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THEORETICAL STUDY: BANKING CRISIS TRIGGERS FACTOR

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Abstract:

The banking crisis occurs when a bank experiencing withdrawals suddenly by many depositors. The banking crisis would be if the phenomenon is systemic bank runs (massive withdrawals) were widespread. Systemic crisis will have an impact on a country's economy deteriorated. There are several factors that can trigger a banking crisis that macroeconomic conditions, internal bank, institutional quality, and the contagion effects of the global economic factors. Based on these factors indicate that the causes of the banking crisis shocks not only from banks but also influenced by internal factors beyond the bank itself so that early warning systems need to be made to capture signals the banking crisis.

Keywords: banking crisis, macroeconomic, internal bank, institutional, contagion effects

INTRODUCTION

The banking crisis occurs when a commercial bank withdrawals experiencing sudden (or a bank run) by many depositors (Ascarya, 2009). Bank runs can occur because of a commercial bank operating under the system of fractional reserve banking, in which banks can lend more of the deposits received and loans banks extend in the long term but accepts deposits in the short term, so that there is always a maturity mismatches. Systemic banking crises occur when a bank run spread. If the bank run is not widespread, but the banks are reluctant to extend loans, a situation called credit crunch (credit crunch). Moreover, in many cases systemic banking crisis is a general condition in which financial institutions are systemically important to be in trouble (Laeven and Valencia, 2008). Examples of banking crises is a banking crisis in the US in 1931, the banking crisis in Nigeria in 1945-1955, the banking crisis in Britain in the year 1973 to 1974, the Asian financial crisis in 1997-1998, the bank run on Northern Rock in 2007, and the collapse of Bear Stearns in 2008.

DEFINITION AND MEASUREMENT OF BANKING CRISIS

The definition of the banking crisis is still debatable. This indication is shown by Mannasoo and Morris (2005) questioned how the size of the crisis so that it can be defined a banking crisis. Borio and Lowe (2002) reveals that the definition of origin unusual banking crisis affecting the future development strategy and assessment of the usefulness of the indicators of crisis. The views underlying the formation of specific indicators referring to the four observations. First, banking crises tend to arise primarily from deteriorating economic fundamentals, especially the decline in asset quality. Second, the banking crisis with a high

economic cost in this case the overall output often appears as a common risk factor. Third, the vulnerability tend to wake up from time to time, which reflects the mutually reinforcing interaction between the financial sector and the real economy. The growing economy, rising asset prices, reduced risk and external financing became cheaper and more. These developments will encourage expansion and if it progressed too far, enabling the financial imbalances which will be covered in the promising economic conditions. The imbalance causes distortions in the real economy in the form of excessive investment in sectors most affected by the favorable conditions. Explosion (boom) imbalance pose next contraction. At a certain point, the process goes into reverse (except financial system has built adequate defense during the boom period), the next contraction can cause widespread instability. Finally, the predictability of crisis may occur, which may also be able to detect the symptoms of the buildup of financial imbalances.

Rojas-Suarez (1999) defines a bank experiencing a crisis if the ratio of bad loans to total loans is greater standard-setting threshold of bad loans on non-crisis period plus two times standard deviation.

Demirguc-Kunt and Detragiache (1998) and Hardy and Pazarbasiglu (1998) defines a banking crisis occur if one of the conditions (indicators) are met. These indicators include: the bad loans exceed 10 percent of the total assets in the banking system, the cost of recovery reached 2 percent of GDP, the transfer of ownership in large banks to government and bank runs. Gonzalez-Hermosillo et al. (1997) provide different measurement mention that bank crises are banks with non-performing loans more than 6-8 per cent of total loans.

Another opinion expressed by Kaminsky and Reinhart (1999) which defines a bank experiencing distress characterized by the existence of a problem on the balance sheet. The banking crisis begins with a deregulation measures that have an impact on credit expansion too fast. This in turn will boost asset prices in the real sector, which led to the bubble (bubble) in the sector. Effects bursting of the bubble in related sectors followed by a drastic price reduction, disruption of the market, and rising corporate bankruptcies widely. This condition is accompanied by rising bad debts, financial losses and liquidity problems in the banking system. Kaminsky and Reinhart (1999) to measure the crisis through an observation period of crisis for 24 months.

Bussiere and Fratzscher (2002) introduced the classification of three state of crisis by multinomial logit model to avoid bias resulting from the post-crisis recovery phase assessment is wrong. The conditions led researchers to reflect the variable as binary data - good crisis or no crisis crisis- who rely on the history list crisis. This concept has some weakness that binary approach and three-period (regime) is different ignoring market pressures at near-crisis. Reliance on professional judgment has the same weaknesses and also illustrates the ambiguity of some of the operational definition of a systemic crisis.

Further definition of the crisis put forward by Mannaso and Mayes (2005), by classifying banks experiencing difficulties in two categories, namely distress and bankruptcy. Banks experiencing distress if the situation shows the ratio of equity and excess reserves of the loan

is less than the highest value of net loan provisions, whereas if the bank has equity is negative or zero, it is called bankruptcy.

Borio and Drehmann (2009) gives two definitions about the crisis. The first definition of crisis in a country where the government had to inject capital into major banks more than one or more than one large bank that failed. The second definition gives the sense that less restrictive about the crisis that the country is said to be in crisis if the government did at least 15 policies following operations: issuing a guarantee wholesale (large trade), purchase of assets, inject capital in at least one big bank, or announced a recapitalization program on a large scale

Illing and Liu (2003, 2006) subsequently developed an index that is used to test the indicators of crisis. This index is used in further studies by Hanschel and Monnin (2005) to investigate the systemic risk in Switzerland and Misina and Tkacz (2008) in Canada. This index is based on market data (stock price), balance sheet data (interbank deposits, return on assets), and the supervision of information on bank risk.

Bhattacharya and Roy (2009) showed that there are two methods of identifying future banking crisis that event-based method (based on annual data) and index method (based on monthly or quarterly). Methods based events (event-based) identify banking crises systemic just after the occurrence of certain events such as bank runs, closures, mergers, long vacation 12 of the ordinary, recapitalization and Non-Performing Assets significant (NPA) (eg Demircug Kunt and Detragiache, 1998; Kaminsky & Reinhart, 1999; Caprio and Klingebiel, 2003, and the World Economic Outlook 1998). The criticism of the method is that the identification of crisis-driven events may result in delayed recognition on crisis events (Hagen and Ho, 2003; 2006). Furthermore, event-based method does not consider the threshold explicit and acknowledge all events financial market turmoil as a crisis. As a result, research-based events that use annual data made the mistake of labeling one year as a year of crisis though the crisis may occur in only a few months of the year.

The index method has several advantages over the approach based on the event. First, this approach does not require a priori knowledge of an incident to identify the banking crisis so that the possibility of a delay in recognizing the crisis will be lower. Second, the various forms of banking severity of the disorder can be identified in this method. Third, the method index based on monthly time series data could imply a more specific timing crisis.

Kibritcioglu (2002) developed a Banking Sector Fragility Index (Index BSF) uses three important indicators to measure the fragility of the banking sector, the level of external debt of the banking sector, the credit ratio, the level of deposits. It is because of these three indicators related to foreign exchange risk, credit risk and liquidity risk.

Bhattacharya and Roy (2009) modifying the Banking Sector Fragility Index (BSF Index) developed by Kibritcioglu (2002) to Health Level Banking Sector Index (Index BSS). The index was constructed to recognize the months right from the banking crisis in India. BSS index using aggregate monthly data on deposits, loans and investment bank monthly general as a proxy for liquidity risk, credit risk and interest rate risk, which are the three main risk

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faced by banks in India. Exchange rate risks have not been included because of the relatively insignificant proportion of international assets and liabilities of banks in India.

DETERMINANT BANKING CRISIS

According to Grossman (1994) and Grossman and Meissner (2010) the cause of the banking crisis is divided into three categories. First, the banking system's ability to withstand an adverse shock depending on the initial conditions, including asset quality, liquidity, profitability and capital position. It is further influenced by the structure of the banking market, namely, the type of bank, the level of competition, policies and regulations that affect the behavior of banks and non-bank financial institutions (NBFIs). Second, macroeconomic policies and performance can affect the confidence of creditors and depositors of the bank, the value of bank assets, the ability of the borrower's bank to settle their debts, as well as the value of the collateral supporting this debt. Third, the response of policy for crisis situations can affect the banking system's ability to withstand an adverse shock (Kent, 2011).

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Many factors affect the banking crisis, among other conditions macroeconomic environment (Demirgüç-Kunt and Detragiache, 1998; Hardy and Pazarbasioglu, 1999; Poghosyan and Cihak, 2008; Wong et al., 2010), the fundamental condition of banking (Gonzalez-Hermosillo, 1997; De Young et al., 1999; Tung et al., 2004; Arena, 2008), institutional (Klomp, 2010; Wong et al., 2010), the effects of contagion (Kaminsky and Reinhart, 2000; Wong et al., 2010), and global factors (Lestano, 2003; Zhuang and Dowling, 2002). The explanation of each variable is as follows:

1. Macroeconomic Conditions

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Systemic banking pressures associated with the macroeconomic environment such as low economic growth, high inflation and high real interest rates. In addition, the balance of payments crisis were found to be associated also with systemic banking problems, as shown in research Demirgüç-Kunt and Detragiache (1998, 2000, 2002, 2005).

To illustrate the adverse macroeconomic shocks bank to increase its share of problem loans, the variables used as regressors the rate of real GDP growth, terms of trade and real short-term interest rates. Short-term real interest rates are high also affect bank balance sheets worsen if banks can not raise interest rates on their loans quickly. The real interest rate can also be considered as a proxy for financial liberalization as Galbis (1993) found that the liberalization process is likely to generate a high real interest rate. Financial liberalization may increase the fragility of the banking sector as the probability increases for excessive risk-taking. Pill and Pradhan (1995) found that the variables that can explain the extent to which financial liberalization has progressed is the ratio of credit to the private sector to GDP (Demirgüç-Kunt and Detragiache, 2005).

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Inflation can be used as an explanatory variable because it is likely to be associated with other nominal interest rates and therefore may represent a proxy on the macro economic mismanagement, which adversely affects the economy and the banking system through various channels. In addition, the rate of depreciation is used to test the hypothesis that the

banking crisis may be due to the risk of excessive foreign currency both in the banking system itself or among borrowers bank (Demirgüç-Kunt and Detragiache, 2005).

According to Calvo (1996; 2012), the ratio of M2 to foreign exchange reserves was a good predictor for the vulnerability of a country's balance of payments crises. Calvo and Mendoza (1996) revealed that when M2 exceeds the value of foreign exchange reserves, will give rise to negative shocks on the demand for money, so the fixed exchange rate system is no longer possible. Domac and Peria (2003) adds that the ratio of M2 to international reserves illustrating the vulnerability of the banking sector to shocks exchange rate crisis. For countries with a fixed exchange rate system, the risk of bank runs even greater, because the bankers are concerned about the central bank does not have enough reserves to convert their deposits into foreign currency, while for countries that embrace a floating system, the panic customers will only have an impact on exchange rate depreciation.

Wong et al. (2010) revealed that an economy with weak economic fundamentals such as economic growth slows, inflation and high real interest rates, or the competitiveness of international trade that worsened reinforce the emergence of the initial shock that triggered a systemic banking crisis. Likewise with high foreign reserves (money supply to foreign reserve) indicate that the economy will be more vulnerable to currency speculation (especially for countries with pegged exchange rates). The threat of a currency crisis that led to a currency devaluation will stimulate investors to allocate the asset portfolio of local assets (eg, local currency deposits) into foreign assets, which can cause systemic bank runs.

2. Internal Banking

Hardy and Pazarbaşıoğlu (1999) revealed that the variables related to the banking sector could be used as indicators of the banking crisis. Some of the indicators used are changes in bank deposit liabilities as a percentage of GDP, indicating a deposit runs (massive withdrawal of deposits) and a loss of confidence in the banking system, or shrinking bank balance sheets for other reasons. Furthermore, the growth ratio of bank credit to the private sector to GDP reflects the magnitude of the expansion of the banking sector. Other indicators, changes in the ratio of gross foreign debt to GDP ratio of the banking system is used as a measure of the banking system's dependence on foreign capital to finance its operations. These measurements can be used to view vulnerability to a sudden withdrawal of capital inflows.

Hardy and Pazarbaşıoğlu (1999) in his study found that the variable banking deposits tend to start to decline in real terms before the banking crisis was announced. This is because the decline in confidence in the domestic banking system and the real amount of deposits continued to decline during the crisis. This decline contributed to the liquidity problem in the banking sector. Findings further their strong tendency to credit to the private sector following the pattern of boom (explosion) and patterns of bankrupt before the crisis, with the continuous decline in the growth of credit during the crisis. The vulnerability of the banking system on private capital inflows (change in the gross external debt of the banking sector relative to GDP) also contributed as an indicator of the crisis.

Uchenna and Okelue (2012) describes the components of CAMEL (Capital, Assets, Management, Earnings and Liquidity) as aspects of the assessment of the health of banks. Capital adequacy is a key element in assessing the health of banks. The main strength lies in the bank's capital base. The capital adequacy index shows the bank's ability to meet its obligations which are a form of confidence for banks to continue to run its business. Bassel Committee in 1988 set the framework of capital adequacy of 8% of risk-weighted assets. The smaller the bank's capital adequacy ratio shows increasingly unable to meet their obligations so that the risk of failure increases. The composition of the assets will determine the amount of bank profits. The more risky the assets owned by bank, the risk of failure increases. In addition to the composition of assets, debt composition also plays an important role in the health of the bank, usually measured from the ratio of short-term deposits to total deposits. the higher the ratio means that the risk of these banks suffered withdrawals of funds in the short term. Furthermore, the feasibility and profitability ratios measure the overall performance of the bank. This aspect shows the bank's ability to manage the funds at risk and generate profit from investment activities. One ratio used is ROA (Return on Assets) which indicates the proportion of profits from the bank's assets. The higher ratio indicates more efficient and effective in the profitable asset allocation.

Poghosyan and Čihák (2008) argues that with early detection on banking distress symptoms (financial distress) will reduce the cost for recovery. Research Poghosyan and Čihák (2008) uses a variable CAMELS (Capital, Assets, Management, Earnings, Liquidity, Sensitivity) as an indicator to predict banking distress and the results showed that the CAMELS can be used as a predictor of the condition of distress of a bank, whereas in penggunaa Altman z-score the result was not as good as using CAMELS.

Results of research Hardy and Pazarbasioglu (1999) related to variable banking sector shows that deposits in banks began to fall in real terms before the banking crisis. This is because due to declining confidence in the domestic banking system, and continued to fall during the crisis. Periods of research used by Hardy and Pazarbasioglu (1999) may contribute to the liquidity problems in the banking sector. There is also a strong tendency to credit to the private sector with the value lags her to adopt a bust at the beginning of the crisis with a further decline in the growth of credit during the crisis. The study also showed that the coefficient of indicators used to capture the vulnerability of the banking system to private capital inflows (change in gross foreign liabilities of the banking sector relative to GDP) is sometimes significantly and contribute to the predictive power. On the variable size gives a signal as a hypothesis that was built, which is positive in the longer lag value, and negative in the period approaching crisis.

Wong et al. (2010) also uses the internal bank as explanatory variables. Consideration proposed by Wong et al. (2010) are the results of Hardy and Pazarbasioglu (1998, 1999), who found that the banking financial pressure is a leading indicator on the Asian financial crisis. It is also driven by the empirical results of Rojas-Areza (2001) who found that the micro-level data is useful for predicting the banking crisis. Theoretically, even a bank default could pose a threat of systemic banking suffering through a contagion effect in the banking sector (Diamond and Dybvig, 1983; Allen and Gale, 2000b; Giesecke and Weber, 2006).

Other arguments by Wong et al. (2010), most studies have tried to explore the determinants of the banking crisis from a macroeconomic perspective, which emphasizes the use of macro data. Based on this perspective, banking distress is assumed to come from macroeconomic problems, such as low output growth or the money supply is excessive. This is contrary to empirical evidence by Rojas-Suarez (2001) indicated that bank-level data is also useful for predicting empirically banking difficulties. Similar arguments were raised by Demirgüç-Kunt and Detragiache (2005), with further explained that the utilization of bank-level information can predict banking distress well as new development in research.

3. Institutional

Demirgüç-Kunt and Detragiache (1998) explains that institutional factors are important indicators in explaining banking distress. There are three indicators to describe the institutional factors that financial liberalization, institutional quality, and deposit insurance. The higher level of financial liberalization, would increase the opportunities for bank risk because it can increase the fragility of the banking sector. On the other hand, with good institutional quality, the system of banking regulation and supervision become more effective so that the possibility of a banking crisis will be lower.

Bystrom (2003) in his study found the quality of the state government relate very negatively associated with the market's assessment of the possible failure of the banking sector. The existence of deposit insurance were also significantly negatively associated with the probability of systemic collapse of banks, although it is restricted during the Asian crisis.

Hwang et al. (2009) explains that the deposit insurance scheme is important that many countries implement to prevent bank runs, control of the financial crisis, and stabilize the financial system. According Demirgüç-Kunt and Kane (2002), in 1999 more than 70 countries have established deposit insurance system in which the government provides a safety net for depositors. Laeven (2002) described two advantages if used deposit insurance system. First, a system of deposit insurance scheme set rules regarding the scope, participants, and funding. Second, the existence of this system is not only to protect small depositors with no direct impact on the government budget, but also to protect the economy and society of fluctuations in the money market. One of the reasons why the bank conditions often lead to contagion effects are a result of information asymmetry in the financial markets. Where can develop into systematic risk, which leads not only losses for depositors but also to recession for the economy.

Deposit insurance system, in essence, creating a firewall to shield the economy from the financial crisis. Many governments impose a deposit insurance system to extend full coverage of deposits to all depositors to stabilize the banking system.

Van Hoose (2007) found that the institutional environment and the reasonable price of deposit insurance is very important in reducing the moral hazard problem. Demirgüç-Kunt and Detragiache (2002) provide evidence that cross-country deposit insurance increases the likelihood of a banking crisis in countries with weak institutional environment.

4. Contagion Effect

Masson (1998) explains that the contagious effect or contagion effect can be grouped into three categories, namely monsoonal effects, spillover, and jump. Monsoonal effect²³ is defined as changes in the economy in developed countries that triggered the crisis in developing countries. The economic⁵⁶ vulnerability of developing countries due to economic pressures on terdenominasi debt in foreign currency, the amount of government debt, and problems in the banking sector. Spillover occurs because of the interdependence among developing countries, with the crisis experienced by a country's macroeconomic fundamentals affect neighboring countries. Jump or pure contagion refers to the crisis due to changes in expectations and are not related to macroeconomic fundamentals.

³⁹ Kaminsky and Reinhart (2000) and Goldstein et al. (2000) showed that incorporate the effects of contagion (contagion effect) substantially improve the accuracy of prediction of the banking difficulties, as the case of the Mexican crisis in 1994 and the Asian crisis of 1997 (Wong et al., 2010). Theoretically, the failure of a bank¹⁸ can be a threat of a systemic banking crisis through contagion effects in the banking sector (Diamond and Dybvig, 1983; Allen and Gale, 2000a, b; Giesecke and Weber, 2006). Contagion (contagion) The same can also be transmitted from non-keuangan corporate sector to the⁷⁵ banking sector, given that both of them have³⁷ debtor-creditor relationship (Blank et al., 2009). Wong et al. (2010) hypothesized that the possibility of a banking crisis in an economy increases with the onset of the crisis elsewhere.

5. Global Factors

Related Research Global¹⁰ factors as predictors of crisis shown by Eichengreen and Arteta (2000) by utilizing the growth of world oil prices (WOP), US interest rate (USI), and OECD GDP growth (ICY). The results showed that all three variables were not statistically significant global factors as explanatory banking crisis. Research Dermirguc-Kunt and Detragiache (2000) did not even find an explanation for the relationship between the factors of global⁵⁵ banking crisis. Global factors would indicate a statistically significant value when used as an explanatory variable¹⁰ of a currency crisis, as shown by Kamin et al. (2001) in particular on US variable interest rate (USI), and OECD GDP growth. Nevertheless, the results were not significant of the three explanatory variables on the currency crisis remains found as indicated by studies Edison (2003).

⁵⁴ Lestano (2003) utilizing the US inflation rate, output growth in the OECD, and the terms of trade as a global indicator to explain the banking crisis. The results showed that all three explanatory variables would⁷⁴ have no impact on the banking crisis. Zhuan⁵³ and Dowling (2002) take advantage of the US real interest rate, GDP growth in the US, the world oil prices and the real exchange rate dollar against the yen as global indicators. The results show that the global factor can be used as the primary variable (leading indicator) descriptors financial crisis in Asia.

CONCLUSION

The banking crisis becomes a topic of interest in recent years in this world. Then the banking sector need to be aware of several issues related to the factors triggering the banking crisis. These factors include macroeconomic conditions, internal banking, institutional banking, contagion effects⁴⁵ and global economic factors. Based on the above factors, it is for policy makers to create a set of early warning system to anticipate the beginning of a banking crisis the banking crisis of a systemic nature.

REFERENCES

- Allen, F., Gale, D., 2000a. Bubbles and crises, *Economic Journal* Vol. 110 No.460, 236–255.
- Allen, F., Gale, D., 2000b. Financial contagion, *Journal of Political Economy* Vol.108 Issue 1, 1–33.
- Arena, M., 2008. Bank failures and bank fundamentals: A comparative analysis of Latin America and East Asia during the nineties using bank-level data, *Journal of Banking & Finance* No. 32.
- Ascarya, 2009. Pelajaran Yang Dipetik Dari Krisis Keuangan Berulang: Perspektif Ekonomi Islam, *Buletin Ekonomi Moneter Dan Perbankan*, Vol. 12 No. 1 juli 2009.
- Bhattacharya, B., T. N. S. Roy, 2009. Forewarning Indicator System for Banking Crisis in India. <http://ssrn.com/abstract=1906576>.
- Blank, S., C. M. Buch, K. Neugebauer, 2009. Shocks at large banks and banking sector distress: The Banking Granular Residual, *Journal of Financial Stability* 5.
- Borio, C., P. Lowe, 2002. Assessing the risk of banking crises, *BIS Quarterly Review*.
- Borio, C., M. Drehmann, 2009. Assessing the risk of banking crises – revisited. *BIS Quarterly Review* March.
- Bussiere, M., M. Fratzscher, 2002. Towards A New Early Warning System Of Financial Crises, *European Central Bank Working Paper Series* No. 145.
- Byström, H. N., 2003. The Market's View on the Probability of Banking Sector Failure: Cross-Country Comparisons, *Working Paper School of Finance and Economics University of Technology Sydney Australia*.
- Calvo, G.A., 2012. Financial Crises and Liquidity Shocks A Bank-Run Perspective, *European Economic Review* 56.
- Calvo, G.A., 1996. Capital Flows and Macroeconomic Management: Tequila Lesson, *International Journal of Finance and Economics*, Vol. 1, July.
- Calvo, G. A., E. G. Mendoza, 1996. Mexico's Balance of Payment's Crisis: a Chronicle of a Death Foretold, *Journal of International Economics* 41, 235-264.
- Caprio, G., Klingebiel, D., 2003. Episodes of Systemic and Borderline Financial Crises. http://research.mfpa.ru/general/upload/faculties/files/dataset_01.pdf
- De Young, R., L. G. Goldberg., L. J. White., 1999. Youth, Adolescence, and Maturity of Banks. Credit Availability to Small Business in an Era of Banking Consolidation. *Journal of Banking and Finance* 23: 463-492.
- Demirgüç-Kunt, A., E. Detragiache, 1998. The Determinants of Banking Crises in Developing and Developed Countries, *IMF Staff Papers* Vol. 45, No. 1.
- Demirgüç-Kunt, A., E. Detragiache, 2000. Monitoring Banking Sector Fragility: A Multivariate Logit Approach, *The World Bank Economic Review* Vol. 14, No. 2.
- Demirgüç-Kunt, A., E. Detragiache, 2002. Does Deposit Insurance Increase Banking System Stability? An Empirical Investigation, *Journal of Monetary Economics* 49,1373–1406.
- Demirgüç-Kunt, A., E. Detragiache, 2005. Cross-Country Empirical Studies of Systemic Bank Distress: A Survey, *IMF Working Paper* No.96.

- Demirgüç-Kunt A. , E. J. Kane. 2002. Deposit Insurance Around the Globe: Where Does It Work? *The Journal of Economic Perspectives* Vol. 16, No. 2 : 175-195
- Diamond, D., Dybvig, P., 1983. Bank Runs, Deposit Insurance And Liquidity. *Journal of Political Economy* 91 (3), 401-419.
- Domac I., M. Peria, 2003, Banking crises and exchange rate regimes: is there a link?, *Journal of International Economics* 61 , pp.41-72
- Edison, H. J., 2000. Do Indicators Of Financial Crises Work? An Evaluation Of An Early Warning System, *International Finance Discussion Papers* Number 675.
- Eichengreen, B., C. Arteta, 2000. Banking Crises in Emerging Markets: Presumptions and Evidence, *Center for International and Development Research*, UC Berkeley
- Galbis, 1993. High Real Interest Rates under Financial Liberalization: is There a Problem?, *IMF Working Paper* 93/7.
- Giesecke, K., Weber, S., 2006. Credit Contagion and Aggregate Losses, *Journal of Economic Dynamics and Control* 30 (5), 741-767.
- Goldstein M., G. L. Kaminsky, C. M. Reinhart, 2000. Assessing Financial Vulnerability: an Early Warning System for Emerging Market, *Working Paper Institute for International Economics*. Washington, DC
- González-Hermosillo, B., Pazarbasioglu, C., Billings, R., 1997. Determinants of Banking System Fragility: A Case Study of Mexico, *IMF Staff Papers* 44, 295-314
- Grossman, R.S., 1994. The Shoe That Didn't Drop: Explaining Banking Stability during the Great Depression, *Journal of Economic History* 54, 654-682.
- Grossman, R. S., C. M. Meissner, 2010. International Aspects of the Great Depression and the Crisis of 2007: Similarities, Differences, and Lessons, *NBER Working Paper* Series No. 16269
- Hagen J., Tai-kuang Ho, 2003. Twin Crises A Reexamination of Empirical Links. <http://www.gtap.agecon.purdue.edu/resources/download/1386.pdf>
- Hagen J., Tai-kuang Ho, 2006. Money Market Pressure and the Determinants of Banking Crises, <http://www.atl-res.com/macro/papers/vonhagen%20paper.pdf>
- Hanschel, Elke; M., Pierre, 2005. Measuring and Forecasting Stress in the Banking Sector: Evidence from Switzerland, *Bank for International Settlements Working Paper*, No. 22, Basel.
- Hardy, D., Pazarbasioglu C., 1998. Leading Indicators of Banking Crises: Was Asia Different?, *IMF working paper*, 98/91
- Hardy, D., Pazarbasioglu C., 1999. Determinants and Leading Indicators of Banking Crises: Further Evidence, *IMF Working Paper* 46 no.3.
- Hwang D., F.Shie, K. Wang, J.-C. Lin, 2009. The pricing of deposit insurance considering bankruptcy costs and closure policies, *Journal of Banking & Finance* Vol 33: 1909-1919
- Illing, M.,Y. Liu, 2003. An Index of Financial Stress for Canada, *Bank of Canada Working Paper* 2003-14, June
- Illing, M.,Y. Liu, 2006. Measuring Financial Stress in a Developed Country: An Application to Canada, *Journal of Financial Stability*, Vol. 2, Issue 4, 243 -265.
- Kamin S. B., J. W. Schindler, S. L. Samuel, 2001. The Contribution Of Domestic And External Factors To Emerging Market Devaluation Crises: An Early Warning Systems Approach, *International Finance Discussion Papers* Number 711. Board of Governors of the Federal Reserve System.
- Kaminsky, G. L., C. M. Reinhart, 1999. The Twin Crises: Causes of Banking and Balance of Payments Problems, *American Economic Review*, Vol. 89 Issue 3, June 1999, 473-500.

- Kaminsky, G. L., C. M. Reinhart, 2000. On crises, contagion, and confusion, *Journal of International Economics* No.51
- Kent, C. J., 2011. Two depressions, one banking collapse: Lessons from Australia, *Journal of Financial Stability* No. 7
- Kibritcioglu, A., 2002. Excessive Risk-Taking, Banking Sector Fragility and Banking Crises, *Working Paper* No. 02-0114, 1-48, Office of Research University of Illinois at Urbana Champaign
- Klomp, J., 2010. Causes of banking crises revisited, *North American Journal of Economics and Finance* 21
- Laeven, L., F. Valencia, 2008. Systemic Banking Crises: A New Database, *IMF Working Paper* No. 08/224.
- Lestano, J. J., G. H. Kuper, 2003. Indicators of financial crises do work! An early-warning system for six Asian countries. *Working Paper*.
- Männasoo, K., D. G. Mayes, 2005. Investigating the Early Signals of Banking Sector Vulnerabilities in Central and Eastern European Emerging Markets, *Working Papers of Eesti Pank* 8.
- Masson, P., 1998. Contagion: Monsoonal Effects, Spillovers, and Jumps Between Multiple Equilibria, *IMF Working Paper* No.142.
- Misina, M., T. Greg, 2008. Credit, Asset Prices, and Financial Stress in Canada, *Bank of Canada Working Paper*, No. 2008-10, Ottawa, April 2008.
- Pill, H., M. Pradhan, 1995. *Financial Indicators and Financial Change in Africa and Asia*. IMF Working Paper 95/123, November
- Poghosyan, T., M. Čihák, 2008. Distress in European Banks: An Analysis Based on a New Dataset, *IMF Working Paper*.
- Rojas-Suarez, L., 1999. Early Warning Indicators of Banking Crises: What Works for Emerging Markets? With Applications to Latin America, *mimeo*, February
- Rojas-Suarez, L., 2001, Rating Banks in Emerging Markets: What Credit Rating Agencies Should Learn from Financial Indicators, *Working Paper of Institute for International Economics*, No. WP01-6, May
- Tung, W. L., C. Quek, P. Cheng, 2004. Genso-EWS: A Novel Neural-Fuzzy Based Early Warning System For Predicting Bank Failures, *Neural Networks* 17.
- Uchenna, A.W., U. D. Okelue, 2012. Detecting Early Warning Bank Distress Signals in Nigeria: A Multi Discriminant Analysis Approach. *Research Journal of Finance and Accounting*, Vol 3, No 6
- VanHoose, D., 2007. Theories of bank behavior under capital regulation. *Journal of Banking & Finance* 31. 3680–3697
- Wong, J., T.-C. Wong, P. Leung, 2010. Predicting banking distress in the EMEAP economies, *Journal of Financial Stability* No.6.
- World Economic Outlook, 1998. *World economic outlook: a survey by the staff of the International Monetary Fund*
- Zhuang, J., J. M. Dowling, 2002. Causes Of The 1997 Asian Financial Crisis: What Can An Early Warning System Model Tell Us?, *ERD Working Paper* No. 26.

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