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# Too big to fail and bank loan accounting in developing nations: Evidence from the Mexican financial crisis

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ABSTRACT

During the 1990s and early 2000s, developing nations in all parts of the world experienced financial crisis. Studies have documented, both theoretically and empirically, that authorities' guarantee that insolvent financial institutions would be "bailed out" increased the incentives of banks, especially large institutions, to take on excessive loan risk. However, little research has been conducted on how the possibility of being "bailed out" impacts banks' decisions regarding the understatement of loan loss reserves (i.e. the tendency to conceal loan risk). We argue that the Mexican financial crisis of the 1990s represents a rich setting to investigate the link between "bailout assistance" and banks' accounting for loan loss reserves. The analysis of loan trends for the entire financial system shows that Mexican banks fully reserved non-performing loans not in 1997, when new accounting standards took effect, but rather in 1999–2001, after the largest institutions had been sold to foreign banks and international bailout assistance had been exhausted. Also, the results show that in the period preceding their sale to foreign institutions, "Too Big To Fail" (TBTF) banks used bailout assistance to directly manage their reserves. By contrast smaller banks used non-bailout sources of capital to reserve non-performing consumer loans, and directly swapped non-performing commercial loans for bailout assistance. Thus, while both TBTF and smaller banks utilized bailout assistance, the bailout funds only affected loan loss reserve levels in the case of TBTF banks.



## 1. Introduction

### 1.1. The Process of Crises

In the late twentieth century, the increasingly rapid globalization of capital flows contributed to the spread of financial crises in many developing countries. These included: the Mexican financial crisis of 1994/1995 (Camdessus, 1995); the East Asia crisis of the late 1990s (Thailand, Indonesia, the Philippines, and South Korea) (Walter, 2008); the 1998 Russia crisis (Pinto & Unalov, 1998); and later crises in some South American countries (Argentina 2001, Ecuador, 1999). While each of these crises had different origins, many followed a similar chronological pattern. The discussion below uses Mishkin's (Mishkin 1999, 2006) chronological order to explain the process of financial crises.

First, *many of the crises were preceded by financial and economic liberalization programs which opened the nations' economies to foreign trade and investment* (Mishkin, 1999, 2006). These included: Mexico's 1994 entrance into the North American Free Trade Agreement (NAFTA) and foreign investment liberalization; trade and financial liberalization programs by East Asian nations in the mid-1990s (Walter, 2008); and late 1990s economic liberalizations by South American countries (e.g. Argentina, Bolivia, and Ecuador) which followed the policies advocated by the *Washington Consensus.*[1]

Second, *in many cases, "regulatory gaps" emerged as the countries' economic and financial liberalizations were not accompanied by adequate financial regulatory reforms, including improvements to bank accounting.* For example, during Mexico's early 1990s economic and financial liberalization, no new regulations were passed to govern rapid flows of foreign portfolio investment or to improve bank supervision, operations, and accounting (e.g. risk management systems, internal audit departments, loan origination practices, and loan accounting) (Hazera, 1999; McQuerry, 1999; Desmet, 2000; Musacchio, 2012). A similar lack of (1990s) reforms preceded the crisis in several of the Asian nations (including,

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[1] The Washington Consensus was a group of Washington D.C. based economists who advocated that sudden economic liberalization by developing nations would provide those countries with fast economic growth and development (Williamson, 1990, 2004).

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Thailand, Indonesia, and the Philippines) (Rahman, 1998; Walter, 2008), as well as the South American countries which adopted the Washington Consensus (Mishkin, 1999).

Third, *in virtually all of these nations, the crises were preceded by large expansions of asset bubbles. Some of these bubbles were reflected in bank loans to entities with high credit risk.* For example, prior to the start of their crises, Malaysia and the Philippines had pre-crisis non-performing loans of between 5% and 10% of total loans while Mexico, Thailand, Indonesia, and South Korea had non-performing loans of approximately 10% (Mishkin, 1999).

Fourth, *many of the nations' crises were preceded by the "bursting" of the nations' asset bubbles* (Mishkin, 1999; Reinhart & Rogoff, 2013). In some cases, the breaking of these bubbles revealed that poor accounting had allowed banks to understate their loan reserves (Mishkin, 1999, 2006). In Mexico, for example, foreign capital flight in late 1994 resulted in a sudden currency devaluation; sharp rises in interest rates and inflation, and large increases in bank loan defaults. Post-crises analyses revealed that Mexican banks had used poor loan provisioning rules to understate loan reserves (Desmet, 2000, Hazera, 2005). Similarly, in the years (1992-1997) leading up to the Korean Crisis (1997/1998), weak regulations for loan classification and provisioning allowed banks to overstate the value of non-performing loans. As a consequence, the post-crisis identification of the causes of the crisis required the use of macro-level data or adjusted "official" bank financial data (Hahm & Mishkin, 2000).

*Finally, given this sudden insolvency, many of these countries were compelled to seek international bailout assistance from International Financial Organizations, such as the International Monetary Fund (IMF) and the World Bank, to restructure and recapitalize the nations' financial systems.* In some cases, the assistance was "conditioned" on improvements to the countries' bank regulations, including bank accounting. This type of aid conditioning was applied to Mexico as well as some of the East Asian bailouts (e.g. Thailand, Indonesia) of the late 1990s (Walter, 2008).

### *1.2. Bank loan accounting and the process of financial crises*

In Mishkin's (Mishkin 1999, 2006) view, financial crises in developing nations occur when financial liberalization, accompanied by inadequate reforms, contributes to economic imbalances and the building/bursting of asset bubbles. In this context, financial crises are deeply rooted in economic and financial imbalances (e.g. large current account deficits funded by foreign portfolio investment; excessive bank credit risk). However, the process also recognizes that poor regulation may contribute to the formation of asset bubbles. These regulatory shortcomings may include policies which encourage and facilitate banks' ability to engage in risky lending and overstatement of poor loans.

For example, modeling studies by Aghion, Bolton, & Fries (1999) and Mitchell (2001) conclude that firm guarantees by authorities to bailout financial institutions, combined with strict liquidation of insolvent banks, may increase the likelihood that banks will finance poor projects and overstate the loans on those projects. Also, Stiglitz's (1994) "gambling for resurrection" model describes how, during economic downturns, strict guarantees of bailout assistance by financial authorities may encourage insolvent banks to "gamble for resurrection" by taking excessive credit risk.

Beattie et al. (1995, 23-24) place such "gambling" in an accounting context by emphasizing that developing nation banks operating under financial stress may engage in consistent "…under provisioning against likely loan losses…". From a regulatory perspective, Beattie et al. (1995) also emphasize that such conditions may place bank supervisors in the precarious position of enforcing strict provisioning standards and pressuring banks' capital, or knowingly permitting banks to hide bad loans in the hope that economic conditions improve. Using macro-level data, Desmet (2000) provides evidence that Mexican banks used poor loan accounting standards to justify understating loan reserves in the three years prior to the 1994 peso devaluation.

This type of regulatory forbearance may be especially prevalent in "Too Big To Fail" (TBTF, hereafter) institutions. These institutions are so large that the failure of even one might threaten a country's financial system and social welfare (e.g. raise unemployment). Given this possibility, authorities may implicitly guarantee that insolvent TBTF institutions will be "bailed out." This guarantee, in turn, creates a "TBTF effect" (i.e. "moral hazard") which incentivizes large banks to undertake, and possibly conceal, overly risky transactions (Wheelock, 2012). Louzis, Vouldis, and Metaxas (2012) found support for such a "TBTF effect" in the non-performing mortgage and business loans of Greece's largest banks prior to the nation's 2010 financial crisis. However, they found no such effect for the banks' consumer loans. Such an affect may be exacerbated if TBTF banks make large loans to related parties (e.g. companies in affiliated industrial groups). Such loans are more likely to carry lower interest rates and possess higher default rates than loans to third parties (LaPorta, Lopez-de-Silanes, & Zamarripa 2003). Thus, the expectation of being bailed out damages the ability of a nation's banking system to efficiently allocate capital.

The purpose of this research note is to explore whether, during times of crisis, bailout assistance encourages authorities and large banks to use weak accounting rules and practices to understate non-performing loans. More precisely, based on the possible relations between guarantees of bailout assistance, bank risk taking, and loan overstatement, this study uses the Mexican crisis to investigate two main questions. The first concerns the impact of bailout assistance on the quality and implementation of bank loan accounting standards:

> Does the guarantee of international bailout assistance from other nations encourage a nation's financial authorities to promulgate or maintain poor accounting standards which allow banks to understate their loan reserves?

The second concerns the impact of bailout assistance on the loan reserves of *TBTF banks*:

> Does the guarantee of bailout assistance by financial authorities to a country's TBTF banks provide those institutions with a greater incentive to understate loan reserves than for smaller banks?

Mexico represents a rich context to investigate the questions advanced in this research note. Shortly after the emergence of the Mexican crisis, the Managing Director of the International Monetary Fund (Camdessus, 1995), characterized it as the "first financial crisis of the 21st Century." Corresponding with this status, the Mexican crisis has subsequently been used as a basis for examining crises in both developing (e.g. Kwon, 2012) and developed nations (e.g. Luhnow, 2008). Moreover, the lessons of the Mexican crisis have not only regarded economic and financial policy, but also the role of bank accounting in creating the conditions for crises. For example, a Harvard Business School Working paper (Del Angel, Haber, & Musacchio 2008, 18) emphasizes that:

> "…Mexico was the first emerging market compelled to reformulate the financial reporting of its banks as result of a financial crisis. The case of Mexico can serve as an example of the relevance of these changes as well as their scope and limitation."

This paper adds empirical evidence to economic models (e.g. Aghion et al., 1999; Mitchell, 2001) that suggest that promises of bailout assistance may not only encourage banks to take on risky loans, but also to hide those loans. Also, the paper adds to the

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