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Reforming Corporate Law in an Emerging Market: The Case of Finland in the 1970's¹

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Abstract

A sweeping and protracted reform of corporate law took place in Finland in the 1970s. We document how the reform brought significant improvements to investor protection and tightened disclosure rules at the cost of increasing the workload in corporate reporting. To study the economic consequences of the reform we develop a simple coordination game where the effects of investor protection on corporate valuation vary with equilibria. Then, using firm level-daily stock return data, we find that the Finnish stock market generally reacts negatively to news of increased investor protection and workload, whereas news of delays in implementation of reform generate largely positive market responses. These results raise the question of whether stronger investor protection and greater transparency unambiguously promote development of stock markets.

JEL Classification: G14, G34, G38, K22

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1 Introduction

Law and finance literature, stemming from the works of La Porta, Lopez-de-Silanes, Shleifer and Vishny (LLSV) (1997, 1998), suggests that upgraded investor protection promotes development of stock markets and enhances corporate valuations. However, the relationship between investor protection laws and corporate valuations is typically studied using cross-sectional multi-country regressions (see, for example, LLSV, 2002). Those regressions are open to criticism of reverse causality due to evolution of laws over time (see, among others, Armour, Deakin, Mollica, and Siems, 2009). Furthermore, international data sets are likely to contain a fair amount of unobserved heterogeneity, which raises similar concerns. Finally, some key results of law and finance approach may also arise from inaccurate measurement of legal differences across countries (see Spamann, 2010). Given these potential problems, it is not surprising that the applicability of the insights from law and finance literature into emerging market context is contested (for different points of view, see, among others, Johnson, Boone, Breach and Friedman, 2000, Pistor, Raiser, and Gelfer, 2000, Glaeser, Johnsson and Shleifer, 2001, Mitton, 2002, Berkowitz, Pistor, and Richard, 2003, and Mueller, 2006).² The question of whether and how legal protection of investors matters might hence be more accurately explored in a clinical single country case. We present such an exploration, as we study the long process towards a major reform of corporate law that took place in Finland in the 1970s.

As in many other countries, financial market regulation was reformed in Finland in the aftermath of the crisis of the 1930s and has since then been gradually revised. In contrast, corporate law in Finland was in 1970 still based on an outdated but flexible Companies Act of 1895. The Finnish stock market during the 1970s was small and illiquid and comparable to many of today's

² Even in the context of mature markets, it is not clear whether improvements of investor protection, especially via more stringent disclosure requirements, are always beneficial for financial market development. There is, for example, some critical evidence concerning the effects of the US Sarbanes-Oxley Act of 2002 (Engel, Hayes and Wang, 2007, Litvak, 2007, and Zhang, 2007). This is reflected in the debate on pros and cons of increased transparency regulation following the recent financial crisis (see, among others, Dang, Gorton and Holmström, 2012, and Landier and Thesmar, 2013).

emerging markets. The focus of this study is the reform process leading to the new corporate law on January 1, 1980 and its effects on stock market development and availability of equity financing for Finnish firms. The goal of the reform was to substantially increase the regulatory outreach of the corporate law. The reform process was exceptionally long, lasting over a decade, and its effects on the relationship between the corporations and their investors were significant. The indices of shareholder and creditor protection by LLSV (1997, 1998) and subsequent work by Pistor et al. (2000) and Glaeser et al. (2001) that accommodate the emerging country setting all indicate that the new law improved the protection for both investor groups against abuse by corporate insiders. Besides the effects captured by the investor protection indices, the reform brought about significantly tightened disclosure rules for Finnish companies. The most obvious potential economic costs of the reform were reduced corporate flexibility due to expanded regulation, and increased workload in corporate reporting.

To provide a theoretical framework for our analysis of the Finnish corporate law reform, we build a simple model of investor protection and corporate valuation. We make a simple coordination game extension to the basic investor protection model of Johnson et al. (2000) and LLSV (2002). A key property of our model is complementarity among investor expectations, costs of outside capital and insiders' incentives to misbehave, which generates multiple equilibria and, similar to Bhattacharya and Daouk (2009) and Giannetti and Koskinen (2010), a non-monotonous relationship between investor protection and valuation of firms. One equilibrium is characterized by more insider misbehavior, costly outside equity capital and low market capitalizations. In this equilibrium, stronger investor protection further increases insiders' incentives to misbehave, which lowers values of firms. Another equilibrium is characterized by better insider behavior, cheaper equity capital and higher values of firms. Under such circumstances, strengthening investor protection works in a manner that is consistent with the law and finance literature, as it lowers insiders' incentives to misbehave and enhances corporate valuation.

We then turn to empirical analysis of the Finnish reform process, using firm-level daily stock return data. We pair the daily stock return data with informational events regarding the law-making process throughout the 1970s. From *Kauppalehti*, the leading daily business news paper in Finland, we have manually identified the articles that specifically refer to the upcoming corporate law. As a group of three co-authors with varied backgrounds, we have independently coded, by loosely following the ground theory approach (Glaser and Strauss, 1967), each article as to whether they contain information that we deemed new at the time, regarding delays in the legislative process, and increases in investor protection or in reporting workload brought about by the new law. We find that many of the articles express a concern for increased workload associated in particular with tightened disclosure requirements. We perform an event study, using publication dates of the articles whose content we deemed unambiguous, as our event dates. To take into account a finding by Korkeamäki, Koskinen and Takalo (2007) that new information arrives to the Finnish market as a law is introduced to the parliament, we also consider official legislative steps as event dates.

Performing an event study of legal reforms in an emerging market environment is challenging. First, there are data constraints that may be even more severe in our historical context than with current day's emerging markets, as electronic data were unknown in the 1970s. Second, we have to take into account the problems caused by infrequent trading and autocorrelation that are pronounced in older Finnish data (see Berglund and Liljeblom, 1988). Third, common to other event studies of legal reforms, we have to deal with extreme event day clustering (Binder 1985). The last problem can be solved by using portfolios of returns (see, for example, Schwert, 1981, and Campbell, Lo, and MacKinley, 1997) instead of observing market reactions of individual stocks. However, construction of a market portfolio of interest and a benchmark portfolio suffers the same problems of infrequent trading and data availability. We tackle these problems firstly by meticulous manual data collection and adjustments, and secondly by numerous robustness checks using alternative estimation methods and variables.

On the positive side, our single country case allows us to tackle institutional heterogeneity, difficulties in measuring various aspects of the law in a consistent manner, and evolution of laws over time, which all hamper cross-sectional multi-country regressions (as emphasized, among others, by Korkeamäki et al., 2007, Armour et al., 2009, Spamann, 2010, and Rousseau and Wachtel, 2011). Our sample also includes the complete set of firms listed on the Helsinki Stock Exchange. The panel of firms is stable through the decade that we study, as the number of firms on the Helsinki stock exchange grows at a slow pace, from 43 to 49 during the 1970s. There were also no bankruptcies or delistings among the firms listed on the Helsinki Stock Exchange during the decade. Furthermore, the news that we identify were likely to convey new information to the market: the articles often appeared on the front page of *Kauppalehti* and were not likely to leak to the public in advance, as the contents were based on an opinion of a journalist who often either interviewed a key law maker, or reported on his or her own research. In this respect our study contributes to the understanding of how journalists affect stock market behavior. In contrast to studies using U.S. data (see, for example, Tetlock, 2007, and Fang and Peress, 2009), competition among financial information media was next to non-existent in Finland in the 1970s, which should contribute to the effect of *Kauppalehti* on the Finnish market.

Despite the advantageous features of our institutional environment, numerous reasons should make it difficult to demonstrate conclusive evidence. Besides the substantial data and methodological challenges mentioned above, we find that several news simultaneously deal with issues whose effects might offset each other (such as an increase in both investor protection and workload). Our theoretical model reveals that market reactions vary with firm characteristics and equilibria. Overall market reaction then depends on the relative and time-varying weights of firms with higher and lower corporate governance standards (for a similar argument, see Giannetti and Koskinen, 2010). The theoretical framework also indicates complex effects associated with increased compliance costs. Moreover, it is not clear from the prior literature (Korkeamäki et al.,

2007, and Miller and Reisel, 2012) to what extent creditors' and shareholders' interests are aligned, implying ambiguous stock market reactions to creditor protection improvements. In support of these concerns, studies of the effects of the Sarbanes-Oxley Act (SOX) in the U.S. report mixed evidence, partially because the SOX strengthened investor protection but imposed compliance costs and partially because market-wide effects are difficult to detect as different types of firms may react differently to the news. For example, Zhang (2007) and Litvak (2007) find a total negative effect of the SOX on corporate value while Jain and Rezaee (2006) and Li, Pincus, and Rego (2008) report a total positive effect. Engel et al. (2007) find negative stock returns for smaller and less liquid firms but Akhigbe, Martin, and Newman (2011) report positive reactions for high-tech firms.

We nonetheless find that news about increases in investor protection are typically connected to a negative market response. Articles indicating a delay in the legislative process tend to be met by a positive reaction by the stock market. To the extent that delays imply effects on market valuations that are opposite to those of the reform itself, these results suggest that the reform had adverse effects on the value of Finnish firms. Our evidence related to increased reporting workload is somewhat less conclusive, but it appears to suggest that increased workload was one reason for the market to dislike the reform.

In sum, evaluating the effects of corporate law in an emerging stock market involves numerous data and methodological challenges. Paired with the offsetting economic effects involved, they imply that any results should be interpreted with caution. Our findings can nonetheless be viewed as support for the view that strengthening investor protection may not uniformly enhance corporate valuations.

The rest of the paper is structured as follows. In Section 2 we review the macroeconomic, legal, and business ethical background on which the reform was implemented. In Section 3 we describe the reform in Finland that took place in the 1970s and documents its impact on investor protection. Section 4 provides a theoretical framework and hypotheses of the connections between

investor protection and stock valuations. It also contains a discussion of the limitations of the theoretical framework. Section 5 describes our data sources and data collection methods. In Section 6 we present our empirical results together with a detailed discussion of the ways we deal with the data and methodological challenges referred to above. Section 7 summarizes our findings and places them in a broader context of the legal reform literature.

2 Finland in the 1970s

2.1 Macroeconomic and Financial Market Environment

At the end of World War II, the Finnish economy was relatively agrarian, lagging the other Nordic countries in terms of economic and industrial development. After the war, the country's economic structure underwent a rapid change so that in the 1970s, heavy metals and forest-based industries formed the core of the Finnish economy.

Finland was in a delicate political situation in the 1970s. The country was formally neutral during the Cold War, but the political and commercial links with the Soviet Union were extensive. The term 'finlandization' became known in the international press. For example, the Soviet opposition blocked the planned move to the Nordic common market, and it was not until 1986 Finland could become a full member of the European Free Trade Association.³ Some areas of the economy, deemed to have only a domestic dimension, such as corporate law, were more free from the Soviet influence.

Beginning from the 1930s, the Finnish economy and financial markets were increasingly regulated, mirroring developments in many other countries (see Rajan and Zingales, 2003).

³ 'Nordek' was a plan to create an economic cooperation area among Denmark, Finland, Norway and Sweden similar to the European Economic Community (EEC) in the late 1960s. The final draft for the Nordek treaty to establish a Nordic common market with similarities to the Rome treaty was agreed upon in February 1970. Soon afterwards the Finnish government, quietly pressed by the Soviet Union, declared that it would not sign the Nordek treaty, much to the surprise of the other three countries. This together with Denmark's shifting its focus to the EEC membership unraveled the Nordek plan.

Government's regulatory outreach in the financial market in Finland was extensive by the 1970s. For example, the cross-border capital flows were controlled by the central bank, interest rate ceilings existed on bank loans and deposits, along with regulated quantity limits on bank lending (Vihriälä, 1997). Three basic restrictions affected investors' portfolio holdings (see Hietala, 1989): i) foreign ownership share of a Finnish company was capped to 20 percent; ii) the Finns were not generally allowed to invest abroad; and iii) short selling was prohibited. Otherwise stock market trading faced few regulations.

Besides the direct regulation, taxation also shaped the financial system, favouring debt financing of investments (see, among others, Hietala, 1989, and Vaihekoski, 1997). For example, interest income from government and mortgage bank bonds and from deposit bank accounts with an interest rate below a regulated ceiling was tax exempt for individuals. In contrast, capital gains and dividends were taxable for both individuals and financial companies, subject to certain exemptions.

Low nominal lending rates, favourable tax treatment, and high inflation resulted in negative real lending rates and hence in excess demand for loans in the late 1970s. The tax exemption of deposit interest earnings subsidised banks and effectively discouraged development of other financial intermediaries. The regulations also reduced banks' incentive to compete for market share and encouraged creation of close banking relationships. Against this mix of regulation, taxation, and monetary policy favoring bank finance, it is hardly surprising that at the end of the 1970s the Finnish financial system was built on a non-competitive and subsidized banking sector in which long-term relationships with borrowers were essential but the incentives for risk management and outside monitoring were weak.

Finnish firms were roughly divided into three spheres, which were controlled by the main Finnish commercial banks (Lantto, 1990). Corporate ownership was concentrated and cross-ownership between financial institutions and nonfinancial firms was common. As a result, the financial institutions had substantial influence on decision making in non-financial firms (Pohjola,

1988)). As banks held large stakes in firms within their spheres through equity and debt, they provided both financial and managerial support, in case a firm within their sphere encountered financial difficulties. Ultimate control rights of the main owners were thus typically larger than their direct stakes. Pohjola (1988) argues a direct voting stake of 30 percent was sufficient for gaining control in Finnish companies.

Since regulation and macroeconomic environment had generated a financial system based on the main-bank structure, it was not surprising that the stock market, while less regulated was small and illiquid (see Table 2 in Section 5). For example, in 1970, there were only 43 firms listed on the Helsinki Stock Exchange.

Towards the end of the 1970s, intermediation restrictions and accelerating inflation made it increasingly evident that the financial system could no longer satisfy the financing needs of Finnish companies. The difficulties in the financial sector and the example of the U.K. and the other Nordic countries led to a gradual liberalization of the financial market in the 1980s (see Drees and Pazarbaşıoğlu, 1995, and Vihriälä, 1997, for accounts of the liberalization, and Hyytinen, Kuosa, and Takalo, 2003, for the development of the Finnish financial markets after 1980).

2.2 Legal and Ethical Corporate Environment

The Finnish legal system has historically evolved in a close connection with other Nordic countries. Especially Swedish legislation has been influential. Finland was a part of the Swedish Kingdom for more than 700 years and the country retained its Swedish legal system when it became a Grand Duchy of Russia in 1809. Like in the other Nordic countries, the legislation concerning investor protection was deemed to be outdated in Finland in the late 1960s, being mainly rooted in

the Companies Act of 1895, in the Liquidation Bankruptcy Code and the Decree on Claim Priorities of 1868, and the Act on Compositions of 1932.⁴

The Companies Act of 1895 was prepared simultaneously with similar Swedish and Norwegian corporate law reforms. The law was fairly ‘Coasean’, giving only a general framework of investor protection. It focused on founding of corporations, while leaving vast contractual freedom for charter provisions regarding a broad range of issues. There were only 10 amendments to the Companies Act of 1895 during its entire existence. The Companies Act of 1895 had particularly scant provisions on investor protection rules. For example, it contained only one significant mandatory minority shareholder provision: 10 percent of share capital was sufficient to call an extraordinary shareholder’s meeting. An amendment (350/1935, effective 15 November 1935) tried to protect minority shareholders by requiring equal treatment of shareholders by the decisions made in the shareholders’ meeting.

As described in Section 2.1, most Finnish firms were controlled by a group of insiders where directors of the main banks were prominent figures. This corporate elite had close relationships with politicians. This environment left plenty of scope for expropriation of minority shareholders by insiders. While it is difficult to find hard data about the extent of such expropriation, it appears that outright stealing of corporate resources was rare, but cronyism, and close connections among the politically powerful insiders created a culture where subtler forms of expropriation were ubiquitous and often considered normal. The activities of Pekka Herlin, the president and controlling shareholder of KONE Corporation from 1964 to 1996 provide an apt example. His bibliography (Simon, 2009) documents how he could use company’s resources without constraints, being accountable to just himself, but how he had a ‘pragmatic’ approach to business ethics. KONE’s former chief lawyer comments Pekka Herlin’s business ethics as follows:

⁴ The Liquidation Bankruptcy Code, the Decree on Claim Priorities of 1868, and the Act on Compositions of 1932 were only reformed in the early 1990s (see Korkeamäki et al., 2007, for the effects of these reforms).

'Yes, he wanted to stay on the right side of the line. He understood very well that KONE is a listed company. But it is also important to remember that at that time there were no insider trading restrictions, and you could make deals based on knowing certain things, and to be sure Pekka took advantage of that. Everybody did.' (Simon, 2009, p.208)

Pekka Herlin's KONE expanded aggressively, also by using equity funding. Often deals were based on due diligence but sometimes he could just acquire a foreign firm because, using his own words, *'... it's a nice country. I've never been there. Let's do the deal!'* (Simon, 2009, p.195).

The official history of Nokia Corporation (Häikiö, 2001), while less colorful, shows how Nokia's expansions in the 1970s were partially funded by public offerings but often driven by empire building, ideological and political considerations rather than commercial motives. An overview of the ethics of the Finnish finance and investing by Pentti Rissanen (1999), the former chief lawyer and a Board member of one of the aforementioned main Finnish banks, documents how the fear of expropriation by controlling shareholders, especially via insider trading, hampered foreign listings of the Finnish firms in the early 1980s. Rissanen (1999) describes how the existence of small number of insiders, and bad customs and social norms made foreign investors doubtful.

In sum, some forms of expropriation of outside investors were part of social norms and traditions of the Finnish corporate elite in the 1970s. In contrast to many other areas of the economy, corporate governance was very lightly regulated. It was only natural to think that corporate governance, too, should be regulated in more detail. The preparation for the new corporate law began already in the late 1960s as a joint effort of five Nordic countries (Denmark, Finland, Iceland, Norway, Sweden). While only Denmark was a member of the EEC (and only as of 1973), it is likely that the legal developments in the EEC such as the First and Second Company Law Directives, adopted in 1968, and 1976, respectively, influenced the Nordic lawmakers. In line with developments elsewhere in Europe (see, for example, Armour et al., 2009), it was thought that

the new law should include more explicit controls concerning disclosure requirements, and investor protection.

3 The Corporate Law Reform of 1970s

3.1 Legal Impact of the Reform

Comparing the old and the new laws, paired with government's official documents and related newspaper articles (see the next subsection), reveals that the new law (the Companies Act 734/1978, effective January 1, 1980) aimed at enhancing investor protection, particularly by increasing public disclosure of corporate information, and that this implied more workload for companies. The proposed law provided detailed regulation on conglomerate auditing and accounting, and required increased disclosure regarding ownership structure and identity of main shareholders. Added transparency regarding use of convertibles and warrants in corporate financing was also among the new requirements. Furthermore, the new law aimed to lower the threshold for firms to incorporate, and to enhance Finnish corporations' ability to raise equity capital. It also tried to clarify the positions of shareholders and corporate board members. Even though the legal principals of corporate regulation went practically unchanged, regulation got much more precise, with less room for judgement.

The effect of the new corporate law on investor protection is detailed and quantified by Rainio (2006). She employs the popular index measures by LLSV (1997, 1998), and their extensions by Pistor et al. (2000) and Glaeser et al. (2001), to measure the effect of the reform both on creditors and shareholders. The indices indicate an improvement in shareholder protection. The eight-point scale by LLSV moves from 2 to 4, and the Pistor et al. index moves from 2 to 4, upon the reform.⁵

⁵ The reading of 4 agrees with the LLSV (1997, 1998) value for Finland, which is also based on the Companies Act of 1980 that was in force until 2006, with a major revision taking place in 1997, after LLSV collected their data. However, it is worth noting that Rainio (2006) disagrees with LLSV on the individual factor coding. While LLSV argue that firms are not allowed to block trade of their own shares before the shareholders' meeting and that cumulative voting is not

An exception is the Glaeser et al. index, which shows a slight deterioration from 6.3 to 5.3, on the scale of 0 to 16. The deterioration is due to the new law disallowing bearer and preference shares.⁶

While Finland has a separate bankruptcy code, the Companies Act of 1980 also affected creditor protection. As reported by Rainio (2006), two measures in the LLSV (1997, 1998) creditor protection index changed, resulting in an improvement in the LLSV index measure from 2 to 4, on the scale of 0 to 5. Prior to the reform, Finnish corporations could themselves initiate bankruptcy proceedings, without creditor consent. The Companies Act of 1980 requires an approval by the firm's major creditor prior to the firm entering the bankruptcy proceedings. The previous corporate law also allowed the firm to decide on the order of liquidation of its assets (albeit in practice, priority of secured creditors was commonly respected). The new law mandated the priority of secured creditors over unsecured creditors.

3.2 Process Towards the Corporate Law of 1980

The law change that took effect at the beginning of 1980 was anticipated well in advance. The plan for overhauling the corporate law was published by the government already in 1969, and it even took almost three years from the Government's bill to the Parliament before the law came into force. While the original idea of increasing the regulatory outreach of corporate law remained from the proposal, the regulatory details underwent several changes due to haggling and lobbying among political parties and interest groups during the decade-long law-making process. Furthermore, although implementation of a fully harmonized Nordic corporate law reform failed, the Finnish law makers continued to pay close attention to developments both in other Nordic countries (in particular to Sweden, which passed its new Companies Act in 1975), and in the EEC countries.

allowed in Finland, Rainio (2006) cites Finnish legal references in support of the opposite. The two disagreements cancel each other out, resulting in the same overall rating.

⁶ Both share types were rare prior to the law change, but since the index measures changes in the letter of the law rather than the practice, both changes reduce the index level.

Unfortunately, our stock returns data source does not allow us to consider the earliest events in our analysis, as our data set begins from February 2, 1970. In search of newspaper articles related to the anticipated law change, we manually explored a decade of daily editions of *Kauppalehti*, the leading business daily newspaper in Finland at the time, and even today.⁷ The earliest mentions of a planned new corporate law are from the spring of 1970. In total, we identify 39 articles published during the 1970s that specifically mention the planned corporate law change. Most of the articles either discuss the content of the law proposal, or report on its progress. Also, five of the events we consider represent days for the legislative steps that the law took.

In order to explore the type of information released in the newspaper articles, we performed a content analysis of each article, using a coding practice reminiscent of the grounded theory (Glaser and Strauss, 1967).⁸ Among the three authors of this study, we independently judged each article along three dimensions, by determining whether the article contained new information related to a delay in the legislative process, an increase in the reporting workload for the companies, or a change in investor protection. As changes in investor protection were difficult to differentiate among those affecting disclosure, creditor protection and shareholder protection, we considered investor protection as a single dimension. Consensus among all three authors was required in order for an article to be classified under each category. We analyze further only those 22 articles that all three authors independently agree to be significant at least in one of the dimensions. Table 1 provides information on the articles.

⁷ *Kauppalehti* was launched in 1898 as a weekly publication to promote the Finnish business-life. It became a daily newspaper in 1919, with an emphasis on economic and business news. The paper was in serious difficulties in 1950s and 1960s when its circulation fell below 10 000 and it made heavy losses. After becoming a specialized business newspaper in 1966 its circulation began to rise. By 1972 *Kauppalehti* was again profitable and its circulation passed 30 000 in 1975. Since the reform of 1966, *Kauppalehti*'s format and readership in the Finnish media market has been roughly similar to that of *Wall Street Journal* in the U.S.

⁸ Recent studies (such as Tetlock, 2007) use Harvard psychosocial dictionary to measure the tone of news articles and its effects on market sentiment. Since no similar published work on negativity of Finnish words exists, we are forced to rely on our own judgment concerning the nature of the content of each article. Pursuing the market sentiment in the news articles more formally together with experts in Finnish language would be an interesting idea for future research.

Table 1 here

As Table 1 shows, many of the articles appeared on the front cover of *Kauppalehti*. Seven of the articles, mainly from the early part of the decade, emphasized a delay in the process. Ten articles had a focus on investor protection (most of which emphasized tightened disclosure requirements), and thirteen of them emphasized an increase in workload. Several of them had more than one emphasis, according to our judgment.

Table 1 also indicates five official legislative steps we consider as additional event dates. Besides the aforementioned Government's bill to the Parliament and the Act taking effect, we consider a proposal by an expert group from the Ministry of Justice for the new Companies Act, Parliament's final vote on the bill and its enactment by the President of Finland.⁹ Given that two of the articles were published on the same day, and that one legislative event coincides with an article publication date, we have 25 unique event days to study.

4 Economic Impact of Legal Reforms

4.1 The Theoretical Framework

As discussed in the previous section, the Companies Act of 1980 brought about significant improvements in investor protection in Finland through more direct guidance and tighter disclosure requirements, but involved non-trivial compliance costs. While the seminal works by LLSV (see in particular LLSV, 2002) and a substantial body of research building on them suggest that stronger investor protection enhances valuation of firms, such conclusions do not necessarily hold universally, as we suggest in the Introduction. For example, in some emerging markets private property rights may be poorly respected and social norms tolerate corruption and insider

⁹ In the Parliament's final vote the final formulation of the bill is either adopted or dismissed. The President may, however, refuse to approve the bill adopted by the Parliament.

misbehavior. Effects of changes of investor protection in such an environment are not necessarily similar to those in a developed market context where insider misbehavior may be more limited.

To clarify potentially complex and contradictory effects of the law reform we, following Johnson et al. (2000) and LLSV (2002), build a simple model of investor protection and corporate valuation.¹⁰ We consider a firm with an investment opportunity of a fixed size I , which may also be interpreted as the size of the firm. Investing I generates revenue according to a simple linear technology

$$Y = (1 + g)I, \tag{1}$$

where $g > 0$ gives the net rate of return on firm's investment which could also be thought of reflecting the firm's growth opportunities.

The firm has some liquid assets of its own, denoted by A with $A \leq I$. The firm is controlled by insiders (management, majority shareholders) who decide a share $f \in [0, 1]$ of its own liquid assets to be invested in the project. To be able to invest, the firm must raise from outside investors the rest of the required funding, $I - Af$. Hence, the level of A is inversely related to the firm's dependence on outside capital. Competitive outside investors require a return of $1 + r$ on a unit of their capital. The firm's own funds that are not invested in the project yield a rate of return of $1 + \rho$ in the best alternative use. We assume that $g > r > \rho \geq 0$. This assumption ensures that the firm has a possibility to raise external funding and that its own assets play a meaningful role in the model.

We assume that the firm can raise the required funding from outside investors who demand a fraction $s \in [0, 1]$ of the firm's revenues in exchange for their investment. Following the literature we assume that the insiders retain full control of the firm, regardless of their cash flow rights. While this seems like a strong assumption, it is supported by the institutional environment in Finland in the 1970s (see Section 2). Given this assumption and the fixed investment size, we view s as a

¹⁰ In essence, our model is an extension of LLSV (2002) to a coordination game where fund raising and outside investor participation are endogenous. Shleifer and Wolfenzon (2002) and Giannetti and Koskinen (2010) offer more general models of investor protection and corporate valuation.

proxy for the cost of external equity capital faced by the firm. For example, it can be interpreted as the dividend payout ratio needed in order to raise the required amount of external equity.

Prior to paying out dividends, insiders may divert a fraction $d \in [0,1]$ of the revenues, but in the process of diversion a fraction $\gamma d^2/2$, $\gamma \in [0,2]$, of the revenues is lost. A similar cost of diversion is used, among others, by Johnson et al. (2000) and LLSV (2002), and it satisfies the properties of a ‘natural’ diversion technology imposed as discussed by Shleifer and Wolfenzon (2002). Parameter γ can be thought to be directly related to the quality of outside investor (shareholder) protection. In other words, the stronger the investor protection, the costlier to divert the firm revenues. Consistent with our empirical analysis, we assume that γ also embodies disclosure regulation, that is, tighter corporate disclosure regulation is assumed to imply stronger investor protection and thereby an increase in γ .

In this simple model, Tobin’s Q is simply $(1+g)(1-d)$. In what follows we analyze the impact of investor protection (γ) on the rate of diversion (d) and, by implication, on Tobin’s Q .

The timing of events is simultaneous. That is, insiders choose the amount of equity capital raised from outside, and the rate of diversion and, simultaneously, outside investors demand a fraction of cash flow rights in exchange for their funding. Then, payoffs are realized. Because of the simultaneous moves, the outside investors cannot detect the actual rate of diversion but they rationally evaluate the insiders’ misbehavior according to the expectation $E(d)=d^e$. In equilibrium, these beliefs are fulfilled, as the investors infer that the insiders’ rate of diversion is the one that prevails in the Nash equilibrium. We focus on pure strategy Nash equilibria.

As the market for outside equity capital is competitive, outside investors demand a minimum possible fraction of the firm’s revenues in exchange for their participation. Therefore we can maximize the insiders’ payoff subject to the outside investor’s binding participation constraint. The insider’s problem is written as

$$\max_{d,f,s} \left\{ Y[(1-s)(1-d) + d - \gamma \frac{d^2}{2}] + (1-f)(1+\rho)A \right\} \quad (2)$$

subject to (1) and the outside investors' zero profit condition

$$Ys(1 - d^e) - (1 + r)(1 - fA) = 0. \quad (3)$$

It is easy to see that because $g > r \geq \rho$ the insiders commit all the liquid assets in the project, that is, $f^* = 1$. After substitution of $f^* = 1$ for (2) and (3), the solution to the problem (1)-(3) is expressed by the following pair of equations:

$$d = \frac{s(d^e)}{\gamma}, \quad (4)$$

and

$$s(d^e) = \frac{(1+r)(1-A/I)}{(1+g)(1-d^e)}. \quad (5)$$

Equation (4) is the first order condition for (2) with respect to d , and (5) solves (3). Equation (4) shows how an increase in the outside investors' claims on cash payouts increases the insiders' temptation to divert. Equation (5) implies that the outside investors' claims are directly related to their expectations: the higher the rate of diversion expected by investors, the larger share of revenues they demand as compensation. This complementarity among investor expectations, costs of outside equity funding, and incentives to divert depicted by equations (4) and (5) plays a crucial role in establishing our key results.

Equations (4) also suggests the direct effects of investor protection. From the insiders' point of view, the right hand side gives the ratio of marginal benefits of diverging, that is, marginal savings in dividend payments, to marginal costs of diverting. An increase in investor protection increases the marginal cost of diverting and, for a given dividend payout ratio, reduces the incentives to divert. But, as shown below, in equilibrium investor protection also has an indirect positive effect on the rate of diversion.

When choosing the rate of diversion in (2), the insiders take investor expectations as exogenous. In equilibrium, however, outside investors correctly anticipate the insiders' rate of diversion. Thus, to determine the equilibrium rate of diversion we insert (5) into (4) and impose rational expectations $d^e = d$. This yields a quadratic equation:

$$-d^2 + d - \frac{(1+r)(1-A/I)}{(1+g)\gamma} = 0.$$

Defining $X:=(1+r)(1-A/I)/(1+g)$ the two roots of this quadratic equation can be expressed as

$$d_H^* = \frac{1}{2} + \frac{\sqrt{1-4X/\gamma}}{2}, \quad (6a)$$

and

$$d_L^* = \frac{1}{2} - \frac{\sqrt{1-4X/\gamma}}{2}. \quad (6b)$$

To ensure existence of real roots, we assume that parameters are such that $X/\gamma < 1/4$. Then, it follows that both real roots are strictly on the unit interval.

To complete the model, we determine the outside investors' equilibrium share of cash flow rights. Substituting (6a) and (6b) for d in (5) yields two equilibrium shares:

$$s_H^* = \frac{2X}{1-\sqrt{1-4x/\gamma}}, \quad (7a)$$

and

$$s_L^* = \frac{2X}{1+\sqrt{1-4x/\gamma}}. \quad (7b)$$

There are two pure strategy Nash equilibria with investments and equity markets in the model.¹¹ In both equilibria, insiders invest all their liquid assets in the firm ($f^*=1$), but the equilibrium characterized by (6a) and (7a) involves a higher degree of diversion and costlier outside equity funding than the equilibrium characterized by (6b) and (7b), that is, $d_H^* > d_L^*$ and $s_H^* > s_L^*$. In what follows, we call the former equilibrium the high diversion equilibrium and the latter the low diversion equilibrium. By implication, Tobin's Q is lower in the high diversion equilibrium than in the low diversion equilibrium.

This equilibrium multiplicity is due to the aforementioned complementarity among investor expectations, funding costs and insiders' incentives to divert. For example, if outside investors, for any reason, expect extensive insider misbehavior, they require a large share of firm revenues in

¹¹ There is also a pure strategy Nash equilibrium where $d^e=d^*=1$ and the firm cannot raise outside capital and invest.

exchange for their participation. This in turn prompts insiders to divert extensively. Investor expectations become self-fulfilling. Similar reasoning applies to the low diversion equilibrium.

Investor protection has opposite effects on the rate of diversion and costs of outside equity capital and, by implication, on market valuations depending on the equilibria: $\partial d_H^* / \partial \gamma > 0$ and $\partial s_H^* / \partial \gamma > 0$ whereas $\partial d_L^* / \partial \gamma < 0$ and $\partial s_L^* / \partial \gamma < 0$. In words, while stronger investor protection further lower the rate of diversion and costs of outside capital, enhancing market valuations in the low diversion equilibrium, it increases the rate of diversion and costs of outside capital, lowering market valuations in the high diversion equilibrium.

The result arises because an increase in investor protection involves two opposite equilibrium effects: a direct effect of increasing the marginal cost of diversion for a given level of funding costs, and an indirect effect of increasing funding costs for a given level of diversion. The direct effect reduces incentives to misbehave but the indirect one increases them. In the low (high) diversion equilibrium the costs of outside equity capital play a smaller (larger) role and the direct (indirect) effect dominates.

Note that the high diversion equilibrium is Pareto dominated since outside investors are indifferent between the equilibria but insiders would be better off with the low diversion equilibrium where less corporate profits are wasted in diversion. Yet, as will be discussed in the next subsection, parties may fail to coordinate into the low diversion equilibrium, ending up in the high diversion equilibrium instead.

4.2 Hypotheses

In Section 2 and further in Section 5, we argue that Finland in the 1970s provides an example of a bank dominated financial market where equity financing was relatively costly, problems of insider misbehavior pervasive, and market capitalizations low. Therefore we hypothesize that the reactions of the Finnish stock market in the 1970s to changes in investor protection would better

correspond with the outcomes of the high diversion equilibrium of our model. Note that this does not mean that all Finnish firms should be in the high diversion equilibrium. The equilibria of our model are firm-specific, allowing for an interpretation that in any given market, some firms are in the high diversion equilibrium and some in the low diversion equilibrium at the same time.

While addressing the tricky and extensively studied question of equilibrium selection in detail is beyond the scope of our paper, tradition and cultural norms could provide a reason for why most firms in any given country might be in one equilibrium versus the other.¹² If tradition and cultural norms are (more) tolerant towards insider misbehavior, then the high diversion equilibrium could more easily become the focal point where stakeholders of a firm coordinate. Certainly, this kind of a setting could be used to place the Finnish firms at the high diversion equilibrium in the 1970s (see Section 2). Once stuck at the high diversion equilibrium, it may be hard to coordinate away from it, even if such coordination yielded a Pareto improvement. For example, Rissanen (1999) complains about the slow change of insiders' bad norms and customs in Finland, even after a legal change had strengthened the protection of minority shareholders. Furthermore, if insider misbehavior is not against tradition and norms, potential reputational externalities (which our model do not capture) from trying to coordinate into the low diversion equilibrium are also smaller.

Next, we analyze the effects of investor protection on outcomes in the high diversion equilibrium in more detail. Our model suggests following effects of firm characteristics. The marginal effect of an increase in investor protection on corporate valuation is less negative for firms whose outside owners have lower opportunity cost of funds ($\partial^2 d_H^* / \partial \gamma \partial \tau > 0$; recall that the rate of diversion is inversely related to Tobin's Q). The effect is also less negative for firms with lower dependence on outside equity capital ($\partial^2 d_H^* / \partial \gamma \partial A < 0$), and for smaller firms ($\partial^2 d_H^* / \partial \gamma \partial I > 0$). The

¹² Besides tradition and cultural norms other commonly suggested equilibrium coordination devices include pre-play communication, commitment and reputation (see, among others, Schelling, 1960, Fudenberg and Levine, 1989, and Myerson, 1991). For example, according to our model, insiders should have incentives to come up with reputation or mechanisms (such as corporate governance structures) to commit to either not to divert or not to dilute their ownership share in exchange for cash from outside. In a repeated game or in a model of sequential decisions one should be able to invoke an equilibrium refinement to eliminate the high diversion equilibrium.

effect of investment productivity (g) on corporate valuation is more complicated since it always involves a positive direct effect on Tobin's Q . Therefore the effect of g on the marginal effect of investor protection on Tobin's Q is given by $\frac{\partial^2 Q^*}{\partial \gamma \partial g} = -[\frac{\partial d_H^*}{\partial \gamma} + (1+g)(\frac{\partial d_H^*}{\partial \gamma} \frac{\partial g}{\partial g})]$ where the first term in square brackets is positive and the second term is negative. It can, however, be shown that the second term outweighs the first term so that $\frac{\partial^2 Q^*}{\partial \gamma \partial g} > 0$. In words, firms with better growth opportunities should view increases in investor protection more favorably.

In the literature the insider's revenue share $1-s$ is also viewed as a proxy for ownership concentration, but such an interpretation is somewhat awkward in our model where the revenue share is determined as part of the equilibrium. Nevertheless in the high (low) diversion equilibrium where market valuations are low (high), insiders retain a small (large) revenue stake in the firm.

As to delays in the reform process, one would expect that they create the opposite effects on market valuations than what would be implied by the reform itself. For example, under the premise that improvements offered by the reform are bad news to the stock market in general, any delays in the legislative process should be met with positive stock reactions.

Some (but not all) effects of the firm characteristics (such as those concerning dependence on outside equity capital) are seemingly in contrast with the predictions of law and finance literature (LLSV, 2002). Yet they are intuitive in the context of the high diversion equilibrium of our model. Note that in our model, many firm characteristics operate through the costs of outside equity capital s , which is an endogenous parameter. For example, equation (5) shows that outside investors demand a higher fraction of cash flow rights from firms with a higher dependence on outside equity capital. This amplifies the positive effect of investor protection on the incentives to misbehave in the high diversion equilibrium.

More generally, one could think that firms in emerging markets would more typically be in a situation reminiscent of the high diversion equilibrium of our model than firms in developed markets. It is widely perceived (see, for example, Bekaert and Harvey, 2000, Johnson et al., 2000,

Glaeser et al., 2001, Bhattacharya and Daouk, 2009, and Francis, Hasan, Lothian, Sun, 2010) that firms in emerging markets have on average lower corporate valuations, face higher costs of equity capital, and are more often associated with problems of insider misbehavior than firms in developed markets. Under this interpretation, our model suggests that effects of investor protection might vary drastically between emerging markets and more mature markets.¹³ Then the effects of investor protection in our model would be consistent with LLSV (2002) establishing a positive relationship between investor protection and corporate valuation, as their data only includes (large) firms from developed markets, and with Bhattacharya and Daouk (2009) who find that strengthening the legal protection of investors may sometimes lead to an increase in the cost of equity financing in emerging markets (but not in developed markets).

4.3 Caveats

Various factors may render the valuation effects of the events under our consideration ambiguous, *ex ante*, despite the clear-cut predictions of the theoretical model. For example, many features of the Finnish corporate law reform, especially those concerning increased transparency, also appear to involve significant compliance costs which are not included in the model.¹⁴ Adding such compliance costs into the model is feasible but would complicate the analysis considerably (see Hyytinen and Takalo, 2002, for a model where compliance costs of (bank) transparency regulation cause complex, dynamic effects on franchise value). As a first approximation, however, it is easy to see that compliance costs would affect Tobin's Q negatively in our model if the

¹³ Note that empirical plausibility of this interpretation does not require that all emerging (developed) market firms are in the high (low) diversion equilibrium. The predictions derived from the equilibria of our model apply to all firms that might thought to be in such equilibria irrespective of whether a firm is in an emerging or a developed market.

¹⁴ Compliance costs were highlighted in several of the *Kauppaliehti* articles. Although auditing and other disclosure requirements mandated by the Finnish Companies Act of 1980 were minor compared to those resulting from the SOX, it should be recalled that data collection was largely manual in Finland in the 1970s. Naturally, disclosure regulation may involve other economic costs besides compliance. For example, Dang et al. (2012) argue that increased transparency affects market liquidity negatively (see Landier and Thesmar, 2013, for summary of the costs associated with disclosure regulation).

equilibrium rate of diversion remained intact. At the same time, the effects through the equilibrium rate of diversion could be complex. Regardless of their sign, if such indirect effects of compliance costs on Tobin's Q are small, the overall effect of compliance costs would be negative.

In our model there is no profit uncertainty and, as a result, equity and debt are indistinguishable. It is possible that in a more comprehensive model allowing a meaningful separation of corporate liabilities, improvements in creditor protection could affect corporate valuations negatively, for instance, if they implied a wealth transfer from stock holders to lenders in case of bankruptcy (see Korkeamäki et al., 2007, and Miller and Reisel, 2012). This could motivate insiders to divert a larger fraction of firm revenues.

It should also be recalled that the equilibria of our model are specific to firms, and not all firms in any given market are likely to be in the same equilibrium. In that case, overall market reaction to changes in investor protection would depend on the relative weights of the firms that are in the high versus low diversion equilibrium. Such weights could also change over time as stakeholders of firms may coordinate from one equilibrium to another. For example, the evidence from Johnsson et al. (2000) suggest that extensive insider misbehavior occurs in emerging markets in connection with large negative macroeconomic shocks, as if (more) firms would be relocated to the high diversion equilibrium after large adverse shocks.

Our empirical analysis focuses on the effects of the new law on publicly listed companies, while the law applied for all limited liability companies. It is plausible that some implications of the law, for example, by means of increased workload and disclosure, were much stronger for small, non-public companies. The law's significance for publicly listed companies is, however, apparent from the newspaper articles that we study. For example, new requirements for consolidated financial statements were particularly relevant for larger firms. Moreover, one of our articles (November 8, 1978, see Table 1)) reports results from a study of disclosure practices of annual reports of publicly listed companies. The results show that while the disclosure standards of

publicly listed companies had heightened during the 1970s, partially in the anticipation of the new law, and were on average higher than those of non-listed companies, they remained significantly below the standards mandated by the new law. Therefore an 18 month transition period from the parliament's acceptance of the law to its entering into force was warranted even for larger firms, despite the long preparation process of the new law. In sum, by considering only larger publicly traded firms, we believe that our estimates establish a lower bound of the effects of the law.

Our judgment of information content of the articles, made 30 years after their publication, can also be justifiably questioned. However, in comparison to recent studies on the effects of mass print media on the stock market (see, for example, Tetlock, 2007, and Fang and Peress, 2009) and in contrast to many other types of corporate events, we can be fairly confident that information contained in the articles represented genuine news. *Kauppalehti* was, and still is, the leading business newspaper in Finland, and there was little competition from other media back in the 1970s. About half of the articles we consider appeared on the front cover (see Table 1), and many articles seem to stem from face-to-face interviews between a journalist and a key law maker. It is nonetheless conceivable that some news have leaked to the market before it was reported in *Kauppalehti* which is reflected in our choice of the event window. Ultimately, our event study results should shed light on whether and in what way each article brought new information to the market.

5 Data

Data constraints tend to plague studies of corporate finance from earlier time periods. As digitization and electronic data access were unknowns in the 1970s, our efforts to overcome data problems have included a large amount of manual data collection.

Our stock return data come from the Hanken School of Economics database on Finnish stock returns from the 1970s. The data set includes all firms traded on the Helsinki Stock Exchange during the time period. We have used the daily return series on individual firms, which were

initially collected to construct the so called WI-index by Berglund, Wahlroos and Grandell (1983). We supplement our stock return data with firm-specific accounting information that has been hand-collected from annual editions of *Pörssitieto* year books.¹⁵ Macroeconomic variables come from the Bank of Finland databases.

Table 2 provides descriptive statistics for our sample. The data is compiled from firm level information reported in *Pörssitieto*. The emergent nature of the Helsinki Stock Exchange in the 1970s is illustrated by a small number of firms, a small ratio of total market capitalization to GDP, and by the extremely low turnover of shares traded. While the firm-level median number for shares traded per day increases from 28 to 120 during the 1970s, even in 1979, firms with less than 10 shares traded on an average trading day exist. By 1980, the total annual stock market turnover reached 4 billion euros (measured in 2006 terms). In 2006, this turnover figure would make Finland comparable to emerging markets such as Bulgaria, Croatia, Jamaica and Ukraine. The Finnish GDP growth outpaced the growth of the stock market during the 1970s, as Market Capitalization/GDP exhibits a decreasing trend.¹⁶ As documented in Hyytinen et al. (2003), the Finnish stock market transformed to a modern financial market only in the subsequent decades, with market capitalization reaching over 200 billion euros in 2006.

Table 2 here

¹⁵ *Pörssitieto: osakesäästäjän käsikirja* (literally translated as ‘Stock Exchange Knowledge: Investor’s Handbook’) yearbooks appear annually. They contain detailed information about the firms listed in the Helsinki Stock Exchange. As the translated name suggests, the goal of the book is to provide information for stock market investors and facilitate comparison of publicly listed firms. The book was compiled for the first time in 1972 (containing information from the year of 1970) as an effort of a single individual, Gunhard T. Kock.

¹⁶ We calculate Market Capitalization as the number of shares times the year-end closing stock price. We include only the most traded share class for each stock, which causes the figure to be downward-biased. *Pörssitieto* does not provide information on number of shares for year 1970, which is why that year is missing from the last two columns of Table 2. Rajan and Zingales (2003) document a similar declining pattern in the ratio of market capitalization to GDP in the 1970s in numerous countries around the world. While our results in the next section suggest that anticipation of corporate law reform may have contributed to the decline in Finland, developments in macroeconomic and financial market environment outside the law such as regulation of cross-border capital flows and taxation favoring debt finance were arguably more relevant (see also Section 2 and Rajan and Zingales, 2003). Exploring the reasons for the decline in full detail is however beyond the scope of our paper.

It is well documented that daily stock return series tend to be autocorrelated. The problem is more severe for assets that are infrequently traded (Scholes and Williams, 1977). It is therefore no surprise that the return series that we use for this paper suffer from severe autocorrelation. Berglund and Liljeblom (1988) list factors that make Finnish data from the 1970s particularly affected by autocorrelation. First, the trading rules on the Helsinki Stock Exchange during our sample period were such that the list of companies traded on the exchange was ‘called out’ during the morning trading hours, and at that point, the bid-ask spread for the day was established. Since trades outside that spread were, by rules of the exchange, not allowed on that trading day, the price of a firm in the early part of the list would not react to news that arrive later during the day (or even during the calling out process). Second, the daily return series in our data source are tabulated so that for each stock that failed to trade on a certain day, the last trade price is substituted by the bid price (use of the bid-ask midpoint is not possible, as for a number of companies, only bid but no ask price exists on numerous trading days). We deal with these empirical challenges in our econometric tests, as explained in the following section.

6 Empirical Results

We conduct an event study around events related to the newspaper articles and legislative events detailed in Section 3.2. For each event, we include 250 trading days prior to the event (-250,-1) as an estimation window. Our event window is (0,+1).¹⁷ The choice of the event window is motivated in part by the trading system of the Helsinki Stock Exchange during our sample period. As discussed in Section 5, whether the news of day 0 are reflected on the stock return for the company on the same day or not depends on where that company is on the list that is called out during the morning hours at the exchange. Particularly for companies that come up early on the list,

¹⁷ Since our return data begins from February 1970, we do not have information available for 250 trading days prior to our first four events. For those events, we have used the method familiar from the IPO literature, where a post-event estimation period is used (Mikkelsen and Partch, 1986). For those cases, we use a 250-day estimation period beginning on the 2nd day after the event day.

inclusion of day +1 in the event window is therefore critical, as *Kauppalehti* was distributed by the Finland's Post day delivery in the 1970s, reaching its readers only long after the trading had begun in some cases. Inclusion of day 0 may thus also partially capture potential information leakages. We also carefully study entire issues of *Kauppalehti* on days around each event to search for potential sources of event contamination.

Research of market reactions to law changes is plagued by extreme event date clustering, as all firms in the market share the same event date (Binder, 1985). In such cases, Schwert (1981) and Campbell, Lo, and MacKinley (1997) suggest using a portfolio of returns instead of making inferences about market reactions based on reactions of individual stocks. At the aggregate market level, our primary measure of market returns is an equally-weighted index that we construct from the Hanken School of Economics data base. With an equally-weighted index as a dependent variable, we hope to capture the market reaction of the average Finnish firm to each event. However, use of an equally-weighted index increases the relative weight of infrequently traded stocks in the portfolio, which intensifies the technical problems discussed above. We tackle this issue in three ways. First, we adjust the original return series to account for the bid rate quotes used for stocks with no trades on certain days. Second, we use Newey-West standard errors to account for autocorrelation present in the time series. As an alternative way to account for autocorrelation, we apply an autocorrelation filter suggested by Jokivuolle (1995). The results based on filtered data are practically identical to those reported in the paper. Third, we use alternative measures for aggregate market reaction to study the robustness of our results.

The abnormal returns for our portfolio are measured by the coefficient β_2 in equation (8).

$$R_{pf,t} = \alpha + \beta_1 R_{mkt,t} + \beta_2 D_{(0,+1)} + \varepsilon, \quad (8)$$

where

R_{pf} = Return on the equally-weighted Finnish stock portfolio on day t ;

R_{mkt} = Return on the Stockholm Stock Exchange on day t ;

$D_{(0,+1)}$ = Dummy variable that takes on value of one during the event window, zero otherwise.

This dummy variable approach to event study is equivalent to estimating market model parameters for the estimation window and then calculating prediction errors within the event window, as shown by Salinger (1992). It allows us to more readily control for heteroskedasticity and autocorrelation present in our data (see Harrington and Shrider, 2007). For each event, we use trading days (-250,-1) as the estimation period.

For a proxy for the market portfolio (R_{mkt}), we use the Jacobson & Ponsbach (JP) index that follows the Stockholm Stock Exchange. Our choice of the proxy for the market portfolio is driven partly by data restrictions, and partly by the nature of the Finnish market in the 1970s. Commonly used international indices, such as the MSCI indices do not have daily data available until 1972. Also, consistent with some emerging markets today, the Finnish stock market was segmented in the 1970s. Correlation of the daily returns of our equally-weighted index is below 3 percent for both FTSE and DAX-indices, while the JP index that we employ exhibits a 7.9 percent correlation with our index. Our findings are, however, essentially identical if we use alternative European indices as a proxy for the market portfolio. Given that controlling for market returns is somewhat questionable in a case where market returns do not appear to have hardly any influence on the Finnish returns, we perform also regressions without a market portfolio. The results of those regressions do not materially deviate from those reported in the paper.

6.1 Market-level results

The abnormal portfolio returns are presented in Table 3. In the specifications in the left-hand side of Table 3, returns of the equally-weighted index of Finnish firms are used as the dependent variable. In calculating the daily index returns, we adjust the Hanken School of Economics firm-level data to take into account infrequent trading of some firms in the database. For firms that fail to trade on a certain day, the buy quote is reported in the database (the sell quote did not exist for

many of them, which motivates the use of the buy quote). However, if a stock fails to trade on day t , but then it trades on day $t+1$, the daily return in the database includes a move from a buy quote to a trade, which can be substantial for the most illiquid stocks with wide bid-ask spreads. For this reason, we manually observe prices for each stock during each of the event windows from *Kaupparehti* and replace ‘buy quote to trade’ returns with ‘buy quote to buy quote’ returns for those stocks.¹⁸ We continue to use trade-to-trade returns whenever such returns are available.

On the right-hand side of Table 3, we replace the equally-weighted index with the HEX-index as the dependent variable when estimating equation (8). The HEX-index is a market value weighted index for the Helsinki Stock Exchange that consists of its 25 most-traded firms (currently known as OMXH25).¹⁹ We also use the broader value-weighted WI-index from the Hanken School of Economics (see Berglund et al., 1983) as an alternative market-weighted dependent variable. The results (not reported) based on that index are practically identical to those based on the HEX-index. In both tests, the variable of interest is the dummy variable that takes on the value of one within the event window.

Table 3 here

As Panel A of Table 3 indicates, a number of articles and law events are connected with statistically significant abnormal returns, suggesting that the events we study convey new

¹⁸ Correcting for non-trades only within each event window causes our model parameters to be misspecified, as the bid-to-trade returns exist also within estimation periods. This concern is reduced to some extent by the very low loading on the market factor that is common among our sample firms. Also, this artificial volatility should bias us against finding significant results.

¹⁹ The HEX-index includes the most frequently traded firms on the exchange, which reduces the technical concerns caused by infrequent trading discussed above. Note that unlike later studies using Finnish data, our study is not plagued by ‘the Nokia-effect’, as we do not have a single company representing a disproportionate share of the market. Even at the end of the 1970s, Nokia was only the third largest firm on the Helsinki Stock Exchange by market capitalization.

information to the market.²⁰ Ten of the events exhibit consistent results for both the equally-weighted index and the HEX index. One of the ten events is a legislative event (the final parliamentary decision). Out of the nine news article-related events with consistent results across both indices, six articles were published on the front cover of *Kauppalehti*, which provides support for the suggestion that articles in the newspaper affect the Finnish stock returns. The law's introduction to the parliament on March, 29 1977 (event number 14) seems to generate a positive and significant market reaction, however only for the HEX-index. This finding is consistent with Korkeamäki et al. (2007), who provide evidence suggesting that new information is released to the market when a law is introduced to the Finnish parliament.

In order to judge how the content of each article has affected corresponding market reactions, we next divide the news articles based on whether they contain information related to delays in the legal process, increased workload caused by the new law, or increased investor protection. The results are reported in Panel B of Table 3. When the equally-weighted index is used as a measure of market reactions, five out of the seven delay news are met with a statistically significant market reaction, four positive and one negative. With the exception of event number 9 on January 29, 1975, these results suggest that delays in the legal process were favored by the Finnish stock market. The HEX-index yields similar albeit somewhat weaker inferences. The results also suggest that emphasis on increased investor protection caused negative market reactions. According to the equally-weighted index, six of the nine events are met by negative reactions, and none of them are met by positive reactions. HEX-index-based results are largely similar. These results corroborate the high diversion equilibrium results of our model of Section 4.

News that contain information about increased corporate workload produce more mixed reactions, which is not surprising given the complex effects of compliance costs implied by our

²⁰ When we perform contamination check of our events by observing the entire *Kauppalehti* for each of the days within our event windows, we find only one case of potential contamination, the negative reaction to the November 8, 1974 event (event number 8), as on the same day, the Bank of Finland urged tightening of bank financing terms in Finland. That event is classified both as a workload and an investor protection event.

theoretical framework. With the equally-weighted index, out of the 13 total events, four produce a positive and significant reaction, and five produce a negative and significant reaction. It should be noted that two of the four articles with positive reactions are articles that contain information on both delays and increased workload, which could partially explain the positive reactions to them. The results based on the HEX-index provide somewhat stronger evidence for the suggestion that increased workload is connected with negative market reactions.

Market-wide effects are difficult to detect as different types of firms may be affected differently by the legal reform as shown in Section 4.2. Given that HEX-index is value-weighted and contains only the largest Finnish firms, we can draw some inferences from the events to which the two indices react differently, as those cases may suggest differing implications for small and large firms. From Table 3 we can observe that the equally-weighted index reacts more often negatively to news emphasizing investor protection increases and positively to news about delays. Thus, smaller firms appear to suffer (in relative terms) from increases in investor protection. This result would be in contrast with the prediction of our model were all firms in the high diversion equilibrium but it is possible that some of the large firms are in the low diversion equilibrium. Note also that in the model, we assume that the size of the firm's investment is fixed. To evaluate more properly the effects of firm size, we should consider variable scale investment model where size is endogenous (such as Shleifer and Wolfenson, 2002).

6.2 Firm-level results

Next, we compile all events that emphasize an increase in workload, an increase in investor protection, or a delay in the legislative process, respectively. We then use firm-level data to calculate the average β_2 - coefficient in equation (8) for each firm across each type of events, and use it as the dependent variable. The equally-weighted index corrected for missing returns in the event windows is used as the market portfolio in these regressions. Our explanatory variables

include firm-specific averages of annual values for $\ln(\text{market capitalization})$, dividend yield, and the percentage owned by top-10 shareholders, foreigners, and government, respectively. These values are very stable for firms across the sample years, which motivates the use of average values. We also include a dummy variable that takes on the value of one for banking institutions. The results are reported in Table 4.

Table 4 here

From Table 4, we see that news on delays in the legislative process and news on increases in workload provide fairly similar results. Recalling our overall results in Table 3, these firm-level results indicate that firms with high dividend yield experience a less positive reaction in conjunction with news about delays, and news emphasizing workload increases cause a more negative than average reaction for them. High dividend yield firms also appear to react less negatively to news about investor protection improvements, albeit that reaction is not statistically significant. These results are in line with the predictions of our theoretical model.²¹

Similarly, firms with high foreign ownership and high government ownership exhibit greater returns than the rest of the sample to news on delays and increases in workload. Improvements in investor protection affect firms with high foreign ownership more negatively than average. Our model does not generate direct implications about the effects of these ownership types. It is possible that these types of owners have higher opportunity costs of their funds than (other) domestic outside investors (for example, government should take into account the shadow costs of public funds and, as described in Section 2, the possibilities of investing abroad were very restricted in Finland in the 1970s). Our model implies that firms with such outside owners should view investor protection

²¹ The comparison of these results with our theoretical model where dividend payout ratio is endogenous is a bit awkward, though. From (7a) we however see that exogenous firm characteristics that predict more positive reactions to delays and less negative reactions to investor protection also predict higher dividend payments.

improvements more negatively and delays more positively. But our model also supports other explanations for these findings. The firms with high government ownership could have lower productivity, and should therefore react more negatively to news about investor protection improvements and more positively to delays. Foreign owners could bring a mechanism (such as voluntary corporate governance standards or reputation externalities) that would allow coordination to the low diversion equilibrium where investor protection improvements and delays should be met with positive and negative reactions, respectively.

Finally, banks appear to react less negatively to workload increases than other firms, suggesting that net implementation costs of the new law were lower for banking industry. This result could, for example, be explained by the required reporting procedures already being in place in banks prior to the reform or by increased reporting load of other firms creating more consulting commissions for the banks.

We next analyze the cross-sectional determinants of individual cumulative abnormal returns around each event. The results are reported in Table 5. The control variables for firm-specific returns around each event mirror those used above. While Panel A reports event-specific findings for each event, we have grouped the findings in Panel A by the types of the events in Panels B, C, and D. In Panel B, we report results on all events that indicated a delay in the legislative process. Supporting the findings reported earlier, delays are better-than-average news for firms with high government or foreign ownership whereas larger firms and firms with high dividends appear to react more negatively. Firms with high ownership share among top-10 shareholders also seem to suffer from delays. Our model suggests that firms with a high insiders' revenue share might be in the low diversion equilibrium where delays should be met with negative reactions (and increases in investor protection with positive reactions).

Table 5 here

The findings on workload increase are reported in Panel C. Similar to the delay news, foreign ownership and government ownership are often related to better-than-average stock reactions, and larger firms and firms with high dividends seem to suffer more than the average firm. Banks' reactions are positive whenever significant, echoing the results reported earlier.

The results on investor protection-related news are mixed, as reported in Panel D. Most of the firm-level variables enter with varying signs, depending on the events. This may reflect the difficulties in separating investor protection both theoretically and empirically from other effects, as discussed above. For instance, in the newspaper articles that we analyze, investor protection improvements coincide very often with the workload emphasis. Recall also that our investor protection indicator captures both shareholder protection and creditor protection.

7 Conclusions

In the 1970s the Finnish stock market was a thinly traded emerging market where the regulations covering most corporate activity in Finland were based on an outdated corporate law dating back to 1895. The focus of this study is the complex reform process – a joint effort of Nordic countries lasting over a decade – that led into the new corporate law on January 1, 1980.

We first document how the reform brought about significant improvements in both shareholder and creditor protection in Finland through more direct guidance and increased transparency, but how it also involved non-trivial compliance costs. We then build a simple model of investor protection and corporate valuation to clarify the effects of such reform. In our model, complementarities among investor expectations, cost of outside equity capital, and insiders' incentives to misbehave generate multiple equilibria. We show how the effects of investor protection vary with equilibrium. In particular, in an equilibrium characterized by low corporate

valuation due to extensive insider misbehavior, increases in investor protection decrease corporate valuations in contrast to typical predictions of the law and finance literature.

Our empirical evaluation of the reform with firm-level daily stock return data supports several of the predictions of our model. The results of our market-wide tests suggest that events containing information about increased investor protection are met with negative market reactions whereas reports of delays in the legislative process tend to produce positive market reactions. In a closer examination of the events leading to the reform, we find that firms offering higher dividend yields respond to delays in the legislative process more negatively whereas firms with a high degree of foreign or government ownership react to delays more favorably.

Both our theoretical and empirical results suggest that more stringent investor protection regulation associated with compliance costs has complex and contradictory effects on corporate valuation that depend on firm-specific market conditions and other firm attributes. We find that reactions to articles emphasizing increased workload resulting from the law change are met with predominantly negative market reactions. Our interpretation of this result is that compliance costs imposed by reforms should not be overlooked.

Our results point out that positive relationship between investor protection laws and corporate valuation derived from the law and finance literature does not necessarily hold universally but may depend on other institutional environment. For example, in many emerging markets, private property rights tend to be poorly respected and social norms tolerate corruption and insider misbehavior. According to our theoretical and empirical results, changes of investor protection in this kind of environment may have unexpected consequences that differ from those in a developed market context where opportunities to insider misbehavior are more limited. This supports the findings by Pistor et al. (2000), Berkowitz et al. (2003), and Bhattacharya and Daouk (2009), and suggests that merely transplanting foreign legislation without paying adequate attention to domestic context may not automatically promote financial market development.

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Table 1. Events and news paper articles during preparation of the 1980 Corporate Law							
The table lists legislative steps (in italics), and news related to preparation of the Finnish Corporate Law of 1980. Multiple events on the same day are numbered. Original article titles were translated from Finnish by authors. Columns "delay", "inv prot", and "work load" indicate authors' independent judgement on whether the content of each article contained information emphasizing a delay in the legislative process, a change in investor protection, or increase in work load, respectively.							
Event #	Date	Event/article title	page no.	delay	inv prot	work load	legislative event
1	Apr 24, 1970	1) Conglomerate not recognized by law: New corporate law clarifies legislation of conglomerates 2) Corporate law narrow internationally		X			
2	Oct 21, 1970	Accounting and corporate laws should be coordinated with business income tax law	4	X		X	
3	Dec 21, 1970	Companies Act will enter into force in 1975?	1	X		X	
4	Dec 29, 1970	Accounting law becomes the sole determinant of financial statements	4		X		
5	Jan 24, 1974	New corporate law mandates auditors to form a new organization	8		X		
6	Sept 2, 1974	<i>Proposal for new corporate legislation</i>					X
7	Nov 8, 1974	More corporate disclosure required	18		X	X	
8	Jan 29, 1975	Despite a one-man taskforce the Companies Act again delayed	1	X			
9	Oct 24, 1975	New corporate law expands the role of auditing	6		X	X	
10	July 21, 1976	Political parties mull over the Companies Act : The Act into force in 1978 by the earliest	1	X			
11	Feb 18, 1977	New corporate law into the parliament during this month	1		X		
12	March 22, 1977	Goal of the decade: Corporate legislation on Nordic foundation	4		X	X	
13	March 29, 1977	<i>Government's proposal to the parliament</i>					X
14	June 7, 1977	A main principle of the new Companies Act: Annual report must involve extensive disclosure	1		X	X	
15	June 15, 1977	Only drawbacks from decentralization	back cover	X			

16	Sept 12, 1977	New hurdle for the Companies Act: The leftist cooperative group does not accept certification of accountants	1			X	
17	Sept 26, 1977	New requirement for accounting: Consolidated accounts of conglomerates must also be disclosed	1			X	
18	June 2, 1978	<i>Parliament decision, 3. round</i>					X
19	July 3, 1978	Companies Act enters into force only in 1980	1	X		X	
20	Sept 29, 1978	1) Law enacted 2) Companies Act presents a challenge for Chambers of Commerce: Standards for education of accountants must rise	9		X		X
21	Nov 8, 1978	Analysis of annual reports of publicly listed companies: Transparency has increased	11		X	X	
22	Dec 1, 1978	Special Report: Corporate legislation in the 80s	9			X	
23	Dec 29, 1978	Companies Act implies burdensome consolidated statements	1			X	
24	March 27, 1979	Companies Act has a whopping 167 sections	1		X	X	
25	Jan 1, 1980	<i>Law enters into effect</i>					X

Table 2. Descriptive Statistics for firms on the Helsinki Stock Exchange by year

The table reports number of companies listed and their median assets and sales, the median number of shares of a company traded per day, trading turnover, total market capitalization and its relation to GDP for each year. Assets, sales, turnover, and market capitalization are in EUR millions (converted from FIM), and the number of trades is the median number of shares of a company traded on a trading day. The data source is various editions of *Pörssitieto* yearbook.

Year	# Firms	Assets	Sales	# Trades	Turnover	Tot.Mkt Cap	Mkt Cap/GDP
1970	43	35.12	34.39	28	13		
1971	44	39.91	32.67	28.5	15.56	1318.27	15.38%
1972	44	47.79	41.35	41.5	28.07	1045.56	10.46%
1973	46	55.85	53.37	65	48.95	1364.65	11.21%
1974	46	73.77	72.91	75	35.15	1315.89	8.57%
1975	46	84.06	75.00	51	34.97	1185.97	7.24%
1976	49	81.10	81.29	54.5	28.95	981.24	5.29%
1977	49	93.35	75.03	88	32.2	901.17	4.47%
1978	49	99.63	81.36	89	55.04	1080.88	4.88%
1979	49	106.52	97.11	120	93.64	1398.25	5.42%

Table 3. Market reactions to events related to the law change

The table reports regression results based on equation (8). The dependent variable is as indicated, where the equally-weighted index of all Finnish stocks has been calculated so that 'trade to bid' observations in data have been replaced by 'bid to bid' data, as detailed in Section 6.1. R_{mkt} is the return on the Stockholm Stock Exchange, and $D_{(0,+1)}$ is an indicator variable that equals one during the (0,+1) event window for each event, zero otherwise. The events are defined in Table 1, with event numbers referring to legislative steps in bold. The Newey-West t-statistics are in parentheses, and ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Panel A												
Dep. var. = Equally-weighted corrected index							Dep. var. = HEX-index					
	Constant		R_{mkt}		$D_{(0,+1)}$		Constant		R_{mkt}		$D_{(0,+1)}$	
Event date												
1	0.0008***	(2.749)	0.0087	(0.292)	0.0039	(0.972)	0.0008**	(2.227)	-0.0101	(-0.325)	0.0014	(1.501)
2	0.0007***	(2.619)	0.0351	(0.924)	0.0016**	(1.995)	0.0008**	(2.233)	0.0137	(0.313)	0.0016***	(3.025)
3	0.0008***	(2.769)	0.0875**	(2.239)	0.0040***	(6.078)	0.0009**	(2.585)	0.0408	(0.889)	0.0012*	(1.968)
4	0.0009***	(3.116)	0.0926**	(2.403)	-0.0071***	(-15.839)	0.0009***	(2.642)	0.0412	(0.901)	0.0005	(1.170)
5	0.0018***	(3.096)	0.0825	(1.490)	-0.0009	(-1.294)	0.0015**	(2.505)	0.0601	(1.080)	-0.0013	(-0.745)
6	0.0002	(0.468)	0.0531	(1.157)	0.0040**	(2.433)	-0.0001	(-0.205)	0.0279	(0.589)	0.0020	(1.334)
7	-0.0008*	(-1.963)	0.0561	(1.307)	-0.0084***	(-3.310)	-0.0011**	(-2.471)	0.0552	(1.141)	-0.0148***	(-5.351)
8	-0.0003	(-0.952)	0.0421	(1.307)	-0.0031***	(-6.025)	-0.0008	(-1.508)	0.0388	(0.754)	-0.0048***	(-3.722)
9	0.0001	(0.330)	0.0566	(1.466)	-0.0016**	(-2.160)	-0.0002	(-0.371)	0.0573	(0.891)	-0.0022***	(-3.119)
10	-0.0002	(-0.583)	0.0580	(1.531)	0.0029***	(7.857)	-0.0004	(-1.163)	0.0228	(0.556)	0.0038***	(2.682)
11	-0.0004	(-1.172)	0.0943**	(2.550)	-0.0021***	(-5.678)	-0.0008**	(-2.279)	0.0531*	(1.699)	-0.0006	(-0.779)
12	-0.0003	(-1.061)	0.0894***	(2.603)	0.0027***	(5.808)	-0.0006*	(-1.900)	0.0541*	(1.846)	0.0003	(0.388)
13	-0.0003	(-0.954)	0.0912***	(2.663)	0.0007	(0.886)	-0.0006*	(-1.783)	0.0557*	(1.908)	0.0018***	(3.525)
14	-0.0004	(-1.288)	0.0804**	(2.425)	-0.0032**	(-2.524)	-0.0005	(-1.506)	0.0693**	(2.446)	-0.0018**	(-2.112)
15	-0.0005	(-1.628)	0.0965***	(2.908)	0.0013**	(2.392)	-0.0006*	(-1.867)	0.0836***	(2.883)	0.0021	(1.275)
16	-0.0004	(-1.285)	0.0855***	(2.769)	-0.0053***	(-7.589)	-0.0004	(-1.480)	0.0764***	(2.819)	-0.0086***	(-16.904)
17	-0.0005	(-1.586)	0.0767**	(2.460)	-0.0006	(-0.500)	-0.0006*	(-1.874)	0.0699**	(2.421)	0.0008	(0.568)
18	0.0003	(0.940)	0.0203	(0.633)	0.0021***	(4.386)	0.0000	(0.105)	0.0582	(1.590)	0.0016***	(2.907)
19	0.0004	(1.234)	0.0167	(0.490)	0.0008	(1.272)	0.0001	(0.168)	0.0496	(1.264)	-0.0015	(-0.870)
20	0.0005*	(1.676)	0.0112	(0.287)	0.0001	(0.146)	0.0002	(0.662)	0.0651	(1.585)	0.0004	(0.865)
21	0.0006**	(2.178)	0.0119	(0.337)	0.0010	(1.194)	0.0003	(1.122)	0.0481	(1.296)	0.0026*	(1.682)
22	0.0007***	(2.727)	0.0153	(0.419)	-0.0010	(-1.017)	0.0006*	(1.925)	0.0484	(1.251)	-0.0022***	(-4.145)
23	0.0008***	(3.081)	-0.0019	(-0.051)	0.0054***	(2.708)	0.0007**	(2.376)	0.0309	(0.763)	0.0067*	(1.689)
24	0.0009***	(3.438)	0.0204	(0.553)	-0.0013***	(-3.677)	0.0008***	(2.768)	0.0442	(1.028)	-0.0002	(-0.237)
25	0.0011***	(3.365)	0.0732*	(1.790)	-0.0014*	(-1.709)	0.0011***	(2.844)	0.0844*	(1.821)	0.0015***	(3.711)

Panel B

Dep. var. = Equally-weighted corrected index							Dep. var. = HEX-index					
t	Constan	R _{mkt}	D _(0,+1)		Constant	R _{mkt}	D _(0,+1)					
Delay												
1	0.0008***	(2.749)	0.0087	(0.292)	0.0039	(0.972)	0.0008**	(2.227)	-0.0101	(-0.325)	0.0014	(1.501)
2	0.0007***	(2.619)	0.0351	(0.924)	0.0016**	(1.995)	0.0008**	(2.233)	0.0137	(0.313)	0.0016***	(3.025)
3	0.0008***	(2.769)	0.0875**	(2.239)	0.0040***	(6.078)	0.0009**	(2.585)	0.0408	(0.889)	0.0012*	(1.968)
8	-0.0003	(-0.952)	0.0421	(1.307)	-0.0031***	(-6.025)	-0.0008	(-1.508)	0.0388	(0.754)	-0.0048***	(-3.722)
10	-0.0002	(-0.583)	0.0580	(1.531)	0.0029***	(7.857)	-0.0004	(-1.163)	0.0228	(0.556)	0.0038***	(2.682)
15	-0.0005	(-1.628)	0.0965***	(2.908)	0.0013**	(2.392)	-0.0006*	(-1.867)	0.0836***	(2.883)	0.0021	(1.275)
19	0.0004	(1.234)	0.0167	(0.490)	0.0008	(1.272)	0.0001	(0.168)	0.0496	(1.264)	-0.0015	(-0.870)
Workload												
2	0.0007***	(2.619)	0.0351	(0.924)	0.0016**	(1.995)	0.0008**	(2.233)	0.0137	(0.313)	0.0016***	(3.025)
3	0.0008***	(2.769)	0.0875**	(2.239)	0.0040***	(6.078)	0.0009**	(2.585)	0.0408	(0.889)	0.0012*	(1.968)
7	-0.0008*	(-1.963)	0.0561	(1.307)	-0.0084***	(-3.310)	-0.0011**	(-2.471)	0.0552	(1.141)	-0.0148***	(-5.351)
9	0.0001	(0.330)	0.0566	(1.466)	-0.0016**	(-2.160)	-0.0002	(-0.371)	0.0573	(0.891)	-0.0022***	(-3.119)
12	-0.0003	(-1.061)	0.0894***	(2.603)	0.0027***	(5.808)	-0.0006*	(-1.900)	0.0541*	(1.846)	0.0003	(0.388)
14	-0.0004	(-1.288)	0.0804**	(2.425)	-0.0032**	(-2.524)	-0.0005	(-1.506)	0.0693**	(2.446)	-0.0018**	(-2.112)
16	-0.0004	(-1.285)	0.0855***	(2.769)	-0.0053***	(-7.589)	-0.0004	(-1.480)	0.0764***	(2.819)	-0.0086***	(-16.904)
17	-0.0005	(-1.586)	0.0767**	(2.460)	-0.0006	(-0.500)	-0.0006*	(-1.874)	0.0699**	(2.421)	0.0008	(0.568)
19	0.0004	(1.234)	0.0167	(0.490)	0.0008	(1.272)	0.0001	(0.168)	0.0496	(1.264)	-0.0015	(-0.870)
21	0.0006**	(2.178)	0.0119	(0.337)	0.0010	(1.194)	0.0003	(1.122)	0.0481	(1.296)	0.0026*	(1.682)
22	0.0007***	(2.727)	0.0153	(0.419)	-0.0010	(-1.017)	0.0006*	(1.925)	0.0484	(1.251)	-0.0022***	(-4.145)
23	0.0008***	(3.081)	-0.0019	(-0.051)	0.0054***	(2.708)	0.0007**	(2.376)	0.0309	(0.763)	0.0067*	(1.689)
24	0.0009***	(3.438)	0.0204	(0.553)	-0.0013***	(-3.677)	0.0008***	(2.768)	0.0442	(1.028)	-0.0002	(-0.237)
Investor protection												
4	0.0009***	(3.116)	0.0926**	(2.403)	-0.0071***	(-15.839)	0.0009***	(2.642)	0.0412	(0.901)	0.0005	(1.170)
5	0.0018***	(3.096)	0.0825	(1.490)	-0.0009	(-1.294)	0.0015**	(2.505)	0.0601	(1.080)	-0.0013	(-0.745)
7	-0.0008*	(-1.963)	0.0561	(1.307)	-0.0084***	(-3.310)	-0.0011**	(-2.471)	0.0552	(1.141)	-0.0148***	(-5.351)
9	0.0001	(0.330)	0.0566	(1.466)	-0.0016**	(-2.160)	-0.0002	(-0.371)	0.0573	(0.891)	-0.0022***	(-3.119)
11	-0.0004	(-1.172)	0.0943**	(2.550)	-0.0021***	(-5.678)	-0.0008**	(-2.279)	0.0531*	(1.699)	-0.0006	(-0.779)
14	-0.0004	(-1.288)	0.0804**	(2.425)	-0.0032**	(-2.524)	-0.0005	(-1.506)	0.0693**	(2.446)	-0.0018**	(-2.112)
20	0.0005*	(1.676)	0.0112	(0.287)	0.0001	(0.146)	0.0002	(0.662)	0.0651	(1.585)	0.0004	(0.865)
21	0.0006**	(2.178)	0.0119	(0.337)	0.0010	(1.194)	0.0003	(1.122)	0.0481	(1.296)	0.0026*	(1.682)
24	0.0009***	(3.438)	0.0204	(0.553)	-0.0013***	(-3.677)	0.0008***	(2.768)	0.0442	(1.028)	-0.0002	(-0.237)

Table 4. Market reactions by type of the event

Table displays OLS results where the dependent variable is the average coefficient on the dummy for each firm and each type of the event. Each explanatory variable is averaged for each firm across all sample years. Bank dummy is an indicator variable that takes on a value of one for banking firms, zero otherwise. Log(Mkt. cap) is the natural logarithm of market capitalization. Dividend yield is the percentage dividend yield offered by the firm. Ownership by top-10, Foreign ownership, and Gov't ownership indicate the percentage ownership of each respective shareholder group. Columns entitled "Delay", "Workload", and "Protection" include only events that fall into each respective category, as indicated in Table 1. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Event type	Delay	Workload	Inv protection
Dependent var.	D (0,+1)	D (0,+1)	D (0,+1)
CONSTANT	0.00797 (0.580)	0.0091 (0.392)	0.0040 (0.226)
Bank dummy	-0.0011 (-0.434)	0.0068** (2.121)	0.0022 (0.750)
Log (Mkt. cap)	-0.0004 (-0.691)	-0.0007 (-0.640)	-0.0004 (-0.417)
Dividend yield	-0.0118*** (-7.294)	-0.0115*** (-4.191)	0.0019 (0.368)
Ownership by top-10	-0.0039 (-0.553)	0.0069 (0.847)	0.0094 (0.941)
Foreign ownership	0.0593*** (6.267)	0.0183*** (3.366)	-0.0394*** (-5.737)
Gov't ownership	0.0007*** (10.927)	0.0005*** (4.624)	-0.0001 (-0.501)
N	35	34	34
ADJ. R ²	0.5535	0.2213	0.2622
F-test p-value	0.000	0.043	0.186

Table 5. Market reactions to events related to the law change

The table reports event-specific OLS results for each event. The events are defined in Table 1, with event numbers referring to legislative steps **in bold**. The dependent variable is the firm-specific abnormal return related to each event. Bank is an indicator variable that takes on a value of one for banking firms, zero otherwise. Assets is the natural logarithm of total assets. Div yield is the percentage dividend yield offered by the firm. Top own, For own, and Gov ownership indicate the percentage ownership of top-10 shareholders, foreigners, and the government, respectively. Robust t-statistics are reported in the parentheses. ***, **, * indicate statistical significance at the 1%, 5%, and 10% level, respectively.

Panel A: All events

Event #	Bank	Assets	Div yield	Top own	For own	Gov own	Constant	N	Adj r2
1	0.0005 (0.034)	-0.0044 (-0.720)	-0.1051 (-0.333)		0.0755 (0.656)	-0.0002 (-1.939)*	0.0283 (0.532)	41	-0.051
2	-0.0041 (-0.851)	0.0021 (0.969)	-0.0113 (-0.413)		-0.0208 (-2.463)**	0.0003 (0.827)	-0.0092 (-0.688)	41	0.033
3	-0.005 (-0.804)	0.0025 (0.844)	0.0986 (1.332)		0.1704 (5.486)***	0.0002 (2.781)***	-0.0193 (-1.064)	41	0.696
4	0.019 (1.271)	0.0026 (0.377)	-0.3784 (-2.801)***		-0.1351 (-3.098)***	0.0003 (1.372)	0.0098 (0.220)	41	0.468
5	-0.0141 (-2.081)**	0.0015 (0.453)	-0.5937 (-1.952)*		-0.0810 (-6.151)***	-0.0006 (-2.405)**	0.0261 (1.465)	43	0.098
6	-0.016 (-0.544)	-0.0013 (-0.170)	0.0449 (0.344)	-0.0384 (-1.586)	-0.2372 (-1.374)	0.0005 (1.152)	0.0185 (0.356)	35	-0.023
7	0.0976 (1.755)*	-0.0319 (-2.383)**	-0.4138 (-2.100)**	0.0715 (1.821)*	1.0337 (4.146)***	0.0007 (1.241)	0.1709 (2.232)**	35	0.328
8	-0.0149 (1.708)*	-0.002 (-1.024)	-0.1892 (-3.064)***	-0.0178 (-1.536)	-0.0001 (-0.001)	0.0003 (2.851)***	0.0279 (1.610)	35	0.14
9	-0.0011 (-0.134)	0.0001 (0.043)	-0.0013 (-6.844)***	-0.0039 (-0.193)	0.0244 (1.173)	0.0004 (2.123)**	0.0007 (0.040)	37	-0.15
10	0.0027 (0.318)	0.0027 (1.051)	0.0855 (0.833)	0.0083 (0.709)	-0.0116 (-0.724)	0.0002 (0.527)	-0.0279 (-1.187)	43	-0.01
11	0.0066 (0.737)	0.0013 (0.402)	0.2572 (1.287)	0.0543 (2.432)**	-0.0514 (-1.505)	-0.001 (-2.131)**	-0.0432 (-1.295)	43	0.056
12	0.0021 (0.273)	0.0018 (0.646)	-0.0016 (-0.010)	0.023 (1.422)	-0.0185 (-0.674)	0.0002 (0.448)	-0.0199 (-0.746)	43	-0.031
13	0.0051 (0.697)	-0.0027 (-0.799)	-0.3811 (-1.794)*	-0.0488 (-1.964)*	0.0969 (2.363)**	0.0009 (2.407)**	0.0515 (1.427)	43	0.209
14	0.0198 (3.928)***	-0.0053 (-2.970)***	-0.0787 (-0.871)	0.0013 (0.119)	-0.004 (-0.430)	-0.0007 (-4.905)***	0.0361 (2.493)**	45	0.239
15	0.006 (1.007)	-0.003 (-1.469)	-0.0042 (-0.034)	-0.0005 (-0.038)	0.0411 (3.726)***	0.0012 (3.985)***	0.0217 (1.225)	45	0.274
16	0.0215 (2.423)**	-0.0076 (-3.165)***	0.0712 (0.498)	0.0086 (0.603)	-0.0107 (-0.781)	-0.0001 (-0.631)	0.0342 (2.256)**	46	0.062
17	0.0319 (1.196)	-0.0008 (-0.353)	0.1293 (0.610)	0.0138 (1.233)	-0.011 (-0.983)	0 (0.129)	-0.0171 (-0.925)	46	0.052
18	-0.0118 (-2.178)**	0.0005 (0.380)	0.0472 (0.490)	-0.0133 (-1.455)	0.0071 (0.773)	0.0002 (1.696)*	0.0024 (0.207)	45	-0.031
19	0.0068 (1.537)	-0.0076 (-2.552)**	-0.0092 (-0.089)	-0.0379 (-2.310)**	0.0678 (7.290)***	0.0005 (2.559)**	0.065 (2.634)**	45	0.26
20	-0.0232 (-1.784)*	0.0011 (0.737)	0.0797 (0.850)	-0.003 (-0.395)	0.0028 (0.279)	-0.0003 (-1.933)*	-0.006 (-0.492)	45	0.079
21	-0.0012 (-0.241)	0.0012 (1.048)	0.0613 (0.952)	0.0117 (1.814)*	0.0053 (0.984)	0.0003 (2.280)**	-0.0152 (-1.677)	45	0.158
22	-0.0158 (-0.895)	0.0005 (0.330)	0.0632 (0.810)	-0.0005 (-0.055)	0.0086 (0.766)	0.0004 (1.750)*	-0.0073 (-0.559)	45	0.035
23	-0.0179 (-0.924)	0.0102 (1.704)*	0.0827 (0.259)	0.0022 (0.081)	-0.0055 (-0.207)	0.0006 (0.535)	-0.0639 (-1.126)	45	0.023
24	0.0221 (3.506)***	-0.0027 (-1.334)	-0.1288 (-1.215)	0.0068 (0.506)	0.006 (0.817)	0.0003 (2.330)**	0.0156 (1.054)	45	0.111
25	-0.0227 (1.817)*	0.0105 (2.581)**	-0.3205 (-1.513)	-0.028 (-0.975)	-0.0071 (-0.330)	-0.0004 (-1.006)	-0.0333 (-1.171)	44	0.094

Panel B: Delay

Event #	Bank		Assets		Div yield		Top own		For own		Gov own		Constant		N	Adj r2
1	0.0005	(0.034)	-0.0044	(-0.720)	-0.1051	(-0.333)			0.0755	(0.656)	-0.0002	(-1.939)*	0.0283	(0.532)	41	-0.051
2	-0.0041	(-0.851)	0.0021	(0.969)	-0.0113	(-0.413)			-0.0208	(-2.463)**	0.0003	(0.827)	-0.0092	(-0.688)	41	0.033
3	-0.005	(-0.804)	0.0025	(0.844)	0.0986	(1.332)			0.1704	(5.486)***	0.0002	(2.781)***	-0.0193	(-1.064)	41	0.696
8	-0.0149	(1.708)*	-0.002	(-1.024)	-0.1892	(-3.064)***	-0.0178	(-1.536)	-0.0001	(-0.001)	0.0003	(2.851)***	0.0279	(1.610)	35	0.14
10	0.0027	(0.318)	0.0027	(1.051)	0.0855	(0.833)	0.0083	(0.709)	-0.0116	(-0.724)	0.0002	(0.527)	-0.0279	(-1.187)	43	-0.01
15	0.006	(1.007)	-0.003	(-1.469)	-0.0042	(-0.034)	-0.0005	(-0.038)	0.0411	(3.726)***	0.0012	(3.985)***	0.0217	(1.225)	45	0.274
19	0.0068	(1.537)	-0.0076	(-2.552)**	-0.0092	(-0.089)	-0.0379	(-2.310)**	0.0678	(7.290)***	0.0005	(2.559)**	0.065	(2.634)**	45	0.26

Panel C: Workload

Event #	Bank		Assets		Div yield		Top own		For own		Gov own		Constant		N	Adj r2
2	-0.0041	(-0.851)	0.0021	(0.969)	-0.0113	(-0.413)			-0.0208	(-2.463)**	0.0003	(0.827)	-0.0092	(-0.688)	41	0.033
3	-0.005	(-0.804)	0.0025	(0.844)	0.0986	(1.332)			0.1704	(5.486)***	0.0002	(2.781)***	-0.0193	(-1.064)	41	0.696
7	0.0976	(1.755)*	-0.0319	(-2.383)**	-0.4138	(-2.100)**	0.0715	(1.821)*	1.0337	(4.146)***	0.0007	(1.241)	0.1709	(2.232)**	35	0.328
9	-0.0011	(-0.134)	0.0001	(0.043)	-0.0013	(-6.844)***	-0.0039	(-0.193)	0.0244	(1.173)	0.0004	(2.123)**	0.0007	(0.040)	37	-0.15
12	0.0021	(0.273)	0.0018	(0.646)	-0.0016	(-0.010)	0.023	(1.422)	-0.0185	(-0.674)	0.0002	(0.448)	-0.0199	(-0.746)	43	-0.031
14	0.0198	(3.928)***	-0.0053	(-2.970)***	-0.0787	(-0.871)	0.0013	(0.119)	-0.004	(-0.430)	-0.0007	(-4.905)***	0.0361	(2.493)**	45	0.239
16	0.0215	(2.423)**	-0.0076	(-3.165)***	0.0712	(0.498)	0.0086	(0.603)	-0.0107	(-0.781)	-0.0001	(-0.631)	0.0342	(2.256)**	46	0.062
17	0.0319	(1.196)	-0.0008	(-0.353)	0.1293	(0.610)	0.0138	(1.233)	-0.011	(-0.983)	0	(0.129)	-0.0171	(-0.925)	46	0.052
19	0.0068	(1.537)	-0.0076	(-2.552)**	-0.0092	(-0.089)	-0.0379	(-2.310)**	0.0678	(7.290)***	0.0005	(2.559)**	0.065	(2.634)**	45	0.26
21	-0.0012	(-0.241)	0.0012	(1.048)	0.0613	(0.952)	0.0117	(1.814)*	0.0053	(0.984)	0.0003	(2.280)**	-0.0152	(-1.677)	45	0.158
22	-0.0158	(-0.895)	0.0005	(0.330)	0.0632	(0.810)	-0.0005	(-0.055)	0.0086	(0.766)	0.0004	(1.750)*	-0.0073	(-0.559)	45	0.035
23	-0.0179	(-0.924)	0.0102	(1.704)*	0.0827	(0.259)	0.0022	(0.081)	-0.0055	(-0.207)	0.0006	(0.535)	-0.0639	(-1.126)	45	0.023
24	0.0221	(3.506)***	-0.0027	(-1.334)	-0.1288	(-1.215)	0.0068	(0.506)	0.006	(0.817)	0.0003	(2.330)**	0.0156	(1.054)	45	0.111

Panel D: Investor protection

Event #	Bank		Assets		Div yield		Top own		For own		Gov own		Constant		N	Adj r2
4	0.019	(1.271)	0.0026	(0.377)	-0.3784	(-2.801)***			-0.1351	(-3.098)***	0.0003	(1.372)	0.0098	(0.220)	41	0.468
5	-0.0141	(-2.081)**	0.0015	(0.453)	-0.5937	(-1.952)*			-0.081	(-6.151)***	-0.0006	(-2.405)**	0.0261	(1.465)	43	0.098
7	0.0976	(1.755)*	-0.0319	(-2.383)**	-0.4138	(-2.100)**	0.0715	(1.821)*	1.0337	(4.146)***	0.0007	(1.241)	0.1709	(2.232)**	35	0.328
9	-0.0011	(-0.134)	0.0001	(0.043)	-0.0013	(-6.844)***	-0.0039	(-0.193)	0.0244	(1.173)	0.0004	(2.123)**	0.0007	(0.040)	37	-0.15
11	0.0066	(0.737)	0.0013	(0.402)	0.2572	(1.287)	0.0543	(2.432)**	-0.0514	(-1.505)	-0.001	(-2.131)**	-0.0432	(-1.295)	43	0.056
12	0.0021	(0.273)	0.0018	(0.646)	-0.0016	(-0.010)	0.023	(1.422)	-0.0185	(-0.674)	0.0002	(0.448)	-0.0199	(-0.746)	43	-0.031
14	0.0198	(3.928)***	-0.0053	(-2.970)***	-0.0787	(-0.871)	0.0013	(0.119)	-0.004	(-0.430)	-0.0007	(-4.905)***	0.0361	(2.493)**	45	0.239
20	-0.0232	(-1.784)*	0.0011	(0.737)	0.0797	(0.850)	-0.003	(-0.395)	0.0028	(0.279)	-0.0003	(-1.933)*	-0.006	(-0.492)	45	0.079
21	-0.0012	(-0.241)	0.0012	(1.048)	0.0613	(0.952)	0.0117	(1.814)*	0.0053	(0.984)	0.0003	(2.280)**	-0.0152	(-1.677)	45	0.158
24	0.0221	(3.506)***	-0.0027	(-1.334)	-0.1288	(-1.215)	0.0068	(0.506)	0.006	(0.817)	0.0003	(2.330)**	0.0156	(1.054)	45	0.111