Monitoring Maturation in

Chinese Financial Intermediation

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ABSTRACT

Over the four decades since the Four Modernizations program began in 1978, China has matured from a capital-starved, mono-bank-centric financial system to a capital-rich system with great variety of financial intermediation. This paper plays off the double meaning of its title: first, it monitors the maturation in Chinese financial intermediation. Surveying development of financial intermediation in China, this paper considers the social responsibility of financial intermediaries to monitor financial contracts and how intermediaries overcome financial market inefficiencies by acting as information conduits. Effective monitoring of financial contracts delivers both benefits. Secondly, it examines the maturation of the monitors themselves, in particularly those involved within the SME sector. The paper employs the case of Wenzhou's financial networks- highly-localized yet also the center of pan-China network of folk-lending. Financial innovation is causing a shift in SME lending from so-called folk-lending to peer-to-peer on-line lending, but monitoring in financial intermediation lags behind innovation.

Key words: Financial institutions, financial intermediation, delegated monitoring, public policy, informal lending, transitional economies, China

JEL classification: G2; P3; Z1

1. Introduction: Development of Private Monitoring in Chinese Financial Contracting

Between the 1949 Revolution and the introduction of the Four Modernizations program in 1978, China suffered from too few financial institutions, too little financial capital and weak informational capital (Eckstein, 1977; Lardy, 1998). The Four Modernizations program made brief explicit mention of finance intermediation (de Wulf, 1985) but implicitly, through promoting a comprehensive economic program, set the stage for considerable broadening and deepening of Chinese banking and finance. Over the four decades since 1978, China has matured from a capital-starved, mono-bank-centric financial system to a capital-rich system with great variety of financial intermediation (Cousin, 2007; Lardy, 1998: 60-61; Tanaka & Molnar, 2008). Although the sophistication of Chinese banking and financial contracting has increased dramatically over the last four decades, further progress is needed in delegated monitoring functions in banking and finance.

Delegated monitoring is defined as a costly, delegated role in which a financial intermediary [extended, in this paper, to investors acting in financial contracting roles] gathers and uses information ex post and ex ante to structure and renegotiate a financial contract.[1] Monitoring is costly in that information collection and analysis requires expertise, time and money; it is delegated in that societies have given over to financial intermediaries this role to improve efficiency in banking (Diamond, 1984; Krasa & Villamil, 1992) and in traded financial markets (Allen & Santomero, 1997). Delegated monitoring provides information, discipline, risk management and managerial improvement in intermediated financial markets. These benefits permeate out through an economy. As banks embrace social and business responsibilities to monitor financial contracts (Diamond, 1984; Schumpeter, 1939), covenants are constructed and enforced around this monitoring function (Krasa & Villamil, 1992; Rajan & Winton, 1995). Through these mechanisms financial intermediaries overcome financial market inefficiencies by acting as information conduits (Allen, 2001; Allen & Santomero, 1997; Rajan & Winton, 1995).

We can examine monitoring in Chinese financial contracting by flipping the title of this paper around. First, this paper monitors maturation of banking and financial contracting in China to examine how and why monitoring remains the last major step in Chinese financial modernization. The formal and informal challenges faced by Chinese banks and other financial intermediaries in performing this monitoring function have eased since 1978, but still remain. Discomfort with uncontrolled information flows has retarded development of monitoring in China. As monitoring provides both a governance component as well as a social responsibility component, Chinese government officials have been uncomfortable with delegating governance authority to private actors (see, for instance, Selmier, 2016a; Yang, G.B., 2014).

[1] This paper implicitly relies on Krasa & Villamil's (1992) model of a finite number of monitors [financial intermediaries]. This reliance is due to three reasons: 1, the Chinese government has attempted to limit the number of financial intermediaries through many policies; 2, this limitation has served to increase informal financial intermediation, resulting in 3, increasing inefficiency in Chinese financial contracting due, in part, to inefficient, ineffective, or corrupted monitoring.

Secondly, this paper examines maturation of monitors themselves by focusing on the informal sectors in Chinese financial contracting. In this, I look at how informal finance channels credit to small- and medium-sized enterprises [SMEs] mostly through examining Wenzhou, a smaller city in southern Zhejiang Province which, for a quarter century, was the fastest-growing municipality in China's fastest growing province. SMEs in Wenzhou, as elsewhere in China, became dependent on so-called "folk-lending"- loans and investment funds channeled through friends, or friends of friends. Wenzhou has also recently become a pan-China center for peer-to-peer online lending. These sources of capital were absolutely critical to SME growth as large state-owned banks would not lend to them (Bailey, Huang & Yang, 2011: Lin & Chen, 2012; Zhang, 2002), while smaller banks focused on specific sectors and better-heeled clients (Tanaka & Molnar, 2008; Zhang, Xu & Qin, 2013). Tsai (2009: 80) calculates in 2007 "only 1.3% of the loans extended by state banks went to private enterprises." Yet SMEs provide an important, fast-growing share of the Chinese economy, recently accounting for "60 per cent of the country's gross domestic product (GDP) and over 75 per cent of urban job opportunities" according to Cunningham and Rowley (2010: 125).

In effect monitoring the maturation shows the impressive development of Chinese banking and financial intermediation. But the maturation of the monitors is still lagging. To examine changes in SME financing, the financial intermediation chains servicing SMEs and the governance challenges which arise, this paper employs a mixed-methods approach. This approach integrates macroeconomic data gathered through on-line and published government sources, extant papers (mostly in Chinese and mostly anecdotal), and 18 face-to-face semi-structured interviews conducted with local and national bankers, government officials and financial academics in Wenzhou, Hangzhou and Beijing in 2014 and 2015.

The next section briefly monitors the maturation in financial intermediation in China. It focuses on six key developmental steps where Chinese financial intermediation broadened and deepened, but did not much progress in monitoring. In effect, the Chinese government did not delegate authority to financial intermediaries to monitor. Section 3 looks at transactional and relationship banking theory, then examining the challenges faced by MNEs in obtaining financing. Section 4 examines the challenges of monitoring in Wenzhou SME finance through discussing two channels of informal lending: folk-lending and peer-to-peer online lending platforms. Section 5 gives final thoughts as to the intimate linkages between delegated monitoring and the soft budget constraint.

2. Monitoring Lags in Development of Financial Intermediation in Modern China

Over the four decades since 1978, China has matured from a capital-starved, mono-bank-centric financial system to a capital-rich system with great variety of financial intermediation (Cousin, 2007; Lardy, 1998: 60-61; Tanaka & Molnar, 2008). Sometimes change was gradual: a bankruptcy law which would allow arms-length restructuring required nearly two decades to implement (Tanner, 1999: 135-166). Sometimes change was rapid, revolutionizing the nature of banking and financial intermediation in China, as in the mid-1990s when state-owned Chinese banks were dramatically altered from redistribution mechanisms for regional development and put on the path to modern commercial banks (Brandt & Zhu, 2007).

Yet great hurdles remain. The specter of financially-weak state-owned enterprises (SOEs) being kept on life support continues to haunt China's state-owned Chinese banks to this day (Steinfeld, 1998; Tan, 2013). Equity markets retain their casino-like nature rather than developing into a more efficient capital allocation mechanism (Allen, Qian & Qian, 2005; Branstetter, 2007), in part due to ties to the informal financial sector (Hess, 2015; Interviews in Wenzhou and Beijing, 2014; 2015). Real estate remains a highly speculative investment class. And SMEs continue to be capital-deprived, and dependent more on informal financing (Shi & Ye, 2001; Tanaka & Molnar, 2008; Zhang, Xu & Qin, 2013). All these hurdles are partly raised due to undeveloped, inefficient or even stymied monitoring functions in Chinese financial intermediation.

Banking theory posits that banks and other financial intermediaries embrace a social responsibility to monitor financial contracts (Diamond, 1984) and that covenants are constructed around this monitoring function (Rajan & Winton, 1995). Through monitoring, financial intermediaries overcome financial market inefficiencies by acting as information conduits (Allen, 2001; Rajan & Winton, 1995). Chinese banks and other financial intermediaries lag in fulfilling this social responsibility. To understand this lag we need to understand better how far Chinese banking and financial intermediation has progressed. Six key steps have already been taken in this process of development. Each of these steps might have catalyzed monitoring improvement, but fell short. The steps are: one, splitting the system up into separate banks and financial services firms in the early 1980s; two, the slow establishment of a bankruptcy law between 1985 and the late 1990s; three, the establishment and growth of equity and bond markets since the late 1980s; four, major reform of banks between 1994 and 1999; five, the slow internationalization of Chinese financial over the last decade; and six, a second round of bank reform which began in the 2000s and continues until today.

While nominally a banking system with three banks in 1978, China was effectively a one-bank system in which the PBoC (Peoples Bank of China) controlled the Bank of China while the China Construction Bank acted as a captive capital distribution wing of the Ministry of Finance (Branstetter, 2007: 28-30). Splitting the system up in the early 1980s established the four large state-owned banks- the Big Four- and began the process of smaller, often specialized financial intermediaries focused on investments and regional development while carving out a modern

central banking role for the PBoC beginning in 1984 (Lardy, 1998: 61-64; 66-76). This institutionalized a government role in monitoring banks and the financial system, but monitoring through private institutions and individuals was left undeveloped.

Insert Table 1 about here

Two crucial steps were started in the mid-1980s which may have enhanced private sector monitoring: passing of a bankruptcy law and the establishment of equity markets. That neither has fulfilled their promise indicates deeply-entrenched political influence over financial intermediation. The slow establishment of a bankruptcy law beginning in 1980 required significant policy entrepreneurship (Tanner, 1999) and to this day has not had much impact in *de jure* outcomes [the legal capacity to follow through to liquidation of a company's assets, see Jiang, 2014] or *de facto* outcomes [that is, informational content sent to economic participants through monitoring actions of a financial intermediary filing a bankruptcy action against a company]. The 1986 law required six years of negotiation and was a very tentative move forward in dialogue about bankruptcy; updated in 2007, it is still rarely invoked (Buford, 2015). Indeed, "as China's banks and asset management companies have discovered, the *de jure* legal right to force a debtor into bankruptcy does not translate into a *de facto* right to acquire control over the debtor's assets," noted Branstetter in 2007 (58). Recent bankruptcy filings by state-owned shipbuilders like Wuzhou Ship Repairing & Building and Sainty Marine (Bao, 2015), and the related asset filings by these firms' banks will test whether this is changing; if so, this would represent progress toward private sector monitoring, particularly steps taken by the Big Four.

Establishment of equity and bond markets required a similarly long gestation period. Discussions around the governance benefits of equity ownership began in policy circles shortly after the Four Modernizations began (Steinfeld, 1998: 130- 37). These discussions resulted in a 1985 lightning rod editorial published in the top economics newspaper, *Jingji Ribao* [经济日报]. The young economists who wrote this piece ascribed lofty ideals to investors:

> The main purpose of risk capital is not to profit, but for future development; not to accelerate business [and profits], but rather to accelerate innovation. [2]

The editorial's authors were purposefully controversial, invoking Adolf Berle's paean to corporate protection of property rights and corporate social responsibility, *The 20th Century Capitalist Revolution*.[3] An important part of their argument was the monitoring capacity of equity markets. But what Branstetter (2007: 54) noted a decade ago is still true today: "… equity prices were meant to serve as a summary statistic of the performance of the firm, guiding

[2] "风险资本主要目的不是为了眼前利润，而是为了未来发展; 不是为了促进企 业，而是为了促进创新。" translation by this author.

[3] Jiang (2009: 27-30) notes the disjoint between "traditional culture concept" in which "personal moral objectives" held sway and the present market economy in China result in a "culture lag" which has affected informal finance, an idea which could be extended to formal finance in China and beyond. While Wu & Jin's 1985 essay may appear naive now, but a strong belief in moral economics provided a powerful argument in post-Cultural Revolution China.

capital to the most productive, best managed enterprises. Equity prices do not… play this critical signaling role…" The main equity markets in Shenzhen and Shanghai were established a quarter century ago, yet China remains a bank-intermediated financial system. In fact, while joint stock banks were founded in the 1980s, only one bank was listed by the end of the 1990s (Lardy, 1998: 65). But note that Li, Makaew and Winton (2014) find that Chinese equity markets may have begun to provide more monitoring.

The end of the 1990s saw China's admission to the WTO after a half-decade of major banking and SOE reform. One important component of this reform was to remove the responsibility of banks to redistribute capital as a social function divorced from business concerns. A PBoC report from early 1980s laid out a policy of using the Big Four to finance local development (Shih, 2008: 32-36). These banks were required to lend locally and, combined with the appointment of local government-linked bank managers by local officials, greatly increased political influence over local funding. The Big Four were also used to shift funds from capital-rich to capital-poor Chinese regions (Brandt & Zhu, 2007: 98-103; Cao, Qian & Weingast, 1999; Hsu, Arner, Wan & Wang, 2005:45-6). Combined with SOE reform which also sought to separate social burdens such as housing, education and health care, and retain under state control only the larger SOEs (Steinfeld, 1998; Zheng & Chen, 2009),[4] the possibilities of enhanced monitoring and higher bank profits grew dramatically. In profit terms, the Big Four showed considerable profit and efficiency improvement since China's accession to the WTO in 1998 even as Chinese banking was to be opened up to more competition (Yin, Yang & Mehran, 2013). But monitoring again lagged behind, as monitoring confers political as well as economic power upon financial intermediaries. "Since the financial system… is the last remaining powerful instrument through which the state and party directly influence resource allocation, they are naturally reluctant to give up this power" noted Lardy in 1998 (221).

The run-up to WTO membership catalyzed the gradual internationalization of Chinese financial institutions as well as broader aspects of Chinese finance. Three internationalization processes were tightly linked financially and politically: globalization of non-financial Chinese MNEs, international network expansion of Chinese banks and financial firms (Tokuchi, 2013), and the internationalization of the RMB (Subramanian, 2011). Former Chairman of CITIC Securities International Ted Tokuchi summarized this interlinkage in 2013:

> A key part of their [the Big Four's] plans at present is to grow their international banking business through footprints of China's development strategy and that means by focusing on Africa and Latin America in particular. (quoted in Selmier, 2013: 747).

Each of the three processes provided opportunities to enhance monitoring in domestic Chinese financial intermediation, yet each has yet to fully deliver. Globalization of Chinese MNEs is

[4] Summed up as "grasping the large and letting the small go" [抓大放小], the idea was to dramatically shrink the state-owned portion of the economy through downsizing, sell-off of firms, and corporatization, including equity listing and official recognition of all linked companies and interests.

perhaps the most impactful of the three in furthering monitoring. Monitoring is increased through listing overseas and thereby disclosing information, acquiring non-Chinese firms and so reporting to non-Chinese regulators, and using services of foreign banks that monitor Chinese MNEs activities and loan covenants. The internationalization of the RMB exerts a powerful, although indirect, set of effects. The PBoC implicitly committed itself to manage the Chinese macroeconomy and its banks through comments such as PBoC Vice Chairman Xiaolian Hu's (2009: 7) that "the Fed seemed to have a let-it-be attitude… until the burst of asset bubbles [in the latest global financial crisis]." The PBoC is also committed through the costs of the RMB becoming a reserve currency, as outlined by Subramanian (2011: 6- 8): likelihood of additional currency appreciation through foreign demand; leverage over domestic financial policy obtained through extensive foreign holdings of the RMB; embedded responsibility commensurate with being a lead currency; and the requirement for an open currency. Chinese bank internationalization has not yet had a large impact on monitoring simply because, as Chairman Jiang Jianqing of China's most international bank, ICBC, sadly mused "We are now just an international bank, not yet a real global bank" (quoted in Yang, L., 2014). Without a large foreign presence, state-owned Chinese banks will not become more scrutinized or pressured toward monitoring by non-Chinese financial intermediaries and governments.

In 1998, Lardy estimated non-performing loans in the Chinese banking system were roughly 35% and were concentrated more in state-owned banks. While contentious when his book was published, the latter 1990s recapitalization of banks proved insufficient, and a second round of reform began in the early 2000s (Brandt & Zhu, 2007; Hsu, Arner, Wan & Wang, 2005). Again, this provided opportunities to enhance the delegated monitoring roles of financial intermediaries, and the probability of this opportunity improved as the Big Four considerably upgraded their information systems and credit scoring (Hansakul, 2006). Importantly, in 2003 the CBRC (China Banking and Regulatory Commission) was established, creating an independent, professional regulatory body. Perhaps underappreciated, the Big Four may be more advanced in delegated monitoring than smaller banks and certainly the informal sector. For instance, Chen, Liu and Su (2013) find that the Big Four are more likely to allocate loans based on better performance, but smaller banks are swayed through bribery. An increase in strict loan covenants and even bankruptcy suits by the Big Four is also unusual in Chinese banking. And expansion into SME lending by the Big Four is not only a sign of increased interest in this sector but also that banks with government ownership will participate in banking to smaller private firms.

But a significant part of Chinese financial intermediation is still not transparent, and transparency is required for delegated monitoring to work effectively. Jianjun Li estimated in 2005 that informal lending was roughly 28% of amount of formal institutions' total lending (cited in Tsai, 2009, fn.8: 85). Informal lending and smaller banks still dominate SME financing, and here monitoring is especially weak. To understand why this is so, we first turn to banking theory, and then apply this to financial intermediation in Wenzhou.

3. SME Lending in the Chinese Context

Monitoring is conditioned by the two archetypal banking types, transactional banking and relationship banking (Allen, 2001; Boot, 2000; Boot & Marinč, 2008). Transactional banking is defined in part by that which is not relationship banking: a focus on the hard data-oriented transaction core of banking, pushing to arms-length the relationship which may develop between banker and client. Transactional banking's essential strategy is to increase the number and efficiency of transactions and so drive down costs, achieving a comparative advantage through speed, volume and efficiency (see Boot on securitization, 2000: 11-12, also Allen & Santomero, 1997). Information availability is essential to properly function as a bank or financial intermediary whether a transactional- or relationship-oriented strategy is pursued. Relationship bankers attempt to capture information which is more difficult to quantify, gathered through numerous meetings between banker and client over a long period resulting in the banker judging the risk and return based on her knowledge of the client. This tacit knowledge collected through the social network of the banker is then infused throughout her bank. In practice the relationship banker typically gathers harder data as well, which she culls from the client financial records and other sources. Transactional banking does not, or perhaps more accurately cannot, effectively collect, manage and employ this tacit knowledge and so relies on hard data. Whether the bank is operating in developed or less-developed, capitalist, communist or mixed-model economies, theory argues that banks ameliorate economic inefficiencies by acting as information conduits (Diamond, 1984; Rajan & Winton, 1995; Tanaka & Molnar, 2008).

Substantial information search costs, as well as the costs associated with information capture, storage, usage and transmission, are the reason for their respective reliance on different kinds of information. The investment required to conduct relationship banking is considered both large and asset-specific to the banking relationship (Tanaka & Molnar, 2008; Berger & Udell, 2002, 2006). Smaller banks and other financial intermediaries have an advantage in controlling such costs and overseeing their employees while maximizing returns when engaged in SME lending, termed the "small bank advantage" (Berger & Udell, 1992, 2006; Boot and Marinč, 2008: 1190-1; Zhang, 2002). The "small bank advantage" is viewed as the classic example of successful relationship banking when the bank's oversight restrains a banker from becoming too close to her client and over-extending credit, mitigating any soft budget constraints. Soft budget constraints "exist when the strict relationship between expenditure and earnings has been relaxed" (Kornai, 1986). Sometimes the banker does not correlate lending discipline to the actual financial condition of the firm, and may continue to extend loans (Qian, 1994). The bank may be unaware of this action, or may encourage it (Bailey, Huang & Yang, 2011; Selmier, 2016). In China, this is often called "lending new to repay old"[5] (Cousin, 2007: 88), a problem which has long been linked to state-owned enterprise lending.

[5] "借新还旧" - Jie xin hai jiu.

So banking theory holds that smaller banks lend to SMEs because smaller banks' size enable them to more efficiently gather "soft data" and better monitor their bankers' tendencies to over-lend. China leans toward the relationship banking pole by nature of the structure of China's guanxi-based social network, banking system, and stage of financial development (Bailey, Huang & Yang, 2011; Zhang, 2002), and SMEs are dependent on smaller banks and informal finance (Allen, Qian & Qian, 2005; Guo & Liu, 2002). Chinese SMEs face the same obstacles facing SMEs elsewhere in terms of obtaining capital from banks, plus additional challenges which push Chinese SMEs to look outside the formal banking systems to what Tsai (2002) refers to as "back-alley banking." Table 2 below outlines these obstacles.

First, SMEs' size and shorter histories often translate into fluctuating demand for capital and lack of banking ties to larger banks. This significantly increases the rates they must pay (Berger & Udell, 1992, 2006; Cousin, 2007: Zhang, 2002). Second, additional upward pressure on rates is seen because of SMEs' lack of professionally audited accounting records or credit history, due in part because of lack of collateral and elevated firm failure rates (Lin & Chen 2012; Tanaka & Molnar, 2008; Zhang, 2002). Third, SMEs' demand for capital is often seasonal and very short-term in nature, so larger banks' formal loan approval processes sometimes cannot adjust. This pushes Chinese SMEs' in particular toward fast solutions with less credit scoring such as folk lending (Bailey, Huang & Yang, 2011; Fu & Bao, 2011; Guo & Liu, 2002).

Fourth, from a capital supply perspective, larger banks consider these higher risk factors, the lack of incentives to take on risks and small loan sizes, and so have tended to ignore SMEs (Bailey, Huang & Yang, 2011; Cousin, 2007; Zhang, 2002).[6] Fifth, the structure of Chinese banking requires smaller local financial intermediaries' to request funds and approval through their supervising banks, further delaying businesses opportunities requiring rapid investment (Lin & Chen 2012: 9; also Tanaka & Molnar, 2008). Sixth, after onset of the 2007-8 Global Financial Crisis, China's central government raised interest rates (Ding, 2012) while setting a ceiling on rates which could be charged (PBoC, 2012). Structuring this interest rate "corridor" dampened informal financial contracting; this, combined with concerns about SMEs' overseas markets and better returns available through other investments, caused a decline in folk-lending.

Insert Table 2 about here

These obstacles were compounded in Wenzhou by two additional, related obstacles [labelled 7 and 8 in Table 2]: seven, Wenzhou has perpetually been in capital-deficit and dependent on significant capital flows from the rest of China (Tsai, 2009; Zhang, Xu & Qin, 2013). Eight, this is due in part to the unbridled nature of Wenzhou-style business and Wenzhou's long history as an independent-minded part of China, resulting in the now famous "Wenzhou Model" (Liu, 1992; Sonobe, Hu & Otsuka, 2004; finance-specific, see Tsai, 2009: 88-92).

[6] However some large banks such as Bank of China have recently established SME Departments to pursue this business, as noted above.

4. Informal Finance in Wenzhou Presents Unique Monitoring Problems

4.1. *Folk Lending and Monitoring Complexities*

The Wenzhou model was particularly dependent on informal forms of financing for a number of reasons. First, Wenzhou was considered geographically undesirable due to proximity to Taiwan (Tsai, 2009) and a history of regional independence which made Wenzhou seem less easy to govern (Liu, 1992; interviews). Both factors, combined with limited arable land and few natural resources aside from the Ou River and its trade flows, meant that Wenzhou was somewhat capital-deprived with the national government reticent to site state-owned enterprises in Wenzhou (Liu, 1992; Tsai, 2009). But Wenzhou people were a natural resource in and of themselves, renowned for three characteristics: their much-mentioned reputation for being extremely hard-working (interviews, Wenzhou and Beijing);[7] their risk tolerance is extremely high (Lin & Chen, 2012; Liu, 1992; Shi & Ye, 2001);[8] and, in the words of a senior local banker, "Wenzhou people love debt".[9]

Employing the resources at hand, Wenzhou SMEs and individuals began pooling capital in the 1980s within small networks which lent at high interest to local businesses. Wenzhou's reputation for successful SME and regional growth outweighed successive scams and collapses (Shi & Ye, 2001; Tsai, 2009) which dented, but did not destroy, the emerging brand name of the Wenzhou Model. By the 1990s Wenzhou's multi-tiered financial network structure had become an important component of the Wenzhou model (Sonobe, Hu & Otsuka, 2004; interviews, 2015).

If Wenzhou SMEs relied solely on smaller banks in which relationship banking was indeed practiced, one might expect some buffering of economic downturns as suggested in the model proposed by Bolton, Freixas, Gambacorta and Mistrulli, (2013). Banking economists Taketa & Udell (2007) developed a similar theory as to how economic contraction may lead to more severe credit contraction for SMEs, and tested this model on Japanese SMEs (see also Berger & Udell, 2006). But economic downturns since the 1980s were often even more severe in Wenzhou than in other parts of China, and more severe than these economists might predict. In fact, the higher interest rates charged through informal channels make loan repayment more difficult, often resulting in violent conflicts between the lenders and SME owners (Lin & Chen, 2012). So the impacts from the global economic downturn beginning in 2007-8 not only immediately blunted Wenzhou exports as shown in Graph 1 but, by 2011, recession hit the entire Wenzhou regional economy with a vengeance.

Graph 1 about here

[7] "温州人很勤劳" is a constantly-heard phrase, mentioned in interviews with academics, regulators, and bankers.
[8] Mentioned in interviews with two local and two national bankers, several financial academics and a regulator.
[9] This banker said "温州人爱贷款." Seven other interviewees told me this in very similar terms.

The credit contraction in Wenzhou was so profound that the municipal and central governments felt compelled to implement China's first, and thus far only, "complete financial reform" [jinrong zonghe gaige 金融综合改革] (PBoC, 2012). In the process of reform a number of financial intermediaries and holding companies were established and more extensive links established between local financial intermediaries and national financial authorities, including the PBoC and the CBRC (Selmier, 2016a). A Local Financial Management Bureau [difang jinrong guanliju - 地方金融管理局] was established to provide on-the-ground oversight. In large part this ongoing profound contraction is an outcome of weak monitoring. Examining the structure of informal financial intermediation in Wenzhou helps explain how and why delegated monitoring functions are still weak in China.

Wenzhou's history of financial innovation is famous for its sophistication in "folk lending", an informal form of financing which translates directly from Chinese as "loans between people" [minjian jiedai- 民间借贷]. Folk-lending arrangements are usually structured between geographically-close borrowers and lenders who have a long-established personal relationship and are usually more risk-tolerant in comparison with formal banks' lending channels (Ding, 2012; Guo & Liu, 2002; Lin & Chen, 2012). But this very informality caused six monitoring problems, as outlined in Table 3 below.

One, there was no way to know just how much capital was involved in the Wenzhou folk-lending market because, until the Wenzhou Private Lending Registration Service Center was established in 2011, there simply was no record of extant lending. Two, the speed at which such loans could be called, or simply not rolled over, was extremely disruptive to SMEs' ongoing working capital needs. For instance, after the export downturn started in 2009, many lenders/capital providers in the folk lending channel simply shifted their capital to other profitable investments in coalmining, real estate or elsewhere outside Wenzhou (Yu, 2013), causing a precipitous decline in available capital within Wenzhou.

Insert Table 3 about here

Three, there was little in the way of hard constraints which bind a borrower/ capital-requirer, so rather than be incented to monitor a financial contract for society's benefits, capital providers were incented to monopolize information rather than divulge it. Jiang (2009: 29) notes:

> Most informal financing activities are based only on an oral agreement and lack collateral, while even those having a written contract are weakly protected by the legal system since informal finance is still an underground activity. Therefore, one often finds that moral constraints are the only type of constraint that prevails.

Fourth, this weak constraint in fact provides an incentive for lenders/capital providers to not simply hide information, but to exit positions before anyone finds out. Consider the situation wherein no penalty exists for acting on non-public information. If a counterparty is in trouble,

the lender/capital provider's rational response is either to exit the position or attempt to arrange additional loans with other, unknowing, lenders/capital providers in order to bail herself out.

Fifth, there is a low bar to becoming a financial intermediary in such informal circumstances. A potential entrant requires only contacts or a bit of capital. Jiang (2009: 22) cites an example of an informal intermediary whose very name connotes this potential problem of lack of expertise: the Old Lady Bank in Wenzhou, whose banking network members are "middle aged women up to 60 years of age, who have little education". Here a prospective borrower/capital-requirer simply contacted one of the older women in this multi-village network and explained his need. The network would look for available capital to lend. Schumpeter (1939: 117) summed up this situation well when he wrote:

> … bankers may, at some times and in some countries, fail to be up to the mark corporatively: that is to say, tradition and standards may be absent to such a degree that practically anyone, however lacking in aptitude and training, can drift into the banking business, find customers, and deal with them according to his own ideas. In such countries or times, *wildcat banking* develops.[10]

Sixth, these first five monitoring problems engender a sixth, systemic problem made more severe through weak monitoring- considerable network risk in Wenzhou. Financial contracting under folk-lending involves a guarantor whom either supplies capital and provides assurance for debt payment, or simply provides assurance to the lender/capital-supplier in a separate contract. This is known as "carrying guarantee" [担保- *danbao*]. One senior banker told me "*danbao* is a China-wide phenomenon, [but] in Wenzhou it is very advanced," and *Danbao* came to be seen as a separable financial good which could be purchased, lessening or even removing the moral constraint which came through interpersonal relationship (Selmier, 2016b).

Financial innovation in Wenzhou created more complex, more networked syndication arrangements such as *baotuan* [保团] where a group of individuals pools capital to lend through informal syndication arrangement [see Figure 1]. The borrower may pay an origination fee and/or a guarantor fee to the *baotuan*, to one if its members, or to a facilitator who introduces the borrower to the *baotuan*. *Baotuan* syndicates enabled financiers to take on investments in large projects in Wenzhou and elsewhere; one finance academic told me that some Wenzhou-based *baotuan* "swooped down" and bought out whole floors or buildings in Shanghai and Beijing.

Insert Figure 1 about here

Network risk also existed in the long chains of folk-lending arrangements called *lianbao* [连保] in which a guarantor to one borrower is a borrower from another, and these arrangements become organically tied together. Selmier (2016b) describes the systemic risk resulting from these complex linkages as "countless spider webs in an old barn, interlinked and difficult to pull

[10] Emphasis added. Note that part of this quote also cited in Diamond, 1984.

apart without destroying all the webs." Figure 2 shows why those lender/capital providers tied together in this structure are highly unlikely to know the others. In fact, "no one knew where the risk was in the system" because folk lending had few public records and no registry of any kind.[11]

Insert Figure 2 about here

4.2. *Wildcat Banking in Wenzhou: The Rise of "P2P" and a New Set of Monitoring Issues*

Even after the financial crisis hit Wenzhou and folk-lending contracted, the channel still accounted for roughly 20% of total loans disbursed in Wenzhou (PBoC, 2012; interview with Wenzhou Private Lending Registration Service Center, 2015). But folk-lending is being eclipsed by a new type of financial intermediary. Part of the credit transmitted through folk-lending channels has now shifted to peer-to-peer on-line lending platforms [P2P ping tai (P2P平台), or simply P2P]. Growth in the P2P channel exploded in China over the last five years, and Wenzhou is one of China's main P2P centers (Caijing, 2013: numerous interviews, 2014: 2015). Of the roughly 3000 P2Ps known to have existed in China in April, 2015, more than 100 were based in Wenzhou (interviews with Local Financial Management Bureau and others). China's largest P2P, Wenzhou Dai, started in Wenzhou, and several of the larger and more successful P2Ps are based in Wenzhou. "The P2P model fits better to Wenzhou's culture" according to a senior local banker interviewed in April, 2015.

While folk-lending arrangements might be characterized as geographically-close between those with personal relationships, P2P platforms bring together geographically-distant actors without personal relationships. In simplest terms, folk-lending is more akin to relationship banking while P2P is closer to transactional banking. Another six monitoring problems have arisen with P2P. Some are similar to the previously-outlined problems encountered under folk-lending, but others are not.

First, while the possibility of a loan being suddenly called by the investor/capital-provider is lessened, the financial intermediary now has wide discretion over how to monitor the borrower/capital-requirer, how much to report and the accuracy of such reporting. Second, independently verifying the information provided through monitoring is now more difficult for the lenders/ capital-providers who are now usually geographically-distant and so cannot verify projects by looking at them (note Agarwal, Li, Liu & Zhang, 2015, find that establishing personal guarantee on a loan may help to lessen this problem). Third, the removal of this geographic proximity removes the disciplining nature on P2P to which intermediaries and borrower/capital-requirers under folk-lending may be subject. That is to say, the "moral constraints" Jiang mentions are even weaker.

Insert Table 4 about here

[11] This was mentioned in interviews with two financial academics, two government officials and two bankers.

Fourth, these weakening moral constraints lead to systemic-level issues under P2P lending which increase monitoring difficulties. One related problem is what Chen, Hu, Lou and Yong (2015) analyze as herding behavior, in which lenders/capital-providers invest capital by following others. They attribute this to two possible reasons: immaturity of loan market due to information asymmetry and a closely-linked reason, inexperience on the part of lenders/ capital-providers. This is has led to a certain ennui on the part of the investing public: "Runaway P2P bosses are no longer newsworthy," as the *Economist* (2016) quoted from a *Jinling Evening News* article.[12]

Fifth, P2Ps also have very low bars to entry just as with folk-lending. The skill set required to clear this low bar is different, though. Whereas the potential entrant in folk-lending requires only contacts or a bit of capital, the potential P2P entrant only requires skill in coding an elegant website. Once up and running, the physical location of the P2P is sometime difficult to uncover, leading to questions as to which government agency is tasked with that P2P's regulatory responsibility (interviews with Local Finance Management Bureau officials).

Sixth, many Chinese P2Ps are acting like real banks. That is to say, they are taking in capital, then allocating to borrowers/capital-requirers rather than merely acting as transparent conduits connecting investor/lender and borrower/capital-requirer as American P2P platforms do. However, if Chinese P2Ps were actually banks they should have been licensed and regulated by the CBRC and subject to capital requirements set by the PBoC. Yet a CBRC official told me in April, 2015: "Since we have not issued bank licenses to any P2P platforms, they cannot be banks." A day earlier the Senior Director of one of Wenzhou's largest and most profitable P2Ps told me, "Yes of course we are a bank. Chinese P2P are not like American P2P [in acting as capital conduits]."

In fact Wenzhou P2P are involved in a full range of financing, including to individuals, SMEs, crowd-sourced projects and recapitalization and work-out restructurings of bankrupt businesses (interviews). Yet regulatory responsibilities for Wenzhou-based P2Ps had been pushed onto the Local Financial Management Bureau, which was not sufficiently staffed to handle so many P2Ps and their very rapid growth. Interviewees from banking, regulation and academia all stated that they believed P2Ps were indeed banks; many argued that P2Ps were funding stock market speculators and so partially responsible for the spike in equity prices from late 2014 until summer, 2015. But P2Ps were not pulled under regulatory jurisdiction of the CBRC in summer of 2015, and this regulatory transition remains a work-in-progress. Over the last four decades, financial intermediation in China has grown increasingly sophisticated with impressive development in "fin tech" channels (financial technology) such as P2P. Yet with all this sophistication it is difficult to see delegated monitoring progress if public monitoring of China's fastest growing lending channel (Caijing, 2014) is inadequate and poorly coordinated.

[12] One of China's top newspapers, based in Nanjing.

5. Final Thoughts: Monitoring and the Soft Budget Constraint

Throughout Chinese SMEs' rapid growth, questions and problems arose as to informational asymmetry and transparency surrounding their financial state and resulting misunderstanding of their debt obligations. Often the financial health of weak SMEs was often not known until an SME collapsed. At that point there would usually be a struggle over what entity was actually responsible for the debts incurred. Sometimes local governments would be the final guarantor, sometimes entrepreneurs and firm owners were held responsible, sometime financial intermediaries were left with the accumulated debts. Nearly always the SME's workers suffered sudden loss of income, and sometimes loss of ownership shares.

These issues could be partially addressed through enhancing monitoring in financial intermediation. Delegated monitoring confers both governance influence and responsibility upon a financial intermediary. That responsibility comes with a price which many delegatees may not wish to pay. Delegating this responsibility for monitoring may make formal financial institutions the targets of additional blame for financial crises, would likely limit margins and increase taxes for informal financial institutions and capital-providing individuals, and bring into view the operations of borrowers/capital requirers who may prefer to keep their financial operations out of view. And there has been little motivation on the part of Chinese governments, whether local or national, to give over some governance power to financial intermediaries.

Delegated monitoring is not the mirror image of the soft budget constraint, but their converses are intimately related. We can compare across monitoring, soft budget constraints and the present state of informal finance channels by examining the inherent options of *exit*, *voice* and *loyalty* available to financial intermediaries. A lender/capital provider suffering under a soft budget constraint is only allowed *loyalty*. Any financial counsel given is spoken *sotto voce*, as making public a borrower/capital requirer's weakened position is not an option. *Exit* is also not an option, as the lender/capital provider is locked into a position as a near-captive capital supplier. Monitoring gives *voice* to the lender/capital provider through both her ex post and ex ante actions regarding the borrower/capital requirer. She may also show *loyalty*, through sound financial counsel, or *exit* the position. Both this actions actually give *voice* as well, as observers see the action of the lender/capital provider, anticipate the implicit signals in her monitoring, and then react. Financial intermediaries in informal financing channels have two options, *loyalty* or *exit*. Monitoring- that is, using *voice* - is not required and little is gained from voluntary monitoring. *Loyalty* may be given in situations where a lender/capital provider knows the counterparty quite well and is willing to increase her risk exposure. When the risk exposure seems too large and private information gives an advantage, *exit* is sometimes an available option.

A debate now rages as to whether government organizations should play an intermediate role in financial contracting, including directing state-owned banks to provide direct financing to SMEs

(Ding, 2012; Shi & Ye, 2001) or establishing innovative financial organizations that serve SMEs (Guo & Liu, 2002; Lin & Chen, 2012). Additional government intervention will not strengthen Chinese banking and financial markets nor would it necessarily benefit society. The next major step in Chinese financial intermediation is to empower financial intermediaries to use their asymmetric information advantages by delegating monitoring to them. And then hold them to the set of responsibilities which come with that empowerment. This will not only improve financial information flows, but also bind Chinese financial intermediaries into more robust and resilience financial governance.

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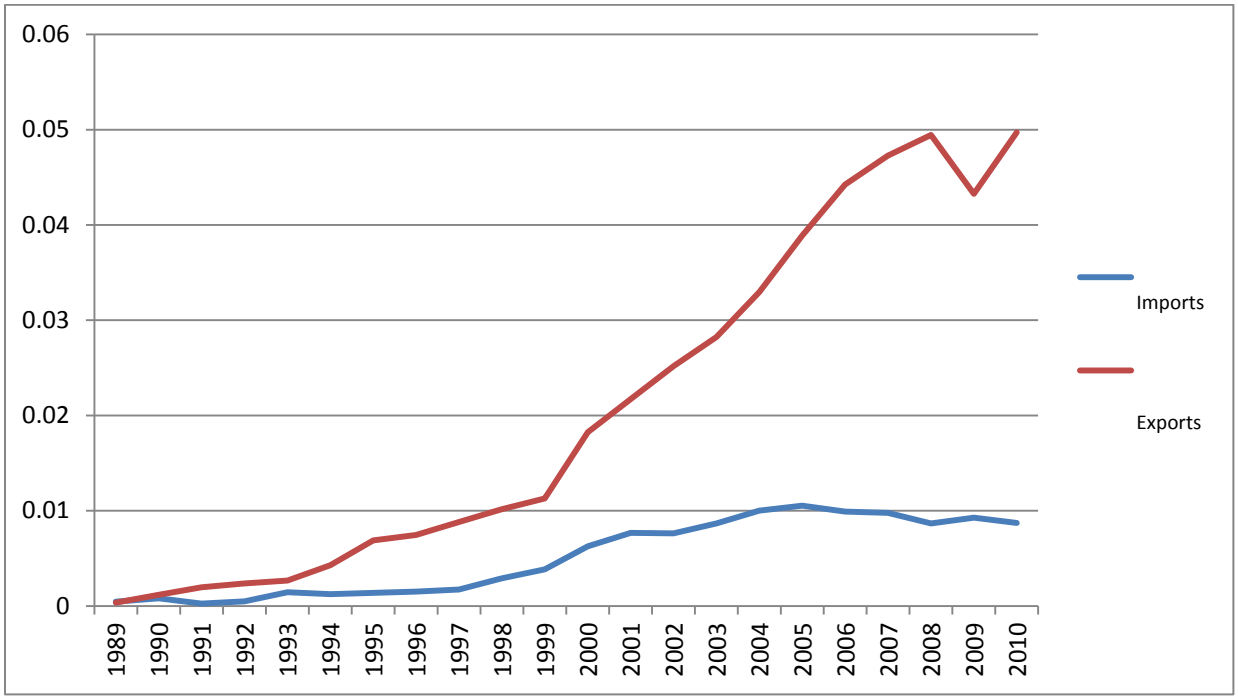
Table 1: Six Key Steps in Modernization of Chinese Financial Intermediation		
Time Period	**Key Step**	**Notes**
early 1980s	Splitting the system up into separate banks and financial services firms	Just the beginning of an ongoing sophistication process in financial intermediation
1985- mid 1990's	slow establishment of a bankruptcy law	Still considered quite underused by legal scholars
1980s until present	Establishment and growth of equity and bond markets	Firms rely mostly on internal financing and bank loans
1994- 99	Major bank reform	Concurrent with SOE reform
1999 until present	Slow internationalization of Chinese financial firms	Beginning with WTO, more prominent after second round of bank reform
2000s until present	Second round of bank reform, including considerable information systems upgrading	The Big Four have become more oriented toward delegated monitoring, but still restrained by government

Table 2: Obstacles to Obtaining Finance for Chinese SMEs			
Number		**Obstacle**	**Notes**
Obstacle seen globally by SMEs	1	Size and shorter histories	Leads to lack of banking ties, fluctuating demand for capital and higher rates paid
	2	Lack of professionally audited accounting records	Also lack longer credit histories, collateral, and high failure rates
	3	Very short-term requirements	Pushes SMEs to informal, fast lenders
	4	Supply-side constraints	Bankers lack incentives and do not wish to face higher risks
China-wide Obstacle for SMEs	5	Smaller banks must obtain approval from supervising banks	Structure of Chinese banking
	6	Post-2008 interest rate channel	Interest rate "corridor" curtailed informal financing
Wenzhou-specific SMEs	7	Perpetually in capital-deficit	Dependent on significant capital inflows, Wenzhou has paid highest rates in China
	8	Fallout from the "Wenzhou Model"	High-debt, high-growth, informal finance, SME and non-SOE regional economy
Culled from: Bailey, Huang & Yang, 2011; Berger & Udell, 1992, 2006; Cousin, 2007; Ding, 2012; Fu & Bao, 2011; Guo & Liu, 2002; Lin & Chen 2012; Liu, 1992; Selmier, 2016; Tanaka & Molnar, 2008; Tsai, 2009; Zhang, 2002.			

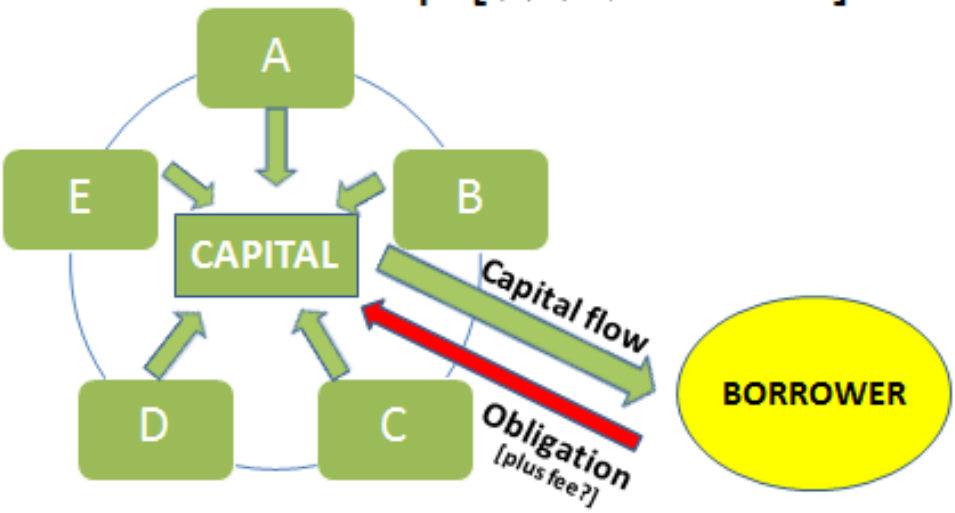
Graph 1: Imports and Exports' Portion of Wenzhou Real GDP [sized to 1]



Source: data is calculated from Wenzhou Statistical Yearbook.

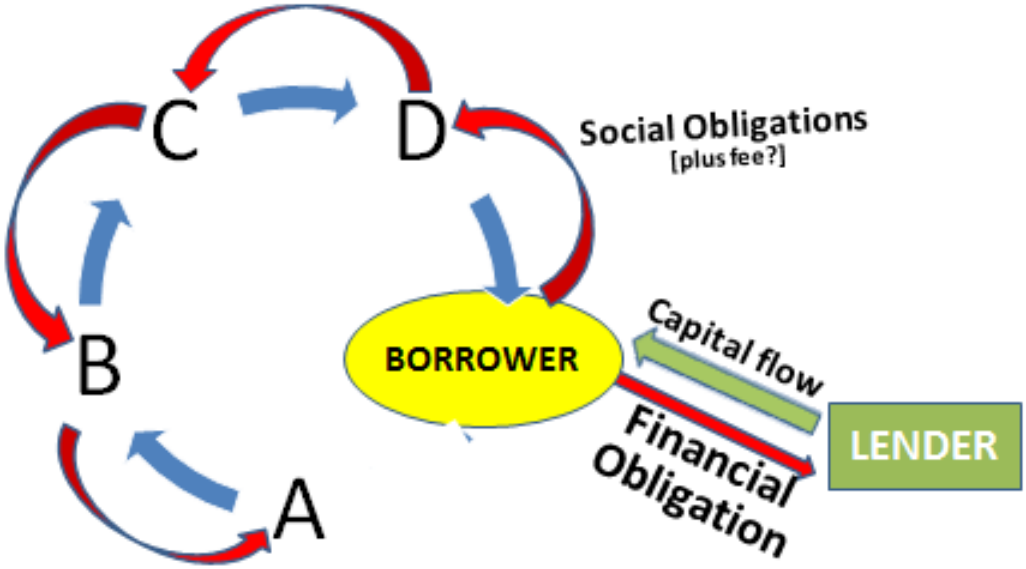
Table 3: Six Monitoring Problems Arising under Folk-Lending [*minjian jiedai- 民间借贷*]		
Number	**Monitoring Problem**	**Reason for Problem**
1	Capital in loan channel unknown	Informality and quasi-legal status make tracking and registration impossible. Wenzhou has created a Center to register minjian jiedai, but reporting is voluntary
2	Imminently callable or non-rollable	Intermediaries have little capital and may call loans as they must pay, or simply not roll the loan
3	No hard constraints	Monitoring without teeth is weak or non-existent monitoring
4	Exit or find another to bail out position rather than monitor	As the borrower/capital-requirer cannot be compelled to pay or change covenants, better moves for the capital-provider are to remain quiet and act on privileged information
5	Low bar to entry into lending channel	Not clear that many lenders/ capital-providers have the skill set to properly monitor
6	Unstable network	All above-mentioned monitoring problems contribute to this problem
Source: Author's conception		

Figure 1: Guarantor Group [保团- Bǎo tuán]



Source: Figure 1 from Selmier, ***Social Capital and Folk-lending in China's Hottest Financial Market***, 2016.

Figure 2: Guarantor Circle [连保- Lián bǎo]



Source: Figure 2 from Selmier, ***Social Capital and Folk-lending in China's Hottest Financial Market***, 2016.

Table 4: Six Monitoring Problems Arising under Peer-to-peer On-line Lending Platforms [*P2P platforms (P2P ping tai, 平台), or simply P2P*]		
Number	**Monitoring Problem**	**Reason for Problem**
1	Gates on removal of capital mean dependence of P2P for monitoring	P2P platforms may choose to not monitor, monitor but provide only positive information, or release flowery descriptions of borrowers/capital-requirers' positions
2	Independent verification of monitored information difficult	Geographically-distant lenders/ capital-providers cannot verify projects by looking at them
3	Even weaker moral constraints	Geographically-distant P2Ps
4	Systemic weakness due to immaturity, information asymmetry and "runaways"	Lenders/ capital-providers engage in herd behavior while P2P bosses absconding with capital are now commonplace
5	Low bar to entry into lending channel	Not clear that many lenders/ capital-providers have the skill set to properly monitor
6	P2Ps act like real banks	Chinese P2Ps are taking in capital, then allocating to of borrowers/capital-requirers
Source: Author's conception		