



รายงานการวิจัย

เรื่อง

## The Impact of Bank Connections on Corporate Restructurings of Thai Listed Firms

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### บทคัดย่อ

งานวิจัยชิ้นนี้เป็นการศึกษาผลกระทบของความสัมพันธ์ระหว่างธนาคารพาณิชย์และบริษัทที่มีต่อการปรับโครงสร้างกิจการใน 3 ช่วงเวลา ซึ่งครอบคลุมกิจการ วิกฤตเศรษฐกิจเอเชียตะวันออกในปี ค.ศ. 1997 (ช่วงก่อนวิกฤต (ปี ค.ศ. 1996) ช่วงวิกฤต (ปี ค.ศ. 1997-1998) และช่วงหลังวิกฤต (ค.ศ. 1999-2000)) ผู้วิจัยตั้งสมมติฐานว่า ความสัมพันธ์ระหว่างธนาคารพาณิชย์และบริษัทจะเพิ่มความเป็นไปได้ในการปรับโครงสร้างกิจการ เนื่องจากบริษัทจะได้รับคำแนะนำที่เป็นประโยชน์และทันเวลาจากธนาคารที่ใกล้ชิด นอกจากนี้ธนาคารที่มีความสัมพันธ์กับบริษัทยังช่วยในการตรวจสอบผู้บริหารบริษัท เพื่อให้เกิดความมั่นใจว่า ผู้บริหารทำการตัดสินใจเกี่ยวกับกลยุทธ์ของกิจการได้อย่างเหมาะสม หากความสัมพันธ์ดังกล่าวมีคุณค่าต่อกิจการ บริษัทที่มีความสัมพันธ์กับธนาคารควรมีการเปลี่ยนแปลงผลการดำเนินงานหลังปรับโครงสร้างที่ดีกว่าบริษัทที่ไม่มีความสัมพันธ์กับธนาคาร ผลการศึกษาโดยใช้ข้อมูลของบริษัทจดทะเบียน (ยกเว้นสถาบันการเงิน) ในประเทศไทย พบหลักฐานที่สนับสนุนสมมติฐานที่ตั้งไว้ กล่าวคือ บริษัทที่มีความสัมพันธ์กับธนาคารมีการปรับโครงสร้างกิจการมากกว่าบริษัทที่ไม่มีความสัมพันธ์กับธนาคาร โดยประเภทของการปรับโครงสร้างกิจการที่บริษัทที่มีความสัมพันธ์เลือกใช้แตกต่างกันไปในแต่ละช่วงเวลา ในช่วงก่อนวิกฤตการลดหรืองดการจ่ายเงินปันผลเป็นกลยุทธ์ทางการเงินที่บริษัทเหล่านี้เลือกใช้ในการปรับโครงสร้างกิจการ

ขณะที่ในช่วงวิกฤตเศรษฐกิจและหลังวิกฤตเศรษฐกิจ การเปลี่ยนแปลงผู้บริหารระดับสูงและการจัดหาเงินทุนเพิ่มเป็นกลยุทธ์ในการปรับโครงสร้างกิจการที่บริษัทที่มีความสัมพันธ์กับธนาคารเลือกใช้ สำหรับระดับของความสัมพันธ์ ผู้วิจัยพบว่า ทั้งความสัมพันธ์ผ่านคณะกรรมการและความสัมพันธ์ผ่านการถือหุ้น มีผลกระทบเพียงเล็กน้อยต่อการปรับโครงสร้างกิจการ อย่างไรก็ตามผู้วิจัยไม่พบหลักฐานที่แสดงให้เห็นว่าความสัมพันธ์กับธนาคารช่วยเพิ่มมูลค่าให้แก่กิจการ เพราะผลการดำเนินงานภายหลังปรับโครงสร้างกิจการไม่มีความแตกต่างระหว่างบริษัทที่มีและไม่มีความสัมพันธ์กับธนาคาร โดยรวมแล้วผลการศึกษาของงานวิจัยชิ้นนี้เสนอแนะว่า ธนาคารที่มีความสัมพันธ์กับกิจการ มีบทบาทสำคัญต่อกลยุทธ์ทางการเงินหลักของบริษัท

**คำสำคัญ:** ความสัมพันธ์ระหว่างธนาคารพาณิชย์และบริษัท การปรับโครงสร้างกิจการ วิกฤตเศรษฐกิจเอเชียตะวันออกเฉียงใต้  
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### **Abstract**

This study investigates the impact of bank connections on the likelihood of corporate restructuring activities in three sample periods covering the 1997 East Asian economic crisis (pre-crisis (1996), during (1997-1998) and post-crisis (1999-2000)). We hypothesize that the presence of connections between firms and banks would increase the possibility of firm restructuring activities because of useful and timely advices from their close banks. The connected banks could also provide monitoring over management to ensure their appropriate decision-making on a firm's strategies. If such connections are valuable, connected firms should have better performance changes after restructurings than non-connected firms. Using data of Thai non-financial listed firms, our analyses show supportive evidence for the hypothesis. More specifically, bank-connected firms are more likely to restructure and the restructuring activities they pursue are different in each sample period. In the pre-crisis period, dividend cut is the financial strategy connected firms use to restructure themselves; while during the crisis and in the post-crisis period, top management turnover and new capital raising appear to be the restructuring strategy adopted by connected firms. As for the connection strength, both director and ownership connections appear to have a marginal impact on corporate restructurings. Nevertheless, we find no evidence that bank connections add value to the firms since performances following restructuring activities are not different between connected and non-connected firms. Overall, the results of this research suggest that connected banks play an important role on a firm's key financial strategy.

**Keywords:** Bank Connections; Restructuring; East Asian Economic Crisis; Business Groups

# Chapter 1

## Introduction

Connections are pervasive around the world.<sup>1</sup> In the context of family business groups and a weak law enforcement system, connections help reduce asymmetric information problems and increase contract enforcement. Individuals and firms tend to develop connections based on reputation and trust in order to complement a lack of formal institutions and effective contracting (Powell and Smith-Doerr, 1994; McMillan and Woodruff, 1998). Lower cost of searching information and higher quantity and reliability of information can be achieved from connected parties (Granovetter, 1973). However, connections may also lead to corporate governance problems in some circumstances in that the connected parties may collude and hinder transparency (Rajan and Zingales, 1998), which may lead to an unfair treatment of non-connected parties.

In this study, we focus on the presence of connections between firms and banks and the impact of bank connections on firm restructurings around the crisis period. In the Anglo-Saxon, the Japanese, and the German financial systems, banks play a key role in monitoring firms, complementing a lack of incomplete contract and mitigating free-rider problems and agency problems. Examples of studies that pronounce the significance of banking relationships are those by Ongena and Smith (2000) and Elyasiani and Goldberg (2004).

Banks act as firms' external financing providers and bank financing plays an important role in developing a country's financial system (Mayer, 1990). In practice, banks adopt a monitoring role in ensuring that firms are able to repay their loans, and in gathering updated information to review firms' financial status and operations. In Germany, banks take an active role in monitoring and governing firms according to the agency theory (Edwards and Fischer, 1994; Chirinko and Elston, 2006). Aoki (2000) uses the concept of information asymmetry and document that Japanese banks work closely with firms to gain information and to monitor firms' investments.

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<sup>1</sup> Connections are defined as the relationship between two people or more. In the literature of Social Economics, connections are known as the network of related parties.



Firms benefit from bank relationships in terms of access to external funds (Gugler, 2001; McCahery, 2002; Espenlaub et al., 2010). In addition, the benefits of bank monitoring increase firms' access to other sources of external funds (Diamond, 1991). Bank connections also help firms obtain a lower cost of external funds (Berger and Udell, 1995; Greenbaum and Thakor, 1995; Charumilind et al., 2006) and survive during the financial distress (Sheard, 1994).

Bank connections might increase the possibility that firms will engage in restructuring actions in response to firm performance deterioration and macro-economic crisis. Connected banks are likely to closely monitor top management and advise distressed firms to help them recover from financial difficulty. Bank-connected firms might also be able to negotiate with banks, enhancing the restructuring incidence. There are several types of restructuring actions, which firms can choose to practice. Generally, restructuring actions are documented as a corporate strategy responsive to a crisis, including a firm-specific crisis, i.e., (sharp) performance decline and economy-wide crisis. Firms also undertake restructuring actions in order to avoid bankruptcy. Taken together, studying the impact of bank connections on the likelihood of corporate restructurings will shed light on the role of banks on a firm's financial strategies.

This study contributes to the literature on bank connections and corporate restructuring in several aspects. First, unlike previous studies (Lai and Sudarsanam, 1997; Gilson, 2001; Baek et al., 2002; Faccio and Sengupta, 2006; Kang et al., 2010), we investigate the impact of bank connections on firm restructurings, covering three periods (pre-, during and post-economic crisis). Thailand was first hit severely by the East Asian crisis in 1997, which can be characterized by a large decline in the currency and stock values, and a substantial rise in the interest rates. In response to the crisis, a majority of firms implement restructuring activities. We use the 1997 East Asian financial crisis as a setting for economic shocks, and examine how bank-connected firms experiencing an economic shock undertake restructuring actions and what factors determining the likelihood of such actions. In addition, the 1997 financial crisis allows us to investigate the impact of bank connections on firm restructuring activities before (1996) and after crisis (1999 - 2000).

Second, we define bank connections that are occurred as a result of family relationships and social relations in Thailand, in addition to the settings of the Anglo-Saxon, the Japanese, and

the German financial systems. Previous research investigates the impact of bank connections on corporate restructurings only in the Anglo-Saxon, the Japanese, and the German financial systems (Bulow and Shoven, 1978; Sheard, 1989; Diamond, 1994; Kaplan and Minton, 1994; Aoki et al., 1994; Sheard, 1994). Many Thai firms are connected with banks through family ownership and board of directors. In particular, Espenlaub et al. (2010) find that connected firms account for 80% of total non-financial listed firms in the pre-crisis period. This characteristic of Thai firms allows us to examine how bank connections influence the restructuring decision of the firms in a difficult time.

Using univariate analyses and probit estimations, we examine the effect of bank connections on the likelihood of restructuring activities in Thailand, covering three periods: the pre-crisis, during the 1997 economic crisis and the post-crisis periods. We further investigate the effect of the strength of connections on the probability of firms engaging in restructurings. In this study, we separate the strength of connections into ownership and director connections. Moreover, we examine the impact of connections on firm performance following restructuring actions.

Our results support the role of connected banks on corporate restructurings. More precisely, univariate analyses show that bank-connected firms engage in restructuring activities more often than non-connected firms in the pre-crisis period. Such activities are dividend cut and capital raising. During the crisis and in the post-crisis period, connected firms are more likely to replace their top management and raise new capital. However, we find only little impact of the strength of connections on the restructuring incidence.

Consistent with the findings of univariate analyses, our probit estimations show that the presence of bank connections is associated with the likelihood of restructuring activities. In the pre-crisis period, connected firms are more likely to cut dividend payment to restructure; while they are more likely to engage in management turnover activity during the crisis. Although connected banks play an important role on a firm's financial strategy, we document that bank connections are not valuable to the firms since changes in operating performances after restructurings are not significantly different between connected and non-connected firms.

The research suggests that policy makers should be aware of the presence of bank connections because it might lead to unfair treatments among firms. To be more specific, connected firms might have easier access to bank loans and obtain valuable information and advices from the connected banks for their restructurings. It also implies that banks might provide higher opportunity to restructure for connected firms because of lower asymmetric information problems between banks and firms.

The rest of the study is structured as follows. Chapter 2 reviews the significance of bank connections and the efficiency of restructuring actions taken in response to a crisis. It also describes the effect of bank connections and other factors on the likelihood that a firm engages in restructuring activities. Chapter 3 discusses data, variables, and methodology used in this study. Chapter 4 analyzes the empirical results from our developed models and examines the impact of bank connections and other factors that determine restructuring choices of Thai firms over the economic crisis. Finally, Chapter 5 concludes the study and provides suggestions for future research.

## **Chapter 2**

### **Literature Review**

Bank connections are commonly found in most economies (Boot, 2000; Ongena and Smith, 2000). In practice, they adopt a monitoring role in ensuring that firms are able to repay their loans, and in gathering updated information to review firms' financial status and operations. The extent to which banks participate or play such a monitoring role in firms, depends on the development of a financial system and institutions in each country. In countries with active capital markets, market control mechanisms and financial service institutions, such as credit rating and information outsourcing companies, act to monitor firms, and this allows banks to lessen their monitoring effort because such activity is complemented by market control and the monitoring roles of other financial service institutions. In other countries, market control does not play an active role in disciplining a firm's management and financial service companies are not well established.

Connections between firms and banks result in both benefits and costs. Bank connections reduce information asymmetry problems, thus leading to easy access to bank loans and preferential credit terms. They are also beneficial in terms of governing and rescuing connected firms that face financial distress or have poor performance. Nevertheless, soft budget constraints and hold-up problems are adverse consequences of bank connections. Close ties with banks or a high dependence on bank lending also adversely affect firm performance and lead to over-lending and over-investment problems. Studies concerning bank connections have been investigated in the context of dispersed ownership in developed countries, and evidence of bank connections in the context of family-owned institutions in emerging markets is lacking and needs further investigation to provide additional insight into connections between firms and banks.

Restructuring activities are one of a firm's key financial strategies. During a crisis, such activities are crucial since a firm struggles to survive and then recovers, or just lets die. Existing literature documents restructuring actions as corporate responses to both performance deterioration and adverse macroeconomic conditions. Previous studies show significant factors that determine the probability of restructuring activities. However, no study has investigated the impact of bank connections on the restructuring likelihood,

although connected banks can play an important role such as advising and monitoring during the firm's difficult time. This will be the focus of our study. More specifically, our study examines whether bank connections help firms engage in restructuring activities. Findings from this research will provide additional evidence on the role of connected-banks on a firm's financial strategy in response to a crisis.

The chapter proceeds as follows. Section 2.1 reviews the literature on the significance of bank connections. Section 2.2 gives an overview of how firms restructure to improve performance, avoid bankruptcy, and cope with an economic crisis. Section 2.3 discusses the impact of bank connections on firm restructuring decisions, and introduces hypotheses regarding the impact of bank connections on the likelihood that a firm will restructure. Section 2.4 discusses other factors that determine the restructuring likelihood.

## **2.1 The significance of bank connections**

Mayer (1990) notes that banks act as financial intermediaries to reduce information asymmetries. Banks appear to improve contract enforcement and reduce agency problems. They seem to control and participate in firms' business by monitoring credit compliance and providing management advice. Diamond (1984, 1996) discusses the role of financial intermediaries and benefits of bank monitoring in the arms' length financial system. Active monitoring may minimize the costs of firms' financial distress. Public debt holders and public equity holders tend to have no incentive to monitor firms as a result of higher monitoring costs. In addition, Diamond (1991) suggests that the benefits of bank monitoring increase firms' access to other sources of external funds. Through the monitoring process, firms may acquire reputation, which could be used to predict their future profits. Thus, firms can rely on reputation in obtaining access to public debts.

The existence of bank connections significantly affects firm value. James (1987) finds that stock prices of the borrowing firms significantly increase as a result of loan announcements, while the announcements of private placements and public debts are negatively associated with stock prices. Using the German firms, Gorton and Schmid (2000) find that firm performance is positively related to banks' equity control rights and concentration of control rights. In addition, Limpaphayom and Polwitoon (2004) find that the relationship between bank equity ownership and firm performance is non-linear in Thailand. The percentage of bank ownership (a proxy for bank relationship) is positively related to Tobin's Q ratio (a

measure of firm performance) at a lower level of bank equity ownership, but negatively related at a higher level of bank ownership. It is important to note that the definition of bank relationships used in this study may under-estimate the real bank relationships that could be traced through ultimate shareholdings in the institutional framework of concentrated ownership and family business groups in Thailand.

Firms that have developed relationships with banks possibly become more stable because they are able to secure a committed source of funds (Neuberger and Rathke, 2009). More importantly, they may also receive preferential credits to reduce their cost of capital (Greenbaum and Thakor, 1995; Boot, 2000). Berger and Udell (1995) also find that banks grant lower interest rate loans to firms with longer bank relationships. These firms have a lower possibility of pledging collateral to banks. Furthermore, Petersen and Rajan (1994) show that the likelihood of late payments on trade credits is negatively related to a length of the longest relationship with a bank.

Although bank relationships are crucial and contribute to various benefits, they result in several drawbacks. Boot (2000) discusses the adverse consequences of relationships between firms and banks, categorizing these into soft budget constraints and hold-up problems.<sup>2</sup> Close ties between firms and banks not only lead to ineffective contract enforcement, but also result in the looting dilemma. La Porta et al. (2003) show that the controlling shareholders use their control over lending policies and channel bank capital to their related parties and other private businesses in Mexico. Such imprudent related lending also leads to over-lending and over-investment problems, which eventually lead to financial crises (Rajan and Zingales, 1998; Pomerleano, 1998).

In some circumstances, bank relationships adversely affect firm performance. Kang and Stulz (2000) document that during the decline of the stock market when connected banks faced financial problems and decreased bank lending, firms that were more dependent on bank loans experienced poorer stock returns and lower investment. Furthermore, Bae et al. (2002) also find that the negative news announcements led to a decline in cumulative abnormal returns of banks and of their client firms. In Thailand, firms with bank connections obtained

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<sup>2</sup> The term “soft budget constraint” has been used in the previous literature on the socialist system.

easier access to bank loans in the pre-crisis; however they poorly performed during the financial crisis (Sitthipongpanich, 2009; Espenlaub et al., 2010).

## 2.2 Firm restructurings in response to crisis

Restructuring actions are well documented as firm responses to performance deterioration (Jain, 1985; John et al., 1992; Ofek, 1993; Kang and Shivdasani, 1997; Lai and Sudarsanam, 1997; Denis and Kruse, 2000; Kang et al., 2001; Frederikslust et al., 2003). The primary objective of restructuring actions is to recover from doing poorly relative to past performances or to competing firms (Brickley and Van Drunen, 1990). In many cases, though, restructuring actions are also undertaken in order that firms may avoid (further) financial distress or bankruptcy (Khanna and Poulsen; 1995). Recent research also shows that firms restructure in response to adverse macroeconomic conditions (Lai and Sudarsanam, 1997; Gilson, 2001; Baek et al., 2002; Faccio and Sengupta, 2006; Kang et al., 2010).

Corporate restructuring can be broadly categorized into *six* major activities. First, firms engage in *downsizing actions*, which includes asset sales, divestitures, plant closures, operational discontinuations, capital expenditure cuts, unit spin-offs, office/branch shutdowns, capacity reductions, and refocusing.<sup>3</sup> Second, firms conduct *expansionary actions* that increase the size or scope of businesses.<sup>4</sup> These actions include, for example, acquisitions, joint ventures, new plant construction, new subsidiary setup, and capital expenditure increases. Third, firms undertake *employment changes*. These changes include employee layoffs, wage cuts, and the offering of early retirement incentives.<sup>5</sup> Fourth, firms implement *internal control changes*. For example, a firm may replace top management, appoint new board members or dismiss existing board members, and add or remove outside

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<sup>3</sup> See John et al. (1992), Ofek (1993), Asquith et al. (1994), Brown et al. (1994), Mitchell and Mulherin (1996), Kang and Shivdasani (1997), Lai and Sudarsanam (1997), Denis and Kruse (2000), Baek et al. (2002), Faccio and Sengupta (2006), and Kang et al. (2010).

<sup>4</sup> Expansion will be an effective strategy if it corresponds to a worthwhile investment opportunity, for instance, a strategic acquisition and a reinforcement of distribution channels as a reaction to declining sales (Kang and Shivdasani, 1997). Nevertheless, expansionary actions that represent diversification or that lead to loss of focus could be unfavorable to firm value (Jensen, 1986).

<sup>5</sup> See John et al. (1992), Ofek (1993), Kang and Shivdasani (1997), Lai and Sudarsanam (1997), Denis and Kruse (2000), Baek et al. (2002), and Kang et al. (2010).

independent directors to or from its board.<sup>6</sup> Fifth, firms conduct *external control activities*. These activities include takeovers, shareholder activism, and block purchases. Such activities are common among firms in the US where markets for corporate control are active, but are not common in countries that are not market-based economies (Kang and Shivdasani, 1997; Baek et al., 2002).<sup>7</sup> Finally, many firms undertake *financial restructuring actions*. Financial restructurings include a dividend reduction or omission, debt restructuring, and raising of capital.<sup>8</sup>

If restructuring actions are an efficient response to an economic crisis or a fall in earnings, performance improvements should be observed after restructuring activities are undertaken. Also, among poorly performing firms, firms that restructure should improve their performance in subsequent periods to a greater extent than those that do not restructure. Consistent with the view that restructuring actions are beneficial to performance, investors generally consider corporate restructuring as good news. For instance, studies have shown positive and significant abnormal returns after troubled firms announce the replacement of a top executive (Bonnier and Bruner, 1989), asset restructuring (Hite et al., 1987; Khanna and Poulsen, 1995; Lang et al., 1995; Denis and Kruse, 2000; Baek et al., 2002; Baek et al., 2004), and an internal reorganization (Berger and Ofek, 1999; Baek et al., 2002). The market also reacts favorably to announcements of corporate restructuring to reduce costs and increase efficiency (Brickley and Van Drunen, 1990), and of employee layoffs as part of an overall restructuring plan to improve company efficiency (Khanna and Poulsen, 1995; Palmon et al., 1997) or after suffering a decline in operating performance (Nohria and Love, 1996).

However, investors do not always welcome announcements of expansion, especially those relating to diversification in firms where insiders might pursue their private benefits rather than value maximization. Baek et al. (2002) find that during the Korean financial crisis, chaebol firms that announce expansionary plans have a negative but insignificant abnormal

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<sup>6</sup> See Gilson (1989, 1990), John et al. (1992), Ofek (1993), Kang and Shivdasani (1997), Lai and Sudarsanam (1997), Denis and Kruse (2000), Baek et al. (2002).

<sup>7</sup> See Mikkelsen and Partch (1989), Mitchell and Mulherin (1996), Denis and Kruse (2000).

<sup>8</sup> See Gilson et al. (1990), John et al. (1992), Brown et al. (1993), Ofek (1993), Asquith et al. (1994), Mitchell and Mulherin (1996), Lai and Sudarsanam (1997), Faccio and Sengupta (2006).



return around the announcement date.<sup>9</sup> The negative abnormal return becomes significant if the plans involve diversifying. In contrast, non-chaebol firms turn out to have a positive and significant return around the announcement date. But when the plans involve diversification, the market response is insignificant. This implies that diversification is not favorable for both types of firms.

The empirical findings discussed above indicate a favorable market reaction to the announcement of corporate restructuring, as long as the restructuring does not involve diversification. Hence, this evidence suggests that restructuring enhances firm value.

There is also evidence supporting the argument that firms restructure to improve stock price performance and accounting profitability. For example, John et al. (1992) find that changes in operations and levels of investments help companies to recover from negative earnings. Many studies find that firms engaging in asset sales have improved their operating performance in the periods that follow (John and Ofek, 1995; Kang and Shivdasani, 1997; Denis and Kruse, 2000; Baek et al., 2002; Kang et al., 2010). Firms also achieve improvements in their profitability following layoffs (Nohria and Love, 1996; Palmon et al., 1997; Kang and Shivdasani, 1997; Denis and Kruse, 2000; Baek et al., 2002; Kang et al., 2010). Likewise, internal control changes, in particular, the replacement of top management, play an important role in enhancing subsequent operating performance (Denis and Denis, 1995; Kang and Shivdasani, 1995). When financially distressed firms successfully restructure their debt out of court, their stock delivers significant positive abnormal returns (Gilson et al., 1990).

### **2.3 Bank connections and firm restructurings**

Diamond (1994) provides an additional aspect of bank monitoring benefits, explaining that firms may prefer bank loans to public debt because banks could exercise control of debt over firms and help firms to save the costs of reorganization. If firms go bankrupt, banks will allow them to continue operations and invest in productive projects, whereas public debt holders will force them to liquidate.

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<sup>9</sup> A chaebol is a group of Korean companies that have close ties with each other.

The roles and benefits of bank relationships in monitoring and rescuing firms are often highlighted in the Japanese main bank system, which as Corbett (1987) explains, involves bank monitoring through regular visits, exchanges of information and exchanges of personnel between firms and banks. A screening process is carefully conducted by banks at the beginning of such relationships, and in the subsequent stages of long-term relationships, recurring monitoring is carried out to allow banks and firms to renegotiate loan contracts and to limit agency problems. Sheard (1989) additionally notes that in Japan, main banks actively take control and intervene in firms' business during reorganization by replacing incompetent managers with bank executives. Kaplan and Minton (1994) find that the likelihood of bank director appointments is higher in firms with negative income and is positively associated with the strength of bank relationships, measured by the proportion of bank lending.

Bulow and Shoven (1978) argue that main creditors may act in the equity holders' interests because they grant firms large loans. The main creditors possibly provide extra funds to help the firms avoid bankruptcy during financial distress periods. The findings of Hoshi et al. (1990) also show that main banks in Japan play a key role in rescuing financially-distressed firms and report that, after the periods of financial distress, the investment rate and sales growth of bank-connected firms are better maintained compared to those of firms without bank relationships. Aoki et al. (1994) and Sheard (1994), agree that in the system of the Japanese main banks, firms seem to be bailed out by their main banks that, typically, are major creditors and hold an ownership shareholding in firms. Thus, the main banks may have incentives to rescue connected firms by extending loans during periods of financial distress. Additionally, main banks are a substitute for courts in the formal bankruptcy process because the reorganization of firms is done informally between them and the financially-distressed firms.

In addition, bank connections were seen to be beneficial in protecting firms against the possibility of filing for bankruptcy during the East Asian crisis. Claessens et al. (2003) find that firms, which are owned by banks, have a lower possibility of filing for bankruptcy. Bank connections contribute to advantages in terms of information and resource allocation in rescuing firms, and out-of-court renegotiations seem to take place informally to reduce the likelihood of bankruptcy. Furthermore, banks can often be a part of business groups and are known for giving group-affiliated firms preferential access to capital, particularly for the firms in distress. This group membership of banks also makes bank-led creditor workouts

easier for group-affiliated firms. Moreover, negotiations between a distressed firm and its creditors are an important consideration in the resolution of distress (Faccio and Sengupta, 2006).

As reviewed above, we hypothesize that bank connections increase the likelihood of firm restructuring. The connected banks appear to closely monitor firms and provide financial advices during a crisis, when a useful financial strategy, i.e. restructuring, is needed to turnaround the company. Moreover, we expect that if bank connections are valuable to firms, connected firms should have better performance changes than non-connected firms after restructurings.

## **2.4 Other significant factors and firm restructurings**

In addition to the major attributes of bank connections discussed in the last section, the literature points out that business group affiliation, size, leverage, firm and industry performances and liquidity are also significant factors that determine the likelihood of restructuring. To precisely investigate the effects of bank connections on firm restructuring, these factors are introduced as control variables in probit models to be discussed in the next chapter.

### *2.4.1 Business groups*

The results of existing studies on the costs and benefits associated with business group affiliation have been mixed. One of the advantages brought by group affiliation is that business groups provide internal markets among member firms. This advantage explains why business groups are more pronounced in emerging economies. Due to a high degree of information asymmetries, a lack of intermediary institutions, and imperfections in capital, product, as well as labor markets, firms in emerging economies find it costly to acquire essential resources and also to establish corporate reputation and credibility (Khanna and Palepu, 2000). Business groups can help mitigate these problems through their internal markets.

However, the complicated ownership and control structures of business groups may increase the severity of any agency problems (Lins and Servaes, 2002; Claesses et al., 2002). Since business groups typically consist of firms ultimately controlled by a family, linked together via pyramids or cross-shareholdings, the major conflicts arise between controlling families

and minority shareholders. Large scale and scope of business groups and high informational asymmetries facilitate the expropriation of outside minority shareholders by owner-managers. Inefficient transfers of resources across group members and unproductive investments in a business group are related to the agency issues described above (Scharfstein, 1998; Shin and Stulz, 1998; Rajan et al., 2000; Scharfstein and Stein, 2000).

The effects of group affiliation on firm restructurings in response to a crisis are unclear. On the one hand, business groups often provide sufficient cross-guarantees to bail out group-affiliated firms in distress. Group affiliation can also dilute the information available to an outside creditor. In crisis, this opacity may help group-affiliated firms as there is a greater likelihood of being bailed out by creditors (Morck et al., 2005). Hence, conglomeration can be designed as a mechanism to maximize the chance of bailout in the event of a default on bank loans (Kim, 2004). In addition, if controlling shareholders of business groups effectively and vigorously get involved in managerial decision-making on restructuring policies, group firms should be more likely to engage in restructuring actions, relative to non-group firms. On the other hand, if controlling shareholders focus on maximizing scale and scope of the group as opposed to the value of individual affiliated firms, even in a time of crisis, downsizing may occur less often or expansion may occur more often in group firms.

Empirical studies on the impact of group affiliation on restructuring are limited. Hoshi et al. (1990) show that Japanese firms affiliated with a keiretsu, invest more after financial distress, relative to non-affiliated firms. Kang and Shivdasani (1997) find that poorly performing firms belonging to a keiretsu are less likely to layoff staff or replace their previous top executives with outsiders. The lower likelihood of outside succession in keiretsu firms is also consistent with Kang and Shivdasani (1995). Unlike Hoshi et al. (1990), Kang and Shivdasani (1997) document no significant effect of keiretsu affiliation on the incidence of expansion in distressed firms. Considering an economic crisis, Baek et al. (2002) show that Korean group firms engage in downsizing actions (i.e., asset downsizing or employment layoff) and internal reorganization less frequently, while they implement expansionary actions (without downsizing) more frequently, than non-group firms. However, chaebol firms in which owner-managers hold high ownership stake are less likely to downsize but are more likely to expand during the Korean financial crisis. Based on the mixed results, the relationship between business group affiliation and firm restructuring remains an empirical issue.

#### *2.4.2 Size*

Although it is not clear how firm size affects restructuring activities, evidence from previous studies reveals a positive relationship between firm size and the incidence of restructuring. Kang and Shivdasani (1997) and Baek et al. (2002) contend that since large firms have more assets and a greater number of employees, they are more likely to undertake such actions as asset sales and staff layoffs, relative to small firms. On the other hand, because large firms are well established with large asset bases that can be used as collateral, they usually have a better access to external sources of funds. Hence, large firms could engage more in expansionary actions and capital raising. Faccio and Sengupta (2006) also argue that the choice for a workout is likely to depend on firm size and borrowing capability. Alternatively, Ofek (1993) argues that a positive relationship between firm size and the likelihood of operational restructuring may reflect the fact that large firms have a greater ability to restructure at the beginning of distress, relative to small firms.

#### *2.4.3 Leverage*

Jensen (1989) argues that debt can be used as an alternative governance mechanism, in particular when a board of directors fails to monitor management. For highly leveraged firms, a slight decrease in firm value may lead to default on debt obligation. Thus, firms with a high level of debt are likely to respond more rapidly to a crisis. In a similar vein, Wruck (1990) argues that with low leverage, managers of poorly performing firms may not realize a distress situation, and hence a need to restructure. Accordingly, no organizational changes are triggered. It is leverage, and in turn financial distress, that provide creditors with incentives to monitor and the right to demand a firm in difficulty to restructure quickly and efficiently.

Jensen (1986) and Stulz (1990) argue that debtholders prefer restructuring actions that generate cash flows to facilitate debt services, such as asset sales and operational divestments. In addition, debtholders tend to favor dividend reduction or omission to retain cash, and equity issuance to increase liquidity (Storey et al., 1987). Monitoring by debtholders is also likely to induce managers to undertake value-maximizing actions, implying a positive relationship between leverage and the probability of terminating unprofitable units, laying off staff, and replacing incompetent managers. Kang et al. (2010) document that the disciplinary role of debt becomes valuable when the agency problem of controlling shareholders is severe; i.e., when firms are in an economic crisis.

Findings from previous studies support these views. Lang et al. (1995) show that US firms engaging in asset sales are inclined to have high leverage. Ofek (1993) finds that US firms with a high level of debt respond to poor performance more quickly, relative to those with a low level of debt. Specifically, a greater use of debt increases the probability of all restructuring actions in his study, except for top executive turnover. Lai and Sudarsanam (1997) find a positive association between the level of debt and the probability of cash-generative actions and debt restructuring in UK firms. Kang and Shivdasani (1997) show that, among Japanese firms, leverage has a positive impact on acquisition but a negative impact on downsizing actions. Using Korean data during the East Asian financial crisis, Baek et al. (2002) document a positive relationship between leverage and the likelihood of changes in internal control, and a negative relationship between leverage and the likelihood of firms being taken over. Faccio and Sengupta (2006) find that East Asian firms with high leverage are more likely to restructure by asset sales and debt workouts in response to the economic crisis.

Negative or insignificant effects of leverage on the likelihood of restructuring cast doubt on corporate governance roles played by debtholders. A number of studies show that connected lending is common in emerging markets where arm-length contracting is not reliable due to the ineffectiveness of formal institutions in emerging market firms (for example, Laeven, 2001; La Porta et al., 2003; Charumilind et al., 2006). Firms could obtain credits, especially long-term borrowings, mainly because their managers or controlling shareholders have close relationships with creditors. Such strong connections between firms and debtholders could impair the importance of debt in corporate governance of emerging market firms.

Viewed collectively, a use of debt as a governance mechanism and connected lending often documented in emerging economies make the effects of leverage on the likelihood of restructuring actions unclear. Leverage is thus introduced as one of explanatory variables to investigate these issues.

#### *2.4.4 Firm and industry performances*

Firms that perform poorly are expected to be more likely to restructure. The empirical evidence shows that firm performance does have a significant effect on the probability of restructuring actions. However, this evidence is also mixed as to whether firm performance

impacts positively or negatively on the likelihood of the firm undertaking any restructuring actions.

Ofek (1993) documents a marginal positive relationship between annual stock returns and the likelihood that US poorly performing firms sell assets or make dividend cuts. In contrast, Kang and Shivdasani (1997) find that returns on assets are negatively associated with the likelihood of downsizing in both Japanese and US firms that suffer a substantial performance decline. In line with Kang and Shivdasani (1997), Morck et al. (1989) show that the likelihood of top executive turnover is lower in firms that outperform their industry standard. Denis and Kruse (2000), however, find no impact of a change in returns on assets on corporate restructuring. As for firms in an economic crisis, Baek et al. (2002) show that higher holding period returns decrease the probability of downsizing and internal reorganization taken by Korean firms.

Evidence on the importance of industry performance is also provided. Kang and Shivdasani (1997) document a positive relationship between industry performance and the probability of expansion in Japanese firms. They explain that firms tend to acquire more assets when their industry is performing well. They also report that for US firms, industry performance is positively associated with the likelihood of downsizing. This result is in line with Shleifer and Vishny (1992) who argue that firms are less inclined to sell assets if their industry condition is poor. In general, Mitchell and Mulherin (1996) find that the magnitude of takeover and restructuring activities is varied across industries, depending on the magnitude of an economic shock borne by industries. To control for significant factors that determine firm restructuring, the abovementioned variables are incorporated in multivariate probit models. However, past studies show that the relationships between these variables and the likelihood of restructuring actions are not conclusive. The effects of such variables are an empirical issue that this study investigates.

#### *2.4.5 Liquidity*

Firms with more liquid assets are generally less financially constrained. This suggests low demand for external sources of funds to finance losses in firms with high liquidity, at least in the short run. Accordingly, the probability that these firms will engage in restructuring actions such as asset sales, staff layoffs, debt restructuring, and new financial security issuance, might be smaller. Ofek (1993) and Baek et al. (2002) find that firm liquidity is

inversely related to the likelihood of downsizing. Baek et al. (2002) also show a negative relationship between liquidity and the likelihood of firms being taken over. In addition, DeAngelo et al. (2002) argue that in firms with highly liquid asset structures, the role of leverage as a governance mechanism could be reduced since “managers of troubled firms can utilize excess assets to fund losses and meet interest payments while experimenting with risky strategies that might (or might not) turn out to be profitable” (p. 21).





## Chapter 3

### Data and Methodology

This chapter begins with the discussion of our sample. Then, the variables, i.e., bank connections and control variables, and corporate restructuring variables, as well as the data sources are illustrated. Finally, the chapter reviews the approaches used in our study, namely univariate estimations and probit regression. These approaches are used to investigate the effect of bank connections on the likelihood that firms restructure in response to the East Asian crisis.

#### 3.1 The sample

Sample firms are non-financial firms listed on the Stock Exchange of Thailand (SET). The sample period covers a period of 1996 - 2000. This sample period will reflect restructuring activities in Thailand before, during and after the 1997 financial crisis. The sample period is divided into three sub-sample periods: the pre-crisis (1996), during-crisis (1997-1998), and post-crisis (1999-2000) periods.<sup>10</sup> We exclude firms in the banking and financial sector because of their non-traditional financial statements. We define 1997 as the base year since this is when firms experience the economic shock and might undertake various restructuring actions in response. As firms may not have responded to the shock immediately, we think that it is more appropriate to investigate restructuring actions over a longer period.

#### 3.2 Data

The data here are categorized to bank connections data, firm financial characteristics data, and restructurings data.

##### 3.2.1 Data on bank connections

We classify firms into two groups: bank-connected and non-connected firms. For connected firms, we also classify the firms into two types: ownership connected firms and director-

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<sup>10</sup> The 1995 data are not included in the pre-crisis period because there were only a small number of restructuring actions taken in that year. In addition, some of the independent variables that are measured as of one year prior to the restructuring year are not available for 1995.

connected firms. The information used to define bank connections is only publicly available information from the SET. For each sample year, we have cross-section data. For each cross-section data, we classify firms into “bank-connected” and “non-connected” firms according to the data on ownership and boards of directors in that year.<sup>11</sup> A firm is a bank-connected firm if 1) a major shareholder of a bank or a member of his related families holds at least 10% shareholding of the firm (CONN1)<sup>12</sup>, 2) if a major shareholder of the firm or a member of his related families is a director of a bank (CONN2), 3) a major shareholder of a bank or a member of his related families is a director of a firm (CONN3), or 4) a bank director is a director of a firm (CONN4).

In order to analyze the effect of the strength of connections, we define ownership connections as the strong connections and director connections as weaker connections. The dummy of ownership connections equals to 1 if CONN1=1 only. The dummy of director connections equals to 1 if CONN2, CONN3 or CONN 4 = 1 and CONN1 unequal to 1.

In order to define connection variables, we obtain lists of family business groups and lists of ownership structure of Thai firms, commercial banks and finance companies. In addition, lists of board of directors of Thai firms, commercial banks and finance companies are collected from the SETSMART database of the Stock Exchange of Thailand and the annual company reports.

### *3.2.3 Data on firm characteristics*

Firm characteristics in our study include the affiliation with large Thai business groups and financial characteristics. Data on business group membership are collected from “Thai Business Groups 1996/1997: A Unique Guide to Who Owns What”, published by Tara Siam Ltd. in 1997. This book reports the list of the top 150 business groups in Thailand. Data on financial characteristics include industrial classification, book value of total assets, debt and equity, sales, and market capitalization. Key financial ratios are also calculated. These ratios

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<sup>11</sup> We exclude the crisis period (1997 and 1998) because, during this time interval, various government actions and the ongoing process of bank closures and capital injections in Thai financial institutions, make it difficult to define the existence of bank connections. Therefore, we assume that the existence of bank connections in 1997 and 1998 remains the same as in 1996.

<sup>12</sup> We use a cut-off point of ownership shareholding at 10% to define a major shareholder as prior literature (La Porta et al., 1999; Claessens et al., 2000) suggests that such a stake lends sufficient power.

represent operating performance, capital structure, and liquidity of the sample firms. The data are obtained mainly from the SETSMART database. This database contains financial information on Thai listed companies, including financial statements, notes to financial statements, auditors' reports, released on a quarterly basis, and stock prices. For companies where such data are not available from the SETSMART database, annual disclosure forms (FM 56-1) submitted to the SET are used.

### *3.2.4 Data on corporate restructuring actions*

The announcements of restructuring actions are posted on the SET website for six months and are updated daily. It is then kept in the company daily news database. Data collection for this section requires one to go through all companies' daily news databases and extract relevant information relating to restructuring activities. Data on some restructuring actions are also gathered from additional sources including press reports in the Bangkok Post and company annual reports and financial statements.

#### *Types of corporate restructuring actions*

Following the literature (for example, John et al. 1992; Ofek, 1993; Kang and Shivdasani, 1997; Lai and Sudarsanam, 1997; Denis and Kruse, 2000; Kang et al. 2001; Baek et al. 2002), restructuring actions can be categorized into the five broad types shown below.

1. *Asset downsizing* occurs when a firm undertakes any of the following activities: selling assets (e.g., financial securities, land, properties, and stakes in other businesses or joint ventures), closing down a plant, reducing production capacities, discontinuing or suspending production operations or shutting down a division/office/branch/subsidiary.
2. *Management turnover* occurs when a firm replaces at least one of its top management positions, including Chairman of the board, President, Vice President, Chief Executive Officer, Managing Director, General Manager, Deputy Managing Director, and Deputy General Manager.
3. *Dividend cut* occurs when a firm reduces its dividend payout from the previous year or omits its dividend payout after paying a dividend in the previous year.
4. *Debt restructuring* occurs when a firm undertakes any of the following activities: a negotiation with creditors that leads to lower interest and principal payments or an increase in the maturity of the firm's debt, exchanging equity securities (common

stocks or securities convertible to common stocks) for debt or offering creditors the firm's equity securities, or appointing a financial advisor to assist in the debt restructuring process.

5. *Capital raising* occurs when a firm issues new loans, debentures, common stock or hybrid securities including preferred stock, warrants, and convertible debentures.

Although *employee layoffs* are a common way to restructure, this action is not included in the present study because such data are not available for Thai firms.

### **3.3 Methodology**

#### *3.3.1 Univariate analyses*

To examine the relation between bank connections and the likelihood of firm restructurings, one way is to conduct a univariate analysis. This approach involves a comparison of the restructuring incidence between two subsamples. One subsample contains firms with bank connections while the other includes firms without that characteristic. According to the hypothesis we develop in Chapter 2, firms that possess bank connection characteristics are expected to show a higher restructuring frequency. We also further investigate the impact of the connection strength on the restructuring likelihood. Using univariate estimations, sample firms are divided in two different ways to investigate the following specifications.

- (i) Whether firms with bank connections are more or less likely to restructure, relative to firms without bank connections.
- (ii) Whether firms with director connections are more or less likely to restructure, relative to firms with ownership connections.

The univariate analysis is done by first calculating the means of the restructuring frequencies in the two subsamples of firms within the same specification. *T*-tests are then conducted to determine whether the means are significantly different from each other. If the means are significantly different from each other, then it can be inferred that the bank connections/the strength of connections are associated with restructuring incidences. The statistical inference of each specification is drawn from *p*-values of these *t*-tests.

An alternative approach not only investigates the effect of bank connections and the connection strength on the likelihood of corporate restructuring but also incorporates other

significant determinants of the restructuring likelihood. This approach is a probit regression described in the following section.

### 3.3.2 Probit analyses

The univariate specifications above have a main limitation. That is, the univariate analysis fails to control for other variables that also have a significant impact on the likelihood of restructuring actions. To control for the impacts of other significant variables, we will conduct probit estimations. Probit estimations are one of the conventional methodologies used in the literature. In our probit models, dependent variables in the probit models are binary variables taking a value of one if a particular restructuring action occurs and zero otherwise, while explanatory variables are a set of variables regarding business groups and other control variables. This model, as shown in specification (1), is used to study the impact of determinants on the probability of restructuring.

$$\text{Probability (Restructuring)} = \Phi(\beta x) \quad (1)$$

where  $x$  is a vector of independent variables and  $\Phi$  is the standard normal cumulative distribution function. The dependent variable (restructuring) is one if a firm engages into one of five restructuring activities, and zero if it is not. Independent variables are institutional and financial characteristics of firms in Thailand, including variables of the presence of bank connections, business group structure, leverage (proxied by the ratio of total debt to total assets), size (proxied by the log of total assets), performance (proxied by the ratio of EBIT to total assets), industry-based performance (proxied by the median ratio of EBIT to total assets of the industry in which a firm is classified), and liquidity (proxied by the ratio of current assets to current liabilities). The presence of bank connections and the affiliation to a large business group are measured as of in which restructuring is taken (Year 0), while financial explanatory variables are measured as of the year prior to the restructuring year (Year -1).

## Chapter 4

### Empirical Analyses

Corporate restructuring is generally perceived as an appropriate response for a firm to take in a crisis. Hence, if bank connections have a positive effect on the incidence of corporate restructuring actions, it suggests that connected banks play an important role on the firm's financial strategy to turnaround. In this chapter, we discuss the results of our empirical investigation. We first present the characteristics of firms undertaking restructuring actions during the period 1996-2000. Then we describe attributes of bank-connected firms. We also make a comparison between connected firms and non-connected firms. Next, using univariate analyses, we show how firms associated with bank connections restructure in response to the crisis. We also examine how firms with the different connection strength engage in restructuring activities. Finally, we test whether bank connections are related to the more likelihood of restructuring activities.

#### **4.1 Characteristics of firms undertaking restructuring actions**

Table 1 exhibits the summary statistics of a number of characteristics of firms that undertake restructuring actions in our sample periods 1996-2000, compared with firms that do not.<sup>13</sup> Such characteristics include business group affiliation, leverage, size, firm and industry performances, and liquidity. In the pre- and post-crisis periods, restructuring and non-restructuring firms are as likely to be affiliated with a large business group. However, during the crisis, firms that belong to a big business group engage in restructuring activities more often at the significance level of 1%. This result is also documented in Polsiri and Wiwattanakit (2006). As expected, restructuring firms have a higher level of leverage and poorer firm performance than non-restructuring counterparts. These findings hold in all periods and have the significance level of 1%. Similarly, the findings of industry performance suggest that restructuring firms have lower industry performance during the crisis and in the post-crisis period, at the 1% and 10% significance level, respectively.

In addition, consistent with the literature, we find that larger firms are more likely to restructure at the 1% level of significance. Nonetheless, during the crisis, both large and small firms are as likely to restructure. This result may reflect the severity of the economic

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<sup>13</sup> The distribution of firms undertaking restructuring activities by years is shown in Appendix 1.

**Table 1:** Firm characteristics and test of differences between firms undertaking and not undertaking restructuring actions

This table reports the mean values of firm characteristics of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. The pre-crisis period covers 1996. The during-crisis period covers 1997-1998. The post-crisis period covers 1999-2000. A firm *undertaking restructuring* is a firm that undertakes at least one of the following restructuring actions: asset downsizing, management turnover, dividend cut, debt restructuring, and capital raising. A firm is in a *business group* if a firm's largest shareholder is among families who own one of the 150 largest business groups. The "*p-value*" columns report *p-values* of the two-tailed t-tests of equal means for each characteristic between two subsamples.

Firm characteristics	Pre-crisis period			During-crisis period			Post-crisis period		
	Undertaking restructuring	Not undertaking restructuring	<i>p</i> -value	Undertaking restructuring	Not undertaking restructuring	<i>p</i> -value	Undertaking restructuring	Not undertaking restructuring	<i>p</i> -value
Number of observations	234	65		607	63		560	78	
Percentage of firms in business groups (%)	52.14	47.69	0.53	51.07	31.75	<b>0.00</b>	46.79	39.74	0.24
Total debt/Total assets (%)	41.25	29.87	<b>0.00</b>	48.90	36.18	<b>0.01</b>	53.58	20.85	<b>0.00</b>
Book value of total assets (million baht)	7,787.34	1,795.82	<b>0.00</b>	8,578.66	4,703.42	0.17	9,671.81	2,591.77	<b>0.01</b>
EBIT/Total assets (%)	7.91	11.79	<b>0.00</b>	4.58	9.81	<b>0.00</b>	0.20	11.45	<b>0.00</b>
Industry EBIT/Total assets (%)	8.52	8.87	0.26	6.33	7.74	<b>0.00</b>	4.79	6.16	<b>0.07</b>
Current assets/Current liabilities	2.03	1.53	0.53	1.35	1.76	<b>0.06</b>	4.01	4.22	0.97

crisis. Liquidity appears not significantly different between two subsamples although restructuring firms show marginally lower liquidity than non-restructuring firms during the crisis.

#### **4.2 Characteristics of bank-connected firms**

In Table 2, we present the characteristics of bank-connected and non-connected firms.<sup>14</sup> Consistent with Polsiri and Wiwattanakantang (2006) who show that banks are commonly a part of big business groups in Thailand, bank-connected firms are more likely to be affiliated with a business group than non-connected firms. The result holds in all periods and is highly significant. Considering the use of debt, we find that there is no difference in financing structure between the two groups in the pre-crisis and during crisis periods. Nevertheless, in the post-crisis period, firms with bank connections use less debt at the 1% significance level. It should be noted here that after the crisis hit followed by the depreciation of the Baht in July 1997, the debt ratio goes up for both connected and non-connected firms. Regarding firm size, bank-connected firms are significantly larger than non-connected firms in terms of total assets in all periods.

As for performance of the firm and performance of the industry in which the firm is classified, connected and non-connected firms show no significant differences in the pre-crisis period. During the crisis, however, bank-connected firms have lower firm and industry performances with the significance level of 1%. In the post-crisis period, although industry performances are not different between both subsamples, connected firms show marginally better firm performance. These finding may be inferred that connected firms are hit harder by the economic crisis but seem to recover better, relative to non-connected firms. Concerning liquidity, only in the post-crisis period, connected firms have higher liquidity at the 10% significance level.

#### **4.3 Univariate analyses of the impact of bank connections on restructuring actions**

To examine the impact of bank connections on the incidence of corporate restructurings, sample firms are divided into two subsamples, depending on whether a firm has relationships with a bank. Furthermore, we investigate the impact of the connection strength. To do so, we classify connected firms into two categories: firms with director connections and firms with

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<sup>14</sup> The distribution of bank-connected firms by years is shown in Appendix 2.



**Table 2:** Firm characteristics and test of differences between bank-connected and non-connected firms

This table reports the mean values of firm characteristics of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. The pre-crisis period covers 1996. The during-crisis period covers 1997-1998. The post-crisis period covers 1999-2000. A firm is a bank-connected firm if 1) a major shareholder of a bank or a member of his related families holds 10% shareholding or more of the firm (CONN1), 2) if a major shareholder of the firm or a member of his related families is a director of a bank (CONN2), 3) a major shareholder of a bank or a member of his related families is a director of a firm (CONN3), or 4) a bank director is a director of a firm (CONN4). A firm is in a *business group* if a firm's largest shareholder is among families who own one of the 150 largest business groups. The "*p*-value" columns report *p*-values of the two-tailed t-tests of equal means for each characteristic between two subsamples.

Firm characteristics	Pre-crisis period			During crisis period			Post-crisis period		
	Bank-connected firms	Non-connected firms	<i>p</i> -value	Bank-connected firms	Non-connected firms	<i>p</i> -value	Bank-connected firms	Non-connected firms	<i>p</i> -value
Number of observations	239	60		525	145		301	337	
Percentage of firms in business groups (%)	58.16	23.33	<b>0.00</b>	55.81	25.52	<b>0.00</b>	54.49	38.28	<b>0.00</b>
Total debt/Total assets (%)	38.60	39.45	0.77	47.67	47.82	0.96	43.52	54.99	<b>0.00</b>
Book value of total assets (million baht)	7,425.43	2,738.12	<b>0.02</b>	9,514.93	3,505.02	<b>0.00</b>	11,923.50	6,021.94	<b>0.00</b>
EBIT/Total assets (%)	8.63	9.27	0.54	4.22	8.17	<b>0.00</b>	3.36	-0.01	<b>0.10</b>
Industry EBIT/Total assets (%)	8.52	8.91	0.23	6.19	7.46	<b>0.00</b>	4.91	4.99	0.87
Current assets/Current liabilities	1.99	1.66	0.69	1.39	1.37	0.88	7.20	1.22	<b>0.09</b>

ownership connection.<sup>15</sup> For each specification, differences in the percentage of firms undertaking restructuring actions between two categories are analyzed. Again, we divide the sample period into the pre-crisis (1996), during-crisis (1997-1998), and post-crisis (1999-2000) periods. The results are presented in Table 3 and Table 4.

#### *The presence of bank connections*

The first classification tests whether the presence of bank connections increases the likelihood of corporate restructurings. Table 3 shows that in the pre-crisis period, firms with bank connections are more likely to undertake restructuring actions. This difference is driven by a higher frequency of dividend cut (at the 1% significance level) and capital raising (at the 5% significance level) in connected firms. According to our hypothesis, the result suggests that connected banks provide the firms with financial advices and thus increase the likelihood of restructurings.

During the crisis, although overall connected and non-connected firms are as likely to restructure in response to the crisis, top management turnover and capital raising occur among connected firms more often, with the significance levels of 5%. Connected firms also have a marginally higher probability of debt restructuring. Consistent with our hypothesis, the higher probability of top management turnover in firms with bank connections may imply that connected banks closely monitor managers of the firms and advise them to change executives who might not be able to deliver their best services during difficult time. The likelihood of debt restructuring is also marginally greater in connected firms. The finding may suggest that firms with bank connections can negotiate with the banks and more likely to engage in this activity.

The results of the post-crisis period are similar to those of the during-crisis period. The higher frequency of overall restructuring actions in connected firms is significant only at the 10% level. However, when considering individual actions, we find that connected firms are more likely to change their top executives and raise more capital. These results support our hypothesis and are significant at the 5% level. Nevertheless, unlike in the during crisis period, firms with bank connections are less likely to engage in debt restructuring. This result is rather surprising since we expect that connected firms should be able to better negotiate with

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<sup>15</sup> The distribution of director-connected and ownership-connected firms by years is shown in Appendix 3.

**Table 3:** Univariate tests of the impact of bank connections on restructuring actions

The sample consists of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. The restructuring frequency is the percentage of firms in that category that undertake a certain restructuring action. The pre-crisis period covers 1996. The during-crisis period covers 1997-1998. The post-crisis period covers 1999-2000. A firm is a bank-connected firm if 1) a major shareholder of a bank or a member of his related families holds 10% shareholding or more of the firm (CONN1), 2) if a major shareholder of the firm or a member of his related families is a director of a bank (CONN2), 3) a major shareholder of a bank or a member of his related families is a director of a firm (CONN3), or 4) a bank director is a director of a firm (CONN4). The “*p*-value” columns report *p*-values of the test for equal restructuring frequencies between two subsamples.

Type of restructuring actions	Pre-crisis period			During-crisis period			Post-crisis period		
	Bank-connected firms	Non-connected firms	<i>p</i> -value	Bank-connected firms	Non-connected firms	<i>p</i> -value	Bank-connected firms	Non-connected firms	<i>p</i> -value
Number of observations	239	60		525	145		301	337	
<b>Percentage of firms undertaking</b>									
Any restructuring actions	81.17	66.67	<b>0.01</b>	91.43	87.59	0.16	90.37	85.46	<b>0.06</b>
Asset downsizing	23.85	21.67	0.72	20.95	17.24	0.32	21.59	24.93	0.32
Management turnover	10.46	6.67	0.38	35.81	25.52	<b>0.02</b>	47.18	38.58	<b>0.03</b>
Dividend cut	65.69	43.33	<b>0.00</b>	83.62	77.93	0.11	68.11	70.92	0.44
Debt restructuring	1.67	1.67	1.00	6.48	2.76	<b>0.09</b>	10.30	17.51	<b>0.01</b>
Capital raising	41.84	25.00	<b>0.02</b>	32.00	22.76	<b>0.03</b>	35.88	27.60	<b>0.02</b>

the banks than their non-connected counterparts. We will further examine this result when we conduct probit models.

#### *The strength of bank connections*

Considering the strength of the connections, Table 4 shows that although the director connections are considered weaker than the ownership connections, their impact on firm restructurings is not significantly different. The only exceptions are the lower likelihood of dividend cut and higher likelihood of capital raising in firms with director connections in the post-crisis period, which are significant at the 5% level. The higher probability of dividend cut in firms with ownership connections may imply that when a major shareholder of a bank or a member of his related families holds 10% shareholding or more of the firm, he or she prefers undertaking dividend cut. This restructuring action involves all shareholders, not only the major shareholder, sharing the dividend cut. Regarding the higher probability of capital raising in firms with director shareholders, it can be interpreted that bank directors give good financial recommendation to the firms in order to make use of the capital market.

#### **4.4 Probit analyses of the impact of bank connections on restructuring actions**

The univariate specifications discussed previously have two main limitations. First, the univariate analysis fails to control for other variables that also have a significant impact on the likelihood of restructuring actions. Second, the univariate analysis is not able to capture the effects of connection magnitude which may also affect the incidence of restructuring. To control for the impacts of other significant variables, and to incorporate the effects of connections, this section performs probit estimations, and discusses and interprets their results.

This probit analysis is used to examine the sample firms experiencing restructuring activities in different periods of time (i.e. pre-crisis, during crisis and post-crisis). In these probit models, dependent variables are dummies indicating if a particular restructuring action occurs, while explanatory variables include variables representing the impact of connections and other control variables for which significance is documented in existing literature. We further classify the connected firms into two types, including ownership connected firms and director connected firms, to spell out the degree of connections and the effect of such difference in connections.

**Table 4:** Univariate tests of the impact of the strength of bank connections on restructuring actions

The sample consists of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. The restructuring frequency is the percentage of firms in that category that undertake a certain restructuring action. The pre-crisis period covers 1996. The during-crisis period covers 1997-1998. The post-crisis period covers 1999-2000. A firm *with bank connections* is defined as if 1) a major shareholder of a bank or a member of his related families holds 10% shareholding or more of the firm, 2) a major shareholder of the firm or a member of his related families is a director of a bank, 3) a major shareholder of a bank or a member of his related families is a director of a firm, or 4) a bank director is a director of a firm. A firm is a director-connected firm if CONN2, CONN3 or CONN4 equals to one and CONN1 equals to zero. A firm is an ownership-connected firm if CONN1 equals to one. The “*p*-value” columns report *p*-values of the test for equal restructuring frequencies between two subsamples.

Type of restructuring actions	Pre-crisis period			During-crisis period			Post-crisis period		
	Director-connected firms	Ownership-connected firms	<i>p</i> -value	Director-connected firms	Ownership-connected firms	<i>p</i> -value	Director-connected firms	Ownership-connected firms	<i>p</i> -value
Number of observations	175	64		388	137		213	88	
<b>Percentage of firms undertaking</b>									
Any restructuring actions	80.00	84.38	0.45	91.49	91.24	0.93	89.67	92.05	0.53
Asset downsizing	25.71	18.75	0.27	20.36	22.63	0.58	22.07	20.45	0.76
Management turnover	10.86	9.38	0.74	37.11	32.12	0.30	47.89	45.45	0.70
Dividend cut	65.71	65.63	0.99	82.22	87.59	0.14	64.32	77.27	<b>0.03</b>
Debt restructuring	2.29	0.00	0.22	7.22	4.38	0.25	9.86	11.36	0.70
Capital raising	40.57	45.31	0.51	30.41	36.50	0.19	39.44	27.27	<b>0.05</b>

In Table 5, there are 299, 670 and 638 observations in the pre-crisis (1996), during crisis (1997-1998) and post-crisis (1999-2000) period, respectively. We report the results of the effect of bank connection on restructuring activities in Panel 1-6. In Panel 1, the results support our hypothesis and show that connections between firms and banks increase the likelihood of restructuring in the pre-crisis and post-crisis periods at the significance level of 10% and 5% respectively. The firm performance, measured by the ratio of EBIT to total assets, is negatively related to the possibility of restructuring activities in all sample periods. The significance level is at 1% for the pre-crisis and post-crisis period and at 5% during the crisis. It confirms that the restructuring activities occur to help deteriorated firms. In contrast, the leverage ratio is positively associated with the likelihood of restructuring in the pre-crisis and post-crisis period, showing that firms with higher leverage ratio are more likely to restructure in the pre-crisis and post-crisis periods. We find that the size of firms is positively related to the possibility of restructuring in pre- and post-crisis at the significance level of 1%. Interestingly, firms in a business group are more likely to restructure only during the crisis at the significance of 10%. Furthermore, the results surprisingly show that, in the pre-crisis period, the possibility of firm restructuring increases if the liquidity of firms is higher.

Panel 2 to 6 of Table 5 show the results of the impact of bank connections on each type of restructuring activities, including asset downsizing, management turnover, dividend cut, debt restructuring and capital raising, in three different sample periods (i.e. pre-crisis, during and post-crisis). In Panel 2 of Table 5, the presence of bank connections does not affect the possibility of asset downsizing activities; however the size factor is the only impact on the likelihood of asset downsizing of the company in all sample periods. This relationship is significantly positive at the significance of 5% in the pre-crisis and during crisis and of 1% in the post-crisis. Moreover, we find that, before and during the crisis, firms will engage in asset downsizing if their performance becomes poorer at the significance level of 1%. The results also show that being a firm in a business group will increase the likelihood to downsize the company's assets during the crisis; although the relationship is significantly marginal at 10%. After crisis, we find that firms with lower liquidity are more likely to restructure; however the relationship between liquidity status and the likelihood of restructuring is marginally significant at the 10% level.

**Table 5:** Probit regressions of the impact of bank connections on restructuring actions

This table reports the results of a probit model of the impact of bank connections on the likelihood of restructuring actions in the pre-crisis (1996), during-crisis (1997-1998), and post-crisis (1999-2000) periods. The sample consists of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. The dependent variable is a dummy equal to 1 if a particular restructuring action is taken in Year  $t$ , and zero otherwise. The restructuring actions can be categorized into the five broad types, including asset downsizing, management turnover, dividend cut, debt restructuring and capital raising. A firm is a bank-connected firm if 1) a major shareholder of a bank or a member of his related families holds 10% shareholding or more of the firm (CONN1), 2) if a major shareholder of the firm or a member of his related families is a director of a bank (CONN2), 3) a major shareholder of a bank or a member of his related families is a director of a firm (CONN3), or 4) a bank director is a director of a firm (CONN4). Business group dummy is a dummy indicating if a firm's largest shareholder is among families who own one of the 150 largest business groups. Other independent variables are Debt to total assets ratio, Log (total assets), total current assets to total current liabilities ratio, EBIT/total assets and Industry EBIT/total assets, which are measured of as of Year  $t-1$ . The probit regression controls for year effect. The statistical significance at levels of 1% (\*\*\*), 5% (\*\*), and 10% (\*) is reported. The figures in parentheses report p-value for two-tailed tests. Robust standard errors control for correlation and clustering at firm level.

**Panel 1:** The impact of connections on restructuring activities

	Pre-crisis	During-crisis	Post-crisis
Connection dummy	0.397 * (0.072)	-0.020 (0.905)	0.313 ** (0.039)
Business group dummy	-0.209 (0.292)	0.276 * (0.069)	-0.063 (0.674)
Debt/total assets	0.947 * (0.093)	0.527 (0.151)	1.651 *** (0.000)
Log (Total assets)	0.392 *** (0.000)	0.108 (0.149)	0.148 *** (0.013)
EBIT/total assets	-3.309 *** (0.008)	-1.585 ** (0.021)	-2.459 *** (0.000)
Industry EBIT/total assets	1.507 (0.707)	-6.685 *** (0.006)	-0.719 (0.602)
Current assets/current liabilities	0.117 * (0.097)	-0.022 (0.578)	0.001 (0.472)
Number of observations	299	670	638
Prob. > $\chi^2$	0.00	0.00	0.00
Pseudo $R^2$	0.1704	0.1307	0.2134

**Panel 2: The impact of connections on asset downsizing actions**

	<b>Pre-crisis</b>	<b>During-crisis</b>	<b>Post-crisis</b>
Connection dummy	-0.098 (0.672)	-0.049 (0.737)	-0.179 (0.128)
Business group dummy	-0.011 (0.952)	0.209 * (0.078)	-0.031 (0.790)
Debt/total assets	0.281 (0.576)	0.144 (0.448)	0.077 (0.562)
Log (Total assets)	0.193 ** (0.012)	0.112 ** (0.018)	0.154 *** (0.001)
EBIT/total assets	-4.667 *** (0.000)	-1.481 *** (0.002)	0.053 (0.834)
Industry EBIT/total assets	5.816 (0.143)	0.172 (0.930)	-2.050 * (0.051)
Current assets/current liabilities	-0.029 (0.472)	0.007 (0.863)	-0.076 * (0.056)
Number of observations	299	670	638
Prob. > $X^2$	0.00	0.00	0.00
Pseudo $R^2$	0.0831	0.0423	0.0471

**Panel 3: The impact of connections on management turnover actions**

	<b>Pre-crisis</b>	<b>During-crisis</b>	<b>Post-crisis</b>
Connection dummy	-0.071 (0.823)	0.286 ** (0.032)	0.167 (0.111)
Business group dummy	-0.080 (0.735)	-0.142 (0.188)	-0.031 (0.769)
Debt/total assets	-2.332 *** (0.000)	-0.070 (0.692)	-0.221 (0.239)
Log (Total assets)	0.374 *** (0.000)	0.073 * (0.099)	0.056 (0.178)
EBIT/total assets	-5.852 *** (0.000)	-0.182 (0.682)	-0.211 (0.468)
Industry EBIT/total assets	-2.030 (0.635)	-0.420 (0.807)	1.284 (0.178)
Current assets/current liabilities	-0.025 (0.731)	-0.030 (0.313)	0.001 (0.614)
Number of observations	299	670	638
Prob > $X^2$	0.00	0.00	0.00
Pseudo $R^2$	0.1556	0.014	0.0172



**Panel 4:** The impact of connections on dividend cut actions

	<b>Pre-crisis</b>	<b>During-crisis</b>	<b>Post-crisis</b>	
Connection dummy	0.603 *** (0.003)	0.028 (0.843)	-0.023 (0.854)	
Business group dummy	-0.079 (0.629)	0.131 (0.312)	-0.110 (0.390)	
Debt/total assets	1.243 *** (0.008)	0.542 (0.250)	2.616 *** (0.000)	
Log (Total assets)	0.016 (0.829)	0.092 (0.139)	-0.009 (0.862)	
EBIT/total assets	-3.313 *** (0.004)	-2.129 *** (0.002)	-2.999 *** (0.000)	
Industry EBIT/total assets	-2.632 (0.447)	-5.818 *** (0.005)	-4.614 *** (0.000)	
Current assets/current liabilities	0.027 (0.192)	-0.043 (0.202)	0.003 * (0.068)	
Number of observations	299	670	638	
Prob. > X <sup>2</sup>	0.00	0.00	0.00	
Pseudo R <sup>2</sup>	0.096	0.1268	0.3146	

**Panel 5:** The impact of connections on debt restructuring actions

	<b>Pre-crisis</b>	<b>During-crisis</b>	<b>Post-crisis</b>	
Connection dummy	0.183 (0.662)	0.230 (0.377)	-0.322 ** (0.035)	
Business group dummy	-0.704 (0.130)	-0.397 ** (0.040)	-0.067 (0.625)	
Debt/total assets	2.533 ** (0.042)	0.312 * (0.077)	0.284 (0.181)	
Log (Total assets)	-0.073 (0.636)	0.192 ** (0.013)	0.156 *** (0.006)	
EBIT/total assets	-0.087 (0.967)	-2.711 *** (0.000)	0.219 (0.512)	
Industry EBIT/total assets	-17.780 * (0.075)	0.893 (0.747)	-3.956 *** (0.003)	
Current assets/current liabilities	0.011 (0.482)	0.001 (0.987)	-0.698 *** (0.007)	
Number of observations	299	670	638	
Prob. > X <sup>2</sup>	0.00	0.00	0.00	
Pseudo R <sup>2</sup>	0.197	0.1882	0.2084	

**Panel 6:** The impact of connections on capital raising actions

	<b>Pre-crisis</b>	<b>During-crisis</b>	<b>Post-crisis</b>
Connection dummy	0.171 (0.441)	-0.017 (0.904)	0.034 (0.775)
Business group dummy	0.059 (0.730)	0.077 (0.517)	-0.006 (0.960)
Debt/total assets	1.069 ** (0.027)	0.190 (0.326)	-0.066 (0.704)
Log (Total assets)	0.539 *** (0.000)	0.507 *** (0.000)	0.459 *** (0.000)
EBIT/total assets	-0.241 (0.851)	-0.351 (0.537)	-0.125 (0.660)
Industry EBIT/total assets	2.584 (0.494)	1.743 (0.370)	-0.495 (0.639)
Current assets/current liabilities	0.008 (0.405)	-0.039 (0.259)	-0.118 *** (0.007)
Number of observations	299	670	638
Prob. > $\chi^2$	0.00	0.00	0.00
Pseudo $R^2$	0.215	0.1929	0.1816

The results in Panel 3 of Table 5 show that the likelihood of management turnovers increases in connected firms during the crisis, thus our hypothesis is accepted. This positive relationship is significant at 5%. Furthermore, as shown in Panel 4 of Table 5, connected firms are more likely to restructure by cutting their dividend payment before the crisis. The effect of connections on the dividend cut activities is significant at 1%. We also find that the possibility of dividend cut is driven by firm performance. The relationship between the dividend cut activities and performance is significantly negative at 1% in all sample periods.

Interestingly, the findings in Panel 5 of Table 5 show that connected firms are less likely to engage in debt restructuring activities in the post-crisis period, which is different from our hypothesis. Firms that belong to a business group are also less likely to restructure their debt financing during the crisis. These negative effects are significant at 5%. We further investigate into the debt restructuring activities after the crisis and find the reason to explain why the relationship between connections and the possibility of debt restructuring is negative. In unreported tests, we find that the appointment of financial advisers is significantly lesser in connected firms in the post-crisis period at the 5% level. It is possible that those firms receive financial advices from their connected banks; hence it is not necessary for them to appoint more financial advisers during the debt restructuring process.

Panel 6 of Table 5 reports the results of the effect of connections on capital raising activities. We find that the presence of connections does not affect the likelihood of capital raising activities; however firm size is the key determinant of firms to restructure by raising more funds. The relationship between firm size and the possibility of capital raising is positively significant at 1% in all sample periods.

In this research, we investigate whether the strength of bank connections have an impact on the likelihood of restructuring activities. We classify the strength of connections by separating connected firms into ownership-connected firms (as the strong type of connections) and director-connected firms (as the weaker type of connections). In the probit regressions not presented here, we find that the strength of connections is not related to the likelihood of restructuring activities, except for the capital raising activity. More precisely, the results in Table 6 show that director-connected firms are more likely to restructure by raising capital in the post-crisis; however the relationship between the possibility of capital raising and director connection dummy is only marginal at 10%. We further examine the financing method connected firms use to raise their capital after crisis. In the unreported regressions, we find that their capital raising activity is driven by new debt financing.

In conclusion, our results show that bank connections significantly affect the likelihood of restructuring activities. The possibility of restructuring activities increases if firms are connected to banks in the pre-crisis and post-crisis periods. The restructuring activities of connected firms differ in each economic situation. Connections between firms and banks support firms to engage in the dividend cut activity in the pre-crisis period and management turnover activity during the crisis. Thus, the findings are consistent with our hypothesis and support that connected firms obtain useful advices from close banks to engage in restructuring activities. Interestingly, we also find that, after the financial crisis, connected firms are less likely to restructure their debt, in particular appointing fewer financial advisers as part of debt restructuring process.

#### **4.5 Performance of bank-connected firms following restructuring actions**

As previously discussed, corporate restructurings appear to be appropriate actions in response to a crisis. If connected banks play an important role, e.g. advisory role and monitoring role, firms with bank connections should be more likely to restructure. The above results support

**Table 6:** Probit regressions of the impact of the strength of bank connections on capital raising actions

This table reports the results of a probit model of the impact of the strength of bank connections on the likelihood of capital raising actions in the pre-crisis (1966), during crisis (1997-1998) and post-crisis period (1999-2000). The sample consists of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. The dependent variable is a dummy equal to 1 if a capital raising is taken in Year  $t$ , and zero otherwise. A firm is a bank-connected firm if 1) a major shareholder of a bank or a member of his related families holds 10% shareholding or more of the firm (CONN1), 2) if a major shareholder of the firm or a member of his related families is a director of a bank (CONN2), 3) a major shareholder of a bank or a member of his related families is a director of a firm (CONN3), or 4) a bank director is a director of a firm (CONN4). A firm is a director-connected firm if CONN2, CONN3 or CONN4 equals to one and CONN1 equals to zero. Business group dummy is a dummy indicating if a firm's largest shareholder is among families who own one of the 150 largest business groups. Other independent variables are Debt to total assets ratio, Log (total assets), total current assets to total current liabilities ratio, EBIT/total assets and Industry EBIT/total assets, which are measured of as of Year  $t-1$ . The probit regression controls for year effect. The statistical significance at levels of 1% (\*\*\*), 5% (\*\*) and 10% (\*) is reported. The figures in parentheses report p-value for two-tailed tests. Robust standard errors control for correlation and clustering at firm level.

	Pre-crisis	During-crisis	Post-crisis	
Director connection dummy	-0.009 (0.967)	-0.036 (0.813)	0.350 (0.067)	*
Business group dummy	0.082 (0.683)	0.071 (0.597)	0.100 (0.567)	
Debt/total assets	1.343 ** (0.010)	0.090 (0.680)	-0.142 (0.656)	
Log (Total assets)	0.513 *** (0.000)	0.499 *** (0.000)	0.385 *** (0.000)	***
EBIT/total assets	-0.704 (0.620)	-0.655 (0.248)	0.465 (0.388)	
Industry EBIT/total assets	4.986 (0.230)	1.363 (0.539)	-1.231 (0.433)	
Current assets/current liabilities	0.005 (0.646)	-0.037 (0.298)	-0.222 (0.004)	***
Number of observations	239	525	301	
Prob. > $X^2$	0.00	0.00	0.00	
Pseudo $R^2$	0.2192	0.1972	0.1969	

this argument. If bank connections are valuable to the firms, we should observe a significant difference in performance changes between connected and non-connected firms after underrating restructuring actions. Hence, we examine the impact of bank connections on the operating performance changes of the firms following restructuring actions. We compare the changes in industry-adjusted operating performances one and two years subsequent to corporate restructurings, between bank-connected and non-connected firms. Here, the focus is on restructuring firms during the crisis period 1997-1998.

Table 7 shows that changes in industry-adjusted performances following restructuring actions are not significantly different between the two subsamples although connected firms have better performance changes. The results may suggest that even though connected banks play an important role that increases the restructuring likelihood, the effect of bank connections on corporate restructuring has no significant value-added to the firms. Therefore, we cannot conclude that the firms are beneficial from their connections with a bank.

**Table 7:** Changes in performance following restructuring actions and test of differences between bank-connected and non-connected firms

This table reports mean values (in percent) of the changes in the industry-adjusted ratio of EBIT to total assets of the sample firms in an economic crisis for the period between Year 0 and one and two years following Year 0. Year 0 denotes the year in which restructuring actions are taken. The sample consists of non-financial firms listed on the Stock Exchange of Thailand during 1997-1998. A firm is a bank-connected firm if 1) a major shareholder of a bank or a member of his related families holds 10% shareholding or more of the firm (CONN1), 2) if a major shareholder of the firm or a member of his related families is a director of a bank (CONN2), 3) a major shareholder of a bank or a member of his related families is a director of a firm (CONN3), or 4) a bank director is a director of a firm (CONN4). The “*p*-value” columns report *p*-values of the two-tailed *t*-tests of equal means for the changes in the industry-adjusted ratio of EBIT to total assets between two subsamples.

Year undertaking restructuring actions	Year (0, +1)			Year (0, +2)		
	Bank-connected firms	Non-connected firms	<i>p</i> -value	Bank-connected firms	Non-connected firms	<i>p</i> -value
Number of observations 1997	248 0.29	61 -3.89	0.13	238 -2.67	57 -9.64	0.14
Number of observations 1998	216 -2.86	58 -6.76	0.39	208 -7.04	56 -8.62	0.89

## Chapter 5

### Conclusions and Suggestions for Future Research

Using the data of non-financial listed firms in Thailand, we investigate the impact of bank connections on the likelihood of corporate restructuring activities and their value to the restructuring firms covering the 1997 East Asian economic crisis. Our analyses are divided into three sample periods; the pre-crisis (1996), during-crisis (1997-1998) and post-crisis (1999-2000) periods. This chapter concludes the empirical findings and provides suggestions for future research.

#### 5.1 Conclusions

In this research, we study the characteristics of restructuring versus non-restructuring firms and bank-connected versus non-connected firms. Then we examine the effect of bank connections on corporate restructurings, which will in turn suggest the role of connected banks on a firm's financial strategies. We also examine the effect of the connection strength on the restructuring likelihood. Finally, we investigate if connections are valuable to the firms.

Our results show that firms that undertake restructuring activities during the East Asian economic crisis are more likely to be affiliated with a business group. This result is also reported in Polsiri and Wiwattanakantang (2006). Consistent with previous literature, we document that restructuring firms tend to have higher level of leverage and total assets, and poorer firm and industry performances, relative to non-restructuring firms. Regarding the attributes of bank-connected firms, we find that they are more often part of a business group and are larger than non-connected counterparts.

Considering the impact of bank connections on restructuring actions, we provide supportive evidence for our hypothesis. Specifically, univariate specifications show that in the pre-crisis period, connected firms engage in restructuring activities more often than non-connected firms. This result is driven by the higher probabilities of dividend cut and capital raising in connected firms. During the crisis and in the post-crisis period, connected firms are more likely to replace their top management and raise new capital. As for the connection strength,

director connections and ownership connections appear to have little impact on corporate restructurings. More precisely, only the likelihood of dividend cut and capital raising in the post-crisis period is marginally different between the firms with the different connection strength.

Consistent with the findings of univariate analyses, our probit estimations show that the presence of bank connections is associated with the likelihood of restructuring activities in the pre-crisis and post-crisis periods. In the pre-crisis period, connected firms are more likely to cut dividend payment to restructure their firms; while they are more likely to engage in management turnover activity during the crisis. Surprisingly, the findings show that the likelihood of debt restructuring is lesser in connected firms in the post-crisis period. It seems that connected firms do not need to appoint more financial advisers to participate in debt restructuring activity.

Although the results discussed above indicate that connected banks play an important role on corporate restructuring activities, we find no support for the value that bank connections add to the firms. In other words, our univariate analysis shows that changes in operating performances after restructuring are not different between connected and non-connected firms. This result is similar to Sitthipongpanich (2009) who documents that connections are not valuable although they play a role in influencing firm investment behavior and financial strategy as shown in this study.

## **5.2 Suggestions for future research**

There are some limitations in this research that, however, provide future research direction. First, the presence of bank connections is defined using available public information i.e. ownership structure and director appointments. Detailed borrowing portfolio of firms and loan data of banks could be used to quantify the presence of connections as in previous research in other developed countries. Second, the sample periods in this study cover the macro-economic crisis in 1997; therefore, the future research could be conducted for firms experiencing financial performance decline (i.e. firm-specific crises) during normal period. Third, this study focuses on the institutional characteristics of bank connections and business groups in Thailand. There are also other institutional factors, such as the role of controlling shareholders and qualifications of board of directors, which might affect the possibility of

restructuring activities. Thus, future research could include these institutional aspects in the analyses to provide additional evidence.





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## APPENDICES

### Appendix 1: The number of firms undertaking restructuring activities classified by years

This appendix reports the number of firms that undertake restructuring activities and firms that do not, classified by years. The sample consists of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000.

Year	Number of firms		
	Undertaking restructuring activities	Not undertaking restructuring activities	Total
1996	234	65	299
1997	323	20	343
1998	284	43	327
1999	297	27	324
2000	263	51	314
<b>Total</b>	1,401	206	1,607

**Appendix 2:** The number of bank-connected firms classified by years

This appendix reports the number of bank-connected and non-connected firms, classified by years. The sample consists of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. We assume that the existence of bank connections in 1997 and 1998 remains the same as in 1996.

Year	Number of firms		
	Bank-connected firms	Non-connected firms	Total
1996	239	60	299
1997	268	75	343
1998	257	70	327
1999	164	160	324
2000	137	177	314
<b>Total</b>	1,065	542	1,607



**Appendix 3:** The number of director-connected and ownership-connected firms, classified by years

This appendix reports the number of director-connected and ownership-connected firms, classified by years. The sample consists of non-financial firms listed on the Stock Exchange of Thailand between 1996 and 2000. We assume that the existence of bank connections in 1997 and 1998 remains the same as in 1996.

Year	Number of firms		
	Director-connected firms	Ownership-connected firms	Total
1996	175	64	239
1997	198	70	268
1998	190	67	257
1999	116	48	164
2000	97	40	137
<b>Total</b>	776	289	1,065