

SPECIAL COMMENT

Sovereign Default and Recovery Rates, 1983-2010

Table of Contents:

INTRODUCTION	2
DATA AND METHODOLOGY	3
TRENDS IN CREDIT QUALITY: THE DISTRIBUTION OF SOVEREIGN RATINGS	5
TRENDS IN CREDIT QUALITY: RATING ACTIONS AND MIGRATION RATES	6
HISTORICAL SOVEREIGN DEFAULTS	9
SOVEREIGN CUMULATIVE DEFAULT RATES	12
RECOVERY RATES OF DEFAULTED SOVEREIGN ISSUERS	13
RATING PERFORMANCE MEASURES	15
MOODY'S RELATED RESEARCH	16
APPENDIX I – CIRCUMSTANCES SURROUNDING INDIVIDUAL SOVEREIGN BOND DEFAULTS	17
APPENDIX II – PRICES OF DEFAULTED SOVEREIGN BONDS	29
APPENDIX III – SOVEREIGN BOND RATING HISTORIES	31

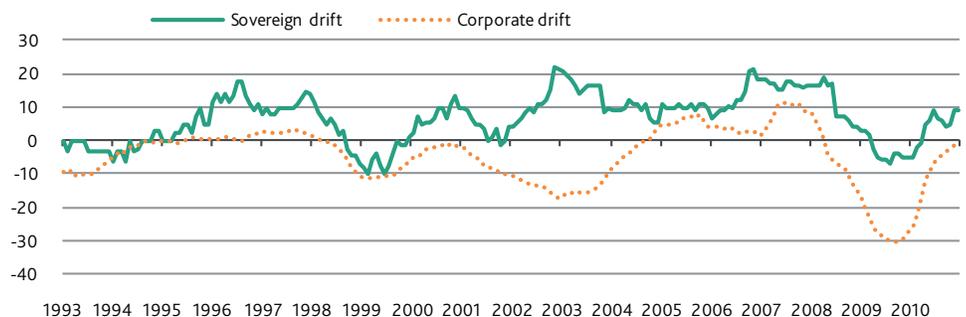
Analyst Contacts:

NEW YORK	1.212.553.1653
Merxe Tudela	1.212.553.7716
<i>Vice President</i>	
Maria.TudelaCarreres@moodys.com	
Elena Duggar	1.212.553.1911
<i>Group Credit Officer-Sovereign Risk</i>	
Elena.Duggar@moodys.com	
Albert Metz	1.212.553.4867
<i>Managing Director-Credit Policy Research</i>	
Albert.Metz@moodys.com	
Bart Oosterveld	1.212.553.7914
<i>Managing Director-Sovereign Risk Group</i>	
Bart.Oosterveld@moodys.com	

This is Moody's seventh annual report of sovereign bond issuers' default and rating experience. Our findings are as follows:

- » From among more than 100 Moody's-rated sovereigns, Jamaica was the only one to default in 2010 as the country underwent a debt exchange in order to reduce the fiscal burden of its domestic debt. Jamaica is the fourth sovereign default in the past six years and the 14th since 1983.
- » The recovery rate on Jamaica's bonds was 90%, substantially higher than the historical average recovery rate on sovereign bonds of 53% on an issuer-weighted basis and 31% on a value-weighted basis.
- » Sovereign upgrades in 2010 exceeded downgrades, reversing the trend of the past couple of years. At the issuer level, there were twice as many upgrades as downgrades, returning the downgrade-to-upgrade ratio – which peaked during the height of the global financial crisis – back towards the average level reached between the mid-1990s and the start of the crisis. However, corporate downgrades still exceeded corporate upgrades in 2010.

Sovereign and Corporate Drift



- » In 1983, all 12 rated sovereign issuers were investment grade. Since then the sovereign rating mix has gradually drifted downwards, so that by the end of 1999 only 58% of sovereign issuers had investment-grade ratings. Over the period 2000-06, that share climbed back up modestly to 64%, falling back to 61% during the recent global financial crisis.
- » Sovereigns rated Caa-C have experienced a larger number of upgrades than have similarly rated corporates. This is because, once their defaults are cured, most sovereigns are eventually upgraded.
- » A comparison between sovereign and corporate default rates shows that sovereign default rates have been, on average, modestly lower than those for corporates, overall and in terms of like-for-like rating symbols. However, the differences are not significant because the overall size of the sovereign sample is small and as default risk has been highly correlated across emerging market sovereign issuers.

Introduction

This year's sovereign default study examines the rating histories and default experience of 108 Moody's-rated governments issuing local and/or foreign currency bonds. This is an increase of four sovereigns compared with the 2009 study (Exhibit 1). As has been the case during the last decade, the initial ratings assigned to these sovereign issuers were in the middle/upper range of the speculative-grade category, thus contributing to the downward drift in the sovereign rating mix since Moody's started rating sovereigns.

EXHIBIT 1

Coverage of Moody's-Rated Sovereign Issuers Included in the Study, Rating Withdrawals in Parenthesis

Initial Rating Date	Number Of Rated Issuers	Issuer
1949-1985	12	United States, Panama, Australia, New Zealand, Denmark, Canada, Venezuela, Austria, Finland, Sweden, Norway, United Kingdom, Japan, Switzerland, (Panama, Venezuela)
1986	19	Argentina, Brazil, Germany, Italy, Malaysia, Netherlands, Portugal
1987	21	Ireland, Venezuela
1988	26	Belgium, China, France, Hong Kong, Spain
1989	29	Iceland, Luxembourg, Thailand
1990	31	Mexico, Micronesia
1991	31	
1992	32	Turkey
1993	37	Colombia, Czech Republic, Philippines, Trinidad & Tobago, Uruguay
1994	44	Barbados, Bermuda, Greece, Indonesia, Malta, Pakistan, South Africa
1995	46	Israel, Poland
1996	58	Bahrain, Bulgaria, Jordan, Kazakhstan, Kuwait, Lithuania, Mauritius, Russia, Saudi Arabia, Slovenia, United Arab Emirates, Panama
1997	70	Bahamas, Costa Rica, Croatia, Ecuador, El Salvador, Guatemala, Lebanon, Macao, Moldova, Oman, Romania, Turkmenistan
1998	86	Bolivia, Cyprus, Dominican Republic, Honduras, Hungary, India, Jamaica, Korea, Nicaragua, Papua New Guinea, Paraguay, Peru, Singapore, Slovakia, Taiwan, Ukraine
1999	96	Belize, Chile, Egypt, Estonia, Fiji Islands, Iran, Latvia, Morocco, Qatar, Tunisia
2000	96	

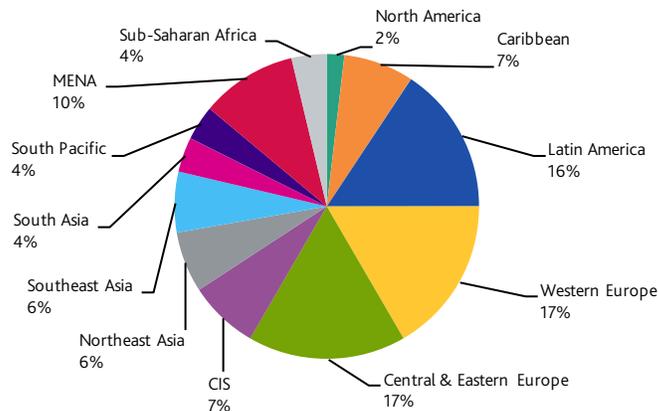
EXHIBIT 1

Coverage of Moody's-Rated Sovereign Issuers Included in the Study, Rating Withdrawals in Parenthesis

2001	96	Botswana, (Iran)
2002	96	
2003	95	(Micronesia)
2004	97	Bosnia and Herzegovina, Suriname
2005	99	Mongolia, Vietnam
2006	101	Armenia, Azerbaijan
2007	105	Albania, Belarus, Cambodia, St. Vincent & the Grenadines
2008	106	Montenegro
2009	105	(Moldova)
2010	108	Angola, Bangladesh, Georgia, Sri Lanka, Moldova, (Turkmenistan)

Exhibit 2 shows the geographical coverage of Moody's sovereign bond ratings. The share of developing and emerging market countries has been increasing from around 20% in the mid-1980s to more than 75% today. The Americas comprised 25% of Moody's rated sovereign issuers in 2010, which also accounts for 35% of all outstanding general government debt in 2010; Europe represented 41% (and 30% in terms of government debt outstanding), the Middle East & Africa 14% (1% of government debt), and Asia Pacific 20% (34% of government debt).

EXHIBIT 2

Regional Distribution of Moody's-Rated Sovereign Issuers in 2010**Data and Methodology**

While Moody's assigns a variety of sovereign ratings, this study focuses on sovereign bond ratings, as represented by either the sovereign's foreign currency (FC) bond rating or local currency (LC) bond rating, whichever is lower.¹ Similarly, we consider whether a sovereign defaults on *any* of its bond obligations, regardless of currency.

¹ Specifically, we construct the sovereign's rating history by tracking its minimum outstanding bond rating, regardless of which currency it references.

Historically, Moody's has often distinguished between a government's LC and FC bond rating, with any gap usually in favor of the local currency rating.² However, this practice has gradually changed over time and today such rating gaps are infrequent. The evolution of this approach reflects global economic and market developments. As both current and capital account mobility have increased, as currency markets have deepened, and as the investor base has broadened, the justifications for distinguishing between local and foreign currency government bond ratings have weakened. Crucially, it is far more likely than it used to be that a problem servicing debt in one currency will spill over and affect a government's ability to service its debt in another. As discussed below, a number of rated sovereigns have cured defaults within a grace period, but with one exception (Peru), they all default without cure shortly thereafter.

Sovereign ratings are withdrawn very rarely: since 1983 Moody's has only withdrawn ratings six times. Both FC and LC ratings are maintained even when there is no outstanding debt. Unlike corporates, countries do not merge, shift from public to private sources of capital, or go bankrupt.

Moody's definition of sovereign default includes the following types of default events:

1. A missed or delayed disbursement of a contractually obligated interest or principal payment (excluding missed payments cured within a contractually allowed grace period), as defined in credit agreements and indentures.
2. A distressed exchange whereby:
 - i) the issuer offers creditors a new or restructured debt, or a new package of securities, cash or assets, that amount to a diminished financial obligation relative to the original obligation; and
 - ii) the exchange has the effect of allowing the obligor to avoid a payment default in the future.

This definition is intended to capture events that change the relationship between the debt holder and debt issuer from the relationship that was originally contracted, and which subjects the debt holder to an economic loss.³

Although rare in practice, certain government actions which change the originally contracted relationship between the government and its creditors and which impose an economic loss on the creditor could also constitute a default. For example, unlike a general tax on financial wealth, the imposition of a tax by a sovereign on the coupon or principal payment on a specific class of government debt instruments (even if retroactive) would represent a default.⁴ Unilateral removal of inflation indexation on inflation-indexed bonds and forced maturity extensions would also represent defaults. Likewise, a forced redenomination of debt instruments imposing an economic loss on creditors would also represent a default. In some of these atypical cases, government actions might be motivated by fairness or other considerations rather than inability or unwillingness to pay.

² In most cases the LC bond rating was the same or higher than the sovereign's FC bond rating due to the fact that a government could generally "print" money if necessary to service LC debts and avoid default, but could find it very difficult, at times, to obtain sufficient foreign exchange to service FC debt. Currently, only India has FC bonds which are rated higher than its LC bonds. For more details, see Moody's Sovereign Methodology Update, "[Narrowing the Gap – a Clarification of Moody's Approach to Local vs. Foreign Currency Government Bond Ratings](#)", February 2010.

³ We do not consider a general inflation to be a default event.

⁴ The credit event in Turkey in 1999, detailed in Appendix I, although unrated by Moody's at the time, is an example of such an atypical default.

For the purpose of calculating issuer-based default rates, we define a sovereign default to have occurred whenever a country defaults on any of its bonds. Moody's does not consider missed interest payments that are fully cured within contractually specified grace periods to be defaults.⁵

Trends in Credit Quality: The Distribution of Sovereign Ratings

As shown in Exhibit 3, by the end of 2010, the share of investment-grade sovereign issuers had declined to little over 60%. While all rated sovereign issuers in 1983 were investment grade, over the years riskier emerging market countries gained access to debt markets. As more sovereign issuers obtained Moody's ratings, the share of speculative-grade ratings rose.

EXHIBIT 3

Rating Distribution of Sovereign Issuers on Selected Dates

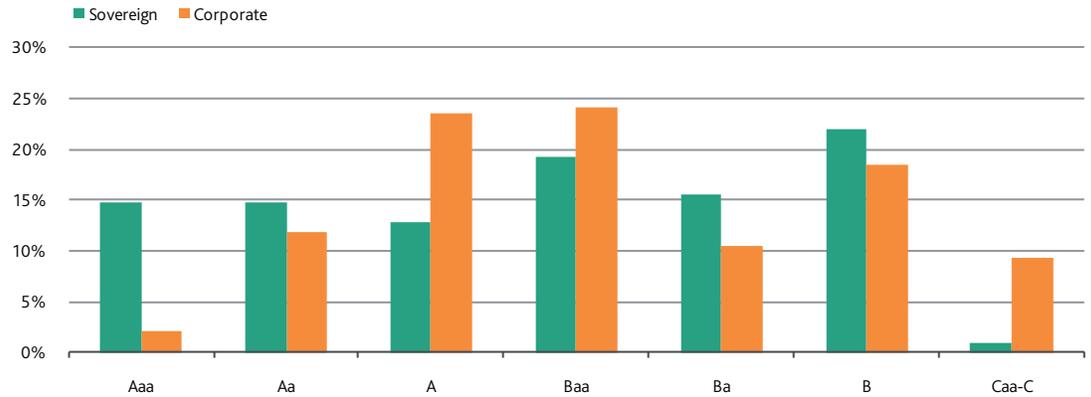
	1983	1990	1995	2000	2005	2010
Aaa	75%	40%	20%	14%	20%	15%
Aa	25%	30%	26%	14%	5%	15%
A	0%	17%	20%	13%	24%	13%
Baa	0%	3%	13%	21%	14%	19%
Ba	0%	7%	15%	17%	15%	16%
B	0%	3%	7%	16%	16%	22%
Caa-C	0%	0%	0%	5%	5%	1%
Investment-Grade	100%	90%	78%	62%	64%	61%
Speculative-Grade	0%	10%	22%	38%	36%	39%

More recently, the sovereign rating mix drifted upward between 2001 and 2006. The share of sovereigns in the Aaa to single-A categories climbed back to about 50% by the end of 2006, that is, to about the same levels seen in the mid-1990s. However, the 2007-09 global financial crisis has eroded those gains. It has also changed the distribution within the investment-grade category: the proportion of sovereigns rated Aa has increased, both because some advanced economies were downgraded from Aaa and because of upgrades into the Aa category for emerging market economies.

The rating distributions of sovereign and corporate bond issuers as of year-end 2010 are compared in Exhibit 4. The share of issuers rated Aaa is substantially larger for sovereigns than it is for corporates, while the proportion of sovereigns rated A and Caa-C is smaller. On average, however, sovereign issuers have higher ratings.

⁵ A cured grace-period default is often shortly followed by a debt restructuring with most of the loss to investors borne at this stage by means of a lengthening of maturity and/or a lowering of the coupon. However, as in the case of Peru, a fully cured default within its grace period yields virtually no losses to investors when it is not followed by another default event shortly afterwards. In other words, the presence of a grace-period default often signals the materialization of a future loss, but is not a necessary condition on its own.

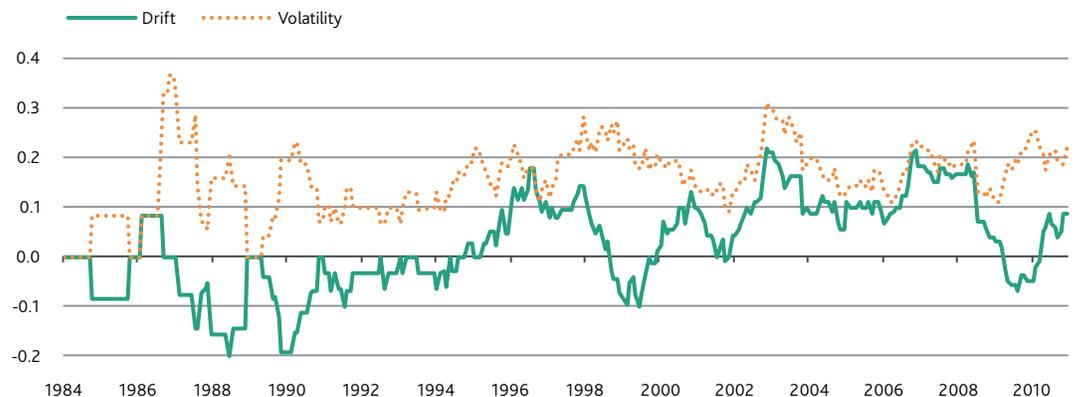
EXHIBIT 4

Rating Distribution of Sovereign and Corporate Issuers at the End of 2010**Trends in Credit Quality: Rating Actions and Migration Rates**

Changes in the distribution of ratings over time can occur either because of ratings drift or because of the entry or exit of issuers. This section focuses exclusively on rating changes.

There were as many rating actions in 2010 as there were in 2009 and twice as many as occurred in 2008, impacting 25% of all rated sovereigns (Exhibit 5). The rating volatility (defined as the sum of upgrades and downgrades over a 12-month period relative to the total number of sovereign issuers at the beginning of the period) increased rapidly from the start of 2009 and has remained high through 2010.

EXHIBIT 5

Sovereign Rating Drift and Volatility

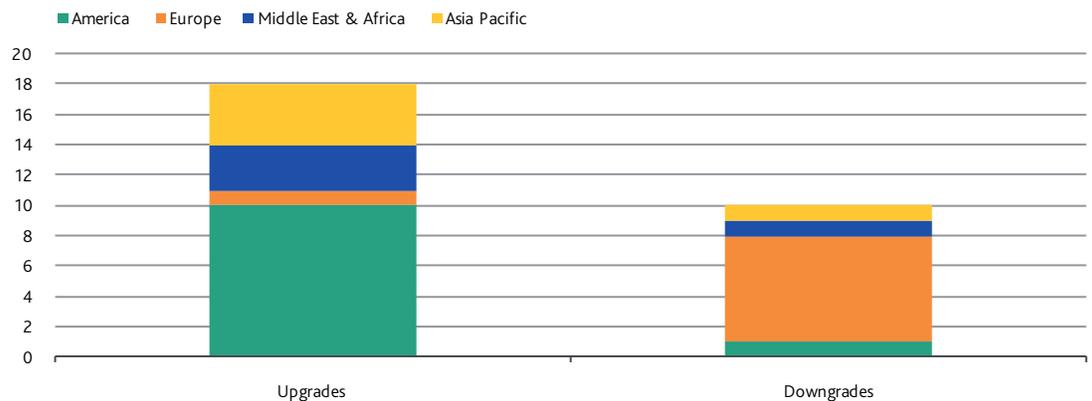
While the increase in rating volatility in 2009 was coupled with a gradual downward rating drift overall (net percentage of upgrades relative to downgrades), the increase in the volatility in 2010 came with a shift towards a more positive, upward drift (Exhibit 5). In other words, in 2010 the number of upgrades exceeded the number of downgrades – indeed, at the issuer level there were twice as many upgrades as downgrades. The downgrades-to-upgrades ratio, which had peaked by mid-2009 at above 2, has now

returned to more normal levels (about 0.7 on average), aided by both fewer downgrades and more upgrades. The same pattern was seen among corporate issuers.

However, this increase in credit quality was not uniformly distributed across regions (Exhibit 6). The vast majority (70%) of downgrades occurred in Europe,⁶ while 56% of upgrades were implemented among sovereigns in the Americas region and a further 39% among sovereigns in both Asia-Pacific and the Middle East and Africa regions.⁷ This meant that the median rating for Europe at the end of 2010 was closer to A2, slightly lower than the A1 median we recorded for the previous nine years. In contrast, the median rating for the Americas region rose by one notch to Ba1 for the first time since the end of 1998.

EXHIBIT 6

Regional Distribution of Upgrades and Downgrades of Sovereign Issuers in 2010



In the 2009 sovereign default study, we explained how ratings in Latin America, Asia-Pacific, the Middle East and Africa proved resilient to the 2007-09 global financial crisis. Indeed, the sovereign upgrades in 2010 were driven by prospects for sustained economic growth and resilience of the financial sector. In the Arabian Gulf, buoyant oil prices and accumulated financial assets enabled most Gulf states to maintain a degree of fiscal stimulus in 2010 without weakening their fiscal position. These countries' banking sectors also experienced less of a credit shock during the crisis, and the volatility in the European financial markets in 2010 did not have a significant effect on the average cost of funding in the Middle East. In both Asia-Pacific and Latin America, sovereign upgrades were also driven by prudent fiscal and monetary policies as well as by structural reforms across several countries. In Asia, economic growth was supported by spillover effects from China's growth, while countries in Latin America enjoyed spillover effects from Brazil's economic strength. International debt forgiveness,⁸ on the other hand, helped Nicaragua and Bolivia to improve their key debt metrics. The sovereign upgrade of the Dominican Republic was additionally driven by favorable developments in the country's institutional framework (e.g. strengthened bank supervision and effective enforcement of prudent regulations) and official efforts that were effective in developing a domestic market for government bonds.

The 2009 sovereign study explained that, although the US was the epicentre of the global crisis, Europe was more deeply affected as a result of its economic openness, mutual trade and financial interdependence, and relatively higher reliance on banks than capital markets as the source of credit. As a

⁶ Greece (twice), Hungary, Ireland (twice), Portugal and Spain, in Europe and Bahrain, Jamaica and Vietnam, elsewhere, were downgraded in 2010.

⁷ Bolivia, Chile, Costa Rica, Dominican Republic, Guatemala, Jamaica, Nicaragua, Panama, Paraguay and Uruguay in the Americas; China, Hong Kong, India and Korea in Asia-Pacific; Lebanon, Oman and Saudi Arabia in the Middle East; and Turkey in Europe, had their sovereign bond ratings upgraded in 2010.

⁸ As part of the IMF/World Bank Heavily Indebted Poor Countries (HIPC) Initiative and the G8 Multilateral Debt Relief Initiative (MDRI).

result, Europe was the main focus of sovereign downgrades in 2009, as had been the case in 2008. Further downgrades to several European sovereigns in 2010 reflected (a) their relatively weak potential growth prospects over the next three to five years, as they transition away from their focus on sectors that had been the engines of growth in the years preceding the financial crisis (i.e. banking, construction and real estate sectors); and (b) the expectation that interest rates will rise from their historically low levels as a result of concerns about inflation and credit risk.

Other factors also contributed to the renewed downgrades in Europe in 2010. For example, Greece was downgraded twice by a total of five notches in 2010 to the top of the speculative-grade category because the risk of default was considered to be inconsistent with an investment-grade rating. In spite of the IMF/euro area support program, which substantially reduced the risk of a liquidity-driven default over the next few years, the adjustments needed to stabilize debt metrics were unprecedented and the risks of the program implementation substantial.⁹

Ireland was the other European country that suffered a sizeable multi-notch downgrade, although it remained within the investment-grade category at Baa1. In addition to the reasons already mentioned and common to other European countries, Ireland's six-notch downgrade was driven in part by the repeated crystallization of bank-related contingent liabilities on the government balance sheet; the continued severe downturn in the financial services and real estate sectors; the ongoing contraction in private sector credit; the required fiscal austerity program, which was likely to weigh on domestic demand; and the significant deterioration of the government's financial strength.¹⁰

Jamaica was the only default in 2010 and the fourth sovereign default over the past six years. Moody's considered Jamaica's debt exchange, which was completed in February 2010, as an event of default (see next section for a more detail explanation of the circumstances surrounding the default).

Separately, in 2010, we also withdrew all ratings on the government of the Republic of Turkmenistan due to insufficient or otherwise inadequate information to allow us to maintain a credit rating. We first rated the government of Turkmenistan in January 2002 when we assigned a B2 issuer rating to its local currency obligations.

However, in 2010, we also assigned first-time sovereign ratings of B1 to both Angola and Sri Lanka and Ba3 to Bangladesh and Georgia. Additionally, Moody's re-assigned a B3 rating to Moldova after having previously withdrawn all its ratings and country ceilings in 2009 due to lack of adequate information.

Rating migration matrices offer a more complete picture of changes in credit quality over time. Exhibit 7 shows average 12-month migration rates by rating category since 1983. Each cell in the matrix shows the average fraction of issuers that held a given row's rating at the beginning of the measurement period and the column rating at the end of the period, including defaults and withdrawn ratings.

The largest values in the transition matrix are along the diagonal, as the most likely rating for an issuer at the end of a given 12-month period during the 1983-2010 is the rating with which the issuer began that period. By contrast, those elements that are off the diagonal reflect transitions to higher (the triangle below the diagonal) or lower (the triangle above the diagonal) rating categories within a 12-month period. The further one moves away from the diagonal, the smaller the migration rates, reflecting a relatively low

⁹ For more information on the drivers of Greece's downgrade, please refer to the Special Comment: "[Key Drivers of Greece's Downgrade to Ba1](#)".

¹⁰ For more information please refer to: "[Key Drivers of Moody's Decision to Downgrade Ireland to Baa1 from Aa2](#)".

historical frequency of issuers moving across more than one rating category during the course of 12 months.

As shown in Exhibit 7, rating changes have on average been somewhat less frequent for sovereign issuers than they have for corporate issuers. For example, on average, only 3.2% of Aaa-rated sovereign issuers have been downgraded in any given 12 months compared to 9.8% (or 13.8% if we also count withdrawals) for Aaa-rated corporate issuers. Moreover, sovereign ratings also appear more stable than corporate ratings in the other investment-grade rating categories, with the differences marginally narrowing as we approach the Baa category. The average stability of sovereign ratings derives from an overwhelmingly lower historical probability of being downgraded within a 12-month period relative to corporate issuers.

EXHIBIT 7

Average 12-Month Rating Migration Rates (1983-2010)

RATING FROM:	RATING TO:								
	Aaa	Aa	A	Baa	Ba	B	Caa-C	Default	Withdrawn
Sovereign Issuers									
Aaa	96.78%	3.04%	0.05%	0.12%	0.00%	0.00%	0.00%	0.00%	0.02%
Aa	5.02%	92.85%	1.05%	0.21%	0.00%	0.00%	0.00%	0.00%	0.87%
A	0.00%	4.75%	91.41%	2.94%	0.53%	0.00%	0.00%	0.00%	0.37%
Baa	0.00%	0.00%	8.56%	86.76%	2.63%	0.76%	0.00%	0.00%	1.29%
Ba	0.00%	0.00%	0.00%	7.51%	86.04%	5.04%	0.23%	0.77%	0.40%
B	0.00%	0.00%	0.00%	0.00%	5.37%	87.28%	3.13%	3.37%	0.85%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.00%	29.55%	46.82%	23.64%	0.00%
Corporate Issuers									
Aaa	86.24%	9.29%	0.45%	0.01%	0.03%	0.00%	0.00%	0.00%	3.97%
Aa	0.89%	84.95%	8.23%	0.39%	0.04%	0.02%	0.01%	0.02%	5.45%
A	0.06%	2.73%	85.82%	5.54%	0.53%	0.13%	0.04%	0.06%	5.09%
Baa	0.04%	0.20%	4.64%	83.72%	4.09%	0.90%	0.23%	0.20%	5.99%
Ba	0.01%	0.06%	0.38%	5.72%	73.88%	7.94%	0.71%	1.14%	10.17%
B	0.01%	0.04%	0.13%	0.34%	4.73%	73.24%	6.58%	4.23%	10.72%
Caa-C	0.00%	0.02%	0.02%	0.13%	0.43%	7.67%	62.03%	16.87%	12.83%

Among speculative-grade issuers, sovereign issuers rated Caa-C have experienced a larger number of upgrades than have similarly rated corporates.¹¹ The higher rate of upgrade among the lowest-rated sovereigns reflects the different dynamics of sovereign and corporate ratings: once their defaults have been cured, most sovereigns are eventually upgraded. In contrast, many corporations that are downgraded to Caa or below ultimately restructure in bankruptcy and have their ratings withdrawn.

Historical Sovereign Defaults

Jamaica's debt exchange, completed in February 2010, represented an event of default. This was the only default event in 2010 and just the fourth sovereign default in the past six years.

Over the previous years, attempts to place Jamaica's public debt on a more sustainable path had proved unsuccessful. The ratio of public debt to GDP had remained above 100% over the past decade and the

¹¹ A smaller sample size can magnify such rating changes.

debt-to-revenue ratio stood at around 400%. The cost of servicing Jamaica's debt was estimated at over 55% of central government revenues and 16% of GDP. Jamaica's government had never defaulted before. Instead it was trying to run primary surpluses in recent years, some on the order of 10% of GDP, but at the cost of slashing public investment and contributing to the very low economic growth. GDP growth averaged barely 1% annually prior to the default.

The debt exchange did not involve external debt, but it included the entire stock of marketable domestic debt, worth around 60% of GDP or 700 billion Jamaican dollars. The exchange proceeded in an orderly fashion with 99% participation. Jamaica's government bond ratings had been lowered to Caa1 at the end of 2009 in expectation of a possible debt restructuring. At the announcement of the debt exchange in January 2010, the local currency bond rating was placed at Caa2 to reflect the 20% loss implied by the terms of the debt exchange.

Indeed, the debt exchange provided for zero reduction in principal, a cut of the average coupon to 11% from 17%, and an extension of the average debt maturity to five years from two. It caused relatively little dislocation to the economy and the financial sector due to the majority of the debt being held by a few local financial institutions and the exchange being designed to strike a balance between a meaningful cash flow alleviation and preserving the health of the banking system.

On March 2010, Moody's upgraded Jamaica's government bond ratings to B3, balancing the fiscal relief following the debt exchange and the economic and financial vulnerabilities. Jamaica's overall debt burden is still relatively high – the debt-to-GDP ratio remains at 113% and interest payments represent 42% of government revenues in 2011.

As for previous defaults, Exhibit 8 provides a chronological summary of historical Moody's-rated sovereign defaults, the bond-default volumes associated with these defaults, and the circumstances surrounding the defaults.

EXHIBIT 8

Moody's-Rated Sovereign Bond Defaults since 1983

Default Date	Country	Total Defaulted Debt (\$ Millions)	Rating at Default	Comments
Jul-98	Venezuela	\$270	Ba2	Defaulted on domestic currency bonds in 1998, although the default was cured within a short period of time.
Aug-98	Russia	\$72,709	Caa1	Missed payments first on local currency Treasury obligations. Later a debt service moratorium was extended to foreign currency obligations issued in Russia but mostly held by foreign investors. Subsequently, failed to pay principal on MINFIN III foreign currency bonds. Debts were restructured in Aug 1999 and Feb 2000.
Sep-98	Ukraine	\$1,271	B3	Moratorium on debt service for bearer bonds owned by anonymous entities. Only those entities willing to identify themselves and convert to local currency accounts were eligible for debt repayments, which amounted to a distressed exchange.
Jul-99	Pakistan	\$1,627	Caa1	Pakistan missed an interest payment in Nov 1998 but cured the default subsequently within the grace period (within 4 days). Shortly thereafter, it defaulted again and resolved that default via a distressed exchange which was completed in 1999.
Aug-99	Ecuador	\$6,604	B1	Missed payment was followed by a distressed exchange; over 90% of bonds were restructured.
Jan-00	Ukraine	\$1,064	Caa3	Defaulted on DM-denominated Eurobonds in Feb 2000 and defaulted on USD-denominated bonds in Jan 2000. Offered to exchange bonds with longer-term and lower coupon. The conversion was accepted by a majority of bondholders.
Sep-00	Peru	\$4,870	Ba3	Peru missed payment on its Brady Bonds but subsequently paid approximately \$80

EXHIBIT 8

Moody's-Rated Sovereign Bond Defaults since 1983

Default Date	Country	Total Defaulted Debt (\$ Millions)	Rating at Default	Comments
				million in interest payments to cure the default, within the 30-day grace period.
Nov-01	Argentina	\$82,268	Caa3	Declared it would miss payment on foreign debt in November 2001. Actual payment missed on Jan 3, 2002. Debt was restructured through a distressed exchange offering where the bondholders received haircuts of approximately 70%.
Jun-02	Moldova	\$145	Caa1	Missed payment on the bond in June 2001 but cured default shortly thereafter. Afterwards, it began gradually buying back its bonds, but in June 2002, after having bought back about 50% of its bonds, it defaulted again on the remaining \$70 million of its outstanding issue.
Jul-03	Nicaragua	\$320	Caa1	In July 2003, Nicaragua completed a distressed exchange of CENI bonds (which were initially issued as Central Bank recapitalization bonds in the 2000 banking crisis and which were denominated in US dollars and payable in local currency) held by a few domestic banks. The exchange reduced the interest rate paid on the bonds from 15.3%-21.0% to 8.3-10.0% and extended the maturity from five to ten years. Another debt exchange of the same bonds (face value US\$295.7mn at that time, held by two domestic banks) followed in June 2008, when the maturity was extended further from ten to twenty years and the interest rate was reduced to about 5%. The 2008 exchange involved 12.5% of the total debt and a 50% NPV loss.
May-03	Uruguay	\$5,744	B3	Contagion from Argentina debt crisis in 2001 led to a currency crisis in Uruguay. To restore debt-sustainability, Uruguay completed a distressed exchange with bondholders that led to extension of maturity by five years.
Apr-05	Dominican Republic	\$1,622	B3	After several grace period defaults (missed payments cured within the grace period), the country executed an exchange offer in which old bonds were swapped for new bonds with a five-year maturity extension, but the same coupon and principal.
Dec-06	Belize	\$242	Caa3	Belize announced a distressed exchange of its external bonds for new bonds due in 2029 with a face value of U.S.\$ 546.8. The new bonds are denominated in U.S. dollars and provide for step-up coupons that have been set at 4.25% per annum for the first three years after issuance. When the collective action clause in one of Belize's existing bonds is taken into account, the total amount covered by this financial restructuring represents 98.1% of the eligible claims.
Dec-08	Ecuador	\$3,210	Caa1	In November 2008, Ecuador missed an interest payment of \$30.6 million on its \$510 million of 12% global bonds due in 2012. Additionally, a \$135 million interest payment on the 2030 global bonds (\$2.7 billion) was missed in February 2009. The authorities announced that the 2012 and the 2030 securities are "illegal" and "illegitimate." The restructuring plan announced in May 2009 included a 65% haircut on the face value of the bonds and Ecuador bought back 91% of the defaulted foreign bonds.
Feb-10	Jamaica	\$7,900	Caa1	In February 2010, Jamaica completed a debt exchange for its entire stock of marketable domestic debt, including J\$234.9bn of fixed-rate bonds, J\$375.9bn of variable rate bonds, and J\$90.6bn of US dollar-indexed domestic bonds, issued prior to 31 December 2009. The exchange replaced 350 old bonds with 23 new benchmark bonds (9 fixed-rate bonds, 9 variable rate, 3 US dollar bonds and 2 CPI-linked bonds). The terms of the exchange provided for zero reduction in principal, a cut of the average coupon to around 11% from 17%, and an extension of the average debt maturity to about five years from two. The exchange entailed about 20% NPV loss. Participation was 99%.

Note: The case of Peru represents a grace-period default and is shown in the table for completeness but does not enter the default rate calculations.

Although our sample begins in 1983, there were no Moody's-rated sovereign bond defaults until 1998. A mixture of cooling global economic conditions, unfavorable market sentiment after the Asian crisis, and external shocks, as well as an increase in the share of speculative-grade sovereign bond issuers in the mid-1990s produced five Moody's-rated sovereign bond defaults in 1998-1999: Russia, Pakistan, Ukraine,

Venezuela and Ecuador. Interestingly, even though many countries were battered by the currency crisis of 1998, not one Asian country actually defaulted on its government bonds.¹² The largest default of 1998 was that of Russia as the country suffered a currency, banking and fiscal crisis, following weak oil and non-ferrous metals prices, unfavorable market sentiment after the Asian crisis, and unsustainable government budget policies.

During 2000-2009, there have been seven additional defaults, led by Argentina's US\$82 billion default in 2001 which spilled over into Uruguay two years later. Ecuador's default in 2008 represented more a problem of "willingness to pay" than "capacity to pay" as the government's decision to default was based on ideological and political grounds and was not related to immediate liquidity and solvency issues.

Appendix I provides more details on events leading to the defaults listed in Exhibit 8, as well as their eventual resolutions.¹³ Appendix I also provides details on recent unrated defaults, such as the default of the Seychelles during 2008.

Sovereign Cumulative Default Rates

EXHIBIT 9

Issuer-Weighted Cumulative Default Rates (1983-2010)

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Sovereign Issuers										
Aaa	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Aa	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
A	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Baa	0.000%	0.476%	0.997%	1.570%	2.207%	2.855%	2.855%	2.855%	2.855%	2.855%
Ba	0.769%	1.746%	3.433%	5.349%	7.435%	8.949%	11.118%	13.951%	16.416%	18.882%
B	3.391%	7.039%	9.204%	12.110%	15.096%	17.986%	20.095%	21.277%	22.735%	24.590%
Caa-C	23.636%	27.727%	32.823%	32.823%	32.823%	32.823%	32.823%	32.823%	32.823%	32.823%
Investment-Grade	0.000%	0.098%	0.204%	0.318%	0.442%	0.566%	0.566%	0.566%	0.566%	0.566%
Speculative-Grade	2.793%	5.035%	7.077%	9.305%	11.651%	13.625%	15.674%	17.780%	19.778%	21.924%
All	0.844%	1.581%	2.253%	2.977%	3.736%	4.380%	4.946%	5.515%	6.029%	6.549%
Corporate Issuers										
Aaa	0.000%	0.016%	0.016%	0.048%	0.086%	0.132%	0.182%	0.186%	0.186%	0.186%
Aa	0.023%	0.066%	0.116%	0.202%	0.291%	0.351%	0.388%	0.419%	0.447%	0.501%
A	0.062%	0.200%	0.414%	0.623%	0.853%	1.099%	1.371%	1.677%	1.969%	2.216%
Baa	0.202%	0.561%	0.998%	1.501%	2.060%	2.636%	3.175%	3.710%	4.260%	4.890%
Ba	1.197%	3.437%	6.183%	9.067%	11.510%	13.757%	15.760%	17.679%	19.526%	21.337%
B	4.466%	10.524%	16.526%	21.774%	26.524%	31.034%	35.301%	39.032%	42.312%	45.194%
Caa-C	18.030%	30.037%	39.612%	47.373%	53.882%	58.064%	60.978%	64.428%	68.464%	73.646%
Investment-Grade	0.095%	0.274%	0.508%	0.769%	1.054%	1.343%	1.622%	1.907%	2.185%	2.467%
Speculative-Grade	4.944%	10.195%	15.233%	19.671%	23.477%	26.820%	29.790%	32.433%	34.804%	36.967%
All	1.819%	3.717%	5.485%	6.988%	8.241%	9.303%	10.212%	11.006%	11.706%	12.344%

Exhibit 9 presents one-year through ten-year issuer-weighted average cumulative default rates for sovereign and corporate issuers. As in our other default studies, cumulative default rates are calculated by

¹² Indonesia came closest to default as it restructured its syndicated London Club bank debt in line with Paris Club comparability of treatment requirements, but its bonds continued to be serviced.

¹³ For the sake of completeness, both Exhibit 9 and Appendix I include the default of Peru which was fully cured within its grace period, but the event does not enter any of the subsequent default calculations.

averaging the experiences of issuer cohorts formed at monthly frequencies.¹⁴ By forming and tracking such cohorts of all Moody's-rated issuers at the beginning of every month, we replicate the experience of a portfolio of both seasoned and new-issue bonds purchased in any given month.

Importantly, the historical default rates in Exhibit 9 show that Moody's ratings clearly rank-order default risk at any given horizon for both sovereigns and corporates, as the probability of default rises with lower ratings. The highest rating held 12 months before the default for all 14 sovereign defaults since 1983 was Ba2 while the median rating was as low as B1 12 months prior to default or even B3 if we look 11 months before default.

A comparison between sovereign and corporate default rates shows that sovereign default rates have been, on average, modestly lower than those for their corporate counterparts, except for Caa-C rated issuers at one-year horizons and Baa-rated issuers at four- to six-year horizons.

Recovery Rates of Defaulted Sovereign Issuers

Moody's ratings are statements about the probability of default and the expected loss severity rate (i.e. one minus the expected recovery rate) in case of default. As such, expectations of potential losses in the event of default are an important discriminating factor when comparing similarly rated sovereigns, particularly at the lower end of the rating scale.

Exhibit 10 presents two types of estimates of recovery rates on defaulted sovereign bonds. The first method reports the average issuer-weighted trading price on a sovereign's bonds 30 days after its initial missed interest payment. In cases of distressed exchange, we report the average price one day before the closing of the distressed exchange. Appendix II provides more detail on the sovereign bond prices used to estimate the recovery rates.

EXHIBIT 10

Recovery Rates on Defaulted Sovereign Bond Issuers

Year Of Default	Defaulting Country	Average Trading Price** (% Of PAR)	PV Ratio Of Cash Flows*** (Ratio In %)
1998	Russia	18	50
1999	Pakistan	52	65
1999	Ecuador	44	60
2000	Ukraine	69	60
2000	Ivory Coast*	18	NA
2001	Argentina	27	30
2002	Moldova	60	95
2003	Uruguay	66	85
2003	Nicaragua	NA	50
2004	Grenada*	65	NA
2005	Dominican Republic	95	95
2006	Belize	76	NA
2008	Seychelles*	30	NA
2008	Ecuador	28	NA

¹⁴ Monthly cohorts have the advantage of capturing rating changes that occur within a calendar year. The default rates are calculated based on cohorts of all issuers holding a given rating at the start of a given month. The cohorts are dynamic in that they change based on whether these issuers leave the cohort due to default or non-credit-related reasons. While the cohort frequency is monthly, the accumulation periodicity remains 12 months, so that we track default rates over horizons of one year, two years, etc.

EXHIBIT 10

Recovery Rates on Defaulted Sovereign Bond Issuers

Year Of Default	Defaulting Country	Average Trading Price** (% Of PAR)	PV Ratio Of Cash Flows*** (Ratio In %)
2010	Jamaica	90	80
Issuer-Weighted Recovery Rates		53	67
Value-Weighted Recovery Rates		31	36

* Not rated by Moody's at the time of default. Pricing information is not available for three other recent unrated sovereign defaults on local currency bonds - Turkey 1999, Dominica 2003, and Cameroon 2004. The PV ratio for Nicaragua is for the 2008 exchange. Appendix I describes more details.

** 30-day post-default price or pre-distressed exchange trading price.

*** Ratio of the present value of cash flows received as a result of the distressed exchange versus those initially promised, discounted using yield to maturity immediately prior to default (Source: Bank of England (2005)).

The second method is based on the ratio of the value of the old securities to the value of the new securities received in exchange, obtained by discounting the promised cash flows using the yield to maturity implicit in the old securities at the time of the announcement of the exchange offer.¹⁵ Additionally, we present the average value-weighted recovery rates for the sovereign sample of both methods.

The sample presents recovery estimates for all rated bond defaulters, except Venezuela and Nicaragua as market quotes on their defaulted domestic bonds are not available. The sample also includes estimated recovery rates on three defaulting issuers – Grenada, Ivory Coast and the Seychelles – whose bonds were not rated by Moody's.

The two highest recovery rates, outside Jamaica, in our sample follow the Dominican Republic and Belize defaults in 2005 and 2006, respectively, when corporate recovery rates were generally high and corporate default rates were low.¹⁶ The recovery rates on the 2008 defaults of the Seychelles and Ecuador were low, at 30% and 28% respectively, and below the average historical sovereign recovery rate of 52% during the 1983-2010 period. The 2008 sovereign recovery rates were similar to the 33.9% average corporate recovery rates observed in 2008 and reflected the challenging economic environment in 2008 and the negative correlation between rising corporate default rates and the observed drop in recovery rates.

The value-weighted recovery rate estimate is significantly lower than the issuer-weighted recovery rate due to the large Argentinean and Russian defaults that garnered low recovery rates.

While there are some cases where the differences between the two recovery-rate methods (30-day post default price and the PV of cash flows) are significant, the two approaches to estimating recovery values generally produce similar estimates. The material differences in the estimates of recovery rates, wherever present, are mainly caused by the timing of the recovery estimate. For example, in Russia's case, Moody's recorded the default when the payment was missed, whereas the distressed exchange was announced more than a year later, when the yield on the existing bonds was used to estimate net present value reduction. With the announcement of an exchange offer, some uncertainty is resolved and the yield on existing instruments may change, which will affect the present value of the new instruments. Another difference arises because the present value method makes the implicit assumption that the yield curve facing the sovereign is flat (it will have a constant discount rate); whereas, the trading price at default may reflect different expectations.

¹⁵ The method of estimated recovery rates is discussed in "Resolving Sovereign Debt Crises: The Market-based Approach and the Role of the IMF," Financial Stability Review, Bank of England, June 2005. Other methods are also discussed in Stuzenneger, F. and J. Zettelmeyer (2005), "Haircuts: Estimating Investor Losses in Sovereign Debt Restructurings, 1998-2005", IMF Working Paper (WP/05/137).

¹⁶ Please see Moody's Special Comment, "[Corporate Default and Recovery Rates, 1920-2010](#)", February 2011 for a summary of corporate recovery rates.

Rating Performance Measures

One of the desirable properties of an effective rating system is its ability to separate low risk from high credit risk issuers. In other words, an effective rating system should not only assign low ratings to issuers that ultimately default but also assign high ratings to those that are remote from default.

A key metric commonly used to measure the relative accuracy of a rating system, or default model more generally, is the cumulative accuracy profile (CAP) or power curve. A CAP is constructed by first ranking all issuers from the riskiest to the less risky according to the model along the horizontal axis. Then starting with the riskiest issuers by plotting on the vertical axis the cumulative proportion of defaults picked up by the model. Thus, for a sample in which 1% of issuers default, a perfect model would include all the defaults within the riskiest percentile. By contrast, in a random model the first percentile would tend to include only 1% of the defaults and its CAP would be represented by the 45 degree line. The better the model at ranking issuers, the more bowed towards the upper-left corner its CAP will be. The CAP is sample-dependent in that its shape is dependent on the proportion of issuers in the sample that default.

EXHIBIT 11

Twelve-Month Cumulative Accuracy Profiles (1983-2010)

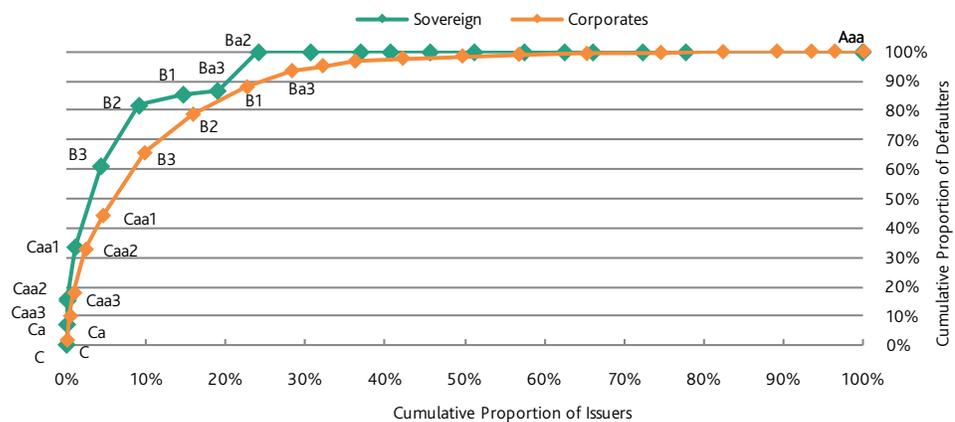


Exhibit 11 presents the 12-month-ahead horizon CAP curves for sovereign and corporate ratings observed between 1983 and 2010, as described above. The CAP plot reveals that historically sovereign ratings have done a good job rank-ordering one-year default risk. For example, all sovereign defaulters had ratings of Ba2 or lower within one year of default. More generally, 24% of the lowest-rated sovereign issuers accounted for 100% of the defaults, while 24% of the riskiest corporates comprised 96% of defaults.

A summary measure of rating accuracy that compresses the information depicted in the CAP curve into a single summary statistic is the accuracy ratio (AR). The AR is the ratio of the area between the CAP curve and the 45-degree line (i.e. the CAP curve of the random model) to the area between the CAP curves of the perfect and random models, divided by survival rate (i.e. 1 - default rate). Based on ARs, Moody's sovereign ratings have had modestly higher accuracy ratios than their corporate counterparts. Although the small sample of sovereign defaults limits the statistical significance of the finding, the historical average one-year accuracy ratio for the sovereign ratings is 89.2% for the 1983-2010 period, compared to 81.5% for corporate ratings during the same period.

Moody's Related Research

Default Research:

- » [Corporate Default and Recovery Rates, 1920-2010, February 2011 \(131388\)](#)
- » [U.S. Municipal Bond Defaults and Recoveries, 1970-2009, February 2010 \(122579\)](#)
- » [Corporate Default and Recovery Rates, 1920-2009, February 2010 \(123042\)](#)
- » [Default and Recovery Rates for Asia-Pacific Corporate Bond and Loan Issuers, Excluding Japan, 1990-H12009, August 2009 \(119158\)](#)
- » [Latin American Corporate Default and Recovery Rates, 1990-H12010, September 2010 \(127140\)](#)
- » [European Corporate Default and Recovery Rates, 1985-2009, April 2010 \(123911\)](#)
- » [Emerging Market Corporate and Sub-Sovereign Defaults and Sovereign Crises: Perspectives on Country Risk, February 2009 \(113931\)](#)
- » [Rating Migration and Default Rates of Non-U.S. Sub-Sovereign Debt Issuers, 1983-2007, September 2008 \(110252\)](#)

Sovereign Methodology and Analytics:

- » [Narrowing the Gap – a Clarification of Moody's Approach to Local Vs. Foreign Currency Government Bond Ratings, Sovereign Methodology Update, February 2010 \(118820\)](#)
- » [Sovereign Bond Ratings, Rating Methodology, September 2008 \(109490\)](#)
- » [Sovereign Defaults and Interference: Perspectives on Government Risks, August 2008 \(110114\)](#)

Other Special Comments:

- » [Strong Loan Issuance in Recent Years Signals Low Recovery Prospects for Loans and Bonds of Defaulted U.S. Corporate Issuers, June 2008 \(109457\).](#)
- » [Market Use of Sovereign Ratings, September 2010 \(127353\)](#)
- » [The Causes of Sovereign Defaults: Ability to Manage Crises Not Merely Determined by Debt Levels, November 2010 \(127952\)](#)
- » [Measuring Corporate Default Rates, November 2006 \(100779\)](#)
- » [Guide to Moody's Default Research: January 2011 Update, January 2011 \(129977\)](#)

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.

Appendix I – Circumstances Surrounding Individual Sovereign Bond Defaults

Venezuela 1998

In the first week of July 1998, the government of Venezuela did not pay the coupon on local currency bonds that were held by local residents. The payments were made a week later. Since these bonds had no grace period, this delay in payment amounted to a default.

The government claimed that the person who was supposed to sign the checks was unavailable at the time but that the checks were later issued from the appropriate office. It was the type of episode that seems to have happened more than once in Venezuela, where the government did not pay the coupon on local currency bonds on time. However, the government has always claimed that there was no "intentional" delay.

After this default, Venezuela installed state-of-the-art payment machinery that reduced or eliminated the need for human intervention in the payment processes.

In July 1998, Moody's changed Venezuela's foreign currency issuer rating to B1 from Ba2 and assigned a first-time local currency rating of B3. The B3 local currency rating reflected the recurrent temporary delays in the payment of interest and principal on local-currency denominated instruments. In September 1998, the ratings were further lowered to B2 for foreign currency and Caa1 for local currency government bonds due to the effects of the oil shock and deteriorating economic and fiscal conditions.

Russia 1998

A significant drop in oil prices in late 1997 and early 1998 led to a serious shortfall in exports. This decline significantly reduced federal budget revenues even in nominal terms in the spring of 1998, while the stock of short-term Russian T-bills (GKO) grew rapidly. Faced with the high cost of domestic debt service (almost 5% of GDP in 1996), the government sped up liberalization of the T-bill market. Restrictions on non-residents' participation were gradually reduced and then eliminated at the beginning of 1998. The Russian market benefited from the inflow in 1997, with the interest rate on short-term debt (GKO) reaching its historic floor of 13% in August 1997, a time when consumer price inflation was at an annual 15%.

With East Asian economies in crisis, non-resident investors decided to pull out money from the Russian T-Bill market as evidenced by a reduction of almost US\$1 billion in foreign exchange reserves per week. The uncertainty over the July 1998 emergency loan from the IMF also resulted in large swings in foreign flows to the T-bill market. The IMF loan was intended to boost confidence among foreigners and, for a while, it had the intended effect. However, Russia stopped payments first on local currency Treasury obligations and later defaulted on its foreign currency obligations that were issued locally but held mostly by foreign investors. Subsequently, it also failed to pay principal on MINFIN III foreign currency bonds.

Debts were restructured in August 1999 and February 2000.

Russia's government ratings had been gradually downgraded leading up to the default as its vulnerability increased during the crisis. In May 1998, the foreign currency government issuer rating was

downgraded to B1 from Ba3 and a new local currency government issuer rating was assigned at B2. In August 1998, the foreign and local currency issuer ratings were downgraded to B2 and Caa1 respectively. Later in August 1998, the foreign and local currency issuer ratings were downgraded to B3 and Ca respectively. In addition, the rating on the government's MinFin domestic foreign currency bonds were downgraded to Caa1 in August 1998 and to Ca in September 1998, reflecting the enhanced risk of low recovery rates.

Ukraine 1998, 2000

Ukraine's debt restructuring took place in four stages over the 1998-2000 period, covering US\$2.5 billion of external (Eurobond) debt and US\$0.3 billion of domestic debt, representing overall about 9% of GDP. Of this amount, about 1.3% of GDP was held by domestic banks. A large part (50-60%) of the Eurobonds was held by retail investors. A selective restructuring of domestic debt held by banks in August 1998 was followed by the restructuring of two bond-like instruments held by non-residents in September and October 1998, and a further restructuring in June 1999. After these piecemeal arrangements, the debt exchange in April 2000 tried to deal more comprehensively with the short maturity of Ukraine's bonded debt.

In 1998, the Government of Ukraine declared a moratorium on debt service for bearer bonds owned by anonymous entities. Only those entities willing to identify themselves and convert to local currency accounts were eligible for debt repayments, which amounted to a distressed exchange.

Since independence, Ukraine has remained dependent upon imported energy and foreign loans. Approximately, US\$3 billion of these foreign loans came due in 2000. The IMF's US\$ 2.6 billion extended fund facility (EFF) was suspended in September 1999, and the World Bank postponed all its lending to Ukraine in October 1999.

On 28 February 2000, Ukraine's Finance Ministry confirmed that it had missed the scheduled coupon repayment for its 16% DM-nominated Eurobonds, which were to mature in 2001. With over US\$13 billion in foreign debt, Ukraine had already announced in January 2000 that it would miss the scheduled repayment for dollar-nominated 16.75% bonds and offered to include them in an exchange proposal. Bondholders were offered seven-year coupon amortization bonds which would be issued by Ukraine and nominated in the euro or U.S. dollar. In euro, the bond coupon amounted to 10%, while in U.S. dollars the coupon represented 11% with no grace period.

The bulk of the debt was amortized in the new euro bonds every six months, with the first six months as a grace period. The average term of the bonds was 4.5 years. While exchanging, investors were able to choose the currency in which the bonds would be denominated.

By the end of March 2000, over 90% of holders of Ukrainian government bonds had agreed to the restructuring and accepted new bonds with a face value of approximately 50% of the debt they replaced.

Ukraine's foreign currency rating was downgraded to B3 from B2 in September 1998, and further to Caa1 in January 2000 after Ukraine announced that it was to restructure its foreign currency debt during the first quarter of 2000. A first-time local currency rating was assigned at Ca in February 1999. The local currency rating was moved to Caa3 in January 2000 following the completed restructuring of much of local currency debt into foreign currency debt instruments.

Pakistan 1999

A serious balance of payments crisis in 1998 was exacerbated as international sanctions were tightened following the government's detonation of a nuclear device (Pakistan has to this day not signed the Nuclear Non-proliferation Treaty). Pakistan sought a new IMF agreement and then a restructuring of its bilateral debt obligations with the Paris Club of lenders but, even in the midst of these negotiations, the government was intermittently late in making payments on commercial, bilateral and some multilateral debt. In this situation, the possibility increased that payments would eventually be missed on the country's Eurobonds and euro notes.

In an attempt to "bail in" private lenders, Pakistan's official bilateral creditors imposed unprecedented conditions on the country before they would grant a Paris Club restructuring. Namely, they required that Pakistan obtain a multi-year debt refinancing from private creditors, including bondholders. Upon agreeing to these conditions, the Paris Club rescheduled in March 1999 some US\$3.25 billion of Pakistan's bilateral obligations (including arrears) over 18 years with three years' grace. In December 1999, bondholders received a new Eurobond, with a coupon of 10% and maturity of six years with three years' grace, in exchange for US\$608 million in existing bonds and notes carrying coupons of 6%, 11.5%, and LIBOR plus 3.95% with original maturity dates between December 1999 and February 2002.

The 1999 Paris Club agreement was not fully implemented because Pakistan failed to comply with the terms of its concurrent IMF agreement. However, subsequent IMF programs - a stand-by agreement and a Poverty Reduction and Growth Facility - have achieved better results. A new Paris Club agreement was reached in January 2001 that restructured US\$1.75 billion in debt and payment arrears on extremely favorable ("Houston") terms.

Pakistan's foreign currency government bond rating had been downgraded to Caa1 from B3 in October 1998, reflecting the increased risk of default on rated instruments given the ongoing balance of payments crisis. Moody's assigned a first-time rating on local currency government bonds of Caa1 in June 1999.

Ecuador 1999

Ecuador's foreign and local currency government bond ratings were lowered to B3 in September and October 1998 respectively, indicating a high probability of default. On 1 October 1999, Ecuador officially suspended payment on almost half of the interest due on its Brady bonds. The ratings were lowered to Caa2 for foreign currency and Caa1 for local currency later that month to indicate expectations of significant loss of principal on the defaulted bonds. The US and the IMF publicly backed Ecuador's efforts to restructure its US\$13 billion in foreign debt. About half of this debt was in the form of Brady Bonds. With the support of the US, Ecuador renegotiated its US\$1 billion of debt outstanding with the Paris Club of creditor nations and was able to restructure over 98% of the bonds into new bonds. Ecuador also defaulted on its domestic debt by unilaterally changing the interest rates on domestic bonds after it had defaulted on its foreign currency bonds.

Turkey 1999

Moody's did not rate Turkey in local currency at the time.

The Turkish economy had been badly battered over 1998-99 by a series of shocks ranging from the Asian and Russian crises to domestic political turbulence. Conditions worsened in 1999 as on 17 August Turkey was hit by the Kocaeli Earthquake, the worst ever to hit the country. In 1999, real GDP declined 3.4% and inflation was 68.8%.

Within the context of an inflation stabilization program and as part of a larger package of emergency tax measures, designed ostensibly to help defray the costs of the devastating earthquake, Turkey imposed a retroactive withholding tax on interest income on all outstanding domestic currency securities issued by the government prior to December 1, 1999. The withholding tax, applied to nominal interest earnings, was structured as follows: 1) Discounted bills and bonds were taxed in the range of 4-14% depending on their maturity - 4% (1-91 days); 9% (92-183 days); 14% (more than 183 days). 2) Floating rate notes were taxed at 4%. 3) Fixed rate bonds were taxed at 19%. Domestic securities issued after December 1, 1999 were specifically exempted from the tax, as were the government's private placements and bonds denominated in foreign currency.

Domestic banks were the most significant class of investors, with a 70% share of the total outstanding domestic debt, while foreign investors held less than 10%. The tax was intended to capture the windfall gains to be generated by the difference in expected and ex-post real returns over a period of rapidly falling inflation and the impact on most holders was intended to be mild. Although the contractual terms governing the domestic debt have not directly been changed, the government had unilaterally reduced the nominal amount that it had promised to pay investors by taxing the coupons as they mature. In effect, the coupon rates have been reduced – and Moody's includes such events in its definition of default.

Although the tax diminished the government's credibility with investors, it enhanced the credibility of the stabilization program. At the end of 1999, Turkey entered into a three-year standby arrangement with the IMF with an approved credit line of SDR 15.038 billion, with a stringent set of conditions designed to bring chronic inflation under control.

As mentioned above, Moody's did not rate Turkey's local currency bonds at the time that the tax was imposed. A first-time local currency government bond rating of B3 was assigned in April 2001. The foreign currency government ratings had remained at B1 in the 1997-2005 period.

Côte d'Ivoire 2000

Moody's does not rate Côte d'Ivoire.

Côte d'Ivoire defaulted on its Brady Bonds obligation in March 2000. General Guei, after proclaiming himself the new leader, suspended payment of the country's external debt (estimated in 1997 at US\$15.6 billion). When the IMF stressed the severity of the consequences of this unilateral moratorium, he resumed payments on 8 January 1998. His administration nevertheless had to go into technical default on CI Brady Bonds in April 2000 and into arrears, yet again, on debt in September 2000.

Côte d'Ivoire was successful at obtaining restructuring of its Paris Club debts. The restructuring means that debt servicing requirements were reduced to around 23% of exports, compared to 28% before the

default. With the restructuring, the short-term debt component was reduced, but it was still well over 100% as a proportion of foreign exchange reserves.¹⁷

Peru 2000

On 7 September 2000, Peru decided not to pay US\$80 million in interest payments on four of its Brady Bonds. Peru had been trying to renegotiate its commercial loans with Elliott and Associates ("Elliott"), a fund specializing in sovereign and distressed debt. Peru had offered to restructure the commercial debt into Brady Bonds, which the lender had refused. Additionally, Elliott filed a lawsuit against the government of President Alberto Fujimori and a US judge granted an injunction authorizing Elliott to attach any financial assets owned by the Peruvian government in the United States. The government of Peru was concerned that Elliott would attach the US\$80 million debt service payment.

After tense negotiations that lasted four weeks and failure to find a safe depository for the US\$80 million, Peru settled the dispute with Elliott through a multimillion-dollar payment. This settlement allowed the Peruvian government to make the interest payments through its fiscal agent in the United States. The payment was made on 4 October 2000 and the default was thus fully cured within its grace period. Peru's grace-period default is reported in this appendix for the sake of completeness, but it is excluded from all formal calculations found in this study.

Peru's foreign currency government bond rating was downgraded to B1 from Ba3 in September 2000, reflecting the missed interest payment but incorporating an expectation that the government would honor its Brady obligations in full before the 30-day grace period. Following the resolution of the legal dispute and the payment of the past-due interest before the 30-day grace period in October 2000, the rating was upgraded to Ba3.

Argentina 2001

Argentina defaulted in 2002 by missing an interest payment on 3 January 2002. While the actual default occurred in 2002, Moody's had already downgraded the long-term foreign and local currency sovereign credit rating to Ca on 20 December 2001, reflecting a very high probability of default and a high loss given default.

Three factors led to the default. In 1989, then President Menem agreed to peg the Argentine peso to the dollar on a parity basis by establishing a currency board. However, when Brazil devalued its real in 1999, foreign investors and buyers found their dollars could buy more in Brazil than in Argentina. As a result, Argentina's foreign investment and exports dried up — buyers of Argentine products could get more for the same price in other countries, particularly in neighbouring Brazil.

Secondly, the Menem government accrued a significant amount of debt, both domestic and foreign, sending domestic interest rates up. This led to the squeezing of private investment out of the market, forcing many companies to close and pushing up unemployment. Many of the privatized companies were utilities, which raised prices for such basic services as electricity and phones. Argentina's recession grew

¹⁷ Côte d'Ivoire defaulted again on its Eurobonds when it failed to pay at the end of its 30-day grace period in January 2011. More details will be provided in next year's annual update on sovereign defaults.

steadily worse. Thirdly, the IMF declined to bail Argentina out by making an advance payment on a previously agreed loan.

These three factors converged to the point that, in December 2001 and early January 2002, there was a rush on the banks to convert pesos into dollars at the one-to-one rate. Argentina subsequently defaulted on its foreign debt.

After prolonged negotiations with its lenders and multilateral institutions to restructure the debt, Argentina completed several exchange offers covering various series of defaulted bonds. By some estimates, the ultimate haircut taken by investors was as high as 65%.

Moldova 2002

In 1990, the Moldovan parliament voted to issue a declaration of sovereignty and secession from the USSR, establishing the supremacy of the Moldovan constitution and legislation throughout the country.

In 1998, Moldova was especially affected by the Russian economic crisis as exports in hard currency and in rubles almost dried up. The country faced a significant shortfall in its foreign reserves, which made servicing of foreign currency-denominated debt extremely difficult. However, it avoided default until June 2001 when it missed a payment on a foreign currency bond. It subsequently cured the default in July within the grace period.

Moldova started buying back its bonds some time after July 2001 and was successful in repurchasing approximately 50% of the outstanding amount. However, on 13 June 2002, it defaulted on the same bond, which matured that day. It was not able to cure the default within the grace period, which expired on 27 June 2002.

The country successfully negotiated with its bondholders to restructure and roll over the matured bond into a new debt instrument with a maturity date of 2009 and face value of US\$39.6 million. The annual coupon was 6.8% with the first payment due by the end of 2002. For the purposes of this study, the cured grace period default is not considered as an actual default event and only the final 2002 default counts.

Moldova's foreign currency government bond rating was downgraded to Caa1 from B3 in July 2001, in expectation that the delayed payment reflected stresses that reduced the likelihood of future payments being made on time. The local currency rating was already at Caa1 at that time. In July 2002, the foreign currency rating was downgraded to Ca from Caa1, reflecting the default on the Eurobond and the difficult overall economic and financial position of the country. The local currency rating was downgraded to Caa2 from Caa1 at the same time.

Nicaragua 2003

Nicaragua's debt levels had risen during the 1980s to reach about 1,000% of GDP in 1989. During the 1990s and the 2000s, successive rounds of debt renegotiation and debt forgiveness initiatives led by the multilateral institutions aimed to reduce the debt burden; after protracted debt relief negotiations and successive IMF programs, debt eventually fell to about 45% of GDP in 2010.

Nicaragua experienced a banking crisis in 2000-01, during which Central Bank CENI bonds were issued as bank recapitalization bonds to finance the purchase of distressed assets. The CENI bonds were denominated in US dollars and payable in local currency and the payment on the bonds absorbed significant part of government resources. In July 2003, Nicaragua completed a distressed exchange of CENI bonds held by a few domestic banks. The exchange reduced the interest rate paid on the bonds from 15.3%-21.0% to 8.3-10.0% and extended the maturity from five to ten years. Debt-to-GDP was over 130% in 2003.

In June 2008, another debt exchange of the same CENI bonds followed. The exchange helped to cover Nicaragua's financing gap at the time arising from lower tax revenues and a drop in foreign financing and it happened in the context of continued debt relief operations. The bonds had a face value US\$295.7mn at that time, and were held by two domestic banks. The exchange took place in June 2008 and was later formally approved by the Central Bank in February 2009. The maturity of the bonds was extended further from ten to twenty years and the interest rate was reduced to about 5%. The 2008 exchange involved 12.5% of the total debt at the time and resulted in 50% NPV loss. The rest of Nicaragua's debt, including locally-issued market debt, continued to be paid on time.

The foreign and local currency government bond ratings for Nicaragua had been at B2 since 1998, based on the country's narrowly-based economy and limited prospects for export diversification, institutional weaknesses, and debt overhang. In June 2003, the foreign currency government bond rating was lowered to Caa1 and the local currency government bond rating to B3, reflecting the vulnerabilities arising from high debt burden, highly-dollarized banking system, political instability, and limited ability to pay. The government bond ratings were unified at B3 in May 2010.

Dominica 2003

Moody's does not rate Dominica.

Dominica suffered from a series of permanent external shocks, including declining revenues from banana exports and a slump in tourism after the September 11, 2001, attacks, causing public debt to expand quickly and shutting off access to foreign capital. Dominica had trouble servicing its debt, which totalled almost 120% of GDP.

In May 2004, the government launched a restructuring of about US\$290 million of local currency bonds. Private and public sector creditors were offered to exchange outstanding bonds for three new ones with 10, 20 and 30-year maturities. The new bonds carry a fixed interest coupon of 3.5% and are denominated in Eastern Caribbean dollars. These bonds entailed principal reductions of 30, 20, and 0% respectively. As the original bonds were horizontally stripped into zero coupons and sold to a wide range of regional investors, the main challenge of the exchange was gaining a critical acceptance rate. Thus the exchange remained open for a prolonged time in 2004. Finally, 72% participation rate was realized. The long duration of the new bonds and the face value reduction improved both liquidity and solvency.

Uruguay 2003

Prior to May 2002, Uruguay had been rated investment grade (Baa3) since the middle of 1997. However, Argentina's severe currency crisis led to concurrent debt servicing problems for Uruguay in 2002. Uruguay's total debt had escalated to about 100% of GDP, or roughly US\$11 billion, with a significant

amount of bonds coming due in 2003 and 2004. To help restore debt sustainability, the authorities launched in April 2003 a debt exchange aiming at lengthening the average maturity on the bonds with no principal reduction. The exchange was completed fairly soon after (at the end of May) and participation rates averaged about 93%.

The debt restructuring involved three components: an international component, covering mainly bonds issued in Europe and the US (amounting to some US\$3.6 billion), a Japanese component (covering Samurai bonds worth about US\$250 million) and a domestic component (covering domestic currency bonds worth about US\$1.6 billion).

As a result of the maturity extension but no principal reduction, Moody's classified the offer as a distressed exchange/default. The foreign and local currency issuer ratings for Uruguay had been downgraded to Ba2 in May 2002, B1 in July 2002, and B3 in end-July 2002, reflecting the increasing vulnerability to macroeconomic shocks emanating from Argentina. The ratings were B3 when the offer was first proposed and were maintained after the exchange was completed.

Grenada 2004

Moody's does not rate Grenada.

Grenada incurred arrears on most of its commercial debt after the authorities declared public debt to be unsustainable after Hurricane Ivan struck in September 2004. Damage from the hurricane exceeded 200% of GDP. In October 2004, the authorities announced that the public debt was unsustainable and they intent to seek a cooperative solution with creditors and donors. In late December, interest payments on two large international bonds were missed.

Almost a year after Ivan, Grenada launched an exchange offer for its commercial debt. The offer covered about half of the country's total public sector debt, and sought to restructure approximately US\$190 million of external debt – including one global bond of US\$100 million – as well as US\$86 million of domestic debt. (The authorities reached a separate settlement on US\$17 million claims by domestic banks in October, ahead of the closing of the general offer.)

On 15 November 2005, Grenada successfully completed a distressed debt exchange and debt rescheduling affecting about US\$276 million of local and foreign currency bonds and bank loans. The debt exchange did not involve any write down of principal, and past-due interest was fully capitalized. The new bonds have a 20-year maturity and interest rates of 1% for the first three years, which gradually increases thereafter. The lower interest rates in the near to medium term imply that creditors accepted a haircut in NPV terms of 40-45% for exit yields in the 9-10% range.

Cameroon 2004

Moody's does not rate Cameroon.

As a result of serious budget slippages, in part due to the November 2004 presidential elections campaign, Cameroon underwent a severe fiscal crisis in 2003 and 2004, which eventually caused the government to default on part of its domestic debt. Cameroon's debt burden had been very high and debt service

payments absorbed a large part of government expenditure. The country also suffers from a weak external economic position and large current account deficits. Cameroon had concluded an agreement with London Club creditors in 2003 whereby approximately 85% of the face-value of outstanding claims was written-off, and the remainder was repaid with a World Bank loan. In H2 2004, the inability to complete the final review of Cameroon's IMF program prevented the country from reaching the completion point for the Highly Indebted Poor Countries (HIPC) debt-reduction initiative. Cameroon defaulted on local currency bonds in 2004. At the time, roughly one-half of the domestic debt stock equivalent to some 13% GDP was made up of bonds that were issued to clear previous arrears (to domestic suppliers, banks, and salaries) and were traded locally.

Following a comprehensive audit of domestic debt in H1 2005, the government implemented an arrears settlement plan, whereby the debt owed to all creditors was rescheduled over several years. The overall financial and economic situation greatly improved in 2005, owing to the combined effect of the increase in oil prices and the fiscal austerity measures put in place by the government. Positive developments with regard to structural and fiscal reforms prompted the IMF to grant Cameroon a new three-year Poverty Reduction and Growth Facility (PRGF) in October 2005. In 2006, Cameroon qualified for the HIPC Initiative and the Multilateral Debt Relief Initiative (MDRI), which led to a significant debt reduction.

Dominican Republic 2005

The Dominican Republic missed a bond payment in January 2004, but cured that default within the 30-day grace period. After a number of additional late interest payments over the following year, in April 2005, the country proposed a debt exchange to investors which would extend the existing maturities on its two outstanding foreign currency bond issues and defer their cash interest payments for two years. In May 2005, roughly 95% of the investors in the bond coming due in 2006 and one coming due in 2013 had agreed to extend the maturity dates by an additional five years at the original coupon rate and accept payment-in-kind (additional bonds) in lieu of all the interest due in 2005 and half of the interest due in 2006.

Moody's views the exchange as "distressed" and hence tantamount to a default, both because the maturity extension and the interest deferral were needed to avoid outright default and because the terms of the new securities (maintaining the original coupon rate) were insufficiently attractive to induce new investor participation. The date of the actual default for the purpose of this study is set at April 2005.

The issuer's foreign and local currency bond ratings were B3 before the exchange (the Dominican Republic was downgraded to B3 from B2 on 30 January 2004) and remained at B3 following the exchange because the realized loss severity of the exchange was modest, yet the potential for further losses going forward remained material.

Belize 2006

A period of modest economic growth in the late 1990s prompted the government to stimulate economic activity through aggressive policies largely financed by foreign borrowing. As a result, the fiscal balance quickly swelled to a deficit in excess of 10% of GDP. In 2005, the government embarked on a series of stabilization policies by rising taxes, cutting expenditure and tightening monetary conditions. During the

2005 fiscal year, the deficit was reduced to 3% of GDP. The debt restructuring was part of the efforts aimed at placing Belize on a more sustainable economic path.

The government announced in August 2006 its intention to reach an agreement with external commercial creditors and, in mid-December, a debt exchange was launched to which over 98% of bondholders had subscribed by its conclusion in February 2007. The exchange did not decrease the overall amount owed by Belize, although its servicing has been made easier by a lengthening in the maturity and a lower coupon. Specifically, the new dollar-denominated bonds mature in 2029 and do not start amortizing before 2019 - providing a 12-year grace period to the government. The new debt carries a lower coupon of 4.25% for the first three years that gradually increases up to 8.5%.

Reflecting the expectation of default, Moody's had already downgraded the foreign and local currency sovereign credit ratings to Caa3 on 26 October 2005. The ratings were raised to Caa1 on 13 February 2007 in light of improved liquidity following the restructuring of the government's external commercial obligations.

Ecuador 2008

In November 2008, Ecuador announced that it would not honor the payments due on its 2012 and 2030 global bonds, after the findings of an audit declared these debts "illegal" and "illegitimate." The government's decision to default was based on ideological and political grounds and was not related to liquidity and solvency issues – the default thus represented a problem of "willingness to pay" rather than "capacity to pay." The default occurred in a situation of relative macroeconomic strength, despite the recent downturn in commodity prices. At the time of the announcement, the country's debt-to-GDP ratio stood at around 23%, well below the 85% level during its previous default in 1999. Measured against central government revenues, Ecuador's debt burden was at 100%, compared to over 500% in 1999. Nevertheless, the fall in oil prices aggravated the economic downturn as oil is Ecuador's main export and finances 40% of its federal budget.

In November 2008, Ecuador missed an interest payment of \$30.6 million on its \$510 million of 12% global bonds due in 2012; then in February 2009, it missed an interest payment of \$135 million on its \$2.7 billion of 10% global bonds due in 2030. It continued to pay on its 2015 global bonds. In May 2009 the government announced a restructuring plan which included a 65% haircut on the face value of the bonds. Subsequently, Ecuador bought back 91% of the defaulted foreign bonds.

In light of the government's announcement that it would not pay the coupon on the 2012 global bonds on time, Moody's downgraded Ecuador's foreign currency rating to Caa1 from B3 in November 2008. The rating was further downgraded to Ca in December 2008, reflecting an expectation of severe losses to bondholders.

Seychelles 2008

Moody's does not rate the Seychelles.

In July 2008, the Seychelles failed to pay the principal due on a privately placed Euro 54.75 million amortizing note due 2011. Then in October 2008, it missed an interest payment on its \$230 million global bond due 2011.

The Seychelles' default occurred in the context of a difficult economic environment, severe fiscal and balance-of-payments constraints, an unsustainable debt burden, and a depleted international reserves position. Several previous years of moribund economic growth, expansionary fiscal policy, and increased indebtedness, combined with fall in tourism, on which the country is heavily dependent, and exacerbated the situation in 2008.

The country had embarked on a reform process in 2004, which although having positive results, had put significant pressure on the country's fiscal and external balances. Due to the accrual of arrears with multilateral creditors, commercial borrowing was pursued instead. The expansionary fiscal policy combined with a restrictive currency regime, low foreign exchange reserves, and rapid import growth. The liquidity pressures culminated in a balance-of-payments crisis in November 2008, when the currency was floated and depreciated by 50%. The rise in interest rate up to 30% has helped stabilize the currency.

At almost 175% of GDP, the Seychelles' debt burden was among the highest in the world. The government announced that it was seeking a restructuring of its external debt stock of approximately US\$800 million and embarked on its first-ever IMF-supported economic and financial program. A two-year Stand-by arrangement was approved by the IMF in November 2008, for about US\$ 24 million. A debt restructuring agreement with Paris Club creditors was reached in April 2009. Paris Club creditors granted exceptional debt treatment to Seychelles under the 2003 Evian approach to debt relief, reducing the debt stock by 45% in nominal terms in two tranches, with the remainder rescheduled over 18 years with 5 years grace period.

A formal exchange offer to commercial bondholders was launched on 7 December 2009 and was closed on 14 January 2010. Tenders for 89% of the debt were received and collective action clauses were evoked to include the remainder of the bonds. Defaulted debt (more than US\$311 million) was exchanged for new notes (with face value of US\$168.9 million) at a discount of 50% to face value. The new notes will amortize in equal semi-annual installments commencing July 2016 and ending January 2026. They have a step-up interest payment of between 3% and 8% over their duration. The new notes carry a partial guarantee on interest from the African Development Bank (AfDB) of up to US\$10 million. The exchange offer has brought about the cancellation of approximately US\$225 in principal, accrued interest, and other charges.

Jamaica 2010

Jamaica completed a domestic debt exchange in February 2010 in order to reduce the burden the debt was placing on public finances. The ratio of public debt to GDP had remained above 100% over the previous decade and the debt-to-revenue ratio stood at around 400%. The cost of servicing Jamaica's debt was estimated at over 55% of central government revenues and 16% of GDP. The country had run primary surpluses in recent years, some in the order of 10% of GDP, which, however, proved to be at the cost of slashing public investment and contributed to the very low economic growth. GDP growth averaged 1% annually prior to the default.

The debt exchange did not involve external debt, but it included the entire stock of marketable domestic debt, worth around 60% of GDP or 700 billion Jamaican dollars. The exchange proceeded in an orderly fashion with 99% participation rate. The terms of the exchange provided for zero reduction in principal, a cut of the average coupon to 11% from 17%, and an extension of the average debt maturity to five years from two. It caused relatively little dislocation to the economy and the financial sector due to the majority of the debt being held by a few local financial institutions and the exchange being designed to strike a balance between a meaningful cash flow alleviation and preserving the health of the banking system.

Jamaica's government bond ratings had been lowered to Caa1 from B2 at the end of 2009 in expectation of a possible debt restructuring. At the announcement of the debt exchange in January 2010, the local currency bond rating was downgraded further to Caa2 to reflect the 20% loss implied by the terms of the debt exchange. After the resolution of the exchange, in March 2010, the government bond ratings were upgraded to B3, balancing the fiscal relief following the debt exchange and the economic and financial vulnerabilities. Jamaica's overall debt burden remained relatively high with a debt-to-GDP ratio of 113% and interest payments-to-revenue ratio of 42% in 2011.

Appendix II – Prices of Defaulted Sovereign Bonds

1983-2010

Defaulting Issuer	Date Of Issue	Maturity Date	Coupon	Initial Rating	Issue Default Date	Default Rating	Default Amount In \$Mm	Recovery Price	Currency
Russia	14-May-94	14-May-99	3%	Ba3	20-Apr-99	Ca	1307	25	USD
Russia	6-Oct-97	15-Dec-15	FLT	Ba3	25-May-99	Ca	6051	10.5	USD
Ecuador	18-Apr-97	25-Apr-04	FLT	B1	22-Oct-99	Caa3	150	59.9	USD
Ecuador	24-Jul-97	25-Apr-02	11.25%	B1	22-Oct-99	Caa3	350	43	USD
Ecuador	24-Jul-97	28-Feb-25	4%	B1	22-Oct-99	Caa2	1914	30	USD
Pakistan	23-Nov-94	22-Dec-99	11.50%	Ba3	6-Dec-99	Caa1	150	40	USD
Pakistan	30-May-97	30-May-00	FLT	B1	6-Dec-99	Caa1	300	62.0	USD
Pakistan	20-Feb-97	26-Feb-02	6%	B2	6-Dec-99	Caa1	160	55	USD
Ukraine	19-Feb-98	26-Feb-01	16%	B2	25-Feb-00	Caa1	500	68.8	DEM
Ukraine	9-Mar-98	17-Mar-00	14.75%	B2	25-Feb-00	Caa1	489	69.3	EUR
Ivory Coast	31-Mar-98	29-Mar-18	2%	NR	31-Mar-00	NR	410	18.1	USD
Argentina	8-Dec-93	20-Dec-03	8.38%	B1	30-Nov-01	Caa3	1000	31	USD
Argentina	1-Oct-96	9-Oct-06	11%	B1	30-Nov-01	Caa3	1213	30.5	USD
Argentina	22-Jan-97	30-Jan-17	11.38%	B1	30-Nov-01	Caa3	2491	27	USD
Argentina	29-Jan-97	12-Feb-07	11.75%	B1	30-Nov-01	Caa3	80	10	ARS
Argentina	26-Jun-97	10-Jul-02	8.75%	B1	30-Nov-01	Caa3	113	25	ARS
Argentina	28-Jul-97	20-Dec-03	8.38%	B1	30-Nov-01	Caa3	500	31	USD
Argentina	12-Sep-97	19-Sep-27	9.75%	B1	30-Nov-01	Caa3	891	26	USD
Argentina	27-Mar-98	10-Apr-05	FLT	Ba3	30-Nov-01	Caa3	456	30	USD
Argentina	29-Jul-98	20-Dec-03	8.38%	Ba3	30-Nov-01	Caa3	300	31	USD
Argentina	18-Nov-98	4-Dec-05	11%	Ba3	30-Nov-01	Caa3	862	26.5	USD
Argentina	17-Feb-99	25-Feb-19	12.13%	Ba3	30-Nov-01	Caa3	176	28	USD
Argentina	19-Feb-99	1-Mar-29	8.88%	NR	30-Nov-01	NR	125	20	USD
Argentina	29-Mar-99	7-Apr-09	11.75%	Ba3	30-Nov-01	Caa3	1163	30.3	USD
Argentina	25-Jan-00	1-Feb-20	12%	B1	30-Nov-01	Caa3	158	28	USD
Argentina	6-Mar-00	15-Mar-10	11.38%	B1	30-Nov-01	Caa3	1000	32	USD
Argentina	2-Jun-00	15-Jun-15	11.38%	B1	30-Nov-01	Caa3	903	31	USD
Argentina	11-Jul-00	21-Jul-30	10.25%	B1	30-Nov-01	Caa3	241	29.5	USD
Argentina	7-Feb-01	21-Feb-12	12.38%	B1	30-Nov-01	Caa3	905	29	USD
Argentina	24-May-01	19-Dec-08	7%	B2	30-Nov-01	Caa3	11456	30.6	USD
Argentina	24-May-01	19-Jun-18	12.25%	B2	30-Nov-01	Caa3	7463	25.5	USD
Argentina	24-May-01	19-Jun-31	12%	B2	30-Nov-01	Caa3	8821	25	USD
Moldova	6-Jun-97	13-Jun-02	9.88%	Ba2	13-Jun-02	Caa1	75	60	USD
Uruguay	9-Jul-97	15-Jul-27	7.88%	B3	15-May-03	B3	510	58.5	USD
Uruguay	13-Nov-98	18-Nov-03	7.88%	B3	15-May-03	B3	200	80	USD
Uruguay	19-Jun-00	22-Jun-10	8.75%	B3	15-May-03	B3	300	66.5	USD
Uruguay	21-Nov-01	20-Jan-12	7.63%	B3	15-May-03	B3	300	63	USD

1983-2010

Defaulting Issuer	Date Of Issue	Maturity Date	Coupon	Initial Rating	Issue Default Date	Default Rating	Default Amount In \$Mm	Recovery Price	Currency
Uruguay	20-Mar-02	25-Mar-09	7.88%	B3	15-May-03	B3	250	66	USD
Uruguay	20-Mar-02	4-May-09	7.25%	B3	15-May-03	B3	250	64	USD
Grenada	20-Jun-02	30-Jun-12	9.38%	NR	30-Dec-04	NR	100	65	USD
Dominican Republic	27-Sep-01	27-Sep-06	9.50%	Ba2	20-Apr-05	B2	500	98.5	USD
Dominican Republic	23-Jan-03	23-Jan-13	9.04%	Ba2	20-Apr-05	B2	600	91.8	USD
Belize	15-Aug-02	15-Aug-12	9.50%	Ba2	7-Dec-06	Caa3	125	75	USD
Belize	9-Jun-03	12-Jun-15	9.75%	Ba3	7-Dec-06	Caa3	100	76	USD
Seychelles	27-Sep-06	3-Oct-11	9.125%	NR	23-Oct-08	NR	230	30	USD
Ecuador	23-Aug-00	15-Nov-12	12.00%	Caa2	16-Dec-08	Ca	510	25.75	USD
Ecuador	23-Aug-00	15-Aug-30	10.00%	Caa2	15-Mar-09	Ca	2700	30.5	USD
Jamaica	8-Mar-02	8-Mar-12	15.125%	NR	24-Feb-10	NR	6.7	97.1	JMD
Jamaica	22-May-02	22-May-22	16.25%	NR	24-Feb-10	NR	11.2	91.5	JMD
Jamaica	18-Jun-02	18-Jun-27	16.25%	NR	24-Feb-10	NR	5.6	88.8	JMD
Jamaica	2-Aug-02	2-Aug-17	14.5%	NR	24-Feb-10	NR	4.5	87.3	JMD
Jamaica	6-Sep-02	6-Sep-32	15%	NR	24-Feb-10	NR	3.4	80.5	JMD
Jamaica	22-Aug-02	22-Aug-19	15.75%	NR	24-Feb-10	NR	1.1	91.1	JMD
Jamaica	19-Aug-05	19-Aug-15	14.25%	NR	24-Feb-10	NR	3.4	89.1	JMD
Jamaica	28-Apr-06	28-Apr-11	14%	NR	24-Feb-10	NR	160.1	97.2	JMD
Jamaica	17-Mar-08	15-Mar-13	14.25%	NR	24-Feb-10	NR	13.4	93.4	JMD

Appendix III – Sovereign Bond Rating Histories¹⁸

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
Albania	06/29/07	B1	Albania	06/29/07	B1
Angola	5/19/10	B1	Angola	5/19/10	B1
Argentina	11/18/86	Ba3	Argentina	01/28/97	B1
	12/04/87	B2		10/02/97	Ba3
	05/26/89	B3		10/06/99	B1
	07/13/92	B1		03/28/01	B2
	10/02/97	Ba3		07/13/01	B3
	10/06/99	B1		07/26/01	Caa1
	03/28/01	B2		10/12/01	Caa3
	07/13/01	B3		12/20/01	Ca
	07/26/01	Caa1		08/20/03	Caa1
	10/12/01	Caa3		06/29/05	B3
	12/20/01	Ca			
	08/20/03	Caa1			
	06/29/05	B3			
Armenia	07/24/06	Ba2	Armenia	07/24/06	Ba2
Australia	01/15/62	A	Australia	07/26/99	Aaa
	10/15/74	Aaa			
	09/10/86	Aa1			
	08/28/89	Aa2			
	10/20/02	Aaa			
Austria	06/26/77	Aaa	Austria	10/27/86	Aaa
Azerbaijan	09/14/06	Ba1	Azerbaijan	09/14/06	Ba1
Bahamas	04/08/97	A3	Bahamas	11/12/98	A1
				10/14/09	A3
Bahrain	01/29/96	Ba1	Bahrain	03/30/99	Baa3
	08/15/02	Baa3		08/15/02	Baa1
	12/11/03	Baa1		10/04/06	A3
	10/04/06	A3		07/24/07	A2
	07/24/07	A2		010/6/09	A3
	010/6/09	A3			
Bangladesh	04/12/10	Ba3	Bangladesh	04/12/10	Ba3
Barbados	12/05/94	Ba2	Barbados	12/09/02	A3
	04/18/97	Ba1		10/13/09	Baa2
	02/08/00	Baa2			
	10/13/09	Baa3			
Belarus	08/22/07	B1	Belarus	08/22/07	B1

¹⁸ The Appendix presents the history of sovereign issuer ratings. For study coverage and methodology, refer to Exhibit 1 and the Data and Methodology section.

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
Belgium	03/27/88	Aa1	Belgium	01/27/97	Aa1
Belize	01/21/99	Ba2	Belize	01/21/99	Ba1
	05/28/03	Ba3		05/28/03	Ba2
	08/05/04	B2		08/05/04	B1
	06/07/05	B3		06/07/05	B3
	10/26/05	Caa3		10/26/05	Caa3
	02/13/07	Caa1		02/13/07	Caa1
	02/10/09	B3		02/10/09	B3
Bermuda	06/10/94	Aa1	Bermuda	11/09/98	Aaa
	04/29/09	Aa2		04/29/09	Aa2
Bolivia	05/29/98	B1	Bolivia	10/02/98	B1
	04/16/03	B3		04/16/03	B3
	09/28/09	B2		09/28/09	B2
	12/05/10	B1		12/05/10	B1
Bosnia and Herzegovina	03/29/04	B3	Bosnia and Herzegovina	03/29/04	B3
	05/16/06	B2		05/16/06	B2
Botswana	03/12/01	A2	Botswana	03/12/01	A1
				03/12/09	A2
Brazil	11/18/86	Ba1	Brazil	06/19/98	B2
	12/04/87	B1		09/03/98	Caa1
	10/15/89	B2		12/16/99	B3
	11/30/94	B1		10/16/00	B1
	09/03/98	B2		08/12/02	B2
	10/16/00	B1		09/09/04	Ba3
	08/12/02	B2		08/31/06	Ba2
	09/09/04	B1		08/23/07	Ba1
	10/12/05	Ba3		09/22/09	Baa3
	08/31/06	Ba2			
	08/23/07	Ba1			
	09/22/09	Baa3			
Bulgaria	09/27/96	B3	Bulgaria	02/18/99	B1
	12/16/97	B2		06/05/03	Ba2
	12/19/01	B1		11/17/04	Ba1
	06/05/03	Ba2		03/01/06	Baa3
	11/17/04	Ba1			
	03/01/06	Baa3			
Cambodia	05/21/07	B2	Cambodia	05/21/07	B2
Canada	05/22/68	Aa	Canada	05/03/93	Aaa
	04/12/74	Aaa		04/12/95	Aa1
	06/02/94	Aa1		05/03/02	Aaa

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	04/12/95	Aa2			
	06/21/00	Aa1			
	05/03/02	Aaa			
Cayman Islands	12/16/97	Aa3	Cayman Islands	-	
Chile	02/17/94	Baa2	Chile	07/29/99	A1
	06/29/95	Baa1			
	07/07/06	A2			
	03/23/09	A1			
	06/16/10	Aa3		06/16/10	Aa3
China	05/23/88	A3	China	07/25/07	A1
	11/08/89	Baa1		07/25/07	A1
	09/10/93	A3			
	10/02/03	A2			
	07/25/07	A1			
	11/15/10	Aa3			
Colombia	08/04/93	Ba1	Colombia	06/19/98	Baa2
	09/19/95	Baa3		06/29/06	Baa3
	08/11/99	Ba2			
	06/19/08	Ba1			
Costa Rica	05/08/97	Ba1	Costa Rica	10/02/98	Ba1
	09/09/10	Baa3		09/09/10	Baa3
Croatia	01/27/97	Baa3	Croatia	03/02/99	Baa1
				11/19/08	Baa2
				04/17/09	Baa3
Cuba	04/05/99	Caa1	Cuba	-	
Cyprus	02/28/96	A2	Cyprus	07/19/99	A2
	07/10/07	A1		07/10/07	A1
	01/03/08	Aa3		01/03/08	Aa3
Czech Republic	03/01/93	Baa3	Czech Republic	06/22/98	A1
	05/01/94	Baa2			
	09/01/95	Baa1			
	11/02/02	A1			
Denmark	09/06/67	Aa	Denmark	07/08/86	Aa
	08/15/86	Aa1		08/15/86	Aa1
	08/23/99	Aaa		02/03/87	Aaa
Dominican Republic	05/30/97	B1	Dominican Republic	11/09/98	B1
	08/29/01	Ba2		08/29/01	Ba2
	10/07/03	B1		10/07/03	B1
	11/10/03	B2		11/10/03	B2
	01/30/04	B3		01/30/04	B3

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	05/07/07	B2		05/07/07	B2
	04/22/10	B1		04/22/10	B1
Ecuador	07/24/97	B1	Ecuador	10/02/98	B3
	09/14/98	B3		10/05/99	Caa1
	10/05/99	Caa2		02/24/04	B3
	02/24/04	Caa1		03/21/08	WR
	01/30/07	Caa2		09/24/09	Caa3
	03/20/08	B3			
	11/14/08	Caa1			
	12/16/08	Ca			
	09/24/09	Caa3			
Egypt	10/09/96	Ba2	Egypt	03/04/99	Baa1
	11/14/97	Ba1		05/18/05	Baa3
				06/23/08	Ba1
El Salvador	07/07/97	Baa3	El Salvador	11/09/98	Baa2
	11/15/09	Ba1		09/14/09	WR
Estonia	09/11/97	Baa1	Estonia	02/18/99	A1
	11/12/02	A1			
Fiji Islands	03/31/99	Ba1	Fiji Islands	03/31/99	Ba1
	07/19/00	Ba2		07/19/00	Ba2
	04/21/09	B1		04/21/09	B1
Finland	10/19/77	Aa	Finland	01/15/97	Aaa
	02/07/86	Aaa			
	10/22/90	Aa1			
	01/13/92	Aa2			
	01/15/97	Aa1			
	05/04/98	Aaa			
France	01/23/79	Aaa	France	09/28/88	Aaa
Georgia	10/07/10	Ba3	Georgia	10/07/10	Ba3
Germany	02/09/86	Aaa	Germany	04/29/93	Aaa
Greece	07/19/90	Baa1	Greece	01/28/97	A2
	05/24/94	Baa3		11/04/02	A1
	12/23/96	Baa1		12/22/09	A2
	07/14/99	A2		04/22/10	A3
	11/04/02	A1		06/14/10	Ba1
	12/22/09	A2			
	04/22/10	A3			
	06/14/10	Ba1			
Guatemala	07/08/97	Ba2	Guatemala	11/09/98	Ba1
	06/01/10	Ba1		06/01/10	Ba1

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
Honduras	09/29/98	B2	Honduras	09/29/98	B2
Hong Kong	8/11/1988	A2	Hong Kong	5/10/1998	A1
	1/11/1989	A3		1/8/2000	Aa3
	2/10/2003	A1		25/7/2007	Aa2
	27/9/2006	Aa3		11/15/10	Aa1
	25/7/2007	Aa2			
	11/15/10	Aa1			
Hungary	07/18/89	Baa2	Hungary	06/22/98	A1
	07/13/90	Ba1		12/22/06	A2
	12/19/96	Baa3		11/07/08	A3
	05/08/98	Baa2		03/31/09	Baa1
	06/25/99	Baa1		12/06/10	Baa3
	11/14/00	A3			
	11/12/02	A1			
	12/22/06	A2			
	11/07/08	A3			
	03/31/09	Baa1			
	12/06/10	Baa3			
Iceland	05/24/89	A2	Iceland	07/30/97	Aaa
	06/24/96	A1		05/20/08	Aa1
	07/30/97	Aa3		10/08/08	A1
	10/20/02	Aaa		12/04/08	Baa1
	05/20/08	Aa1		11/11/09	Baa3
	10/08/08	A1			
	12/04/08	Baa1			
	11/11/09	Baa3			
India	01/28/88	A2	India	06/19/98	Ba2
	10/04/90	Baa1		07/26/10	Ba1
	03/26/91	Baa3			
	06/24/91	Ba2			
	12/01/94	Baa3			
	06/19/98	Ba2			
	02/03/03	Ba1			
	01/22/04	Baa3			
Indonesia	03/01/94	Baa3	Indonesia	09/01/98	B3
	12/01/97	Ba1		09/01/03	B2
	01/01/98	B2		05/18/06	B1
	03/01/98	B3		10/18/07	Ba3
	09/01/03	B2		09/16/09	Ba2
	05/18/06	B1			

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	10/18/07	Ba3			
	09/16/09	Ba2			
Iran	-		Iran	06/10/99	Ba2
				12/31/01	WR
Ireland	07/15/87	Aa3	Ireland	09/04/92	Aaa
	08/31/94	Aa2		07/05/09	Aa1
	02/13/97	Aa1		10/05/10	Aa2
	05/04/98	Aaa		12/17/10	Baa1
	07/05/09	Aa1			
	10/05/10	Aa2			
	12/17/10	Baa1			
Israel	11/02/95	A3	Israel	12/15/98	A2
	07/06/00	A2		04/17/08	A1
	04/17/08	A1			
Italy	10/10/86	Aaa	Italy	11/02/93	A1
	07/01/91	Aa1		07/03/96	Aa3
	08/13/92	Aa3		05/15/02	Aa2
	05/05/93	A1			
	07/03/96	Aa3			
	05/05/02	Aa2			
Jamaica	03/30/98	Ba3	Jamaica	03/30/98	Baa3
	05/17/03	B1		05/17/03	Ba2
	03/04/09	B2		03/04/09	B2
	11/18/09	Caa1		11/18/09	Caa1
	03/02/10	B3		01/22/10	Caa2
				03/02/10	B3
Japan	10/01/81	Aaa	Japan	05/07/93	Aaa
	11/16/98	Aa1		11/16/98	Aa1
	10/20/02	Aaa		09/08/00	Aa2
	05/18/09	Aa2		12/04/01	Aa3
				05/30/02	A2
				10/11/07	A1
				06/29/08	Aa3
				05/18/09	Aa2
Jordan	10/27/95	Ba3	Jordan	11/24/99	Ba2
	08/21/03	Ba2		08/21/03	Baa3
Kazakhstan	11/11/96	Ba3	Kazakhstan	06/25/99	B1
	02/18/99	B1		06/18/01	Ba1
	06/18/01	Ba2		09/19/02	Baa1

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	09/19/02	Baa3		05/12/09	Baa2
	06/08/06	Baa2			
Korea	11/18/86	A2	Korea	12/04/98	Baa1
	04/04/90	A1		03/28/02	A3
	11/27/97	A3		07/25/07	A2
	12/10/97	Baa3		04/14/10	A1
	12/21/97	Ba1			
	02/12/99	Baa3			
	12/16/99	Baa2			
	03/28/02	A3			
	07/25/07	A2			
	04/14/10	A1			
Kuwait	01/29/96	Baa1	Kuwait	01/21/99	Baa1
	05/15/02	A2		05/15/02	A2
	10/04/06	Aa3		10/04/06	Aa3
	07/24/07	Aa2		07/24/07	Aa2
Latvia	12/17/97	Baa2	Latvia	03/02/99	A2
	11/12/02	A2		11/07/08	A3
	11/07/08	A3		01/07/09	Baa1
	01/07/09	Baa1		04/23/09	Baa3
	04/23/09	Baa3			
Lebanon	02/26/97	B1	Lebanon	08/26/99	B1
	07/30/01	B2		07/30/01	B3
	03/14/05	B3		04/01/09	B2
	04/01/09	B2		04/13/10	B1
	04/13/10	B1			
Lithuania	09/04/96	Ba2	Lithuania	02/18/99	Baa1
	12/16/97	Ba1		12/11/03	A3
	11/12/02	Baa1		09/11/06	A2
	12/11/03	A3		04/23/09	A3
	09/11/06	A2		09/28/09	Baa1
	04/23/09	A3			
	09/28/09	Baa1			
Luxembourg	09/20/89	Aaa	Luxembourg	07/13/99	Aaa
Macao	11/03/97	Baa1	Macao	09/04/98	A3
	02/09/03	A3		10/15/03	A1
	10/15/03	A1		07/25/07	Aa3
	07/25/07	Aa3			
Malaysia	11/18/86	Baa1	Malaysia	09/04/98	A3
	03/12/90	A3			

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	03/15/93	A2			
	03/15/95	A1			
	12/29/97	A2			
	07/23/98	Baa2			
	09/14/98	Baa3			
	10/17/00	Baa2			
	09/24/02	Baa1			
	12/15/04	A3			
Malta	03/14/94	A2	Malta	03/25/98	A3
	03/25/98	A3		07/10/07	A2
	07/10/07	A2		01/03/08	A1
	01/03/08	A1			
Mauritius	03/28/96	Baa2	Mauritius	01/15/99	A2
				06/01/06	Baa1
				12/14/07	Baa2
Mexico	12/18/90	Ba3	Mexico	05/20/93	Baa1
	01/22/96	Ba2		01/06/95	Baa3
	08/10/99	Ba1		03/07/00	Baa1
	03/07/00	Baa3			
	02/06/02	Baa2			
	01/06/05	Baa1			
Micronesia	04/20/90	Aa2	Micronesia	-	
	05/23/90	Aa1			
	01/13/03	WR			
Moldova	01/14/97	Ba2	Moldova	07/13/99	Caa1
	07/14/98	B2		07/11/02	Caa2
	04/19/00	B3		05/06/03	Caa1
	07/03/01	Caa1		10/01/09	WR
	07/11/02	Ca		08/01/10	B3
	05/06/03	Caa1			
	10/01/09	WR			
	08/01/10	B3			
Mongolia	10/03/05	B1	Mongolia	10/03/05	B1
Montenegro	03/12/08	Ba2	Montenegro	-	
	04/30/09	Ba3			
Morocco	03/02/98	Ba1	Morocco	12/03/01	Ba1
Netherlands	01/10/86	Aaa	Netherlands	05/05/98	Aaa
New Zealand	07/01/65	Baa	New Zealand	09/14/91	Aaa
	07/10/75	Aa			
	06/29/77	Aaa			

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	10/17/84	Aa			
	08/15/86	Aa3			
	03/16/94	Aa2			
	02/26/96	Aa1			
	09/23/98	Aa2			
	10/20/02	Aaa			
Nicaragua	03/27/98	B2	Nicaragua	03/27/98	B2
	06/30/03	Caa1		06/30/03	B3
	05/26/10	B3			
Norway	11/12/78	Aaa	Norway	08/11/95	Aaa
	07/13/87	Aa1			
	09/30/97	Aaa			
Oman	01/29/96	Baa2	Oman	07/15/99	Baa2
	10/06/05	Baa1		10/06/05	Baa1
	10/04/06	A3		10/04/06	A3
	07/24/07	A2		07/24/07	A2
	02/18/10	A1		02/18/10	A1
Pakistan	11/23/94	Ba3	Pakistan	06/25/99	Caa1
	07/11/95	B1		02/13/02	B3
	11/06/96	B2		10/20/03	B2
	05/28/98	B3		11/22/06	B1
	10/23/98	Caa1		05/21/08	B2
	02/13/02	B3		10/28/08	B3
	10/20/03	B2			
	11/22/06	B1			
	05/21/08	B2			
	10/28/08	B3			
Panama	06/30/58	A	Panama	-	
	06/27/78	Aa			
	01/22/97	Ba1			
	06/09/10	Baa3			
Papua New Guinea	12/31/98	B1	Papua New Guinea	01/25/99	B1
Paraguay	07/13/98	B2	Paraguay	07/13/98	B1
	04/28/03	Caa1		04/28/03	Caa1
	04/09/08	B3		04/09/08	B3
	12/05/10	B1		12/05/10	B1
Peru	02/05/96	B2	Peru	11/09/98	Baa3
	03/27/98	Ba3			
	09/19/00	B1			
	10/05/00	Ba3			

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	07/16/07	Ba2			
	08/01/08	Ba1			
	12/16/09	Baa3			
Philippines	07/01/93	Ba3	Philippines	09/04/98	Baa3
	05/12/95	Ba2		01/27/04	Ba2
	05/18/97	Ba1		02/05/05	B1
	01/27/04	Ba2		07/23/09	Ba3
	02/05/05	B1			
	07/23/09	Ba3			
Poland	06/01/95	Baa3	Poland	06/22/98	A2
	09/01/99	Baa1			
	11/02/02	A2			
Portugal	11/18/86	A1	Portugal	02/10/97	Aa2
	02/10/97	Aa3		07/13/10	A1
	05/04/98	Aa2			
	07/13/10	A1			
Qatar	01/29/96	Ba1	Qatar	12/15/99	Baa2
	11/04/96	Baa2		08/15/02	A3
	08/15/02	A3		05/18/05	A1
	05/18/05	A1		10/04/06	Aa3
	10/04/06	Aa3		07/24/07	Aa2
	07/24/07	Aa2			
Romania	03/06/96	Ba3	Romania	02/22/99	Caa1
	09/14/98	B1		12/19/01	B2
	11/06/98	B3		12/16/02	B1
	12/19/01	B2		12/11/03	Ba3
	12/11/03	Ba3		03/02/05	Ba1
	03/02/05	Ba1		10/06/06	Baa3
	10/06/06	Baa3			
Russia	10/07/96	Ba2	Russia	05/29/98	B2
	03/11/98	Ba3		08/13/98	Caa1
	05/29/98	B1		08/21/98	Ca
	08/13/98	B2		01/05/00	Caa2
	08/21/98	B3		12/07/00	B3
	09/05/01	B2		10/11/01	B1
	11/29/01	Ba3		11/29/01	Ba2
	12/17/02	Ba2		10/08/03	Baa3
	10/08/03	Baa3		10/25/05	Baa2
	10/25/05	Baa2		07/16/08	Baa1
	07/16/08	Baa1			

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
Saudi Arabia	01/29/96	Baa3	Saudi Arabia	01/12/99	Ba1
	06/16/03	Baa2		06/16/03	Baa1
	11/14/05	A3		11/14/05	A3
	10/04/06	A2		10/04/06	A2
	07/24/07	A1		07/24/07	A1
	02/15/10	Aa3		02/15/10	Aa3
Singapore	09/20/89	Aa3	Singapore	09/04/98	Aaa
	05/24/94	Aa2			
	01/18/96	Aa1			
	06/14/02	Aaa			
Slovakia	05/15/95	Baa3	Slovakia	06/22/98	Baa2
	03/30/98	Ba1		11/13/01	A3
	11/13/01	Baa3		01/12/05	A2
	11/12/02	A3		10/16/06	A1
	01/12/05	A2			
	10/16/06	A1			
Slovenia	05/08/96	A3	Slovenia	01/06/99	Aa3
	11/14/00	A2		07/26/06	Aa2
	11/12/02	Aa3			
	07/26/06	Aa2			
South Africa	10/03/94	Baa3	South Africa	11/20/95	Baa1
	11/29/01	Baa2		11/29/01	A2
	01/11/05	Baa1		07/16/09	A3
	07/16/09	A3			
Spain	02/03/88	Aa2	Spain	01/31/97	Aa2
	12/13/01	Aaa		12/13/01	Aaa
	09/30/10	Aa1		09/30/10	Aa1
Sri Lanka	09/09/10	B1	Sri Lanka	-	
St. Vincent & the Grenadines	12/10/07	B1	St. Vincent & the Grenadines	12/10/07	B1
Suriname	02/03/04	B1	Suriname	02/03/04	Ba3
Sweden	11/10/77	Aaa	Sweden	01/18/95	Aa1
	01/17/91	Aa1		08/23/99	Aaa
	02/01/93	Aa2			
	01/05/95	Aa3			
	06/04/98	Aa2			
	08/23/99	Aa1			
	04/04/02	Aaa			
Switzerland	01/20/82	Aaa	Switzerland	11/10/98	Aaa
Taiwan	03/24/94	Aa3	Taiwan	12/04/98	Aa3

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating		
Thailand	08/01/89	A2	Thailand	09/04/98	Baa1		
	04/08/97	A3					
	10/01/97	Baa1					
	11/27/97	Baa3					
	12/21/97	Ba1					
	06/22/00	Baa3					
	11/26/03	Baa1					
Trinidad & Tobago	02/08/93	Ba2	Trinidad & Tobago	11/09/98	Baa3		
	10/10/95	Ba1				04/06/00	Baa1
	04/06/00	Baa3					
	08/09/05	Baa2					
	07/07/06	Baa1					
Tunisia	04/06/95	Baa3	Tunisia	06/25/99	Baa2		
	04/17/03	Baa2					
Turkey	05/05/92	Baa3	Turkey	04/06/01	B3		
	01/14/94	Ba1		09/30/04	B2		
	06/02/94	Ba3		02/11/05	B1		
	03/13/97	B1		12/14/05	Ba3		
	12/14/05	Ba3		01/08/10	Ba2		
	01/08/10	Ba2					
Turkmenistan	12/04/97	B2	Turkmenistan	01/14/02	B2		
	09/09/10	WR		09/09/10	WR		
Ukraine	02/06/98	B2	Ukraine	02/22/99	Ca		
	09/09/98	B3		01/05/00	Caa3		
	01/05/00	Caa1		11/20/01	Caa1		
	01/24/02	B2		01/24/02	B2		
	11/10/03	B1		11/10/03	B1		
	05/12/09	B2		05/12/09	B2		
United Arab Emirates	01/29/96	Baa1	United Arab Emirates	10/04/06	Aa3		
	12/11/97	A2		07/09/07	Aa2		
	12/21/04	A1					
	10/04/06	Aa3					
	07/09/07	Aa2					
United Kingdom	03/31/78	Aaa	United Kingdom	04/27/93	Aaa		
United States of America	02/05/49	Aaa	United States of America	02/05/49	Aaa		
Uruguay	10/15/93	Ba1	Uruguay	10/02/98	Baa3		
	06/10/97	Baa3		05/03/02	Ba2		
	05/03/02	Ba2		07/10/02	B1		
	07/10/02	B1		07/31/02	B3		
	07/31/02	B3		12/21/06	B1		

Sovereign issuer	FCR date	FC rating	Sovereign issuer	LCR date	LC rating
	12/21/06	B1		01/12/09	Ba3
	01/12/09	Ba3		12/08/10	Ba1
	12/08/10	Ba1			
Venezuela	12/29/76	Aaa	Venezuela	07/22/98	B3
	02/04/83	Aa		09/03/98	Caa1
	06/03/87	Ba2		12/20/99	B3
	12/04/87	Ba3		09/20/02	Caa1
	08/07/91	Ba1		09/07/04	B1
	02/07/94	Ba2			
	04/08/94	Ba3			
	01/22/96	Ba2			
	07/22/98	B1			
	09/03/98	B2			
	09/20/02	B3			
	01/21/03	Caa1			
	09/07/04	B2			
Vietnam	10/31/05	Ba3	Vietnam	03/14/07	Ba3
	12/15/10	B1		12/15/10	B1

Report Number: 132672

Author
Merxe Tudela

Editor
Maya Penrose

Production Associate
Alisa Llorens

© 2011 Moody's Investors Service, Inc. and/or its licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ARE MOODY'S INVESTORS SERVICE, INC.'S ("MIS") CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MIS DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. CREDIT RATINGS DO NOT CONSTITUTE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS ARE NOT RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. CREDIT RATINGS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MIS ISSUES ITS CREDIT RATINGS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT. All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process. Under no circumstances shall MOODY'S have any liability to any person or entity for (a) any loss or damage in whole or in part caused by, resulting from, or relating to, any error (negligent or otherwise) or other circumstance or contingency within or outside the control of MOODY'S or any of its directors, officers, employees or agents in connection with the procurement, collection, compilation, analysis, interpretation, communication, publication or delivery of any such information, or (b) any direct, indirect, special, consequential, compensatory or incidental damages whatsoever (including without limitation, lost profits), even if MOODY'S is advised in advance of the possibility of such damages, resulting from the use of or inability to use, any such information. The ratings, financial reporting analysis, projections, and other observations, if any, constituting part of the information contained herein are, and must be construed solely as, statements of opinion and not statements of fact or recommendations to purchase, sell or hold any securities. Each user of the information contained herein must make its own study and evaluation of each security it may consider purchasing, holding or selling. NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

MIS, a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MIS have, prior to assignment of any rating, agreed to pay to MIS for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.com under the heading "Shareholder Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Any publication into Australia of this document is by MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657, which holds Australian Financial Services License no. 336969. This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001.

Notwithstanding the foregoing, credit ratings assigned on and after October 1, 2010 by Moody's Japan K.K. ("MJKK") are MJKK's current opinions of the relative future credit risk of entities, credit commitments, or debt or debt-like securities. In such a case, "MIS" in the foregoing statements shall be deemed to be replaced with "MJKK".

MJKK is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO.

This credit rating is an opinion as to the creditworthiness or a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors. It would be dangerous for retail investors to make any investment decision based on this credit rating. If in doubt you should contact your financial or other professional adviser.