

Potential economic gains from reforming insolvency law in Europe

February 2016



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Foreword

Reforming Europe's disparate insolvency laws is a classic single market project, and a much-needed one. Currently, conflicting insolvency rules are holding back European financial markets and growth in the real economy. These conflicting rules are causing uncertainty among investors, discouraging cross-border investment and delaying restructuring of companies facing financial difficulty. They also made it harder to address Europe's high levels of non-performing loans, which represent a real challenge to banking sector stability.

EU insolvency reform is long overdue and the European Commission has committed to take action. Later this year, as part of its work plan on capital markets union, the Commission will propose a legislative initiative on business insolvency. To help inform the debate, AFME has published 'Potential economic gains from reforming insolvency law in Europe'. Written in collaboration with economic consultancy Frontier Economics and international law firm Weil, Gotshal & Manges LLP, the report provides a comprehensive economic and legal analysis of the effects of Europe's fragmented insolvency laws.

Our report offers a first estimate of the potential economic impact of insolvency reform in Europe. It shows that improving the insolvency recovery rate should reduce corporate bond spreads by 18 to 37 basis points. Applied across the economy, this lower risk premium could add 0.3% to 0.55% to EU GDP over the long-term, or between €41 and €78 billion.

We put forward a number of concrete proposals for targeted harmonisation of insolvency laws through minimum European insolvency standards. First, we recommend that all Member States should have a Chapter 11-type stay of proceedings to enable quick and effective restructuring. Second, we advocate special protection for new financing to provide working capital to a distressed company. Third, we propose stronger creditor rights. And fourth, we suggest that national insolvency agencies should regularly report on their results in order to better inform investors and policymakers.

Strong insolvency rules promote deeper and more efficient capital markets and higher levels of entrepreneurship – all key elements in delivering much-needed growth across the European Union. AFME and our members are fully supportive of the Commission's work on Capital Markets Union. We hope this report provides the bedrock for meaningful discussion on creating a consistent Europe-wide insolvency framework as part of this vital initiative.

Simon Lewis

Chief Executive

Association for Financial Markets in Europe



Executive summary



Executive summary

In its action plan on capital markets union, the European Commission has highlighted that adopting minimum standards for insolvency law across Europe would help to reduce barriers to cross-border investment and enable faster restructuring by firms. The Commission intends to pursue a legislative initiative on insolvency law by the end of 2016. The purpose of this report is to examine the current state of European insolvency laws and practices in the context of the new Commission proposals for reform, and to provide a credible quantitative and qualitative assessment of the range of economic benefits that could be achieved through insolvency law reform.

The legal framework governing corporate insolvency helps to determine how efficiently scarce resources – particularly capital and labour – are reallocated to more productive uses when a business encounters serious financial difficulties. An effective insolvency framework has four main functions:

- Assessing viability – distinguishing firms that are no longer viable from those which could potentially remain viable as going concerns.
- Enabling restructuring – facilitating reorganisation of viable businesses to enable them to return quickly and smoothly to normal operations.
- Providing legal certainty – ensuring that all relevant parties in a corporate restructuring or insolvency have a clear understanding ex ante of procedures and timescales and their rights and responsibilities.
- Enabling settlement of claims – minimising the cost and time required to enforce debt contracts, in the event of a corporate insolvency.

Major differences between national insolvency frameworks in Europe have a range of negative effects on the economy and financial markets, including:

- discouraging cross-border investment (particularly with respect to multinational companies or those with complicated financing structures), thereby reducing the efficiency of EU capital markets in general;
- discouraging the timely restructuring of viable companies in financial difficulties, often resulting in a distressed company entering liquidation rather than restructuring as a going concern;
- increasing uncertainty amongst issuers, investors and other stakeholders with respect to creditor recovery rates;
- putting SMEs at a competitive disadvantage, as they generally do not possess the financial resources required to take advantage of more efficient restructuring procedures available in other member states; and
- making it harder to address high levels of non-performing loans (NPLs), which absorb bank capital, reduce the efficiency of capital allocation, and represent a challenge to banking system stability.

Methodology and key findings

Recent studies on the economic impact of insolvency reform in Europe have used relatively limited datasets and relied on a range of broad assumptions in order to generate a macroeconomic estimate of the gains from reform. This study seeks to augment the evidence by using market data in order to test the observable impact of variations in the quality of national insolvency frameworks on the pricing of credit, using corporate bond yields as a proxy. We use a bond pricing model to estimate the impact of insolvency regimes on the risk premium. This result is then used to estimate the potential long-term impact on EU GDP.

Step 1: estimating the impact of insolvency reform on the risk premium

Controlling for bond characteristics, we find a significant, negative correlation between corporate bond yields and expected recovery rate. We find that a 10 percentage point increase in expected recovery rate is associated with a 37 basis point fall in bond spread. This suggests that countries with strong insolvency regimes have lower borrowing costs. When we control for

unobserved country characteristics (e.g. institutional factors or risks not captured in the credit rating) the estimated effect falls to an 18 basis point reduction in the bond spread.

Step 2: estimating the macroeconomic impact of insolvency reform

Established literature allows us to extrapolate from the impact of insolvency frameworks on bond spreads to the overall macroeconomic impact of improving insolvency frameworks. Our estimations are based on the results of Bleaney et al (2013), who find that a percentage point reduction in bond spread is associated with a 1.57 percentage point increase in longterm GDP and a 1.06 percentage point increase in long-term employment.

We can combine these results with those from our bond pricing model to simulate the macroeconomic impact of insolvency reform at EU level. If all EU member states were to reach a recovery rate of 85 percent, this would imply a permanent increase in GDP of €41bn to €78bn (or between 0.3% and 0.55% of EU28 GDP). Additional employment in the EU28 would increase by between 600,000 jobs in the low scenario and 1.2 million jobs in the high scenario. The distribution of macroeconomic effects suggests that much of the absolute gains from insolvency reform could flow to Italy, Spain and France, as well as some central European member states such as Poland, Hungary and Romania.

Potential economic benefits not estimated in this study

There are a number of potential additional channels not included in our model which should further increase the overall economic advantages to the EU from reforming its insolvency framework, including: (i) greater access to finance for companies; (ii) greater levels of entrepreneurship and company formation; (iii) the ‘single market’ benefits arising from a more integrated environment for cross-border trade and investment; and (iv) progress in addressing Europe’s high level of non-performing loans. We suggest that these impacts should be examined in further studies.

The NPL issue is particularly pressing. Based on a standard definition, the ECB’s 2014 comprehensive assessment identified €879 billion in non-performing exposures in the banking system. In its most recent economic assessment on the Euro area, the IMF found that *“high NPLs are hindering lending and the recovery”* and highlighted pan-European insolvency reform as a priority in order to reduce the large stock of NPLs. The IMF finds that *“NPL disposal can free up large volumes of regulatory capital and generate significant capacity for new lending”*, calculating that freeing-up capital disposed for NPL could unlock new lending of between €167–€522 billion, provided there is corresponding demand for new loans.

Insolvency law policy recommendations

The key policy conclusion is that there are significant economic benefits attributable to investing in insolvency reform and convergence to best practice. These payoffs are distinct and robust relative to the payoffs from other categories of institutional reforms.

We consider the following elements as the most important to enhance the efficiency of European insolvency practices, notably by enhancing the possibilities for restructuring:

- **Stay:** By preventing precipitate action by creditors, a stay procedure is critical to the successful rescue or orderly workout of a failing business. Most EU member states have some form of stay but arguably the precise forms in certain jurisdictions do not go far enough.
- **Valuation:** Progress should be made toward creating a consistent framework for fast judicial resolution of valuation disputes.
- **Cramdown:** Creditors or shareholders with (on a proper valuation basis) no economic interest in the enterprise, should not be in a position where their “veto” could force the commencement of formal insolvency proceedings or delay otherwise viable restructurings. There should be a possibility, under appropriate circumstances, for decisions made by creditors with a continuing economic interest in the enterprise to bind creditors that no longer have an economic interest (otherwise referred to as a “cramdown” of such “out-of-the-money” creditors).
- **Role of creditors:** Member states should allow creditors or third parties to play a more influential role, even in formal insolvency proceedings, including providing creditors with all relevant information about the affected enterprise and any proposed plans or proceedings, as early in the process as possible. The participation of creditors or third parties could yield new solutions or additional funding, thereby making it easier to distinguish viable companies from those whose creditors are unwilling to provide support and which should be subject to liquidation procedures.

Executive summary

- **Financing:** Steps should also be taken to address the issue of ongoing funding for distressed companies, in order to ensure that a greater proportion of economically viable companies can be turned around, thereby limiting destruction of value in a restructuring.

A convergence to best practices could be achieved through a harmonised approach under which minimum standards are issued for each of the elements referred to above, and are then applied to national insolvency regimes across Europe. In this respect, similarly situated stakeholders involved in insolvency proceedings should be able to expect reasonably similar rights, obligations, protections and outcomes across all EU jurisdictions. Otherwise, as is currently the case, we will continue to see an aggregation of negative country specific effects resulting from specific reforms in different jurisdictions.

There are important practical and political judgments to be made on the priorities and phasing of further insolvency reform in the EU. AFME advocates pursuing a fairly narrow and focused EU legislative initiative to embed the key minimum standards of an effective insolvency law into national systems. Our proposals go with the grain of reforms already being implemented at national level.

Alongside, we advocate the development of recommendations and the sharing of best practice (both at EU and OECD level) on a range of wider issues. The diagram below summarises our proposals for new EU legislation and a related Commission Recommendation.



In addition to progress to minimum insolvency standards across Europe, it would be in the best interest of creditors that there is consistency among the courts and administrative personnel in the application of insolvency laws and procedures. The Commission could play a leading role in encouraging the development of appropriate frameworks in order to facilitate this goal.

1. Introduction



1. Introduction

Report structure

This report aims to improve the economic evidence and analysis regarding the impact of insolvency frameworks on European economic and financial markets in order to help policymakers at EU and national level evaluate the options and set a clear direction for reform.

This report is structured as follows:

- **Section 1** establishes a background for the issues raised and explains the objectives of this report.
- **Section 2** outlines existing reforms to insolvency law and policy at EU level.
- **Section 3** provides an overview of the key legal and policy issues for national insolvency frameworks in Europe, highlighting priority areas for reform.
- **Section 4** surveys the relevant economic literature; presents an economic model of the impact of the insolvency regime quality on capital market efficiency; and estimates the potential impact of insolvency reform on macroeconomic performance in the EU.
- **Section 5** provides conclusions and discusses policy considerations.

This report includes four annexes that present a more detailed treatment of, respectively, the relationship between insolvency regime quality and bond market development, data on recovery rates and a technical annex on econometric models.

Appendix A presents a detailed legal overview of certain European national insolvency regimes. Appendix B provides an overview of the U.S. Chapter 11 framework. Appendix C analyses two case studies of major restructuring processes conducted in Europe. Appendix D summarises recent insolvency reforms enacted in two EU Member States; namely Italy and the Czech Republic.

Economic functions of insolvency regimes

An established body of research has identified the role of well-functioning financial markets as a key determinant of economic performance (see also section 4).¹ The development and efficiency of financial markets are in turn reliant on the institutional frameworks that underpin them. These frameworks include broad factors, such as the rule of law and the integrity of the judiciary, as well as specific sets of rules and practices. Regimes that govern insolvency and bankruptcy are one such set of rules. Their importance reflects the critical role of debt in facilitating savings and investment decisions.

The legal framework governing corporate insolvency helps to determine how efficiently scarce resources – particularly capital and labour – are reallocated to more productive uses when a business encounters serious financial difficulties. An effective insolvency framework has the following functions:

- Assessing viability – distinguishing firms that are no longer viable from those which could potentially remain viable as going concerns.
- Enabling restructuring – facilitating reorganisation of viable businesses to enable them to return quickly and smoothly to normal operations.
- Providing legal certainty – ensuring that all relevant parties in a corporate restructuring or insolvency have a clear understanding ex ante of procedures and timescales and their rights and responsibilities.
- Enabling settlement of claims – minimising the cost and time required to enforce debt contracts, in the event of a corporate insolvency.

¹ For a review, see Ross Levine (1997), “Financial development and economic growth: Views and agenda”, *Journal of Economic Literature*, Vol. 35, No. 2 (pp 688–726)

Current divergence in national insolvency regimes in Europe

Because of the divergence in European national insolvency rules and practices, creditors, administrators and other stakeholders involved in an insolvency proceeding can expect to receive different rights, obligations, protections and outcomes depending on the European jurisdiction in which the proceeding is conducted. These differences lead to uncertainty and inefficiency, and can, on a cumulative basis, have a negative effect on European capital markets.

The following are specific examples of areas in which European national insolvency laws and practices vary, both substantively and procedurally, and in which stakeholders can expect varying results depending on the applicable jurisdiction:

- the opening of insolvency proceedings;
- applicable insolvency triggers/tests;
- the interpretation and application of insolvency rules and regulations;
- the length of and process for a general stay of creditor rights;
- management of insolvency proceedings;
- ranking of creditors;
- the role and level of participation of creditors in insolvency proceedings;
- filing and verification of claims;
- responsibility for proposing and approving reorganisation plans;
- annulment of transactions entered into prior to insolvency proceedings;
- liability of directors, shareholders and management; and
- the availability of post-petition financing (i.e. financing provided to an enterprise operating under court-supervised protection after it has already entered into insolvency or similar proceedings).

These differences between national insolvency and restructuring regimes have a range of negative effects, and in particular are likely to:

- discourage cross-border investment (particularly with respect to multinational companies or those with complicated financing structures) and reduce the overall efficiency, attractiveness and innovation of European capital markets generally;
- discourage the timely restructuring of viable companies in financial difficulties, and often lead to liquidation rather than providing an opportunity to restructure as a going concern;
- increase uncertainty amongst issuers, investors and other stakeholders with respect to creditor recovery rates;
- result in small and medium sized companies being at a disadvantage as they are less able to meet high restructuring costs or take advantage of more efficient restructuring procedures in other member states; and
- make it harder to address high levels of non-performing loans (NPLs), which absorb bank capital and reduce the efficiency of capital allocation and represent a challenge to banking system stability.

The EU policy agenda

In the EU, the benefits of reforms to insolvency and bankruptcy regulations need to be considered in the context of the EU's agenda for capital markets union ("CMU"). The Commission intends that progress towards CMU will broaden financing channels across the EU, notably by increasing the scope for non-bank financing, and deepen the markets for financial services. CMU is also expected to enhance growth and financial stability, in a context in which cross-border investment and cross-border supply chains are an important aspect of commercial practices and a driver of economic value.²

An important step towards achieving these objectives is addressing the problem of divergent insolvency regulation. In its 2014 assessment of the costs of continued regulatory fragmentation, the Commission noted that the status quo in Europe typically entails: *"high costs for cross-border creditors, incentives for forum-shopping, and obstacles to the re-organisation of cross-border groups of companies."*³

In the recent action plan on its proposed capital markets union, the Commission highlighted that adopting minimum standards across Europe for insolvency frameworks would help to alleviate these negative effects. In its action plan on capital markets union, the Commission stated its intention to propose a legislative initiative on business insolvency, including early restructuring and providing viable companies with a second chance, drawing on the experience of the EC Recommendation on insolvency reform issued in March 2014. Subsequent Q&As and other pronouncement by the Commission have confirmed its commitment to issue a legislative proposal on insolvency reform during 2016. It is our view that successful implementation of any minimum standards will require that they are introduced at the national member state level in as similar a manner as possible.

Currently, the EU policy framework comprises a fairly limited EC Regulation on insolvency proceedings, which was adopted in 2000 and was amended in 2015 and which is principally concerned with establishing, as a procedural matter, which local insolvency regime should apply to a debtor, rather than harmonising local insolvency laws. The Commission also issued a Recommendation in 2014 on business failure and insolvency which identifies best practices for national systems but is non-binding. These EU-level measures are examined in more detail in the next chapter.

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EU policy framework comprises
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on insolvency proceedings.
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2 European Commission (2015), Economic Analysis, Accompanying the document "Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions", Staff Working Paper, 30 September

3 European Commission (2014), Impact Assessment Accompanying the document Commission Recommendation on a New Approach to Business Failure and Insolvency", Commission Staff Working Document, p . 23

2. Overview of existing reforms at EU Level



2. Overview of existing reforms at EU Level

This chapter provides an overview of existing insolvency reforms at European level. The analysis in this chapter should be read in conjunction with Appendix A, which summarises aspects of the insolvency regimes in the UK, France, Germany, Italy, Spain, the Netherlands and Luxembourg.⁴ Appendix B outlines the main principles of the U.S. Chapter 11 framework, which is also an important reference point when considering further insolvency reform in Europe.

The European Insolvency Regulation

The EC Regulation on insolvency proceedings EC 1346/2000 (the “**Regulation**”) was adopted by the Council of the European Union on 29 May 2000 and came into effect on 31 May 2002. The Regulation took precedence over domestic policy in all EU member states except Denmark.⁵ The Regulation aims to develop a framework for cross-border insolvency proceedings, and applies whenever a debtor has assets in more than one EU member state. The key idea is that the member state where the debtor has its Centre of Main Interests (“**COMI**”) should be the jurisdiction under whose laws insolvency proceedings are conducted. The Regulation also, importantly, provides for mandatory, or “automatic”, recognition of such proceedings in other member states.

The Regulation did not seek to impose disciplines on national regulations, but rather worked with them with a view to ensuring an orderly treatment of cross-border cases. In addition, certain types of proceedings – specifically pre-insolvency proceedings and hybrid proceedings permitted under local insolvency laws – were excluded from the scope of the Regulation. Finally, not all debtors are covered by the Regulation; insolvency proceedings concerning insurance undertakings, credit institutions, investment undertakings, holding funds or securities for third parties, and collective investment undertakings are excluded.⁶

Centre of main interests (COMI)

The Regulation sets a rebuttable presumption that “the place of the registered office shall be presumed to be the [debtor’s] centre of its main interests”. The presumption can be rebutted by objective factors which are ascertainable to third parties (see Eurofood). The ability to rebut the statutory presumption has encouraged companies to take steps to rebut the statutory presumption under a process referred to as “COMI shifting” or “COMI migration”.⁷ Examples of objective factors (collectively or in conjunction with other steps) deemed to shift a debtor’s COMI have included:

- i. moving a debtor’s head office function to the target jurisdiction;
- ii. notifying creditors of the change of head office location;
- iii. holding board meetings in the target jurisdiction;
- iv. opening a bank account in the target jurisdiction; and
- v. convening restructuring negotiations in the target jurisdiction (see *Wind Hellas*).

The courts, however, are unlikely to recognise a COMI shift if the steps taken are transitory or lack credibility (e.g. if actions were taken only weeks before applying to commence main insolvency proceedings in the target jurisdiction).

In 2012 the Commission reviewed the impact of the EC Insolvency Regulation and recognised some benefits but also several weaknesses in its operation.⁸ The main weaknesses highlighted were: the exclusion of pre-insolvency and hybrid proceedings; the restrictive definition of secondary proceedings to winding-up proceedings and the lack of rules regarding the opening up of proceedings; the lack of clear rules regarding groups of companies; and the scope for regulatory forum

⁴ Appendix A summarises the types of insolvency and restructuring proceedings available, recent legislative reforms, time limits for filing, whether creditors may propose a restructuring plan, cram down rights, company valuations, the role of existing directors and managements, moratoria, pre-packs, avoidance transactions, DIP financing, termination rights and future reforms.

⁵ Council Regulation (EC) No 1346/2000 of 29 May 2000 on insolvency proceedings

⁶ Winding up of insurance firms is regulated by Directive 2001/17/EC (introduced 05/05/01, deadline for implementation 05/05/04) which is applied to the winding up of insurance firms whether founded on insolvency or not. The same applies to the winding up of credit institutions under Directive 2001/24/EC (introduced 20/04/01, deadline for implementation 20/04/03).

⁷ COMI shifts are generally effected at holding company level rather than at operating company level, since the latter would require major organisational upheaval; i.e. moving the operating company’s assets and employees from its home jurisdiction to the target jurisdiction.

⁸ Whether COMI shifting is necessarily prejudicial to creditors is a matter of debate, since one positive consequence is that the process allows restructurings to be effected under more flexible regimes, for example, as permitted under English insolvency laws. On the other hand, opportunistic shifts can tend to favour larger debtors and increase costs to creditors by reducing the predictability of loan conditions.

“shopping” resulting from the definition of COMI. This last concern arose because, according to the existing jurisprudence, the decisive moment for determining COMI was the timing of application for insolvency.⁹

The above concerns from the Commission review were addressed in an amended EU Insolvency Regulation (EU 2015/848) that will apply to insolvency proceedings from 26 June 2017.¹⁰ The amended regulation has an improved framework for COMI determinations that balances views about the different types of effects introduced by COMI-shifts. While it retains the rebuttable presumption that the COMI is the place of registration, this rebuttable presumption is predicated on a demonstration that the central administration is located elsewhere, and a comprehensive assessment of all other relevant factors. It denies the presumption if there has been a shift in the registered office in the three months prior to the filing of proceedings. The amended regulation also introduces a framework for resolving group insolvencies by, among other things, placing an even greater emphasis on avoiding a multiplicity of proceedings for the same debtor and providing mechanisms for coordination of group companies across borders.

Forum shopping

“Forum shopping” has also been used in Europe where debtors and creditors have sought to utilise non-insolvency based restructuring procedures available in other member states. In particular there has been a recent trend for non-English companies to restructure using English law schemes of arrangement. English courts have been willing to sanction such schemes of arrangement where sufficient connection with the English courts is established. The following factors are likely to determine whether there is sufficient connection in practice:

- i. whether the key financial documents are governed by English law and whether there is an exclusive submission to English jurisdiction (see *Apcoa*);
- ii. whether the secured assets and creditor operations are in England (see *Re Drax Holdings Ltd*);
- iii. whether all of the company’s scheme debts and intercreditor agreement are governed by English law (see *Primacom*);
- iv. whether the debtor has moved its COMI to England (see *Re Magyar Telecom BV*); and
- v. whether a decision to sanction the scheme is likely to be recognised and upheld by the courts of relevant foreign jurisdictions.

In some circumstances, the ability to institute proceedings in a different and more favourable jurisdiction may be helpful to a company in distress, but this is not available to all companies (particularly medium or smaller companies), and may often be more costly and inefficient than proceeding’s in the debtor’s own jurisdiction.

Commission Recommendation

On 12 March 2014 the Commission published its “Commission Recommendations of 12.3.2014 on a new approach to business failure and insolvency” (the “**Recommendation**”).¹¹ The main thrust of the Recommendation is to shift the emphasis of insolvency proceedings away from liquidation to pre-insolvency restructuring, in order to allow viable firms to be turned around and return to going concern status. In arguing for this position, the Commission cites data reported by the World Bank, showing that recovery rates are highest in jurisdictions where restructuring is the most common form of rehabilitation proceeding.¹² Specifically, the Recommendation advocates:

- permitting the debtor to retain control of the business and to request a temporary stay of individual enforcement actions;
- the possibility of an approved restructuring plan “cramming down” dissenting or apathetic creditors if confirmed by the court; and
- various protections for lenders willing to provide new financing to assist in the implementation of a restructuring plan.

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There has been a recent trend for non-English companies to restructure using English law.
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⁹ European Commission (2012), REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL AND THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE on the application of Council Regulation (EC) No 1346/2000 of 29 May 2000 on insolvency proceedings

¹⁰ <http://economia.icaew.com/opinion/february-2015/the-eu-insolvency-consultation-two-years-on>

¹¹ http://ec.europa.eu/justice/civil/files/c_2014_1500_en.pdf

¹² European Commission (2014), Impact Assessment Accompanying the document Commission Recommendation on a New Approach to Business Failure and Insolvency”, Commission Staff Working Document, p . 8

Overview of existing reforms at EU Level

The Recommendation goes beyond the Regulation in seeking to promote harmonisation across EU jurisdictions by introducing minimum standards for national regimes. The objective of the harmonisation approach through the “New Approach” initiative is to move jurisdictions in each member State closer to best practice, where this is measured in terms of improvements in the recovery rate, in a bid to foster convergence around best practices.

In connection with any European minimum insolvency standards:

1. Member states (each, an “Enacting State”) would expect to see any corresponding changes that are implemented lead to economic improvements; and
2. To the extent that those changes give rise to restructuring processes that are sufficiently similar to those of other member states, the Enacting State can hope to see further economic improvements, due to (a) a more readily recognisable procedure with more predictable outcomes; and (b) local corporate entities attracting cross border finance at more competitive rates (again because of the more predictable outcomes).

The Recommendation highlights that “further harmonisation of minimum standards for European insolvency regimes would help to facilitate more predictable and orderly outcomes for corporate restructurings.” In order for this to be most effective, there should be minimal differences in the manner in which each Enacting State interprets and introduces the harmonised framework into their local insolvency laws. Therefore, the scope of each Enacting State to interpret and introduce different criteria in relation to those standards should be limited.

On 30 September 2015, the Commission issued an “Evaluation of the Implementation of the Commission Recommendation of 12.3.2014 on a New Approach to Business Failure and Insolvency”. The evaluation acknowledged that some European member states had implemented insolvency reforms in response to the Recommendation, but suggested that there are important disparities in perceptions about the effects of such national reforms, notably between the EC and members states (including those that have implemented changes). This is evidenced by the Commission’s statement in the evaluation that “among the Member States who replied, several Member States consider that they already largely comply with the Recommendation”, quickly followed by Commission’s conclusion that the Recommendations had “not succeeded in having the desired impact in facilitating the rescue of businesses in financial difficulty and in giving a second chance to entrepreneurs because of its only partial implementation in a significant number of Member States, including those having launched reforms.” This suggests that the Commission may agree with our assertion that we cannot expect the problems caused by divergent European national insolvency regimes to be resolved at the individual national level and would require some level of minimum standards to be applied across Europe.

The evaluation further concluded that the *“differences in implementation mean continued legal uncertainty and additional costs for investors in assessing their risks, and continuing barriers to the efficient restructuring of viable companies in the EU”*. In response, and alongside its evaluation, the Commission confirmed its intention as part of the capital markets union to propose a legislative initiative on business insolvency by Q4 2016.

3. Legal and policy aspects of EU insolvency systems



3. Legal and policy aspects of EU insolvency systems

This section provides a legal and policy overview of European insolvency frameworks. The contents are structured as follows:

- Section 3.1 examines the main legal aspects of national insolvency regimes in Europe;
- Section 3.2 reviews practical issues for effective insolvency regimes; and
- Section 3.3 discusses the case for further policy reform at EU level.

3.1 Legal aspects of European insolvency frameworks

This section examines essential legal aspects of insolvency regimes in Europe, discussing both general principles and divergences in practice at national level. The discussion focuses on:

- i. stay provisions;
- ii. the valuation framework;
- iii. cram-down;
- iv. ongoing (debtor-in-possession) financing; and
- v. the role of creditors.

Stay provisions

A properly defined stay on actions prejudicial to the survival of the business is a crucial element of any useful rescue procedure. Stay provisions need to strike a balance between preventing precipitate action by creditors and offering certainty and predictability around the contractual provisions linking debtors and creditors. According to work conducted by the World Bank, the critical dimensions of stay provisions are:

- automaticity of stay processes once insolvency proceedings have begun;
- the extent of coverage of the debtor's assets of a stay order; and
- the scope of creditors covered by the stay order.

Inadequate or overly restrictive stay provisions are likely to reduce the chances for a successful turnaround and damage the overall value of the business. For example, an ineffective stay could allow customers and suppliers to walk away (or demand punitive amendments) at a time when their continued commitment is most crucial to the company's rescue. Alternatively, upon a default, an ineffective stay might not prevent creditors from instituting proceedings to seize secured assets or taking other actions that would hinder a successful restructuring.

We may distinguish between automatic court stay orders that apply for a relatively brief period, and stay orders that can be extended subject to demonstrating that extension will favour the continuation of the business as a going concern.

The length of a stay procedure must balance the interests of debtors and secured creditors. It must be long enough to allow for sufficient time to secure the business, but not so long as to erode confidence in asset-based lending. Therefore, stay proceedings should not be so long or onerous that they trap financing or unduly prevent or discourage creditors from providing necessary financing to the market. A stay provision that is too long or onerous may, in certain circumstances, actually erode value.

Most EU Member States have introduced some form of stay as part of certain court-supervised insolvency and restructuring procedures. However, the drafting and scope of such stay provisions varies widely. Spanish insolvency law includes a time-limited moratorium on creditor action, although such time limits are generally too short to adequately restructure an otherwise viable business. Under English law, contractual termination provisions triggered by insolvency are permitted and remain exercisable by the counterparty notwithstanding any stay. Furthermore, the English scheme of arrangement, which, as noted above, is an increasingly popular restructuring tool, does not trigger a stay.

The valuation framework

Reliable valuation is a critical aspect of insolvency proceedings. Valuation is necessary in order to:

- i. establish whether a distressed company is technically insolvent or able to continue to trade;
- ii. determine which stakeholders retain an economic interest in the business;
- iii. inform any restructuring plan, whether creditor- or debtor-led; and
- iv. assign new interests to stakeholders as appropriate, including rights to any future value in the restructured company.

In a restructuring context, the two main valuation methodologies used to assess a company's value are "going concern" valuations and liquidation (or "gone concern") valuations. A going concern valuation assesses the value of a company as an operating business and therefore ascribes value both to the company's assets and its future earning power and prospects.

In contrast, a gone concern valuation is concerned only with determining the value of a company's individual assets sold on a piecemeal basis out of an insolvency process, and therefore, tends to be lower than a going concern valuation. Thus, a universally applied going concern valuation approach is likely to save more viable businesses than a liquidation valuation approach.

Unlike the United States, Europe does not yet have a consistent methodology for valuing companies in a restructuring process. Each member state has its own rules governing the technical basis for insolvency, which leads to inconsistent outcomes, particularly for a cross-border group of companies. There is also currently no consistent method or platform for resolving shareholders' disputes as to the basis of valuation, short of a company entering formal insolvency proceedings.

Appendix A outlines how valuation is generally governed by local law in EU member states. Within Europe, English law arguably has the most developed jurisprudence. However, in contrast to the U.S. courts, the English courts have tended to endorse liquidation valuations as the relevant metric rather than going concern valuations.¹³ In particular, in the context of schemes of arrangement the English courts have traditionally favoured applying a liquidation valuation to determining which creditors have an economic interest in a scheme company and as a comparator to the restructuring outcome projected under the scheme.¹⁴

A more harmonised approach to valuation would provide creditors with greater certainty and predictability regarding their rights when a company faces financial difficulties, enabling commercial parties transacting across EU borders to more accurately evaluate downside risks. A desirable minimal requirement, which has already been implemented in some European jurisdictions, would be a "Best interests test" to establish whether creditors are at least as well off under the proposed restructuring plan as they would be under a liquidation scenario.

While in certain European countries there are proceedings outside of formal insolvency which use their own valuation methods, a more consistent framework could be created across Europe to resolve valuation disputes quickly outside formal insolvency proceedings. This would enable practice and precedent to develop in restructuring valuations, providing stakeholders relative certainty of outcome, whilst avoiding the value loss associated with formal insolvency proceedings.

Cramdown

Having established a valuation for the enterprise to be restructured, it may become evident that some lower ranking stakeholders (e.g. shareholders and subordinated creditors) would likely receive little or no return on their credit or investment under the insolvency proposal and therefore no longer have an economic interest in the enterprise. Traditionally, however, the agreement of these "out-of-the-money" junior creditors and/or shareholders would nevertheless be required for an out-of-court restructuring. More recently, parties have realised that making a restructuring dependent upon the consent of stakeholders with no remaining economic interest in an enterprise is not conducive to an efficient restructuring.

Ad hoc approaches to cramdown create uncertainty concerning stakeholders' rights and, ultimately, make restructurings outside of formal insolvency proceedings more difficult. The issue will become increasingly important as more complex

¹³ English law, however, does not preclude the use of alternative valuation methodologies (including going concerns valuations) (see Bluebrook).

¹⁴ This approach is grounded on the understanding that the most likely alternative outcome to a successful creditor scheme is the applicant company becoming insolvent and that it therefore follows that a liquidation valuation of the company is the appropriate starting place (see MyTravel).

capital structures predominate. Practice currently varies across Europe. With respect to cramdown procedures, English courts apply a “fairness test” prior to sanctioning an English scheme of arrangement. This contrasts with Spain where creditors suffering a “disproportionate sacrifice”¹⁵ may only challenge a scheme after it has been sanctioned by the court.

To create a robust and readily available cramdown regime that effectively binds out-of-the-money stakeholders, minority dissidents and apathetic creditors, there should be more consistency and an improvement in minimum requirements and protections for those affected stakeholders dissidents to ensure that this tool is being used fairly. In particular, creditors or shareholders who no longer have an economic interest in the enterprise as determined by a universally approved valuation methodology should not be in a position where their “veto” forces formal insolvency proceedings or delays otherwise viable restructurings.

Ongoing (debtor-in-possession) financing

In the absence of debtor-in-possession (DIP) financing arrangements, under which a company under court-supervised protection can receive additional financing after it has entered into insolvency or similar proceedings, a distressed company has to rely on existing creditors to meet its interim funding requirements whilst a restructuring plan is devised. Whether and how this is achieved depends on the support of existing lenders and the nature of existing credit facilities. The process can be complex where a large number of financial institutions (with differing investment and exit strategies) are involved and in complicated cross-border proceedings where the rights and obligations of creditors, directors and other stakeholders differ, often leading to conflicting objectives and considerations.

In the U.S., the Bankruptcy Code provides super-priority status for post-petition DIP financing. A number of European jurisdictions have recently implemented similar reforms, most notably France, Italy and Spain. A specialised market has evolved in the U.S. for this sort of rescue funding, but is yet to develop in Europe.

There are four categories of DIP financing, which are:

1. Unsecured financing with a super priority claim. Lenders who provide this kind of financing are given a super priority claim, allowing them to be paid ahead of all other administrative claims.
2. Secured financing by granting security over unencumbered assets of the debtor.
3. Secured financing by granting subordinated or junior ranking security over encumbered assets of the debtor.
4. Secured financing by granting senior or equal ranking security over encumbered assets of the debtor.

Under the U.S. Bankruptcy Code, the debtor must try to obtain DIP financing in the order set out above. The debtor is obliged to try to obtain unsecured financing (category 1) and only if unsuccessful can it then try to obtain any financing secured on unencumbered assets (category 2), and so on.

Any unsecured financing will usually be provided by trade creditors rather than bank lenders. Bank lenders are more likely to seek to provide some form of secured DIP financing, motivated by the payment of substantial fees, the possibility of higher margins and a strong package of covenants. The U.S. DIP financing market has also seen increased activity from bespoke lenders such as hedge funds, private equity funds, institutional lenders and CLO funds, drawn by the higher yields available or possible loan to own strategies.

For court-supervised restructurings within Europe, there should be automatic priority status for new financing and no regulatory restrictions on the provision of interim financing to debtors. In particular, the market should be open to alternative sources of finance, such as hedge funds, and any usury thresholds should be removed.

DIP financing providers should also be protected by some form of immunity against criminal liability, as supported by the Commission Recommendation of March 2014, and/or public guarantees (provided State aid rules are complied with).

The above reforms would greatly increase the potential sources of financing, improving the chances for businesses to restructure successfully and also promoting the development of a European DIP financing market. Court supervision should

¹⁵ This term is not defined under Spanish law and nor has any guidance been developed by Spanish courts.

ensure that the terms of the interim financing (including any priority status) are warranted by the actual needs of the business and in the context of the specific restructuring, and should also help to ensure that existing creditors are not unduly prejudiced by the terms of any DIP financing.

Role of creditors

Where a debtor is not obliged to put a creditor's restructuring proposal to a vote, creditors are effectively forced either to approve the debtor's plan or push the company into liquidation. However, in recent years there has been much greater receptiveness across Europe to lender-led restructuring proposals.¹⁶ A number of jurisdictions now grant creditors the right to propose their own restructuring plan (or a counter-proposal to a debtor's plan), most notably in France and Spain.

In court-supervised pre-insolvency proceedings, creditors – and potentially, other interested third parties such as shareholders – should be granted the right to submit a restructuring plan to a debtor, which should be put to creditor vote. This would allow credit-bids and, more generally, create an incentive for the debtor to 'stay honest' and present more achievable restructuring proposals.

In addition, creditors should be given greater disclosure of relevant information on the affected enterprise as early in the process as possible, as well as information relating to non-creditor sponsored restructuring proposals.

3.2 Practical aspects of effective insolvency frameworks

This section examines essential legal aspects of insolvency regimes in Europe, discussing both general principles and divergences in practice at national level. The discussion focuses on:

- i. the judicial system;
- ii. the insolvency profession; and
- iii. reporting and transparency.

The judicial system

It is important that there is an adequate judicial and professional framework in place to successfully administer any European insolvency reform. For example, there should be consistency among the courts in the application of insolvency laws, rules and regulations. In some jurisdictions the outcome of an insolvency proceeding may be completely different depending on the judicial region in the applicable country in which the case is heard, or depending on which judge presides over the case. The adoption of minimum insolvency standards across Europe would help to reduce any negative effects of judicial inconsistencies in the interpretation or application of insolvency laws.

It is also important that judicial, administrative and regulatory officials charged with interpreting and administering insolvency rules and regulations are sufficiently knowledgeable about, and experienced in, matters relating to insolvency to be able to apply such rules and regulations in a consistent and reasoned manner. It would be helpful if the Commission were to encourage the development of a network of dedicated, knowledgeable and independent court and administrative officials across the EU to interpret and administer its insolvency rules and regulations in a balanced and consistent manner.

Professional and administrative standards

The administrative and professional personnel involved in insolvency proceedings should also be considered, especially for large cross-border insolvencies. This is not a regulated profession and standards vary across Europe, particularly outside of the larger cities. At a minimum, these parties should have experience and a high level of knowledge regarding accounting, legal and business practices, financial markets and related issues, and general insolvency structures and practices, as well as the specific considerations that enter into cross-border insolvencies or insolvencies involved sophisticated or unusual deal structures. In the U.S., for example, there are courts, and therefore judges, in each federal judicial district which only hear bankruptcy cases, as well as corresponding administrative personnel that exclusively administer and control bankruptcy estates under the direction of these courts. Accordingly, there has developed in the U.S. an extremely experienced and knowledgeable network of judicial and administrative officials and practitioners, which provides a relatively high degree of certainty to issuers, creditors and other stakeholders with respect to the conduct and, to some extent, the outcome of an insolvency proceeding.

¹⁶ See for example the restructuring of French fashion retailer Vivarte; a lender-led restructuring proposal which resulted in a fully consensual work-out involving France's largest ever debt-for-equity swap, and which avoided the need to put the company into Accelerated Financial Safeguard proceedings.

Reporting and transparency

The research that we have conducted for this report has highlighted the lack of real-world data on the outcomes of insolvency proceedings and their effect on European capital markets (and the European economy). More and better data on insolvency proceedings and procedures would be useful in assessing the utility of the legal and practical aspects of insolvency frameworks discussed in this report.

Reporting by national insolvency agencies is generally patchy across Europe, with reporting typically limited to a small number of cases and outcomes (possibly with some sectoral classification, as in the UK). The Czech Republic is an exception since its insolvency agency publishes a full record of each case. Although the Czech authorities do not publish aggregate data, market participants are able to use the public record to derive data on overall outcomes.¹⁷

Key data points which are not yet typically reported publicly by insolvency agencies include performance metrics such as the speed of procedures; outcomes achieved; and the percentage of asset value recovered or preserved in bankruptcy. Such data points would help to inform policymakers regarding the need for additional reforms, or changes to existing proposals or reforms. If we are to improve the understanding of insolvency frameworks and their effects on the European economy it is essential that more data is made available to both policymakers and the market generally.

3.3 The case for further EU level reform of insolvency laws

We cannot expect the disparities in national insolvency and restructuring laws to be resolved or determined by market forces. Stakeholders approach each restructuring with their own agenda and strategy, often looking for positions of control and influence to gain leverage, and are not always seeking common ground and consensus. In addition, policymakers in various local jurisdictions often cite political considerations, or historical and cultural practices, as serious impediments to insolvency reform and harmonisation. As a result, and as highlighted above, the absence of a consistent, predictable and well supervised European restructuring regime continues to create a considerable layer of uncertainty, increases costs and, to some extent, alters the economics of capital markets transactions. Fashioning ad hoc restructuring frameworks around national or market driven influences results in greater transaction risks and higher costs of capital.

Further harmonisation of minimum standards for European insolvency regimes would help to facilitate more predictable and orderly outcomes for corporate restructurings. As shown in Section 4, market participants are more likely to invest, and are willing to pay a price premium, when purchasing assets in countries with the most predictable restructuring outcomes. Divergent and inadequate insolvency regimes limit the potential of the private sector to attract investment, while, on the other hand, developing sound minimum standards introduce a greater level of predictability to creditors and other stakeholders, boost investment and enhance the 'single market' benefits arising from a more integrated economic environment. Accordingly, we believe that certain key aspects highlighted above, when enacted properly and supported by the relevant jurisdiction's legal, judicial and regulatory frameworks, would greatly increase the effectiveness of European insolvency and restructuring laws and, where appropriate, would positively enhance a company's ability to effectively restructure and avoid formal insolvency.

A predictable, consistent and effective restructuring process is singularly lacking across Europe. There is no doubt that the targeted reforms to European insolvency laws described above would help to increase the efficiency of, and confidence in, European capital markets. While introducing such reforms will lead to improvements generally, they will have their greatest positive impact on the EU economy and markets, to the extent that they are implemented consistently across jurisdictions.

Several wider policy benefits should also result from insolvency reform in Europe:

- **Tackling the problem of non-performing loans (NPL).** In its most recent Article IV report on the Euro area, the IMF found that *"high NPLs are hindering lending and the recovery. By weakening bank profitability and tying up capital, NPLs constrain banks' ability to lend and limit the effectiveness of monetary policy."*¹⁸ The IMF has identified improving Europe's insolvency framework as a priority in order to reduce Europe's large stock of NPLs.

¹⁷ Aggregate data published by a Czech firm, InsolCentrum, cite an effective recovery rate of 6-7% of creditor claims in 2011 and 2012, with an average time for resolution of 21 months. At that time the World Bank estimates a resolution period of 38 months and a recovery rate of 56%.

¹⁸ July 2015 IMF Article IV report on Euro area policies, available at: <https://www.imf.org/external/pubs/ft/scr/2015/cr15204.pdf>

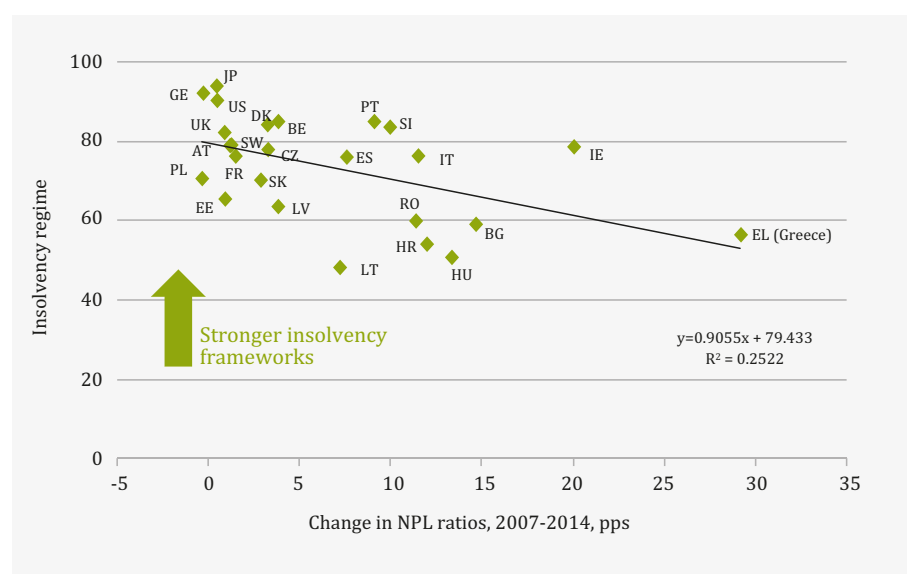
Based on a standard definition, the ECB's 2014 comprehensive assessment identified a total of €879 billion in non-performing exposures in the banking system.¹⁹ A recent EBA study²⁰ has identified that in most Member States the highest share of NPLs is in the SME lending book. The EU weighted average for SME loans was 18.5 % in June 2015. The EBA explains that high NPL ratios for SMEs are caused by *"the relatively lower resilience of SMEs to adverse economic conditions compared to other corporates... and by legal and other difficulties surrounding the disposal/write-off of SMEs' NPLs."*

In a recent study conducted by the European Commission²¹ (discussed more extensively in Annex 3), the authors find evidence of the contribution of sound insolvency regimes (among other factors such as GDP growth and debt ratios) in accelerating the speed of adjustment of NPLs. Below we provide further support to this argument, which however is more robustly analysed in the EC paper. **Figure 1** compares the change in NPLs between 2007 and 2014 in different European countries, the United States and Japan, with the quality of insolvency regimes as measured by the World Bank distance to frontier (DTF) metric²².

As illustrated in **Figure 1**, countries with stronger insolvency regimes were able to adjust more rapidly their NPL ratios than countries with weaker regimes. The rationale of this finding is that stronger insolvency frameworks facilitate the restructuring and continuation of debtor's operations and therefore smooth the progress towards a rapid change of unsustainable debt levels.²³ This result is supported by similar analysis by the IMF (discussed in Annex 3) which finds that countries with stronger insolvency regimes deleveraged more rapidly in the post crisis period.

High levels of NPLs have a direct consequence on the capacity of banks to support growth. According to the IMF Article IV review of the Euro area, "high levels of NPLs and debt have held back bank lending and investment, limiting the pass-through of easier financial conditions." The IMF finds that "NPL disposal can free up large volumes of regulatory capital and generate significant capacity for new lending", calculating that freeing-up capital disposed for NPL could unlock new lending of between €167–€522 billion, provided there is corresponding demand for new loans.

Figure 1: Quality of insolvency regimes in 2015 (distance to frontier) and change in NPLs in Europe, Japan and the United States



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High levels of NPLs and debt have held back bank lending and investment.
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Source: World Bank and Doing Business 2015

¹⁹ Report of the ECB comprehensive assessment, available at: <https://www.ecb.europa.eu/press/pr/date/2014/html/pr141026.en.html>

²⁰ Risk Assessment of the European Banking System, EBA, December 2015.

²¹ European Commission (2015b) "The Economic impact of Rescue and Recovery Frameworks in the EU". available at http://ec.europa.eu/economy_finance/publications/eedp/pdf/dp004_en.pdf

²² For a detailed definition of this metric see section 3.2.1.

²³ A similar result was observed by correlating the 2015 level of NPLs and the same metric of quality of insolvency regimes as of 2015.

- **Capital market harmonisation.** The EU is striving to harmonise capital market rules and practices across Europe, as evidenced by initiatives such as the European banking union and the proposed capital markets union. In addition, the Commission is seeking to establish a “single rulebook” through legislation on markets in financial instruments (MiFID II), market abuse (MAR/MAD), alternative investment fund managers (AIFMD), over the counter (OTC) derivatives (EMIR) and central securities depositories (CSDR), among others.²⁴ Each of these initiatives and regulations support and encourage deeper and stronger markets and are intended to increase harmonisation across Europe. We support these reforms but also believe – for the reasons stated above – that they will not be optimally effective without a similar and corresponding focus on closer alignment of European insolvency rules.
- **Public/private issues.** European insolvency procedures sometimes have complicated or unintended securities law implications. Information regarding proceedings under European insolvency regimes (even in-court proceedings) is, generally, not publicly available, and any relevant information is usually distributed on a confidential basis and only made available to creditors. In such situations, trading on a public basis in the relevant securities can become difficult or unlawful. For example, under UK market abuse rules, trading on information not available to the public and shareholders, even if available to all creditors including a trading counterparty, could expose participants to liability (including possible criminal sanction) for market abuse. Any European insolvency reform should address this issue and make it clear when and how securities of an insolvent company may be publicly traded during insolvency proceedings.
- **Disclosure.** Many European countries are currently reforming and revising their insolvency laws, as illustrated by the information contained in Appendix A. In addition, as noted above, many debtors are able to take advantage of COMI shifts and other mechanisms to tailor where and how their insolvency or restructuring proceedings are conducted. The location and participants in an insolvency or restructuring proceeding can sometimes have a significant effect on the outcome of such proceedings. This situation increases investor uncertainty regarding the treatment of debt in an insolvency or restructuring and, in a worst case scenario, might result in such treatment being very different from the insolvency considerations described in the relevant offering document. Reform and harmonisation of European insolvency regimes would help to reduce this uncertainty.

In summary, there is a strong prima facie case for greater harmonisation of insolvency rules across the EU, with potential economic benefits for European companies, investors and the health of the financial system as a whole. Section 4 attempts to quantify the scale of the potential economic benefit to Europe from improving the effectiveness of its insolvency framework.

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There is a strong prima facie
case for greater harmonisation
of insolvency rules.
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24 See the European Commission’s Green Paper on “Building a Capital Markets Union”, page 5, footnote 1.

4. Economic analysis of the impacts of insolvency regime quality



4. Economic analysis of the impacts of insolvency regime quality

This chapter provides an economic perspective on the issue of insolvency regimes and offers an estimate of the potential benefits of insolvency reform in Europe. The contents are structured as follows:

- Section 4.1 summarises the economic literature on insolvency regimes.
- Section 4.2 provides an overview of the main data sources on international insolvency frameworks and discusses data limitations.
- Section 4.3 outlines an econometric model for estimating the potential benefits to EU credit markets resulting from insolvency reform.
- Section 4.4 provides an estimate of the macroeconomic benefits from EU insolvency reform, based on the results derived in section 4.3.

4.1 Key messages from the economic literature

An established body of research points to the positive effect of well-functioning financial markets on economic performance.²⁵ Indicators of financial market development and efficiency are strongly influenced by the institutional framework, including regulations pertaining to insolvency and bankruptcy, which underpin the operation of financial markets. Section 3.1 reviews the linkages between insolvency reform and key macro and microeconomic variables.

Extant literature considers the linkages between insolvency reform and credit protection with four sets of economic variables:

The impact on equity and credit markets:

- improvements in the efficiency of debt enforcement lead to deeper markets for debt (Djankov, 2008);
- equity beta and price volatility are lower in countries where the bankruptcy code favours debt renegotiations (Favara et al., 2012);
- laws and enforcement standards are important for the size and extent of a country's capital markets. Countries with poorer investor protection have smaller and narrower capital markets (La Porta et al, 1997);
- market valuations improved with the introduction of new bankruptcy laws which gave greater protection to creditors (Kadiyala, 2011);
- weak creditor rights increase loan spreads (Bae and Goyal, 2009);

Financing conditions for companies:

- unfriendly bankruptcy codes lead to higher collateral requirements (Davydenko and Franks, 2008);
- sound and efficient investor protection rules increase the likelihood to access credit (ECB);

Entrepreneurship and company formation:

- sound insolvency regimes encourage entrepreneurship estimated as the likelihood of self-employment (EC) and rate of new firm entry (Leea et. al, 2001);

25 See for example, Raghuram Rajan and Luigi Zingales (1998), "Financial Dependence and Growth", *American Economic Review*, Vo. 8, No.3, pp 559-586; Ross Levine and Sara Zervos, "Stock markets, banks and economic growth", Vo. 8, No.3, pp 537-558; Marco Pagano (1993), "Financial markets and growth", *European Economic Review*, Vo. 37, pp613-622; Robert King and Ross Levine, "Finance, entrepreneurship, and growth – Theory and evidence", *Journal of Monetary Economics*, Vol. 32 pp 513-542; Rioja, Felix, and Neven Valev. 2004a. "Finance and the Sources of Growth at Various Stages of Economic Development." *Economic Inquiry* 42: 127–140 and Philippe Aghion, Peter Howitt and David Mayer-Foulkes (2005), "The effect of financial development on convergence: Theory and Evidence", *Quarterly Journal of Economics*, Vol. 120 (1), pp 173-222

Macroeconomic outcomes:

- Sound insolvency regimes speed up macroeconomic adjustment and deleveraging (IMF, RBS)
- Sound pre-insolvency regimes speed up the adjustment of NPLs (EC).

In sum, a wide ranging body of literature spanning several decades attests to the relationship between financial market efficiency and economic growth, and also the effects that institutional reforms (including harmonisation) can have on growth via their effects on financial markets.

A more comprehensive and detailed literature review on insolvency regimes, creditor protection and economic performance is provided in Annex 3.

The research undertaken in this report has measured the efficiency of financial markets by using the metric of risk premiums, and has reported the effects of changes in the quality of insolvency regimes on these premiums. Recent work also underscores the linkages between the effectiveness of insolvency regimes and the efficacy of stabilisation policies.

Please see Appendix D for case studies of institutional reform and performance.

4.2 Insolvency regimes and economic performance

This section provides an overview of the main data sources currently available on international insolvency frameworks and examines the main messages in the data on EU member states. The section also discusses limitations in the existing data, which have implications for the specification of the economic model developed in this report.

EU member state performance as measured by World Bank indices

Efficient insolvency regimes reduce the transactions costs of enforcing debt contracts, and more broadly promote the efficiency of capital markets by promoting the winding up of unviable firms while providing scope for the orderly restructuring of distressed, but ultimately viable, businesses.

Measuring best practice in insolvency regimes can be done in many ways. One is to focus on quantitative performance measures, such as the reported cost of proceedings, time for creditors to recover credit, and rates of default and recovery. A second approach is to identify the desirable properties of an insolvency regime, and to “score” the actual regime of a jurisdiction based on whether, and how far, they exhibit these desirable properties.

These “desirable properties” relate essentially to the decision rights of the various parties over business operations and the conduct of the proceedings. In this regard, historically, civil law regimes in Europe have been regarded as providing creditors with less decision rights compared to common law regimes, such as England and Wales. The economic rationale for such provisions reflects two types of problem:

- *Informational problems* – the debtor and/or certain creditors may have more information on aspects of the business than other parties, and may also have the possibility to undertake actions that might be in the interest of a subset of the parties but are globally suboptimal. Moreover, because all contracts are to some extent incomplete, questions of residual rights of control over decisions about the debtor’s operations and assets will arise.
- *Collective action problem*. While it is in the interests of all parties to secure an orderly liquidation or restructuring, some parties may perceive there to be benefits from behaving opportunistically. If such behaviour is generalised, then the chances of an orderly resolution are diminished. A system of rules specifying decision rights and the scope of these rights is thus required to enforce cooperative behaviour.

The World Bank, through its Doing Business database, provides information on both the quantitative and qualitative properties of insolvency regimes.²⁶ Because this database provides information that is comprehensive in its coverage of countries and types of insolvency indicator, it is our primary source of information. Moreover, as observed in section 2, the EU’s view on best practices is influenced by the World Bank’s research.

²⁶ The information reported is collected on the basis of a simulated case study scenario of an insolvency. Experts are asked to rate institutions and laws in specific countries, and from this, a computation is obtained for both the quantitative and qualitative indicators.

Economic analysis of the impacts of insolvency regime quality

Quantitative and qualitative measures of insolvency regime performance

Since 2004, the World Bank Doing Business initiative has scored countries on various aspects of institutional quality, including rule of law, creditor protection, and quality of the insolvency framework.

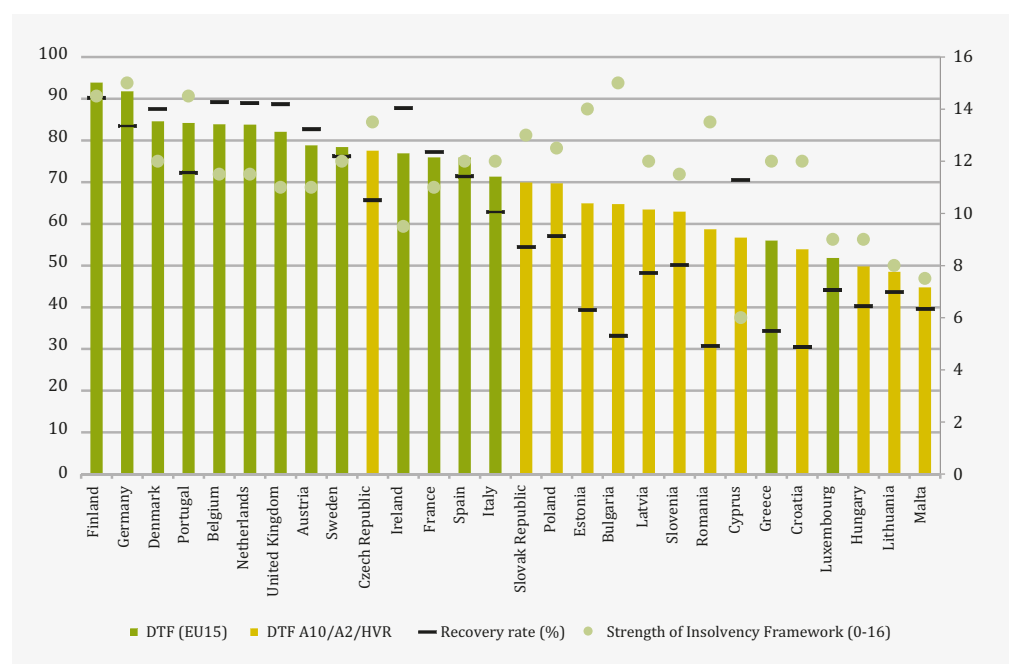
In relation to resolving insolvency, the following types of data are available:

- **Quantitative data on insolvency outcomes.** This covers the cost of insolvency proceedings, the time for creditors to recover credit, and recovery rates. These data are available back to 2004.
- **Qualitative data on strength of insolvency framework.** This composite measure is based on four sub-indices covering: (i) a reorganisation index; (ii) a commencement of proceedings index (to gauge whether debtors and/or creditors can initiate liquidation and/or reorganisation); (iii) a management of debtor's assets index; and (iv) a creditors' rights index. Each sub-index is given a rating of 0-4, and these are added to give a score of 0-16. This dataset starts in 2014.
- **Overall 'distance to frontier' score.** The DTF is an overall score showing how a country is performing in relation to insolvency, drawing on the available measures. For each variable included, a country's performance is measured relative to the worst and best performers, expressed as a number from 0 to 100. These scores are then averaged to give the DTF score. This approach is used to summarise each aspect of institutional quality in Doing Business. Note that this measure was not used in earlier years, so any analysis of this variable over time would need to use a consistently derived measure.²⁷

Figure 2 shows the EU28 countries ranked by insolvency DTF score in 2015. The bars show the 2015 DTF score. This ranking tends to place established EU members higher, with the EU15 clustered to the upper end of the distribution and the accession countries clustered to the lower end. The only exceptions to this pattern are that the Czech Republic appears in 10th place amongst the EU15, and that Luxembourg and Greece are ranked much lower than other EU15 countries.

²⁷ The range of indicators and method of aggregating scores in Doing Business has changed over time. In 2004 the quantitative measures of cost of proceedings and time of proceedings were used, alongside qualitative measures of priority of claims and efficiency of outcomes. In 2005 the qualitative measures were dropped, and a recovery rate was introduced, itself reflecting the time and cost of proceedings. From 2007, the recovery rate was used to rank countries. From 2012 a distance to frontier approach was used to treat each aspect of institutional quality – in relation to insolvency this used only the recovery rate. In 2014 the strength of insolvency framework index was introduced and used alongside recovery rate in 50:50 proportion to calculate DTF.

Figure 2: Distance to frontier, recovery rate and strength of insolvency framework in EU28



Source: Doing Business 2015

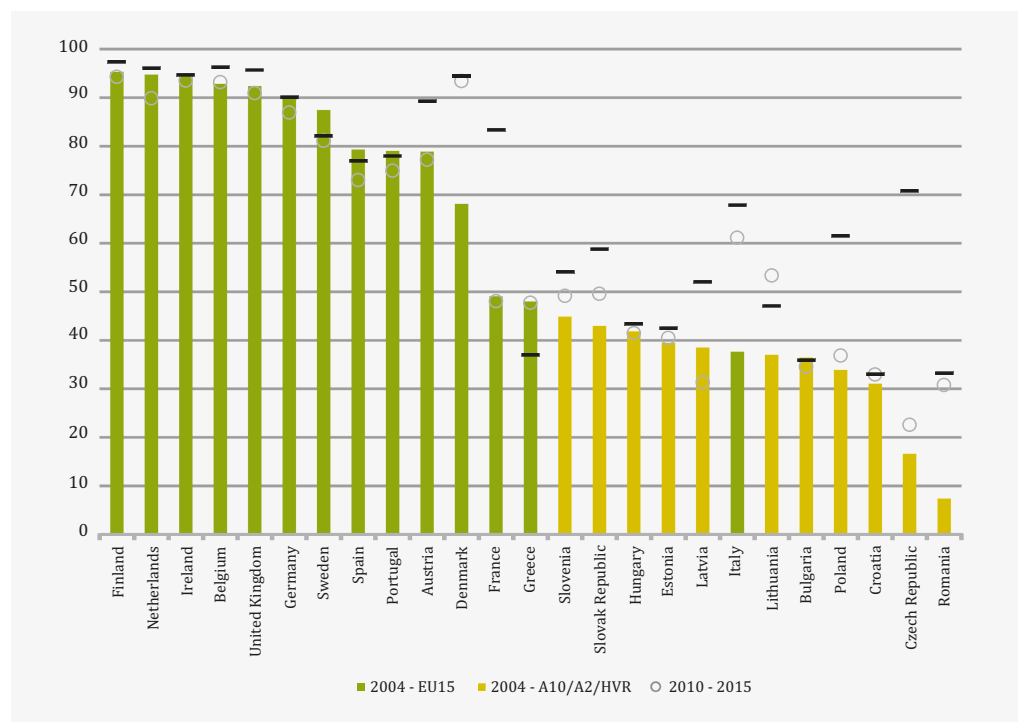
The two measures on which the 2015 DTF score is calculated – estimated recovery rate and strength of insolvency framework – are also shown. In general we see that the EU15 countries perform relatively better in terms of estimated recovery rate, but not so well in terms of strength of framework, whereas the 13 Member States (EU13) which have joined since 2004 are rated better on strength of insolvency framework than on recovery rate.

The DTF scores of EU28 member states range from 93.5 (Finland) to 44.78 (Malta), while recovery rates range from 90.2 (Finland) to 30.5 (Croatia). The large differences between countries highlight the potential benefits of harmonising insolvency regimes with adequate minimum standards. Likewise, the scope of each EU 28 member state to vary the manner in which it implements those standards should be limited; otherwise the DTF scores and recovery rates would preserve similar ranges of variation between countries, limiting in turn the ‘single market’ benefits of harmonisation.

It is possible to get some sense of how reforms and recovery rates might be linked by considering their evolution over time, and in particular the experience of member states that have more recently acceded to the EU. Thus **Figure 3** shows the EU28 countries ranked by recovery rate in 2004. In 2004, with the exception of Italy, recovery rates were higher in all of the EU15 than in the EU13. Of the EU15, only four have seen substantial increases in the recovery rate – Austria, Denmark, France and Italy. By contrast, only four of the accession countries have *not* seen substantial increases in recovery rate (Hungary, Estonia, Bulgaria, Croatia). Several members of the EU13 will have implemented various reforms and seen improvements in the recovery rate.

We note that jurisdictions in the right-hand portion of the graph comprise many of the Group 1 jurisdictions identified by the Commission as providing limited restructuring options. The low recovery rates are consistent with the World Bank’s findings linking recovery rates with the availability of restructuring options. But we also note that even these weaker jurisdictions have witnessed substantial improvements to their recovery rates between 2004 and 2015.

Figure 3: **Recovery rate in EU28 countries - 2004, 2010 and 2015**

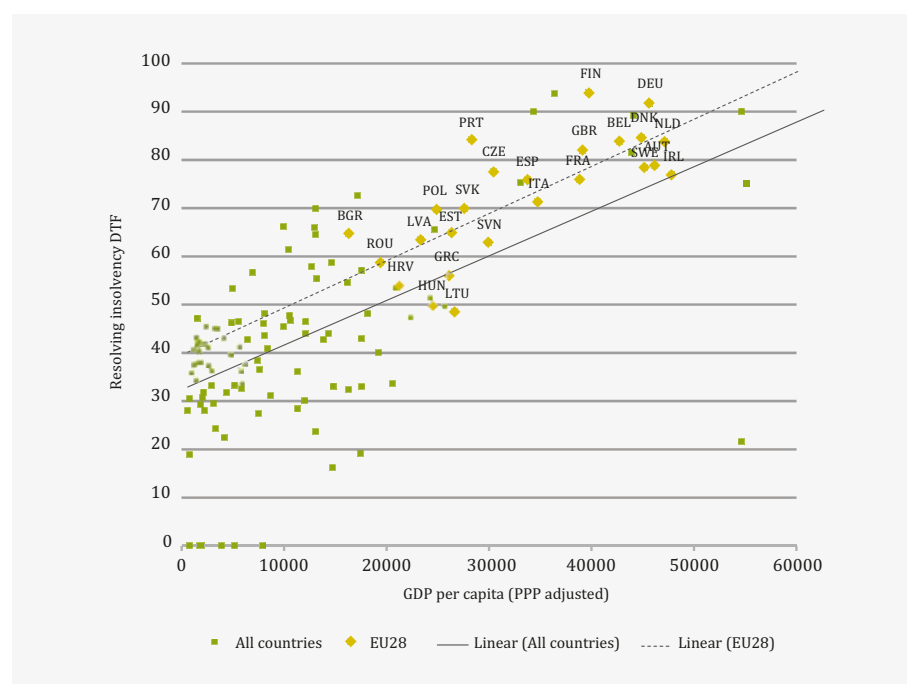


Source: Frontier analysis of Doing Business 2015

Across all countries, there is a positive and significant relationship between recovery rates and strength of insolvency framework (Pearson coefficient = 0.39, R-squared = 0.15, t-stat = 5.4). However, within the EU28 there is virtually no correlation between the variables (Pearson coefficient = 0.06, R-squared = 0.00, t-stat = 0.29). This reflects the fact that there is presently much less variation in variables of institutional quality within the EU, than outside it. Taken together, the results also highlight how the EU13 countries have benefited from policy convergence with the EU15 by raising the quality of their insolvency regimes.

Finally, we consider the link between economic growth and the quality of insolvency institutions, in light of the well-established literature on the link between economic growth and the quality of institutions generally. **Figure 4** compares GDP with the resolving insolvency DTF score. This shows a strong positive relationship between the two variables. GDP per capita in fact explains around 50 percent of the variation in the DTF score. Whilst this is a strong correlation, the causal relationship between the two is not obvious and is likely to be bi-directional: that is, the quality of institutions influences GDP, and as countries get wealthier, the quality of their institutions increases. Note that the trendline for EU28 and for all countries are very similar.

//
EU13 countries have benefited from policy convergence with the EU15.
//

Figure 4: **Correlation between Real GDP per capita and the insolvency index**

Source Frontier Economics based on Eurostat and World Bank data

The links between insolvency regime quality and the wider business environment

It is useful to consider the relationship between indicators of insolvency regime quality and other factors affecting the ease of doing business. This is because such factors are also liable to affect measures of risk, and thus would need to be taken into account when modelling the determinants of corporate bond spreads.

We have estimated correlations between insolvency DTF as calculated by the World Bank and other ease of doing business institutional indicators. Positive correlations were found with variables such as ease to start a business (0.49), access to credit (0.56), protecting minority investors (0.61), and contracts enforcement (0.48).

The correlation is strongest with the overall DTF (0.78) – this is unsurprising, as the overall DTF itself incorporates the resolving insolvency DTF score.

4.3 Estimating the impact of insolvency reform on financial market performance

This section develops an econometric model to test the relationship between national insolvency regimes and the efficiency of financial markets, as measured by the corporate risk premium. That is, the additional return an investor would require to compensate for the risk of taking on corporate debt.

The economic benefits estimated in the model are narrow in nature and may underestimate the wider impact of insolvency reform by excluding other potential benefits identified by the literature (See Annex 3). These additional benefits relate to (i) greater access to finance for companies; (ii) greater levels of entrepreneurship and company formation; (iii) the 'single market' benefits arising from a more integrated environment for cross-border trade and investment; and (iv) progress in addressing Europe's high level of non-performing loans.

Our model uses corporate bond yield spreads (the difference between corporate bond yield and sovereign bond yield) to measure risk premium. Other things being equal, we would expect a stronger insolvency regime to increase the share of asset value that would be recovered in the event of default. Thus, the return required by corporate bond holders to compensate for losses in default should be correspondingly lower. To estimate this relationship, we take into account other factors affecting

Economic analysis of the impacts of insolvency regime quality

yield spreads, such as risk at the issuer level²⁸ and the term premium. We use a bond pricing model to estimate the corporate bond yield spread as a function of key bond characteristics, which include the credit rating, time to maturity (reflecting term premium), bid-ask ratio (a measure of liquidity risk) and a measure of non-diversifiable systemic risk. We also include the insolvency recovery rate to measure the effect of insolvency regime performance.²⁹

Our main focus is on the recovery rate estimated in the World Bank's Doing Business report, which explores how the same stylised insolvency case would progress in different jurisdictions, giving a consistent measure over time and across countries.³⁰

In addition to the direct effect on bond spreads, the insolvency regime will also have an indirect effect via the credit rating, since ratings agencies adjust individual bond ratings in light of a jurisdiction's recovery rating. We estimate this by combining the effect of credit ratings on bond-spread with a bottom-up calculation of jurisdiction-specific notch adjustments.

Econometric methodology

We use a panel model pooling individual corporate bonds to estimate the correlation between insolvency metrics and risk premium (corporate bond spreads), whilst taking into account other relevant characteristics that may affect risk premia.

The key motivation is to understand the impact of insolvency regulation and other institutional factors on risk premium (corporate bond spreads). Whilst the bond characteristics are not of direct interest, it is important that these are modelled adequately, in case some of their impacts were misattributed to the strength of insolvency regimes frameworks. As a result, it is appropriate to estimate a large and extensive model on a monthly level, even though the structure of data on insolvency metrics is relatively simple and only available at annual frequency.

Below we present the scope and variables used for the estimation. Further methodological details are presented in Annex 4.

Scope of the econometric model

Bonds

The focus of the estimation is on 'vanilla' bonds, i.e. non-callable, zero-coupon bonds issued in home currency. Other types of bond are not analysed, as it is difficult to model these specific features within a general model, and unless these features are captured properly, their inclusion could bias the results.

We exclude bonds with less than one year maturity remaining, as yields of short duration bonds can behave rather differently.

Timescale

Our sample runs from 2004 to 2015. This is the period over which the main source of insolvency framework data, Doing Business, is available. The more detailed Strength of Insolvency Framework indicators are only available for 2014 and 2015

Countries

In principle, the analysis should consider all EU member states, in particular the EU accession countries that have recently reformed their insolvency regimes. However, there are very few corporate bonds in many of these countries - this itself reflects the relationship between insolvency regime and market thickening. Our sample includes 10 EU member states and 2 OECD countries. The majority of bonds are in Germany and Italy, with smaller numbers in Austria, the Netherlands and France.³¹

28 A review of the relationship between insolvency regimes and bond market development is presented in Annex 4.

29 In theory, one could use existing corporate bond indices, which are defined for specific maturities and ratings of bond, and can be aggregated measure yield spread on a consistent basis over time. However, this approach is not feasible, as corporate bond indices are only available for a limited number of European countries, mainly the more advanced ones in the region. If there is only limited number of countries, for which bond data are available there will not be enough variation across insolvency regimes to identify their impact on bond spread. Instead we pool together data on individual corporate bonds. Even if the number of bonds for a country is too small for a published bond index to exist, they can still be included in a wider model, allowing us to see how a country's insolvency regime affects the bond spread. This approach maximises the range of countries that can be included in the analysis.

30 Whilst we explored using Moody's data on actual recovery outcomes by case as an alternative measure of insolvency regime performance, we did not consider this appropriate, due to patchy coverage over countries and time, and varying case mix making it unlikely that the observed cases are representative of the underlying regime quality. The outcome recovery rate data are discussed further in Annex 3.

31 As a cross-check on the effects of sample composition, we have explored alternative weightings of the sample, such as reducing the weight attached to Italian and German bonds or re-weighting bonds such that the countries have equal prominence in the sample. This has little effect on the results, suggesting that the results are not being driven by the dominance of Italian and German bonds within the sample.

Results of estimation

Our bond pricing model shows that low corporate bond yield spreads are associated with higher recovery rates, indicating that countries with robust insolvency regimes typically have lower borrowing costs through capital markets.

The estimation results are shown in Table 1 for four models. In each case, corporate bond yield spread is the variable the impact is estimated on. By corporate yield spread, we refer to the bond's yield to maturity minus the risk free rate, proxied by the 10 year sovereign bond yield.

Each model assumes a different pricing model with different explanatory variables for bond spreads. In addition to a basic specification including only bond characteristics, we separately test two measures of insolvency regime performance, as well as a specification controlling for effects at country level. More sophisticated panel modelling gives similar results (See Annex 4).³²

Basic model

The basic model (1) does not take into account the impact of any insolvency metric. The purpose is to establish that the approach to bond estimation is working as expected, before drawing inferences regarding the effect of insolvency metrics.

In this model, the variables that seek to explain corporate bond spreads are:

- Time to maturity: remaining time (months) until the bond matures.
- Credit rating: S&P historical ratings, translated into 'notches'.³³
- Beta: correlation with market return variable; measures the correlation of the change in bond price with a global stock index (the Morgan Stanley Capital Index). Bonds with insufficient pricing history to calculate a beta were identified separately ("missing beta" in table 1).
- Liquidity: Bid-ask spreads. In many cases this data is not available, which itself indicates a degree of illiquidity. These cases are identified separately as "missing bid-ask" in table 1.
- Time trend: picks up any additional (common) changes in the yield spread that are not correlated with the above variables.

Further details on sources and data used are in Annex 4.

In the results (Column 1, basic model in Table 1), the bond characteristics all appear sensible. Around 30 percent of the variation in bond spread is explained by these characteristics. Time to maturity is positively correlated with bond spread, reflecting the term premium. Credit ratings, as a measure of default risk, are negatively correlated with the bond spread. The beta and bid-ask terms, reflecting non-diversifiable risk and liquidity risk respectively, are positively correlated with the bond spread.

Model with insolvency metrics: the impact of insolvency regimes on borrowing costs

In (2) we add the recovery rate into the model (Column 2 in Table 1). Aiming to explain corporate bond yield spreads, in this model we have included the same explanatory variables as in the "basic model" (time to maturity, credit rating, liquidity metrics and beta) and added recovery rate as explanatory variable, summarising the soundness of insolvency regimes of the different countries in which the bond was issued.

The estimation shows that a one percentage point increase in recovery rate is associated with a reduction in bond spread of 0.0366 percentage points. That is, a 10 percentage point improvement in recovery rates as measured by the World Bank, is associated with a bond spread 0.37 percentage points smaller, indicating that countries with better insolvency regimes have lower borrowing costs.

³² The bond sample used in the analysis is discussed in further detail in Annex 4.

³³ The credit rating variable is linear, i.e. assumes that the impact of a one-notch improvement will be the same at any level of credit rating. Alternative measures of credit rating were considered, which allow the impact to vary along the credit curve. However, the non-linearities were not pronounced, and these changes made little difference to the overall results. In order to keep the model simple and parsimonious, the linear specification was preferred.

This relationship is robust and statistically significant at the 1 percent level. In general we see similar impacts of the bond characteristics. The fact they tend to become slightly smaller in magnitude could reflect the modest correlation of these variables with the insolvency rate.

In (3) we take into account the potential impact of other unobservable country level characteristics³⁴ on bond spreads, by adding explanatory variables for each of the countries in the sample (Column 3 in Table 1). When these are included, the recovery rate coefficient then measures the effect of a change in the recovery rate at country level on the bond spread. **We see that a one percentage point increase in recovery rate is associated with a reduction in bond spread of 0.0178 percentage points, and this is significant at the 1 percent level.** That is, under this methodology, a 10 percentage point improvement in recovery rate associated with an 18 basis point reduction in bond spread.

The bond characteristic again becomes slightly smaller, because some of this is now picked up in the country-specific variables (or “dummies”).

Robustness checks

For purposes of robustness check, in (4) we include the World Bank’s Strength of Insolvency Framework (SIF) as an alternative measure of insolvency regime performance (Column 4 in Table 1). **This also has a statistically significant negative impact on bond spreads, with a one point increase in the score associated with a 0.27 percentage point reduction in spread.** The coefficients on the bond characteristics are reasonably different for this specification, because it is run on a smaller sample, only including data for 2014 and 2015.

34 Country dummies for each country in the sample.

Table 1: Results of bond estimation model – impact on corporate bonds yield spread (% points)

	(1) Basic model	(2) With recovery rate	(3) With recovery and country dummies	(4) With Strength of Insolvency Framework
Time trend (days)	0.000307***	0.000428***	0.000380***	0.000836***
Time to maturity (days)	0.000187***	0.000197***	0.000189***	0.000326***
Credit rating (notch)	-0.253***	-0.222***	-0.184***	-0.249***
Missing beta [§]	0.260***	-0.0313	0.0285	-0.439**
Beta	11.40***	7.934***	6.996***	0.386
Missing bid-ask [§]	0.899***	1.235***	1.274***	1.374***
Bid-ask (% point)	0.101***	0.0766***	0.0676***	0.00301
Recovery rate (% point)		-0.0366***	-0.0178***	
Strength of Insolvency Framework (0-16)				-0.270***
AUT ^ψ			0.712	
CHE ^ψ			-0.691	
DEU ^ψ			0.103	
FRA ^ψ			1.121*	
GBR ^ψ			(omitted - base case)	
IRL ^ψ			1.574**	
ITA ^ψ			0.941	
LUX ^ψ			0.0111	
NLD ^ψ			1.498**	
PRT ^ψ			1.346*	
SWE ^ψ			-0.643	
TUR ^ψ			-0.298	
Constant	4.034***	5.295***	2.761***	4.633***
Observations	22,982	22,982	22,982	6,462
R-squared	0.302	0.368	0.398	0.310

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1, [§] dichotomous variables (or “dummies”): 1= for bonds with missing beta or missing bid-ask spreads; 0= otherwise, ^ψ dichotomous variables (or “dummies”): 1= for bonds issued in the country; 0= otherwise.

Source: Frontier analysis of Datastream and World Bank data

Several additional robustness checks were estimated and are presented in Annex 4³⁵). Consistent with the results above, the relationship between insolvency regimes and corporate bond spreads holds for the alternative specifications, suggesting a robust and statistically significant correlation between both variables.

35 In these models, we estimated the impact of insolvency regime on risk premia (corporate bond spreads) using other alternative measures of yield spreads (different from the estimated in Table 2); introduced controls for other institutional variables (e.g. Doing Business institutional indicators); added weights by size of bonds; changed the sample to include near-maturity bonds; and estimated other within-country models (impact in selected economies)

Summary of main findings from the econometric analysis

A 10 percentage point improvement in recovery rates as measured by the World Bank, is associated with a bond spread 0.37 percentage points smaller, indicating that countries with better insolvency regimes have lower borrowing costs.

Alternative estimations that take into account the effect of unobservable country level characteristics (i.e. “country dummies”), a 10 percentage point improvement in recovery rates is associated with a 0.18 percentage point reduction in bond spread.

With alternative insolvency regimes metrics, we observe that a 1 percentage point improvement leads to 0.27 percentage point reduction in spread. Our bond pricing model finds a 0.2 percentage point reduction in spread per notch improvement in rating.

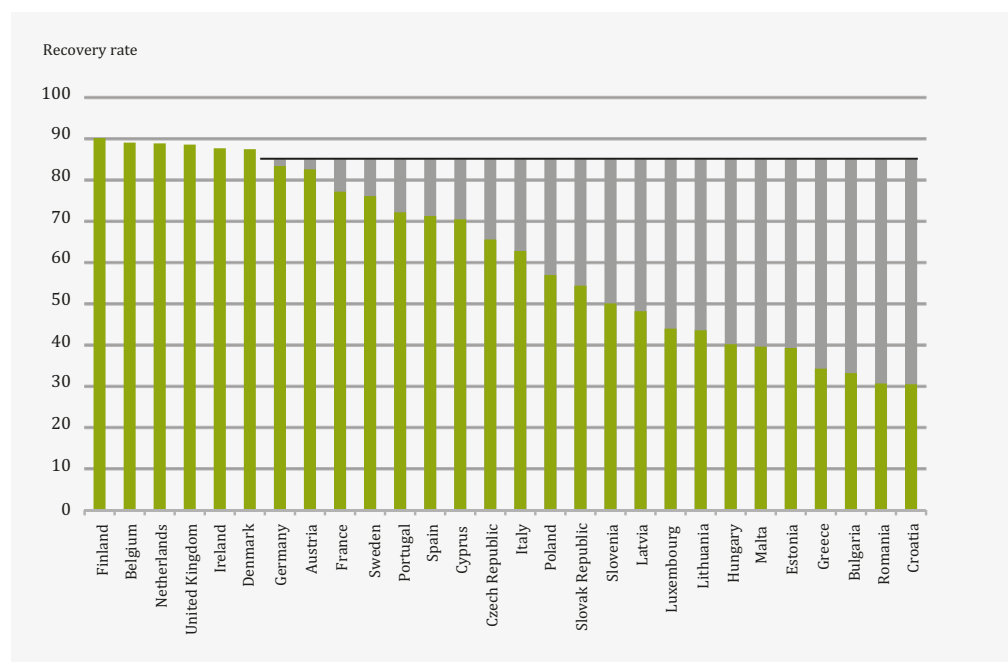
We test for the effects of other institutional factors on yield spreads. A significant effect is detected for variables measuring perceptions of corruption. The recovery rate continues to exert a significant impact, and in most instances a stronger one, pointing to the importance of insolvency regime reforms in the context of wider institutional reforms.

4.4 The potential macroeconomic impact of EU insolvency reform

We can infer the likely impact of insolvency reform by combining macro-economic data with previous estimates of the relationship between financial market performance and our own estimates of the impact of insolvency regime on financial market performance. This is performed over EU28 countries.

We begin by assuming that the reform would allow countries to reach a recovery rate of 85%, which is around the level of the top 6 EU economies.³⁶ EU countries are shown ranked by recovery rate in **Figure 5** together with the benchmark level they are assumed to reach through reform.

Figure 5: **Recovery rate - scope for improvement in EU28**



Source: Frontier analysis of World Bank data (2015)

³⁶ The EU28 weighted-average recovery rate (by GDP) stood at 77.2% in 2015. The EU15 weighted-average recovery rate stood at 79.4%

The benefits of reform are given by the size of the ‘gap’ between current recovery rates and the benchmark level of 85 percent. Our econometric analysis indicates that a percentage point improvement in recovery rate reduces bond spread by between 0.037 and 0.018 percentage points (a ‘high scenario’ and ‘low scenario’ respectively). In turn, we can draw on established literature on financial-macro linkages to infer the macroeconomic impacts. It is most appropriate to use the results from Bleaney et al,³⁷ as this paper uses corporate bond yield spread, so the recovery rate results can be translated directly into macroeconomic impacts.

Bleaney et al find that a percentage point reduction in bond spread is associated with a 1.57 percentage point increase in GDP and a 1.06 percentage point increase in employment. Combining these estimates, each percentage point improvement in recovery rate would be associated with an increase in GDP between 0.06% and 0.03% and an increase in employment between 0.04% and 0.02%. It is straightforward translating these relationships into macroeconomic impacts.

In addition to the direct effect that insolvency regime may have on bond spreads, there is also scope for an indirect effect via the credit rating. As shown above, an increase in credit rating of one notch reduces spread by between 0.18 and 0.25 percentage points. Evidence from credit rating agencies suggests they take account of jurisdiction ranking assessments when rating individual bonds.³⁸ These effects are relatively small, however, around 5% to 10% of the size of the direct effect³⁹.

Over the EU28, the total impact on annual GDP is between €41bn and €78bn or between roughly 0.3% and 0.55% of EU28 GDP.⁴⁰ The impact on GDP by country is shown in **Figure 6**. The absolute value, in Euros, of impact is given by the size of the economy and the size of the recovery rate gap. Italy, France and Spain are large economies and have scope for improvement in their insolvency regimes, so are top of the impact rankings.⁴¹ Poland, Greece, Romania and Hungary are smaller economies, but they have considerable room for improvement, and so are also feature high in the rankings.

The impacts are likely to be gradual, as countries implement reform and adjust their internal insolvency proceedings from a legal and market practice perspective.

//
The total impact on annual GDP
is between €41bn and €78bn.
//

37 Bleaney et al (2015) investigate the causal relationship between the aggregate European bond spread index and economic activity in Europe. The study finds that “bond spreads consistently predict changes in real activity”, with a percentage point reduction in bond spread associated with a 1.57 percentage point increase in GDP and a 1.06 percentage point increase in employment. The second task focuses on the implications on individual countries. While the sign of the causal relationship between bond spread and GDP is unambiguously negative, there is some country heterogeneity in the size of the effect. This implies that countries differ in their sensitivity to changes in financial conditions. In particular in Germany, France and the Netherlands, the response is weaker than in the other countries, making such countries less vulnerable to financial market turmoil. As spreads reflect the willingness to lend in the economy, decreased access to credit makes output go down which in turn affects all indicators of economic activity. The paper contributes to the interpretation of the causal relationship between corporate bond spreads and economic activity.

38 S&P outlines a methodology by which it assigns rankings of “A”, “B” or “C”. This is combined with a preliminary recovery assessment of each issue, to generate a notch adjustment relative to the issuer rating. If a country were to improve its insolvency regime and move from band B to band A, some of the bonds would see an uplift in credit rating. Other things being equal we would expect this to feed into a reduction in bond spread. We use a distribution of actual bond recovery ratios from Moody’s default data to derive a bottom-up calculation for each country.

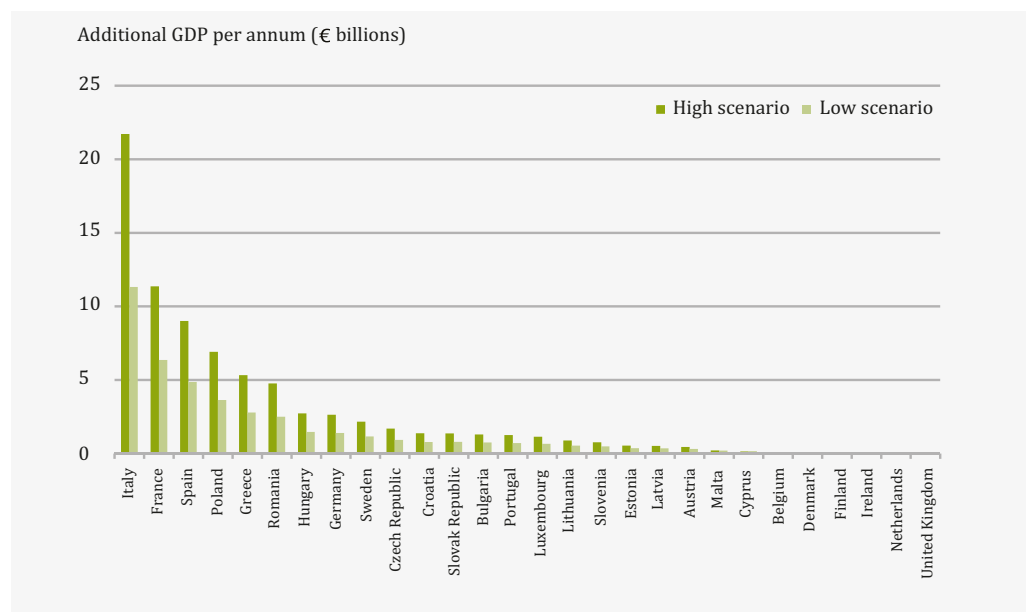
39 See Annex 4 for a detailed methodological explanation of the indirect effect via credit ratings.

40 2014 figures at market prices (Source: Eurostat)

41 For countries where the size of the recovery rate gap is small or nil, this methodology does not take into account the indirect benefits to companies based in such countries but with assets in economies with large recovery rate gaps. Therefore, the aggregate impact is likely to be larger than the estimated.

Economic analysis of the impacts of insolvency regime quality

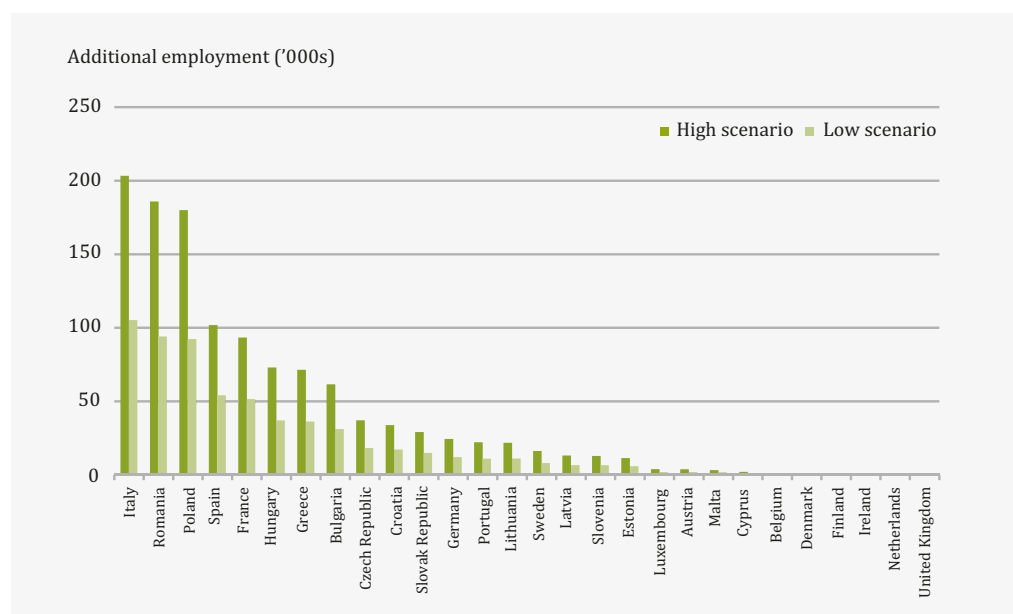
Figure 6: Illustrative GDP impact of insolvency reform on EU28



Source: Frontier analysis of Datastream, World Bank, S&P and Moody's data

Employment impacts can be calculated in the same manner. If reform allowed all countries to reach a recovery rate of 85 percent, this would imply an employment increase of 600,000 in the low scenario to 1.2 million in the high scenario. The contribution by country is shown below.

Figure 7: Illustrative employment impact of insolvency reform across EU28

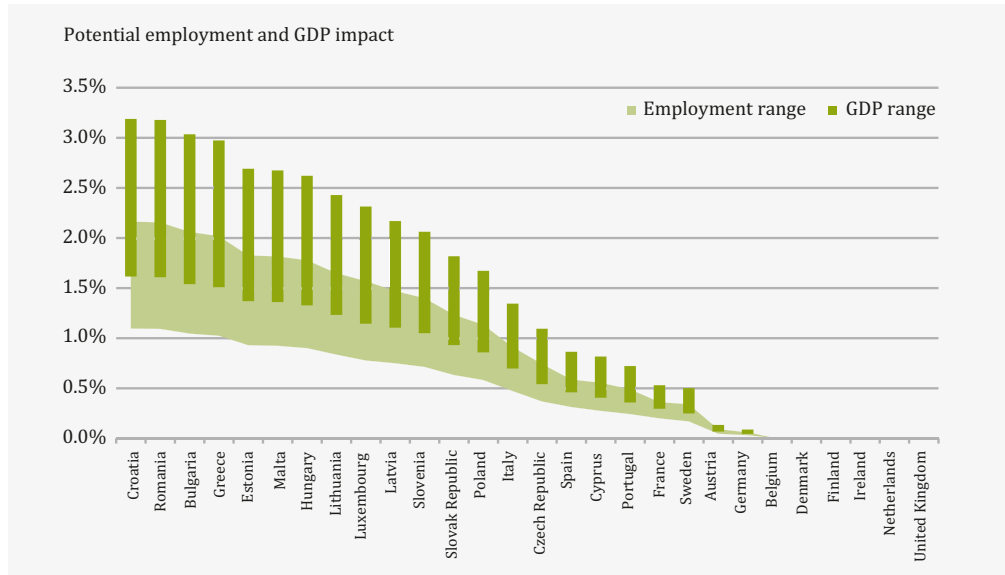


Source: Frontier analysis of Datastream, World Bank, S&P and Moody's data

The absolute impacts shown above are driven in part by the size of each country's economy. However, the relative impacts (i.e. as a proportion of a particular country's GDP or labour force) depend only on the scope for improvement in a country's insolvency regime. **Figure 8** shows the relative GDP impacts (green bars) and employment impacts (green area) by country, using the high and low scenarios to create a range. In Croatia, Romania, Bulgaria and Greece, the GDP impacts are in the

range of 1.5% to 3.2%, and the employment impacts between 1% and 2%. In eight other countries, primarily EU accession countries, the relative impacts are in excess of 1% of GDP. In countries such as UK, Ireland and Germany, where there is little scope for improvement, the potential impact from reform is small or even zero.

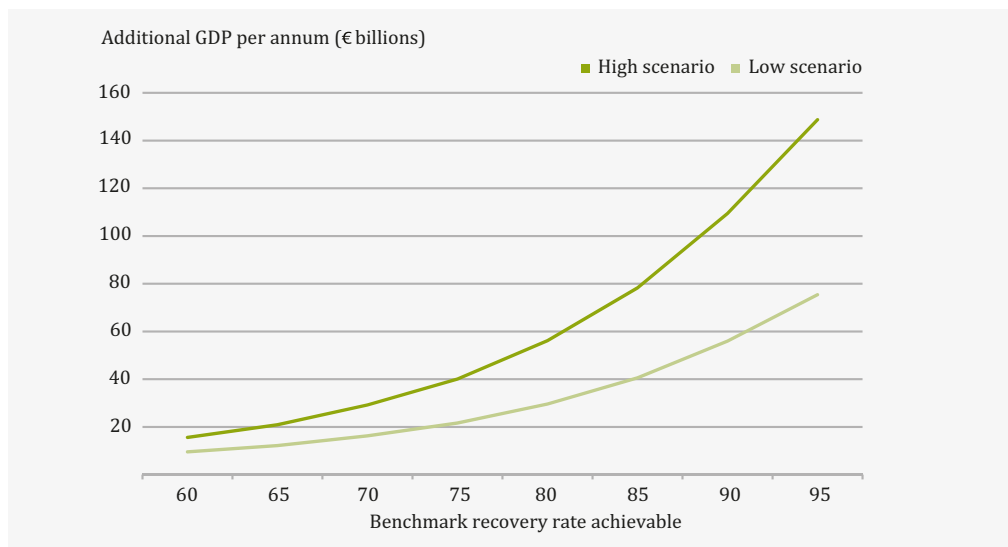
Figure 8: Relative impact of reforms by country



Source: Frontier analysis of Datastream, World Bank, S&P and Moody's data

The magnitude of impact from reform depends on how much improvement is achievable. The higher the benchmark recovery rate, the more countries have scope for improvement. **Figure 9** shows the impact on GDP under different assumptions on the horizontal axis of the minimum recovery rate that would result from reform. This is shown with separate lines for the high and low scenario respectively. At a benchmark level of 85 percent there are potential gains in all but six EU member states. But if reform would only lift countries to a recovery rate of 70 percent, there would not be any gains in larger economies such as Germany, France, or Spain, and the impact would only be in the range of €16bn to €29bn.

Figure 9: GDP impact for EU28 under different improvement assumptions



Source: Frontier analysis of Datastream, World Bank, S&P and Moody's data

Economic analysis of the impacts of insolvency regime quality

As our results illustrate, there are potentially large macroeconomic impacts from insolvency reform. The magnitude of these depends on how the impact of insolvency regime on bond spread is calculated, as well as the assumptions applied regarding the amount of regime improvement that reform can generate.

A relevant caveat to these results is that the individual country-level impact would depend, on:

- Existing recovery rate gap (or strength of insolvency regimes, already incorporated);
- individual labour market characteristics of each economy (e.g. distance to individual natural rates of unemployment or labour market flexibility); and
- size of funding carried out via capital markets.⁴²

Following Bleaney (2015), however, we anticipate the aggregate EU 28 impact as reported at between 0.3% and 0.55% of EU28 GDP and 600,000 to 1.2 million new jobs in the EU28.

Likewise, the positive gains of reform will be maximised to the extent that they are introduced in each jurisdiction with as little variation as possible, seizing the 'single market' benefits arising from harmonised insolvency proceedings and a more integrated market.

Key findings on macroeconomic impact of EU insolvency reform

Using our own estimated impact of insolvency regimes on borrowing costs, we derive estimates for GDP and employment effects. If all EU countries were to reach a recovery rate of 85 percent, this should permanently add between €41bn and €78bn to EU GDP per annum (or between 0.3% and 0.55% of EU28 GDP). Total employment would increase by 600,000 to 1.2 million across the EU 28. The distribution of macroeconomic effects suggests that gains from the reforms in absolute terms (i.e. in billions of Euros) are located in the larger of the more recently acceded member states, such as Poland, Hungary and Romania, as well as EU-15 members, notably Italy, Spain and France. Indeed, these last three account for around half of the value of extra GDP.

If we represent macroeconomic impacts relative to the size of the economies in which they occur, the most significant impacts are to be found in Croatia, Romania, Bulgaria and Greece, where the GDP impacts are in the range of 1.5% to 3.2%, and the employment impacts between 1% and 2%.

⁴² See Bleaney (2015) for further discussion on country-level heterogeneity in the sensitivity of spreads.

5. Conclusions and policy discussion



5. Conclusions and policy discussion

Implications of our findings

The purpose of the Commission's proposal for a new approach to insolvency and business failure is to stimulate convergence in insolvency regulations across the EU, by developing a set of minimum standards with which national insolvency legislation would be required to comply. The standards would reflect a view on what constitutes best-practice regulation and, in particular, the view that facilitating opportunities for restructuring early on, or prior to, the commencement of formal insolvency proceedings is desirable from the point of view of creditors and debtors, and thus ultimately the economy as a whole. These efforts represent a step-up in EU-wide disciplines on insolvency regulation, which so far have focused mainly on cross-border proceedings.

This report has examined a range of qualitative evidence documenting both existing insolvency regulations and frameworks in the EU, and the steps taken to enhance the quality of such regulation, across the EU. The qualitative evidence highlights the significant steps taken by a number of more recent EU member states as part of their accession reforms, as well as reforms undertaken by more established members, such as Italy. It also documents the scope for further reforms across the EU.

However, our research, as well as various statements and publications by the Commission, suggest that such reforms have not adequately addressed the problems associated with the different and disparate national insolvency regimes across Europe, and that significant work remains to be done if we are to alleviate or resolve these problems.

The quantitative evidence generated by the research conducted for this report is based on assessing changes to metrics of regime quality and the cost of corporate borrowing. The chosen variable, the recovery rate, is the measure that the Commission itself has used to describe the benefits of insolvency regime reforms. The report finds a statistically significant effect of changes to the recovery rate on the cost of borrowing i.e. as the recovery rate improves, we observe that the cost of borrowing declines, even once other factors (notably country fixed-effects) are controlled for. The results can be paired with previous empirical research, notably the work undertaken by the World Bank and the Commission, linking changes in the recovery rate to reforms to the insolvency regime, and notably reforms that include pre-insolvency restructuring options. The results can also be paired with the qualitative evidence reported in this report, which documents improvements to the recovery rate in many member states following accession.

The report also documents that balanced and effective insolvency regimes can have a beneficial effect on the costs of borrowing via changes to credit ratings. It also documents that recovery rates remain a significant factor affecting the cost of borrowing, even when other institutional variables, beyond insolvency-related factors, are shown to have explanatory power.

An estimate of wider economic effects, specifically on economic activity and employment, can be derived from pairing the elasticity estimates derived for the effects of the recovery rate on the costs of corporate borrowing, with findings from the empirical literature linking the costs of corporate borrowing to economic activity. Positive effects, in the range of 0.3% to 0.55% of GDP per annum, and between 600,000 and 1.2 million jobs, are thus estimated.

Priorities for EU insolvency reform

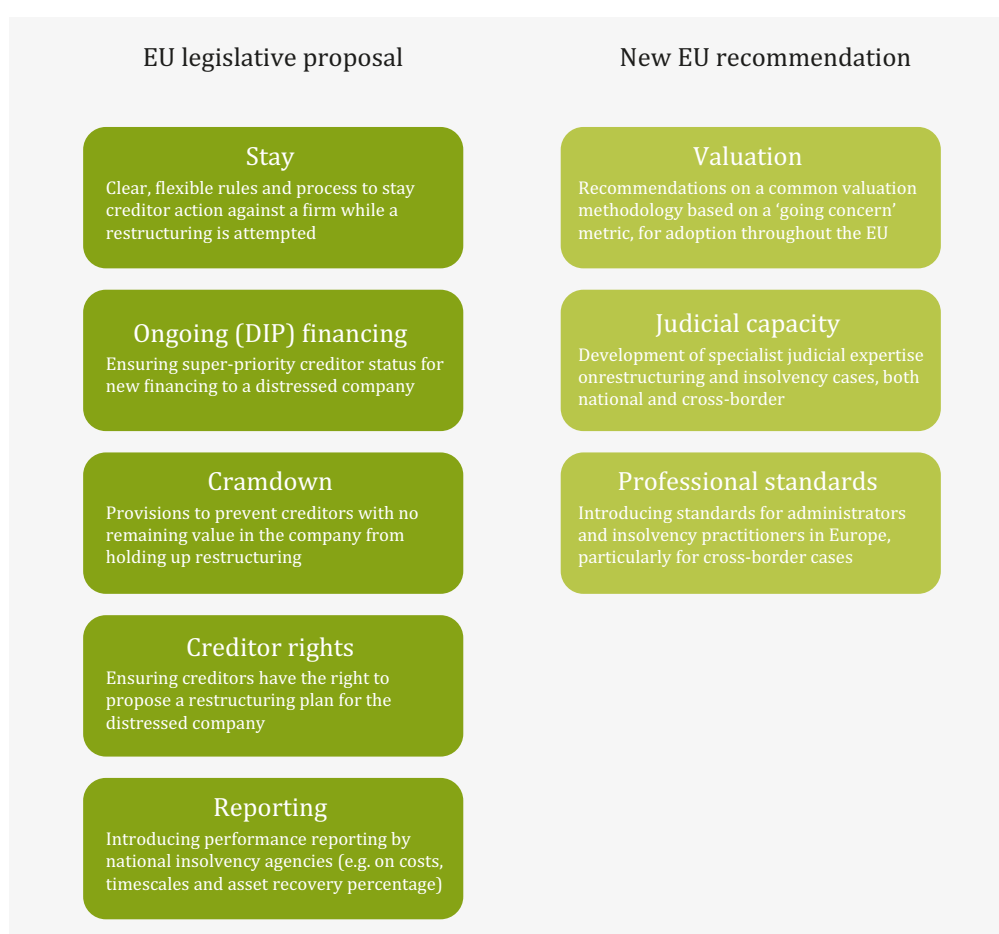
We consider the following elements to be the most important in order to enhance the efficiency of European insolvency practices, notably by enhancing the possibilities for restructuring:

- **Stay:** By preventing precipitate action by creditors, a stay procedure is critical to the successful rescue or orderly workout of a failing business. Most EU member states have some form of stay but arguably the precise forms in certain jurisdictions do not go far enough.
- **Valuation:** Progress should be made toward a consistent framework for the fast judicial resolution of valuation disputes.

- **Cramdown:** Creditors or shareholders with (on a proper valuation basis) no economic interest in the enterprise, should not be in a position where their “veto” could force the commencement of formal insolvency proceedings or delay otherwise viable restructurings. There should be a possibility, under appropriate circumstances, for decisions made by creditors with a continuing economic interest in the enterprise to bind creditors that no longer have an economic interest.
- **Role of creditors:** Member states should allow creditors or third parties to play a more influential role, even in insolvency proceedings. The participation of creditors or third parties could yield new solutions or additional funding, thereby making it easier to distinguish between viable “supported” companies from those which creditors are unwilling to support and which should be subject to liquidation procedures.
- **Financing:** Steps should also be taken to address the issue of ongoing funding for distressed companies, in order to ensure that a greater proportion of economically viable companies can be turned around, thereby limiting destruction of value in a restructuring.

There are important practical and political judgments to be made about the priorities and phasing of further insolvency reform in the EU. AFME advocates pursuing a fairly narrow and focused EU directive to embed the key elements of an effective insolvency law into national systems. Our proposals go with the grain of reforms already being implemented at national level.

Alongside, we advocate the development of recommendations and the sharing of best practice (both at EU and OECD level) on a range of wider issues. The diagram below summarises our proposals for the new EU directive and a new related Commission Recommendation.



Agenda for further research and evaluation

The focus of this paper is on the impact of insolvency regime reforms, via the efficiency of capital markets, on economic performance. The recovery rate is treated as a measure of regime quality. It is likely that the estimates presented understate the economic impacts of insolvency reforms. To begin with, insolvency reforms may have economic impacts via channels other than the capital markets. For example, as was reported in section 3, better insolvency regimes allow for a more orderly process of deleveraging and therefore increase the efficacy of macro-economic stabilisation measures.

Secondly, while the results presented capture the macro-economic benefits of more efficient capital markets resulting from better access to finance, there may be some dynamic effects that are not captured by existing research. For example, access to finance is known to be a significant factor in influencing innovation and research, which in turn has a long term effect on growth through productivity-related impacts. Reforms of legal frameworks, including those for insolvency, can have a significant impact on European productivity and growth by enhancing the ability of financial markets to support innovation.⁴³

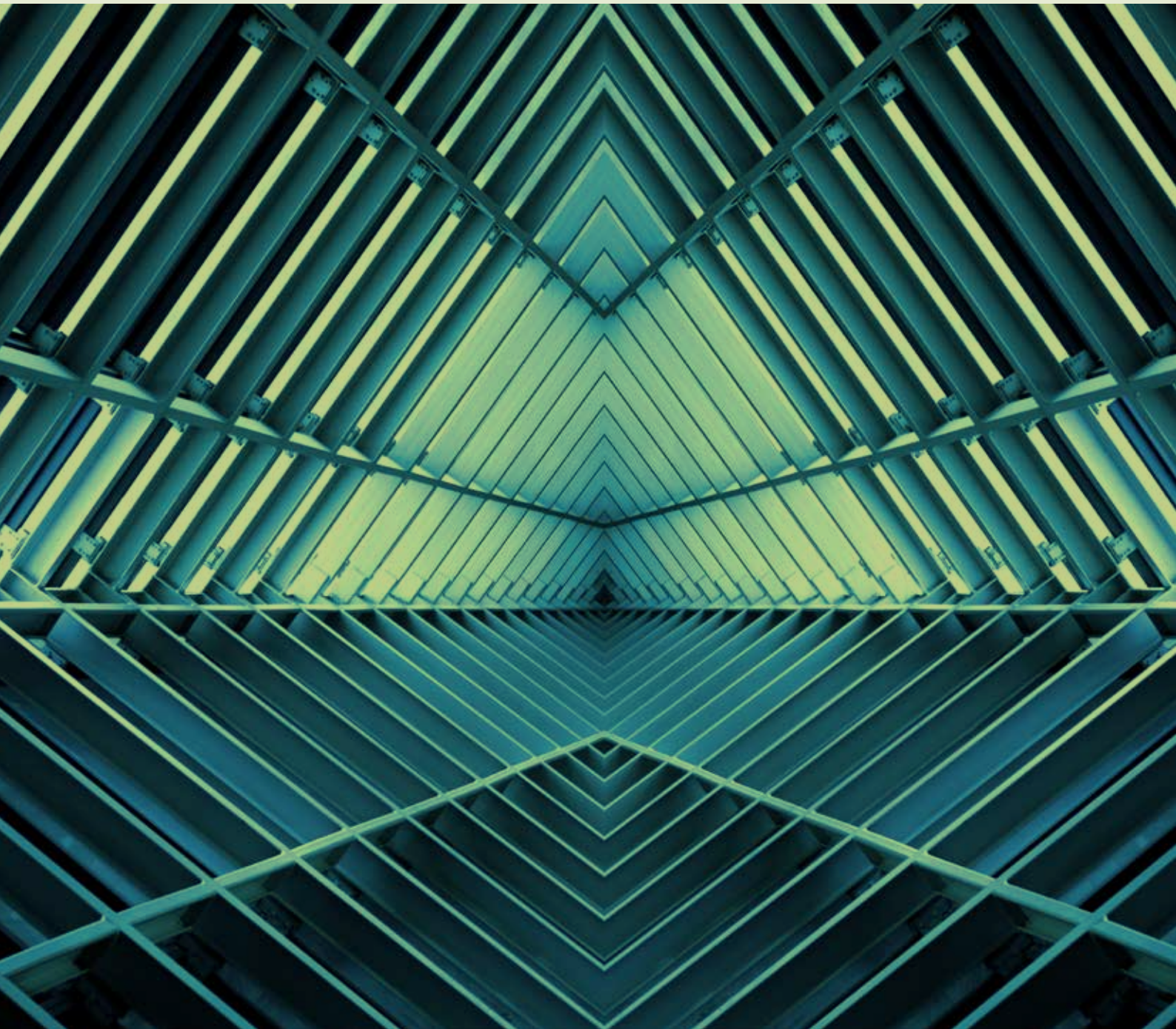
Finally, it is likely that the results reported in this paper are underestimates, because they are an aggregation of country specific effects stemming from reform within those countries. In reality, the benefits of the reforms will also flow through the fact that insolvency reforms and convergence across the EU will produce benefits because of the facilitating effects on cross-border trade and investment, on an intra-EU basis, but also from the perspective of global investment by making the EU a more integrated destination for global capital flows. These effects lie outside the scope of the current research but are likely to be substantial.

The key policy conclusion that can be derived from this work is that there are significant benefits from investing in insolvency reform and convergence to best practice, and these payoffs are distinct and robust relative to the payoffs from other categories of institutional reforms. It is likely that these wider reforms are correlated with reforms to the insolvency regime, either in response to EU initiatives, or as part of reforms undertaken unilaterally to enhance the quality of the policy environment for trade and investment. Indeed, the findings of the report can be interpreted within the context of the broader literature linking institutional reform and quality, to economic performance.

More specifically, convergence and consistency in practices across Europe, in the form of minimum insolvency standards, would benefit European capital markets, and the EU economy more generally, by providing greater certainty to market participants, increasing recovery rates while reducing costs for investors, making it more likely that a viable enterprise would be given a second chance, encouraging cross-border investment and increasing the competitiveness of European industry.

43 Philip Hartmann, Florian Heider, Elias Papaioannou, and Marco de Luca, (2007) "The role of financial markets and innovation in productivity and growth in Europe", The European Central Bank, Occasional Papers Series, No. 70

Annexes



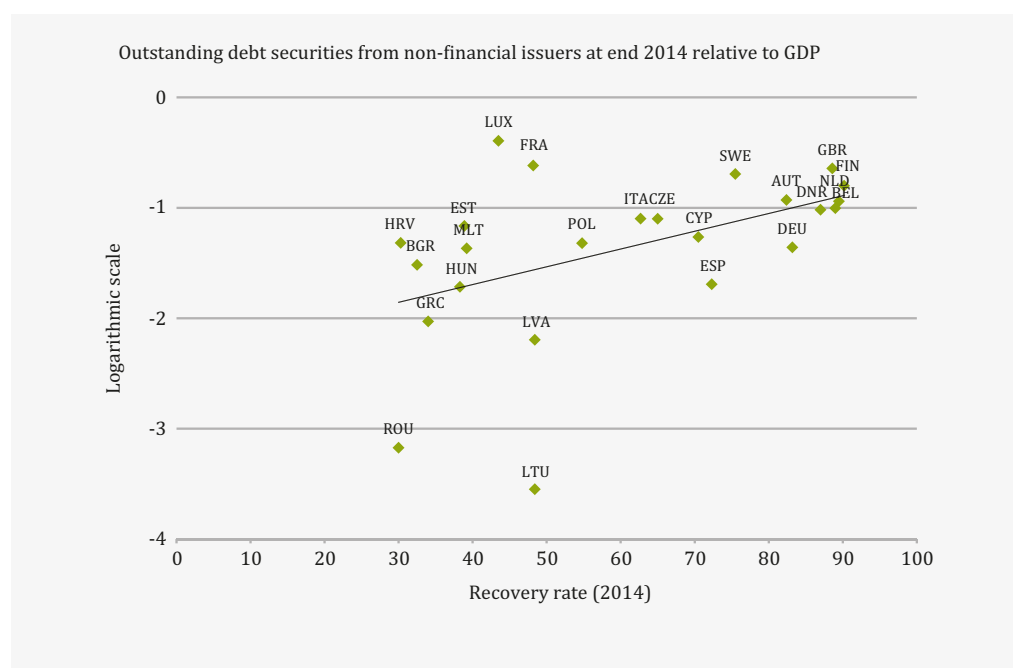
Annex 1: The relationship between insolvency regime quality and bond market development

The insolvency regime may affect the funding behaviour of firms, including whether to seek funding, the propensity to issue debt, the type of debt, and whether to apply for credit ratings.

We have explored the high-level relationships between size of bond markets and insolvency regimes in EU member states. The evidence suggests that higher recovery rates are associated with larger corporate bond markets, which would suggest greater liquidity. This would be consistent with better recovery rates lowering borrowing costs, and in turn raising the attractiveness of debt funding. However, we have not established the causal relationship, and cannot rule out other mechanisms such as joint determination.

Figure 10 shows the recovery rate plotted against the ratio of outstanding debt securities to GDP, which gives an indication of the development of bond markets in each country.⁴⁴ There is a positive correlation between the two variables, consistent with our hypothesis on bond market development.

Figure 10: Relationship between outstanding debt securities (non-financial) and recovery rate

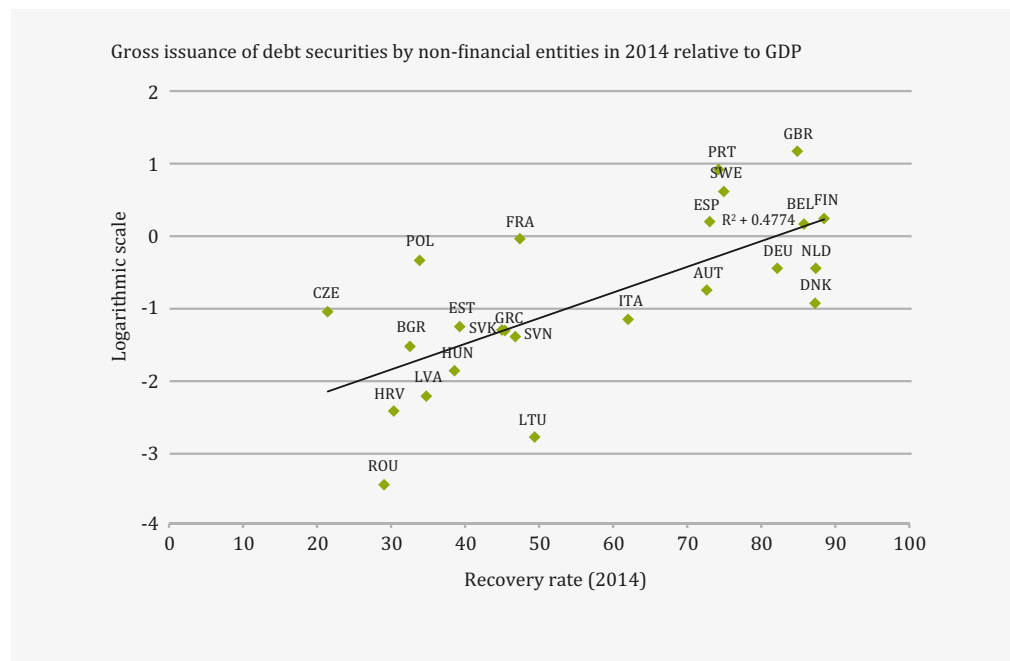


Source: Frontier analysis of World Bank and ECB data

As outstanding issues might include factors such as longer-term history, for example bonds issued many years ago, we repeat the exercise for gross issues in a year. This is illustrated in **Figure 11** and shows a similar relationship. Gross issue is a better measure of liquidity than outstanding debt, as it will include churn occurring within the year (new debt replacing old debt).

⁴⁴ We focus here on non-financial issuers, although similar results are obtained if we add banks. Scale is logarithmic in order to show detail in less advanced bond markets.

Figure 11: Relationship between gross debt securities issues (non-financial) and recovery rate



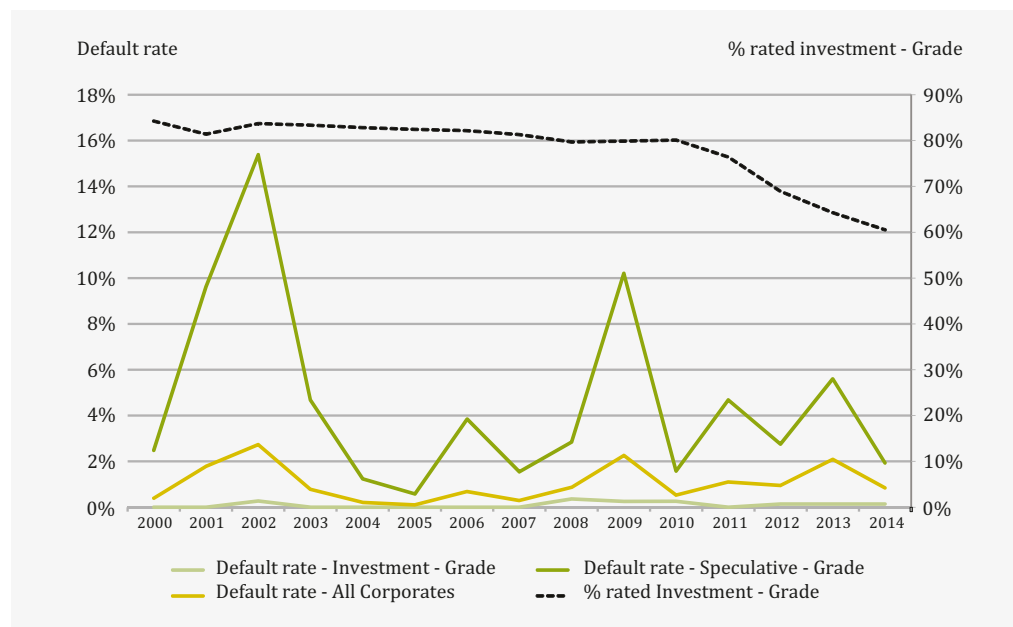
Source: Frontier analysis of World Bank and ECB data

We have also analysed Bank of International Settlements data on outstanding issues; these show similar relationships to the ECB data. Ideally, one would use data on number and size of trades as a measure of liquidity, but such data is not easily available.

Evidence from credit rating agencies on default and insolvency

Corporate default rates are low overall, typically less than 1% of issuers default in any one year. In **Figure 12** we show default rates over time in EU member states, broken down by the issuer rating (speculative or investment grade). The default rate spikes in 2002 and 2009, consistent with financial crises in those years. The main driver in default rates is default rates among speculative-grade issuers; default rates remain very low for investment-grade issuers. The share of issuers rated investment-grade, shown by the dotted line, has gradually fallen over time, from 80% in 2010 to around 60% in 2014.

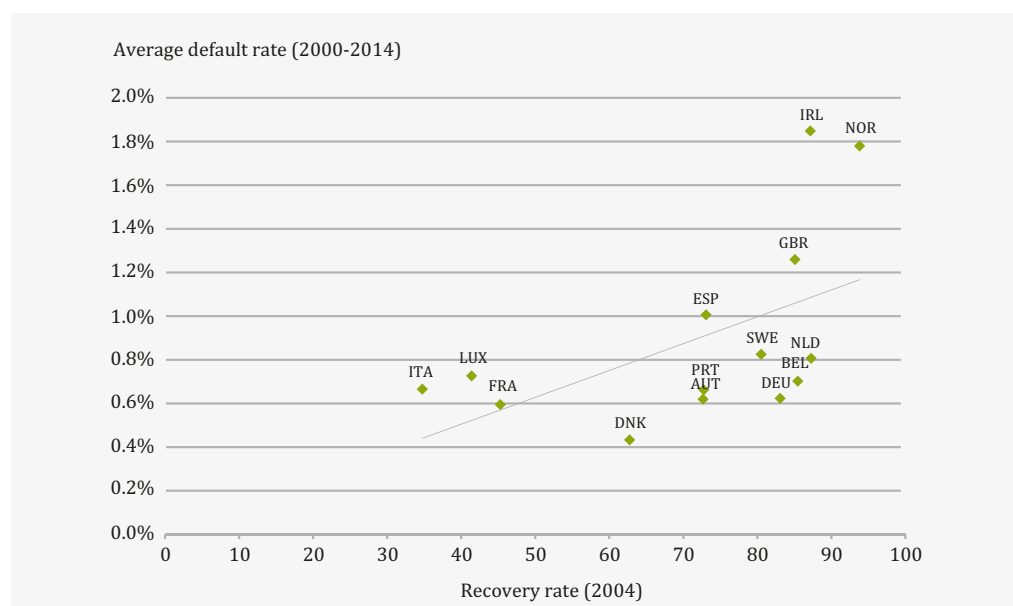
Figure 12: Default rates and grade mix over time in EU



Source: Frontier analysis of Moody's data

Default rates vary by country and, as shown in **Figure 13**⁴⁵ below, there is some positive correlation between default rates and recovery rates. There are a number of potential explanations for this. On the one hand it is possible that countries with higher default rates (e.g. due to sector mix) have more incentive to develop robust insolvency regimes. On the other hand, there is scope for a better insolvency regime to improve access to finance, and hence for speculative grade issuers to appear in the sample. There is scope for the type of insolvency outcome to affect an issuer's conduct, as the prospect of liquidation as opposed to refinancing may have different effects on risk-taking behaviour.

Figure 13: Relationship between default rates and recovery rate



Source: Frontier analysis of Moody's and World Bank data

⁴⁵ The 2000-2014 period has been chosen for default rates to bring in two waves of defaults. The 2004 recovery rate is the earliest observation available, and indicates the prevailing insolvency regime around the start of this period.

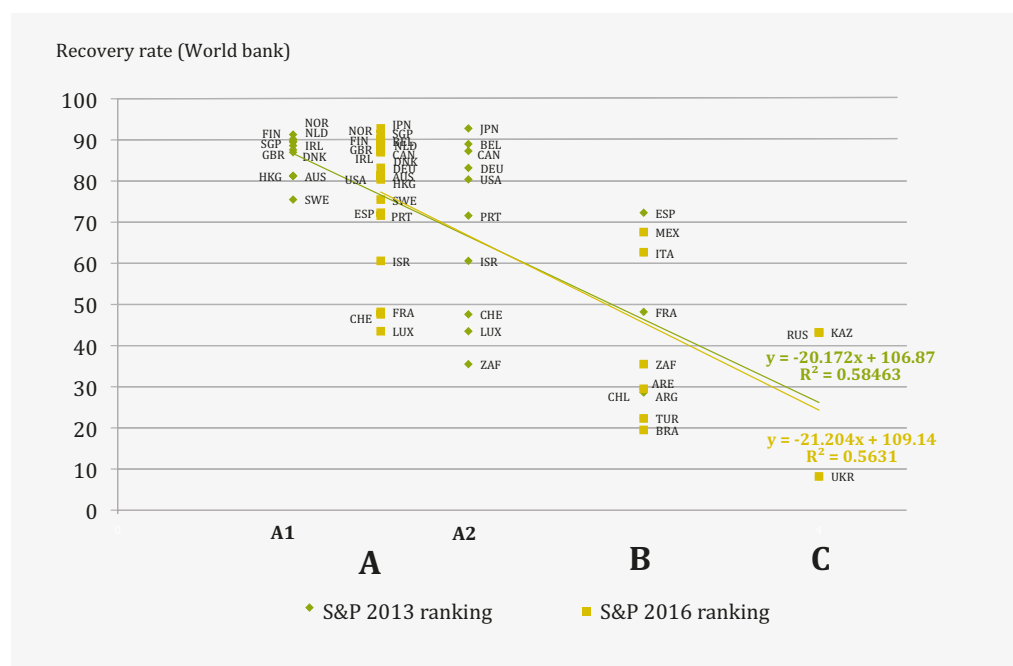
Annex 2: Data on recovery rates

Evidence from credit-rating agencies

We have cross-checked the World Bank-derived recovery rates against jurisdiction assessments by S&P, as well as historical data from Moody's on recovery outcomes. It is important to emphasise that the World Bank recovery rate uses a stylised insolvency case to examine what the outcome would be in different jurisdictions. This has the advantage of providing a consistent measure across jurisdictions, and so is not prejudiced by differences in the mix of cases going through particular countries. For example, two countries with otherwise similar insolvency regimes might show quite different recovery outcomes if one is focused on financial issuers with little collateral, and the other has more issuers with more (physical) fixed assets.

S&P undertakes jurisdiction ranking assessments of recovery, taking account of rule of law risk and creditor friendliness, analysed on seven different measures. This places countries in different bands, which are then used to inform credit ratings. **Figure 14** shows S&P jurisdiction assessments as ranked in 2013 and 2016, and the World Bank recovery rates plotted against each other. There is a clear relationship between the two, with A1-rated countries having the highest recovery rates for the 2013 ranking (A-rated in the 2016 ranking), and C-rated the lowest.⁴⁶ It is relevant to note that S&P uses World Bank data as input to produce the ranking assessments, therefore there is an implicit element of correlation between both variables.

Figure 14: Relationship between S&P jurisdiction ranking assessments and World Bank indicators recovery rate



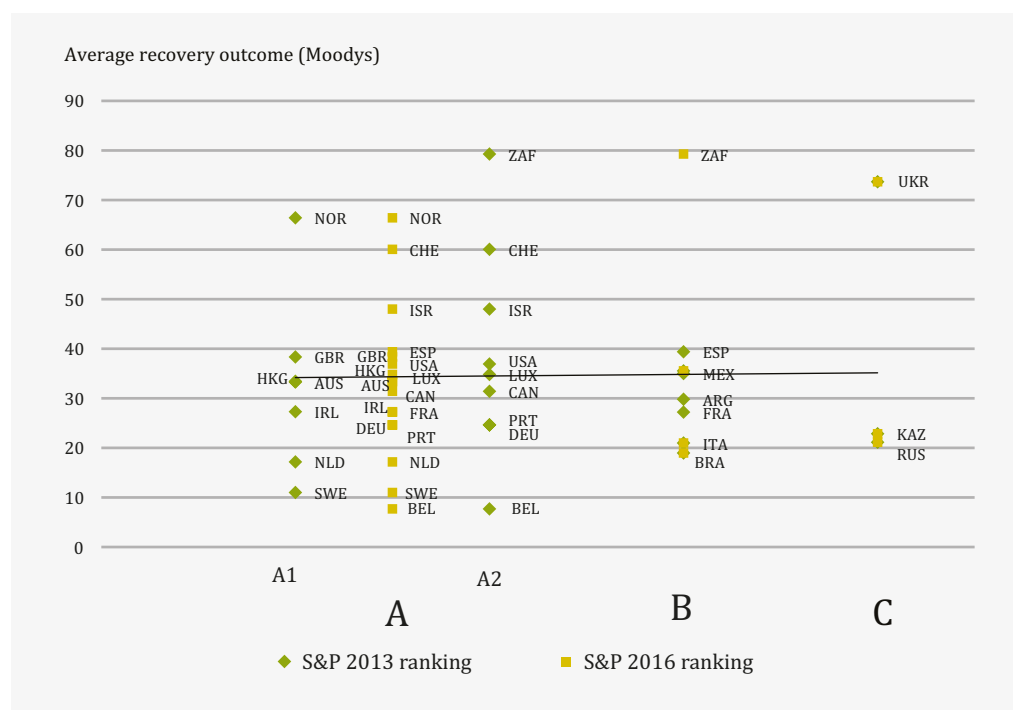
Source: Frontier analysis of S&P and World Bank data

We have also reviewed Moody's historical data on recovery outcomes from 1999 to 2015. These are 'default prices', which are based on the 30-day post-default bid price as a percent of face value of the bond. The data are at case level and show considerable variation, as they will reflect the particular circumstances of each insolvency case.

⁴⁶ In 2016, S&P ranked jurisdictions in 30 countries grouped in three categories: A, B and C. In 2013, 32 countries were ranked grouped in four categories: A1, A2, B and C.

Within any country, a wide range of outcomes are observed, and country only factors explain 5 percent of the variation in recovery rate. **Figure 15** shows outcome average recovery rates by country (weighted by amount of debt outstanding) plotted against jurisdiction assessment. There is no obvious relationship between the two variables – the outcome average recovery rate barely changes across the different jurisdictions' ranking assessments. This lack of relationship may partly reflect differences in the mix of issuing sector, seniority and credit rating – factors which together explain around 35 percent of the variation in recovery rate outcome. But even when controlling for these factors, to derive 'adjusted' recovery rate outcomes, we see little relationship with jurisdiction assessment.

Figure 15: Relationship between S&P jurisdiction ranking assessments and outcome recovery rate



Source: Frontier analysis of S&P and Moody's data

It is also worth emphasising that the recovery outcome data are patchy in terms of coverage over time. Within 17 European countries and over 12 years, there are 247 insolvency cases in the dataset, around 1.2 per country per annum. Most of the cases are in the Netherlands, UK, Ireland and Greece in the period 2009-2012. There are only 10 country-year observations with more than 10 insolvency cases, so the other data points would be either missing or associated with one or two observations. Given these limitations, we did not use the outcome recovery rate data in the econometric analysis. Instead we focused on the World Bank recovery rate as a measure of insolvency regime performance. Conceptually, this may also be a superior measure, insofar as it gives a forward-looking assessment controlling for case mix.

Annex 3: Literature review

Impact of insolvency reform on equity and credit markets

A widely cited study by La Porta et al (1997) concluded that the prevailing legal environment (which encompasses both laws and enforcement standards) is important for the size and extent of a country's capital markets. In particular, the study found that countries with poorer investor protection (i.e. a lower quality of legal rules and law enforcement), have smaller and narrower capital markets.⁴⁷

In the same vein, Djankov et al (2008) measured the efficiency of debt enforcement in 88 jurisdictions, and found that improvements in the efficiency of debt enforcement led to deeper markets for debt (a 10 percentage point improvement in efficiency measures is associated with a 5 to 6 percentage point improvement in the private debt to GDP ratio).⁴⁸ Importantly, the study also underscored the very strong correlation between measures of debt enforcement and broader measures of public sector and regulatory performance. This linkage between the costs of finance and broader legal and institutional arrangements is further borne out by other research.⁴⁹

Favara et. al. (2012) found that equity beta and return volatility are lower in countries where the bankruptcy code favours debt renegotiations and for firms with more shareholder bargaining power relative to debt holders (i.e. in jurisdictions where bankruptcy codes are more flexible).⁵⁰

The positive impact of insolvency reform on capital markets is also borne out by studies at national level. Kadiyala (2011) identified a positive and sustained market reaction in the value of publically traded companies in Brazil after the introduction of new bankruptcy laws which gave greater protection to creditors.⁵¹ Meanwhile, in a study focusing on the Czech Republic, Smrčka et. al. (2014) find that the costs of insolvency proceedings negatively affect the yields for creditors, and that these costs are reflected in higher borrowing spreads.⁵²

The findings are consistent with those of other studies that select a measure or set of measures of financial market performance, and estimate their relationship to aspects of the institutional environment (property rights, creditor rights, legal framework etc.). For example, Bae and Goyal (2009) measured the effects of property and creditor rights on loan spreads. They found that if a borrower moves from a country with weak creditor rights to a country with strong creditor rights, loan spreads are 39 basis points lower.⁵³ Degryse et al (2014) draw on data on spreads in recovery rates, and find that under weak creditor protection, the spread in recovery rates is substantially negative whereas it is only slightly negative with strong creditor protection.⁵⁴

47 Rafael La Porta, , Florencio Lopez-De-Silanes, Andrei Shleifer, and Robert W. Vishny. (1997): "Legal Determinants of External Finance." *Journal of Finance* 52, no. 3 113-150.

48 Simeon Djankov., Hart, O., McLiesh, C., and Shleifer, A. (2008) "Debt Enforcement around the World" *Journal of Political Economy*, Vol. 116, No. 6, pp. 1105-1149.

49 See for example Asli Demirgüç-Kunt and Vojislav Maksimovic, (1998) "Law, finance, and firm growth", *The Journal of Finance*, Vol. 53, No. 6. pp. 2107-2137

50 Favara, G., Schroth, E. and Valta, P. (2012), Strategic Default and Equity Risk Across Countries. *The Journal of Finance*, 67: 2051-2095

51 Kadiyala P., (2011) Impact of bankruptcy law reform on capital markets in Brazil. *Investment Management and Financial Innovations*, Volume 8, Issue 1, 2011.

52 Smrcka, L, Schonfeld, J Arltova, M and Placek, J. (2014) The significance of insolvency statistics and the regression analysis thereof – the example of the Czech Republic. University of Economics, Prague.

53 Bae, K.-H. and Goyal, V. K. (2009), "Creditor Rights, Enforcement, and Bank Loans". *The Journal of Finance*, 64: 823-860.

54 Degryse, H., Ioannidou, V., Liberti, Jose M. and Sturgess, J. (2014) "When Do Laws and Institutions Affect Recovery Rates on Collateral?"

Impact of insolvency reform on financing conditions for companies

Davydenko and Franks (2008) find that unfriendly bankruptcy codes lead to higher collateral requirements. Large differences in creditors' rights across countries lead banks to adjust their lending and reorganisation practices to mitigate the expected creditor unfriendly aspects of bankruptcy law.⁵⁵

The European Central Bank (the "ECB") (2015) examined a range of institutional factors (specifically, the strength of the creditor protection; the strength of property rights; the time and costs of resolving a dispute; and the number of procedures the plaintiff faces) and examined their effect on the probability of firms obtaining credit. The results use data from 11 European countries included in the biannual "Survey on the Access to Finance of Enterprises" (SAFE). The study finds that the extent of credit constraints on firms diminish as direct and indirect costs associated with legal proceedings diminish and the strength of creditor protection increases.⁵⁶ This implies a comparative disadvantage for firms operating in jurisdictions with weaker creditor protection, as potential creditors will consider that the likelihood of recovering debt is lower, and be less willing to lend. This constraint on available credit affects firms' development and growth, since alternative sources of finance (such as leasing and trade credit) are unlikely to be sufficient to fill the financing gap.⁵⁷

The ECB's research reveals that a stronger legal system improved the probability of gaining credit within the European Union by nearly 30 percent. It also reveals that the time and financial costs associated with enforcing creditor and property protection laws had a significant effect on the probability of a firm accessing all the credit it required. Moving from the least efficient to the most efficient jurisdiction increased the probability of accessing all required credit by 40 percent, while moving from the most costly to least costly jurisdiction improved the probability of accessing all required credit by around 33 percent.

Impact of insolvency reform on entrepreneurship and company formation

The European Commission (2015b)⁵⁸ investigated the impact of pre-insolvency frameworks on entrepreneurship and non-performing loans (NPL). According to the study, early intervention frameworks increase the chances of survival of viable firms and minimises the costs of restructuring.

The study finds that sound insolvency regimes encourage entrepreneurship. An increase by one percentage point in the efficiency of the national rescue and recovery systems (measured by an aggregate index constructed by the authors) is associated with a higher self-employment rate of 0.75 percent. This is consistent with the results found by Leea et. al. (2001) when estimating the impact on entrepreneurship development as measured by the rate of new firm entry in 29 countries.⁵⁹

On the dynamics of NPLs, the Commission study finds that facilitating the continuation for the debtor's operations is associated with a more rapid adjustment in NPLs. The authors also find a positive contribution to GDP growth, via a rapid adjustment to economic imbalances. A reduction of 1 percent in the ratio of debt to financial assets is associated with 0.23 percent lower GDP growth in countries with sound pre-insolvency regimes (compared to 0.36 percent in countries with inferior frameworks). This result is consistent with recent work conducted by the International Monetary Fund ("IMF") investigating the interrelationship between insolvency regimes and macroeconomic stabilisation policies (see section 3.3).

55 Davydenko, S. and Franks, J. (2008), "Do Bankruptcy Codes Matter? A Study of Defaults in France, Germany, and the U.K.", *Journal of Finance* 63 (2): 565–608.

56 Annalisa Ferrando, Daniela Maresch, Andrea Moro (2015) "Creditor protection, judicial enforcement and credit access," ECB Working Paper Series, No. 1829. July 2015

57 Financing Patterns Around the World: Are Small Firms Different? – Thorsten Beck, Ash Demirgüç-Kunt

58 European Commission (2015b) "The Economic impact of Rescue and Recovery Frameworks in the EU". Available in http://ec.europa.eu/economy_finance/publications/eedp/pdf/dp004_en.pdf

59 Seung-Hyun Leea, Yasuhiro Yamakawab, Mike W. Penga, Jay B. Barneyc. (2001), How do bankruptcy laws affect entrepreneurship development around the world?.

As observed in preceding sections, the importance of reforms to insolvency regulation in the EU is to be understood in the wider context of capital market integration, and the economic benefits expected from this. The harmonisation of EU banking laws has, for example, been found to have had a pro-growth effect, mainly by increasing the efficiency of financial intermediation.⁶⁰ Improvements in the efficiency of financial intermediation are at the centre of the proposed reforms to insolvency regulation. Thus the Commission noted that persistent flaws in insolvency regulation and fragmentation in regulation created “high costs for cross-border creditors, incentives for forum-shopping, and obstacles to the re-organisation of cross-border groups of companies.”⁶¹

Impact of insolvency reform on macroeconomic outcomes

The potential ramifications for EU member states with limited creditor protection and property rights, highlights the importance of cooperation across the EU on cross-border insolvency cases. The ECB has found that firms in countries with less available credit not only struggle to break into new markets but can also struggle to hold onto their local market share. The ECB finds that firms can be motivated to move from one country to another, seeking more advantageous credit availability, taking not only economic activity with them but also job creation.⁶² This could point to potential displacement effects.

As noted above, Djankov et. al. (2008) find that reliable debt enforcement is strongly correlated with higher per capita income. Meanwhile, Smrčka et. al. (2014b) find a positive relationship between costs and yields of insolvency proceedings for creditors and the performance of an observed economy, which is measured by GDP.⁶³

Finally, recent work by the IMF has highlighted the links between insolvency regimes, on one hand, and macro-economic stabilisation policies on the other. The IMF argues that the efficacy of quantitative easing in the Euro area, which was designed to stimulate growth, has been blunted by the overhang of bad loans. Part of the solution to this problem of a “debt overhang”, with a view to unclogging credit channels, lies in improving the effectiveness of legal frameworks for insolvency.⁶⁴

60 Diego Romero-Avila (2007), “Finance and growth in the EU: New evidence from the harmonisation of the banking industry”, *Journal of Finance and Banking*, Vol. 31, No. 7, pp 1937-1954

61 European Commission (2014), *Impact Assessment Accompanying the document Commission Recommendation on a New Approach to Business Failure and Insolvency*, Commission Staff Working Document, p. 23

62 Ibid

63 Smrčka, L, Arltova, M, Schonfeld, J and Louda, L. (2014), *Parameters of insolvency proceedings in developed countries and their dependence on economic performance* <http://inase.org/library/2014/santorini/bypaper/ENVIR/ENVIR-53.pdf>

64 IMF (2015), *Global Financial Stability Report*, April, p. 24

Annex 4: Technical annex on econometric model

Overview of bond data

Using the search query in Bloomberg, ISINs were identified for plain vanilla non-callable zero-coupon corporate bonds issued in home currency, with maturity from 2003 onwards for EU and OECD countries. This gave a list of around 29 thousand eligible bonds.

Using a Datastream terminal, the following variables were extracted:

- Redemption Yield (daily series)
- Composite Bid / Ask Price (daily series)
- Credit Rating (S&P data on ratings changes, at security level or issuer level). From these snapshots, a full ratings history can be derived.

Less than 10% of the bonds had yield data, and of these only a quarter had credit ratings history. In total this gave a sample of 573 bonds with both yield data and credit ratings history. This patchiness of data reflects the illiquidity of corporate bonds. We also explored whether extracting the data through Bloomberg might give better coverage, but this was not the case. However, we were able to extract credit ratings history for an additional 52 bonds, as well as data on issue size. In total this gives a sample of 625 bonds.

The breakdown of bonds by country and maturity of the bonds are shown in Table 2 below. Most bonds are either in the 6-10 year band or the >10 year band; only a small number are in the <1 year band. The sample is skewed heavily towards Germany and Italy, but there are also reasonable numbers of bonds for Austria, France and Netherlands. Coverage is very thin for other countries.

Table 2: **Coverage by country and maturity**

Country	Maturity				Total
	<1 year	1-5 year	5-10 year	>10 year	
Austria	0	6	12	19	37
Belgium	0	2	2	0	4
Switzerland	0	1	0	0	1
Czech Republic	0	2	0	0	2
Germany	1	36	103	80	220
France	0	00	18	18	36
UK	0	2	7	0	9
Ireland	0	3	5	4	12
Italy	0	42	134	43	219
Luxembourg	14	5	0	1	20
Netherlands	0	4	26	8	38
Portugal	0	1	4	1	6
Sweden	0	3	6	0	9
Turkey	11	1	0	0	12

Source: Frontier analysis of Datastream and S&P data

Average issue size by country is shown in Table 3. In the main analysis we exclude observations with less than one year remaining, which results in a number of bonds disappearing from the sample. There are also 16 bonds appearing in the data issued by the European Financial Stability Facility. These bonds, issued in Luxembourg, have been excluded from the analysis as they are not typical corporate-issued bonds given that they also carry state guarantees. This leaves a dataset of 564 bonds.

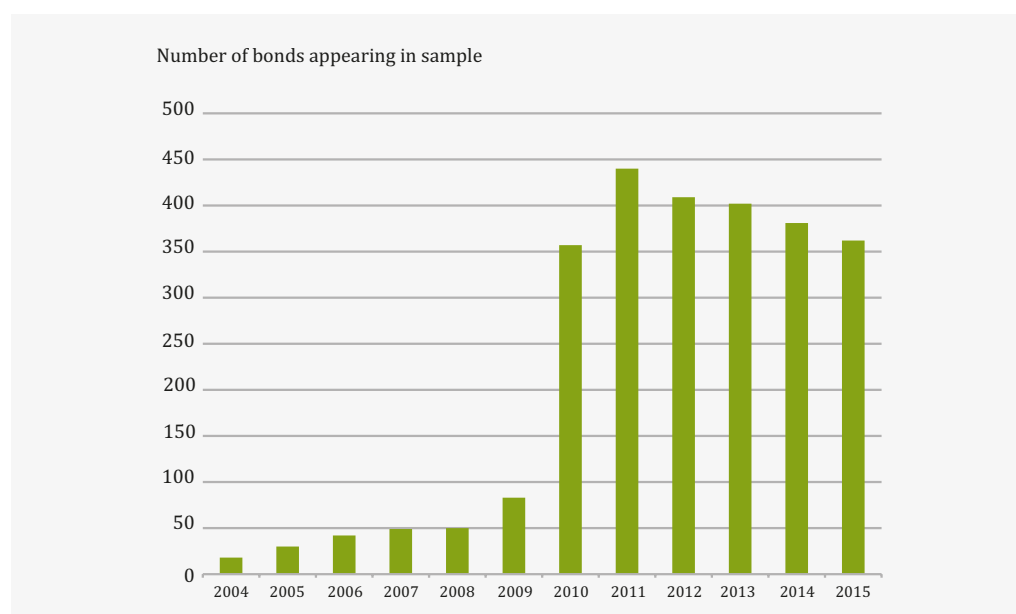
Table 3: Average issue size by country, EUR millions

Country	All bonds in sample	Excluding bonds with <1 year remaining
Austria	39	33
Belgium	14	14
Switzerland	238	238
Czech Republic	56	0
Germany	54	53
France	206	206
UK	11	11
Ireland	52	52
Italy	85	84
Japan	69	69
Luxembourg	71	71
Mexico	75	75
Netherlands	38	35
Portugal	69	97
Sweden	7	7
Turkey	159	19

Source: Frontier analysis of Datastream, Bloomberg and S&P data

Coverage over time of the sample is shown in **Figure 16**. We observe that prior to 2010 coverage is much thinner. We understand that this due to poor retention of data for bonds that have matured more than 5 years previously.

Figure 16: Coverage of sample over time



Source: Frontier analysis of Datastream, Bloomberg and S&P data

Sample structure and choice of estimation strategy

In the bond pricing model we identify the relationship between bond spreads and insolvency regime, controlling for a number of relevant bond characteristics. In the basic specification the relationship is largely cross-sectional: we see that countries with better insolvency regimes have lower bond spreads. Although this result is intuitive and the key determinant of bond spread has already been accounted for by the credit rating, it is difficult to establish whether the estimated relationship might reflect some other underlying relationships.

We have used a panel model pooling individual corporate bonds to estimate the correlation between insolvency metrics and risk premium, whilst taking into account other relevant bond characteristics that may affect corporate bond spreads.

The chief advantage of the pooled bond approach over using a bond index is that it allows data to be used from countries with smaller bond markets, in which bond indices are not published or cannot be collated manually due to sparsity of data. A second motivation for using a pooled bond approach is that it gives one set of estimates, whereas indices must be analysed separately by maturity, rating, etc., which could complicate interpretation of results due to potential ambiguities.

Many institutional factors and financial characteristics may be correlated with the quality of the insolvency framework at country level. We have also run specifications with country fixed effects to control for these factors.

Econometric model

The general model can be written as:

$$\text{Yield_spread}_{\{i,g,t\}} = \text{constant} + \beta_1 \text{time_to_maturity}_{\{i,t\}} + \beta_2 \text{credit_rating}_{\{i,t\}} + \beta_3 \text{correlation_with_market_return}_{\{i,g,t\}} + \beta_4 \text{time_trend}_{\{t\}} + \beta_5 \text{bid_ask_spread}_{\{i,t\}} + \gamma \text{insolvency_regulation_metrics}_{\{g,t\}} + \text{error}_{\{i,t\}}$$

for bond i in country g at time t .

The variables are discussed in turn:

- Yield spread denotes the bond's yield to maturity minus the risk free rate, proxied by the 10 year sovereign bond yield. In the case of Eurozone countries, the German sovereign bond yield is used. Currency expectation effects will already be captured in the sovereign bond yield, so should not affect the spread.
- The time to maturity variable is the remaining time until the bond matures, which is included to control for the effect of the term premium. This is a linear variable measured in 'trading days'.
- The credit rating controls for the default risk premium. We use S&P historical ratings, translated into 'notches'. Credit rating is the main determinant of bond yield spread, so we only analyse bonds for which historical credit rating is available. The credit rating variable we use is linear.⁶⁵ The correlation with market return variable is analogous to a 'beta', and measures the correlation of the change in bond price with a global stock index (the Morgan Stanley Capital Index). The coefficient on this variable gives an estimate of the systematic (non-diversifiable risk) associated with the bond. This is estimated separately for each bond using a rolling window approach to allow for variation over time. Note that many bonds are illiquid and show minimal variation in price, in which case the correlation will be small. At the beginning of a bond's life there will be history on which to estimate the beta. These cases are identified separately using a dummy variable.
- The time trend picks up any additional (common) changes in the yield spread that are not correlated with the above variables. We use a linear variable.
- The bid-ask spread gives a measure of liquidity risk associated with a bond. In many cases this data is not available, which itself indicates a degree of illiquidity. These cases are identified separately using a dummy variable.

⁶⁵ We also considered using non-linear or non-parametric measures of credit rating, which allows that the impact of a one-notch to vary along the credit curve. However, the estimated credit curves were not markedly different from the linear specification and did not affect the results regarding impact of insolvency metrics. Overall, we considered the linear credit rating variable to be preferable, as it gives a simpler, more parsimonious model, which is less demanding in terms of data.

- Insolvency regulation metrics allows us to test a number of indicators from Doing Business, alongside other institutional factors at country level. On the whole, we focus on the recovery rate, which carries information on the time and cost of proceedings and recovery rate.
- The error term includes unobservable heterogeneity at the bond level (e.g. some particular characteristic of the bond that is not adequately controlled for in the model), country level (e.g. country risk profile not fully captured by Doing Business indicators included in model), and temporal shocks. In some specifications we also use country-level effects (fixed effects or random effects) to remove unobservable heterogeneity at country level.

It is possible that there are some other components of default risk that are not captured by the credit rating, or relevant institutional factors other than the recovery rate. Insofar as these omitted variables are fixed (or change little over time), they can be controlled for using country dummy fixed effects. When fixed effects are included they absorb the cross-sectional relationships, and the remaining correlation between insolvency regime and bond spread show how their movements are correlated over time. That is, an improvement over time in a country's recovery rate is associated with a reduction in the bond spread.

In theory, fixed effects would address many of the conceptual challenges raised in section 4.3. However, fixed effects require better quality data, as panel estimates then rely on variation over time within each observational unit. As noted in section 2, recent insolvency reforms have occurred primarily in EU accession countries, but these are not covered well in our bond data. In most countries with good bond coverage there has been little change over time in insolvency regime.

Another difficulty for the fixed effects specification is how to control for temporal shocks in bond spreads, e.g. due to macroeconomic effects or financial crises. Ideally, one would use time dummies to control for such effects, *i.e.* strip out all variation over time. This would result in a 'two-way fixed effect model', but this risks overfitting, as the results of such a model would be sensitive to changes over time in sample composition. For this reason, a linear time trend is used to control for temporal shocks.

For each country, we can measure the correlation over time between insolvency regime and bond spreads, also controlling for bond characteristics. This gives a series of within-country relationships between insolvency regime and bond spread. The general result from the fixed effects model can then be thought of as an average of the within-country relationships.

Using the same control variables as before (controlling for bond characteristics and linear time trend), we estimate the bond-pricing model separately for each country in turn. This helps identify which countries may be driving the relationship. The results are shown in Table 4 below which shows the coefficient on recovery rate, the standard error on the coefficient, and the number of observations. Note that aside from Italy and Germany, other countries have much smaller samples, bringing in fewer than 40 bonds each.

Table 4: Results of within-country models estimating bond spread as a function of bond characteristics and recovery rate

Country	Coefficient on recovery rate	Standard error	Observations
Austria	-.104***	.016	1442
France	.021***	.005	1421
Germany	.009	.007	11449
Italy	-.166***	.016	9334
Ireland	-.344	.482	486
Netherlands	-.076*	.046	902

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Frontier analysis of Datastream and World Bank data

We see negative, statistically significant relationships between bond spread and recovery rate for Italy, Austria and Netherlands (at the 10 percent level). For France there is a positive significant relationship. For Germany the relationship is insignificant. The fact that the relationships for France goes in the 'wrong' direction should not be surprising as the sample size is fairly small and the bond pricing less accurate. By pooling multiple countries together, we improve the accuracy of the model and give less room for the recovery rate to pick up any arbitrary effects. It appears that much of the relationship estimated with country dummy is driven by within-country effects from Italy, where insolvency reform is correlated with reductions in bond spread. It would, of course, be interesting to know how bond spreads in EU accession countries have moved in response to insolvency reform, but the data to explore this are not available.

Indirect impact via credit ratings adjustment

We estimate the notch adjustment to credit rating that would result from improvement to jurisdiction rating.

We assume that reform would move each country from its current jurisdiction rating to a jurisdiction rating of A (see **Figure 14** for country groupings). Many of the smaller European countries do not have an S&P jurisdiction rating (A,B,C), so we assume the current jurisdiction rating on the basis of recovery rate, and the relationship observed in **Figure 14** ($C < 40$, $40 < B < 60$, $A > 60$). Each 'jump up' in jurisdiction rating (C to A, B to A) has an associated notch adjustment to credit rating.

The notch adjustment of a bond depends on both the jurisdiction rating and the 'preliminary recovery rating' of that bond as per S&P's 2016 Jurisdiction Ranking Assessments methodology. For example, a bond with a preliminary recovery rating in the range of 70-90, would see 1 notch uplift in an A-jurisdiction, but 0 notch uplift in a B-jurisdiction.

Preliminary recovery ratings are not observable, but instead we use Moody's data on actual recovery outcomes. We use data on over 3000 bond defaults to calculate the overall distribution of recovery rates. We assume that this distribution is representative of the distribution of preliminary recovery ratings.

Based on this distribution, a B to A jurisdictional improvement implies an average uplift of 0.26 notches, and a C to A improvement implies an average uplift of 0.32 notches.

The indirect effect via credit ratings is then given by multiplying the country's average notch improvements by the coefficient of credit rating on bond spread. Overall, this results in around €5bn of GDP impact. This is much smaller than the other €33bn or €73bn coming directly through the recovery rate improvement.

Results of alternative model specifications

We have also tested whether the impact of insolvency regime still holds when other institutional factors are taken into account in the bond pricing model. These include various indicators from the World Bank Doing Business, Heritage Foundation, and Transparency International Corruption Index.

Although there are many variables that might describe the business environment, the ones that should be relevant in terms of corporate bond yields would be those that are associated either with the probability of business failure or with what happens in the event of failure. Note that some of these measures have changed little over time in the countries in question. Also, note that these indicators are highly correlated with the recovery rate in the estimation sample (correlation coefficient typically 0.8). In these circumstances, the variable with the weaker effect may have a coefficient of the 'wrong' sign, as the other variable picks up all of the effect.

Table 5 shows results for the institutional variable and the recovery rate respectively, first without "country dummies" and secondly with "country dummies". As can be seen, in some cases other institutional variables have a counterintuitive sign. This would suggest that when placed 'head to head' with the recovery rate, the recovery rate continues to have a negative effect on bond spread, whilst the coefficient on the institutional variable is distorted.

The coefficient on recovery rate typically remains negative, significant, and of a similar magnitude to when estimated absent the institutional variables. In two cases (starting business DTF and depth of creditor information index) the coefficient on recovery rate becomes small and insignificant, which may reflect multicollinearity. For the model without country dummies, the coefficient remains negative and significant. Overall, it appears that the recovery rate has a stronger effect on bond spread than the institutional variables, and therefore that the insolvency regime is driving the results.

Table 5: Impact of recovery rate, while controlling for other institutional variables⁶⁶

	No country dummies		With country dummies	
Institutional variable	Coefficient on institutional variable	Coefficient on recovery rate	Coefficient on institutional variable	Coefficient on recovery rate
Starting business DTF	0.122***	-0.007***	0.149***	-0.006
Liability DTF	-0.494***	-0.012***	-0.546***	-0.015***
Creditor Information	0.022***	-0.016***	0.032***	-0.020***
Strength of legal rights index (0-12)	0.011	-0.035***	0.585***	-0.01**
Depth of credit information index (0-8)	-0.314***	-0.016***	-0.376***	-0.003
Enforcing Contracts DTF	-0.001	-0.035***	0.055***	-0.015***
World Bank Index	-0.19**	-0.031***	-0.53	-0.014***
Heritage Foundation overall score	-0.047***	-0.024***	-0.256***	-0.034***
Heritage Foundation PCA index ⁶⁸	-0.022	-0.033***	-1.395***	-0.016***
World Bank PCA index ⁶⁹	0.022	-0.034***	0.101	-0.015***
TI corruption	-0.156***	-0.035***	-2.98***	-0.093***

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Frontier analysis of Datastream and World Bank data

A number of alternative model specifications have been tested as an additional robustness check. These sensitivities address issues including scope of countries and bonds in sample, treatment of currency effects, treatment of temporal shocks and weighting of bonds. The cross-sectional results are not affected much by the alternative model specifications. But when country dummies are included, under three of the alternative model specifications, the results are unaffected, whereas in two cases the coefficient on recovery rates becomes insignificant. It should be noted that in the country dummies model, the effect of recovery rates is identified only through changes in time, placing a greater burden on the data sample, so it should not be surprising to see greater sensitivity of the results to some of these alternative specifications.⁶⁹

We present two tables, the first with a basic (cross-sectional) model, the second with country-dummy results. The following modifications are considered:

- Central model – this is the general model presented in Table 6 (models 2 and 3 respectively).
- Un-weighted model – observations are not weighted by issue size, as in the central model. The rationale behind weighting is to reduce the influence of smaller issues of bond, as they are more likely to be illiquid and yield inaccurate information.
- Time dummies – instead of a linear time trend, time effects are controlled for using a series of monthly dummies, allowing temporal shocks to vary from month to month.

⁶⁶ The various measures have been chosen to cover a wide range of institutional factors, and because they are measured consistently over time, so that the published data can be used. One exception to this is the Transparency International Corruption Perceptions Index, for which the scale and calculation basis changes between 2011 and 2012. In this case the variable is standardised each year with mean of zero and standard deviation of one.

⁶⁷ Principal Components Analysis

⁶⁸ Principal Components Analysis

⁶⁹ As an additional robustness check we have tested the impact of using only data from 2010 onwards. This gives similar cross-sectional results, but the panel result becomes insignificant. When this shorter time period is used, the amount of variation over time in recovery rates is further reduced, so that when the country dummies are added there is insufficient data left to identify the impact of recovery rate.

- Near-maturity bonds – this model does not exclude bonds with less than one year remaining until maturity.
- Supplementary bond data – the sample is extended to include 53 bonds for which credit rating were manually extracted.
- Currency effects model – rather than estimate the bond spread we estimate corporate bond yield as a function of both the 10-year sovereign yield (German bond for Eurozone), and the spread between the country's sovereign bond and the sovereign German bond. This model allows for the corporate bond yield to move in line with both the own country sovereign and the German sovereign, and find the natural anchor.

The results for alternative specifications of the basic model are shown in Table 6, with rows showing the coefficient on the recovery rate and various bond characteristics and columns showing the various alternative specifications.

Table 6: **Alternative specifications of the basic model**

	(1)	(2)	(3)	(4)	(5)	(6)
Variable	Central model	Un-weighted	Month dummies	Include near-maturity bonds	Include supplementary bonds	Sovereign effects
Time trend (days)	0.000428***	0.000184***		0.000447***	0.000429***	-0.000217***
Month dummies			Included			
Time to maturity (days)	0.000197***	0.000162***	0.000212***	0.000209***	0.000203***	0.000216***
Credit rating (notch)	-0.222***	-0.212***	-0.235***	-0.223***	-0.226***	-0.0973***
Missing beta (dummy)	-0.0313	-0.293***	-0.0107	-0.153*	-0.0284	0.0200
Beta	7.934***	12.16***	4.953***	9.727***	7.257***	2.930**
Missing bid-ask (dummy)	1.235***	1.186***	0.750***	1.262***	1.222***	0.576***
Bid-ask (% point)	0.0766***	0.0688***	0.0629***	0.0818***	0.0753***	0.0442***
Recovery rate (% point)	-0.0366***	-0.0432***	-0.0282***	-0.0345***	-0.0377***	-0.0268***
Sovereign bond yield						0.609***
Sovereign-DE spread						0.504***
Constant	5.295***	6.388***	5.649***	5.040***	5.414***	4.959***
Observations	22,982	22,982	22,982	24,613	23,984	22,849
R-squared	0.368	0.368	0.511	0.364	0.362	0.538

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Frontier analysis of Datastream and World Bank data

The size of the coefficient on recovery rate ranges from -0.0268 in the sovereign effects model to -0.0432 in the unweighted model. The other sensitivities make relatively little impact on the results. In each case the impact of recovery rate on bond spread is statistically significant. The most substantial changes occur with the 'sovereign effects' specification, in which many of the bond characteristics have smaller effects on spread. This may be because the sovereign effects terms (own sovereign yield and sovereign-DE spread) are picking up either country-level effects (since sovereign yield varies by country) or time-varying effects (since sovereign yield varies over time), so that less explanatory power is attributed to the bond characteristics.

The results are more sensitive to specification for the model with country fixed effects. The results for alternative specifications of this model are shown in Table 7, with each column showing an alternative specification, and the rows showing the coefficient on the recovery rate and on each bond characteristic.

In three of the alternative specifications the coefficient on recovery rate is similar to the coefficient in the central model, whereas in the un-weighted and month dummy models the coefficient is smaller and statistically insignificant. Note that these modifications may be more questionable in the context of a model already containing country fixed effects. In particular, the inclusion of month dummies is problematic if the sample is unbalanced, as the mix of countries changes over time, with varying exposure to temporal shocks; this may directly affect the variables recorded at country level. Likewise, placing equal weight on more illiquid bonds can be thought of as adding ‘noise’ due to inaccurate or irrelevant price data, and when cross-country variation is stripped out, there is insufficient data remaining to estimate the effect of insolvency reform. There is therefore considerable justification to focus on the central model. However, the alternative specifications illustrate the limitations facing a panel estimation approach, given the data available.

Table 7: **Alternative specifications of the country fixed effect model**

	(1)	(2)	(3)	(4)	(5)	(6)
Variable	Central model	Un-weighted	Month dummies	Include near-maturity bonds	Include supplementary bonds	Sovereign effects
Time trend (days)	0.000380***	0.000141***		0.000405***	0.000389***	-0.000177***
Month dummies			Included			
Country dummies	Included	Included	Included	Included	Included	Included
Time to maturity (days)	0.000189***	0.000176***	0.000205***	0.000204***	0.000197***	0.000229***
Credit rating (notch)	-0.184***	-0.157***	-0.197***	-0.202***	-0.182***	-0.155***
Missing beta (dummy)	0.0285	-0.283***	0.0653	-0.00435	0.0113	0.0294
Beta	6.996***	10.16***	3.766***	8.749***	6.433***	1.571
Missing bid-ask (dummy)	1.274***	1.269***	0.786***	1.354***	1.255***	0.644***
Bid-ask (% point)	0.0676***	0.0481***	0.0554***	0.0731***	0.0658***	0.0420***
Recovery rate (% point)	-0.0178***	-0.00210	-0.00470	-0.0160***	-0.0179***	-0.0190***
Sovereign bond yield						0.727***
Sovereign-DE spread						0.713***
Constant	2.761***	2.944***	2.852***	1.137**	2.422***	4.601***
Observations	22,982	22,982	22,982	24,613	23,984	22,849
R-squared	0.398	0.418	0.534	0.392	0.401	0.572

Robust standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Source: Frontier analysis of Datastream and World Bank data

Potential biases and limitations

There are a number of factors that should be borne in mind when interpreting the results. In some cases we have adapted our econometric specification to mitigate these effects, whereas in other cases the issues are more fundamental and driven by data availability.

- **Endogeneity.** Our hypothesis is that stronger insolvency regulations lead to lower risk premiums. However, the insolvency regime in a country is not determined exogenously and it may be correlated with the underlying risk characteristics in that country, or with other institutional factors that can affect bond spread. These factors may be confounded with the effect of insolvency regime on borrowing costs, which could bias our estimation of such effect. This issue is addressed methodologically in several ways. First, we have controlled for a number of institutional factors to the extent that they are measurable. Secondly, we have estimated the model using country fixed effects; as these will absorb any unobservable heterogeneity at the country level and, this approach should remove any cross-sectional

endogeneity. Finally, we have run single country-level regressions, which measure the correlation of insolvency regime and bond yield over time in each country, again removing any cross-sectional endogeneity. Overall, we continue to find a significant negative impact of low recovery rates on bond spread.

- **Multicollinearity.** If some of the control variables are highly correlated with each other, it becomes difficult to determine which of them is having the effect and the individual coefficients in question become unreliable. This is problematic if it affects variables of ultimate interest. This problem may arise if the strength of insolvency regulations is correlated with the level of default at a country level or with various other institutional factors. There are 74 separate measures reported in World Bank Doing Business, and many of these could have some bearing on the corporate yield spread. In light of this we have avoided including many highly correlated variables within the same regression.
- **Selection bias.** A firm's debt-issuing behaviour may be affected by the characteristics of the jurisdiction it is in. Two otherwise equal issuers (with the same risk profile etc.) might issue debt in the 'safe' jurisdiction but not be able to do so in the 'unsafe' jurisdiction, so that the bonds in the 'unsafe' jurisdiction are never observed. Unfortunately, there is no consistent data that can be used to model the selection process.
- **Unbalanced panels.** The composition changes over time as bonds enter and leave the sample. If certain countries (and therefore their insolvency regime) are concentrated on time periods when bond spreads are particularly high/low, it can be difficult to control fully for both country effects and temporal shocks, as the remaining coefficients become more sensitive to sample structure. For this reason we use a linear time variable, rather than many time dummies.
- **Outliers.** Outliers arise where a bond is materially different in some respect. Some illiquid bonds may carry inaccurate price or yield information and take on extreme values, distorting the results. In order to reduce the influence of illiquid bonds, we weight observations by issue size, consistent with standard approaches to bond indices. Short duration bonds may also take on extreme value, so these are excluded. 'Residual-versus-fitted' plots do not indicate any material outliers in the estimation sample.

Many of the potential biases discussed above should be addressed within the panel specification. However, a robust panel estimation requires a considerably richer dataset, with good coverage over time for many countries undergoing substantial changes in insolvency regime. But as observed earlier, much of the recent insolvency reform has been in EU accession countries with thin bond markets and poor data, typically not available through providers such as Datastream or Bloomberg. For any future research on the impact of insolvency reform on these countries, it would be desirable to gather detailed bond data from individual country exchanges and to ensure comparability between sources.

Appendices



Appendix A: Key Differences in EU Insolvency and Restructuring Law⁷⁰

UK (England and Wales)

Corporate Insolvency and Restructuring Proceedings	Recent Legislative Reforms?	Time limits for filing	Creditors able to propose restructuring plan?	Court approved cram down on creditors?	Court approved cram down on shareholders?	Valuation method for the purposes of determining creditors' entitlement to vote on a court-sanctioned reorganisation plan
Pre-insolvency i.) Scheme of Arrangement ii.) Company voluntary arrangement (CVA) ii.) Administration iv.) Administrative Receivership ⁷¹ Post-insolvency v.) Scheme of Arrangement vi.) CVA vii.) Administration viii.) Liquidation ix.) Administrative Receivership	Revised SIP 16 ⁷² , which governs administrators' conduct in relation to pre-packs, became effective on 1 November 2015 along with the introduction of pre-pack pools for connected party transactions (although obtaining clearance for connected-party pre-pack transactions from the pre-pack pool remains voluntary on a comply or explain basis). The Small Business, Enterprise and Employment Act, which is being introduced in phases, contains a number of insolvency reforms which have general application to all relevant companies (not just SMEs). On 1 October 2015 (inter alia) the following reforms became effective (i) preventing essential utility and communications services from cutting off supply or charging premium rates while insolvency practitioners seek a viable solution to rescue a business and (ii) insolvency officeholders were granted the right to assign certain pre-insolvency avoidance transaction claims to third parties	No prescribed time limit but risk of directors' liability	Administration: one or more creditors may apply for an administration order. A qualifying floating charge holder has the power to choose the identity of the administrator CVA: creditors cannot propose a CVA Scheme of Arrangement: creditors can propose a Scheme, although in practice applications are usually made by the company	Scheme of Arrangement: can be used to cram down secured and unsecured creditors if approved by at least a majority in number and 75% in value of each class of the members or creditors who vote on the scheme ⁷³ There is no obligation to consult any creditor whose rights are not affected by the scheme or who has no "economic interest" in the scheme The Court will only sanction the scheme if the "proposal is such that an intelligent and honest man, a member of the class concerned, acting in respect of his interests might reasonably approve" – the fairness test A UK scheme is commonly used to restructure foreign companies where there is a "sufficient connection" between the company and the UK ⁷⁴ CVA: may be used to cram down creditors if approved by a majority of creditors comprising 75% in value of the company's creditors present and voting at the creditors' meeting called to consider the CVA (50% voting in favour must be unconnected with the company). A CVA cannot affect the rights of a secured or preferential creditor, except with their consent A CVA may be challenged on the grounds of unfair prejudice or material irregularity (subject to time limits)	Scheme of Arrangement: members may be bound by scheme if approved by a majority in number representing 75% in value of members in that class ⁷⁵ CVA: the company's shareholders can approve the proposals by a simple majority in value, although if they do not approve the proposals and the creditors do, the CVA will still be implemented. Dissenting shareholders can challenge the CVA on the basis of unfair prejudice or procedural irregularity	The price that a purchaser will pay for that business at the current time Valuation on a liquidation basis is appropriate only where the sole alternative is liquidation

⁷⁰ Analysis as at January 2016.

⁷¹ Administrative Receivership may be available to a holder of a floating charge over all or substantially all of the company's assets. Pursuant to the Enterprise Act 2002, this out-of court enforcement mechanism is no longer available for charges created after 15 September 2003 (unless a specific exception applies e.g. capital markets exception) and is rarely used in practice.

⁷² Unlike U.S. Chapter 11 proceedings and the German Insolvency Plan, a UK scheme cannot be used to cram down an entire dissenting class. "Roll over schemes" which combine a scheme (to bypass consent thresholds to roll-over senior debt to a Newco) and a pre-pack sale, where assets are transferred to a Newco and junior debt is left behind in the Oldco, have therefore become common in the UK (e.g. IMO Carwash)

⁷³ <http://www.icaew.com/en/technical/insolvency/insolvency-regulations-and-standards/statements-of-insolvency-practice-sips-england>

⁷⁴ Recent examples include Apcoa, the German car parking operator (2014); Zlomrex International Finance S.A, the French financing vehicle for the Cognor group, suppliers and distributors of steel products in Poland (2014); and Magyar, the Dutch holding company of the Invitel group of companies, one of the leading telecommunication services providers in Hungary (2014)

Position of management (insolvency and restructuring proceedings)	Stay on proceedings	Pre-pack sale available?	Avoiding Transactions	Priority status of post-petition financing / DIP financing	Creditor's ability to exercise contractual termination rights following commencement of restructuring/insolvency proceeding	Future Reforms?
Administration: directors displaced unless the administrator agrees otherwise Scheme of Arrangement: directors remain in place CVA: directors remain in place, however CVA is implemented under the supervision of a licensed insolvency practitioner Liquidation: directors displaced	Administration / Liquidation: automatic moratorium Scheme of Arrangement: no, however in practice, a Scheme of Arrangement is often used in conjunction with Administration to take advantage of the moratorium, or a lock-up arrangement is entered into with creditors CVA: small companies are eligible for a moratorium of up to 3 months when proposed by the company's directors. For companies not eligible for a moratorium, a CVA may be used in conjunction with Administration to take advantage of the moratorium	Yes. The sale of all or part of a company's business or assets can be negotiated with a purchaser prior to the appointment of an administrator and executed immediately upon his appointment The company's creditors are not consulted prior to the sale. However, the administrator must comply with Statement of Insolvency Practice (SIP) 16	Administration / Liquidation: an administrator or liquidator may apply to the court for an order to avoid or unwind certain pre-insolvency transactions Effective, as of 1 October 2015, administrators and liquidators have the right to assign certain pre-insolvency avoidance transaction claims to third parties.	Administration / Liquidation: DIP financing is not available; however, an administrator or liquidator may raise new money on the security of the unencumbered assets. Such additional funding will rank as an administration or liquidation expense which has priority over other claims (save for claims secured by a fixed charge)⁷⁶ CVA / Scheme of Arrangement: no statutory priority for new funds made available pursuant to a CVA or Scheme of Arrangement, although this may be granted contractual priority	Yes - contractual provisions providing that a contract may be terminated upon the commencement of insolvency or restructuring proceedings are valid provided they do not offend the anti-deprivation principle (parties cannot, on bankruptcy, deprive the bankrupt of property that would otherwise be available for creditors) (<i>Whitmore v Mason</i>, (1861) 21&H 204))⁷⁷ The anti-deprivation rule has been construed very narrowly (<i>Belmont Park Investments Pty Ltd v BNY Corporate Trustee Services</i> [2011] UKSC 38; <i>Lomas v JFB Firth Rixon Inc.</i> [2010] EWHC 3372 (Ch))	Insolvency Rules Modernisation Project. Implementation date TBC

⁷⁵ In practice, a “rollover scheme and pre-pack” (see footnote 72 above) is often used to take control of a distressed company without shareholder consent

⁷⁶ In practice, UK companies often grant a floating charge over all their assets. As such, generally, there are no unencumbered assets over which to grant new security. The UK Government considered amending legislation when consulting on the Enterprise Act 2002 and concluded that “the matter was one of too great complexity which required a wider consultation, particularly if it were intended that the UK courts would have a role in approving the grant of super priority funding on a case by case basis”. See INSOL article “Repair or Recycle? Some thoughts on DIP Financing and Pre-Packs” (https://www.insol.org/_files/Fellowship%202013/Literature/Session%206/Repair%20or%20Recycle.pdf) and “Financing Corporate Rescues, Where Does the UK Stand?”, by Akpareva Aruoriwo (<http://sas-space.sas.ac.uk/5609/1/2080-3020-1-SM.pdf>).

⁷⁷ The suspension of ipso facto clauses in administration was considered during the Standing Committee Stage of the Enterprise Act 2002 and was rejected for interfering with freedom of contract.

France

Corporate Insolvency and Restructuring Proceedings	Recent Legislative Reforms?	Time limits for filing	Creditors able to propose restructuring plan?	Court approved cram down on creditors?	Court approved cram down on shareholders?	Valuation method for the purposes of determining creditors' entitlement to vote on a court-sanctioned reorganisation plan
Pre-insolvency i.) Mandat ad hoc proceedings ii.) Conciliation proceedings iii.) Safeguard iv.) Accelerated Financial Safeguard (AFS) v.) Accelerated Safeguard (AS) Post-insolvency vi.) Conciliation Proceedings, AFS and AS – in each case provided that the company has been insolvent for less than 45 days before the petition is filed vii.) Judicial Reorganisation proceedings viii.) Judicial Liquidation proceedings	12 March 2014 Ordonnance to reform French insolvency law, effective 1 July 2014, implemented by the 30 June 2014 and 25 July 2014 decrees and amended by the 26 September 2014 Ordonnance 8 August 2015: Loi Macron	Obligation to file for either Judicial Reorganisation or Liquidation proceedings within 45 days following the date on which the company became cash-flow insolvent (except if the opening of conciliation proceedings has been filed within these 45 days) Directors face a management ban if they fail to file within this time limit and civil liability – of a financial nature – if the company's lack of assets is due to their management misconduct	Safeguard / AFS / AS / Judicial Reorganisation Proceedings: yes – when the creditors' committees must be formed⁷⁸, each committee member can submit a draft plan or suggest amendments to the company's plan Judicial Reorganisation/ Liquidation proceedings: yes – creditors can submit a takeover offer	Mandat ad hoc / Conciliation Proceedings: no – an agreement can only be adopted with the unanimous approval of every creditor⁷⁹ Safeguard / AFS / AS / Judicial Reorganisation proceedings: yes – may be used to cram down creditors The safeguard or reorganisation plan must be submitted to: (i) the financial establishments and assimilated committee; (ii) the main suppliers of goods and services committee and (iii), if applicable, a single bondholders' meeting for approval The plan must be approved by a 2/3 majority of claims held by voting creditors on each committee. If the plan is approved by the creditors' committees, a single bondholders meeting will be held. The plan must be approved by a 2/3 majority of claims held by voting bondholders The Court ensures that the interests of all the creditors are sufficiently protected	Generally no – a plan providing for a debt for equity swap must be approved by resolution of a meeting of shareholders. However: Safeguard / AFS / AS / Judicial Reorganisation proceedings: the judgment approving the restructuring plan may appoint a judicial administrator with power to convene the shareholders' meeting which will vote on the shareholders' cram down. The Court can decide the shareholders will vote by a simple majority at the first call. On the second call, quorum and majority will be determined by applicable commercial law Judicial Reorganisation proceedings: (i) when the debtor's equity value is lower than half its share capital an <i>mandataire ad hoc</i> can be appointed⁸⁰, and (ii) if the company has > 150 employees (or controls subsidiaries with global staff of > 150 employees) and the liquidation of the company would have an adverse impact on the economy / local employment and a share capital reorganisation is the only solution, the court may appoint a <i>mandataire ad hoc</i>⁸¹ Judicial Liquidation proceedings: N/A	N/A – the test is whether the plan affects the pre-existing contractual arrangement between the debtor and creditor. Save for a beneficiary of trust security, all creditors (regardless of ranking) are entitled to vote on the plan if their claim is affected

78 Creditors' committees, namely, the financial institutions creditors' committee and the trade creditors' committee, must be formed if the debtor has more than a €20m turnaround or 150 employees. As the case may be, a general meeting of bondholders is held to vote on the draft plan as approved by the committees.

79 In the restructuring of the French fashion retailer, Vivarte, the Vivarte Group failed to receive the support of 66.6% of creditors for a covenant standstill due to the opposition of certain funds, seeking higher fees to approve the request. The company was, nevertheless, able to implement a fully consensual work out plan involving France's largest ever debt-for-equity swap through Mandat ad Hoc and, ultimately, conciliation proceedings to implement the work-out plan.

80 The Mandataire ad hoc can convene a shareholders' meeting and exercise the voting rights of uncooperative shareholders to approve an increase in share capital for subscriptions by a third party

81 The Mandataire ad hoc can convene a shareholder's meeting and exercise the voting rights of the dissenting shareholders or order the sale of all or part of the dissenting shareholders' shares for the benefit of persons who undertake to implement the plan.

Position of management (insolvency and restructuring proceedings)	Stay on proceedings	Pre-pack sale available?	Avoiding Transactions	Priority status of post-petition financing / DIP financing	Creditor's ability to exercise contractual termination rights following commencement of restructuring/insolvency proceeding	Future Reforms?
Mandat ad hoc / Conciliation proceedings: management remains in place but is assisted by a court-appointed officer Safeguard / AFS / AS: management stays in place but its powers are limited to common management acts. He can be either supervised or assisted by the judicial administrator. The supervising judge may appoint up to 5 creditor controllers to supervise and assist the proceedings Judicial Reorganisation proceedings: judicial administrator appointed to assist or (in exceptional circumstances) replace management. Supervising judge may also appoint up to 5 creditor controllers to supervise and assist the proceedings If the reorganisation of the company requires so, the Court may make the plan conditional on the removal of one or several managers. Judicial Liquidation proceedings: management replaced by judicial liquidator. Supervising judge may also appoint up to 5 creditor controllers to supervise and assist the proceedings Employee representative also appointed for collective proceedings	Mandat ad hoc / Conciliation Proceedings: no automatic stay, however directors may apply to the Court for up to a 2 year grace period on obligations to creditors (deferral/rescheduling of payment obligations) Safeguard / AFS / AS / Judicial Reorganisation and Liquidation proceedings: automatic stay for debts originating from before the opening judgment – save for some exceptions. Note that for AFS, non-financial creditors are not affected and their debt is not stayed	12 March 2014 Ordonnance provides for a court-appointed insolvency officer and debtor to prepare confidentially and within the framework of Conciliation proceedings a consensual sale of all or part of the debtor's assets which would be implemented within the framework of a subsequent insolvency proceeding (e.g. Safeguard or Judicial Reorganisation or Liquidation proceedings)⁸²	Available in Judicial Reorganisation or Liquidation proceedings for suspicious transactions settled up to 18 months before the opening judgment	Conciliation Proceedings: new money/goods/services provided to a debtor with a view to ensuring the continuation of its operations are granted priority over pre-petition and post-petition claims (except certain post-filing costs and wage arrears) where it is provided as part of a court-sanctioned conciliation agreement. Note that this new money priority does not extend to shareholders or partners who contribute to a capital increase. Neither does it extend to Mandat ad hoc proceedings Safeguard / AFS / AS / Judicial Reorganisation and Liquidation proceedings: post-petition financing is paid back when due, and if not, priority over pre-petition secured and unsecured claims for new finance provided during the observation period where certain conditions are satisfied (but ranks behind post-filing costs, wage arrears and new money provided pursuant to court-approved conciliation agreement)	Mandat ad hoc / Conciliation proceedings: pursuant to the 12 March 2014 Ordonnance, contractual provisions (i) triggering detrimental consequences to the debtor or (ii) charging him the creditors' Mandat ad hoc or Conciliation counsel fees over a fixed price on the sole ground that conciliation or Mandat ad hoc proceedings have been commenced are now void Safeguard / AFS / AS / Judicial Reorganisation and Liquidation proceedings: contractual provisions triggering termination of the contract on the sole ground of the opening of Safeguard, AFS, AS, Judicial Reorganisation or Liquidation proceedings are void	

⁸² Similar to a UK-style pre-pack, the fact that the company is in financial difficulty is kept confidential, until implemented through a subsequent insolvency proceeding. This can help preserve value in the company.

Germany

Corporate Insolvency and Restructuring Proceedings	Recent Legislative Reforms?	Time limits for filing	Creditors able to propose restructuring plan?	Court approved cram down on creditors?	Court approved cram down on shareholders?	Valuation method for the purposes of determining creditors' entitlement to vote on a court-sanctioned reorganisation plan
Preliminary Proceedings⁸³ i.) Protective Shield Proceedings⁸⁴ ii.) Preliminary Debtor-In-Possession Proceedings ("Preliminary DIP Proceedings") iii.) Preliminary Regular Insolvency Proceedings ("Preliminary Regular Proceedings") Main Proceedings iiii.) Insolvency Plan Proceedings (DIP or administrator led) ("Insolvency Plan") v.) Debtor-In-Possession Proceedings ("DIP Proceedings") vi.) Regular Insolvency Proceedings (led by court appointed administrator) ("Regular Proceedings")	Act for the Further Facilitation of the Restructuring of Corporations, effective 1 March 2012 ("ESUG")	Without undue delay after the occurrence of illiquidity or over-indebtedness, but at the latest within 3 weeks	Creditors may by resolution of the creditors' assembly instruct DIP/supervisor/administrator to prepare a draft. Creditors may not propose a draft or any content but only define the purpose of the plan The creditors' committee advises the administrator in preparation of the plan	Insolvency plan can be used to cram down secured and unsecured creditors If a class of creditors rejects the plan, such rejection can be disregarded under the following conditions: Majority: Simple majority of the voting classes, each with more than 50% of (i) votes cast and (ii) amounts (shareholdings) "Best Interest Test": Creditors of the crammed down class are not worse off with the plan than without "Absolute Priority Rule": Creditors of the crammed down class adequately participate in the value distributed, i.e. under the plan (i) no creditor receives more than the value of its claim; (ii) no subordinated creditor receives any value and (iii) no <i>pari passu</i> creditor receives more than the creditors of the crammed down class In the context of an insolvency plan, subordinated claims (by law or contract) are deemed to be waived in principle. Only if a plan deals with subordinated claims and if the insolvency court summons subordinated creditors to file their claims (which will only happen if all non-subordinated creditors will be paid in full) will subordinated creditors have a right to vote on the plan	Insolvency plan can be used to cram down dissenting shareholders If class of shareholders rejects the plan, such rejection can be disregarded under the following conditions: Majority: Simple majority of the voting classes, each with more than 50% of (i) votes cast and (ii) amounts (shareholdings) "Best Interest Test": Shareholders are not worse off with the plan than without "Absolute Priority Rule": Shareholders adequately participate in the value distributed, i.e. under the plan (i) no creditor receives more than the value of its claim; (ii) no <i>pari passu</i> shareholders will be better off than without the plan	For the "best-interest" test, the court compares the return for the individual creditor in the envisaged insolvency plan against the dividend in regular insolvency proceedings (liquidation or going concern sale). For the "economically reasonableness" test, i.e. whether the insolvency plan provides for an economically reasonable participation of the dissenting class, the court evaluates whether (i) no other creditor receives more than the value of its claim (ii) no <i>pari passu</i> creditor receives more than a creditor in an impaired dissenting class and (iii) no subordinated creditor receives any value under the plan ("absolute priority" rule). Here, the value of the company is in particular relevant if the plan foresees a participation of the creditors in the company, e.g. by any kind of instruments The remedies of creditors based on the above tests are procedurally limited in order not to hold up the confirmation of a plan and instead aim to compensate a creditor in the case of violation of its rights

83 German law does not provide for a pre-insolvency proceeding. Due to the absence of a pre-insolvency proceeding and the short deadlines obliging the directors to file, it can be difficult for German companies to arrange a rescue deal or sale, without the risk of insolvency becoming public knowledge. This can, arguably, have a negative impact on value of the company.

84 The Protective Shield Proceeding is a new type of proceeding where the debtor, if not yet illiquid, is granted 3 months to develop a restructuring plan as a debtor-in-possession under the supervision of a court appointed supervisor who may be suggested by the debtor.

Position of management (insolvency and restructuring proceedings)	Stay on proceedings	Pre-pack sale available?	Avoiding Transactions	Priority status of post-petition financing / DIP financing	Creditor's ability to exercise contractual termination rights following commencement of restructuring/insolvency proceeding	Future Reforms?
Preliminary Proceedings Protective Shield/Preliminary DIP Proceedings: Management remains in place but is supervised by a court appointed preliminary supervisor (suggested by the debtor/preliminary creditors' committee) Preliminary Regular Proceedings: Usually management remains in place but all decisions are subject to approval by a court appointed preliminary administrator (suggested by a preliminary creditors' committee) Main Proceedings Insolvency Plan Proceedings: Depends on whether DIP or administrator led (see below) DIP Proceedings: Management remains in place but is supervised by a court appointed supervisor Once the main proceedings as DIP proceedings have been opened, the supervisory board, the shareholders' meeting or comparable organs shall have no influence on the debtor's management. The withdrawal and appointment of new members of the board of management shall be effective only if the court appointed supervisor gives its consent. That consent must be given if the measure does not place the creditors at a disadvantage. In practice this often means that such consent is usually not given. All of this also applies mutatis mutandis already in the Protective Shield/Preliminary DIP proceedings. Regular Insolvency Proceedings: Court appointed administrator takes over management powers	Preliminary Proceedings: No automatic stay but usually court orders a stay. Court may also stay the enforcement of rights for separation Main Proceedings: Automatic stay upon commencement of main proceedings	Pre-pack sale not available⁸⁵ Similar results may be achieved by careful planning, dependent on cooperation of the competent court A debtor is able to present a pre-packed plan. Implementation best to be pursued by a petition for Protective Shield Proceedings. Such planned sales usually take place only upon the opening of the insolvency proceedings over the estate of the debtor and only if the insolvency administrator (or the debtor-in-possession) agrees.	Insolvency administrator/supervisor may challenge certain pre-petition transactions, if the transaction was detrimental to the creditors. Standard look-back period is up to three months prior to the insolvency application. Specifically, avoidance action available for repayments of a shareholder loan within 1 year prior to the commencement of the main proceedings. In cases of "Wilful Disadvantage" ("<i>Vorsatzanfechtung</i>") which means cases where the debtor made payments with the intention to disadvantage all of its creditors and where the other party was aware of the debtor's intention, the look-back period is 10 years prior to the insolvency application. In cases of Gratuitous Benefits ("<i>Schenkungsanfechtung</i>"), the look-back period is 4 years.	No super senior post-petition/DIP financing available However, administrator/DIP may raise new money ranking as administration claim and/or on the security of unencumbered assets (in Preliminary Proceedings subject to prior authorization by the court)	Contractual termination rights in principle available after commencement of Main Proceedings However, ipso facto clauses risk being void if they are conditional upon a filing for (or the opening of) insolvency proceedings. However, other termination clauses based on other circumstances other than insolvency are arguably still valid. Further, lease contracts where the debtor is the tenant may not be terminated by the landlord based on default of rent due prior to petition for the commencement of insolvency proceedings or deterioration of assets of the debtor	German Ministry of Justice issued consultation on group insolvencies in January 2013. A corresponding draft law dated 30 January 2014 is currently under debate in the German Bundestag In addition, there is currently a draft reform of the German provisions for avoiding transactions being discussed in the German legislature under which it is proposed avoidance transactions will be limited.

⁸⁵ As a result of the lack of a German style pre-pack sale, there are examples of German companies taking advantage of a UK pre-pack. See for example Re Christophorus 3 Limited [2014], whereby ATU, the German automotive group, implemented a restructuring via a UK administration and pre-pack sale. Despite the group having almost no connection with the UK, it incorporated an English company to purchase the assets of the Group in order to obtain a UK administration order and sell its assets to a new group structure.

Italy

Corporate Insolvency and Restructuring Proceedings	Recent Legislative Reforms?	Time limits for filing	Creditors able to propose restructuring plan?	Court approved cram down on creditors?	Court approved cram down on shareholders?	Valuation method for the purposes of determining creditors' entitlement to vote on a court-sanctioned reorganisation plan
Pre-insolvency i.) Interim petition for <i>concordato</i> (<i>concordato con riserva</i>) ii.) Court supervised settlement with creditors (<i>concordato preventivo</i>) iii.) Debt Restructuring Agreement (<i>accordi di ristrutturazione dei debiti</i>) iiii.) Out-of Court Certified Rescue Plans (<i>piani di risanamento attestati</i>) Post-insolvency v.) Extraordinary administration (<i>Prodibis Proceedings</i>)⁸⁶ vi.) Extraordinary administration for large insolvent companies⁸⁷ (Marzano Proceedings) vii.) Bankruptcy proceedings (<i>fallimento</i>)⁸⁸ viii.) Post-Bankruptcy Creditors' Composition	Several reforms have been enacted since 2003. The most recent ones are: Law Decree No.83 of 22 June 2012 Law Decree No. 69 of 21 June 2013. Law Decree No. 145 of 23 December 2013. Law Decree No. 144 of 24 June 2014. Law Decree No. 83/2015 of 27 June 2015.	No prescribed time limit but risk of directors' liability in case of late filing	Settlement with Creditors: yes –if the composition plan includes a third party offer for the sale of some or all of the debtor's assets, a competitive process will be commenced ("<i>Concordato Preventivo</i>"). In addition, where a plan does not result in the payment of (i) at least 30% of the total unsecured indebtedness in case of composition plans on a going concern basis, or (ii) at least 40% of unsecured creditors' claims if not on a going concern basis, one or more creditors representing at least 10% of creditors may present a concurrent proposal and composition plan. Debt Restructuring Agreement: no, only the debtor may propose a debt restructuring agreement Certified rescue plan: plan is prepared by the debtor Extraordinary Administration: extraordinary administration proceedings can be commenced by a creditor (as opposed to extraordinary administration of large enterprises, which cannot) Post-Bankruptcy Creditors' Composition: once insolvency has been declared and the relevant procedure has commenced, creditors or third parties may file a proposal for a composition with the Court, with the aim of concluding the insolvency proceeding with a consensual restructuring with creditors	Settlement with Creditors: may be used to cram down secured and unsecured creditors (requires approval by more than 50% of creditors (by nominal value of their claims) and majority of creditor classes) Only creditors who are affected by the settlement plan are entitled to vote A court appointed expert assesses the viability (but not fairness) of the settlement plan to creditors or creditor classes Debt Restructuring Agreement: where more than 50% of a debtor's debts are owed to bank or other types of financial creditors, the debtor may seek to impose the debt restructuring agreement to dissenting or apathetic creditors. Various conditions apply including (i) the financial creditors that have approved the debt restructuring agreement represent at least 75% of the indebtedness in that class (ii) the legal position and economic interests of the financial creditors that approved the debt restructuring agreement are of the same nature as the dissenting creditors (<i>i.e.</i> all financial creditors are in the same class) (iii) the plan represents the "best alternative" to dissenting creditors and is on terms that are at least equal to those under any other realistically feasible alternative (iv) the court validates the plan and (v) the rights of non-financial creditors are unaffected. Certified Rescue Plan: no – this is an out of court procedure Extraordinary Administration: no, unless through settlement with creditors	Settlement with Creditors: if the sanctioned settlement proposal is not executed by the debtor, the court may appoint a judicial administrator vested with the power to execute the proposal. If the settlement proposal includes an increase of the debtor's share capital requiring shareholder consent, the judicial administrator may be empowered by the court to call a shareholders' meeting and to exercise the voting rights of any dissenting shareholders in such a meeting so as to increase the debtor's share capital.	N/A

86 Extraordinary administration is available under Italian insolvency law for large companies that employ at least 200 employees during the previous year (including those admitted to the redundancy fund). The overall debts of the company must be at least 2/3 of the assets on the balance sheet and of profits deriving from sales and provision of services during the previous financial year. When a company subject to the extraordinary administration procedure is part of a corporate group, the procedure extends to the other insolvent companies within the group.

87 Extraordinary administration of large enterprises is only available under Italian insolvency law to insolvent companies with at least 500 employees in the last year and an overall debt of €300m. If the company subject to the procedure is part of a group of companies, the extraordinary commissioner may ask the minister for economic development to admit other insolvent companies in the group to the procedure by submitting the application for insolvency to the relevant court.

88 The procedures that arise out of bankruptcy are insolvency, arrangements with creditors and liquidation (for entities of public interest which are not allowed to go bankrupt).

Position of management (insolvency and restructuring proceedings)	Stay on proceedings	Pre-pack sale available?	Avoiding Transactions	Priority status of post-petition financing / DIP financing	Creditor's ability to exercise contractual termination rights following commencement of restructuring/ insolvency proceeding	Future Reforms?
Settlement with Creditors: management remains in place but are subject to the control of the judicial commissioner. Extraordinary transactions require Court approval Debt Restructuring Agreement: management remains in place Certified rescue plan: management remains in place since this is an out-of-court restructuring procedure Extraordinary Administration: The powers of the board of directors are suspended and attributed to one or three extraordinary commissioner(s) appointed by the Ministry of Economic Development or the Court Bankruptcy: control of company transferred to the receiver. Creditor committee consent required for extraordinary transactions	Interim Petition for Concordato: automatic stay from the date of filing for a period up to 180 days (depending on the Court decision), when the debtor must file either a Debt Restructuring Agreement or a Settlement with Creditors. Any judicial mortgage on the debtor's properties granted in the 90 days prior to filing is ineffective Settlement with Creditors: automatic stay from date of filing and for the entire duration of the proceedings (up to a maximum of 9 months). Any judicial mortgage on the debtor's properties granted in the 90 days prior to filing is ineffective Debt Restructuring Agreement: automatic 60 day stay on creditor actions from date restructuring agreement is published in the Companies' Register. The stay may also be anticipated upon court approval for a period of 60 days before the entering into the agreement, in addition to the 60-day stay period following the publication of same (for an overall stay period of 120 days) Certified rescue plan: no formal moratorium, however a contractual standstill is commonly entered into with creditors Extraordinary Administration: automatic stay on creditor actions and enforcement of security Bankruptcy: automatic stay on creditor actions and enforcement of security	Both Debt Restructuring Agreements and Court supervised Settlement With Creditors (whether or not preceded by Interim Petition for <i>Concordato</i>) are instruments suitable for pre-pack and pre-agreed restructuring plans	Bankruptcy: a receiver may challenge certain pre-petition transactions according to certain hardening periods and within certain time limits. Payments made and guarantees granted by the debtor as part of a Settlement with Creditors, a Debt Restructuring Agreement or a Certified Rescue Plan are not subject to claw-back In pre-insolvency proceedings the Court may enter orders protecting certain transactions from claw-back risks Extraordinary Administration for Large Companies: the commissioner's powers are the same as those of a receiver during bankruptcy proceedings Extraordinary Administration Proceedings: the commissioner can only claw-back transactions approved as part of a Ministry-approved liquidation programme, but not if there is a restructuring plan in place Insolvency administrator/ supervisor may challenge certain pre-petition transactions, if the transaction was detrimental to the creditors. Specifically, avoidance action available for repayments of a shareholder loan within 1 year prior to the commencement of the main proceedings	A debtor in Concordato Preventivo or Debt Restructuring Agreement may seek court authorisation to receive interim financing, where such financing arrangements may be granted priority status, if an expert appointed by the debtor certifies that entering into such financing is in the creditors' best interest. In addition, a debtor in Concordato Preventivo or Debt Restructuring Agreement may seek court authorisation to either receive interim financing or to continue to use existing trade receivable credit lines, where such financing arrangements may be granted priority status. The court may authorise such financing arrangements, without prior expert certification subject to consulting with the debtor's main creditors and provided that the debtor confirms that: (i) the financing is required to meet urgent operational business needs (ii) the proposed purpose for the financing and that it was unable to obtain alternative financing and (iii) failure to provide the financing could cause irreparable and imminent harm to the business.	Pre-insolvency: Contractual clauses that provide that bankruptcy constitutes grounds for termination are ineffective only in case of Settlement with Creditors which provides for the continuation of the business as an ongoing concern No restrictions to enforce similar clauses in Debt Restructuring Agreement and Court Certified Rescue Plan Post-insolvency Contractual clauses that provide that bankruptcy constitutes grounds for termination are ineffective	

Spain

Corporate Insolvency and Restructuring Proceedings	Recent Legislative Reforms?	Time limits for filing	Creditors able to propose restructuring plan?	Court approved cram down on creditors?	Court approved cram down on shareholders?	Valuation method for the purposes of determining creditors' entitlement to vote on a court-sanctioned reorganisation plan
Pre-insolvency i.) Out of Court Payments Agreement⁸⁹ ii.) Protected Refinancing Agreements⁹⁰ iii.) Spanish Scheme of Arrangement for financial claims (<i>homologación judicial</i>). Also claw-back protected Post-insolvency iv.) Insolvency proceedings (<i>concurso</i>). The proceedings will either have the aim of reorganisation (by way of a creditors' arrangement supported by a viability plan) or liquidation (in which case sale of business as a going concern is also available)	9/2015 Act of 25 May 2015 (effective 27 May 2015). It formally validates RDL 11/2014, clarifying certain aspects of the 2014 reforms RDL 11/2014⁹¹ (effective on September 7, 2014). It extends and makes applicable the main principles of refinancing agreements to creditor voluntary arrangements within the context of insolvency proceedings. It also introduces new provisions regarding transfer of business units within <i>concurso</i>. Law 17/2014 (effective on October 2, 2014). It incorporates in the Insolvency Law contents of the latest RDLs with some minor amendments	Duty to file within 2 months of when the company has or should have become aware of its insolvency (cash flow only – there is no concept of balance sheet insolvency in Spain) An insolvent company can apply to the Court to obtain an additional 3 months to negotiate a settlement or refinancing plus one additional month to file for insolvency In relation to imminent insolvency, there is no duty to file, but debtor may decide to do so	Any creditor is able to propose a restructuring plan when negotiating a refinancing agreement A financial creditor supporting a Spanish Scheme of Arrangement may apply for its homologation Within <i>concurso</i>, creditors exceeding 20% of total liabilities may submit a reorganisation plan proposal	Protected Refinancing Agreements: approval of at least 60% of liabilities affected by the agreement is required⁸². There is no need for Court approval Spanish Scheme of Arrangement for financial claims, which require approval by creditors representing, at least, 51% of the financial liabilities, can be used to cram-down secured and unsecured creditors. The majorities required depend on whether the scheme affects secured or non-secured creditors and the terms of the scheme⁸³. The Court homologation is needed for the cram-down to be effective Creditors may, following approval of the Spanish Scheme of Arrangement by the Court, challenge it on the basis of “disproportionate sacrifice”⁹⁴ Creditors Agreement in insolvency proceedings: the Absolute Priority Rule does not apply. a) acceptance of at least 50% of the ordinary liabilities is required for non-burdensome measures (like write-offs up to 50% or deferrals up to 5 years); b) acceptance of a superior proportion of the liabilities than those voting against the proposal will be sufficient for the less aggressive proposals of full payment within 3 years or immediate payment with a write-off of less than 20%; c) acceptance of at least 65% of the ordinary liabilities is required for the more onerous measures (higher haircuts, conversion into equity etc.) Cram down on privileged creditors and secured creditors is also considered provided certain qualified majorities concur However, creditors' cram down will not be effective unless the Court approves the Creditors' Agreement	Pre-insolvency: No. A plan providing for a debt-for-equity swap must be approved by resolution of a shareholders meeting. However, unreasonable refusal by shareholders or directors to the capitalisation could result in liability in subsequent insolvency proceedings⁸⁵ Insolvency proceedings: Shareholders are affected by the Creditors Agreement approved by the Court, save that shareholder consent is required for any debt-for-equity swap The debtor has a veto right on a proposed plan (even if accepted by creditors). The debtor may prefer liquidation and, if he so decides, no proposal should be approved by the Court	N/A. Subordinated creditors are eligible to vote on a refinancing agreement even if they are “out of the money”⁸⁶

89 An out-of-court payments agreement under Spanish insolvency law can be reached by (i) an entrepreneur (an individual) in a position of current or imminent technical insolvency with liabilities below €5 million; and (ii) a legal entity in a position of technical insolvency with fewer than 50 creditors or assets or liabilities below €5 million, provided that the costs of the agreement can be met and the expected assets and revenues will be sufficient to allow a viable agreement. An insolvency mediator is appointed and the payment plan must achieve the consent of at least 60% of liabilities affected by the agreement. If agreement cannot be reached or the terms are breached, a consecutive insolvency proceeding will be declared in order to directly liquidate the assets. Therefore, an out-of-court Payments Agreement is very rarely used.

90 There are two types of refinancing agreement under Spanish law which are protected from claw-back risk: (i) a collective refinancing agreement, being an agreement entered into by creditors representing at least 60% of existing liabilities and made in response to a viability plan; and (ii) an individual refinancing agreement “safe harbour” which is not supported by a majority of creditors but which may, if certain criteria are met (which evidence that the refinancing agreement clearly improves the debtor's financial position), be protected from claw-back risk.

91 A key element of the RDL 11/14 was the introduction of a new section 3 in article 90 of Law 22/2003 (the Spanish Insolvency Law) which provides that special privilege to secured claims shall only apply to that part of a secured claim not exceeding the value of its security. Value of the security for such purposes shall be understood to be 90% of the “fair value”, less any preferential claims over the same asset. Valuation criteria are set out to determine what is to be considered as “fair value” of the secured asset, depending on the type of asset.

92 In relation to syndicated facilities, if lenders representing at least 75% of the outstanding principal (or less percentage if so stated in the facility agreement itself) approve the refinancing agreement, it will be understood that 100% of the lenders have approved it (for the purposes of calculating the 60% of the outstanding liabilities required).

Position of management (insolvency and restructuring proceedings)	Stay on proceedings	Pre-pack sale available?	Avoiding Transactions	Priority status of post-petition financing / DIP financing	Creditor's ability to exercise contractual termination rights following commencement of restructuring/ insolvency proceeding	Future Reforms?
Pre-Insolvency: management remains in place Insolvency proceedings: general rule: management remains in place supervised by the insolvency manager appointed by Court Management is replaced by the insolvency manager in cases of insolvency proceedings filed by a creditor, when the Court deems it appropriate or whenever the liquidation phase is opened	Pre-insolvency: Upon the communication to the Court of the start of negotiations within a Pre-insolvency scenario, enforcement actions against certain debtor's assets are stayed for a maximum period of 4 months. Public claims are not affected by this stay Spanish Scheme: once the agreement is reached and is filed before the Court in order to get its homologation, single enforcement proceedings are stayed by the Court until the homologation is awarded Insolvency proceedings: upon the issuance of the insolvency order, the general rule is that enforcement actions against the debtor are stayed With regards to secured creditors, only enforcement actions over certain debtor's assets (such as assets considered needed for the continuity of the debtor's activity) are temporally stayed. No enforcement of financial collateral shall be stayed as a consequence of the insolvency of the collateral grantor.	There is a possibility of sale of business unit through auction or direct sale (if the insolvency manager considers it to be in the best interest of the insolvent debtor) Unlike the U.S. pre-pack sale, the sale or auction of a business unit (before liquidation) requires Court sanction. The consent of 75% of the relevant secured creditors may also be required where the price to be received for the secured assets included in the production unit is lower than the value of the security	An insolvency manager may challenge any pre-insolvency transactions if they occurred within the previous 2 years and caused damage to the debtor's estate The Insolvency Law includes certain presumptions of acts to be harmful to the insolvency estate In addition, there is the possibility to rescind those acts and contracts that the debtor has entered into in the 4 previous years in fraud of creditors A Refinancing Agreement which meets the legal requirements is immune to claw-back⁹⁷	Ordinary rule: new money provided by means of a refinancing agreement ranks 50% privileged (over ordinary claims) and 50% "post-petition" claims (claims against the estate) However, 100% new money executed under refinancing agreements prior to October 2016, may under certain circumstances be granted post-insolvency order claim status (even if supplied by specially related party) in the case of a subsequent insolvency proceeding that occurs within the following 2 year period After expiry of the 2 year period the ordinary rule will apply again	Spanish Insolvency Law does not recognise contractual clauses which allow the termination of an agreement merely upon the issuance of the insolvency order of one of the parties (except for the case of financial collateral agreements regulated in RDL 5/2005) However, a creditor may apply for termination of agreements with pending reciprocal obligations in case of breach of the contract by the debtor	

93 In very simplified terms, the regime for the cram down on ordinary unsecured creditors requires: (a) the approval by creditors holding 60% of financial liabilities for non-burdensome measures (e.g.. deferrals for up to 5 years); (b) the approval by creditors holding 75% of financial liabilities for more onerous measures e.g. write-offs etc.. The regime for the homologation/cram down on secured creditors is the following: (a) for claims up to the value of the security, the approval by creditors holding 65% of financial liabilities for non-burdensome measures (i.e. deferrals for up to 5 years) and the approval by creditors holding 80% of financial liabilities for more onerous measures e.g. write-offs etc., and (b) for the secured debt amount not covered by the security value, the same majorities as for unsecured creditors is required.

94 "disproportionate sacrifice" is not defined under Spanish law and there is no set of guidelines developed by the Courts. The Spanish Court has, to date, only admitted challenges on this basis in a very limited number of cases. Furthermore, any potential challenge to a resolution validating a refinancing agreement is heard by the same court that issued the resolution (not by a higher court).

95 To avoid debtors objecting unreasonably to reaching agreements setting out debt for equity terms, a new presumption of serious wilful misconduct or fault by the debtor or the debtor's legal representatives, directors or liquidators, in generating or aggravating the debtor's technical insolvency, has been added where they object to a refinancing agreement and an insolvency order is later issued on the debtor (and, most importantly, this presumption can apply even to the shareholders or members if it was their negative vote at the company's shareholders' meeting that prevented the exchange of debt for equity).

96 Note, however, that for formal Spanish Court proceedings, subordinated creditors do not formally have voting rights.

97 See footnote 90. The Spanish Scheme of Arrangement may also resist claw back upon the scheme's approval by the Court.

The Netherlands

Corporate Insolvency and Restructuring Proceedings	Recent Legislative Reforms?	Time limits for filing	Creditors able to propose restructuring plan?	Court approved cram down on creditors?	Court approved cram down on shareholders?	Valuation method for the purposes of determining creditors' entitlement to vote on a court-sanctioned reorganisation plan
Pre-insolvency i.) Informal composition offer outside of insolvency⁹⁸ Post-insolvency ii.) Composition proposed pursuant to bankruptcy iii.) Bankruptcy (faillissement) iv.) Suspension of payments⁹⁹ (surséance van betaling)	Legislative proposals have been circulated for consultation purposes and proposed legislation is expected to come into effect in 2016	No prescribed time limit but risk of directors' liability	No, but the current legislative proposals include a restructuring plan presented by the creditors, provided that the company does not take the first initiative to propose a restructuring plan itself ¹⁰⁰	Informal composition outside insolvency: no (except in very exceptional circumstances) Composition proposed pursuant to bankruptcy: yes, however it will only be binding on ordinary creditors (not secured or preferential creditors without their consent). Requires majority in number and value¹⁰¹ Legislative proposals have been circulated that include a cram down of creditors within a certain class or of an entire class of creditors, provided that creditors do not vote in favour of a restructuring proposal on improper grounds	No	Legislative proposals have been circulated that allow for a restriction of shareholders' rights and the imposition of a debt for equity swap No prescribed valuation methodology The draft bill does not include any specific provisions relating to the type of valuation evidence or valuation methods

98 An informal composition outside insolvency is an agreement between the company and its creditors, that provides for partial payment in full satisfaction of the creditors' claims. The company is free to negotiate terms with its creditors, however it is only allowed to put forward one proposal plan. Once agreed and approved by the court, the company avoids liquidation and its debts are discharged. Only parties to the agreement are bound by its terms.

99 Under a suspension of payments, a debtor is given temporary relief against its unsecured creditors and any creditors who have subsequently been granted a security interest. The period may last up to 1 1/2 years and may be extended, during which time the business is managed jointly by the company and the adopted administrator.

100 A notable example of an English scheme of arrangement being used to restructure a Dutch company is the restructuring of Magyar Telecom B.V. (2014), where an English scheme of arrangement was used to compromise New York governed notes issued by a Dutch incorporated company. Magyar embarked on a number of measures (such as opening of a UK office, notices to creditors, negotiation meetings with creditors in London, appointment of UK based directors) to ensure that COMI shifted from the Netherlands to the UK. The other relevant jurisdictions (the Netherlands, Hungary and the United States) did not provide any attractive alternatives to the English scheme for the implementation of the transaction. The trend of using of an English scheme of arrangement to restructure NY high yield bonds issued by European corporates has continued e.g. Zlomrex International Finance S.A. (2014).

101 If the required majority do not vote in favour of the plan, the supervisory judge may, upon request, approve the plan if at least 75% of the present ordinary creditors vote in favour, provided the rejection of the proposal is due to one or more creditors who could not reasonably vote on the plan.

Position of management (insolvency and restructuring proceedings)	Stay on proceedings	Pre-pack sale available?	Avoiding Transactions	Priority status of post-petition financing / DIP financing	Creditor's ability to exercise contractual termination rights following commencement of restructuring/insolvency proceeding	Future Reforms?
Informal composition offer outside of insolvency: no court involvement – management remains in place Suspension of payments: management remains in place, supervised by a Court appointed administrator and a supervisory judge. The administrator's approval is required to bind the company and dispose of assets Bankruptcy: management displaced by court appointed bankruptcy trustee, who acts under the supervision of the supervisory judge	Suspension of Payments: limited stay (which does not prevent the commencement of proceedings by creditors) unless cooling-off period is ordered by the Court Bankruptcy: upon the appointment of the bankruptcy trustee, all creditors' actions and claims are automatically stayed In both the case of bankruptcy and a suspension of payments, the court may for a period of 2 months, with a possible extension of 2 further months, order a general stay of all creditors' actions	There have recently been a number of successful pre-pack restructurings in the Netherlands despite the fact that the pre-pack lacks a statutory basis¹⁰² Typically this procedure is achieved by the Dutch court appointing a so-called 'silent trustee', who can participate in negotiations with the relevant stakeholders	Provided that certain conditions are met, the bankruptcy trustee can avoid pre-bankruptcy transactions that are detrimental to the creditors of the bankrupt debtor	DIP financing is not available However, in Bankruptcy, if loans or credit are obtained by the bankruptcy trustee, these rank as estate claims and security can be granted over unencumbered assets to secure the repayment In suspension of payments, if loans or credit are obtained by management with the approval of the administrator, these rank as estate claims and security can be granted over unencumbered assets to secure the repayment	Contractual clauses that provide that bankruptcy constitutes a termination ground are valid, except for deliveries of certain utilities	Draft legislation is expected to be implemented in 2016. Based on the English scheme of arrangement and the U.S. Chapter 11, it will introduce a framework that enables companies and creditors to prevent minority obstructive creditors forcing the company to offer a composition in bankruptcy or suspension of payments A flexible mechanism is envisaged that will enable creditors or the company to offer a tailored composition if they (i) have ascertained that the business is heading for bankruptcy; and (ii) have provided opportunity for the company to offer a composition itself New proposals by the Ministry of Justice include (i) a Dutch version of the pre-pack and a statutory basis for the appointment of silent administrators; (ii) a cram down of creditors within a certain class or of an entire class of creditors and (iii) restriction of shareholders' rights and the imposition of a debt for equity swap as part of restructuring proceedings

¹⁰² E.g. in July 2014, the Dutch childcare service provider Estro went bankrupt and a Dutch 'pre-pack' bankruptcy process was utilised. Currently, all Dutch courts except for two, are accustomed to approving the appointment of "silent administrators" to effect a Dutch pre-pack sale.

Luxembourg

Corporate Insolvency and Restructuring Proceedings	Recent Legislative Reforms?	Time limits for filing	Creditors able to propose restructuring plan?	Court approved cram down on creditors?	Court approved cram down on shareholders?	Valuation method for the purposes of determining creditors' entitlement to vote on a court-sanctioned reorganisation plan
Pre-insolvency i.) Composition with creditors (<i>concordat préventif de faillite</i>) ii.) Suspension of payments (<i>sursis de paiement</i>) iii.) Controlled management procedure (<i>gestion contrôlée</i>) Post-insolvency iv.) Bankruptcy proceedings (<i>faillite</i>) v.) Compulsory liquidation (<i>liquidation judiciaire</i>)	No	Obligation to file within 1 month of cessation of payments	No	Composition with Creditors: approval of the majority of creditors representing at least 75% in value required to approve composition Before approving the composition, the Court will analyse whether the proposed composition is in the public interest and in the creditors' interests. Additionally, the debtor must be considered to be in good faith and to find itself in "<i>unfortunate circumstances</i>" (<i>débiteur malheureux et de bonne foi</i>) The relevant law for the composition procedure is a 1886 Law and this procedure is rarely used. Controlled Management: reorganisation plan must be approved by majority in number and value of creditors	No	N/A

Position of management (insolvency and restructuring proceedings)	Stay on proceedings	Pre-pack sale available?	Avoiding Transactions	Priority status of post-petition financing / DIP financing	Creditor's ability to exercise contractual termination rights following commencement of restructuring/insolvency proceeding	Future Reforms?
Suspension of payments: management remains in place, monitored by a court appointed administrator Controlled Management: management remains in place during first phase of controlled management but actions supervised by court appointed magistrate. A <i>commissaire</i> is appointed to supervise management in the second phase Bankruptcy / Compulsory Liquidation management displaced by court appointed receiver (<i>curateur</i>) Composition with creditors (<i>concordat préventif de faillite</i>) Management remains in place. Supervisory judge supervises the composition process. If the composition is specifically to realise the company's assets, liquidators are appointed by the court and are supervised by the supervisory judge.	Suspension of payments: moratorium on payment of creditor claims Controlled management: creditors' rights (including secured creditors except where specific laws provide differently) are stayed until a final court decision on reorganisation/liquidation plan is taken. Bankruptcy / Compulsory Liquidation: enforcement actions against the debtor are suspended. However, financial collateral arrangements¹⁰³ remain enforceable Composition with creditors (<i>concordat préventif de faillite</i>) If the composition is approved, it applies to all creditors (except the tax authorities, claims guaranteed by security or mortgage and claims due in respect of maintenance (<i>aliments</i>)). The composition only applies to contracts signed/debts contracted before the composition was obtained	No	Bankruptcy / Compulsory Liquidation: certain security interests and transactions may be challenged by the receiver in bankruptcy if they are granted during the hardening period (a maximum of 6 months, plus 10 days in certain circumstances) from the date of the filing of the petition Where a transaction is made with the purpose of defrauding creditors' rights, such transaction may be challenged irrespective of the date the transaction took place	DIP financing is not available. However, if finance is granted after the commencement of the insolvency proceedings the lender will be a creditor of the bankruptcy estate (<i>créancier de la masse</i>) and will be granted with a priority claim against the estate	Bankruptcy / Compulsory Liquidation: it is not clear whether contractual provisions providing that bankruptcy constitutes grounds for early termination, acceleration and penalty are valid	Draft legislation on business preservation and modernisation of bankruptcy law was introduced in the Luxembourg Parliament on 1 February 2013. The draft legislation provides for the introduction of out-of-court procedures to avoid formal insolvency proceedings. The legislation is intended to replace the existing restructuring procedures due to practical challenges associated with them in a modern business context

¹⁰³ Financial Collateral Arrangements include: transfers of ownership for security purposes, repurchase agreements relating to financial instruments (including securities, shares, etc.) and claims (including receivables and bank account balances).

Appendix B: Main principles of the U.S. Chapter 11 framework

We have set out below the main principles of the insolvency framework under Chapter 11 of the U.S. Bankruptcy Code, which is the most widely cited non-EU restructuring and insolvency regime. Chapter 11 is a rehabilitation regime which enables eligible financially-distressed corporations and partnerships to restructure their finances and reorganise their affairs under the protection of an automatic stay. Circumstances permitting, rehabilitated entities are then able to exit Chapter 11 and continue operating. We present these features as an example of an insolvency regime under which, as intended by the EC Recommendations, emphasis is placed on providing a viable company with a “second chance” to continue as a going concern. We do not suggest that Europe should explicitly follow Chapter 11, but we do believe that certain aspects of Chapter 11 might be useful in the analysis and application of any European reforms.

Key benefits provided to debtors under the U.S. Bankruptcy Code include:

- The “automatic stay,” imposed by the U.S. Bankruptcy Code as soon as a bankruptcy case is commenced. The automatic stay provides a breathing space from creditors in which a debtor can try to reorganize by restructuring its business or selling its assets without being pressured by the commencement or continuation of lawsuits or the seizure of assets.
- The presumption that the debtor’s management will remain in place, rather than be replaced by a trustee.
- The ability to obtain post-petition financing.
- The ability to obtain access to trade credit by paying post-petition creditors in full as an administrative expense.
- The ability to sell property of the debtor’s estate free and clear of liens, claims and encumbrances.
- The ability to reject burdensome executory contracts and unexpired leases and assume and assign executory contracts and unexpired leases to third parties, notwithstanding contractual assignment prohibitions.
- The exclusive right to propose a Chapter 11 plan during the initial 120 days of a Chapter 11 case and solicit and obtain acceptances of the plan during the initial 180 days.
- The ability to restructure financial obligations on a non-consensual basis pursuant to the “cramdown” provisions of the U.S. Bankruptcy Code.
- The discharge of a debtor from any debt that arose before the date of confirmation of a plan of reorganisation, regardless of whether a proof of claim was filed or the creditor accepted the plan.

The ability for a company in Chapter 11 to retain existing management and to obtain DIP financing are regarded as particularly advantageous features of the U.S. regime. In this regard, the retention of existing management is considered to assist in maintaining business continuity and the ability to obtain DIP financing is widely regarded as a crucial stabilisation tool, serving to facilitate the successful rehabilitation of a debtor or, if rehabilitation is not possible, maximising possible asset realisations in a liquidation.

Appendix C: Case studies on major restructurings in Europe

Summaries of two recent restructuring cases – Wind Hellas and Nortel - are provided below. These summaries, in different ways, highlight the need for further harmonisation of EU insolvency laws. Wind Hellas restructured successfully through a COMI shift, which arguably would have been unnecessary if European member state insolvency regimes were of a universally high standard. Nortel provides a classic example of how, in an international cross-border context, the interests of multiple stakeholders, competing insolvency laws and lack of harmonisation can lead to expensive litigation and delay appropriate distributions to creditors.

Wind Hellas

Wind Hellas was one of the largest telecommunications operators in Greece providing both fixed line and mobile telephone services to the Greek market. In 2009, the group was subject to a high profile restructuring under which a “COMI shift” was combined with a UK pre-packaged administration sale to effect a successful financial restructuring of the group.

Wind Hellas is a positive case study demonstrating that complex high profile businesses can be successfully restructured with minimum damage to underlying businesses if there is sufficient flexibility within a member state’s insolvency law to facilitate the use of appropriate restructuring tools and procedures.

As part of the restructuring the centre of main interests (“COMI”) of Hellas Telecommunications (Luxembourg) II SCA (“Hellas II”), a Luxembourg registered holding company, was successfully migrated from Luxembourg to England. The purpose of the COMI shift was to allow the group to implement a restructuring using the flexible procedures available under English law, which were considered to offer a better prospect of business continuity and value preservation compared to the more rigid formal insolvency procedures available under the laws of Hellas II’s original place of domicile in Luxembourg.

Following the successful migration of Hellas II’s COMI to England, Hellas II was placed into administration. Shortly after appointment, the Hellas II administrators entered into a pre-packaged administration sale¹⁰⁴ under which the shares in Hellas II’s principal subsidiary were sold to a new holding company structure, enabling the Wind Hellas business to continue operating with an improved balance sheet.

The Wind Hellas case bolsters arguments in favour of harmonising European insolvency laws and the adoption of minimum standards across all member states. It could be argued that if such standards had existed across EU member states at the time of the Wind Hellas restructuring, the same outcome could have been achieved using a simpler (and cheaper) Luxembourg process without needing to shift Hellas II’s COMI to England. This observation is particularly relevant in relation to the interests of smaller firms who are unlikely to have the financial resources or access to legal and other advisers to allow them to utilise the arrangements contained in the EC Insolvency Regulations¹⁰⁵ to choose a more favourable restructuring forum by migrating COMI.

¹⁰⁴ The term pre-packaged administration sale or “pre-pack” refers to an English law process under which a company enters administration and the administrators, immediately following their appointment, sell the business or assets of the company to a purchaser under an arrangement which was agreed and negotiated with the administrators prior to their appointment. The key feature of a pre-pack is the speed in which a sale can be executed thereby limiting the potential reputational damage which can be caused by a company entering insolvency, protecting value and enabling business continuity, thereby facilitating the preservation of jobs and goodwill.

¹⁰⁵ Council Regulation (EC) 1346/2000 on insolvency proceedings

Nortel

Prior to its collapse, Nortel was a global telecoms business headquartered in Canada, which at its peak generated approximately U.S.\$30 billion of consolidated revenue and employed around 93,000 employees globally. In January 2009, faced with a looming interest payment, various key Nortel group companies concurrently commenced main insolvency proceedings in three different jurisdictions – namely, Canada, the U.S. and the UK. Unable to agree an overarching insolvency protocol, the competing interests of the different insolvency estates resulted in deadlock regarding the allocation of asset sale proceeds. This deadlock was only resolved after over five years of litigation, during which time creditors and stakeholders (including 33,000 Nortel pensioners in the UK and 20,000 pensioners of Nortel Canada) had to wait to receive distributions.

The key protagonists in the Nortel insolvency were (i) the Canadian parent company, Nortel Networks Limited, which together with certain Canadian subsidiaries applied for protection under the Canadian Companies' Creditors Arrangements Act (ii) the U.S. company Nortel Networks Inc., which together with certain Nortel U.S. subsidiaries filed for protection under Chapter 11 of the U.S. Bankruptcy Code and (iii) 19 European companies¹⁰⁶ each of which was placed into English administration proceedings on the basis that each company's COMI was located in the UK. In addition, local proceedings were commenced in various other jurisdictions including secondary *liquidation judiciaire* proceedings in France and bankruptcy proceedings in Israel.

The Canadian, U.S. and European estates worked together to achieve a number of successful business divestitures and asset sales realising in total over U.S.\$7.3 billion of sale proceeds for distribution to Nortel creditors as part of a coordinated liquidation process. Crucially, however, issues of jurisdiction, clashing insolvency laws, competing interests and complex inter-group organisational and tax arrangements meant that, despite three rounds of mediation, the estates were unable to agree on a methodology by which the sale proceeds could be allocated between themselves and distributed to their respective creditors. In the absence of an allocation agreement, the sale proceeds were placed in escrow and the estates entered into protracted and expensive litigation (including appeal hearings) in Canada, the U.S. and the UK to resolve the issue.

Although the Nortel case is an example of the difficulties which can arise under cross-border insolvencies, it also illustrates the benefits of harmonised European insolvency laws. Reliance on the existing EC Insolvency Regulations was crucial to facilitating 19 disparate Nortel subsidiaries in 16 different European jurisdictions in successfully commencing English administration proceedings on the grounds that the English court was satisfied that each company's COMI was located in England. This process allowed the coordinated appointment of administrators to each relevant Nortel European subsidiary and, in so doing, minimised the inefficiencies which would have arisen had each subsidiary opened main proceedings in the jurisdiction of its incorporation. It is also notable that by appointing English administrators to the Nortel European subsidiaries it was possible through the use of so-called "synthetic secondary proceedings"¹⁰⁷ to limit the number of actual secondary proceedings to France only (where the administrators invited the appointment of a French liquidator), thereby minimising the number of officeholders with which negotiations were required to be held. The pending EU insolvency reforms which introduce (amongst other things) (i) limits regarding the opening of secondary proceedings and (ii) compulsory cooperation between officeholders and courts, should hopefully mean that in a future "Nortel", the European insolvency process would be even more streamlined and efficient, enhancing the possibility of debtors being rescued and maximising recoveries to creditors.

¹⁰⁶ The 19 Nortel subsidiaries which entered administration proceedings and their original places of incorporation were: Nortel Networks UK Limited (UK); Nortel Networks SA (France); Nortel GmbH (Germany); Nortel Networks France SAS (France); Nortel Networks NV (the Netherlands); Nortel Networks SpA (Italy); Nortel Networks BV (the Netherlands); Nortel Networks Polska SP Zoo (Poland); Nortel Networks Hispania SA (Spain); Nortel Networks (Austria) GmbH (Austria); Nortel Networks sro (Czech Republic); Nortel Networks Engineering Service Kft (Hungary); Nortel Networks Portugal SA (Portugal); Nortel Networks Slovensko sro (Slovakia); Nortel Networks Oy (Finland); Nortel Networks Romania SRL (Romania); Nortel Networks AB (Sweden); Nortel Networks International Finance & Holding BV (the Netherlands); and Nortel Networks (Ireland) Limited (Ireland).

¹⁰⁷ Synthetic secondary proceedings are arrangements whereby the officeholder in the main proceeding undertakes to deal with any assets in the 'second' jurisdiction in accordance with the second jurisdiction's law of distribution thereby negating the need to actually open secondary proceedings.

Appendix D: Case studies of recent national reforms

Italy

Italy has undertaken a number of reforms to its insolvency regime since 2004, in response both to EU directives, certain high-profile insolvency cases involving large businesses, and more generally an increase in corporate insolvencies as a consequence of the global financial crisis. The overall thrust of the reforms has been to strengthen the scope for reorganisation and restructuring, in preference to liquidation. This has been achieved mainly by extending the range of pre-insolvency processes and simplifying the grant of stays during such processes; reforming the role of the courts in pre-insolvency and insolvency processes; addressing problems related to creditor “hold out” by making it easier to impose restructuring plans on dissenting creditors; tax reforms that reduce disincentives previously faced by lending institutions to recognise non-performing loans; and improving creditor protection during liquidation processes.

The main steps in the reforms have been:

- The Marzano Law of 2004 that streamlined processes for dealing with the insolvency of large companies.
- Reforms in 2005 simplifying pre-insolvency processes. These include: the possibility of debtors concluding an out-of-court agreement with creditors; concluding a court-sanctioned restructuring agreement with debtors that account for at least 60% of exposure, which involves a 60-day stay on enforcement (further simplified in 2010 to allow stays to begin at the commencement of negotiations, unless the courts object); and a “composition agreement” that allows agreement with all creditors on the reorganisation of the business, and contains “cram down” provisions. Creditor protection against claw-backs was also enhanced.
- In 2012, the initiation of restructuring and access to interim financing was further streamlined. Access to finance includes the possibility of contacting loans that are given “super-senior” status in the case of subsequent debtor insolvency. A provision of a one-year suspension of payments to secured creditors, subject to court approval, was also introduced.
- Reforms in 2015 further strengthened access to interim financing, made credit-losses tax-deductible over a single fiscal year rather than five, and introduced the possibility for creditors holding at least 10 percent of overall debt to draw up competing restructuring plans, drawing on the U.S.’ Chapter 11 as a model.

Overall, the thrust of Italy’s insolvency reforms, with its focus on facilitating restructuring options prior to the commencement of insolvency proceedings, or at an early stage at this process are entirely consistent with the direction proposed by the EC’s proposal on a new approach to insolvency and business regulation. The reforms are consistent with the findings presented in **Figure 3** of this report, which highlight the improvements in recovery rates in Italy between 2004 and 2015. As reported in **Figure 6**, the potential GDP gains from further improvements to Italy’s insolvency regime are the largest in the EU28 area, underscoring the importance of furthering the reform agenda.

Czech Republic

The requirement to strengthen the framework for insolvency was identified as a matter of priority policy concern in the context of the Czech Republic's accession to the EU. The prevailing framework was seen as being cumbersome, suffering from conflicting interpretations by the courts, and lacking in flexibility, especially with regard to the possibility of restructuring debtors' businesses.¹⁰⁸

The main reform to the insolvency regime took place in 2008, with the entry into force on 1 January of the Czech Insolvency Act (hereafter the "**Act**"). In response to feedback from courts, participants and other stakeholders, amendments to the Act were introduced in 2014.

The Act introduced a number of innovations to the Czech insolvency regime, the single most important one of which was the development of a pathway for restructuring. Under the Act businesses that are insolvent or under the threat of insolvency can file for restructuring proceedings, subject to a series of critical size tests (relating to turnover or the number of employees) and to the approval of a reorganisation plan that is approved by the insolvency court. The court will, *inter alia*, check that the plan is likely to afford each creditor an amount at least equivalent to that creditor's share of the hypothetical liquidation valuation of the debtor. Debtors that do not meet the critical size thresholds can still file for reorganisation but only subject to the prior approval by the majority of secured and unsecured creditors, as well as the court. The 2014 amendments lowered the size of critical size thresholds to improve access to reorganisation proceedings.

The Act also introduced changes to the balance of rights and obligations of creditors. In particular, it affords them the right to recall trustees appointed by the court at the outset of the reorganisation process, the right to appoint valuation experts whose findings, once approved by the courts, are binding, and full priority for secured creditors. The Act enforces a stay of action on creditors following the filing for insolvency.

In the event that a reorganisation plan cannot be approved within the prescribed timetable, or the court finds that the debtor cannot abide by the provisions of the plan, bankruptcy is declared. The main innovation under the Act was to ensure full priority for secured creditors – whereas previously, claims were capped at 70 percent of the proceeds of sale.

In general, the reforms implemented by the Czech Republic are consistent with the directions advocated by the EC's 2014 recommendations. The reforms are a reflection of both internal factors, as well as commitments undertaken as part of the EU accession process (which was completed in 2004). Our analysis reports that further improvements to the quality of the insolvency regime could add €2.5 billion to Czech GDP.

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Contacts

AFME



Paul McGhee
Director of Strategy
paul.mcghee@afme.eu
+44 (0)20 3828 2708



Gary Simmons
Managing Director, High Yield and
Prime Services
gary.simmons@afme.eu
+44 (0)20 3828 2723



Julio Suarez
Research Manager
julio.suarez@afme.eu
+44 (0)20 3828 2726

Frontier Economics



Thomas Baily
Senior Consultant
thomas.baily@
frontier-economics.com
+ 44 (0)20 7031 7107



Amar Breckenridge
Senior Associate
amar.breckenridge@
frontier-economics.com
+41 78 803 6445

Weil



Paul Bagon
Associate
paul.bagon@weil.com
+44 (0)20 7903 1253



Andrew J. Wilkinson
Partner
andrew.wilkinson@weil.com
+44 (0)20 7903 1068



Alexander Wood
Partner
alexander.wood@weil.com
+44 (0)20 7903 1206

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London Office

39th Floor
25 Canada Square
London, E14 5LQ
United Kingdom

Switchboard:
+44 (0)20 3828 2700

Brussels Office

Rue de la Loi, 82
1040 Brussels
Belgium

Switchboard:
+32 (0)2 788 3971

Press enquiries

David Waller
Director of External
Relations
david.waller@afme.eu
+44 (0)20 3828 2736

Rebecca Hansford
European Media Relations
Manager
rebecca.hansford@afme.eu
+44 (0)20 3828 2693

Membership

Elena Travaglini
Elena.Travaglini@afme.eu
+44 (0)20 3828 2733

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