

## Special Comment

# Moody's Global Banking

May 2009

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

### Summary

The global financial crisis that erupted almost two years ago has provided evidence that Moody's approach of factoring some degree of potential public support in deposit-taking institutions' ratings is conceptually appropriate. The analytical framework has been severely tested, but it appears to have captured adequately the importance that public authorities attach to protecting depositors' confidence during times of stress.

The prolonged global financial crisis, however, is affecting the ability of national governments and their central banks to support their banking systems in certain markets. Most governments are at least as likely, if not more likely, to support their banking systems as they are to service their own debts. However, the erosion in underlying credit fundamentals and reduced policy flexibility of many governments have prompted a review of the level of systemic support for banks in countries with sovereign ratings below the triple-A level. This review is expected to result in changes to the bank debt and deposit ratings of some banks in non-Aaa rated countries.

Coming into this crisis, Moody's assessment of the ability and willingness of a government to support systemically important banks has been framed around the motivation of authorities to avoid a systemic banking crisis that could be sparked by the failure of individual institutions. This motivation is powerful and is based on the logic of preserving economic and fiscal fundamentals within a country.

### Table of Contents:

Summary	1
Potential Rating Implications	2
Support Capacity Limitations During Systemic Crisis	3
Systemic Support Not Necessarily Limited To Government Debt Ratings	4
Parameters used to Determine Level of Systemic Support	5
Foreign Currency Debt Ratings	6
Government-Related Issuers	6
Implementation and Potential Rating Implications	6
Moody's Related Research	8
Appendix 1	9
Appendix 2 - Definitions	10

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**Moody's Investors Service**

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

This has prompted governments around the world to take the supportive actions that they have. Now, however, with the crisis both prolonged and widespread in many systems despite the support actions that have been taken, we observe that governments are forced to consider a more restricted range of policy options in order to preserve their fiscal health, currency value, and access to financial markets. These restrictions may lead to greater risk to bank creditors.

During an extended financial crisis, such as that which we are currently experiencing, the capacity of a central bank to provide support converges with, and is increasingly constrained by, the national government's own debt capacity. Even in systems with fiat currency<sup>1</sup>, where central banks have a theoretically unlimited capacity to 'print money', there will remain tradeoffs involving monetary policy considerations and access to global financial markets.

In this Special Comment, Moody's describes the parameters that it is considering in its assessment of governments' ability to provide support to their banks in the current environment. These include the size of the banking system in relation to government resources, the level of stress in the banking system, the foreign currency obligations of the banking systems relative to the government's own foreign exchange resources, and changes to government political patterns and government priorities.

### Potential Rating Implications

Moody's will incorporate its observations on a country-by-country basis. Over time, rating reviews and rating adjustments as a result of our observations and conclusions will be announced. In some instances, such as certain central European countries, revised support assumptions have already been taken into account as part of recent rating actions.

The countries in developing and emerging markets where ratings of banks are more likely to be affected in this environment are those where the gap between the government bond rating and the local currency Deposit Ceiling is wide and where banks have benefited from multiple notches of rating uplift due to systemic support.

In many cases, we expect the capacity of national governments to provide support to be established at approximately two notches above the government's rating. In rare and more extreme situations, where we believe that the risk is high that a government may seek to 'ring-fence' its own fiscal position from a very weak banking system, our assessment of support to the banking system could fall below the government's own rating. In other cases, where a government's fiscal position is very strong and Moody's assessment of the risk of a system-wide, as opposed to institution-specific, banking crisis is very low, our assessment of support to the banking system could be higher than two notches above the government rating.

Banks with stand-alone ratings that are higher than that of the government, or banks that have higher deposit ratings because of other sources of support, such as support from a parent company, will continue to be rated above the government bond rating level. All else being equal, these banks would be constrained only by the local currency Deposit Ceiling in its utility as an indicator of the risk of a deposit moratorium (see definitions in Appendix 2).

Moreover, in countries where the government bond rating and the Deposit Ceiling are at the same level, our reassessment of systemic support will have no implication on banks' ratings. This applies to banks in all countries that are Aaa-rated, as well as to banks in a handful of countries rated below Aaa.

We will begin our review of support capacity with those systems in which the government's own capacity to provide support may be constrained in today's environment or significantly reduced compared to our previous assessment. Among more than 1,100 banking groups rated by Moody's in over 80 countries, about half benefit from systemic support under our methodology. Based on some initial analysis, negative rating implications could be triggered for between 10% to 15% of the banks we rate, sprinkled among approximately 50 countries.

In this report we comment on potential rating changes resulting from a reassessment of systemic support to the local currency deposit and senior debt ratings of affected banks. However, it is important to note that other classes of debt may also be affected as the ratings on those more junior debt classes are usually derived by notching from the most senior classes. Appendix 1 provides an indication of the systems in which bank local currency ratings may be subject to review based on our initial analysis.

<sup>1</sup> "Fiat" currency is a currency issued and controlled by a government through its own central bank.

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

### Support Capacity Limitations During Systemic Crisis

In incorporating systemic support in bank ratings, we have been using the Deposit Ceiling as a proxy of the ability of the government to support a bank. In numerous systems where the government's own bond rating is less than Aaa, the Deposit Ceiling can be established at a higher rating level to reflect the extensive policy tools available to central banks, in particular, to support banks, but limited at the same time by the risk of a deposit moratorium.

The conduct of governments during the global financial crisis that erupted in 2007 has largely validated the approach of factoring some degree of public support in deposit-taking institutions' ratings. Moody's Joint Default Analysis methodology (see definition in Appendix 2) has proven analytically sound when empirically tested in this harsh environment. Demonstrations of support have been overwhelming across various banking systems, and support has taken different forms, including liquidity and capital injections, nationalizations, as well as blanket deposit and debt guarantees.

Broad based systemic support is also evidenced by the fact that few incidents of loss have been borne by investors, and even less by depositors, despite the fact that the international banking crisis has reached historical proportions. That being said, many lessons have been and are being learned about the various modes of central banks' and governments' intervention during the crisis. These developments warrant an examination of, how much support should be incorporated in bank ratings. Under conditions of prolonged and systemic stress, an adjustment to our assessment of systemic support needs to be made so as to ensure that bank ratings don't overestimate the systemic support capacity relative to the Government bond rating.

When we introduced the Joint Default Analysis for banks, we chose the Deposit Ceiling as the anchor to the support coming from public authorities. The Deposit Ceiling was - and remains - the risk that the government might impose a domestic currency deposit moratorium. The government would presumably resort to a deposit moratorium only in response to a run on the banking system's deposits that was so broad-based as to potentially overwhelm the central bank's ability to provide the needed short-term liquidity. As long as the finances of the government itself are secure, the Deposit Ceiling is a reasonable measure of the central bank's ability to support a troubled bank; i.e., it can provide liquidity assistance to any individual bank as long as the problems within the banking system are idiosyncratic.

What has become increasingly apparent during the current crisis is that when crisis conditions become exceptionally harsh, a liquidity crisis can degrade into a solvency crisis. Liquidity support provided by a central bank will keep banks afloat, but when not only their funding is at risk but also their assets are impaired, there is a need for recapitalization, which is beyond a central bank's powers.

Liquidity injections by central banks do not address banks' long-term solvency issues. First, central banks themselves are not immune to losses; as they take less pristine securities in exchange for liquidity, their balance sheets swell and, being public institutions, their losses have to be covered by the government. Second, there is a point where the monetization of assets is not sufficient to rescue a bank from insolvency, and fresh capital injections are needed; central banks typically are not equipped - and not mandated - to provide capital.

In addition, the capacity of central banks to provide liquidity is finite, and their willingness to support banks is therefore limited. This limitation has become a more relevant constraint for many systems due to the pervasiveness and longevity of the current crisis. For instance, if hyper-inflation becomes a concern - whether it is caused by the over supply of liquidity by the central bank or for other macro-economic reasons - the government or the central bank may choose to take aggressive actions to the detriment of banks. In many cases, concerns about the government's access to the cross-border financial markets becomes a greater consideration, and bank support policies can have implications on the stability of the value of a country's currency. Under these cases, policy responses to assure market access and protect currency values could be as extreme as to include the implementation of a deposit moratorium.

Also, as governments become increasingly involved in the rescue of banks, the central bank's "credit strength" - for the purpose of measuring capacity to bail-out its system - converges towards the government's bond rating. In other words, there is inevitably a point where the burden of supporting the banking system shifts from the balance sheet of the central bank to that of the government.

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

In the context of the current crisis and the ever-changing market conditions, the need for support has become less institution-specific and more system-wide. In situations where support requirements extend beyond single institutions as a result of systemic crises, the Deposit Ceiling becomes less relevant as an indicator of the capacity of a government and central bank to provide support. The support capacity converges with that of the government itself. This warrants a reassessment of the level of support to that which will more appropriately reflect the ability of a government to support banks during times of systemic stress. Therefore, we believe that the support input (or indicator) that we use in our rating methodology should be more closely aligned to the government's local currency bond rating.

Moody's also notes that in the medium to long term, actions being taken by regulators to retool and rethink the global financial architecture and regulatory regimes may well influence the risks that could be borne by a banking system. It is possible that idiosyncratic risks will be reduced as a result (by preventing single institutions from becoming systemically too significant), and therefore systemic risks would become predominant. Should this occur, the required intervention in times of crisis would be potentially large relative to the ability of its central bank to provide support, which further calls for some moderation of the assessment of support.

The next question that needs to be addressed is whether this support input should be equalized with the government bond rating, or whether it typically should be set above the government level due to the array of tools available to the central bank to provide support. We should also examine the case for keeping some flexibility in order to reflect the risk that, when a system is under extreme stress, governments may choose to ring-fence their assets and limit the support they provide to banks, which might justify reducing the level of support below that of the government bond rating.

### Systemic Support Not Necessarily Limited To Government Debt Ratings

Having discussed why the Deposit Ceiling may overstate support capacity and why our systemic support assumptions would be more appropriately measured by anchoring the input on the government bond rating, it is important to stress that Moody's nonetheless believes that the ability of a government to support a bank can be higher than the government debt rating. This opinion in part is supported by the array of tools - financial as well as non-financial - available to governments and their central banks which could be employed to assist banks even if they have difficulties servicing their own debts. For instance, governments may opt to distribute their scarce resources among a number of banks, thus providing incremental and gradual support to maintain their existence. This may happen even though governments may have difficulties in servicing their debt, especially when government authorities fear a collapse of the banking system, which might amplify the economic stress.

A central bank can utilize non-financial measures (i.e., measures that have no material fiscal impact to the government) to assist banks in times of stress, including accounting, tax and regulatory forbearance. Changes to the insolvency code and assisted asset sales to other market participants are alternative forms of support. To the extent that banking authorities can manage to deal with ailing banks without a cost to public coffers, higher support than that suggested by the government debt rating could be incorporated in bank ratings. However, we would also need to consider cases when there is significant risk that the costs of preventing a systemic banking crisis could overwhelm public resources, prompting these governments to preserve their own debt service capacity at the expense of providing support to banks, even if they are deemed systemically important. At the same time, in some other countries where banking systems are strong and not overly large in comparison to the sovereign, and the government's fiscal position is similarly strong, a greater level of support may be appropriate.

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

### Parameters used to Determine Level of Systemic Support

Consistent with the discussion above, when establishing the level of systemic support that can be used for bank ratings, sovereign and banking analysts will consider a number of dimensions, both positive and negative, which will determine where our support assumptions should be set. This support assumption will be determined on a country basis and will therefore be used as an input for all bank ratings in that country.

The following conditions would be among those considered in our reassessment of systemic support:

#### 1. Size of the banking system compared to that of the government

The magnitude of resources required to support banks in relation to the government's resources and debt capacity is a constraining element on the support capacity. Where there is significant risk that the costs of preventing a systemic banking crisis could overwhelm public resources, governments may be forced to preserve their own debt service capacity at the expense of providing support to banks that are deemed systemically important. At the same time, we must pay attention to the risk that individual institutions have reached a size of significant proportion to a country's gross domestic product and may pose too big of a challenge to a country to be saved, especially if the country is already burdened with debt.

#### 2. Level of stress in the banking system and in the economy

Financial and economic crises vary in scope and duration, and the extent and nature of the assistance that may be required also fluctuates. Also, while the actions and amounts of resources that may be required to save individual institutions is typically calculable and circumscribed, it is more challenging to stimulate a stalled economy or to have the expertise and the right plan to re-build a financial system. As such, the presence of a profound crisis or the frequent recurrence of the need for government intervention in a country prone to failures would put downward pressure on a support assessment.

#### 3. Foreign currency obligations of the banking system relative to the government's own foreign currency resources

Beyond the scale of a government intervention, the type of intervention, and in particular the fact that banks liabilities may be predominantly in foreign currency, also matters. While central banks are only lenders of last resort in the local currency, the capacity to support banks does not depend only on the ability to inject emergency liquidity in local currency. The risk that sizable foreign currency liabilities may lead to concerns about the stability of the system itself diminishes the ability of the central bank to issue massive liquidity assistance in local currency; by injecting substantial amounts of liquidity in local currency, the central bank incurs the risk of a drop in the value of its currency, fueling inflation and further currency depreciation. The size of banks' foreign currency liabilities, as well as the existence of clearly defined foreign currency swap agreements between central banks, are, therefore, additional factors to consider in determining support capacity.

#### 4. Political and historical patterns

In collecting evidence of support, we consider current actions and official announcements made by governmental authorities as well as historical patterns. These can be both positive (supportive) or negative, as it must be recognized that governments can sometimes be a source of uncertainty and pose risks to banks.

#### 5. Shift in Government Priorities

Either because of implicit (e.g., historical patterns) or explicit reasons (e.g., statements made by the government), the assessment of support capacity partly relies on assumptions regarding the likely behavior and priorities of governments in times of crisis. However, these priorities can change and it is important to remain alert to this possibility. For instance, Moody's has traditionally considered government-

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

owned banks, when present, as the most likely to receive support in a crisis, followed by large and systemically important banks. However, while such rank order remains valid in general, Moody's may in some instances reassess the probability of support, even to public sector banks, in order to reflect shifting priorities which, as discussed above, might be triggered by a desire to protect the currency as opposed to banks or institutions that have large depositor shares compared to public policy institutions.

### Foreign Currency Debt Ratings

Our reassessment of the systemic support assumption for banks' deposit ratings does not change Moody's methodology for assigning foreign currency ratings to banks' debts. These continue to be based on the obligor's local currency rating and Moody's country ceiling policy. Therefore, to the extent that our new assessment of the support factor leads to lower local currency ratings for certain banks, it would also affect foreign currency ratings unless they remain constrained by or are at the foreign currency bond or foreign currency deposit ceilings of that particular jurisdiction.

However, as discussed in the Special Comment published in February 2009 "Banks Dependent on Government Foreign Currency Resources for Support", there will be cases where the foreign currency debt obligations of a bank may be further adjusted and could be constrained by the government foreign currency bond rating. This would be the case if a bank, even though stronger than the government on a stand-alone basis, cannot access the foreign currency market independently and therefore needs government support to refinance its foreign currency obligations. In such a case, the foreign currency debt obligations of a bank would be capped by the government's foreign currency debt rating.

### Government-Related Issuers

Moody's also applies its Joint Default Analysis methodology in the rating of government-related, non-bank financial institutions (or financial government-related issuers - definition in Appendix 2). When evaluating financial government-related issuers, Moody's analysis starts with the stand-alone assessment of these issuers. We then take into account the role that these institutions play in the local economy and the government support, expressed either through guarantees, direct ownership or laws and regulations. Financial government-related issuers with policy roles would usually be rated at or below the government level.

However, financial government-related issuers that play a unique and critical role in the economy may benefit from additional uplift - similar to deposit-taking institutions. Moody's will implement a similar approach as the one discussed above for banks and will use the government's local currency bond rating, adjusted in a similar manner as for banks,<sup>2</sup> as the anchor to the Joint Default Analysis methodology when rating financial government-related issuers that play critical roles in the local or national economy, and therefore are expected to be supported in priority to the government's own debt obligations. Moody's believes an uplift to the government rating is applicable to financial government-related issuers that have unique and critical roles because central banks and governments can make use of their non-fiscal measures to support these institutions in the same way as they do for deposit-taking institutions.

### Implementation and Potential Rating Implications

Moody's will be evaluating the systemic support assumption currently applied in the assignment of deposit ratings in all countries where Moody's rates banks. However, for countries where the government bond rating and the Deposit Ceiling are at the same level, this evaluation will have no direct rating implications for bank ratings at this time. Countries that may be most affected are those for which the gap between the government bond rating and the Deposit Ceiling is widest.

As we approach the process of reassessing the systemic support input in our analysis, not all bank ratings in these countries will be affected. Ratings of banks that receive no ratings lift from systemic support will be unaffected by the change. The number of banks that may be affected, and the number of notches that their

<sup>2</sup> As for banks, we are shifting our measure of the government's ability to support financial government-related issuers that perform critical policy functions from the local currency deposit ceiling to the government's local currency bond rating, adjust upward as appropriate to account for the multitude of support tools available to the government.

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

ratings could be changed, would depend on the stand-alone rating of each bank, the level of support currently assumed, and where our assessment of systemic support will be positioned (for example, at government bond rating plus two notches, or at a different level).

Banks whose stand-alone fundamental credit strength - measured by Moody's Bank Financial Strength Rating (see definition in Appendix 2) - is stronger than that of the government would continue to be rated above the government bond rating assuming they are not constrained by the Deposit Ceiling. Similarly, branches and subsidiaries of highly rated banks could be intrinsically more sound than the government of its host country in local currency, and therefore may merit a higher rating. All local currency deposit ratings will continue to be capped by the Deposit Ceiling, as it expresses the risk of a deposit freeze.

To evaluate the systemic support assumptions, global rating committees consisting of sovereign and banking analysts will be conducted. The rating committees will consider every country's particular characteristics by taking into account the factors described in the previous section; these committees will determine whether their assessment of a national government's capacity to provide support is adequately reflected in current ratings. Upon conclusion of the rating committees, any bank ratings that are affected will be adjusted, or, in cases where the impact is not immediately determined or there are other considerations pending, placed on review.

The countries where banks are more likely to be affected by our observations on systemic support are those where the gap between the government bond rating and the Deposit Ceiling is wide and where banks have benefited from multiple notches of rating uplift due to our assumption of systemic support. It is this group of banks that will receive our primary focus as we progress our analysis. Based on some initial analysis, negative rating implications could be triggered for between 10% to 15% of the banks we rate, sprinkled among approximately 50 countries.

We note that we also are pursuing other initiatives in the assessment of our bank ratings globally. Changes triggered by our revised observations on systemic support will be coordinated with these other analytic initiatives, as appropriate. These initiatives include changes to Bank Financial Strength Ratings or debt and deposit ratings consistent with the guidance provided in the Special Comment 'Calibrating Bank Ratings in the Context of the Global Crisis', which was published in February 2009. Moody's is actively pursuing stress tests of bank assets and placing increased focus on the implications of these tests to capital adequacy. This analysis may have implications for many banks independent of changes in systemic support. Further, in relation to support as recognized through the Joint Default Analysis methodology, Moody's also is assessing parental support, particularly in relation to the capacity and willingness of parent banks in developed systems to provide support to banks in emerging markets that have come under increased stress. This issue was highlighted in the recent paper 'West European Ownership of East European Banks During Financial and Economic Stress', also published in February. This too could have implications for some of the banks that may be affected by developments in systemic support.

We will monitor our systemic support assumptions and adjust them in the future as necessary and as the conditions in each country change. Adjustments could occur if (i) the local currency government bond rating were to change, or (ii) if our opinion on any of the parameters discussed above were to change. Any adjustments to the systemic support assumption for a specific country would be communicated through a press release.

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

### Moody's Related Research

#### Rating Methodology

- Credit Differentiation Among Classes of Bank Debt: Evidence From Recent Government Interventions in the U.K., Denmark and the U.S.", April 2009 (116002)
- Calibrating Bank Ratings in the Context of the Global Financial Crisis, February 2009 (114705)
- Banks Dependent on Government Foreign Currency Resources for Support, February 2009 (114127)
- West European Ownership of East European Banks During Financial and Economic Stress, February 2009 (112939)
- Moody's Assesses Bank Hybrid Securities in the Context of the Credit Crisis, December 2008 (112358)
- Incorporation of Joint Default Analysis into Moody's Bank Ratings: A Refined Methodology, March 2007 (102639)
- Bank Financial Strength Ratings: Global Methodology, February 2007 (102151)
- The Local Currency Deposit Ceiling, August 2006 (98554)

*To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.*

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

## Appendix 1

## Potential Impact of Reassessment of Systemic Support on Banks and Financial Government-Related Issuers (GRIs)

This table below includes all countries where Moody's has a public rating of banks and/or financial government-related issuers currently, and it is provided as a preliminary indication only. It is broken down between countries where we expect some of these firms to be affected and countries where we do not anticipate any impact based on our initial assessment. Entities in a "likely to be affected" country will not necessarily be all impacted. As emphasized in the Special Comment, that assessment will be determined on a case-by-case basis and will depend on country-specific and individual banking system conditions.

Likely to be affected	Banks	GRIs	Unlikely to be affected
ARGENTINA	/		ANDORRA
ARMENIA	/		AUSTRALIA
AZERBAIJAN	/		AUSTRIA
BAHRAIN	/		BELGIUM
BELARUS	/		BERMUDA
BRAZIL	/	/	BOLIVIA
BULGARIA	/		CANADA
CAMBODIA	/		CHINA
CHILE	/		DENMARK
COLOMBIA	/		EL SALVADOR
CROATIA	/	/	ESTONIA
CYPRUS	/		FINLAND
CZECH REPUBLIC	/	/	FRANCE
EGYPT	/		GERMANY
GEORGIA	/		GUATEMALA
GHANA	/		ICELAND
GREECE	/		ISRAEL
HONG KONG		/	ITALY
HUNGARY	/	/	JERSEY
INDIA	/		KUWAIT
INDONESIA	/		KYRGYZSTAN
IRELAND	/		LATVIA
JAPAN		/	LIECHTENSTEIN
JORDAN	/		LITHUANIA
KAZAKHSTAN		/	LUXEMBOURG
KOREA	/	/	MALTA
LEBANON	/		MONTENEGRO
MALAYSIA	/		NETHERLANDS
MAURITIUS	/		NEW ZEALAND
MEXICO	/	/	NORWAY
MONGOLIA	/		OMAN
MOROCCO	/		PANAMA
PAKISTAN	/		PERU
PHILIPPINES	/		PORTUGAL
POLAND	/		QATAR
ROMANIA	/		RUSSIA
SLOVAK REPUBLIC	/		SAUDI ARABIA
SOUTH AFRICA	/	/	SINGAPORE
THAILAND	/	/	SLOVENIA
TRINIDAD & TOBAGO	/		SPAIN
TUNISIA	/		SWEDEN
TURKEY	/		SWITZERLAND
UKRAINE	/		TAIWAN
URUGUAY	/		UNITED ARAB EMIRATES
UZBEKISTAN	/		UNITED KINGDOM
VENEZUELA	/		UNITED STATES
VIETNAM	/		

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

### Appendix 2 - Definitions

#### Bank Financial Strength Rating <sup>3</sup>

Bank Financial Strength Ratings (BFSRs) represent Moody's opinion of a bank's intrinsic safety and soundness and, as such, exclude certain external credit risks and credit support elements that are addressed by Moody's Bank Deposit Ratings. In addition to commercial banks, Moody's BFSRs may also be assigned to other types of financial institutions such as multilateral development banks, government-sponsored financial institutions and national development financial institutions. Unlike Moody's Bank Deposit Ratings, Bank Financial Strength Ratings do not address the probability of timely payment. Instead, Bank Financial Strength Ratings are a measure of the likelihood that a bank will require assistance from third parties such as its owners, its industry group, or official institutions.

Bank Financial Strength Ratings do not take into account the probability that the bank will receive such external support, nor do they address risks arising from sovereign actions that may interfere with a bank's ability to honor its domestic or foreign currency obligations. Factors considered in the assignment of Bank Financial Strength Ratings include bank specific elements such as financial fundamentals, franchise value, and business and asset diversification. Although Bank Financial Strength Ratings exclude the external factors specified above, they do take into account other risk factors in the banks operating environment, including the strength and prospective performance of the economy, as well as the structure and relative fragility of the financial system, and the quality of banking regulation and supervision.

Moody's uses an A through E symbol system for Bank Financial Strength Ratings. Bank Financial Strength Ratings can be mapped to Moody's traditional bond rating scale as shown in the table below.

Mapping of Bank Financial Strength Rating

Bank Financial Strength Ratings	Baseline Credit Assessment
A	Aaa
A-	Aa1
B+	Aa2
B	Aa3
B-	A1
C+	A2
C	A3
C-	Baa1
C-	Baa2
D+	Baa3
D+	Ba1
D	Ba2
D-	Ba3
E+	B1
E+	B2
E+	B3
E	Caa1
E	Caa2
E	Caa3
E	Ca
E	C

<sup>3</sup> For more detail, see "Bank Financial Strength Ratings: Global Methodology", February 2007 (102151).

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

### Deposit moratorium

A deposit moratorium or "deposit freeze" is defined as a government-imposed restriction on the ability of depositors to withdraw their money from a bank. Deposit moratoria are a subset of other debt moratoria that a government could resort to in the event the government itself defaults on its debt obligations, or where it is simply unable to prevent a run on bank (e.g., when the scale of the support required is too large). A deposit moratorium can be imposed on all banks within a country or it can be done selectively among institutions (e.g., government-owned versus private, large versus small) or types of debt (e.g., demand deposits versus term deposits, deposits versus securities and/or between domestic and foreign currency debt).

### Joint Default Analysis <sup>4</sup>

The Joint Default Analysis framework is used for adjusting Bank Financial Strength Ratings to reflect various forms of external support for purposes of determining senior debt and deposit ratings.

The Joint Default Analysis operates on the principle that the risk of default (and therefore, loss) for certain obligations depends upon the performance of both the primary obligor (i.e., the bank) and other entities that may provide support to the primary obligor. Moody's Joint Default Analysis framework for banks evaluates potential support in a *sequential* process, or "building block" approach, starting - and notching up - from a Bank's Financial Strength Rating. The intention of this approach is to replicate the likely sequence in which external support for a bank would be forthcoming. Each support provider is assessed for its *capacity* and *willingness* to support the bank. The first is based on the supporter's own rating. The second is based on Moody's opinion of the probability that support will be forthcoming when needed. External support providers, if any, that are considered under the Joint Default Analysis are: the parent company, any relevant cooperative group, any relevant regional government and any relevant national government-related entity (typically the central bank and the government itself).

### Non-Bank Financial Government-Related Issuers

A Non-Bank Financial Government-Related issuer is an entity with full or partial government ownership or control, a special charter or a public-policy mandate from the national or local government.

A number of these agencies are effectively government-related financial institutions, without having all the powers that traditionally characterize banks, such as deposit-taking powers. Nonetheless, they typically play an important role in the economy, as they are usually established to supplement the services or products offered by private firms. They can be mandated to provide financing to small firms, fund infrastructure projects or provide other forms of financial support for other policy objectives.

### Local Currency Deposit Ceiling

Moody's Local Currency Deposit Ceiling for a country or monetary region is the highest rating that can be assigned to the local currency deposits of a bank or other deposit taking institution domiciled within that rated jurisdiction. It reflects the risk that governmental authorities might impose a freeze on all local currency bank deposits in the response to systemic run on deposits or a heightened risk of such a run.

<sup>4</sup> For more, see "Incorporation of Joint-Default Analysis into Moody's Bank Ratings: A Refined Methodology, March 2007 (102639)

## Financial Crisis More Closely Aligns Bank Credit Risk and Government Ratings in Non-Aaa Countries

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