risk, as measured by the relationship between family/management ownership and institutional ownership. The sample is 557 firms from France, Germany and Italy for the period 2003-2006.

The author finds some evidence of an impact of IFRS adoption in France: 'For firms where family/management ownership equals or exceeds 20%, mandatory IFRS adoption attenuates the negative relation between family/management and institutional ownership'. No evidence is found of an impact in Germany or Italy. The author comments that 'Since France is the country with the strongest enforcement, the results suggest that IFRS only has an impact when enforcement is high.' He also points out that 'there were changes in enforcement and governance regimes around the mandatory IFRS adoption date in France' and that therefore the findings for France 'likely reflect the joint effects of these changes and IFRS adoption'.

Panel 9.2: Hong (2013)

Hyun A. Hong, 'Does mandatory adoption of International Financial Reporting Standards decrease the voting premium for dual-class shares?', looks at the effects of mandatory IFRS adoption on the valuation of private control benefits in firms with a dual-class share structure. The theory is that as expropriation risk is reduced by greater transparency, the 'voting premium' on the superior shares in dual-class structures should be reduced.

The sample is 133 dual-class firms (17% non-EU) from 13 countries (five non-EU). There is a control sample of dual-class firms from non-IFRS countries and for some tests a control sample of IFRS firms with a single class of shares. The period covered is 2002-2007.

The author finds a statistically significant decrease, following IFRS adoption and relative to non-adopters, in mandatory adopters' voting premium. The author also finds that 'this effect is

more pronounced in countries with strong legal enforcement and for mandatory adopters that experience an increase in the transparency and comparability⁴⁷ of reported information’.

The author comments that ‘Taken together, these results support the view that mandatory IFRS adoption benefits minority shareholders by providing an effective mechanism to constrain the private benefits of control.’ She adds, however, that ‘one should interpret these results with caution as concurrent efforts to strengthen corporate governance regimes and the enforcement of corporate and securities laws may also contribute to the decrease in voting premiums’.

The author also finds that the market valuation (implicit in share prices) of cash held by firms ‘significantly increases [for mandatory adopters] subsequent to mandatory IFRS adoption relative to that for the non-IFRS adopters’. She comments that ‘This evidence is consistent with the view that the practice of misusing cash reserves is more significantly reduced around the IFRS mandate at dual-class firms where a controlling party’s diverting corporate cash is less likely to be subject to capital markets’ disciplinary mechanisms’.

9.2.2 Discussion

Although Botma (2009) is stated to be about expropriation risk, it could reasonably be viewed as primarily about ownership structure (as its title indicates). It does not have direct evidence on expropriation risk, but argues that changes in ownership structure are attributable to expropriation risk. This may be a reasonable assumption to some extent, but it is also possible that information asymmetry affects ownership structure even in the absence of expropriation risk, and that improved transparency may therefore affect ownership structure for reasons other than appropriation risk.

As noted earlier, different authors make different assumptions about which EU countries have more or less effective enforcement regimes. Botma (2009)’s assumptions on this question are based on two earlier papers, which in turn appear to take their data from a variety of sources dating from 1994 to 2002, so they are not necessarily accurate for 2005. The enforcement indices in Brown et al (2014) give France, Germany and Italy each a score of 19, suggesting that their standards of enforcement were much the same at that time. Nor do Brown et al (2014) report any increase in enforcement for France between 2002 and 2005; they do report a significant increase for Germany.

As with Botma (2009), there is a question as to how the findings of Hong (2013) should be interpreted. Where there are information asymmetries, potential investors may be deterred from investing in a firm even when there is no expropriation risk. So while the decline in the voting premium identified by Hong (2013) may well be evidence of declining expropriation risk, it is not necessarily all about such a decline.

Similar questions to those arising on Botma (2009) also arise in relation to Hong (2013)’s classification of enforcement systems. For example, like Botma (2009), Hong (2013) classifies France as a strong enforcement country and Germany and Italy as weak enforcement countries. This may be correct, but some researchers take a different view.

Both these papers suggest that mandatory IFRS adoption, by increasing transparency, had some effect in reducing expropriation risk. For Botma (2009), this is only the case for France, while for Hong (2013), it applies to mandatory adopters generally – not just in the EU – in relation to both the voting premium and the valuation of cash. However, Hong (2013) warns that simultaneous changes in other institutions may also be responsible for the observed effects in relation to the voting premium. Overall, the evidence on this question is supportive of the proposition that mandatory IFRS adoption may have reduced expropriation risk, but does not rule out the possibility that concurrent changes may be to some extent responsible for the findings.

⁴⁷ Increases in comparability are measured using the approach of DeFond et al (2011) described at Panel 8.7 and discussed briefly at Section 8.3.2.

9.3 Trade within the EU

Firms want information about those with whom they transact, so that they can make judgements about whether the counterparties will be reliable customers or suppliers and, in the case of customers, whether they will be able to pay their debts on time. So if mandatory IFRS adoption has brought increased transparency and comparability to financial reporting within the EU, then it might also be expected to promote cross-border trade within the Union.

We are aware of only one research paper that looks at this question.⁴⁸

Panel 9.3: Márquez-Ramos (2011)

Laura Márquez-Ramos, 'European accounting harmonisation: consequences of IFRS adoption on trade in goods and foreign direct investments', which we reported at Panel 8.1 above in connection with cross-border investment, also looks at the effects of mandatory IFRS adoption on trade in goods within the EU. The sample covers exports of goods between EU countries for 2002-2007.

The author finds evidence that 'benefits exist in terms of trade in goods [ie, trade in goods increases] ... when IFRS are adopted'.

9.4 Accounting-based performance assessment

9.4.1 The evidence

The following two papers look at, respectively, the effects of IFRS adoption on management turnover and on management compensation.

Panel 9.4: Wu and Zhang (2010)

Joanna Shuang Wu and Ivy Zhang, *Accounting Integration and Comparability: Evidence from Relative Performance Evaluation around IFRS Adoption*, look at the effects of mandatory IFRS adoption on the correlation between firms' relative performance as measured by accounting information and CEO turnover. The sample is 12,049 firm-years (10% non-EU) from 15 Continental European countries (two non-EU: Norway and Switzerland) for the period 1993-2008, excluding the year of IFRS adoption (2005).

The authors find 'a post-adoption increase in the use of Relative Performance Evaluation (RPE) based on foreign peers' accounting information, consistent with greater financial reporting comparability associated with mandatory IFRS adoption.' In fact, the authors find 'no accounting-based RPE pre-2005'. The authors argue that the economic significance of their findings is that post-adoption, 'if foreign peers perform better, the likelihood of a firm having a CEO turnover increases by 3.94%'. Pre-adoption, the comparable figure is 0.75%.

Panel 9.5: Ozkan et al (2012)

Neslihan Ozkan, Zvi Singer and Haifeng You, 'Mandatory IFRS adoption and the contractual usefulness of accounting information in executive compensation', look at the effects of mandatory IFRS adoption on the correlation between firms' performance as measured by accounting information, considered in isolation and relative to other firms, and their managers' compensation. The sample is 892 firms (8% non-EU) from 15 European countries (one non-EU: Norway). The periods covered are 2002-2004 and 2006-2008, ie, the year of adoption is excluded. US firms are used as a control sample.

⁴⁸ Karthik Ramanna and Ewa Sletten, 'Network effects in countries' adoption of IFRS' (2014), look at whether the expectation of such trade benefits affects countries' decision to adopt IFRS, but not at whether the benefits are realised.

The authors find 'evidence of increased use of earnings for [pay-performance sensitivity] in the post-adoption period, which is primarily driven by countries with large differences between IFRS and the local accounting standards in place prior to the transition.' They also find 'strong evidence of increased use of foreign peers in accounting-based [relative performance evaluation] in the post-adoption period. Further analyses show larger increases in the use of [relative performance evaluation] for firms with more foreign operations, and for those with fewer comparable domestic peers.'

The authors comment that their 'overall results are consistent with mandatory IFRS adoption leading to some improvement in the quality and a significant increase in the cross-country comparability of accounting earnings.'

9.4.2 Discussion

Wu and Zhang (2010) describe their findings as showing greater use of foreign comparators following IFRS adoption in decisions on CEO turnover. While they do not observe such use directly, this interpretation of their findings seems to be reasonable. Ozkan et al (2012) comment on Wu and Zhang (2010):

'Some CEO turnovers are voluntary for reasons other than bad performance (eg, promotion, retirement, health). Misclassification of voluntary resignations as forced turnovers can potentially lead to false inferences.'

This is correct, but the distinction between voluntary resignations and forced turnovers is often unclear, and the fact that Wu and Zhang (2010) find a correlation between relatively poor performance and CEO turnover lends credence to their interpretation. Genuinely voluntary resignations would presumably show no systematic correlation with either relatively good or relatively poor performance. Indeed, CEOs who time their own exit may well prefer to depart when everything looks rosy.

Voulgaris et al (2014) (see Panel 10.3 below) look at whether the contractual terms of managerial compensation contracts in the UK change after IFRS adoption, and find that there is a reduction in the use of earnings-based measures. On the face of it, there is a tension here with the findings of Ozkan et al (2012). Ozkan et al (2012) do not look at contractual terms, but at the correlations between pay and a firm's performance as measured by accounting (pay-performance sensitivity) and between pay and the firm's performance relative to that of other firms as measured by accounting (relative performance evaluation). Ozkan et al (2012) find stronger correlations on both counts following IFRS adoption, which they interpret as indicating increased use of the firm's own accounting numbers in determining management pay and increased use of other firms' accounting numbers for the same purpose.

While Voulgaris et al (2014) and Ozkan et al (2012) are looking at different data, it might be expected that if firms are making less use of accounting-based measures in compensation contracts, this would be accompanied by reduced pay-performance sensitivity rather than increased pay-performance sensitivity. Ozkan et al (2012) comment on this and point out that their results are driven by countries where there were larger differences between national GAAP and IFRS, whereas Voulgaris et al (2014) look only at the UK, where there were smaller differences. Indeed, Ozkan et al (2012) note that they 'also document a negative, albeit insignificant change in accounting-based [pay-performance sensitivity] for countries with a small IFRS-LGAAP [ie, local GAAP] difference.'

It is also possible that a correlation between pay and performance as reported in the accounts would exist (or increase) independently of the use of accounting terms in compensation contracts.

9.5 Crash risk

A firm's 'crash risk' is indicated by the frequency with which it experiences steep falls in its share price. The following paper is based on the theory that firms are more likely to experience a share price crash if their management stores up bad news and then releases it all at once. A more transparent reporting environment should make it less likely that this will happen.

Panel 9.6: DeFond et al (2014)

Mark DeFond, Mingyi Hung, Siqi Li and Yinghua Li, 'Does mandatory IFRS adoption affect crash risk?', look at the effect of mandatory IFRS adoption on crash risk for firms in 25 countries (six non-EU). The sample comprises 8,472 non-financial firms (35% non-EU) and 1,748 financial firms (40% non-EU). There are control samples of non-IFRS adopters and voluntary IFRS adopters. The period covered is 2003-2006.

The authors find 'a decrease in crash risk among non-financial firms after IFRS adoption, and that the effect is more pronounced among firms in poor information environments [see below] and in countries with large and credible changes to local GAAP.' For financial firms, they find 'no change in crash risk after IFRS adoption, on average. However, financial firms less affected by IFRS's fair value provisions experience a decrease in crash risk, and banks with less restrictive banking regulations [see below] experience an increase in crash risk.'

Indicators of the strength of the firm's information environment are: whether it is cross-listed in the US; whether its share price features in a stock market index; the number of stock exchanges on which it is listed; the extent of its foreign sales; the number of investment analysts following it; and its market capitalisation.

The restrictiveness of banking regulations is assessed in terms of the extent to which banks are prohibited from engaging in other activities, such as securities markets, insurance, and real estate.

The authors test whether their findings for non-financial firms as a whole and for financial firms as a whole still apply if the sample is restricted to EU firms. They find that 'The results for non-financial firms are qualitatively identical ... For financial firms, however, crash risk increases significantly after restricting the treatment sample to the EU countries...' They comment, however, that there is 'only weak evidence' for this last finding.

Overall, the findings of DeFond et al (2014) support the view that mandatory adoption of IFRS reduced crash risk in the EU, at least for non-financial firms. This is consistent with IFRS adoption increasing transparency. It is not clear how far the finding for firms in poor information environments applies to the EU (35% of the sample are non-EU). If it does, then, to the extent that size is an indicator of a poor information environment, it would provide further evidence that IFRS adoption can disproportionately benefit smaller publicly traded companies.

10. Costs

There is surprisingly little evidence on the negative effects of IFRS adoption in the EU. But some of it suggests a conflict between the market valuation objective of accounting and its contractual uses.

10.1 General points

In this chapter we review the research evidence on the costs (ie, negative effects) of IFRS adoption. Some of these costs are arguably one-off items that should have no relevance to debates on future EU policy in relation to IFRS, but we include them for the sake of completeness. We report research findings on the following topics:

- continuing incremental preparation costs associated with IFRS (10.2);
- declining utility of accounting-based compensation contracts (10.3);
- declining utility of accounting-based debt contracts (10.4);
- unintended wealth transfers between shareholders and lenders (10.5);
- changes in capital structure that would not otherwise have been made (10.6);
- equity issues that were made earlier than they would otherwise have been (10.7); and
- changes for the worse in some aspects of risk management using financial instruments, although these may be accompanied by other changes for the better (10.8).

None of these topics is heavily researched, and in some cases it would probably be wrong to put much weight on the findings, particularly in those instances where much of the evidence comes from outside the EU.

10.2 Preparation costs

10.2.1 The evidence

Different GAAPs involve different costs for preparers, depending on features such as the standards' complexity, the extent of their required disclosures, and whether they require information (eg, valuations) that would not otherwise be prepared. Changing from one GAAP to another also imposes one-off costs as preparers learn about the new requirements and, where appropriate, change their accounting systems to meet them. Mandatory IFRS adoption in the EU clearly involved one-off costs as the new GAAP was implemented, but of greater continuing interest are any recurring costs that IFRS involves by comparison with what preceded it.

ICAEW's 2007 report on the implementation of IFRS in the EU gave estimates of the initial and recurring additional accounts preparation costs, including external audit costs, involved in implementation. One point of interest in these figures is that they show proportionately higher costs for smaller publicly traded companies, reflecting economies of scale for larger firms. These estimates have subsequently been cited (not always accurately) in a number of research studies, but there does not appear to have been any significant academic research on the subject, except in relation to audit fees.

Beattie et al (2011), reported at Panel 3.17 above in connection with accounting quality, find a view among those they interviewed that IFRS involves 'excessive complexity'. They comment that 'The complexity of IFRS was particularly challenging for CFOs in smaller listed companies ... which tend to have limited in-house accounting support' (pp305-306). It seems reasonable to assume that additional complexity would mean at least some additional costs.

Hoogendoorn (2006), refers to 'the complexities of IFRS, where many entities, especially smaller listed entities, lack sufficient expertise', and therefore require significant help from their auditors. The author is commenting as an auditor reflecting on first-time adoption of IFRS, but his remarks would seem to indicate the likelihood of some recurring additional costs

because of the additional complexity of IFRS. He states that 'IFRS is too complex, even for auditors and other specialists' and also comments unfavourably on its lack of clarity.

Fox et al (2013), reported at Panel 5.1 in connection with the cost of capital, give a number of interviewees' estimates of initial implementation costs, which vary from nil to €100m. The paper does not give estimates of recurring costs.

Glaum et al (2007), reported at Panel 4.24 above in relation to comparability, comment in various places on the cost and complexity of IFRS requirements on accounting for business combinations. They also suggest that 'the IASB consider dispensing of a few disclosure requirements that in practice are found as having an unfavorable cost-benefit relationship.'

Albu and Albu (2012), reported at Section 3.5.6 above in relation to transparency, note that 'the extra costs of maintaining up to three reporting systems (to comply with [Romanian] national regulations and IFRS, and for taxation purposes), and increased auditing costs were a concern for some preparers.' This is a reminder that the additional recurring costs of IFRS adoption are likely to vary from country to country, depending on how far IFRS supersedes or is additional to national requirements.

The following paper looks at recurring audit costs:

Panel 10.1: Kim et al (2012)

Jeong-Bon Kim, Xiaohong Liu and Liu Zheng, 'The impact of mandatory IFRS adoption on audit fees: theory and evidence', look at the impact of mandatory IFRS adoption on audit fees in the EU. The test sample comprises 2,860 firm-year observations for firms from 14 EU countries over the period 2004-2008, excluding the year of adoption. Controls are provided by EU publicly traded companies that had not yet adopted IFRS, eg, because they are quoted on unregulated markets, and by firms from three countries that had not adopted IFRS: Canada, Japan and the US. 'Audit fees' include fees paid to auditors for non-audit work; the authors acknowledge this 'data limitation'.

The authors find that 'on average, the audit fee increase is 5.44 percent greater for the adopter firms, compared to that for the non-adopter firms in our control sample.' They also find that 'the IFRS-related audit fee premium increases with the increase in audit complexity brought about by IFRS adoption, and decreases with the improvement in financial reporting quality arising from IFRS adoption.' They also find 'some evidence that the IFRS-related audit fee premium is lower in countries with stronger legal regimes.'

The authors also find that audit fees in the transition year are not significantly higher than in subsequent years.

Markku Vieru and Hannu Schadewitz, 'Impact of IFRS transition on audit and non-audit fees: evidence from small and medium-sized listed companies in Finland' (2010), find evidence of IFRS implementation affecting audit and non-audit fees in the year of adoption, but do not go beyond that to see whether there is any continuing effect on costs.

The following paper looks at broader costs imposed on preparers by mandatory IFRS adoption:

Panel 10.2: Vulcheva (2011)

Maria Ivanova Vulcheva, 'International accounting standardization across countries with unequal enforcement – questionable benefits at a high price?', looks at the effects of mandatory IFRS adoption on delistings in four EU countries (Germany, Ireland, Italy and the UK). The period covered is 1998-2007. The argument is that mandatory IFRS adoption imposes additional costs on listed companies, which may react by delisting. To the extent that they do so, changes in the level of delisting at the time of IFRS adoption are an indication that additional costs are being imposed.

The author finds evidence that 'the costs of standardization are sufficient to push some firms out of the market'. She also finds that the increase in delisting 'is most substantial for low-incentive public companies [ie, where incentives for high quality reporting are low], and for companies that operate in the two common-law countries in [the] sample, the UK and Ireland.'

10.2.2 Discussion

There appears to be no academic research on recurring preparation costs, other than Kim et al (2012), which finds higher audit costs.

The evidence of delistings in Vulcheva (2011) indicates that mandatory IFRS imposes additional costs on preparers, but it is difficult to know how to interpret the findings. The paper shows that only the UK has a statistically significant higher than average level of delistings in 2005, the year of mandatory IFRS adoption. The author interprets her findings as to some extent evidence that the more rigorous enforcement of accounting standards in common law countries (the UK and Ireland) imposes additional costs on firms based there. The strength of this argument depends in part on how far enforcement is indeed more rigorous in the common law countries and, as noted earlier, there are various proxies that give very different results for the degree of enforcement in a country. As discussed in Section 6.2 above:

- Christensen et al 'Mandatory IFRS reporting and changes in enforcement' (2013) identify Germany as a country that implemented significant improvements in enforcement in 2005; and
- Brown et al (2014), show enforcement in Germany not far behind that in the UK by 2005.

Delisting may also be seen as a consequence of managers' desire to avoid the potential reduction in information asymmetries that additional disclosures under IFRS might bring – an 'agency' explanation for delisting, rather than a 'cost savings' explanation.⁴⁹ Overall, the picture may be more complicated than the interpretation in Vulcheva (2011) suggests.

Beattie et al (2011)'s anecdotal evidence of additional complexity implies that there should be additional recurring costs involved in IFRS adoption, and it seems reasonable to assume – because of economies of scale – that they would be proportionately higher for smaller publicly traded companies. But as yet there seems to be no academic research to support these plausible assumptions beyond Kim et al (2012) on audit fees, and even this does not look at whether costs are relatively higher for smaller publicly traded companies.

Glaum et al (2007) also comment on IFRS's cost and complexity in relation to accounting for business combinations, but do not quantify the costs.

10.3 Accounting-based compensation contracts

The following study looks at the effects of mandatory IFRS adoption on the use of accounting-based measures in management compensation contracts.

Panel 10.3: Voulgaris et al (2014)

Georgios Voulgaris, Konstantinos Stathopoulos and Martin Walker, 'IFRS and the use of accounting-based performance measures in executive pay', look at the effects of mandatory IFRS adoption on the use of earnings-based measures in management compensation contracts. The sample is 500 large UK companies for the period 2002-2009.

The authors find that 'firms place a lower weight on EPS-based performance measures in management compensation contracts, post-IFRS'. They argue that this may be because 'IFRS add "noise" to accounting numbers which ... makes reported earnings less useful for

⁴⁹ See Christian Leuz, Alexander J. Triantis and Tracy Yue Wang, 'Why do firms go dark? Causes and economic consequences of voluntary SEC deregistrations' (2008).

evaluating managerial performance.’ This in turn may, they argue, be attributed to greater use of fair value accounting under IFRS, which can have the result that ‘it adds unnecessary noise to reported earnings, driven by events outside the manager’s control’. The authors warn, however, that they are ‘very cautious about inferring strict causality in this phenomenon, since there might be an alternative explanation for our results, based on “managerial power” based arguments.’

The findings of this study suggest that IFRS adoption has made accounting information less useful in relation to management compensation contracts. While the authors do not completely rule out the alternative ‘managerial power’ explanation, they consider it unlikely. The managerial power explanation, which Voulgaris et al (2014) do not explore in detail, would presumably be that fair value numbers are less manipulable by managers than historical cost numbers. Managers would therefore oppose the use of an IFRS contractual basis because the numbers are less under their control, rather than because the numbers fail to reflect their performance. Critics of fair value would of course argue the opposite.

This paper parallels that at Panel 10.4 below, which also shows declining use of accounting numbers in contracting following IFRS adoption.

10.4 Accounting-based debt covenants

The following study looks at the effects of mandatory IFRS adoption on the uses of accounting-based covenants in debt contracts.

Panel 10.4: Ball et al (2013)

Ray Ball, Xi Li and Lakshmanan Shivakumar, ‘Mandatory IFRS adoption, fair value accounting and accounting information in debt contracts’, look at the effects of mandatory IFRS adoption on accounting-based debt covenants. Their study covers 1996-2010, and the test sample comprises 1,362 debt issues (18% non-EU) by mandatory IFRS adopters from 20 countries (six non-EU). There is a control sample of 1,675 debt issues from eight countries that have not adopted IFRS. The majority of the control sample are from Japan and Taiwan. The US is excluded from the control sample because IFRS and US GAAP have been moving closer together since the 1990s and this ‘pollutes the US as a control’.

The authors find that ‘A significant fall in accounting-based debt covenants and increase in non-accounting covenants follows mandatory IFRS adoption. No such effects are observed in non-adopting countries... Greater declines in accounting-based covenants are observed in countries whose pre-IFRS domestic standards differed more from IFRS, and in countries where the difference involved fair value accounting.’ Analysing the debt issues between loans and bonds, the authors find that, while the decline in accounting-based covenants is statistically significant for loans, it is not statistically significant for bonds.

The authors argue that these findings are attributable to the greater use of fair values in IFRS, ‘the IFRS treatment of convertible debt, method choices given to firms under IFRS, and uncertainty about future IASB rule-making’, all of which decrease the efficiency of accounting-based debt covenants.

The findings of Ball et al (2013) are consistent with those reported at Panel 5.13 for Tai-Yuan Chen et al (2013) in relation to loans, who in addition find that mandatory IFRS adoption leads to higher interest rates, increased collateral requirements and slightly shorter periods for loans. Chen et al (2013) find that these changes are significantly associated with increased income smoothing and a higher level of accruals.

10.5 Wealth transfers

The following study looks at whether mandatory IFRS adoption results in any wealth transfers between shareholders and lenders.

Panel 10.5: Christensen et al (2009)

Hans B. Christensen, Edward Lee and Martin Walker, 'Do IFRS reconciliations convey information? The effect of debt contracting', look at whether IFRS reconciliations of UK firms at first-time adoption of IFRS convey information to the market, including about wealth transfers between shareholders and lenders. The authors argue that where firms have accounting-based covenants in debt contracts, adoption of IFRS can make a breach of the contract either more or less likely. Where the accounting change makes a breach less likely, there may be a transfer of wealth from lenders to shareholders and, where it makes a breach more likely, from shareholders to lenders.

The test covers the 2004 IFRS reconciliations in the 2005 accounts of 137 UK companies and the market reaction to them. The authors 'find significant market reactions to IFRS reconciliation announcements. These market reactions are more pronounced among firms that face a greater likelihood and costs of covenant violation'. They argue that this finding 'supports market reactions to IFRS reconciliations being at least partly explained by wealth transfers between shareholders and lenders'.

Christensen et al (2009) find evidence supporting the view that mandatory IFRS adoption involves wealth transfers between shareholders and lenders (in both directions) as the change in accounting makes breaches of accounting-based covenants either more or less likely. It could be argued that this result is not evidence of either a net benefit or a net cost of mandatory IFRS adoption. However, as people enter into transactions with certain expectations, it can also be argued that changes that redistribute benefits in an unexpected way should be regarded as costs because they make rational decision-making more difficult.

The results of Christensen et al (2009) also indicate a possibility that studies that look purely at equity-capital-related benefits may be neglecting corresponding debt-capital-related costs (and vice versa).

10.6 Changes in capital structure

The following paper looks at the effects of mandatory IFRS adoption on firms' capital structure.

Panel 10.6: De Jong et al (2006)

Abe de Jong, Miguel Rosellón and Patrick Verwijmeren, *The Economic Consequences of IFRS: The Impact of IAS 32 on Preference Shares in the Netherlands*, look at the effects of mandatory IFRS adoption on Dutch firms with preference shares. They identify 34 such firms as at 1 January 2004. Their significance is that the Netherlands had the largest number of firms with preference shares that would be required under IFRS to classify them as liabilities.

The authors find that of the 34 firms in their sample, three would be able to classify the shares as equity. Of the remaining 31, 16 buy back the preference shares and six change the shares' characteristics so that they can be classified as equity. The authors also find that for these 22 firms, not making these changes would have resulted in their debt ratios increasing by 46.5% on average, compared with 19.1% for the remaining nine firms. Of the 15 firms that had actually bought back the preference shares by the date of the research (the 16th had not), nine financed the transaction by issuing equity.

Again it may be unclear whether the outcomes identified by De Jong et al (2006) should be regarded as a cost. We classify them as a cost on the grounds that they involve:

- an expense for the firms concerned; and
- a move away from their preferred capital structure;

with no corresponding benefit other than avoiding the greater costs anticipated from the introduction of IFRS.

10.7 Equity issues

It is possible that mandatory IFRS adoption encouraged firms that would expect to report worse results under it to raise equity capital in advance of adoption. The following paper looks at the evidence for this.

Panel 10.7: Wang and Welker (2011)

Shiheng Wang and Michael Welker, 'Timing equity issuance in response to information asymmetry arising from IFRS adoption in Australia and Europe', look at equity issues by firms in the three years preceding mandatory IFRS adoption and their correlation with reconciliation adjustments between IFRS and domestic GAAP in the prior year comparatives provided in the first year of IFRS adoption. The sample is 2,916 firms (22% non-EU) from 17 countries (two non-EU: Australia and Norway).

The authors find that 'a firm's likelihood of equity issuance and equity issue size during the three years prior to the IFRS reconciliation disclosure are negatively associated with the unexpected change in net income resulting from the conversion to IFRS.' I.e., firms are more likely to raise equity capital where IFRS adoption will in due course reduce their reported net income. The authors interpret this as evidence of managers taking advantage of an information asymmetry, which was in due course removed on IFRS adoption.

The findings of Wang and Welker (2011) provide evidence of an interesting anticipatory effect of IFRS adoption. It is not clear whether it should be regarded on balance as a cost or a benefit. On the basis that the phenomenon uncovered by the research is essentially one of capital raisers taking advantage of capital providers' ignorance, we have classified it as a cost. On the other hand, as the ultimate effect of IFRS adoption is that such opportunities are removed, it could equally well be argued that it shows the benefits of adoption. The costs are in effect one-off transitional costs. The benefits should be enduring.

10.8 Risk management

It is possible that the introduction under IFRS of fair value measurements for some financial instruments has affected firms' risk management. We are aware of one paper that looks at this question, but, as we discuss below, its scope does not fit well with the purposes of this report.

Panel 10.8: Lins et al (2011)

Karl V. Lins, Henri Servaes and Ane Tamayo, 'Does fair value reporting affect risk management? International survey evidence', looks at the effects of fair value accounting for derivative financial instruments on firms' risk management policies. The evidence base for the paper is replies to a questionnaire sent to CFOs in 2005. Replies were received from 229 firms in 36 countries (22 non-EU). Not all respondents stated their country, but of those that did 50% were from the EU.

The authors find that 42% of respondents 'state that their risk management policies have been materially affected by fair value reporting'. Specifically, they find 'a substantial decrease in foreign exchange hedging and in the use of nonlinear hedging instruments' (see below). Overall, they conclude that 'while speculative activities have been reduced, sound hedging strategies have been compromised as well'.

Nonlinear hedging instruments: the authors state that 'it is often optimal for a firm to hedge using derivative strategies that feature nonlinear payoffs, such as basic or exotic option contracts'.

Lins et al (2011) is not primarily about the effects of IFRS adoption, but about the effects of some fair value accounting requirements. However, for many of the respondents to their questionnaire in 2005, these requirements were about to be introduced as a result of impending IFRS adoption, and this should be reflected in the CFOs' answers. Also, only 50% of the respondents are from EU firms, so it is not clear how far the survey's findings are applicable to the EU. Of this 50%, it is likely that some are voluntary IFRS adopters – 46 of the 113 EU respondents are from Germany, which had a high proportion of voluntary adopters.

Overall, therefore, Lins et al (2011) should probably not be regarded as evidence of the effects of IFRS adoption in the EU. But it seems plausible that the effects they find would also have arisen on mandatory adoption of IFRS in the EU.

Whether these effects are on balance costs or benefits is an open question. We have classified them as costs as the potentially deleterious effects on hedging appear to be the predominant effect. But Lins et al (2011) also identify a reduction in speculative activities, which they appear to regard as a benefit.

11. The financial crisis

Its possible role in the financial crisis is probably the biggest controversy surrounding IFRS in the EU. But there is only a modest amount of research evidence on the key issues.

11.1 General points

We review below the limited evidence on the relationship between mandatory IFRS adoption and the financial crisis in the EU. Overall it does not allow any firm conclusions to be drawn.

In the EU, the argument that IFRS was in some way responsible for the crisis or made it worse revolves around two issues.

- It has been argued that the use of fair values for some financial instruments overstated profits before the crisis, adding to the atmosphere of excessive optimism and risk-taking in banking, and leading to excessive remuneration and distributions, which left banks with inadequate capital to face the crisis. At the same time, it led to overstated losses during the crisis, reducing banks' capital ratios and undermining confidence in the banks.
- It has also been argued that the incurred loss method of calculating loan loss provisions also led to overstated profits before the crisis, again adding to the atmosphere of excessive optimism and risk-taking, and leading to excessive remuneration and distributions, but resulting in capital inadequacy when in due course more realistic provisions had to be recognised after the crisis had struck.

It can also be argued that both fair value accounting and the incurred loss method of calculating loan-loss provisions led to greater volatility in banks' reported results, which was destabilising.

The role of fair value accounting **during** the financial crisis has now been reasonably well researched in the US, with little evidence so far that fair value measurements played a significant part either in precipitating bank failures or in making the crisis worse. Relevant works include:

- US Securities and Exchange Commission, *Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on Mark-to-Market Accounting* (2008).
- Christian Laux and Christian Leuz, 'Did fair-value accounting contribute to the financial crisis?' (2010).
- Sanders Shaffer, *Fair Value Accounting: Villain or Innocent Victim* (2010).
- Mary E. Barth and Wayne R. Landsman, 'How did financial reporting contribute to the financial crisis?' (2010), which reviews the research results available at that time.
- Gauri Bhat, Richard Frankel and Xiumin Martin, 'Panacea, Pandora's box or placebo: feedback in bank mortgage-backed security holdings and fair value accounting' (2011). This paper goes against the general trend in that it does find evidence that fair value accounting requirements for mortgage-backed securities drove asset sales and that the relaxation of these requirements was positively received by the market, with rises in both share prices and bond prices.
- Brad A. Badertscher, Jeffrey J. Burks and Peter D. Easton, 'A convenient scapegoat: fair value accounting by commercial banks during the financial crisis' (2012).

It is clearly possible that the conclusions of this research are to some extent applicable in the EU as the IFRS requirements for fair valuing financial instruments were largely based on those of US GAAP. However, banking institutions and their regulation in the EU are not the same as in the US. At the time of the crisis (as now), there was greater variety in regulatory regimes and ownership structures, including state ownership, across the EU than in the US; and variety in domestic GAAPs and in the voluntary adoption of IFRS before the crisis also meant that banking in the EU was more heterogeneous in relevant respects than in the US. It would therefore be helpful to have separate research for EU institutions using EU evidence. At the moment, this is still largely missing.

The US literature does not examine the role of fair value accounting in the years preceding the crisis, nor does it look at the role of loan loss provisioning before the crisis. Again, research on these matters using EU evidence is also lacking.

11.2 The evidence

The following papers do not, in most cases, look directly at the possible connection between financial reporting and the financial crisis in the EU, but they examine the effects of mandatory IFRS adoption on different aspects of accounting for financial instruments, which may be relevant to the crisis.

Panel 11.1: Fiechter (2011)

Peter Fiechter, 'The effects of the fair value option under IAS 39 on the volatility of bank earnings', looks at the effects on the volatility of reported earnings of adopting the fair value option (FVO) in IAS 39, *Financial Instruments: Recognition and Measurement*. The sample comprises 222 banks from 41 countries using IFRS and covers the period 2006-2007. 50% of the sample firms are from the EU, but results are not disaggregated, so their applicability to the EU is unclear.

The author finds that 'Banks applying the FVO primarily to reduce accounting mismatches ... report lower levels of earnings volatility than the control group'. The control group comprises banks in the sample that adopt the FVO, but not primarily to reduce accounting mismatches. 'The results also indicate that the application of the FVO is a more effective tool to reduce earnings volatility than hedge accounting, in accordance with IAS 39.'

Panel 11.2: Gebhardt and Novotny-Farkas (2011)

The results of this study are summarised at Table 3.12 in connection with the effects of IFRS adoption on accounting quality. As the paper is also relevant to the potential relationship between financial reporting and the financial crisis, we repeat and extend that summary here.

Günther Gebhardt and Zoltan Novotny-Farkas, 'Mandatory IFRS adoption and accounting quality of European banks' (2011), look at whether the transition from local GAAP to mandatory IFRS affected accounting quality in relation to loan loss provisions. Their sample comprises 90 banks from 12 EU countries, using data for the period 2000-2007.

They find that the change to IFRS reduces income smoothing (an improvement in quality), but also reduces timely loss recognition (a reduction in quality). They also find that the reduction in income smoothing is less pronounced in countries with stricter banking supervision and widely dispersed bank ownership and for EU banks cross-listed in the US.

They also look at the differences between IFRS and national GAAP numbers for loan loss provision for 2004 (disclosed as comparatives in the 2005 accounts) and find that in five countries IFRS resulted in higher loan loss provisions, while in six it resulted in lower provisions; one country showed no change.

Panel 11.3: Leventis et al (2011)

The results of this study are also summarised at Table 3.12 in connection with the effects of IFRS adoption on accounting quality. As the paper is also relevant to the potential relationship between financial reporting and the financial crisis, we repeat and extend that summary here.

Stergios Leventis, Panagiotis E. Dimitropoulos and Asokan Anandarajan, 'Loan loss provisions, earnings management and capital management under IFRS: the case of EU commercial banks' (2011), look at the effect of mandatory IFRS adoption on banks' loan loss provisions. The sample comprises 56 mandatory adopters and 35 voluntary adopters from 18 European countries (one non-EU: Switzerland). The number of Swiss banks included is not disclosed. The period covered is 1999-2008.

The authors find that earnings management using loan loss provisions is significantly reduced after IFRS adoption. They also find that earnings management is more pronounced for riskier banks.

Panel 11.4: Bischof et al (2011)

The results of this study are summarised at Panel 4.25 in relation to continuing non-comparability. As the paper is also relevant to the potential relationship between financial reporting and the financial crisis, we repeat and extend that summary here.

Jannis Bischof, Ulf Brüggemann and Holger Daske, 'Fair value reclassifications of financial assets during the financial crisis', look at the reaction of 302 IFRS-using banks in 39 countries (including 134 banks in 19 EU countries) to the IASB's October 2008 decision to allow an option to abandon fair value measurement for certain financial assets.

They find that banks 'use the reclassification option to forgo the recognition of fair value losses and ultimately the regulatory costs of supervisory intervention'. They also find that 'Some banks ... use the reclassification option to withhold potentially material information by not complying with corresponding footnote disclosure requirements'.

In addition, the authors find that 'reclassifying banks that do not comply with corresponding footnote disclosures experience a significant increase in bid-ask spreads ... relative to non-reclassifying banks'. Additional tests 'suggest that the increase in bid-ask spreads ... is not solely attributable to missing reclassification disclosures', but the authors comment that their research design does not allow them 'to disentangle' the effects of reclassification disclosure non-compliance from those of 'other potential drivers'.

Separate results are not given for EU banks, so it is not clear how far the findings apply to them specifically as well as to the sample as a whole.

Panel 11.5: Amel-Zadeh and Meeks (2013)

Amir Amel-Zadeh and Geoff Meeks, 'Bank failure, mark-to-market and the financial crisis', look at, among other things, the possible impact of fair value accounting on the failure in 2007 of the UK bank Northern Rock. They conclude that its failure 'cannot be attributed to fair value accounting', but was instead 'attributable to cash flow insolvency'.

Other questions examined in the paper refer to the US or use international samples whose EU component is not stated, so their applicability to the EU is unclear. The authors look at the 2008 failure of the US investment bank Lehman Brothers and, as for Northern Rock, conclude that its failure was attributable to cash flow insolvency, not fair value accounting. Using data for a sample of 125 global financial institutions for the period 2007-2009, they do not find evidence that potential mark-to-market write downs on asset-backed securities increased insolvency risk. But they do find a correlation between increased liquidity risk and increased insolvency risk, which is consistent with their findings for Northern Rock and Lehman Brothers. However, using data for a sample of 481 international banks, they find a positive stock price response to the IASB's October 2008 relaxation of the fair value accounting requirements, consistent with expectations of reduced insolvency risk.

Panel 11.6: Beltratti et al (2013)

Andrea Beltratti, Nasser Spear and Mark Daniel Szabo, 'The value relevance of write-downs during the subprime financial crisis', look at the correlation between asset write-downs and stock price movements for 49 North American and European banks between 2007 and 2009. 18 of the 49 firms are based in the EU, but results are not disaggregated, so their applicability to the EU is unclear.

The authors 'find that both fair-value and historical cost write-downs are associated dollar-for-dollar with security returns, suggesting that on average, write-downs were completely value

relevant throughout the Financial Crisis'. They also find 'little evidence that write-downs were untimely'. Overall, they conclude: 'We find no evidence that write-downs were unnecessary or excessive, or that managers avoided or delayed write-downs.'

Panel 11.7: O'Hanlon (2013)

John O'Hanlon, 'Did loan-loss provisioning by UK banks become less timely after implementation of IAS 39?', looks at the effect of IFRS adoption on the timeliness of loan-loss provisions by UK banks. The sample comprises 37 banks (12 publicly traded) and the data cover the period 2001-2008.

The author regards the pre-IFRS UK GAAP regime for loan-loss provisioning as an incurred loss model and the change of regimes, therefore, as being from one form of incurred loss approach to another with stricter evidence requirements. His results 'do not suggest that provisioning became less timely under the stricter evidence requirements of IAS 39'.

All the studies referred to so far deal with the effects of IFRS on banks' financial reporting. But it is also possible that the effects of IFRS on the non-banking sector will have had consequences for banks. As we have discussed in earlier chapters, there is evidence that IFRS adoption facilitates access to bond markets (Chapter 5) and to international sources of finance (Chapter 8). These changes reduce the non-bank sector's dependence on domestic banks. The following paper is based on the theory that the resulting increase in competition among banks in domestic markets encourages them to cut costs and to take more risks to maintain their profitability.

Panel 11.8: Jayaraman and Kothari (2012)

Sudarshan Jayaraman and S. P. Kothari, 'The effect of corporate transparency on bank risk-taking and banking system fragility', look at, among other things, the effects of mandatory IFRS adoption on the behaviour of domestic banks. The sample is 29,800 bank-year observations (16% non-EU) for banks from 26 IFRS-adopting countries (eight non-EU). There is a control sample of banks in non-adopting countries. The period covered is three years before and three years after IFRS adoption, excluding the year of adoption itself.

The authors find that 'bank risk-taking increases by 15.5% ... in domestic banks of adopting countries incrementally to that in domestic banks in non-adopting countries' and that there is 'a 3.8% ... incremental increase in cost efficiency in these banks.' They also find evidence that 'banks [in adopting countries] respond to corporate transparency [following IFRS adoption] by taking on more non-lending than lending risk'.

11.3 Discussion

11.3.1 Fair value accounting

Fiechter (2011) is relevant to one of the arguments in support of the view that IFRS adoption exacerbated the financial crisis: ie, that the use of fair value for certain financial instruments, required or permitted under IFRS, leads to greater volatility in banks' reporting, which is destabilising. The paper shows that use of fair value does not necessarily lead to greater volatility, but does not appear to cast doubt on the generally accepted view that fair value accounting tends to produce more volatile results than historical cost accounting. In particular, Fiechter (2011) looks at a specific instance of the use of fair value where it has been adopted in order to avoid mismatches that arise from the mixed measurement model under which some financial instruments are measured at historical cost and other, possibly related, instruments at fair value.

The one conclusion to be drawn from this paper in relation to the financial crisis is the limited one that where the fair value option was adopted in order to avoid mismatches, it did not on average add to the volatility of banks' reported results. As 50% of the paper's sample is from outside the EU, the applicability of its conclusions to the EU is uncertain.

The findings of Amel-Zadeh and Meeks (2013) on the collapse of Northern Rock in the UK and Lehman Brothers in the US are consistent with the US evidence (eg, SEC (2008)) that fair value accounting was not a direct contributor to banking failures. This is also consistent with their statistical evidence that potential mark-to-market write downs on asset-backed securities are not correlated with insolvency risk, although their data for this are global and not exclusively from the EU.

The finding of Amel-Zadeh and Meeks (2013) that the stock market reacted positively to news of the relaxation of fair value requirements in IFRS, again based on global rather than EU evidence, implies that the market viewed these fair value requirements as increasing the risks of insolvency, and their removal therefore as good news – a finding that parallels Bhat et al (2011) in the US. Against this, though not necessarily inconsistent with it, Bischof et al (2011) find an increase in bid-ask spreads for banks that take advantage of the relaxations without making full disclosures. However, the authors make the point that it is unclear how far the increase in bid-ask spreads is attributable to the non-compliance on disclosure and how far to other factors. Also, less than half the sample in this paper are EU banks.

11.3.2 Loan-loss provisions

The findings of Gebhardt and Novotny-Farkas (2011) support the view that the adoption of IFRS led on average to less timely loss recognition by EU banks. But the picture they paint is a mixed one. Their data on timely loss recognition are not analysed by country, and for the pre-transition year (2004) they find a significant number of countries in which IFRS resulted in higher loan loss provisions. Their measurement of timely loss recognition is based on the persistence of earnings components from one year to the next. They have only two periods of data for IFRS on this basis (2005-2006 and 2006-2007), and they warn that, for this reason and others, their results 'have to be interpreted cautiously'.

As noted above, the mechanisms by which the incurred loss model is hypothesised to have contributed to the banking crisis are through banks' distributions, remuneration, lending policies, and capital adequacy over the period before the crisis struck. These issues are outside the scope of Gebhardt and Novotny-Farkas (2011). Establishing whether there is a link between the incurred loss model and the financial crisis would require an exploration of these questions, which would presumably also involve looking at what happened in EU banks before 2005 and whether that had any effect on the subsequent crisis.

Leventis et al (2011) present the other side of the coin to Gebhardt and Novotny-Farkas (2011), finding that the new approach to loan loss provisions under mandatory IFRS reduced earnings management. This arguably reflects a fundamental choice in financial reporting requirements, between information that is more forward-looking and more open to manipulation and information that is less forward-looking and less open to manipulation.

The evidence of Beltratti et al (2013) may appear to be somewhat at variance with Gebhardt and Novotny-Farkas (2011) on timely loss recognition, but there are a number of possible reasons for this. The two papers measure the timeliness of loss recognition in different ways. They look at different periods. Beltratti et al (2013) are not making a comparison with the pre-IFRS timeliness of loss recognition. The sample in Beltratti et al (2013) is mainly of North American firms. And the sample of EU firms in Gebhardt and Novotny-Farkas (2011) is much larger: 90 as against 18 for Beltratti et al (2013). While it would be useful to investigate the differences in the two papers' conclusions, there seems to be no good reason to doubt either paper's findings within their respective limits. And given the predominantly North American basis of the sample in Beltratti et al (2013), it would probably be unsafe to place reliance on its findings to draw conclusions about the EU.

There are also apparent differences between O'Hanlon (2013) and Gebhardt and Novotny-Farkas (2011). Again they are presumably attributable to different ways of measuring the timeliness of loss recognition, different periods covered, and different samples. In particular, the sample in O'Hanlon (2013) is 37 UK banks, while in Gebhardt and Novotny-Farkas

(2011), the findings for the 10 UK banks in the sample are, in relation to the timeliness of loss recognition, not reported separately, but included in the overall results for 90 EU banks.

11.3.3 Crash risk

The findings of DeFond et al (2014) were reported at Panel 9.6 above. They include 'weak evidence' that for financial firms in the EU crash risk increases significantly after IFRS adoption. 'Crash' in this instance refers to a steep fall in share price rather than insolvency, but the finding may be of some relevance to banks' perceived stability.

11.3.4 Effects of non-bank transparency

Jayaraman and Kothari (2012) find that mandatory IFRS adoption is followed by cost-cutting and increased risk-taking by domestic banks as increased transparency among non-banks (ie, banks' customers) makes it easier for them to raise money from other sources. On the face of it, this should be interpreted as evidence that IFRS adoption increases the fragility of domestic banks. In fact, the authors interpret their results in the opposite way and argue that 'corporate transparency leads to a more developed banking sector and one that is less susceptible to a banking crisis'. This is based on evidence unrelated to IFRS adoption – from banking crises in the 1980s and 1990s and banking and corporate transparency data for 1990-2004.

11.3.5 IFRS accounting before mandatory IFRS adoption

O'Hanlon (2013) is a reminder that investigating the relationship between financial reporting and the financial crisis is not identical with investigating the role of mandatory IFRS adoption in the financial crisis. O'Hanlon (2013) argues that UK banks were using an incurred loss method of calculating loan loss provisions for some time before they were required to adopt IFRS. Similarly, Gebhardt and Novotny-Farkas (2011) point out that German and Austrian banks had already voluntarily adopted IFRS before mandatory adoption came into effect. These countries' banks are therefore excluded from their sample. So, even if relationships can be established between financial reporting and the financial crisis in the EU, which has not yet been done, the question remains of whether the relevant financial reporting practices are attributable to mandatory IFRS adoption or would have been in place anyway.

11.3.6 Gaps in the research

We are not aware of any research into the potential role of fair value accounting in the years before the crisis (either in the US or the EU) or exploring the possible links between the incurred loss method of loan-loss provisioning and the financial crisis (either in the US or the EU). It would be useful, for example, to investigate the links in the years before the crisis between loan loss provisioning (on different bases) and fair value accounting on the one hand and remuneration, distributions, lending policy and capital ratios on the other. In relation to loan-loss provisioning the research would have to take into account that the losses that ensued in the crisis were unexpected.⁵⁰ There would also be the difficult question to assess of how far loss provisions can avoid being pro-cyclical and yet still give a true and fair view of financial position and performance.

It would also be useful to look at the course of events as they developed in relation to particular banks, as in Amel-Zadeh and Meeks (2013), to see what specific circumstances led to their collapse including, for example, announcements of results that were significantly affected by fair value measurements.

Another view of the financial crisis is that it may have been affected by an inappropriate interaction between financial reporting requirements and regulatory capital requirements for banks. The argument here is that, although regulatory capital ratios have for a long time

⁵⁰ Rüdiger Fahlenbrach and René M. Stulz, 'Bank CEO incentives and the credit crisis' (2011), show that the crisis appeared to come as a shock to bank CEOs, who did nothing to minimise their potential losses ahead of it.

involved adjustments to financial reporting numbers, at the time of the financial crisis these adjustments did not go far enough to insulate regulatory capital from financial reporting fair value losses. We are not aware of any research on how far this contributed to the financial crisis.⁵¹

11.4 Conclusions

More research based on EU financial institutions is needed before conclusions can be drawn regarding the relationship between financial reporting and the financial crisis in the EU. Indeed, the specifically EU evidence available so far is very slight, focusing mainly on financial reporting and stock market outcomes, and not investigating how financial reporting practices might have affected banks' decision making, which is arguably the crucial issue. But to date, there is no research evidence that financial reporting was a significant contributor to the banking crisis in the EU.

⁵¹ Although there is some discussion of the issue in Robert Bushman and Wayne R. Landsman, 'The pros and cons of regulating corporate reporting: a critical review of the arguments' (2010).

12. Conclusions

What conclusions can be drawn from the mass of evidence reviewed in this report? What are the lessons for researchers and policy makers?

12.1 Introduction

In this chapter, we summarise the research evidence (12.2), discuss six challenges for IFRS that emerge from the research findings (12.3), consider some of the problems of applying the research in arriving at policy decisions (12.4), and draw attention to the two-way relationship between financial reporting reform and its surrounding institutional framework (12.5) and the consequences of this for judging the role of financial reporting in the financial crisis (12.6). Finally, we look briefly at the way ahead (12.7).

12.2 The research evidence

The research evidence on the potential benefits of mandatory IFRS adoption in the EU is not conclusive. On balance it seems likely that there were overall benefits to transparency, comparability, the cost of capital (with the possible exception of bank loans), liquidity, corporate investment efficiency and international capital flows. But the research evidence also clearly shows that these benefits were unevenly distributed among firms and countries. For some firms and some countries there may have been either negligible benefits in these respects or even costs rather than benefits, depending on a number of institutional factors – in particular, the effectiveness of enforcement mechanisms – and variations in incentives, in particular, whether firms rely on ‘insider’ or ‘outsider’ sources of finance. It is unclear how far the benefits found to follow mandatory IFRS adoption are attributable to the change of financial reporting standards or to concurrent changes in other institutions.

The research evidence that supports these conclusions is often drawn from databases that are focused on larger publicly traded companies, which some would argue might be expected to benefit most from IFRS adoption. Against this, some research – eg, on market liquidity, on IPOs, on investment efficiency and on crash risk – finds evidence of benefits that should either be particularly relevant to smaller publicly traded companies or that apply more strongly to such companies. This may be because greater transparency and comparability can compensate smaller publicly traded companies for other deficiencies in their information environment.

Another effect of this sample bias is that eastern European companies are often under-represented in international research on the effects of IFRS adoption.

There is virtually no research evidence on some other costs that may have been incurred by firms, eg, increased preparation costs. Partly for this reason, overall conclusions on net costs and net benefits do not emerge from the research findings.

Because IFRS is constantly changing, the costs and benefits of mandatory IFRS adoption found by research will not necessarily continue to apply indefinitely. Much of the research into these benefits in the EU focuses on the period immediately after adoption as this is the period at which the effects of IFRS are likely to be most easily detectable. Research on the continuing benefits of IFRS is scarcer. What there is does not suggest any diminution in the benefits of IFRS adoption, but the evidence on this is less ample than for the immediate post-adoption period. Also, measurements of the continuing effects of IFRS adoption beyond 2007 are disrupted first by the financial crisis and then by the recession. However, there is some evidence that the benefits of mandatory IFRS increase with time. This is because there is a learning process involved in adopting a new set of accounting standards, and effective compliance with the new standards can therefore be expected to improve over time, at least for a short period.

We should expect improvements in transparency and comparability to be reflected, other things being equal, in reductions in the cost of capital, greater market liquidity, improved corporate investment efficiency, and improved access to international capital markets. In fact, while we have noted many inconsistencies among the studies summarised in this report, on balance and at the aggregate level the findings do appear to be consistent, with most research finding evidence of increased transparency and comparability, consistent with the findings of lower cost of capital, increased market liquidity, improved corporate investment

efficiency, and increased cross-border investment. The exception is the evidence on aspects of accounting quality such as the level of accruals, earnings management and timely loss recognition, where no overall conclusions emerge from the research evidence – other than differences in effects among firms and among countries. But these studies mainly focus on earnings and its components, and it seems likely that there has been an improvement in the transparency of financial reporting as a whole.

There is evidence that mandatory IFRS adoption has led to reduced use of accounting-based covenants in loan agreements and possibly to higher interest rates and increased requirements for collateral. There is also evidence that mandatory IFRS adoption has led to reduced use of accounting-based measures in management compensation contracts. In both cases it has been argued that the reduced use of accounting-based covenants is attributable to, among other things, the increased use of fair value in IFRS by comparison with prior national GAAPs.

More research based on EU financial institutions is needed before conclusions can be drawn regarding the relationship between financial reporting and the financial crisis in the EU.

We have not attempted to analyse which countries within the EU have benefited most or least from mandatory IFRS adoption, and there is probably insufficient research at the country level to do so with any confidence. But we note that where results are reported by country they are sometimes unexpected. Several studies, for example, identify significant benefits for UK firms even though UK GAAP was regarded as close to IFRS. These benefits, if they are indeed attributable to IFRS adoption, presumably come from information gains because of greater comparability with firms outside the UK using IFRS.

12.3 Challenges emerging from the research findings

12.3.1 Introduction

The findings of empirical research appear to pose a number of challenges to IFRS – various respects in which IFRS may appear to have failed to meet its objectives or to be defective in some way. We have identified six challenges that emerge from the research summarised in this report, and they fall into three categories:

Challenges that apply to any set of financial reporting standards:

- The importance of surrounding institutions and preparers' incentives.

Challenges that are particularly relevant to any set of international standards:

- The role of options in standards.
- The effects of principles-based standards.
- The one-size-fits-all problem.

Challenges that apply specifically to IFRS:

- The role of fair value accounting.
- The priority given to the valuation role of accounting.

We discuss these in turn below.

12.3.2 Surrounding institutions and preparers' incentives

Much of the research discussed in this report emphasises the role of preparers' incentives and of institutions other than accounting standards in determining financial reporting

outcomes, and so raises questions as to how much IFRS adoption as such has achieved. But this evidence does not constitute a criticism of IFRS or an implicit suggestion that an alternative set of standards would have achieved more; it should instead be seen as putting accounting standards of all kinds into their appropriate context. They are one factor in determining financial reporting outcomes and the costs and benefits (including capital market effects) that follow from these outcomes. Other factors will often be equally important or even more important.

12.3.3 The role of options in standards

A number of research papers identify the existence of options in IFRS as a defect, especially in achieving comparability – a stated objective both of the IASB and of Regulation 1606/2002. This is perhaps a more serious challenge, as it could be argued that retaining options is the only way in which an international standard setter can achieve consensus among opposing views and traditions from around the world. The question for the IASB is therefore how far it is feasible to go in eliminating existing options while retaining the support of its various stakeholders. And the question for those, such as the EU, who have chosen to adopt IFRS, is how far they are willing to sacrifice options that may exist for the benefit of EU firms.

12.3.4 The effects of principles-based standards

A number of researchers identify the principles-based nature of IFRS as a disadvantage as, in their view, it allows preparers undue flexibility to ‘manage’ their financial reporting. Again this is a serious challenge for IFRS as it could be argued that a principles-based approach (like the retention of options) is essential for an international standard setter if it is to achieve consensus among conflicting views. It seems unlikely that a highly detailed global rulebook would be feasible. But the question for those, such as the EU, who have chosen to adopt IFRS is whether – or how far – they would prefer to see more specific requirements that would make standards and compliance with them more complex, that might leave loopholes for the unscrupulous, and that might rule out interpretations that EU firms consider to be appropriate.

12.3.5 The one-size-fits-all problem

Options in standards and principles-based standards are both strategies likely to commend themselves to an international standard setter seeking global consensus. But if it is to be effective, a standard setter must also eliminate some practices and require others. This lays it open to a different criticism, that of adopting a one-size-fits-all approach. This charge can be laid at the door of any standard setter, but it is one that seems likely to be especially applicable to an international standard setter, which necessarily sets requirements that are intended to apply in widely differing circumstances and within highly diverse institutional frameworks.

Sure enough, the one-size-fits-all criticism has been raised by a number of researchers. It does not seem to have attracted the same level of interest from researchers at the national level, although it arises there too, though admittedly not to the same extent. We are unaware, for example, of research looking into how the accounting quality of firms based in New York compares with that of firms based in Alaska, or how the value relevance of California firms’ financial reporting compares with that of Louisiana firms. Presumably if researchers did examine these matters and they found any differences, they would question whether US GAAP is an appropriate one-size-fits-all solution for the whole of the US.

The EU is itself a diverse community and it seems unlikely that any set of standards would be equally well-suited to the needs of every one of its Member States. This is an inevitable cost of international standard setting. The question is whether the gains from international standardisation outweigh the costs.

12.3.6 The role of fair value accounting

Researchers attribute a number of their negative findings about the effects of IFRS adoption to the role of fair value accounting, and they sometimes write as though fair value were the distinguishing characteristic of IFRS by comparison with alternative sets of accounting standards. It is correct to say that there are more fair value measurements under IFRS than there were under prior national GAAPs in the EU, but even under IFRS historical cost is the principal basis of measurement. And much of the fair value that is in IFRS comes from the convergence project with the US; it was not adopted to distinguish IFRS but – among other things – to promote international harmonisation.

However, given the uneven development of asset markets around the world, and the fact that there is no country in the world where fair value rather than historical cost has hitherto been the dominant form of measurement, full fair value accounting would on the face of it be an unpromising basis on which to seek to achieve global unanimity. Opinions will differ on whether there is too much or too little fair value in IFRS, but the role of fair value in IFRS is open to debate both at the conceptual framework level and standard by standard, and research findings should play their part in that debate. What would be wrong would be to assume that adopting IFRS means that everything will be measured at fair value or that not adopting IFRS means that nothing will be measured at fair value. Whether to adopt IFRS and when to use fair value are separate questions.

12.3.7 The priority given to valuation

The IASB gives priority to the valuation function of financial reporting, and some research suggests that this has made IFRS less useful for contracting purposes. Again this is not a necessary feature of IFRS, and as with fair value, what information IFRS requires is decided both at the conceptual framework level and standard by standard, so those who want to see IFRS move towards information that is more useful for contracting purposes need to argue their case.

As the valuation and contracting purposes of financial reporting are to some extent in conflict, which is why the question is important, any move towards putting greater weight on the contracting role would presumably attract criticism from supporters of the valuation role and, in due course, prompt research findings that show this as a cost.

12.3.8 Summary

The findings of research pose serious challenges for IFRS. They draw attention to the limits of what any set of standards on its own can achieve. They identify some problems that are inherent to international standard setting, and that have to be lived with if it is thought that the benefits of internationalisation outweigh the costs. And they identify certain key choices made by the IASB, where there are arguments for and against, but ultimately it is for the IASB to decide in consultation with its stakeholders how far it wishes to maintain or modify them.

12.4 Problems of applying the research to policy

12.4.1 Changes in standards and their effects

At the risk of stating the obvious, we emphasise that while accounting research may be able to tell us that IFRS adoption had specific benefits or costs when it occurred and even whether or not these benefits and costs subsequently endured, it is uncertain how far such effects can reasonably be extrapolated into the future.

- Standards are constantly changing and what is an appropriate set of standards at one time is likely to become either more or less appropriate with the passage of time.

- Standards need to change because there is constant change in markets, technologies, and institutions, to which accounting needs to adapt, but also because preparers may change their conduct so as to avoid standards' intended effect.

So a set of standards that have specific effects one year may well have different effects the next year – partly because the standards will change, but more importantly because the world will change.

12.4.2 Comparisons with alternatives

In assessing the effects of IFRS adoption, researchers compare the position after adoption with the pre-adoption state of affairs, when EU companies each followed their own national GAAPs, subject to the constraints of the EU Company Law Directives on accounting. Such comparisons no longer make sense. National GAAPs in the EU are no longer designed to meet the needs of publicly traded companies, but, where they continue, are aimed primarily at private companies. Even so, they have tended to move in the direction of IFRS. It is no longer possible, therefore, to compare the costs and benefits of IFRS in the EU with credible EU alternatives. The alternatives are either not designed for publicly traded companies or are increasingly similar to IFRS.

A similar problem applies in comparing IFRS to the one other credible form of international GAAP for publicly traded companies – US GAAP. IFRS and US GAAP have been converging since the 1990s. Although differences between them remain, there is limited value to be derived by comparing the costs and benefits of IFRS with those of an accounting system that for more than a decade has been converging with it.

So it is more difficult than it was a decade ago to think in terms of a comparison of IFRS with credible alternatives for publicly traded companies that operate in international markets. For policy purposes, it may be easier to think in terms of how existing standards could usefully be improved rather than to try to assess whether the EU would benefit from adopting a completely different GAAP.

12.5 Institutional change and financial reporting reform

As we noted in Chapter 1, it is possible to view financial reporting reform as part of a broader programme of institutional reform – indeed, arguably it only makes sense when viewed in this way; and IFRS adoption in the EU was explicitly part of such a broader programme of reform – the Financial Services Action Plan. The success of financial reporting reform may therefore be judged in part by its effects on surrounding institutions, but its success may also be determined by changes (or the lack of them) in surrounding institutions.

The sources of finance for business are usually seen as part of a country's institutional structure, and different approaches to financial reporting fit different approaches to financing business. IFRS is generally regarded as appropriate for countries and firms where high quality financial reporting is valued, which implies a preference for international, public and 'outsider' financing, rather than local, private and 'insider' financing.⁵² And one of the ways in which the success of mandatory IFRS is judged is whether it leads to increased international capital market flows (Chapter 8). So a change in sources of financing for business (towards more international, publicly traded and outsider financing), may be regarded as evidence of the success of IFRS. This implies a view of success that goes beyond accounting practices and makes value judgements that extend to broader institutional changes.

Alternatively, financial reporting reform may compensate for inadequacies in other institutions. That mandatory IFRS adoption had this effect in some cases is suggested by evidence that

⁵² 'Insiders' in this context are those who do not have to rely on publicly reported information because they have access to private information about a firm. Managers and large shareholders (who may be the same people or related to one another) would come into this category, as would banks and in some countries governments. 'Outsiders' are those who do have to rely on publicly reported information.

IFRS can benefit smaller publicly traded companies, with otherwise lower quality financial information environments.

We have noted at a number of points in this report that researchers have sometimes been uncertain as to how far a specific outcome is attributable to IFRS adoption or to other concurrent institutional changes, such as improvements in enforcement. This may support the view expressed above that IFRS adoption in the EU can only be judged sensibly as part of a larger package of reforms. It is also possible that at least some of the improvements in enforcement were only possible because of the adoption of a single set of accounting standards across the EU (which need not in principle have been IFRS), allowing investors, researchers and central authorities in the EU to make better comparisons between the varying regulatory approaches of different Member States. While common standards on their own are unlikely to achieve complete financial reporting comparability, it is an open question how far comparability could be achieved without common standards.

- Some argue that comparability cannot be achieved without common standards.
- Others argue that common standards impose one-size-fits-all solutions on dissimilar situations, potentially reducing comparability.

Whether common standards do in fact improve comparability is therefore an empirical question that can only be settled, if it can be settled at all, by looking at the facts in each case.

The adoption of IFRS also appears to have had some unintended institutional effects, reducing the use of accounting-based terms in loans and remuneration agreements. As noted above, this perhaps reflects the focus of the IASB on information for valuation purposes, at the expense of information for contracting.

Conversely, broader institutional reforms also affect the success of financial reporting reforms. One recurring theme in this report has been the importance of other institutional changes, such as improvements in enforcement, in determining financial reporting outcomes. Another has been the importance of incentives, which often depend on institutions such as the sources of finance for business. Researchers have, for example, drawn attention to the continuing lack of comparability in accounts prepared in accordance with IFRS. This has various causes, but within the EU one of them is the fact that enforcement varies significantly from one Member State to another. This does not mean that enforcement within the EU should be centralised, which would create problems of its own, but greater transparency in national enforcement methods and outcomes may be helpful. Differences in national approaches would then become clearer, and can be addressed at the national level where they seem to be inappropriate.

The problem of how to judge the role of financial reporting in the financial crisis could also be seen as a question of the relationship between financial reporting and its surrounding institutions. We consider this next.

12.6 Banks, financial reporting and institutional structures

Arguably, different views on the role of financial reporting ahead of the financial crisis, and to a lesser degree during it, are rooted in different views on the appropriate institutional structures for the banking system. This industry-specific problem may be seen as part of a larger question of institutional reform. IFRS for banks is appropriate for a banking system dependent on international capital markets that rely on public information. The near-failure of that system in the EU during the financial crisis, and its need to be rescued by the state (including central banks), inevitably raised questions about the appropriateness of the financial reporting system that accompanied it. In this case, judgements on the failed institutional structure have led to adverse verdicts on the success of IFRS. As we explained in Chapter 11, though, these claims are neither supported nor contradicted by extant financial reporting research for the EU.

Financial reporting that accurately reflects banks' financial performance and financial position is necessarily pro-cyclical – it will encourage optimism in the good times and pessimism in the bad times. It will not be alone in doing this, as all the other indicators of financial and economic performance will probably be pointing in the same direction, and so it should not be assumed that financial reporting contributes significantly to the prevailing mood, but no doubt it has some effect.

The degree to which financial reporting accurately reflects banks' financial performance and financial position could be adjusted so that bank reporting is less procyclical. The results in the good times could be made less encouraging by making larger provisions for loan losses, whether the losses are expected or not. In bad times, these provisions could be used to disguise the severity of the downturn's effects. This would make financial reporting less pro-cyclical. If the numbers are falsified sufficiently, it could even be made counter-cyclical, reporting losses in the good times and profits in the bad times, although nobody of course suggests going this far.

In a system where banks are dependent on public markets for their financing, there is a strong case for transparency as the providers of finance will demand price protection, raising the cost of finance for banks, or may even withhold financing where they are not confident that they are being told the whole truth. But in a system where banks are dependent on the state (or other off-market sources) for their financing, the case for public transparency is weaker as finance is in effect being provided in a way that bypasses public markets – by the government or the central bank (or from private sources). These parties may prefer to keep the public at least to some extent in ignorance of individual banks' financial position and financial performance, and hope that bank creditors are willing to rely on the assurance that behind the scenes the central bank 'is ready to do whatever it takes' to rescue banks that get into trouble. But even under such a system there may be a demand for banking transparency to ensure that governments and central banks are themselves accountable.

In the EU at present, there is a mixture of both systems of bank finance, and so it is understandable that there is some confusion on how to assess the role of financial reporting for banks. Before the crisis, most banks were dependent on market finance. And in practice, most bank capital in the EU is still provided by private sector investors who do not have a guarantee from the government that they will get their money back. They are therefore likely to have a continuing and keen interest in the transparency of the institutions in which they invest. But since the crisis banks have also to a significant extent been dependent on the state as the investor of last resort. From the point of view of the providers of state finance to the banking system it would no doubt have been preferable with the benefit of hindsight for banks' financial reporting (and other sources of information) before the crisis to have been more pessimistic. From this angle, financial reporting that accurately reflects actual performance and financial position can be regarded as unhelpful.

If there is indeed, as we have suggested, a tension between transparent reporting and counter-cyclical reporting, which is preferred may therefore to some extent depend on the institutional framework for the banking sector.

12.7 The way ahead

For researchers, there remain plenty of unanswered questions surrounding the effects of IFRS adoption in the EU:

- Where existing findings appear to contradict one another, it would be helpful to investigate why this is the case so that apparent anomalies in the research record are either removed or explained.
- It would be helpful to know more about a number of important questions on which little is currently known, such as the role of financial reporting in relation to the financial crisis, and the effects of IFRS adoption in eastern Europe.

- The links between financial reporting and its surrounding institutions need further exploration. In particular, although important work has been done to explore some of the connections between financial reporting changes, capital market effects and concurrent institutional changes, this might profitably be extended to cover other possible effects of IFRS adoption.

For policy makers, the research findings summarised in this report will not end controversy on the effects of IFRS adoption in the EU, but they should help to form views on what has been achieved to date and what needs to be done in the future. Perhaps the most significant point to emerge from the research is the importance of institutions and incentives. The balance of evidence suggests that the objectives of Regulation 1606/2002 have been achieved to some extent. But differing institutions and incentives mean that its effects vary from firm to firm and from country to country. And the objectives may well have been achieved to some, at present undetermined, extent by concurrent institutional changes, particularly those forming part of the Financial Services Action Plan.

If the EU wishes to achieve further progress in financial reporting and to reap the benefit of these improvements, it may make most sense to look at the incentives for those involved in the financial reporting process and at the institutions that surround it, as well as to engage in the global debate on the future development of IFRS.

There are also more general lessons for policy makers who wish to base their decisions on research evidence:

Investigating apparent inconsistencies. Where researchers arrive at findings that are apparently inconsistent with previous research, sometimes they try to explain the inconsistencies, but sometimes they do not. No doubt the differences are usually attributable to differences in samples, in periods covered and in methodologies. Investigating differences may be difficult and time-consuming, and the incentives for researchers to do so appear to be weak. Part of the reason for this is no doubt that investigating earlier researchers' findings would involve 'replication studies', which in accounting research are difficult to publish, and therefore unattractive to researchers.⁵³ It may therefore be worthwhile for policy makers to commission additional research specifically to look into and explain such apparent anomalies.

Under-researched topics. Some topics in relation to the effects of IFRS adoption that are of interest to policy makers in the EU are under-researched – possibly because of lack of data or other research difficulties. Where policy makers know that they will need to make or review decisions, and wish to be able to rely on research in doing so, they may need to take a more active approach to ensuring that all relevant aspects of the question have been adequately researched and to help researchers overcome any obstacles that lie in their path.

⁵³ Brown (2013) deprecates 'editors and reviewers [of accounting research] who discourage replications: their actions signal a disciplinary immaturity'. Dyckman and Zeff (2014) also argue in favour of replication studies in accounting, but say that 'few will be forthcoming unless the academic reward system is modified'.

Acknowledgements

ICAEW is grateful to the following commentators for providing helpful reactions in a personal capacity to drafts of this report.

Paul André
Elisabetta Barone
Philip Brown
Kathryn Cearn
Hans Christensen
Stig Enevoldsen
Françoise Flores
Annita Florou
Robert Herz
Robert Hodgkinson
Martin Hoogendoorn
Christopher Humphrey
Stuart McLeay
Richard Macve
Roger Marshall
Christopher Nobes
Thorsten Sellhorn
Andy Simmonds
Chungwoo Suh
Ann Tarca
Martin Walker
Stephen Zeff

None of the commentators should be assumed to agree with the views expressed in this report, and they are not responsible for any errors or omissions.

The report's principal author is Brian Singleton-Green.

Bibliography

Agostino, Mariarosario, Danilo Drago and Damiano B. Silipo, 'The value relevance of IFRS in the European banking industry', *Review of Quantitative Finance and Accounting*, vol 36 (2011), pp437-457.

Aharony, Joseph, Ran Barniv and Haim Falk, 'The impact of mandatory IFRS adoption on equity valuation of accounting numbers for security investors in the EU', *European Accounting Review*, vol 19 (2010), pp535-578.

Ahmed, Anwer S., Michael Neel and Dechun Wang, 'Does mandatory adoption of IFRS improve accounting quality? Preliminary evidence', *Contemporary Accounting Research*, vol 30 (2013), pp1344-1372.

Albu, Nadia, and Cătălin Nicolae Albu, 'International Financial Reporting Standards in an emerging economy: lessons from Romania', *Australian Accounting Review*, vol 22 (2012), pp341-352.

Alves, Paulo, Peter F. Pope and Steven Young, *European Cross-Border Information Transfers and the Impact of Accounting Standards Regime Changes*, London: Chartered Accountants' Trustees, 2010.

Amel-Zadeh, Amir, Jonathan Faasse, Kevin Li and Geoff Meeks, 'Has accounting regulation secured more valuable good will disclosures?', 2013 (unpublished but available at SSRN).

Amel-Zadeh, Amir, and Geoff Meeks, 'Bank failure, mark-to-market and the financial crisis', *Abacus*, vol 49 (2013), pp308-339.

Amiram, Dan, 'Financial information globalization and foreign investment decisions', *Journal of International Accounting Research*, vol 11 (2012), pp57-81.

Amiraslani, Hami, George E. Iatridis and Peter F. Pope, *Accounting for Asset Impairment: A Test for IFRS Compliance across Europe*, London: Cass Business School, 2013.

André, Paul, Dionysia Dionysiou and Ioannis Tsalavoutas, 'Mandatory adoption of IFRS by EU listed firms and comparability: determinants and analysts' forecasts', 2012 (unpublished).

André, Paul, Andrei Filip and Luc Paugam, 'Impact of mandatory IFRS adoption on conditional conservatism in Europe', *Journal of Business Finance and Accounting* (forthcoming 2014).

Armstrong, Christopher S., Mary E. Barth, Alan D. Jagolinzer and Edward J. Riedl, 'Market reaction to the adoption of IFRS in Europe', *The Accounting Review*, vol 85 (2010), pp31-61.

Atanassova, Anita, 'IFRS adoption in Bulgarian banks: non-numerical disclosure evidences' 2008 (unpublished).

Atwood, T. J., Michael S. Drake, James N. Myers and Linda A. Myers, 'Do earnings reported under IFRS tell us more about future earnings and cash flows?', *Journal of Accounting and Public Policy*, vol 30 (2011), pp103-121.

Aubert, François, and Gary Grudnitski, 'The impact and importance of mandatory adoption of International Financial Reporting Standards in Europe', *Journal of International Financial Management and Accounting*, vol 22 (2011), pp1-26.

Aubert, François, and Gary Grudnitski, 'Analysts' estimates: what they could be telling us about the impact of IFRS on earnings manipulation in Europe', *Review of Accounting and Finance*, vol 11 (2012), pp53-72.

Aussenegg, Wolfgang, Petra Inwinkl and Georg Schneider, 'Earnings management and local vs international accounting standards of European public firms', 2008 (unpublished but available at SSRN).

Badertscher, Brad A., Jeffrey J. Burks and Peter D. Easton, 'A convenient scapegoat: fair value accounting by commercial banks during the financial crisis', *The Accounting Review*, vol 87 (2012), pp59-90.

Bae, Kee-Hong, Hongping Tan and Michael Welker, 'International GAAP differences: the impact on foreign analysts', *The Accounting Review*, vol 83 (2008), pp593-628.

Ball, Ray, 'International Financial Reporting Standards (IFRS): pros and cons for investors', *Accounting and Business Research* (2006), *International Accounting Policy Forum*, pp5-27.

Ball, Ray, 'Accounting informs investors and earnings management is rife: two questionable beliefs', *Accounting Horizons*, vol 27 (2013), pp847-853.

Ball, Ray, Xi Li and Lakshmanan Shivakumar, 'Mandatory IFRS adoption, fair value accounting and information in debt contracts', 2013 (unpublished but available at SSRN).

Banker, Rajiv, Rong Huang and Yinghua Li, 'Do accounting standards matter for firm productivity? Evidence from mandatory IFRS adoption', 2014 (unpublished but available at SSRN).

Barone, Elisabetta, and Stuart McLeay, 'Economic impact and statistical significance: interpreting research into regulatory effects', 2014 (unpublished: presented at the 10th Workshop on European Financial Reporting, Regensburg, September 2014).

Barth, Mary E., 'Global comparability in financial reporting: what, why, how, and when?', *China Journal of Accounting Studies*, vol 1 (2013), pp2-12.

Barth, Mary E., William H. Beaver and Wayne R. Landsman, 'The relevance of the value relevance literature for financial accounting standard setting: another view', *Journal of Accounting and Economics*, vol 31 (2001), pp77-104.

Barth, Mary E., and Doron Israeli, 'Disentangling mandatory IFRS reporting and changes in enforcement', *Journal of Accounting and Economics*, vol 56 (2013), issues 2-3, supplement 1, pp178-188.

Barth, Mary E., and Wayne R. Landsman, 'How did financial reporting contribute to the financial crisis?', *European Accounting Review*, vol 19 (2010), pp399-423.

Barth, Mary E., Wayne R. Landsman, Mark Lang and Christopher Williams, 'Are IFRS-based and US GAAP-based accounting amounts comparable?', *Journal of Accounting and Economics*, vol 54 (2012), pp68-93.

Barth, Mary E., Wayne R. Landsman, Danqing Young and Zili Zhuang, 'Relevance of differences between net income based on IFRS and domestic standards for European firms', *Journal of Business Finance and Accounting*, vol 41 (2014), pp297-327.

Barth, Mary E., and Katherine Schipper, 'Financial reporting transparency' (2008), *Journal of Accounting, Auditing and Finance*, vol 23 (2008), pp173-190.

Bayerlein, Leopold, and Omar Al Farooque, 'Influence of a mandatory IFRS adoption on accounting practice: evidence from Australia, Hong Kong and the United Kingdom', *Asian Review of Accounting*, vol 20 (2012), pp93-118.

Beattie, Vivien, Stella Fearnley and Tony Hines, *Reaching Key Financial Reporting Decisions: How Directors and Auditors Interact*, Chichester: John Wiley & Sons, 2011.

- Bellas, Athanasios, Kanellos Toudas and Konstantinos Papadatos, 'The consequences of applying International Accounting Standards (IAS) to the financial statements of Greek companies', *Spoudai*, vol 57 (2007), pp54-77.
- Beltratti, Andrea, Nasser Spear and Mark Daniel Szabo, 'The value relevance and timeliness of write-downs during the financial crisis of 2007-2009', *The International Journal of Accounting*, vol 48 (2013), pp467-494.
- Beneish, Messod Daniel, Brian P. Miller, and Teri Lombardi Yohn, 'The impact of financial reporting on equity versus debt markets: macroeconomic evidence from mandatory IFRS adoption', 2012 (unpublished but available at SSRN).
- Beuselinck, Christof, Philip Joos, Inder K. Khurana and Sofie Van der Meulen, *Mandatory Adoption of IFRS and Analysts' Forecasts Information Properties*, Tilburg: Tilburg University, 2010.
- Beuselinck, Christof, Philip Joos, Inder K. Khurana and Sofie Van der Meulen, 'Mandatory IFRS reporting and stock price informativeness', 2009 (unpublished but available at SSRN).
- Beuselinck, Christof, Philip Joos and Sofie Van der Meulen, 'International earnings comparability', 2007 (unpublished but available at SSRN).
- Bhat, Gauri, Jeffrey L. Callen and Dan Segal, 'Credit risk and IFRS: the case of credit default swaps', *Journal of Accounting, Auditing and Finance*, vol 29 (2014), pp129-162.
- Bhat, Gauri, Richard Frankel and Xiumin Martin, 'Panacea, Pandora's box or placebo: feedback in bank mortgage-backed security holdings and fair value accounting', *Journal of Accounting and Economics*, vol 52 (2011), pp153-173.
- Biddle, Gary C., Carolyn M. Callahan, Hyun A. Hong and Robin L. Knowles, 'Does mandatory adoption of International Financial Reporting Standards increase investment efficiency?' 2011 (unpublished but available at SSRN).
- Bischof, Jannis, 'The effects of IFRS 7 adoption on bank disclosure in Europe', *Accounting in Europe*, vol 6 (2009), pp167-194.
- Bischof, Jannis, Ulf Brüggenmann and Holger Daske, 'Fair value reclassifications of financial assets during the financial crisis', 2011 (unpublished but available at SSRN).
- Botma, Folkert, 'The impact of mandatory IFRS adoption on ownership structure', 2009 (unpublished).
- Botosan, Christine A., 'Disclosure and the cost of capital: what do we know?', *Accounting and Business Research* (2006), *International Accounting Policy Forum*, pp31-40.
- Brochet, Francois, Alan D. Jagolinzer and Edward J. Riedl, 'Mandatory IFRS adoption and financial statement comparability', *Contemporary Accounting Research*, vol 30 (2013), pp1373-1400.
- Brown, Philip, 'International Financial Reporting Standards: what are the benefits?', *Accounting and Business Research*, vol 41 (2011), pp269-285.
- Brown, Philip, 'How can we do better?', *Accounting Horizons*, vol 27 (2013), pp855-859.
- Brown, Philip R., John P. Preiato and Ann Tarca, 'Measuring country differences in enforcement of accounting standards: an audit and enforcement proxy', *Journal of Business Finance and Accounting*, vol 41 (2014), pp1-52.
- Brüggenmann, Ulf, Holger Daske, Carsten Homburg and Peter F. Pope, 'How do individual investors react to global IFRS adoption?', 2012 (unpublished but available at SSRN).

Brüggemann, Ulf, Jörg-Markus Hitz and Thorsten Sellhorn, 'Intended and unintended consequences of mandatory IFRS adoption', *European Accounting Review*, vol 22 (2013), pp1-37.

Bushman, Robert, and Wayne R. Landsman, 'The pros and cons of regulating corporate reporting: a critical review of the arguments', *Accounting and Business Research*, vol 40 (2010), pp259-273.

Byard, Donal, Ying Li and Yong Yu, 'The effect of mandatory IFRS adoption on financial analysts' information environment', *Journal of Accounting Research*, vol 49 (2011), pp69-96.

Cai, Francis, and Hannah Wong, 'The effect of IFRS adoption on global market integration', *International Business & Economics Research Journal*, vol 9 (2010), pp25-34.

Cai, Lei, Asheq Rahman and Stephen Courtenay, 'The effect of IFRS and its enforcement on earnings management: an international comparison', 2008 (unpublished but available at SSRN).

Cai, Lei, Asheq Rahman and Stephen Courtenay, 'The effect of IFRS adoption conditional upon the level of pre-adoption divergence', *The International Journal of Accounting*, vol 29 (2014), pp129-162.

Cairns, David, Dianne Massoudi, Ross Taplin and Ann Tarca, 'IFRS fair value measurement and accounting policy choice in the United Kingdom and Australia', *The British Accounting Review*, vol 43 (2011), pp1-21.

Callao, Susana, and José Ignacio Jarne, 'Have IFRS affected earnings management in the European Union?', *Accounting in Europe*, vol 7 (2010), pp159-189.

Callao, Susana, José I. Jarne and José A. Laínez, 'Adoption of IFRS in Spain: effect on the comparability and relevance of financial reporting', *Journal of International Accounting, Auditing and Taxation*, vol 16 (2007), pp148-178.

Capkun, Vedran, Anne Cazavan-Jeny, Thomas Jeanjean and Lawrence A. Weiss, 'Earnings management and value relevance during the mandatory transition from local GAAPs to IFRS in Europe', 2008 (unpublished but available at SSRN).

Capkun, Vedran, Anne Cazavan-Jeny, Thomas Jeanjean and Lawrence A. Weiss, 'Setting the bar: earnings management during a change in accounting standards', 2011 (unpublished but available at SSRN).

Capkun, Vedran, Daniel W. Collins and Thomas Jeanjean, 'The effect of IFRS adoption on earnings management (smoothing): a closer look at competing explanations', 2013 (unpublished but available at SSRN).

Cascino, Stefano, and Joachim Gassen, 'What drives the comparability effect of mandatory IFRS adoption?', *Review of Accounting Studies* (forthcoming 2014).

Charitou, Andreas, Irene Karamanou and Anastasia Kopita, 'Financial analyst stock recommendations and corporate disclosures: complements or substitutes?', 2012 (unpublished).

Charitou, Andreas, Irene Karamanou and Neophytos Lambertides, 'Who are the losers of IFRS adoption in Europe? An empirical examination of the cash flow effect of increased disclosure', 2012 (unpublished).

Chen, Charles P., Yuan Ding and Bin Xu, 'Convergence of accounting standards and foreign direct investment', *The International Journal of Accounting*, vol 49 (2014), pp53-86.

Chen, Chen, Danqing Young and Zili Zhuang, 'Externalities of mandatory IFRS adoption: evidence from cross-border spillover effects of financial information on investment efficiency', *The Accounting Review*, vol 88 (2013), pp881-914.

Chen, Huifa, Qingliang Tang, Yihong Jiang and Zhijun Lin, 'The role of International Financial Reporting Standards in accounting quality: evidence from the European Union', *Journal of International Financial Management & Accounting*, vol 21 (2010), 220-278.

Chen, Long, Jeff Ng and Albert Tsang, 'The effect of mandatory IFRS adoption on international cross-listings', 2014 (unpublished but available at SSRN).

Chen, Tai-Yuan, Chen Lung Chin, Shiheng Wang and Chun Yao, 'The effect of mandatory IFRS adoption on bank loan contracting', 2013 (unpublished but available at SSRN).

Choi, Young-Soo, Ken Peasnell and Joao Toniato, 'Has the IASB been successful in making accounting earnings more useful for prediction and valuation? UK evidence', *Journal of Business Finance and Accounting*, vol 40 (2013), pp741-768.

Christensen, Hans B., Luzi Hail and Christian Leuz, 'Mandatory IFRS reporting and changes in enforcement', *Journal of Accounting and Economics*, vol 56 (2013), issues 2-3, supplement 1, pp147-177.

Christensen, Hans B., Luzi Hail and Christian Leuz, *Capital-Market Effects of Securities Regulation: Prior Conditions, Implementation, and Enforcement*, Brussels: European Corporate Governance Institute, 2014.

Christensen, Hans B., Luzi Hail and Christian Leuz, 'Proper inferences or a market for excuses? The capital-market effects of mandatory IFRS adoption', 2013 (unpublished but available at SSRN).

Christensen, Hans B., Edward Lee and Martin Walker, 'Cross-sectional variation in the economic consequences of international accounting harmonization: the case of mandatory IFRS adoption in the UK', *The International Journal of Accounting*, vol 42 (2007), pp341-379.

Christensen, Hans B., Edward Lee and Martin Walker, 'Incentives or standards: what determines accounting quality changes around IFRS adoption?', 2008 (unpublished but available at SSRN).

Christensen, Hans B., Edward Lee and Martin Walker, 'Do IFRS reconciliations convey information? The effect of debt contracting', *Journal of Accounting Research*, vol 47 (2009), pp1167-1199.

Christensen, Hans B., and Valeri Nikolaev, *Who Uses Fair Value Accounting for Non-financial Assets after IFRS Adoption?*, Chicago: University of Chicago Booth School of Business, 2009.

Clarkson, Peter, J. Douglas Hanna, Gordon D. Richardson and Rex Thompson, 'The impact of IFRS adoption on the value relevance of book value and earnings', *Journal of Contemporary Accounting & Economics*, vol 7 (2011), pp1-17.

Cole, Vicky, Joël Branson and Diane Breesch, 'Determinants influencing the *de facto* comparability of European IFRS financial statements', 2011 (unpublished but available at SSRN).

Committee of European Securities Regulators, *CESR's Review of the Implementation and Enforcement of IFRS in the EU*, Paris: CESR, 2007.

Comprix, J. Joseph, Karl A. Muller III and Mary Stanford, 'Economic consequences from mandatory adoption of IASB standards in the European Union', 2003 (unpublished).

Dargenidou, Christina, and Stuart McLeay, 'The impact of introducing estimates of the future on international comparability in earnings expectations', *European Accounting Review*, vol 19, (2010), pp511-534.

Dargenidou, Christina, Stuart McLeay and Ivana Raonic, 'Expected earnings growth and the cost of capital: an analysis of accounting regime change in the European financial market', *Abacus*, vol 42 (2006), pp388-414.

Daske, Holger, Luzi Hail, Christian Leuz and Rodrigo Verdi, 'Mandatory IFRS reporting around the world; early evidence on the economic consequences', *Journal of Accounting Research*, vol 46 (2008), pp1085-1142.

Daske, Holger, Luzi Hail, Christian Leuz and Rodrigo Verdi, 'Adopting a label: heterogeneity in the economic consequences around IAS/IFRS adoptions', *Journal of Accounting Research*, vol 51 (2013), pp495-547.

DeFond, Mark, Xuesong Hu, Mingyi Hung and Siqi Li, 'The impact of mandatory IFRS adoption on foreign mutual fund ownership: the role of comparability', *Journal of Accounting and Economics*, vol 51 (2011), pp240-258.

DeFond, Mark, Mingyi Hung, Siqi Li and Yinghua Li, 'Does mandatory IFRS adoption affect crash risk?', *The Accounting Review* (2014, forthcoming).

De Jong, Abe, Miguel Rosellón and Patrick Verwijmeren, *The Economic Consequences of IFRS: The Impact of IAS 32 on Preference Shares in the Netherlands*, Rotterdam: Erasmus Research Institute of Management, 2006.

Devalle, Alain, Enrico Onali and Riccardo Magarini, 'Assessing the value relevance of accounting data after the introduction of IFRS in Europe', *Journal of International Financial Management & Accounting*, vol 21 (2010), pp85-119.

Ding, Yuan, Ole-Kristian Hope, Thomas Jeanjean and Hervé Stolowy, 'Differences between domestic accounting standards and IAS: measurement, determinants and implications', *Journal of Accounting and Public Policy*, vol 26 (2007), pp1-38.

Dobija, Dorota, and Karol Marek Klimczak, 'Development of accounting in Poland: market efficiency and the value relevance of reported earnings', *The International Journal of Accounting*, vol 45 (2010), pp356-374.

Dunne, Theresa, Suzanne Fifield, Gary Finningham, Alison Fox, Gwen Hannah, Christine Helliard, David Power and Monica Veneziani, *The Implementation of IFRS in the UK, Italy and Ireland*, Edinburgh: Institute of Chartered Accountants in Scotland, 2008.

Dyckman, Thomas R., and Stephen A. Zeff, 'Some methodological deficiencies in empirical research articles in accounting' (2014), *Accounting Horizons*, vol 28 (2014), pp695-712.

Ewert, Ralf, and Alfred Wagenhofer, 'Using academic research for the post-implementation review of accounting standards: a note', *Abacus*, vol 48 (2012), pp278-291.

Fahlenbrach, Rüdiger, and René M. Stulz, 'Bank CEO incentives and the credit crisis', *Journal of Financial Economics*, vol 99 (2011), pp11-26.

Fiechter, Peter, 'The effects of the fair value option under IAS 39 on the volatility of bank earnings', *Journal of International Accounting Research*, vol 10 (2011), pp85-108.

Florou, Annita, and Urska Kosi, 'Does mandatory IFRS adoption facilitate debt financing?', 2014 (unpublished but available at SSRN).

Florou, Annita, Urska Kosi and Peter F. Pope, 'Are international accounting standards more credit relevant than domestic standards?', 2013 (unpublished but available at SSRN).

- Florou, Annita, and Peter F. Pope, 'Mandatory IFRS adoption and institutional investment decisions', *The Accounting Review*, vol 87 (2012), pp1993-2025.
- Fox, Alison, Gwen Hannah, Christine Helliard and Monica Veneziani, 'The costs and benefits of IFRS implementation in the UK and Italy', *Journal of Applied Accounting Research*, vol 14 (2013), pp86-101.
- Francis, Jere R., Shawn X. Huang and Inder K. Khurana, 'The role of international GAAP in cross-border mergers and acquisitions', 2012 (unpublished but available at SSRN).
- García Osma, Beatriz, and Peter F. Pope, 'Strategic balance sheet adjustments under first-time IFRS adoption and the consequences for earning quality', 2011 (unpublished but available at SSRN).
- Gebhardt, Günther, and Zoltan Novotny-Farkas, 'Mandatory IFRS adoption and accounting quality of European banks', *Journal of Business Finance & Accounting*, vol 38 (2011), pp289-333.
- Glaum, Martin, Peter Schmidt, Donna L. Street and Silvia Vogel, 'Compliance with IFRS 3- and IAS 36-required disclosures across 17 European countries: company- and country-level determinants', *Accounting and Business Research*, vol 43 (2013), pp163-204.
- Glaum, Martin, Donna L. Street and Silvia Vogel, *Making Acquisitions Transparent: An Evaluation of M&A-related IFRS Disclosures by European Companies in 2005*, Frankfurt: PwC, 2007.
- Goh, Lisa, Philip Joos and Kazbi Soonawalla, 'Determinants and valuation implications of imperfect stock option disclosures', 2013 (unpublished).
- Goncharov, Igor, and Sander Van Triest, 'Unintended consequences of changing accounting standards: the case of fair value accounting and mandatory dividends', 2013 (unpublished but available at SSRN).
- Gordon, Lawrence A., Martin P. Loeb and Wenjie Zhu, 'The impact of IFRS adoption on foreign direct investment', *Journal of Accounting and Public Policy*, vol 31 (2012), pp374-398.
- Guenther, Nina, Bernhard Gegenfurtner, Christoph Kaserer and Ann-Kristin Achleitner, *International Financial Reporting Standards and Earnings Quality: the Myth of Voluntary vs Mandatory Adoption*, Munich: Technische Universität München, 2009.
- Hail, Luzi, and Christian Leuz, 'Capital market effects of mandatory IFRS reporting in the EU: empirical evidence', 2007 (unpublished but available at SSRN).
- Haller, Axel, and Martin Wehrfritz, 'The impact of national GAAP and accounting traditions on IFRS policy selection: evidence from Germany and the UK', *Journal of International Accounting, Auditing and Taxation*, vol 22 (2013), pp39-56.
- Holthausen, Robert W., and Ross L. Watts, 'The relevance of the value-relevance literature for financial accounting standard setting', *Journal of Accounting and Economics*, vol 31 (2001), pp3-75.
- Hong, Hyun A., 'Does mandatory adoption of International Financial Reporting Standards decrease the voting premium for dual-class shares?', *The Accounting Review*, vol 88 (2013), pp1289-1325.
- Hong, Hyun A., Mingyi Hung and Gerald Lobo, 'The impact of mandatory IFRS adoption on IPOs in global capital markets', *The Accounting Review*, vol 89 (2014), pp1365-1397.

Hoogendoorn, Martin, 'International accounting regulation and IFRS implementation in Europe and beyond – experiences with first-time adoption in Europe', *Accounting in Europe*, vol 3 (2006), pp23-26.

Horton, Joanne, and George Serafeim, 'Market reaction to and valuation of IFRS reconciliation adjustments: first evidence from the UK', *Review of Accounting Studies*, vol 15 (2010), pp725-751.

Horton, Joanne, George Serafeim and Ioanna Serafeim, 'Does mandatory IFRS adoption improve the information environment?', *Contemporary Accounting Research*, vol 30 (2013), pp388-423.

Houqe, Muhammad Nurul, Tony van Zijl, Keitha Dunstan and A. K. M. Waresul Karim, 'The effect of IFRS adoption and investor protection on earnings quality around the world', *The International Journal of Accounting*, vol 47 (2012), pp333-355.

ICAEW, *EU Implementation of IFRS and the Fair Value Directive: a Report for the European Commission*, London: ICAEW, 2007.

ICAEW, *Financial Reporting Disclosures: Market and Regulatory Failures*, London: ICAEW, 2013.

Ionas, Ion, Mihaela Ionas, Lavinia Olimid and Daniela Artemisa Calu, 'An empirical evaluation of the costs of harmonizing Romanian accounting with international regulations (EU Directives and IAS/IFRS)', *Accounting in Europe*, vol 4 (2007), pp169-206.

Jarva, Henry, and Anna-Maija Lantto, 'Information content of IFRS versus domestic accounting standards: evidence from Finland', *The Finnish Journal of Business Economics*, 2012, pp141-177.

Jayaraman, Sudarshan, and S. P. Kothari, 'The effect of corporate transparency on bank risk-taking and banking system fragility', 2012 (unpublished but available at SSRN).

Jeanjean, Thomas, and Hervé Stolowy, 'Do accounting standards matter? An exploratory analysis of earnings management before and after IFRS adoption', *Journal of Accounting and Public Policy*, vol 27 (2008), pp480-494.

Jiao, Tao, Miriam Koning, Gerard Mertens and Peter Roosenboom, 'Mandatory IFRS adoption and its impact on analysts' forecasts', *International Review of Financial Analysis*, vol 21 (2012), pp56-63.

Jones, Stewart, and Aimee Finley, 'Have IFRS made a difference to intra-country financial reporting diversity?', *The British Accounting Review*, vol 43 (2011), pp22-38.

Karampinis, Nikolaos I., and Dimosthenis L. Hevas, 'Mandating IFRS in an unfavorable environment: the Greek experience', *The International Journal of Accounting*, vol 46, (2011), 304-332.

Khurana, Inder K., and Paul N. Michas, 'Mandatory IFRS adoption and the US home bias', *Accounting Horizons*, vol 25 (2011), pp729-753.

Kim, Jeong-Bon, Xiaohong Liu and Liu Zheng, 'The impact of mandatory IFRS adoption on audit fees: theory and evidence', *The Accounting Review*, vol 87 (2012), pp2061-2094.

Kim, Yongtae, and Siqi Li, 'The externality effect of accounting standards convergence: evidence from cross-border information: transfers around EU mandatory IFRS adoption', 2011 (unpublished).

Kraft, Pepa, and Wayne R. Landsman, 'Effect of mandatory IFRS adoption on accounting-based prediction models for CDS spreads' 2014 (unpublished but available at SSRN).

- Kvaal, Erlend, and Christopher Nobes, 'International differences in IFRS policy choice: a research note', *Accounting and Business Research*, vol 40 (2010), pp173-187.
- Kvaal, Erlend, and Christopher Nobes, 'IFRS policy changes and the continuation of national patterns of IFRS practice', *European Accounting Review*, vol 21 (2012), pp343-371.
- Kvaal, Erlend, and Christopher Nobes, 'International variations in tax disclosures', *Accounting in Europe*, vol 10 (2013), pp241-273.
- Landsman, Wayne R., Edward L. Maydew and Jacob R. Thornock, 'The information content of annual earnings announcements and mandatory adoption of IFRS', *Journal of Accounting and Economics*, vol 53 (2012), pp34-54.
- Lang, Mark H., Mark G. Maffett and Edward L. Owens, *Earnings Comovement and Accounting Comparability: the Effects of Mandatory IFRS Adoption*, Rochester: University of Rochester, 2010.
- Lantto, Anna-Maija, 'Does IFRS improve the usefulness of accounting information in a code-law country?', 2007 (unpublished but available at SSRN).
- Laux, Christian, and Christian Leuz, 'Did fair-value accounting contribute to the financial crisis?', *Journal of Economic Perspectives*, vol 24 (2010), pp93-118.
- Lee, Edward, Martin Walker and Hans B. Christensen, *Mandating IFRS: its Impact on the Cost of Equity Capital in Europe*, London: Certified Accountants Educational Trust, 2008.
- Lee, Gladys, and Neil Fargher, 'Did the adoption of IFRS encourage cross-border investment?', 2010 (unpublished but available at SSRN).
- Leuz, Christian, Alexander J. Triantis and Tracy Yue Wang, 'Why do firms go dark? Causes and economic consequences of voluntary SEC deregistrations', *Journal of Accounting and Economics*, vol 45 (2008), pp181-208.
- Leventis, Stergios, and Panagiotis E. Dimitropoulos and Asokan Anandarajan, 'Loan loss provisions, earnings management and capital management under IFRS: the case of EU commercial banks', *Journal of Financial Services Research*, vol 40 (2011), pp103-122.
- Li, Siqi, 'Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital?', *The Accounting Review*, vol 85 (2010), pp607-636.
- Liao, Qing, Thorsten Sellhorn and Hollis A. Skaife, 'The cross-country comparability of IFRS earnings and book values: evidence from France and Germany', *Journal of International Accounting Research*, vol 11 (2012), pp155-184.
- Lins, Karl V., Henri Servaes and Ane Tamayo, 'Does fair value reporting affect risk management? International survey evidence', *Financial Management*, Fall 2011, pp525-551.
- Linsmeier, Thomas J., Daniel B. Thornton, Mohan Venkatachalam and Michael Welker, 'The effect of mandated market risk disclosures on trading volume sensitivity to interest rate, exchange rate, and commodity price movements', *The Accounting Review*, vol 77 (2002), pp343-377.
- Macve, Richard, 'What should be the nature and role of a revised Conceptual Framework for International Accounting Standards?', *China Journal of Accounting Studies*, vol2 (2014), pp77-95.

- Márquez-Ramos, Laura, 'European accounting harmonization: consequences of IFRS adoption on trade in goods and foreign direct investments', *Emerging Markets Finance and Trade*, vol 47 (2011), supplement 4, pp42-57.
- Marra, Antonio, Pietro Mazzola and Annalisa Prencipe, 'Board monitoring and earnings management pre- and post-IFRS', *The International Journal of Accounting*, vol 46 (2011), pp205-230.
- Mechelli, Alessandro, and Riccardo Cimini, 'Is comprehensive income value relevant and does location matter?', *Accounting in Europe*, vol 11 (2014), pp59-87.
- Morais, Ana Isabel, and José Dias Curto, 'Mandatory adoption of IASB standards: value relevance and country-specific factors', *Australian Accounting Review*, vol 19 (2009), pp128-143.
- Morricone, Serena, Raffale Oriani and Maurizio Sobrero, 'The value relevance of intangible assets and the mandatory adoption of IFRS', 2009 (unpublished but available at SSRN).
- Moscariello, Nicola, Len Skerratt and Michele Pizzo, 'Mandatory IFRS adoption and the cost of debt in Italy and UK', *Accounting and Business Research*, vol 44 (2014), pp63-82.
- Muller, Karl A., Edward J. Riedl and Thorsten Sellhorn, 'Mandatory fair value accounting and information asymmetry: evidence from the European real estate industry', *Management Science*, vol 57 (2011), pp1138-1153.
- Neel, Michael, 'Accounting comparability and economic outcomes of mandatory IFRS adoption', 2014 (unpublished but available at SSRN).
- Nobes, Christopher (ed.), *GAAP 2001: A Survey of National Accounting Rules Benchmarked against International Accounting Standards*, no place: Andersen, BDO, Deloitte Touche Tohmatsu, Ernst & Young, Grant Thornton, KPMG and PricewaterhouseCoopers, 2001.
- Nobes, Christopher, 'IFRS practices and the persistence of accounting system classification', *Abacus*, vol 47 (2011), pp267-283.
- Nobes, Christopher, 'The continued survival of international differences under IFRS', *Accounting and Business Research*, vol 43 (2013), pp83-111.
- Nobes, Christopher, and Jordi Perramon, 'Firm size and national profiles of IFRS policy choice', *Australian Accounting Review*, vol 23 (2013), pp208-215.
- O'Hanlon, John, 'Did loan-loss provisioning by UK banks become less timely after implementation of IAS 39?', *Accounting and Business Research*, vol 43 (2013), pp225-258.
- Oliveira, Lúcia, Lúcia Lima Rodrigues and Russell Craig, 'Intangible assets and value relevance: evidence from the Portuguese stock exchange', *The British Accounting Review*, vol 42 (2010), pp241-252.
- Ozkan, Neslihan, Zvi Singer and Haifeng You, 'Mandatory IFRS adoption and the contractual usefulness of accounting information in executive compensation', *Journal of Accounting Research*, vol 50 (2012), pp1077-1107.
- Paananen, Mari, 'The IFRS adoption's effect on accounting quality in Sweden', 2008 (unpublished but available at SSRN).
- Paananen, Mari, and Henghsiu Lin, 'The development of accounting quality of IAS and IFRS over time: the case of Germany', *Journal of International Accounting Research*, vol 8 (2009), pp31-55.

Paananen, Mari, and Nimita Parmar, 'The adoption of IFRS in the UK', 2008 (unpublished but available at SSRN).

Pae, Jinhan, Daniel B. Thornton and Michael Welker, 'Agency cost reduction associated with EU financial reporting reform', *Journal of International Accounting Research*, vol 7 (2008), pp51-76.

Paglietti, Paolo, 'Investigating the effects of the EU mandatory adoption of IFRS on accounting quality: evidence from Italy', *International Journal of Business and Management*, vol 4 (2009), pp3-18.

Palea, Vera, 'The effects of the IAS/IFRS adoption in the European Union on the financial industry', *The European Union Review*, vol 12 (2007), no 1-2.

Panaretou, Argyro, Mark B. Shackleton and Paul A. Taylor, 'Corporate risk management and hedge accounting', *Contemporary Accounting Research*, vol 30 (2013), pp116-139.

Pathak, Jagdish, 'Discussion of "The effect of IFRS adoption conditional upon the level of pre-adoption divergence"', *The International Journal of Accounting*, vol 49 (2014), pp179-182.

Piot, Charles, Pascal Dumontier and Rémi Janin, 'IFRS consequences on accounting conservatism within Europe', 2010 (unpublished but available at SSRN).

Platikanova, Petya, and Christopher Nobes, 'Was the introduction of IFRS in Europe value-relevant?', 2006 (unpublished but available at SSRN).

Platikanova, Petya, and Jordi Perramon, 'Economic consequences of the first-time IFRS introduction in Europe', 2009 (unpublished but available at SSRN).

Pope, Peter F., and Stuart J. McLeay, 'The European IFRS experiment: objectives, research challenges and some early evidence', *Accounting and Business Research*, vol 41 (2011), pp233-266.

Preiato, John, Philip Brown and Ann Tarca, 'A comparison of between-country measures of legal setting and enforcement of accounting standards', 2014 (unpublished but available at SSRN).

Rahman, Asheq, Lei Cai and Stephen Courtenay, 'Reply to the discussion note on "The effect of IFRS adoption conditional upon the level of pre-adoption divergence"', *The International Journal of Accounting*, vol 49 (2014), pp183-189.

Ramanna, Karthik, and Ewa Sletten, 'Network effects in countries' adoption of IFRS', *The Accounting Review*, vol 89 (2014), pp1517-1543.

Sahut, Jean-Michel, Sandrine Boulerne and Frédéric Toulon, 'Do IFRS provide better information about intangibles in Europe?', *Review of Accounting and Finance*, vol 10 (2011), pp267-290.

Salewski, Marcus, Torben Teuteberg and Henning Zülch, 'Short-term and long-term effects of IFRS adoption on disclosure quality and earnings management', 2014 (unpublished but available at SSRN).

Samarasekera, Nelly, Millicent Chang and Ann Tarca, 'IFRS and accounting quality: the impact of enforcement', (2012) (unpublished but available at SSRN).

Schadewitz, Hannu, and Markku Vieru, 'How markets value and response to IFRS reconciliations adjustments in Sweden', 2007 (unpublished but available at SSRN).

- Schipper, Katherine, 'The introduction of International Accounting Standards in Europe: implications for international convergence', *European Accounting Review*, vol 14 (2005), pp101-126.
- Schleicher, Thomas, Ahmed Tahoun and Martin Walker, 'IFRS adoption in Europe and investment-cash flow sensitivity: outsider versus insider economies', *The International Journal of Accounting*, vol 45 (2010), pp143-168.
- Shaffer, Sanders, *Fair Value Accounting: Villain or Innocent Victim*, Boston: Federal Reserve Bank of Boston, 2010.
- Shibly, Fatima Baalbaki, and Pascal Dumontier, 'Investigating the role of information environment in EU capital markets: the case of IFRS and MAD', 2014 (unpublished: presented at the annual meeting of the European Accounting Association, May 2014).
- Shima, Kim M., and Elizabeth A. Gordon, 'IFRS and the regulatory environment; the case of US investor allocation choice', *Journal of Accounting and Public Policy*, vol 30 (2011), pp481-500.
- Sun, Jerry, Steven F. Cahan and David Emanuel, 'How would the mandatory adoption of IFRS affect the earnings quality of US firms? Evidence from cross-listed firms in the US', *Accounting Horizons*, vol 25 (2011), pp837-860.
- Sunder, Shyam, 'IFRS monopoly: the Pied Piper of financial reporting', *Accounting and Business Research*, vol 41 (2011), pp291-306. (There is an extended version of this paper at SSRN, which includes a survey of research on IFRS by Kai Du.)
- Tan, Hongping, Shiheng Wang and Michael Welker, 'Analyst following and forecast accuracy after mandated IFRS adoptions', *Journal of Accounting Research*, vol 49 (2011), pp1307-1357.
- Tarca, Ann, 'The case for global accounting standards: arguments and evidence', appendix to *Report to the Trustees of the IFRS Foundation: IFRS Foundation Staff Analysis of the SEC Final Staff Report – Work Plan for the Consideration of Incorporating IFRS into the Financial Reporting System for US Issuers*, London: IFRS Foundation, 2012.
- Tsalavoutas, Ioannis, Paul André and Lisa Evans, 'The transition to IFRS and the value relevance of financial statements in Greece', *British Accounting Review*, vol 44 (2012), pp262-277.
- Trombetta, Marco, Alfred Wagenhofer and Peter Wysocki, 'The usefulness of academic research in understanding the effects of accounting standards', *Accounting in Europe*, vol 9 (2012), pp127-146.
- US Securities and Exchange Commission, *Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on Mark-to-Market Accounting*, Washington: SEC, 2008.
- Verriest, Arnt, Ann Gaeremynck and Daniel B. Thornton, 'The impact of corporate governance on IFRS adoption choices', *European Accounting Review*, vol 22 (2013), pp39-77.
- Vieru, Markku, and Hannu Schadewitz, 'Impact of IFRS transition on audit and non-audit fees: evidence from small and medium-sized listed companies in Finland', *The Finnish Journal of Business Economics*, 2010, pp11-41.
- Voulgaris, Georgios, Konstantinos Stathopoulos and Martin Walker, 'IFRS and the use of accounting-based performance measures in executive pay', *International Journal of Accounting* (2014, forthcoming).

- Vulcheva, Maria Ivanova, *International Accounting Standardization across Countries with Unequal Enforcement – Questionable Benefits at a High Price?*, 2011 (unpublished Emory University PhD dissertation).
- Walker, Martin, 'How far can we trust earnings numbers? What research tells us about earnings management', *Accounting and Business Research*, vol 43 (2013), pp445-481.
- Wang, Clare, 'Accounting standards harmonization and financial statement comparability: evidence from transnational information transfer', *Journal of Accounting Research*, vol 52 (2014), pp955-992.
- Wang, Jacqueline Wenjie, and Wayne W. Yu, 'The information content of stock prices, reporting incentive, and accounting standards: international evidence', 2009 (unpublished).
- Wang, Shiheng, and Michael Welker, 'Timely equity issuance in response to information asymmetry arising from IFRS adoption in Australia and Europe', *Journal of Accounting Research*, vol 49 (2011), pp257-307.
- Wang, Xin, Danqing Young and Zili Zhuang, 'The effects of mandatory adoption of International Financial Reporting Standards on information environments', 2008 (unpublished).
- Wu, Joanna Shuang, and Ivy Xiyang Zhang, 'The adoption of internationally recognized accounting standards: implications for the credit markets', *Journal of Accounting, Auditing and Finance*, vol 29 (2014), pp95-128.
- Wu, Joanna Shuang, and Ivy Zhang, *Accounting Integration and Comparability: Evidence from Relative Performance Evaluation around IFRS Adoption*, Rochester: University of Rochester, 2010.
- Yip, Rita W. Y., and Danqing Young, 'Does mandatory IFRS adoption improve information comparability?', *The Accounting Review*, vol 87 (2012), pp1767-1789.
- Yu, Gowoon, 'Accounting standards and international portfolio holdings: analysis of cross-border holdings following mandatory adoption of IFRS', 2010 (unpublished University of Michigan PhD dissertation).
- Zeff, Stephen A., 'Some obstacles to global financial reporting comparability and convergence at a high level of quality', *British Accounting Review*, vol 39 (2007), pp290-302.
- Zéghal, Daniel, Sonda M. Chtourou and Yosra M. Fourati, 'The effect of mandatory adoption of IFRS on earnings quality: evidence from the European Union', *Journal of International Accounting Research*, vol 11 (2012), pp1-25.
- Zéghal, Daniel, Sonda Chtourou and Yosra Mnif Sellami, 'An analysis of the effect of mandatory adoption of IAS/IFRS on earnings management', *Journal of International Accounting, Auditing and Taxation*, vol 20 (2011), pp61-72.
- Zhuang, Zili, Bin Ke and Danqing Young, 'Mandatory IFRS adoption and accounting conservatism', 2014 (unpublished: presented at the annual meeting of the European Accounting Association, May 2014).
- Zimmerman, Jerold L., 'Myth: external financial reporting quality has a first-order effect on firm value', *Accounting Horizons*, vol 27 (2013), pp887-894.