

ICFR and Financial Times Research Essay Winner:

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**What Works Best for Banking Regulation: Market
Discipline or Hard–Wired Rules?**

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ABSTRACT

In the aftermath of the global financial crisis, regulators now have the challenge of deciding on how best to regulate the bank of tomorrow. As academic and practitioner research increasingly questions the role and effectiveness of hard-wired rules regulation in favour of incentive-based regulation like market discipline, the following question arises: what works best for banking regulation; market discipline or hard-wired rules. Through a discussion of cases for and against both forms of regulation, this essay aims to explain why a mixed regulatory approach based on both regulators and market based – oversight and founded on rules and incentives to promote market discipline, may be the only solution for effective and efficient regulation. In so doing the essay confirms why there is a growing focus on the use of contingent capital as opposed to subordinated debt as a tool of market discipline and the need to create rules that mandate contingent capital in tackling excessive risk taking by banks and present an effective tool of balancing market discipline with capital rules, closes gaps of information asymmetries, controls principal agent and moral hazard problems, reaches an internationally harmonised approach to avoid regulatory arbitrage and in so doing, achieves a level playing field and a certain level of market discipline in financial markets.

Using Basel II's Capital Accord, third pillar (market discipline), the essay seeks to explain to what extent this was used in the events leading to the financial crisis. With the aid of comparisons between the UK and US style of regulation, the essay also analyses how a shift from a rules based regime to a principles based regime has benefited the UK market and why the US also seeks to shift from their heavily regulated regime closer to that employed by the UK.

INTRODUCTION

Banks are an important aspect of any economy. They provide financing for commercial businesses, access to payment systems and a variety of financial services for the economy as a whole. The integral role that banks play in the national economy is demonstrated by the need for and practice of banking regulation and as part of the lessons learnt from the recent global financial crisis, provides a government safety net to compensate depositors when banks fail thus providing depositor protection. One of the main reasons why banking regulation is vital is because of systemic risks; the risk that financial difficulties at one or more banks spill over to a large number of other banks or the financial system as a whole¹. Systemic risks were traditionally bank – based. Bank regulators traditionally focused on systemic risk in the banking sector while securities regulators traditionally focused on investor protection and market practices however recent crisis shows that systemic risk can arise from a general drying up of liquidity in capital markets². Other goals of banking regulation are to ensure the stability and soundness of the financial system and the safeguard of confidence and trust. Economists tend to share a different view in that they argue that regulation is only necessary in the presence of market failure or deficiency.

Market discipline versus “Hard-wired” rules

Banking regulation is often reactive. Regulatory reform closes gaps in the financial system usually following a crisis, shifts in the markets or other change

¹ Rosa M. Lastra , Legal foundations of international monetary stability (2006), p.138

² Alexander, Eatwell, Persaud & Reoch (2007) Financial Supervision and Crisis Management in the EU

that threatens financial stability.³ A feature of banking regulation which is necessary in tackling such problems is market discipline. Market participants are said to be constrained by market discipline in setting prices because they have strong incentives to generate revenues and avoid bankruptcy. This means that in order to satisfy their interests, customers usually avoid high prices whilst service providers set prices that generate revenue. Market discipline can be exerted by market participants if they have sufficient information and if they have the incentives and ability to assess bank risk. BGFRS⁴

having insurance against some risk causes the insured party to take greater risk or to take less care in preventing the event that gives rise to the loss. The existence of a public ‘safety net’ creates a moral hazard, that is, a set of incentives for the protected to behave differently – irresponsibly, carelessly or less conservatively simply because of the existence of protection.⁵

Another Moral hazard problem is that of the ‘**too big to fail doctrine**’. The issue of excessive risk taking and their potential external consequences presents the notion that a firm’s risk exposure is limited to its capital base whilst its external (random) losses are unbounded. This therefore establishes a condition for a firm to believe it is too big to fail. When banks are perceived too big to fail, they have a tendency to take excessive risks to profit in the short term; they therefore seek to unduly exercise their market power, ruling the less powerful and pricing their services unrelated to their costs or quality. In order to counteract this loss of market discipline, the argument that governments must introduce “hard – wired” rules and regulations aimed at preventing bank managers from taking excessive risk is viable. In a speech by the President of the Federal bank of New York⁶, emphasis was placed on the fact that some pro-cyclical dynamics in the financial system were to blame for “market participants not always having the incentive to behave in ways that will be good for the system as a whole”. According to President Dudley because market participants do not have to bear the full costs of their actions they have an incentive to take on more risk without regard for the broader implications of those actions. A number of issues, including poorly constructed compensation schemes, ineffective risk management and gaps in regulatory oversight and risk capture were cited as causal factors.

Market Discipline as an incentive to restrain extreme risk taking – Case for hard-wired rules

⁵ Rosa M. Lastra, Legal foundations of international monetary stability (2006), p115

⁶ William C Dudley, Speech on lessons learnt from the Crisis, 13 October 2009

Today, market discipline is introduced into the Basel II Capital Accord as a pillar of prudential banking regulation⁷. Excessive risk taking by deposit taking institutions provides the rationale for market discipline. Pillar 3 of Basel II Capital Accord recognises that market discipline has the potential to reinforce capital regulation and other supervisory efforts to promote safety and soundness in banks and financial systems. Market discipline imposes strong incentives on banks to conduct their business in a safe, sound and efficient manner. It can also provide a bank with an incentive to maintain a strong capital base as a cushion against potential future losses arising from its risk exposures. The Committee believes that supervisors have a strong interest in facilitating effective market discipline as an incentive to strengthen the safety and soundness of the banking system. The allowance by Basel II for institutions to use publicly available assessments of private credit rating agencies as well as their own internal credit ratings to determine capital standards is an example of an incentive mechanism which was used to promote the concept of market discipline. A vital question that comes to mind however is whether this mechanism worked in light of the crisis? One of the major causes of the crisis (**which is a disadvantage of market discipline**) was that debt had been inaccurately assessed and rated as AAA (i.e. excellent credit scoring) by credit rating agencies paid by the issuing companies or vehicles involved. Banks and investors who had purchased structured debt but not directly involved in that market were fully entitled to purchase high yielding and apparently low risk debt that had been given excellent credit scores by all the main rating agencies. This later resulted in banks recording huge losses as soon as the underlying collateral problems were realised and the assets re-valued. Placing huge reliance on credit rating agencies in this way poses a substantial risk as this creates an incentive for agencies to act either in their own interests or those of the borrower in hopes of maximising their own gains through favourable

⁷ Basel Committee, The New Basel Capital Accord: Consultative document, May 2001; Pillar 3 (market discipline)

ratings.⁸ The crisis has revealed weaknesses in the methods and models used by credit rating agencies and this perhaps heightens the argument for credit rating agencies to be subjected to hard-wired rules. To clarify the role of the agencies and assess the need for hard regulatory measures, in autumn 2007 the European Commission requested the advice of the CESR⁹ and the European Securities Markets Expert Group (ESME)¹⁰. At around the same time, other countries also started reforms in this field; (US, Japan), and since then, important reports by the International Organisation of Securities Commissions (IOSCO)¹¹, the Financial Stability Forum¹² and the Committee on the Global Financial System¹³ have addressed the issue.

The Need for Mandatory Contingent Capital as opposed to Subordinated Debt (case for a mixture of market discipline hard wired rules)

Studies have shown that subordinated debt (debt bonds) markets do differentiate between banks with different risk profiles. This fact satisfies a necessary condition for regulatory proposals which would mandate increased reliance on subordinated debt in the bank capital structure to discipline banks' risk taking.

⁸ Ellis Ferran and Charles A E Goodhart, *Regulating Financial Services and Markets in the 21st Century* 2001

⁹ The CESR is an independent advisory group to the European Commission composed of the national supervisors of EU securities markets; see Commission Decision of 6 June 2001, establishing the Committee of European Securities Regulators, 2001, p. 43). The role of the CESR is to improve coordination among securities regulators, advise the European Commission and ensure more consistent and timely day-to-day implementation of Community legislation in the Member States.

¹⁰ The European Securities Markets Experts Group (ESME) is an advisory body to the Commission, composed of securities markets practitioners and experts set up by the Commission in April 2006 and governed by Commission Decision 2006/288/EC of 30 March 2006 setting up a European Securities Markets Expert Group to provide legal and economic advice on the application of the EU securities Directives (2006, p. 14).

¹¹ Code of conduct fundamentals for Credit rating agencies (revised May 2008)
<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD271.pdf>.

¹² Report of the FSF on Enhancing Market and Institutional Resilience, 7 April 2008
http://www.fsforum.org/publications/r_0804.pdf.

¹³ Ratings in structured finance: What went wrong and what can be done to address short comings? July 2008, <http://www.bis.org/publ/cgfs32.pdf?noframes=1>

The belief is that with a fully implemented program, the market will become deeper, issuance will be more frequent, debt will be viewed as a more viable means to raise regulatory capital, and debt dealers will be less reluctant to disclose more details on debt transactions. Prior to the financial crisis, regulators believed that a degree of market discipline will be more enhanced by establishing rules with a mandatory subordinated debt program requiring banks to regularly approach the subordinated debt market. Mandating the issuance of this form of debt encourages banks (especially large complex banking organisations) to engage in less risky activities which in turn provide signals to market participants of the condition of the bank. Large complex banking organisations were being targeted here because they are typically associated with systemic concerns of regulators.¹⁴ It should however not be overlooked that although subordinated debt allows banks to hold a portion of their liabilities, subordinated debt holders and supervisors are both concerned about bank risk. If a bank fails and if its assets value is less than its liabilities, depositors and senior debt holders are compensated first. Then, subordinated debt holders, who are junior claimholders, share the residual value. If a bank is at risk, subordinated debt holders bear a considerable risk because of their junior status. The aim of subordinated debt proposals to enhance both direct and indirect market discipline as described above is now being overshadowed by the growing focus on convertible debt as a way of balancing market discipline with capital rules. This is because there is little evidence to suggest whether banks with higher elements of subordinated debt in their financing fared any better in the crisis than institutions with lower levels of subordinated debt¹⁵. In a paper by Mark J. Flannery, a former resident scholar at the Federal Reserve Bank of New York, there was an evaluation of a new security which converts from debt to equity automatically when the issuer's equity ratio falls to low. This is known as a Convertible debt certificate. "Contingent

¹⁴ See Benink and Schmidt (2000), Calomiris (1997, 1998), Evanoff and Wall (2000a, b) and US Shadow Regulatory Committee (2000)

¹⁵ Mark Flannery, Stabilizing large financial institutions with contingent capital certificates (2009)

capital certificates" (CCC) can greatly reduce the probability that a large financial firm will suffer losses in excess of its common equity, and will provide market discipline by forcing shareholders to internalize more of their assets' poor outcomes. In doing so, market discipline may improve the efficiency of banking regulation and decrease its cost. Because the interest on CCC bonds should be tax-deductible for the issuing firm, their risk absorption capacity has limited effect on the issuing firm's cost of capital. Unlike a straightforward increase in equity capital requirements, CCC will not raise break-even loan rates substantially, and hence will not hinder borrowers' growth or profitability. Indeed, CCC should permit regulatory authorities to require substantial more "downside risk" protection at a modest cost to the issuing banks. Replacing subordinated debt with CCC would also raise the average traditional pre-failure risk absorption capacity by more than one-half, and replacing the entire (not known to be secured) long-term debt with CCC would more than double the average firm's pre-bankruptcy risk-bearing capacity without changing its usage of long term debt. In Flannery's opinion, "companies can most readily issue CCC to replace their unsecured long-term debt, including the traditional subordinated debt included in Tier 2 Capital requirements. If firms financed themselves partly with CCC, there would be a mechanism for recapitalizing firms promptly after they suffered losses". This also means that there may be no need for central banks to exercise their lender of last resort function and taxpayers' money will be protected. CCC would thus reduce the probability of failure, reduce the incentive to move safer activities off balance sheet, protect taxpayers and solvent banks from bearing the issuer's losses, and still permit the issuers' to lend profitably at relatively low rates of interest. William Dudley¹⁶ also supports the idea of mandating contingent capital in the regulatory framework. In his view, the regulatory capital framework would benefit from four changes:

- Improving the risk capture associated with the capital requirements.

16

- Introduction of rules that ensure the conservation of capital during times of economic and financial distress.
- Imposition of higher capital requirements for systemically important institutions.
- Development of efficient forms of capital. In particular, contingent capital debt instruments that are convertible into common equity if a bank's share price were to fall precipitously.

Market discipline and The Principal Agent Problem

An effective regulatory framework should also include accounting rules and practices and mandatory disclosure requirements to curb excessive risk taking. Market abuse will not be unobserved if regulators had complete information. The idea that firms have information advantages and that this provides the opportunity to take reckless actions presents the principal – agent problem. This information asymmetry and inefficiencies present a dilemma for regulators as regulators believe firms have better information and so should be incentivised to provide this information. The existence of information deficiencies is a good example of what prevents market discipline thus justifying regulation in the form of hard wired rules. During instances where the quality and quantity of information received by regulators about the dealings of any financial institution is inferior, firms need incentives to be able to provide this information more freely. This is because firms are the main source of regulators' information. The adoption of a rule-based regime however, means that firms are also unable to make full use of information held by managers. This is because rule-based regulation does not make use of managers' expertise whereas the notion of market discipline allows firms to operate more efficiently due to the use of managerial insights. Whilst there is this limitation to a rule-based regime, it is vital to consider the issue of conflicts of interests when reliance is placed on managers to use their insight and expertise to produce information. It is very

common for managers to operate in the interest of owners for example a major shareholder, which therefore drives corporate governance to be largely influenced by shareholders' interests.

Further cases against hard wired rules

Another reason why market discipline is proving popular and provides a good foundation on which to build future regulation is because of financial innovation and technological improvements through the use of financial intermediaries. Producing and implementing “hard-wired” rules governing these activities become more and more costly to monitor and supervise from a regulatory perspective. This is why market discipline may be preferred as another channel to complement regulatory policies. The crisis has revealed the part intermediaries, through the use of financial innovation and improvements in technology played in fuelling the global financial crisis. The shift to new products and services offered by traditional intermediaries and new market entrants presented a low cost alternative through capital markets via the securitization model. This allowed banks to diversify their risks and rapidly convert their assets (loans) into marketable securities (bonds) for people to invest in, creating more liquidity. Problems arose when banks and securities firms began to compete directly by offering similar products and services, such as loan securitization. In order to remain competitive, banks were forced to move risky assets off their balance sheets – in many instances to special purpose vehicles that financed the purchase with commercial paper. Maturity Transformation (funding longer-term assets with short-term credit) created many of the same problems that have historically been addressed by banking regulation; the asset – liquidity mismatch problem. Initially, banks sold all or portions of entire loans to other banks and investors, but over time, they also began to transfer only the credit risk of those loans. There were an increasing number of banks on new instruments – like

credit default swaps (“CDSs”)¹⁷ – to outsource risk management to less regulated entities, including hedge funds, which could then invest in and manage the credit risk of a bank’s loan portfolio without extending loans themselves. Hedge funds remain largely exempt from regulation under the federal securities and investment advisory laws. There is therefore an argument that perhaps hedge funds must be subject to “hard – wired” rules. One of the main downsides to this however is regulatory arbitrage if the rules are not imposed across the board. In the Financial Times issue (published October 22, 2009), the European central bank (ECB) said it supported “the intention to provide a harmonised regulatory and supervisory framework” for alternative investment fund managers in the European Union but urged the Commission “to continue the dialogue with its international partners, in particular the US, to ensure a globally coherent regulatory and supervisory framework”. The ECB warned that funds could simply shop around to find a country where the policing of the sector was less stringent. “An internationally coordinated response is necessary given the highly international nature of the industry and the consequent risks of regulatory arbitrage and evasion,” it said.¹⁸ The ECB’s support for a harmonised regulatory and supervisory framework therefore withstands the argument that hard-wired rules cannot be completely wiped out as long as they are proposed and implemented through international coordination and collaboration. If hard-wired rules are adopted for hedge fund and alternative investment business, it needs to be scrutinised and acceptable to standards which are suitable in all jurisdictions. “If financial regulation is too restrictive in one jurisdiction, both providers and users of financial services can simply move to a less restrictive and less costly

¹⁷ A CDS is a type of derivative that permits a counterparty to a swap contract to buy or sell all or a portion of the credit risk tied to a loan or bond. The CDS customer pays the “writer” of the swap a periodic fee in exchange for a contingent payment in the event of a credit default. If a credit event occurs, typically involving default by the borrower, the CDS writer must pay the counterparty an amount sufficient to make it whole or purchase the referenced loan or bond at par. See William K. Sjostrom, Jr., *The AIG Bailout*, 66 WASH. & LEE L. REV. (2009)

¹⁸ Financial Times issue, published 22 October 2009

jurisdiction.”¹⁹ It is important not to disregard however that hard-wired rules also do not accommodate corrections to be made when there is a crisis. This is because when rules have to be changed each time there is a crisis, the constant changing of those rules extracts integrity and trust from the financial system as this creates feelings of inconsistency in the marketplace. It is also appropriate to mention the undue pressure hedge funds are feeling with regards to changing the way they do business.²⁰ In a keynote address by a major participant in the hedge fund business, Millennium Partners L.P, the need for greater transparency, stronger risk management, better liquidity and more favourable or flexible terms was highlighted. Instead of hedge fund investors focusing on the objectives mentioned above, they must also focus on how well managers’ financial interests are aligned with their own. (The principal Agent Problem). As a result of Bernie Madoff’s scandal, more investors are requesting for hedge funds to prove they are not going to be ripped off. Hedge funds have therefore made significant effort to maintain a certain level of market discipline without any regulatory intervention so far. They are now more willing to entertain third party auditors to review and verify various aspects of their business. Pressures for regulation have also resulted in some hedge funds restructuring their legal and compliance teams. Increasing risk management tools are now at the centre of their core principles. The keynote address by Millennium Partners L.P also addressed the way forward for regulation. Whether at banks and investment banks, funds of funds each have different sets of regulatory and accounting standards therefore hedge fund regulation should endeavour to focus on providing some degree of clarification and uniformity so that market participants and regulators can supervise funds collectively. For example if a management fee is generating profits so that managers’ interests are misaligned with the interests of investors, regulators would find it useful to address the future of

¹⁹ Eilis Feran and Charles A E Goodhart, *Regulating Financial Services and Markets in the 21st Century* 2001

²⁰ Israel A Englander, Keynote address, Absolute Return Symposium 2009

regulation in a way that achieves a level playing field.

Market Discipline or Hard Wired Rules (Differences in UK and US Regulatory Regime)

Having provided some arguments for both market discipline and hard wired rules based regulation in general, it is appropriate to discuss the different forms of regulation specifically used by some of the major markets today for example the regulatory approach used by the United States and the UK. In 2003, the UK's financial services regulator, the FSA, shifted from the hard wired rules regime to a principles-based form of regulation. The shift attracted a great deal of interest as it came to light that in 2005, for the first time in recent history, the overwhelming majority of the largest international Initial Public Offerings took place in London rather than in New York.²¹ A report by consultants McKenzie & Co commissioned by New York City Mayor, Michael Bloomberg and New York Senator Charles Schumer, first and foremost blamed American overregulation for the city's continuous financial sector anguish. Hank Paulson, United States Treasury Secretary has suggested that, to preserve its global competitiveness, the United States should move toward a more flexible, U.K.-style approach to regulating capital markets.²² In 2006, the FSA began consulting on simplifying its rules relating to dealings with retail customers, and it began to replace the detailed obligations established by its existing money laundering requirements with more streamlined provisions focusing on ensuring that firms have effective risk management systems and controls in place and that firms' senior management take responsibility for managing money laundering risk. In terms of its own processes, the FSA has moved to a risk-based regulatory approach

²¹ American Business Law Journal Volume 45, Issue 1, pg 1, Spring 2008

²² Jeremy Grant & Krishna Guha, Paulson Seeks British-Style Flexibility in Capital Markets, FINANCIAL TIMES (U.K.), Nov. 21, 2006,

(assisted by the “Arrow” methodology),²³ and it emphasizes consultation with the public and industry. In engendering more market discipline as a form of better regulation, the FSA consults on many aspects of its operations, and it even began consulting on streamlining its own Enforcement and Decision-Making manuals in early 2007 before the global financial crisis.²⁴ In shifting from a rules-based regime to employing a more market discipline approach the FSA replaced huge amounts of its detailed Handbook rules with short, high-level requirements, often accompanied by regulatory guidance. Between 2002 and 2005, for example, the FSA simplified and restructured its rules relating to listed companies, reducing the length of the rules by 40% and adding six listing principles plus guidance. The more complex and formal U.S rules and procedures do not permit as much flexibility or speed. The greater US costs of preparing acceptable prospectuses for example is due to the greater number of prospectuses that the SEC must process according to SEC’s regulations. In the United States, all issues of securities by companies except intrastate offerings and private placements must be registered. This is in comparison to UK law which applies only to security issues by a company and by underwriters who are acting in a professional capacity. The recommendation that United States move to the UK system of regulation is therefore welcomed. The Obama Administration, headed by Secretary Geithner, proposed to Congress in June 2009 a reform of the US financial regulation system²⁵, accompanied by several pieces of legislation. Congress is expected to implement “tough regulation” on financial services this spring.

CONCLUSION

In the aftermath of the crisis, regulators have a challenge of whether regulation

²³ FSA, FSA BUSINESS PLAN 2007/08 (2007), available at <http://www.fsa.gov.uk/pages/Library/Corporate/Plan/bp2007.shtml>.

²⁴ FSA, REVIEW OF THE ENFORCEMENT AND DECISION MAKING MANUALS (2007), http://www.fsa.gov.uk/pubs/cp/cp07_02.pdf.

²⁵ US Department of the Treasury (2009)

should be implemented through imposed hard wired and detailed rules or through the creation of incentives for market discipline. The paper has provided sound arguments both for market discipline and an appropriate rules-based regulatory regime which make it impossible to favour one and not the other. Both forms of regulation have advantages and disadvantages which presents the analogy that in order for a regulatory regime to succeed, it needs to be able to set minimum standards for markets to follow and encourage market participants to adhere to those required standards by way of maintaining a certain level of discipline. This means that a mixed regulatory approach, consisting of both the regulatory authorities and market-based oversight and founded on rules and incentives, may be the only solution for efficient and effective regulation. Failure to set minimum standards on a cross border level will generate corporate flight to jurisdictions with more hospitable regimes whilst failure to use concepts of market discipline can easily persuade market participants to act incoherently. In an attempt to curb banks' risk taking activities, mandatory subordinated debt was seen as an effective tool of market discipline but as part of the lessons learnt from the financial crisis, there is little evidence to support the notion that banks with higher levels of subordinated debt suffered fewer losses than those with lesser subordinated debt levels. A new security mechanism has emerged – Contingent Capital Certificates (CCC). They present an alternative to bankruptcy proceedings and initiate an orderly process in which to re-capitalize banks. Effective regulatory reform should include CCC conversions that depend only on a firm's own condition, not the state of the financial system. Large systemically important firms cannot be permitted to fail, and CCC provide an alternative to government absorption of private losses. There is some argument that CCC conversions may allow weak managers to retain control of their firms, thus interfering with the efficient deployment of banking resources. However, managerial entrenchment is a general corporate governance problem. If shareholders will not fire bad managers, at least we can protect taxpayers from

their poor results.²⁶ The paper has further shown that market discipline does not provide absolute control mechanisms. Therefore, by creating suitable market investors, market information appears to have a role in enhancing regulatory authority supervision. Furthermore, it has been shown that some market discipline policies require the creation of rule-based incentives to be effective. Therefore, implementation of market discipline policies alone in regulatory design would not remove the need for the regulatory authorities to issue prescriptive rules and the supervisory style of monitoring it fosters. Financial systems are changing substantially and to an extent that undermines traditional approaches to regulation and, most especially, the balance between rules, incentives, and market discipline. In particular, globalization, the emergence of a more unified European capital market, the pace of financial innovation and the creation of new financial instruments, the blurring of traditional distinctions between different types of financial firms, the speed with which portfolios can change through banks trading in derivatives and the like, and the increased complexity of banking business - all these create a fundamentally new environment in which regulation should be undertaken. Through adequate transparency, regulation should reinforce, not replace market discipline. Where possible, market disciplines (e.g., through disclosure) should be strengthened. This means creating incentives for private markets to reward good performance and penalize hazardous behaviour. Regulation is ubiquitous. So too is eagerness to make it better.²⁷ In the UK and in

²⁶ Mark Flannery, *Stabilizing large financial institutions with contingent capital certificates* (2009)

²⁷ Stephen Weatherill, *Better Regulation*, pg 3 (2007)



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the EU, rule makers have endeavoured to achieve a more satisfactory balance between the demands of proper protection from market failure and inequity, on one hand, and commercial freedom and the potential for innovation on the other. This is where the problem of future regulation lies; the ability to balance the two main objectives.

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