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## Default Study:

# Sovereign Defaults And Rating Transition Data, 2012 Update

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## Default Study:

# Sovereign Defaults And Rating Transition Data, 2012 Update

Standard & Poor's Ratings Services has updated its data on the performance and default rates of sovereign ratings through year-end 2012. (1) From our reading of the data, we conclude that, in general:

- The relative rank ordering of sovereign ratings has been consistent with historical default experience.
- Sovereign ratings have exhibited greater stability at higher rating levels than at lower levels.
- Sovereign ratings have been no more volatile than other credit ratings on private-sector corporations and financial institutions; large rating movements in either direction are the exception and not the rule, even over several years.
- The sovereign rating default experience has been in line with Basel II reference default rates, even though default rates for individual years vary widely.
- In 2012, we lowered foreign-currency sovereign ratings to 'SD' five times and local-currency sovereign ratings three times.
- Since the recession of 2008/2009, sovereign upgrades and downgrades have come more into balance in the shorter time horizons, and a downward bias for local-currency sovereign ratings has emerged.

## Background And Methodology

Standard & Poor's published its first sovereign rating transition study for foreign-currency ratings in 1999. (2) We have enhanced, expanded, and updated the study annually. We find that examining default rates reveals a strong correlation between our assessments of credit quality and default remoteness: empirically, the higher the rating, the lower the default experience. Many default studies, including this one, also look at transition rates, which gauge the degree to which ratings change either up or down over time. We find that these transition studies have demonstrated that higher ratings have tended to be more stable than lower ratings.

This study is based on long-term sovereign credit ratings. The methodology tracks rating changes over time, including revisions to 'D' (default) or, more commonly for sovereign issuers, 'SD' (selective default), as defaulting sovereigns often continue to service some of their debt to commercial and official creditors. The study is based on issuer (in this case, central government) ratings, not issue ratings. Issuers are not adjusted for size (that is, they are not dollar-weighted), so for the purposes of this study, a default by the Hellenic Republic counts the same as a default by Grenada. Our study tracks defaults on a sovereign's commercial debt, including both bonds and bank loans (see Appendix 1). When tallying defaults for the study, we use both public (whether solicited or unsolicited) (3) and confidential (4) ratings (that subsequently go public) as of the start of the cohort period. Ratings that we subsequently withdraw (indicated with the abbreviation NR for not rated) are included up until the date of withdrawal. As of Dec. 31, 2012, Standard & Poor's had withdrawn public sovereign ratings four times--those on the Republics of Madagascar, Mali, and Seychelles, as well as Libya. (5)

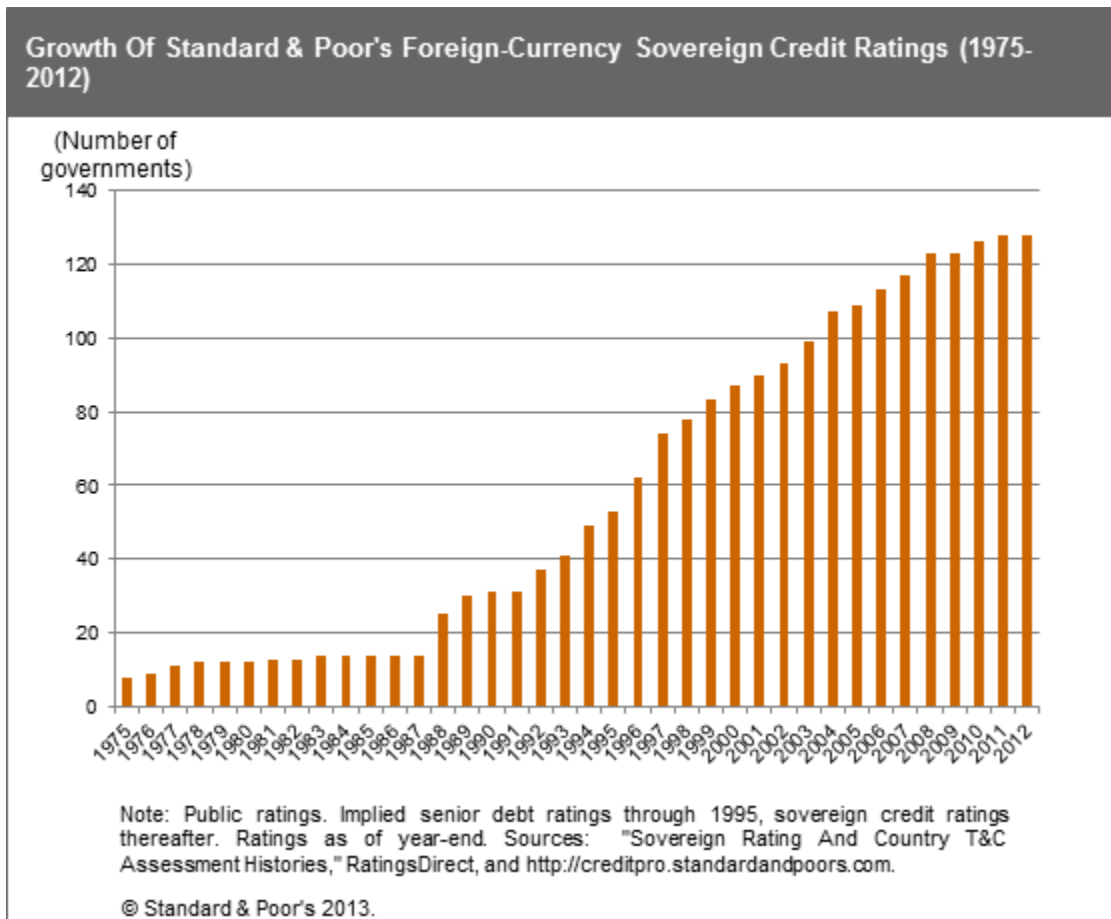
We compile the data using static pools. A static pool is a portfolio of issuers defined on a specific periodic date. The study tracks rating migrations and defaults for each static pool going forward from that point to the end of a specified

time horizon in 12-month increments, and the results for each static pool are averaged to calculate the average rating migrations for each rating category over specific time horizons. (6) We use two approaches for determining static pools. We use monthly start dates for sovereign-specific default and transition tables and charts, annualizing the results. For cross-departmental comparisons and regulatory filings, we use calendar-year start dates (7).

### Universe dynamics

Chart 1 shows the growth in the number of sovereigns publicly rated by Standard & Poor's.

**Chart 1**

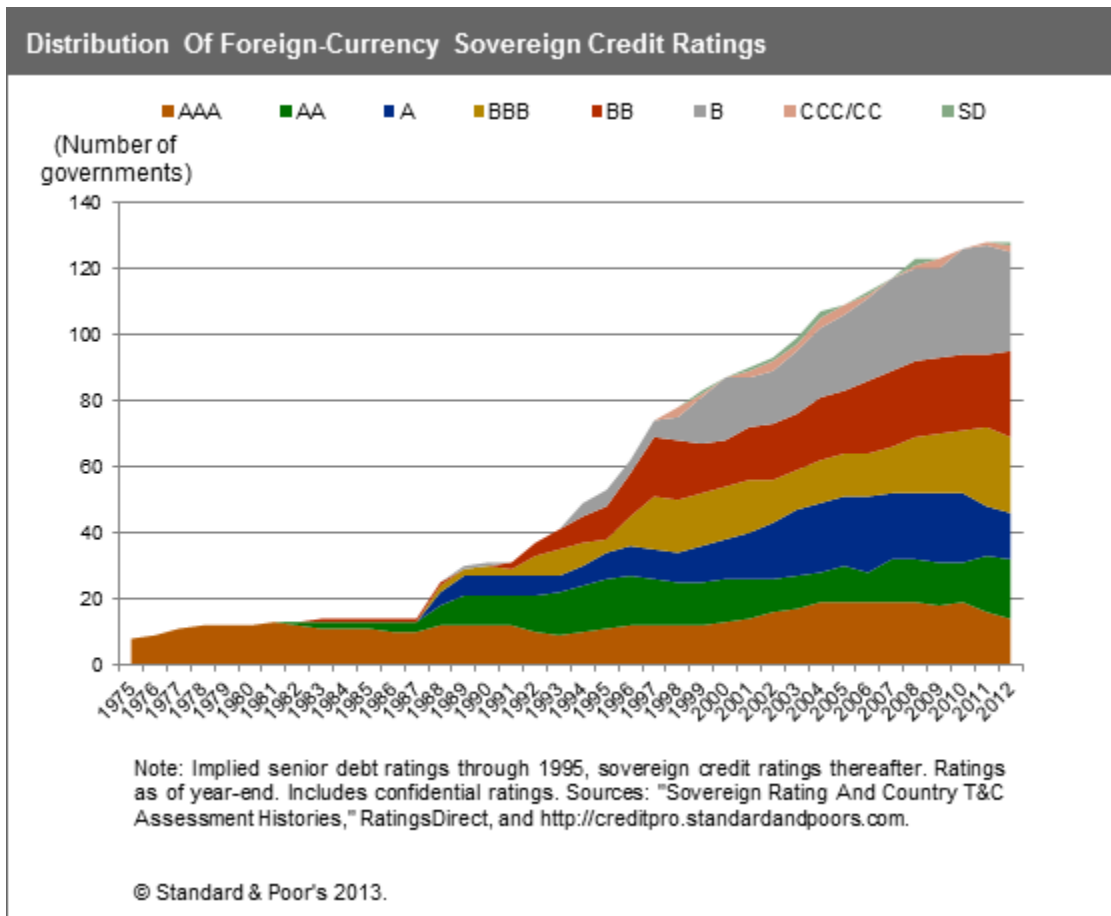


As described in Appendix 2, Standard & Poor's predecessor institutions started rating sovereign governments in the 1920s. However, after the Great Depression, World War II, and the imposition of the Interest Equalization Tax (IET) in the U.S. in 1963, sovereign ratings lapsed, except on the U.S. and Canada. The Yankee bond market again became attractive for foreign governments with the repeal of the IET in 1974, and demand for sovereign ratings resumed from American investors (Standard & Poor's original base of demand). The number of rated sovereigns rose to 12 in 1980 from two at the time of IET's 1974 repeal. The figure almost tripled by 1990, to 31, with all but one sovereign rated investment grade.

From that point on, there was a marked increase in the number of ratings and an expansion into lower rating categories. The increase stemmed from the successful restructuring of Mexico's defaulted bank debt into Brady bonds,

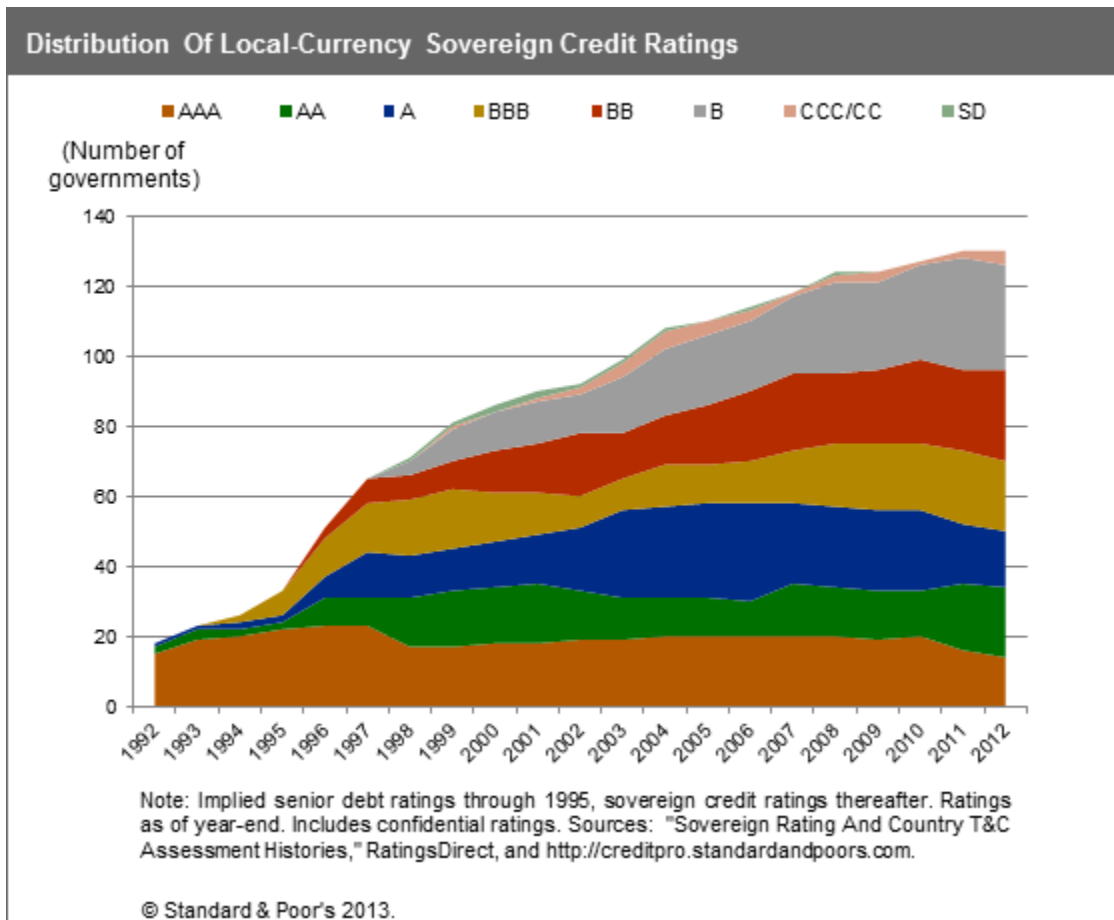
thus opening up speculative-grade sovereigns as an attractive asset class. Our rating history and transition data suggest that the growth in speculative-grade issuers is not a function of downgrades, but rather a result of issuers that we initially rated in lower categories as they first accessed international bond markets (see chart 2). As of year-end 2012, Standard & Poor's rated the governments of virtually every major economy in the world, and the ratings were fairly evenly distributed across the rating spectrum from 'AAA' to 'B'.

Chart 2



Standard & Poor's assigned only a few local-currency sovereign debt ratings before 1992; we aligned most of these with the foreign-currency debt rating on the sovereign. Today, all rated sovereigns have both foreign- and local-currency credit ratings. In 1992, Standard & Poor's revised its view of a sovereign's greater inherent flexibility in servicing its local-currency debt based on the unique powers a sovereign enjoys within its own borders--particularly in its control of domestic financial and monetary systems. (8) As a result, as of year-end 2012, 18 sovereigns have local-currency credit ratings that are higher than the foreign-currency credit ratings (see chart 3) (9).

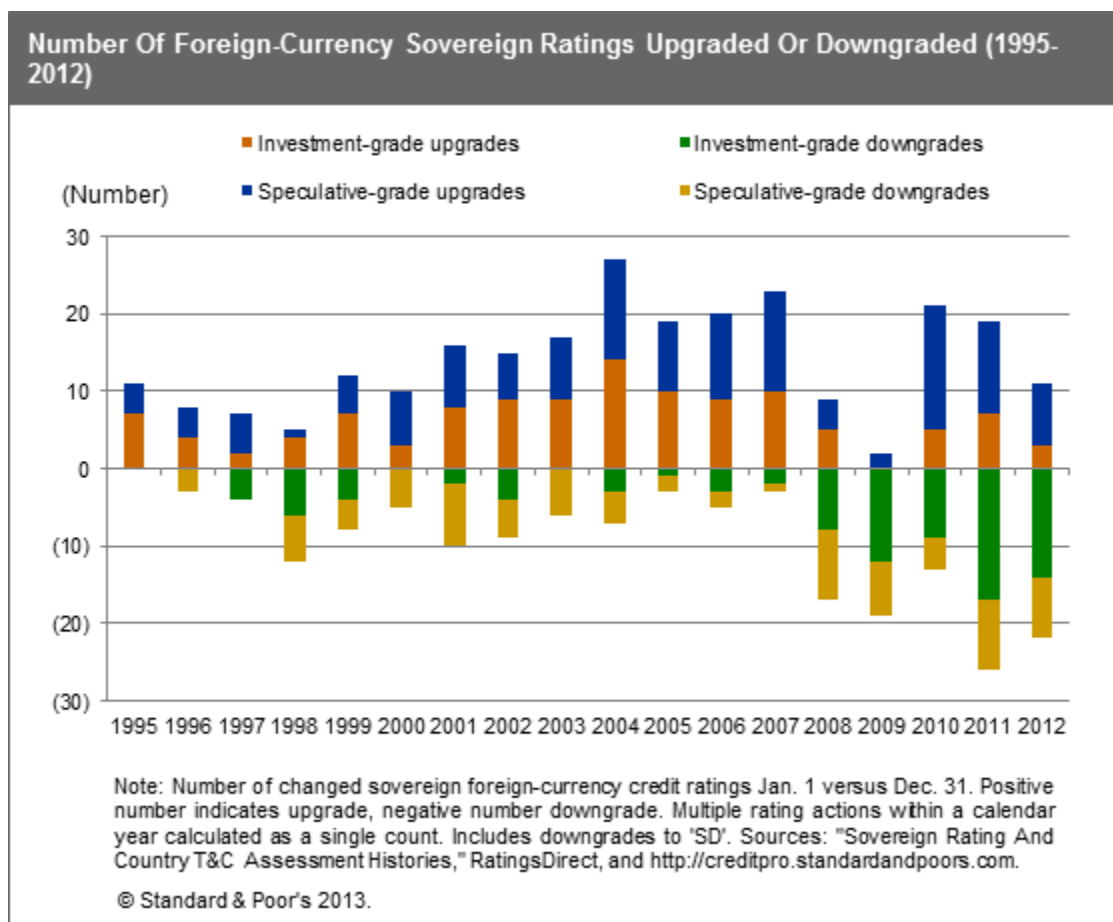
Chart 3



## Sovereign Annual Upgrades Versus Downgrades

Chart 4 shows the balance of foreign-currency rating actions since 1995. (10) The chart shows the number of rating actions (both across and within rating categories) between Jan. 1 and Dec. 31 for each year covered. We count multiple rating actions during a calendar year as a single action. In 2012, we changed 25% of sovereign foreign-currency ratings. Downgrades outnumbered upgrades in 2012. We downgraded 17% (22 in all) of rated sovereigns between Jan. 1, 2012, and Dec. 31, 2012, and upgraded 8% (11) over the same period. In the last 18 years, however, upgrades have outnumbered downgrades 13 times. (The four previous down years were 1998, 2008, 2009, and 2011.) Upgrades and downgrades of speculative-grade sovereigns were equal in 2012 (see chart 4). We expect that sovereign credit conditions will continue to worsen in 2013: At year-end 2012, we had assigned negative outlooks to, or placed on CreditWatch with negative implications, the ratings on 37 sovereigns, whereas only five sovereign ratings had positive outlooks. (11) That said, from 1995 to 2012, between 63% and 82% of sovereign ratings remained unchanged compared with the year before.

Chart 4



## Sovereign Foreign-Currency Rating Transition Rates

Turning to aggregate data for rating changes, charts 5-10 and tables 6-10 (which are found, along with the other large tables, at the end of this article) present the weighted-average transition matrices for foreign-currency ratings by rating category during the 38-year period beginning in 1975. (12) The charts group the data by rating category, and the tables present the data by time horizon. For example, chart 5 displays the rating transition for 'AAA' credits. It shows that on average since 1975, 96.9% of sovereigns rated 'AAA' at the beginning of the year were rated 'AAA' at the end of the year, 92.3% after three years, 88.2% after five years, 78.2% after 10 years, and 71.7% after 15 years. These data correspond to the cell that captures the intersection of the 'AAA' row showing ratings at the beginning of a year and the 'AAA' column showing ratings at the end of a year in tables 6-10. The green bar shows the percentage of downgrades that resulted in a rating in the 'AA' category. Thus, after 15 years, on average, 26.4% of sovereigns rated 'AAA' at the beginning of the period were rated in the 'AA' category at the end.

Charts 5-10 show the stability and dispersion of foreign-currency sovereign ratings over time that is shown numerically in tables 6-10. If ratings never changed, a single bar would fill each column of the chart, and 100% would appear along the diagonal of the transition tables. In general, these charts and tables show that ratings have been more stable when

the time horizon is shorter and the rating is higher. Upgrades and downgrades are broadly balanced in the shorter time horizons, with some greater preponderance of upgrades at longer time horizons at 'BB' ratings and above.

Chart 5

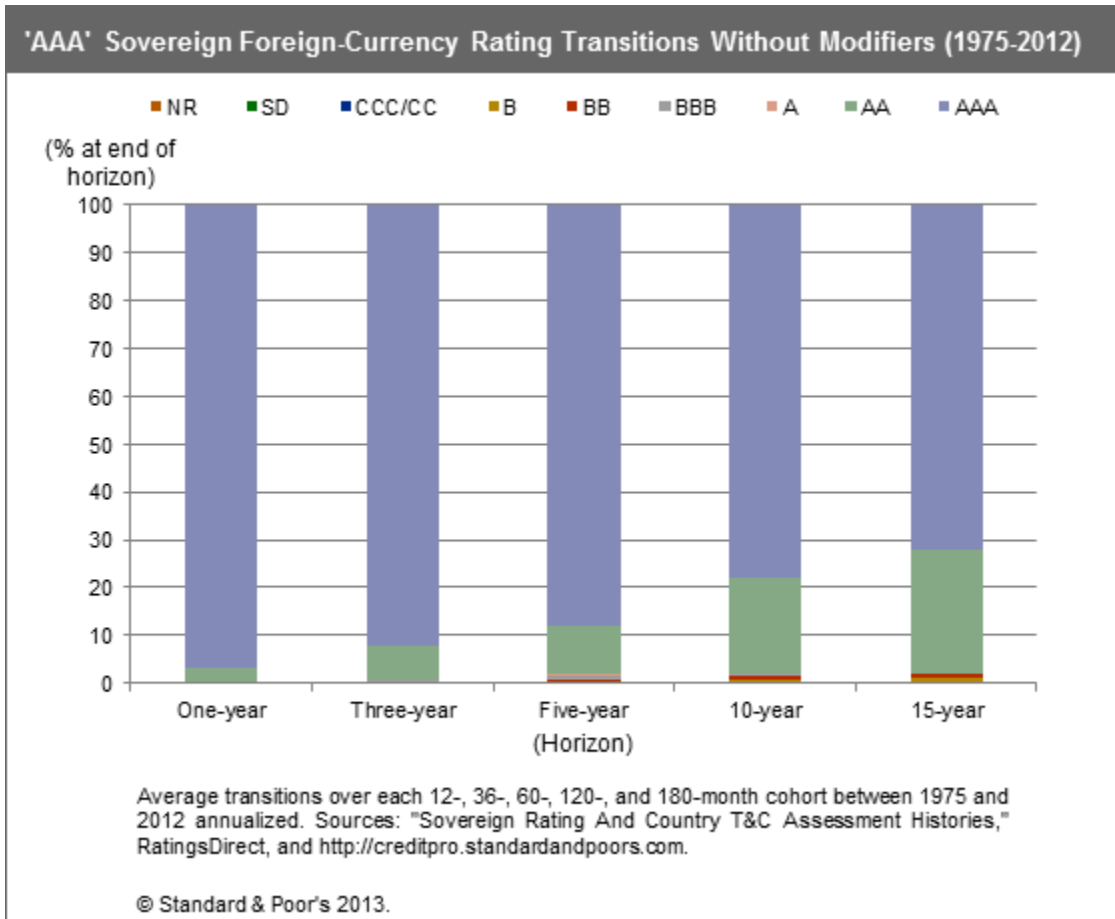




Chart 6

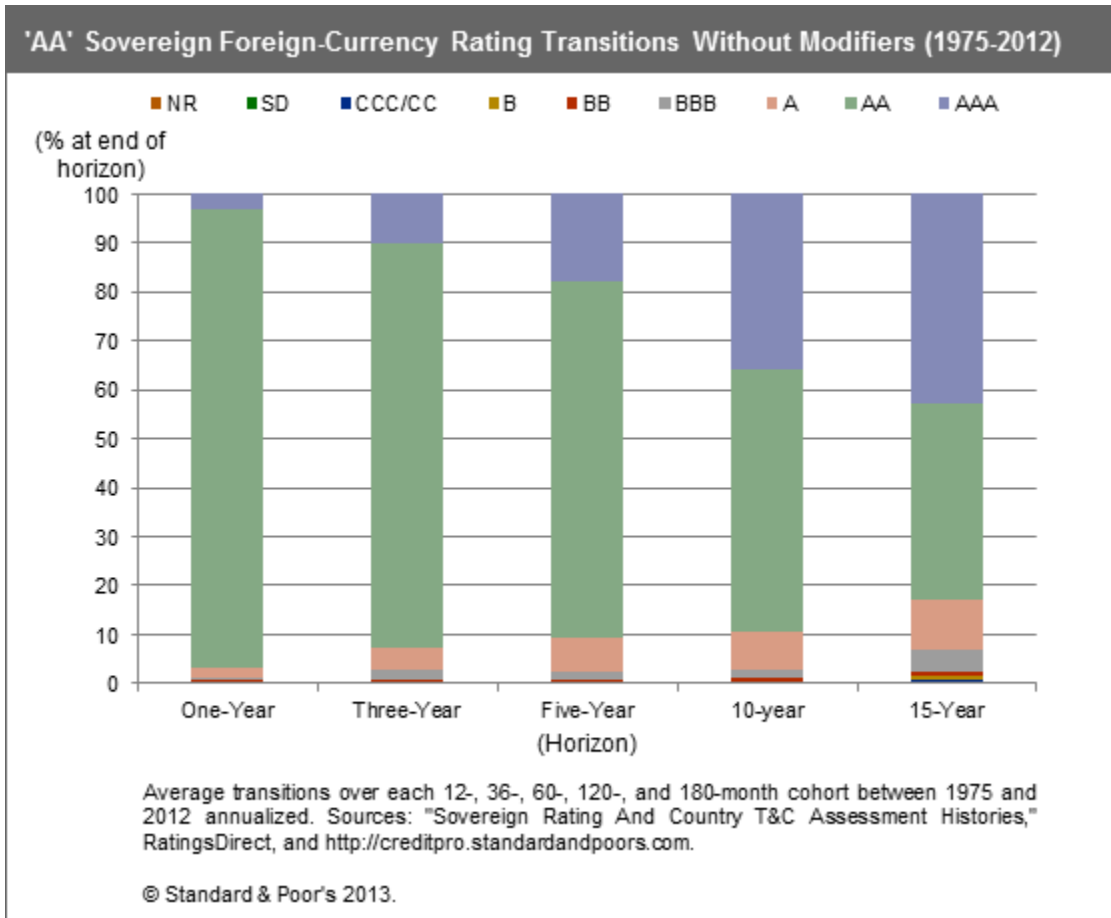


Chart 7

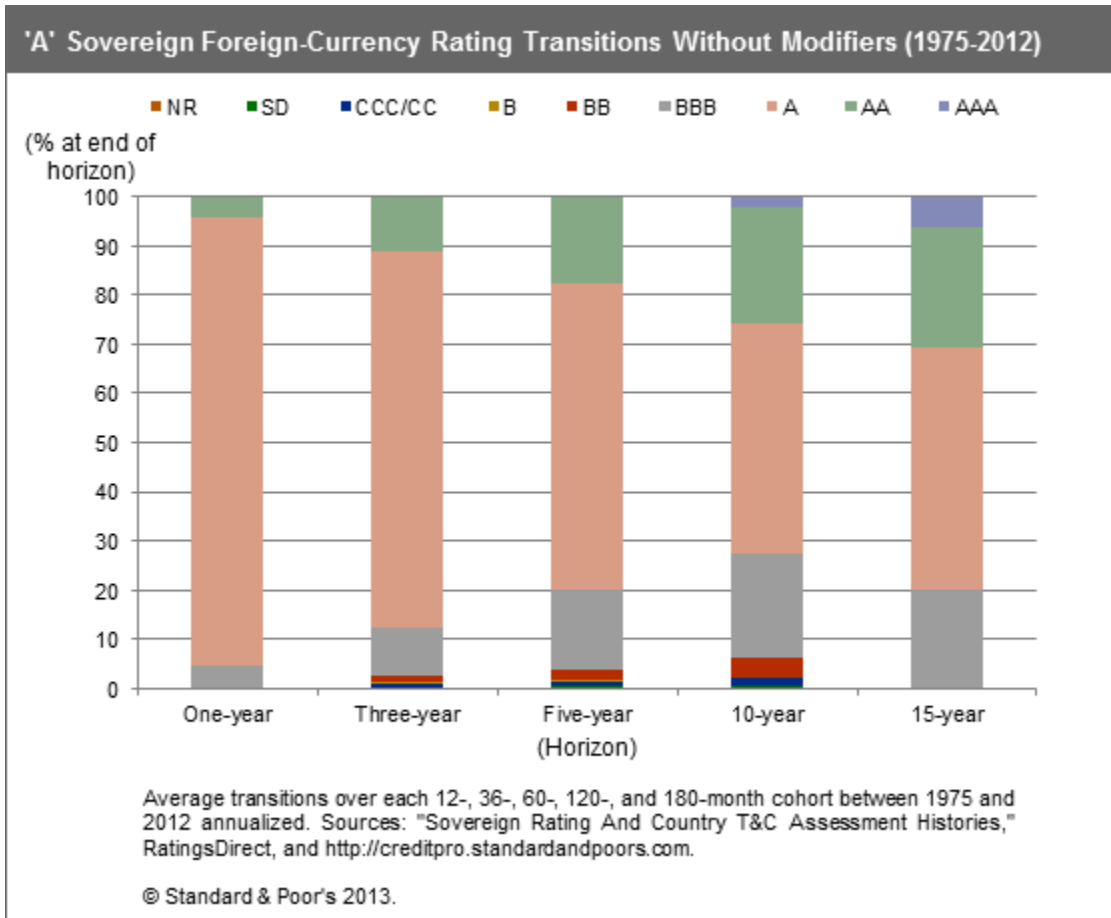


Chart 8

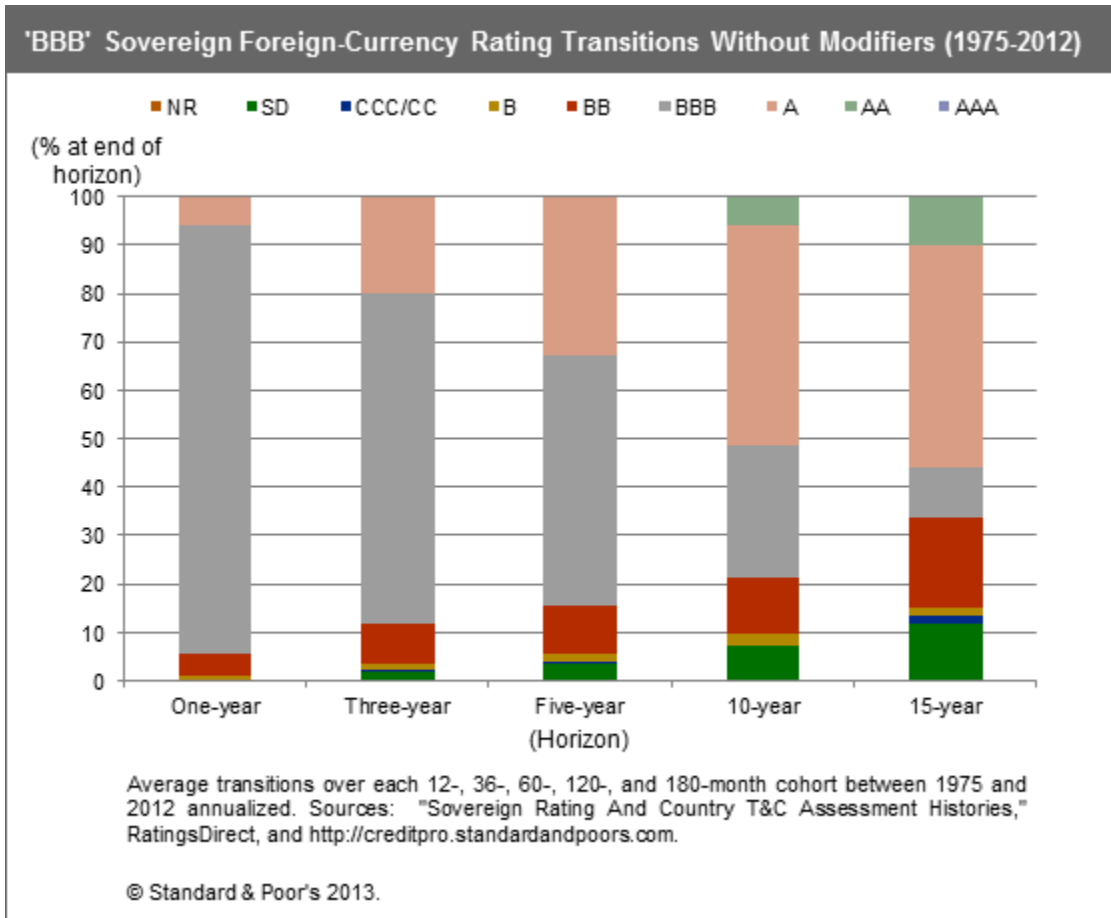


Chart 9

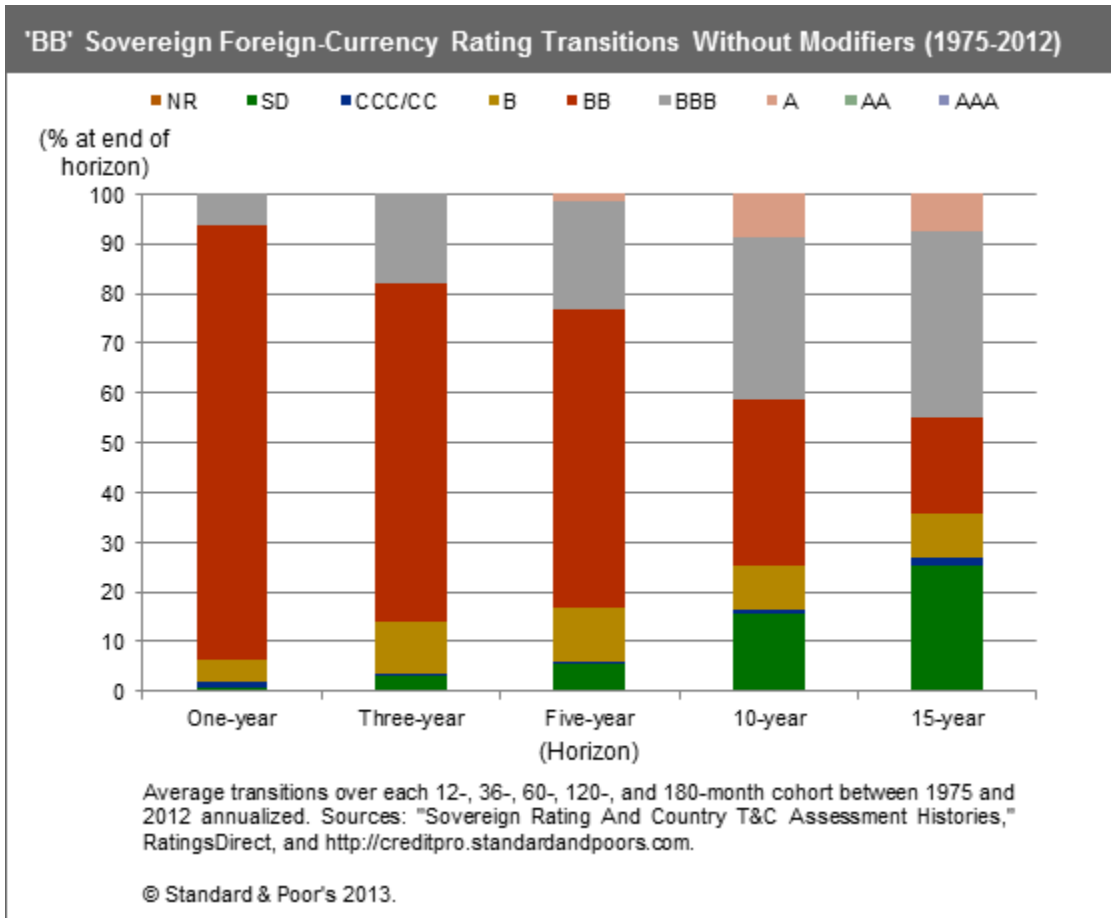
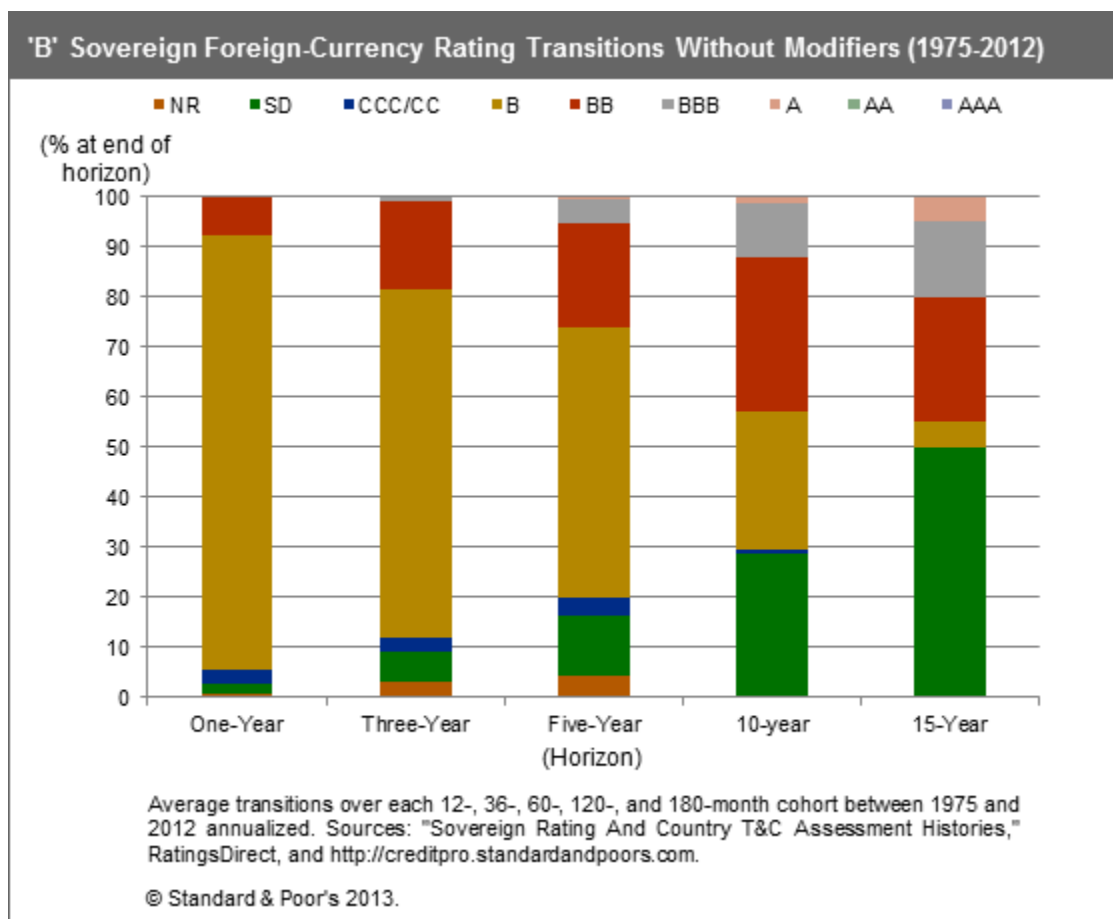


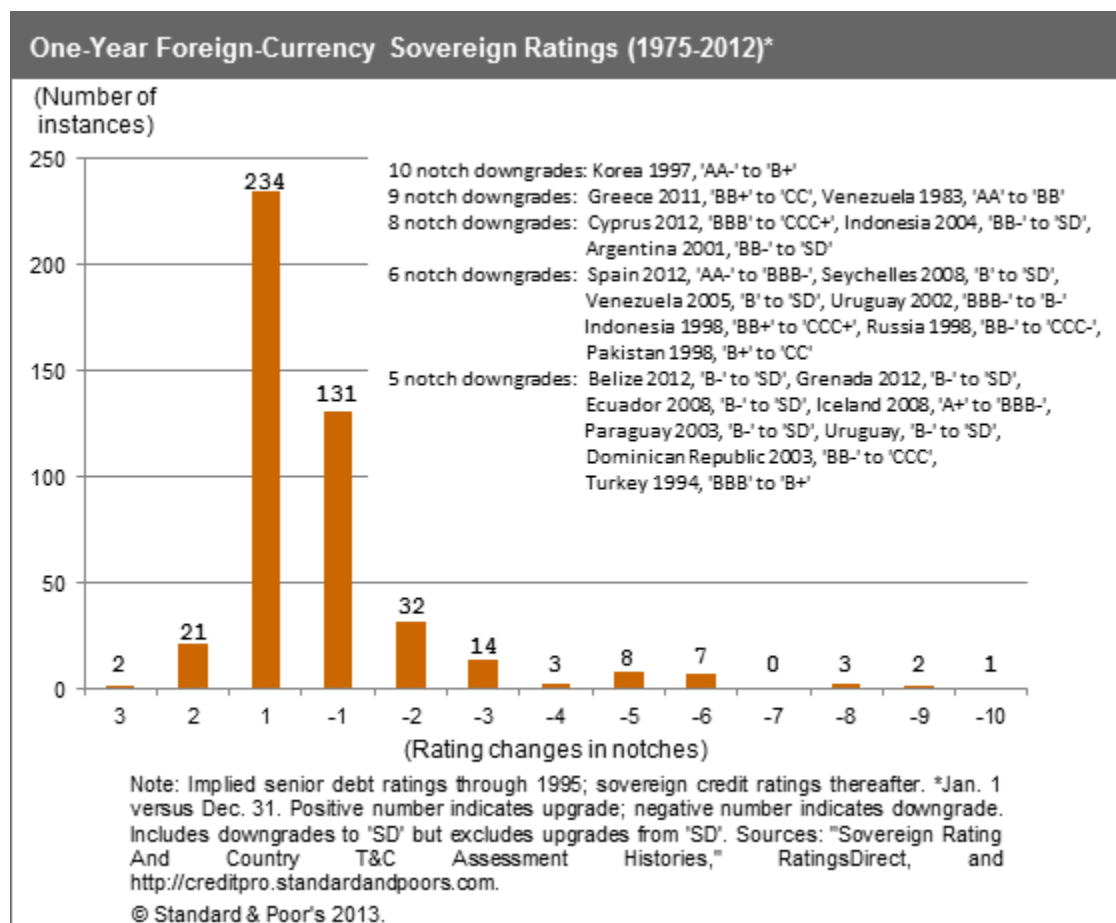
Chart 10



Standard & Poor's has also updated its weighted-average one-, five-, and 15-year matrices for sovereign foreign-currency ratings with rating modifiers. These data--contained in tables 11, 12, and 13--also show broadly balanced upgrades and downgrades with some general upward bias of rating actions and, of course, a higher frequency of rating actions within rating categories. (Recall that upgrades are represented by data below the diagonal in the transition tables, downgrades by the data above the diagonal.) Chart 11 presents the transition severity of foreign-currency sovereign ratings with modifiers on a one-year horizon by calendar year during 1975-2012. We find that large rating transitions are the exception, not the rule. Many of the more pronounced multinotch downgrades included ratings that fell into default. A rating that we lower to 'SD' from 'B' over the course of a calendar year, for example, represents a six-notch downgrade. As seen in the chart, upgrades seldom exceed a notch over a 12-month period. We believe the occasional greater downward rating movement reflects the phenomenon that sovereign creditworthiness usually improves gradually with time, but that policy errors made in a difficult external environment can lead to a significant deterioration in a sovereign's capacity to pay its debt. Multiple downgrades reflect our changing opinion of the relatively pronounced movement in credit quality as rating committee analysts attempt to distinguish the long-term trend, which Standard & Poor's ratings seek to address, from the effects of a credit cycle. (13) Rating committees analyze data that national governments collect and frequently revise. In addition, policy execution often trails policy intent. Surprises are usually on the downside. On the other hand, when a sovereign's

creditworthiness is increasing, we have observed that improvements are usually incremental and tend to be more easily anticipated.

Chart 11



## Correlation Of Successive Rating Actions

Table 1 shows the historical correlation between two subsequent identical rating actions over a two-year horizon. Between 1975 and 2012, there were 250 foreign-currency sovereign credit rating upgrades. Of this set, 40% of ratings were raised again over the course of the next two years, 54% remained unchanged, and 6% were lowered. (14) Similarly, during these 38 years, we lowered foreign-currency sovereign credit ratings 264 times. Of this set, we lowered 58% again within two years, 30% remained the same, and we raised 12%. The data suggest that there has typically been a small correlation within two years between an upgrade and a subsequent upgrade of 0.34, and there has typically been a moderate correlation between a downgrade and a subsequent downgrade of 0.45.

**Table 1**

<b>Sovereign Foreign-Currency Rating Action Correlation (1975-2012)</b>				
<b>(%, unless otherwise indicated)</b>	<b>Total (no.)</b>	<b>Followed by the same rating action within two years</b>	<b>Stayed the same after two years</b>	<b>Followed by the opposite rating action within two years</b>
Upgrades*	250	40.0	54.0	6.0
Downgrades§	264	57.6	29.9	12.5

\*Excludes upgrades from 'SD'. Correlation between an upgrade and a subsequent upgrade: 0.34. §Including downgrade to 'SD'. Correlation between a downgrade and a subsequent downgrade: 0.45

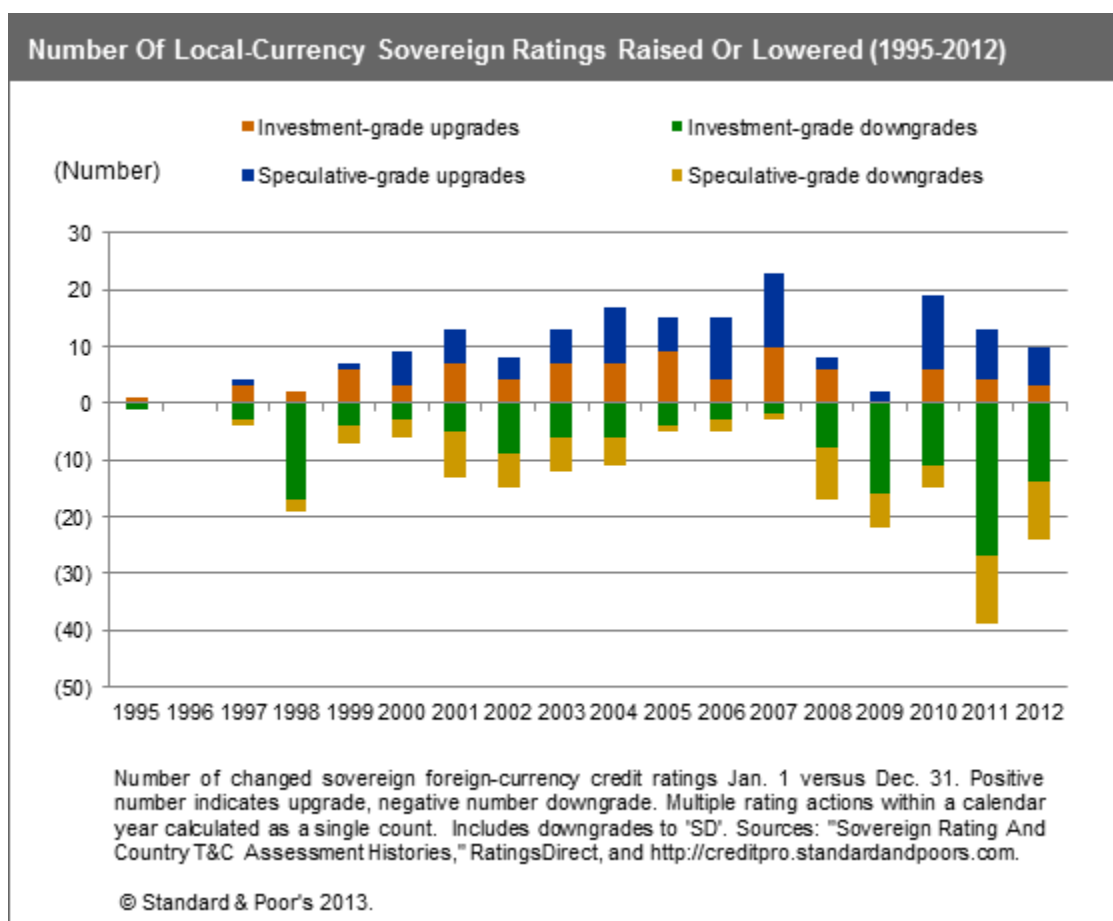
## Sovereign Local-Currency Rating Transition Rates

Tables 14-18 contain weighted-average transition matrices for local-currency sovereign credit ratings. Like foreign-currency sovereign credit ratings, local-currency ratings have generally exhibited greater comparative stability at higher rating levels than at lower levels. However, the absolute level of stability for local-currency sovereign credit ratings usually has been slightly less at most levels than for foreign-currency sovereign credit ratings.

Local-currency rating actions that crossed rating categories have shown a greater downward bias than foreign-currency rating actions. We believe this resulted mostly from three factors:

- After countries entered the eurozone, their foreign- and local-currency ratings converged (if they hadn't already done so), most often at the lower level.
- With our latest criteria revision, (15) we've narrowed the gapping between the two ratings, given the difficulty in predicting ex ante which categories of debt will be included in a distressed exchange.
- With previous criteria revisions following Mexico's near default in 1995 on its tesobonos and Russia's 1998 default on its GKO's, we lowered some ratings more broadly.

Chart 12

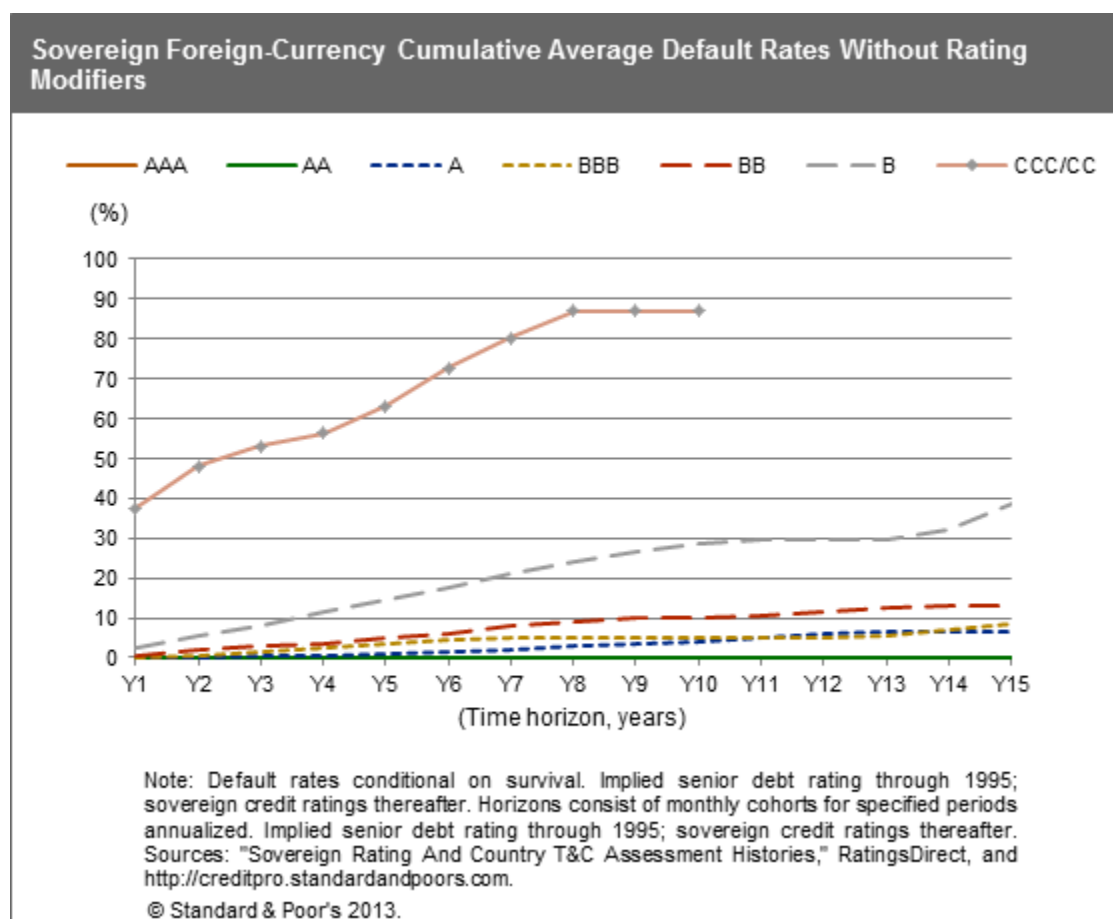


## Sovereign Default Rates

Chart 13 and table 19 display the cumulative foreign-currency sovereign default rates for 1975-2012 by rating category. Cumulative default rates average the experience of all static pools in a select period of time by calculating marginal weighted-average default rates conditional on survival (survivors being nondefaulters) for each possible time horizon and accumulating marginal default rates. We calculate conditional-on-survival default rates by dividing the number of issuers in a static pool that default within a specific time horizon by the number of issuers that had survived (had not defaulted) up to that point in time. These component calculations are found in tables 20-24. (16) In the context of sovereign ratings, we treat governments that selectively default as a complete default. We based weights on the number of issuers in each static pool. (17) As with the previous discussed transition data, these calculations are based on monthly start dates for 12-month increments.



Chart 13



The foreign-currency sovereign defaults included in the data occurred in Argentina, Belize, the Dominican Republic, Ecuador, Greece, Grenada, Indonesia, Jamaica, Mali, Pakistan, Paraguay, Russia, Seychelles, Uruguay, and Venezuela (see table 2). Of this group, Greece, Mali, Belize, and Grenada defaulted in 2012, with Greece defaulting twice.

Table 2

Country	Selective default date	Emergence date	Time in selective default	Rating one year before selective default	Rating at emergence from selective default
Russia	Jan. 27, 1999	Dec. 8, 2000	22 months	BB-	B-
Pakistan	Jan. 29, 1999	Dec. 21, 1999	11 months	B+	B-
Indonesia	Mar. 30, 1999	Mar. 31, 1999	One day	B-	CCC+
Indonesia	Apr. 17, 2000	Oct. 2, 2000	Six months	CCC+	B-
Argentina	Nov. 6, 2001	Jun. 1, 2005	54 months	BB	B-
Indonesia	Apr. 23, 2002	Sep. 5, 2002	Four months	B-	CCC+
Paraguay	Feb. 13, 2003	Jul. 26, 2004	18 months	B	B-
Uruguay	May 16, 2003	Jun. 2, 2003	One month	BB-	B-
Grenada	Dec. 30, 2004	Nov. 18, 2005	11 months	BB-	B-
Venezuela	Jan. 18, 2005	Mar. 3, 2005	One month	B-	B

**Table 2**

Sovereign Foreign-Currency Selective Defaults (cont.)					
Dominican Republic	Feb. 1, 2005	Jun. 29, 2005	Five months	CCC	B
Belize	Dec. 7, 2006	Feb. 20, 2007	Three months	CCC-	B
Seychelles*	Aug. 7, 2008	-	-	B	-
Ecuador	Dec. 15, 2008	Jun. 15, 2009	Six months	B-	CCC+
Jamaica	Jan. 14, 2010	Feb. 24, 2010	One month	B	B-
Belize	Aug. 21, 2012	-	-	B-	-
Grenada	Oct. 8, 2012	Oct. 16, 2012	One week	B-	CCC+
Greece	Feb. 27, 2012	May 2, 2012	Three months	BB+	CCC
Greece	Dec. 5, 2012	Dec. 18, 2012	Two weeks	CCC	B-

Note: Mali defaulted in 2012; we withdrew its rating in 2008. \*The rating on Seychelles was withdrawn while it was still in default. Source: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect.

For foreign-currency sovereign defaults, the data indicate that no sovereign rated in the 'AA' category or higher on Jan. 1 has defaulted within 15 years (see table 19), through Dec. 31, 2012. Cumulative default rates have increased progressively--though not linearly--as ratings have declined. Thus, for 1975-2012, in the five-year (i.e., 60 month) cumulative default column, 1.1% of sovereigns rated in the 'A' category on average annually defaulted within the period. (The figure pertains to the Hellenic Republic.) The figure rises to 3.4% of sovereigns rated in the 'BBB' category, 4.8% for the 'BB' category, 14.8% for the 'B' category, and 63.0% for the 'CCC'/'CC' categories. Fifteen-year cumulative default rates for sovereigns averaged 2.5% for investment-grade sovereigns and 24.8% for speculative-grade ones. (18)

Looking at the 38 years of data disaggregated by rating modifier (see table 25), we believe that most of the same observations made regarding defaults by rating category are valid. In the column for one-year cumulative default rates, the data indicate that no sovereign rated investment grade defaulted on its foreign-currency debt within the next 12 months. Moving to the next column, the data again indicate no sovereign rated 'A-' or higher defaulted within 24 months, and no sovereign rated higher than 'A+' or higher defaulted within 180 months. By and large, we observe that cumulative default rates for ratings with modifiers have tended to increase progressively as ratings decline.

In table 26, we break down the default data by month through 24 months. We see that foreign-currency cumulative default rates mostly increase as ratings become lower, with sharp increases in the 'CCC' and 'CC' categories. These monthly data suggest that historically foreign-currency ratings have been strong indicators of default probability and the imminence of default.

Chart 14 and table 27 display the local-currency cumulative default rates for 1993-2012 by rating category. The table includes public and confidential sovereign ratings. The public local-currency sovereign defaults included in the data were in Argentina, Cameroon, the Dominican Republic, Ecuador, Greece, Grenada, Jamaica, Mali, and Suriname (see table 3). Of this group, Greece and Mali defaulted in 2012, with Greece defaulting twice. Table 28 shows local-currency default rates for the same period with rating modifiers.

Chart 14

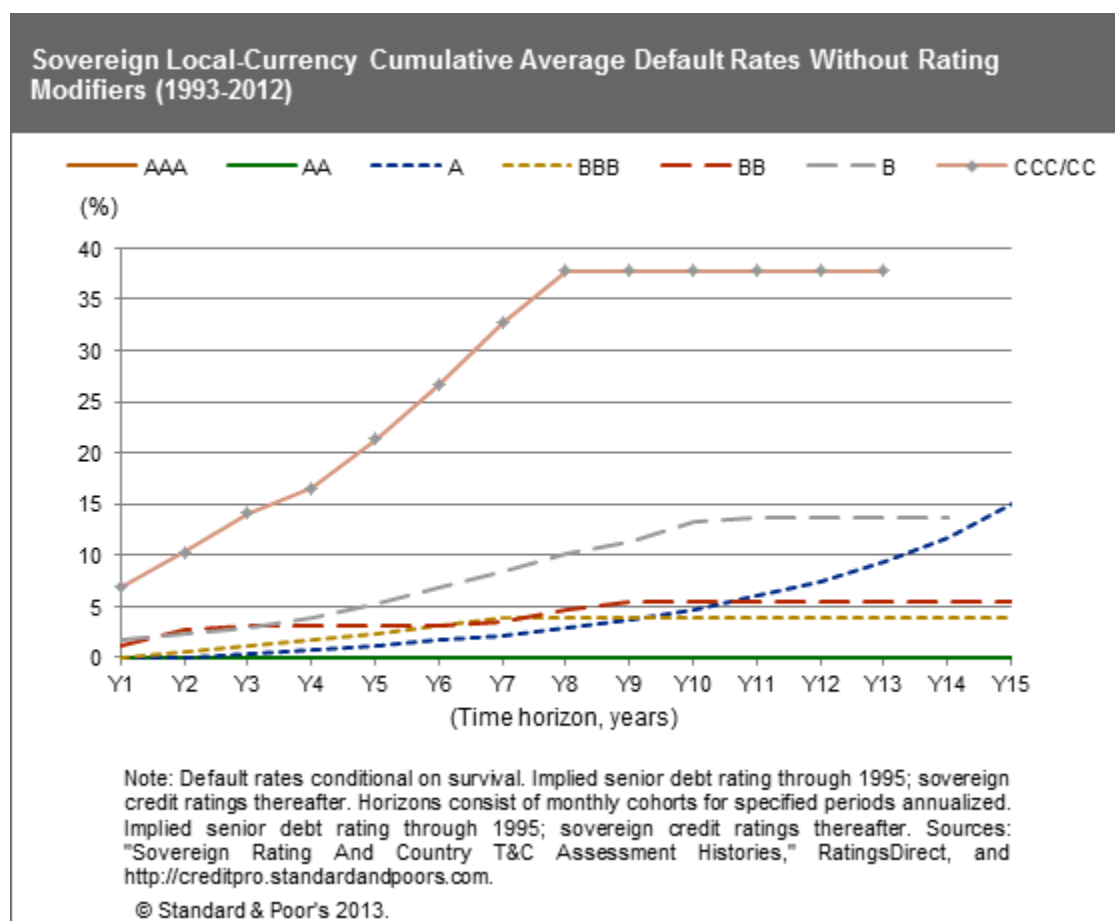


Table 3

**Sovereign Local-Currency Selective Defaults**

Country	Selective default date	Emergence date	Time in selective default	Rating one year before selective default	Rating at emergence from selective default
Country 1*	Sep. 11, 1998	May 7, 1999	Eight months	BB+	CCC
Dominican Republic	Apr. 9, 1999	Jun. 12, 2001	26 months	BB	B-
Suriname	Jan. 1, 2000	Jan. 1, 2002	60 months	B	B
Argentina	Nov. 6, 2001	Jun. 1, 2005	43 months	BBB-	B-
Cameroon	Sep. 1, 2004	Dec. 3, 2004	Three months	B	CCC
Grenada	Jan. 1, 2005	Nov. 18, 2005	11 months	BB-	B-
Grenada	Dec. 1, 2006	Apr. 2, 2007	Four months	B-	CCC+
Ecuador	Dec. 15, 2008	Jun. 15, 2009	Six months	B-	CCC+
Jamaica	Jan. 14, 2010	Feb. 24, 2010	One month	B	B-
Greece, first default	Feb. 27, 2012	May 2, 2012	Two months	BB+	CCC
Greece, second default	Dec. 5, 2012	Dec. 18, 2012	Two weeks	n/a	B-

Note: Cameroon and Grenada cured their local-currency defaults before the ratings were changed. Mali defaulted in 2012; we withdrew its rating in 2008. \*Confidential rating. Source: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect.

Except for the five- through 15-year periods for the 'A' level and the one- through two-year periods for the 'BB' level, cumulative default rates by rating category for local-currency sovereign credit ratings have been lower than for foreign-currency sovereign credit ratings (see tables 19 and 27). The universe of local-currency ratings is smaller than the foreign-currency one (one series begins in 1975, the other in 1992), which could account for the discrepancy. Also, the local-currency sovereign default rates could be understated, as it is hard to detect forced rollovers of domestic bank debt or coerced exchanges of local-law, local-currency debt when domestic financial institutions hold the debt.

## **Comparison Of Sovereign Default Rates With Basel II Benchmarks**

Under the auspices of The Bank for International Settlements, the Group of Ten governments established revised guidelines in 2004 for banks in their setting of risk weighting of assets for capital adequacy calculations (19). These guidelines established targeted absolute default rates for normal credit conditions (reference rates) and tolerance thresholds (monitoring and trigger levels) for stressed credit conditions for banks' use of internal credit scoring systems or external credit ratings. The reference rates are based on the latest 10-year average of the three-year cumulative default rate, and the tolerance thresholds are based on the last three-year cohort. Commonly known as the Basel II framework, these guidelines are being revised again in light of credit performance during the global recession (Basel III framework).

Tables 29 and 30 display Standard & Poor's sovereign rating performance during the last decade against these Basel II benchmarks. According to our data, foreign-currency sovereign ratings have not breached trigger-level benchmarks in 2012, except for the 'BBB' rating category. Apart from this category, all foreign-currency sovereign rating categories were below the long-run reference threshold. Similarly, our data indicate that all of the average three-year cumulative default rates for local-currency sovereign ratings for the past decade were below the Basel II reference thresholds, although the data breached the 'BBB' rating category trigger threshold in 2012. Standard & Poor's expects that local- and foreign-currency defaults of speculative-grade-rated sovereigns are likely to rise from current levels given the deterioration of public finances during the global recession of 2008/2009.

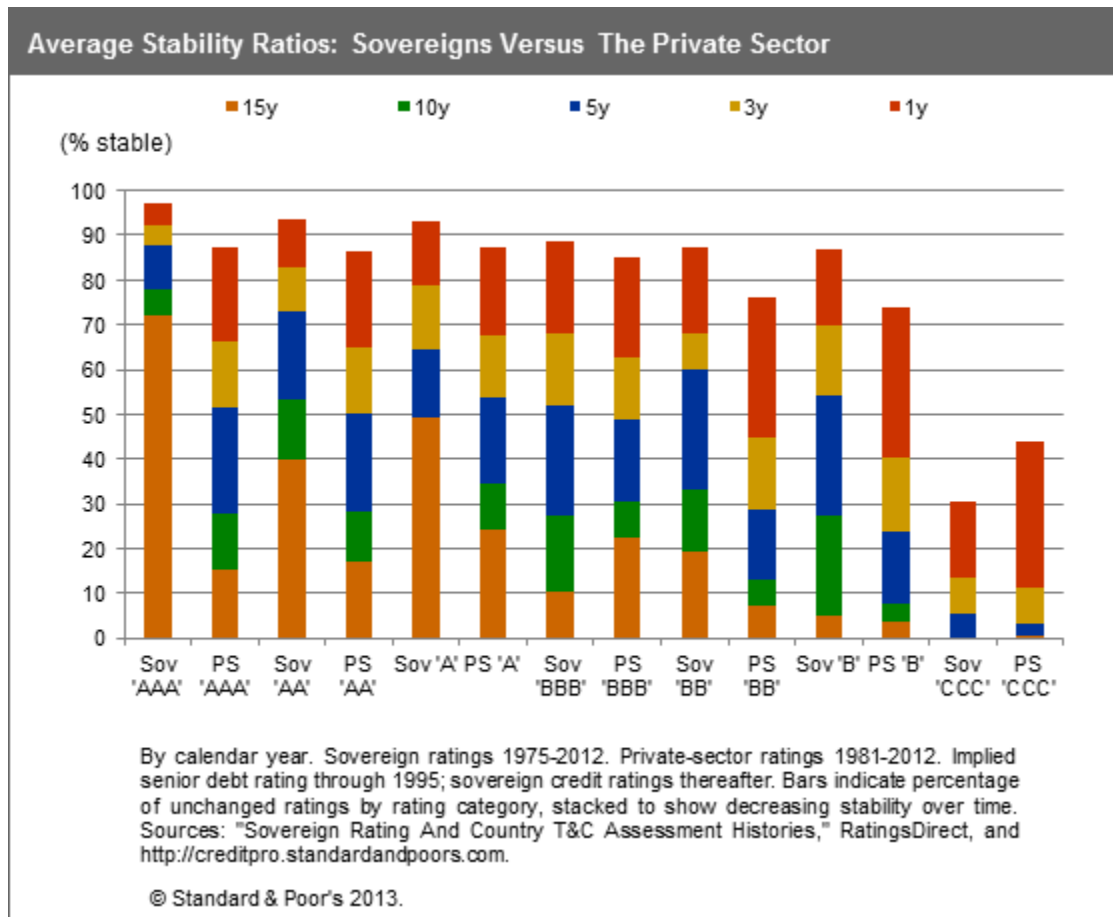
## **Comparisons Of Sovereign Default And Stability Rates With Those In The Private Sector**

Table 31 compares the one-, five-, 10-, and 15-year weighted cumulative average default rates by category for sovereigns to those of Standard & Poor's private-sector ratings (20). The data span Jan. 1, 1981, through Dec. 31, 2012, for the private-sector ratings, whereas the sovereign data range from Jan. 1, 1975, to Dec. 31, 2012, for the foreign-currency ratings and Jan. 1, 1993, to Dec. 31, 2012, for the local-currency ratings. The cohorts of these data are set by calendar year. Like the sovereign default data, the private-sector default data comprise both public and confidential ratings. The private-sector data represent local-currency ratings on corporations and financial institutions, whereas both local- and foreign-currency default rates are shown for the sovereign set. According to our criteria, only a sovereign-imposed limitation on foreign exchange would likely account for a private-sector entity's foreign-currency debt default that would not also lead to a default on the entity's local-currency debt. At the 'AA' rating level and higher, the cumulative default experience for sovereigns has been lower than that for private-sector entities. The trend has

been mixed at other rating levels but is overall comparable. As is the case when comparing relative ratings, Standard & Poor's expects that the default rates of the sovereign and private sectors will converge further over time.

Chart 15 compares the stability of sovereign and private-sector ratings by rating category. As with the previous comparison, we juxtapose foreign-currency sovereign credit ratings with private-sector local-currency ratings. The bar charts are stacked to show progressive instability of ratings. Thus, 96.9% of sovereign 'AAA' ratings (and 87.2% of private-sector ratings) remain 'AAA' one year later; whereas 72.0% of sovereign 'AAA' ratings (and 15.4% of corporate ratings) remain unchanged 15 years later. Across the cohorts, we observe that sovereign ratings have exhibited greater relative stability, except for the 10- and 15-year periods at the 'BBB' level and most of the periods for the 'CCC'/'CC' level. In our view, differences in rating performance could stem from the different factors that influence public versus private finance or from the composition of the private-sector universe (consisting heavily of U.S. firms, which are subject to the U.S. economic cycle) versus the sovereign universe (which, by its nature, is global in scope). (21)

**Chart 15**



## Relative Rating Performance

In addition to examining the absolute performance of sovereign ratings, Standard & Poor's examines their relative

performance. One technique we use to measure relative performance is the Gini coefficient. The Gini coefficient is a summary statistic of the Lorenz curve. (22) We believe that Lorenz curves and Gini coefficients are useful when compared with other Lorenz curves' Gini coefficients.

In the six charts that follow, Standard & Poor's presents two series of comparisons. In charts 16-19, Standard & Poor's plots the sovereign foreign-currency Lorenz curve for 1975-2012 against the Standard & Poor's private-sector Lorenz curve for 1981-2012. The private-sector Lorenz curve uses local-currency ratings. (23) As the charts indicate, the sovereign ratings Lorenz curve dominates the Standard & Poor's private-sector Lorenz curve on all horizons. Standard & Poor's expects the sovereign and private-sector curves to converge further over time. Sovereign and private-sector analysts use the same rating scale with the same definitions, but the sovereign universe is small compared with the number of corporate and bank ratings. The sovereign foreign-currency Gini coefficients for the one-, three-, five-, and 10-year horizons are 0.93, 0.81, 0.79, and 0.81, respectively. The Gini coefficients for Standard & Poor's private-sector ratings for the one-, three-, five-, and 10-year horizons are 0.82, 0.76, 0.71, and 0.69, respectively.

Chart 16

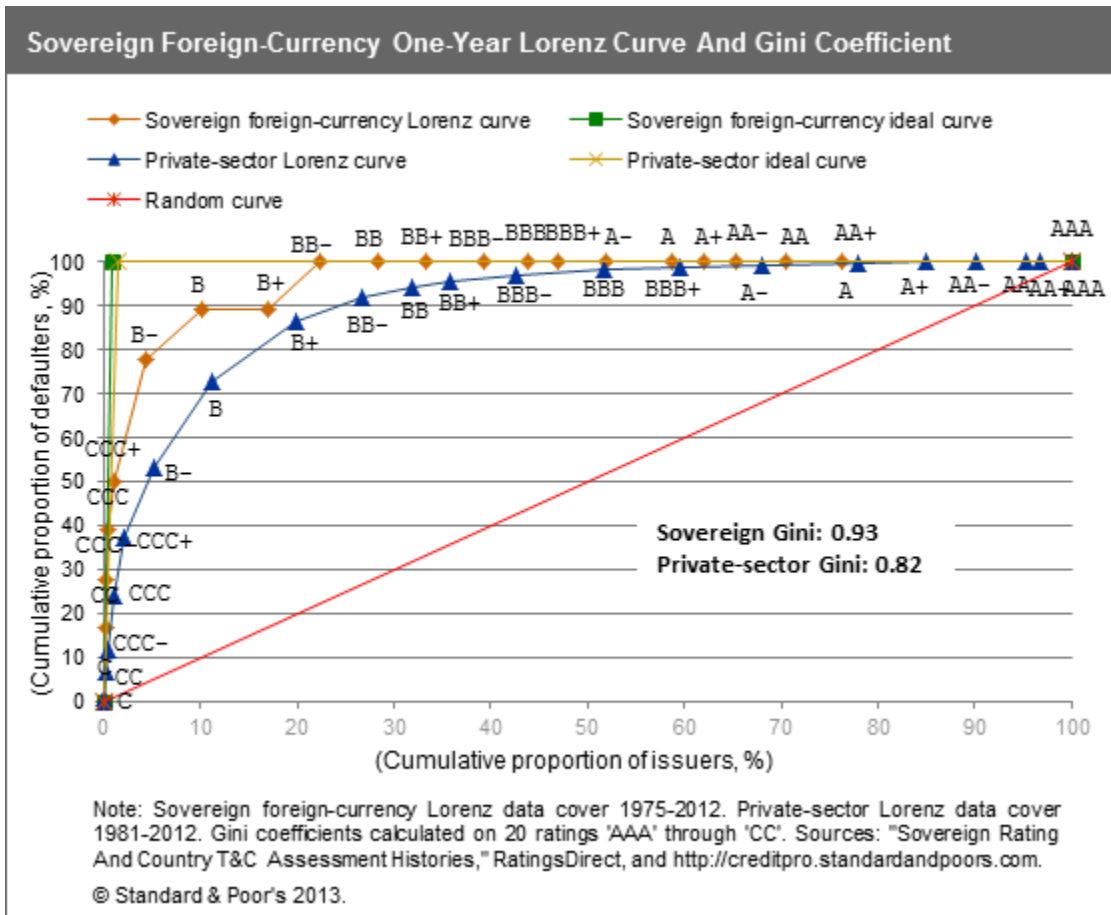


Chart 17

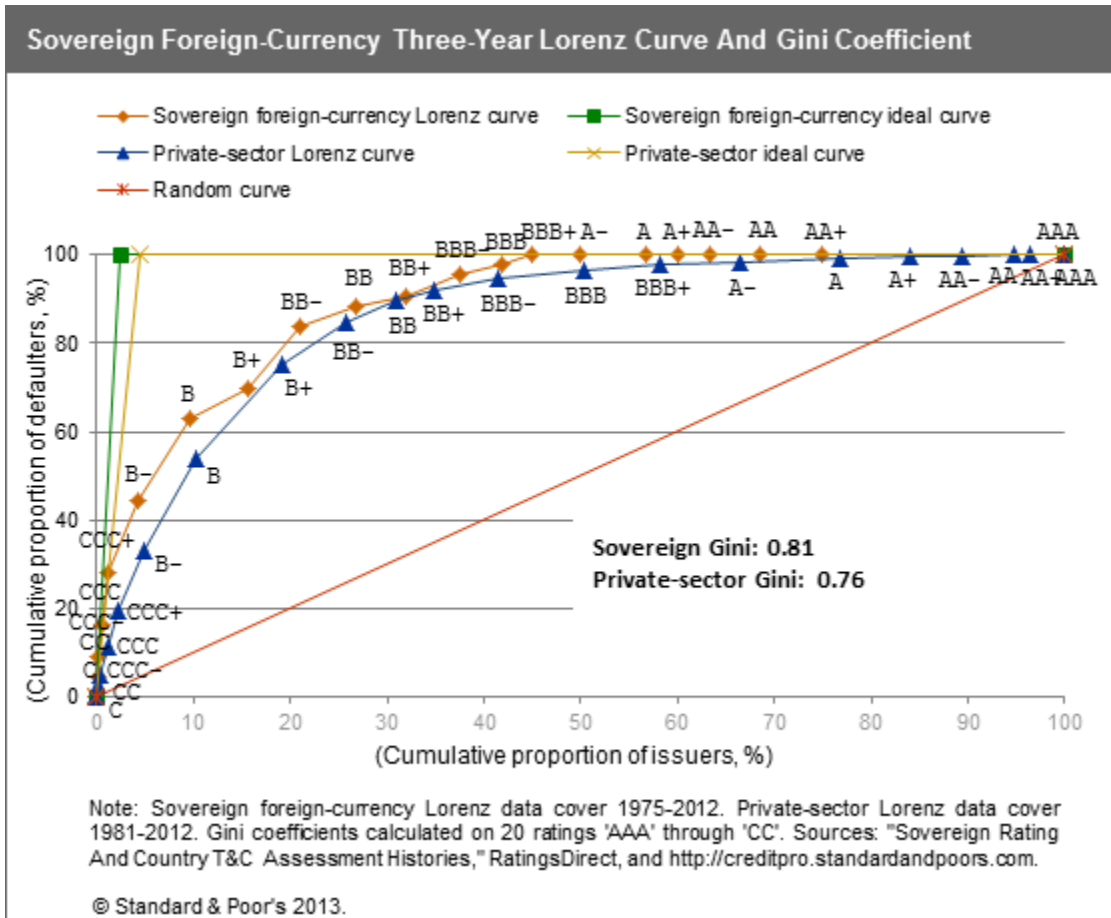


Chart 18

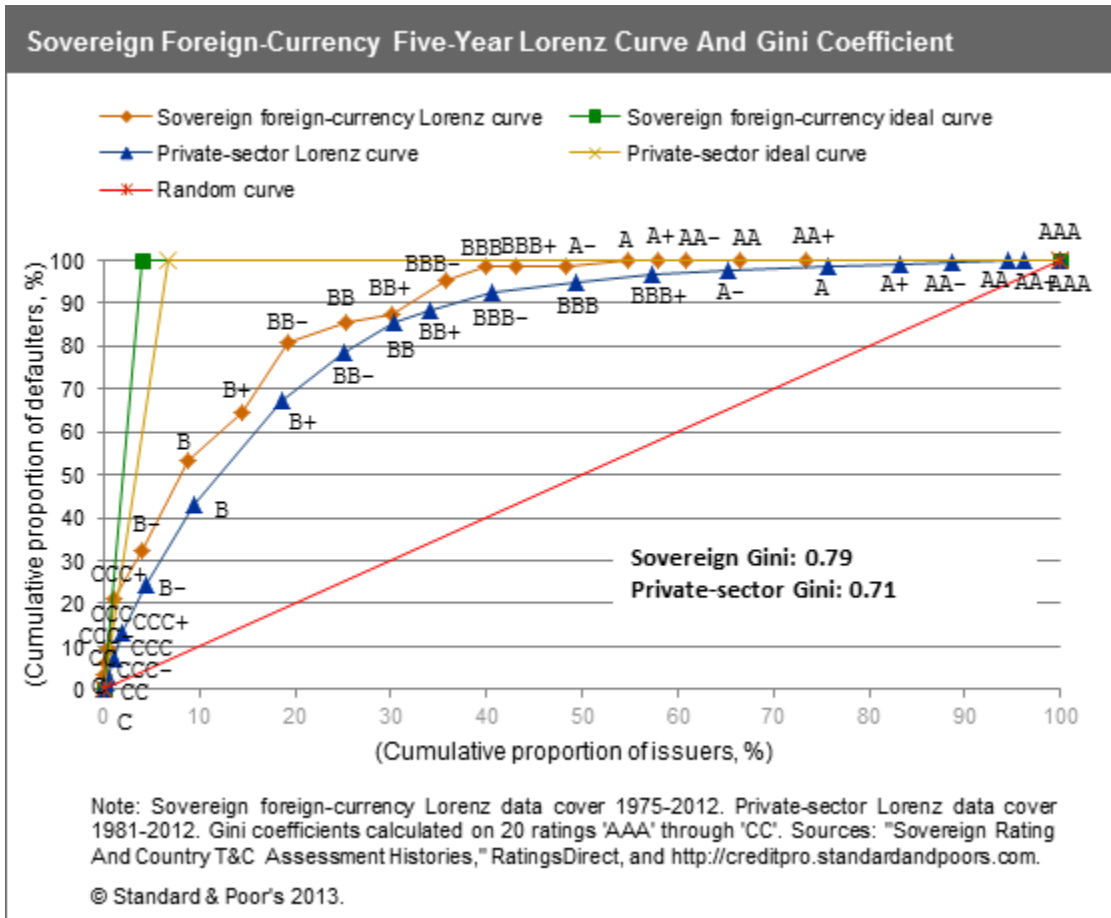
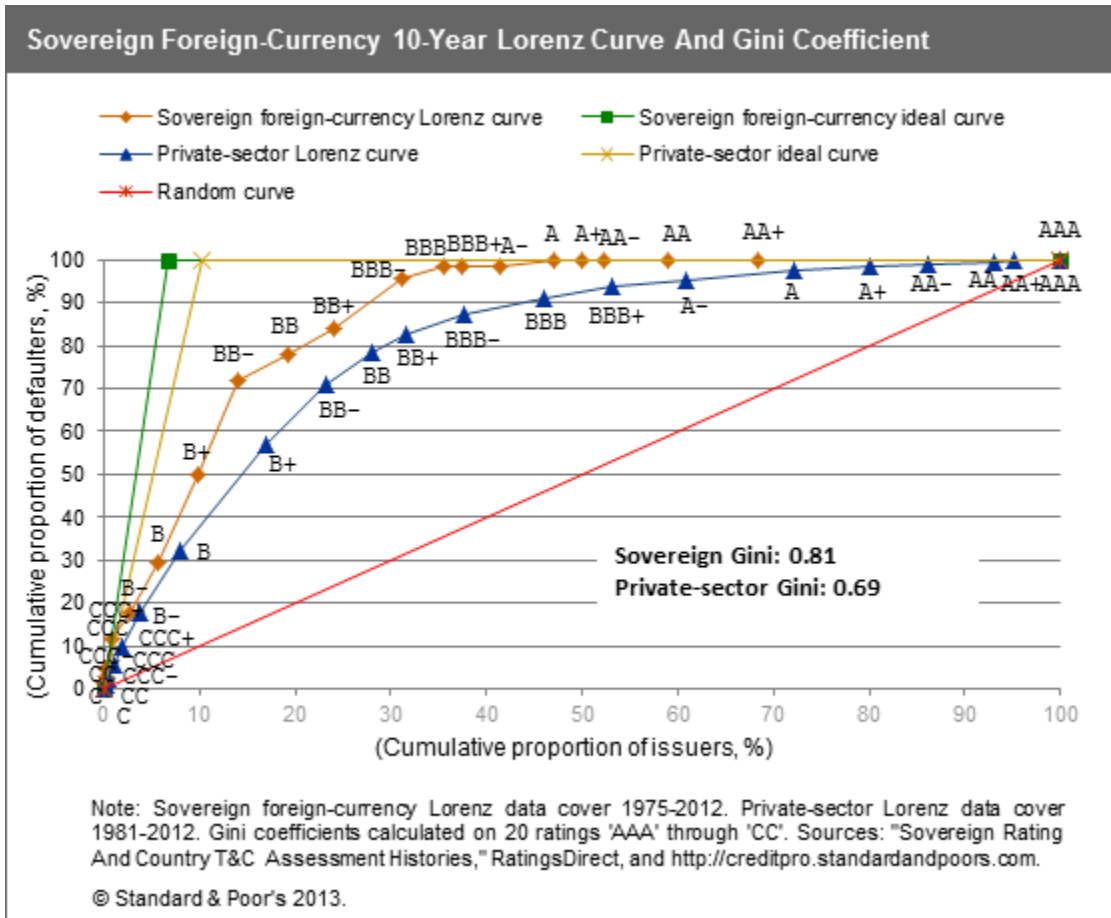




Chart 19



In charts 20 and 21, Standard & Poor's plots the sovereign local-currency Lorenz curve for 1993-2012 against the Standard & Poor's private-sector Lorenz curve for 1981-2012. For this data set, the private-sector curve dominates the sovereign curve in the one-year horizon for ratings below 'BB' and in the 10-year horizon for ratings below 'BB-'. The sovereign local-currency Gini coefficients for the one- and 10-year horizons are 0.83 and 0.75, respectively.

Chart 20

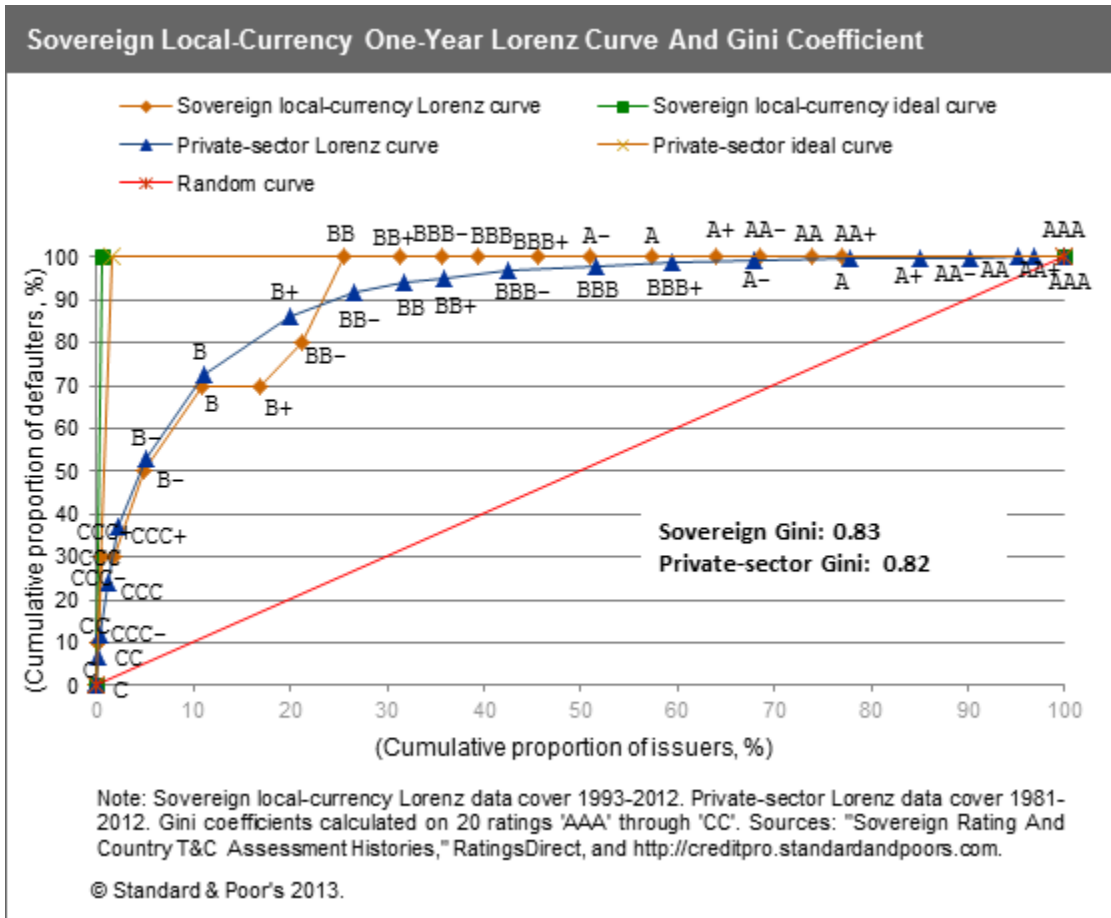
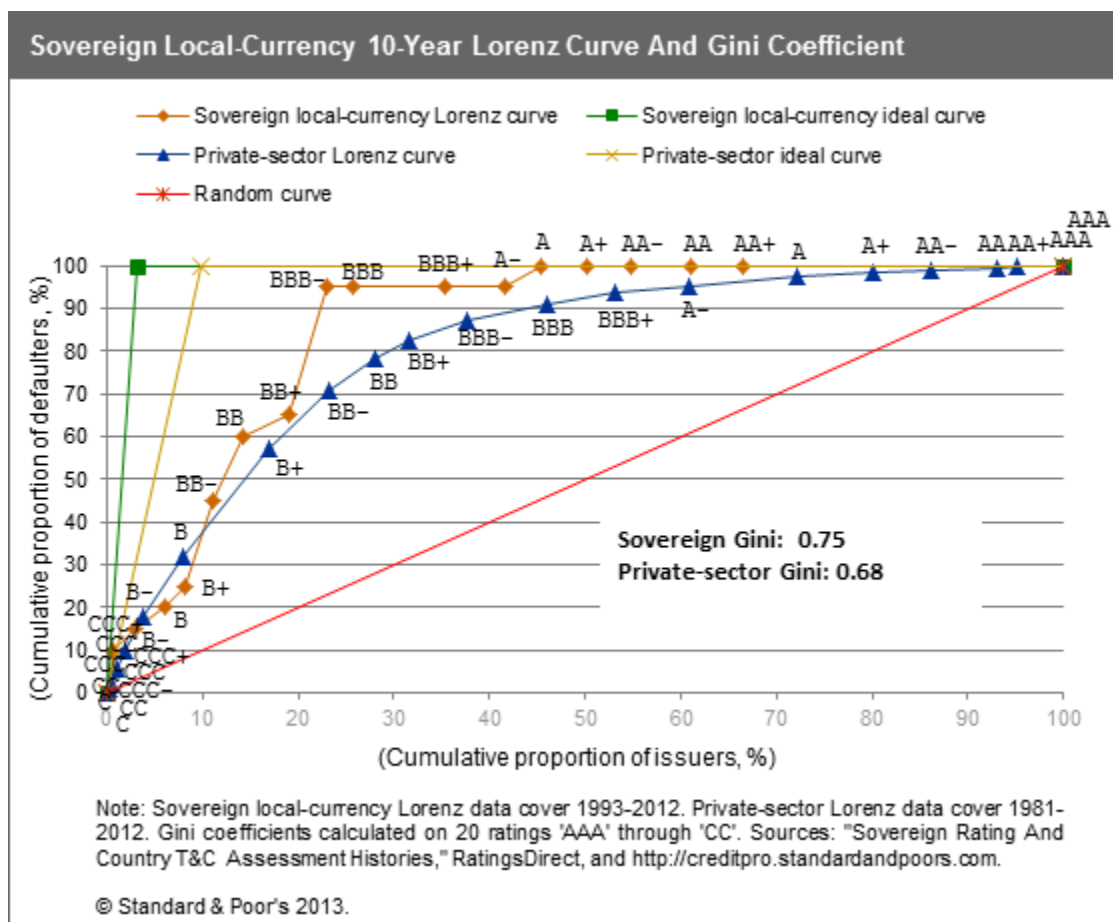


Chart 21



## Supplementary Data

Tables 32-38 reproduce sovereign rating transition data that we provide to the SEC and other regulatory bodies. The data are compiled on a calendar-year basis, but the underlying rating history is the same as for the other tables and charts. Tables 32, 33, and 34 present one-, three-, and 10-year average transition matrices for foreign-currency ratings. Tables 35, 36, and 37 present the most recent cohorts for one-, three-, and 10-year transition periods. In the latest one-year cohort, notable downgrades include Spain ('AA-' to 'BBB-') and Cyprus ('BBB' to 'CCC+'). (24) In the latest three-year cohort, additional sovereigns that experienced notable downgrades include the Hellenic Republic ('BBB+' to 'SD'), Portugal ('A+' to 'BB'), and Ireland ('AA' to 'BBB+'). In the latest 10-year cohort, notable additional downgrades include Egypt ('BB+' to 'B-'). Table 38 presents original-to-last foreign-currency sovereign rating transition data. It combines markedly different rating horizons. For example, Venezuela was originally rated 'AAA' in 1977. It was lowered to speculative grade in 1983 and defaulted in 2005. On the other hand, as seen in chart 1, five sovereign ratings are less than five years old. Tables 39-45 present the same transition data for local-currency sovereign ratings as the previous seven tables.

## **Appendix 1: Sovereign Default Definitions And Emergence From Default**

Standard & Poor's generally defines default as the failure to meet a principal or interest payment on the due date contained in the original terms of a debt issue. (25) Questions can arise, however, when applying this definition in different situations and to different types of sovereign obligations. Standard & Poor's considers a sovereign to be in default under any of the following circumstances:

- For local- and foreign-currency bonds, notes, and bills issued by the central government and held outside the public sector of the country, a sovereign default occurs when the central government either fails to pay scheduled debt service on the due date or tenders an exchange offer of new debt with less-favorable terms than the original issue. (26)
- For local currency issued by the central bank, a sovereign default takes place when notes are converted into a new currency of less-than-equivalent face value.
- For private-sector bank loans incurred by the central government, a sovereign default occurs when the central government either fails to pay scheduled debt service on the due date or negotiates with the bank creditors a rescheduling of principal or interest at less-favorable terms than in the original loan.

Emergence from default also can be a complicated analytical issue for sovereigns. Sovereigns often undertake debt restructurings through exchange offers that, we find, rarely close the books on the restructured debt. For a number of reasons, ranging from difficulty in contacting all debtholders to holdouts seeking payment in accordance with original terms, we have observed that participation in sovereign distressed debt exchanges usually does not reach 100%. This stands in contrast with corporate debt restructurings in the U.S. and in many other jurisdictions, where all obligations are typically addressed in bankruptcy reorganization. A corporate entity reorganizing outside of bankruptcy generally must continue payments on the holdouts' debt or face the prospect of an involuntary bankruptcy filing.

Less common among sovereign defaults is the repudiation of debt, which most often follows a revolutionary change of regime (as occurred in Russia in 1917, China in 1949, and Cuba in 1960). Standard & Poor's takes no position on the propriety of government debt defaults, repudiations, and the like. Standard & Poor's also does not take a position on the course of negotiations (or the absence thereof) between creditors and the government about working out debt that is repudiated, or on the parameters of any settlements between creditors and governments that could occur. Instead, Standard & Poor's ratings are an opinion of the probability of default on a forward-looking basis. We analyze historical defaults to form our own view as to the extent that they could affect the likelihood of the sovereign defaulting in the future.

In general, Standard & Poor's sovereign ratings apply only to debt that the present government acknowledges as its own. If there is no resolution of a default through the courts or by the parties involved, Standard & Poor's eventually withdraws the default ratings based on the diminished prospects for resolution and the lack of relevance of the default ratings in the context of the market. (27) For example, Standard & Poor's has no rating on direct and guaranteed debt of the government of China issued prior to the founding of the People's Republic of China in 1949 because Standard & Poor's first rated China in 1992, long after the new government repudiated pre-1949 debt. The default is included in Standard & Poor's sovereign default survey, which covers defaults by rated and unrated issuers. (28)

## **Appendix 2: Sovereign Ratings Before The Repeal Of The Interest Equalization Tax**

(Editor's note: This appendix was first published in Standard & Poor's "CreditWeek International," May 25, 1987.)

Standard & Poor's has rated sovereign debt issues since the 1920s. However, prior to the imposition of the Interest Equalization Tax (IET) in 1963, the system of analysis was less rigorous than that used today. During this period, Standard & Poor's had to rely strictly on public information. Indeed, the lack of what we considered to be timely and comprehensive information led us to place an asterisk beside the ratings on sovereign debt issues to indicate that they were not directly comparable with domestic corporate and municipal ratings. No such qualifications are needed today, as rated sovereigns meet Standard & Poor's information requirements through frequent discussions with senior government officials.

During the 1920s, a large number of foreign borrowers tapped the expanding U.S. capital market. Standard Statistics Co. and Poor's Publishing Co., which merged in 1941 to form Standard & Poor's Corp., began rating foreign government financings in the U.S. in the late 1920s. Table 4 shows that the ratings covered most major European nations, several Latin American governments, Australia, Canada, Japan, and China. In 1929, Poor's Publishing's sovereign ratings ranged from A\*\*\* for Canada (roughly equivalent to a current 'AAA') to B\* for China and the Hellenic Republic (Greece) (equivalent to a 'BB'). Every Latin American rating was speculative grade, except for that on Argentina, which was rated A\* ('A'). Two interesting aspects of the rating system at that time were the special ratings of A\*\*\*\*\* ('AAAAA') for the U.S. government and A\*\*\*\* ('AAAA') for agencies of the U.S. government, categories that no longer exist.

Most sovereign ratings were lowered during the 1930s depression. At that time, the ratings on Germany and Japan fell into the speculative-grade categories. With the approach of World War II, ratings on European nations fell rapidly. By 1939, all ratings in the region were speculative grade, except the U.K., which was still rated 'A-1' ('AA') by Standard Statistics. The rating on Germany moved to 'D' in October 1939. As all of Europe (except neutral Kingdom of Sweden and the Swiss Confederation) became engulfed in war in June 1940, Standard Statistics suspended most of its sovereign debt ratings. The few exceptions were the 'A-1' ('AA') ratings on Canada's Yankee bond issues and several speculative-grade ratings on bonds of a few Latin American nations.

After the war, Standard & Poor's again began to rate Yankee bond issues by several major industrialized nations. Ratings included Australia; the Republic of Austria; the Kingdoms of Belgium, Denmark, and Norway; and Japan. Except the existing 'AA' rating on Canada, all sovereign bond issues during this period were rated 'BBB'. In 1951 the rating on Canada was raised to 'AAA'. As investor interest in the Yankee market waned following the imposition of IET, Standard & Poor's suspended all remaining sovereign ratings in 1968 except for that on Canada, which was exempt from IET.

**Table 4**

	<b>--Poor's Publishing--</b>	<b>—Standard Statistics—</b>	<b>--Standard &amp; Poor's--</b>	
	<b>1929</b>	<b>1935</b>	<b>1939</b>	<b>1960</b>
Argentina	A	A	A	—
Australia	AA	A	A	BBB
Austria	BBB	BBB	CCC	BBB
Belgium	A	AA	BB	BBB
Canada	AAA	AA	AA	AAA
Chile	BB	D	C	—
China	B	C	C	—
Colombia	BB	CCC	D	—
Denmark	AA	A	BB	BBB
Finland	BB	A	A	—
France	BBB	AA	BB	—
Germany	BBB	CCC	D	—
Great Britain	AA	AA	AA	—
Greece	B	CC	CC	—
Hungary	BB	CCC	CCC	—
Italy	BB	BB	B	—
Japan	BBB	B	B	BBB
Norway	AA	A	BB	BBB
Peru	BB	D	D	—
Uruguay	BB	CCC	CCC	—

Source: CreditWeek International, a publication of Standard & Poor's, May 25, 1987.

### Appendix 3: Sovereigns' Path To Default

This article captures ratings at discrete dates. It does not capture rating changes between dates, though we made adjustments to reflect defaults that occur and are cured within periods. As an issuer (in this case, a sovereign) approaches default, we usually lower the rating several times in succession as the probability of default rises. Table 5 shows the last date of the highest rating, the number of intermediate rating actions (including outlook changes) before default, and the date of the sovereign's default. Charts 22-25 show the rating movements.

Chart 22

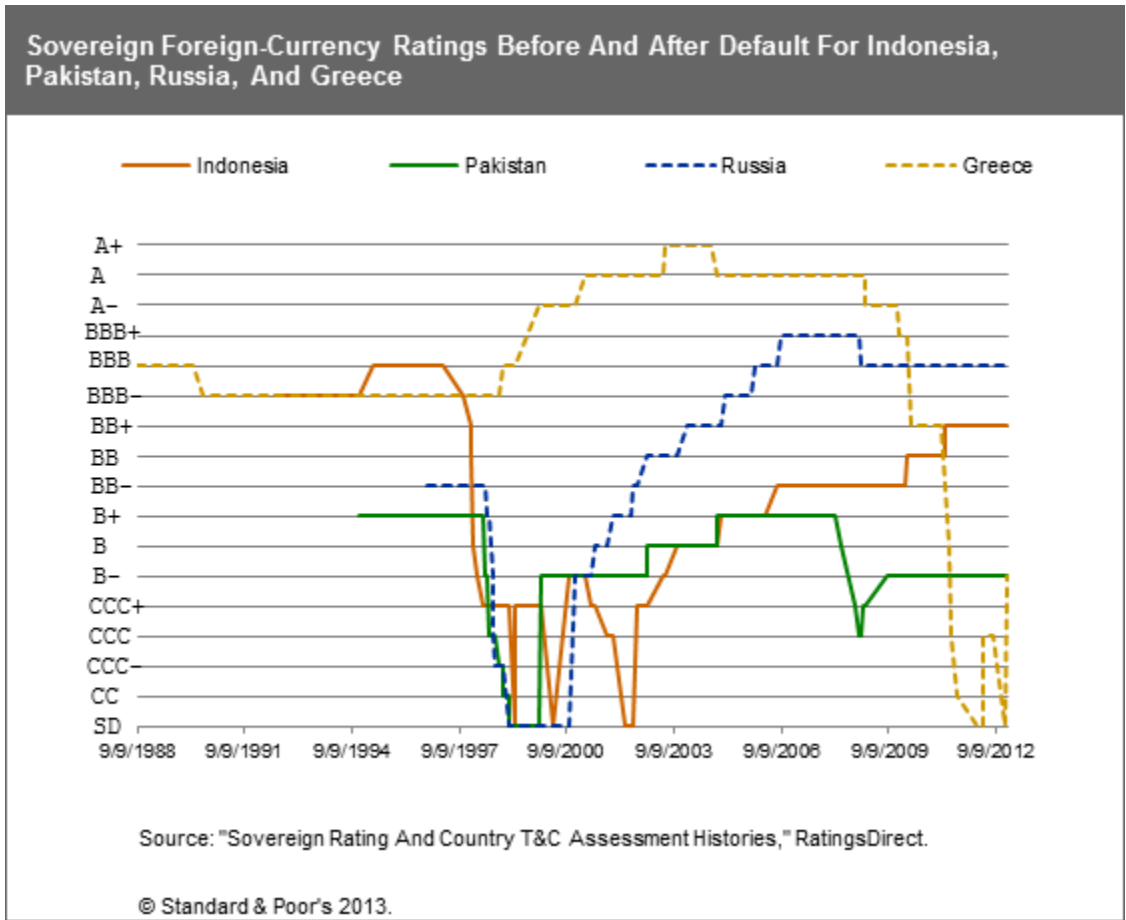


Chart 23

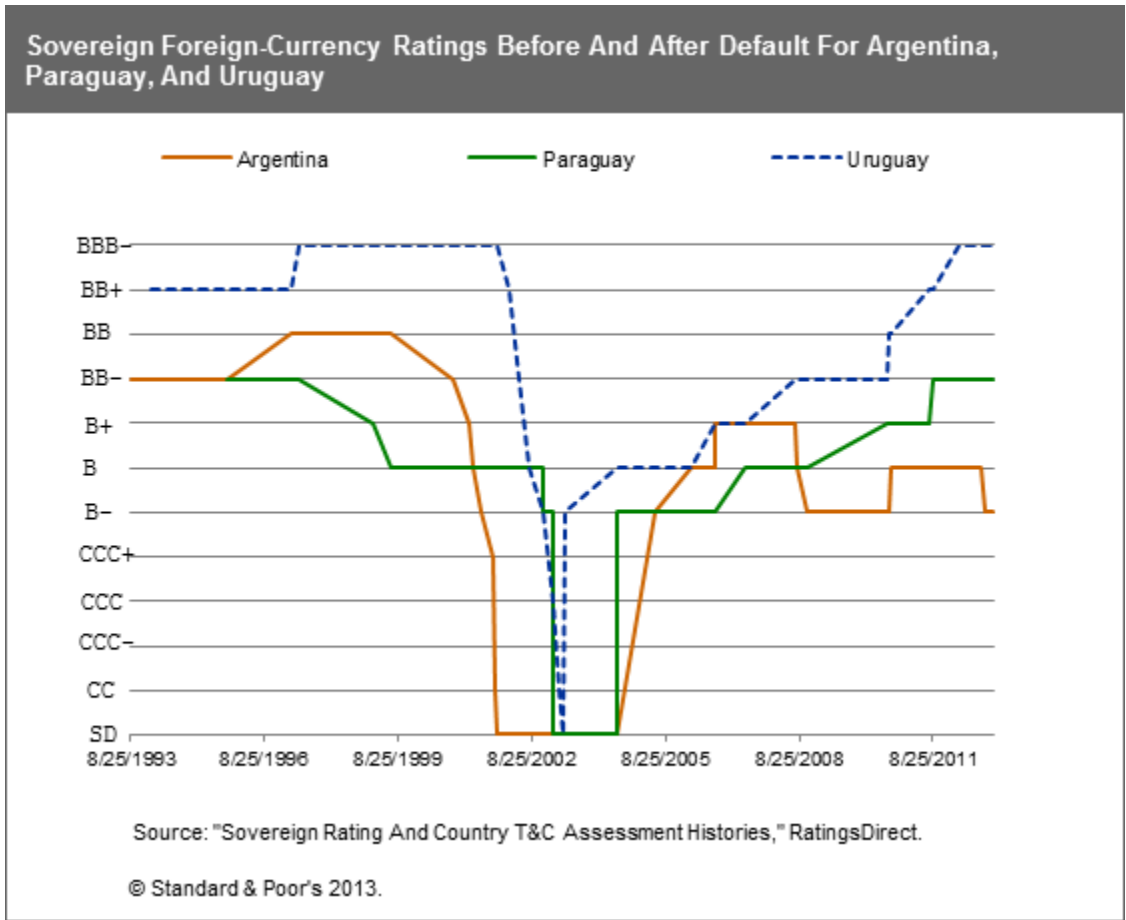




Chart 24

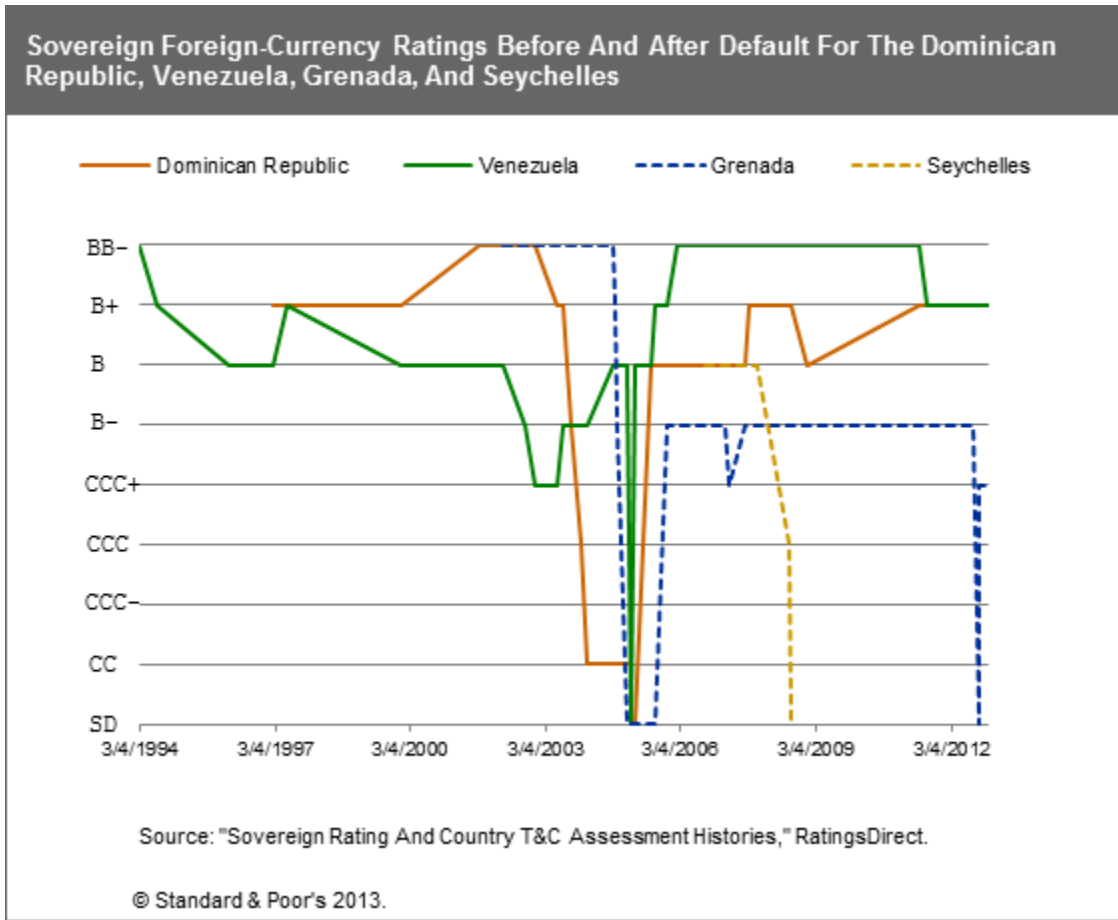


Chart 25

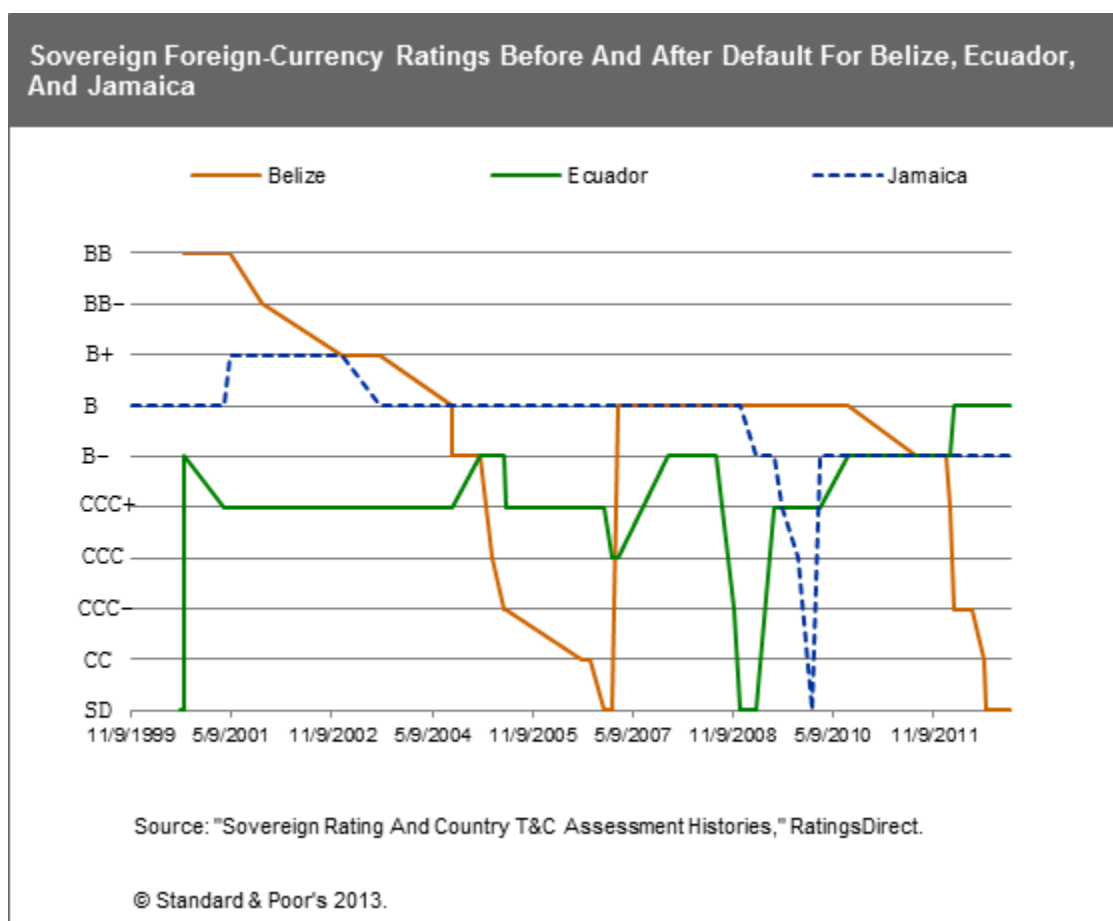


Table 5

**Length Of Time To Default**

Government	Date of initial rating	Highest rating/outlook before default	Last date of highest rating	Number of intermediate rating actions	Selective default	Days elapsed between highest rating and default
<b>Foreign-currency sovereign credit rating defaults</b>						
Russia	Oct. 14, 2006	BB-/Stable	Dec. 18, 1997	7	Jan. 27, 1999	405
Pakistan	Sep. 21, 1994	B+/Positive	Aug. 2, 1995	8	Jan. 29, 1999	1,276
Indonesia, first default	Jul. 20, 1992	BBB/Stable	Oct. 9, 1997	8	Mar. 29, 1999	536
Indonesia, second default	Jul. 20, 1992	CCC+/Stable	Sep. 12, 1999	2	Apr. 17, 2000	218
Argentina	Aug. 25, 1993	BB/Stable	Oct. 30, 2000	10	Nov. 6, 2001	372
Indonesia, third default	Jul. 20, 1992	B-/Stable	Mar. 7, 2001	5	Apr. 23, 2002	412
Paraguay	Oct. 23, 1995	BB-/Stable	Nov. 18, 1998	5	Feb. 13, 2003	1,548

**Table 5**

<b>Length Of Time To Default (cont.)</b>						
Uruguay	Feb. 14, 1994	BBB-/Stable	Jan. 10, 2002	8	May. 16, 2003	491
Grenada, first default	Mar. 22, 2002	BB-/Stable/B	Sep. 16, 2004	2	Dec. 30, 2004	105
Venezuela	Oct. 5, 1977	AAA	Aug. 12, 1982	26	Jan. 18, 2005	8,195
Dominican Republic	Feb. 13, 1997	BB-/Stable	Oct. 22, 2001	5	Feb. 1, 2005	1,198
Belize, first default	Aug. 18, 2000	BB/Stable	Aug. 18, 2000	7	Dec. 7, 2006	2,302
Seychelles	Sep. 15, 2006	B/Stable	Nov. 1, 2007	2	Aug. 7, 2008	280
Ecuador	Jul. 29, 2000	B-/Stable	Nov. 13, 2008	1	Dec. 15, 2008	32
Jamaica	Nov. 9, 1999	B+/Positive	Jul. 27, 2003	8	Jan. 14, 2010	2,363
Greece, first default	Sep. 9, 1988	A+/Stable	Nov. 16, 2004	8	Feb. 27, 2012	2,659
Belize, second default	Feb. 20, 2007	B/Stable	Aug. 3, 2011	4	Aug. 21, 2012	384
Grenada, second default	Nov. 18, 2005	B-/Stable	Jul. 31, 2007	0	Oct. 8, 2012	1,896
Greece, second default	May 2, 2012	CCC/Stable	Dec. 4, 2012	0	Dec. 5, 2012	1
<b>Local-currency sovereign credit rating defaults</b>						
Dominican Republic	Feb. 13, 1997	BB/Stable	Sep. 30, 1998	2	Apr. 09, 1999	191
Suriname	Nov. 23, 1999	B/Stable	Dec. 31, 1999	1	Jan. 01, 2000	1
Argentina	Sep. 1, 1994	BBB-/Stable	Oct. 30, 2000	10	Nov. 06, 2001	372
Ecuador	Jul. 29, 2000	B-/Stable	Nov. 13, 2008	1	Dec. 15, 2008	32
Jamaica	Nov. 9, 1999	BB-/Stable	Jul. 27, 2003	8	Jan. 14, 2010	2,363
Greece, first default	Mar. 26, 2007	A+/Stable	Nov. 16, 2004	8	Feb. 27, 2012	2,659
Greece, second default	May 2, 2012	CCC/Stable	Dec. 04, 2012	0	Dec. 05, 2012	1

Mali defaulted in 2012; we withdrew the rating in 2008. Source: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect.

**Table 6**

<b>Sovereign Foreign-Currency Average One-Year Transition Rates (1975-2012)*</b>										
<b>--Rating one year later (%)--</b>										
<b>Ratings as of first of month</b>	<b>Number</b>	<b>AAA</b>	<b>AA</b>	<b>A</b>	<b>BBB</b>	<b>BB</b>	<b>B</b>	<b>CCC/CC</b>	<b>SD</b>	<b>NR</b>
AAA	5,759	96.9	3.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
AA	3,469	3.1	93.6	2.4	0.5	0.4	0.1	0.0	0.0	0.0
A	3,602	0.0	4.0	91.1	4.1	0.5	0.0	0.0	0.0	0.3

**Table 6**

Sovereign Foreign-Currency Average One-Year Transition Rates (1975-2012)* (cont.)										
BBB	3,276	0.0	0.0	5.9	89.5	3.6	0.7	0.2	0.0	0.0
BB	3,901	0.0	0.0	0.0	6.5	87.1	5.1	0.7	0.6	0.0
B	3,667	0.0	0.0	0.0	0.0	7.3	86.6	2.9	2.5	0.7
CCC/CC	250	0.0	0.0	0.0	0.0	0.0	35.6	30.4	34.0	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 12-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 7**

Sovereign Foreign-Currency Average Three-Year Transition Rates (1975-2012)*										
--Rating three years later (%)--										
Ratings as of first of month	Number	AAA	AA	A	BBB	BB	B	CCC/CC	SD	NR
AAA	5,323	92.3	6.9	0.1	0.2	0.5	0.0	0.0	0.0	0.0
AA	3,152	9.9	82.6	5.0	2.0	0.4	0.0	0.0	0.0	0.0
A	3,151	0.0	10.8	76.9	9.6	1.7	0.2	0.3	0.3	0.3
BBB	2,777	0.0	0.0	20.4	69.3	7.2	1.2	0.5	1.6	0.0
BB	3,357	0.0	0.0	0.0	18.2	67.6	10.4	0.8	3.0	0.0
B	2,914	0.0	0.0	0.0	0.6	17.1	69.9	2.4	6.8	3.3
CCC/CC	234	0.0	0.0	0.0	0.0	0.0	32.5	16.7	50.9	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 36-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 8**

Sovereign Foreign-Currency Average Five-Year Transition Rates (1975-2012)*										
--Rating five years later (%)--										
Ratings as of first of month	Number	AAA	AA	A	BBB	BB	B	CCC/CC	SD	NR
AAA	4,878	88.2	10.0	0.2	0.6	1.1	0.0	0.0	0.0	0.0
AA	2,838	17.4	72.8	7.1	2.0	0.6	0.0	0.0	0.0	0.0
A	2,629	0.0	17.7	63.3	15.6	2.6	0.2	0.3	0.4	0.0
BBB	2,396	0.0	0.1	33.7	52.3	8.2	1.4	0.5	3.8	0.0
BB	2,811	0.0	0.0	1.5	22.2	59.1	11.1	0.6	5.4	0.0
B	2,272	0.0	0.0	0.1	5.2	20.8	54.1	3.1	12.7	4.1
CCC/CC	193	0.0	0.0	0.0	0.0	4.2	17.1	10.4	68.4	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 60-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 9**

Sovereign Foreign-Currency Average 10-Year Transition Rates (1975-2012)*										
--Rating 10 years later (%)--										
Ratings as of first of month	Number	AAA	AA	A	BBB	BB	B	CCC/CC	SD	NR
AAA	3,775	78.2	19.9	0.0	0.4	0.7	0.8	0.0	0.0	0.0

**Table 9**

Sovereign Foreign-Currency Average 10-Year Transition Rates (1975-2012)* (cont.)										
AA	2,216	35.7	53.6	8.3	1.7	0.8	0.0	0.0	0.0	0.0
A	1,414	1.8	23.0	48.7	21.7	3.2	0.2	0.6	0.8	0.0
BBB	1,609	0.0	5.6	45.8	27.6	11.8	1.7	0.0	7.5	0.0
BB	1,659	0.0	0.0	9.4	32.7	32.6	9.3	0.8	15.1	0.0
B	972	0.0	0.0	0.2	11.5	30.9	25.1	0.2	32.1	0.0
CCC/CC	72	0.0	0.0	0.0	0.0	5.6	0.0	0.0	94.4	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 120-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 10**

Sovereign Foreign-Currency Average 15-Year Transition Rates (1975-2012)*										
--Rating 15 years later (%)--										
Ratings as of first of month	Number	AAA	AA	A	BBB	BB	B	CCC/CC	SD	NR
AAA	2,988	71.7	26.4	0.0	0.0	0.7	1.2	0.0	0.0	0.0
AA	1,458	42.9	40.5	10.6	4.0	1.4	0.6	0.1	0.0	0.0
A	723	5.1	23.7	50.2	20.9	0.0	0.1	0.0	0.0	0.0
BBB	648	0.0	7.6	51.7	9.0	15.7	2.0	1.2	12.8	0.0
BB	702	0.0	0.0	8.3	38.0	17.7	10.5	1.0	24.5	0.0
B	206	0.0	0.0	0.5	13.6	27.2	5.8	0.0	52.9	0.0
CCC/CC	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 180-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 11**

Sovereign Foreign-Currency Average One-Year Transition Rates With Rating Modifier (1975-2012)*																						
--Rating one year later (%)--																						
Rating as of first of month	#	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	SD
AAA	5,759	96.9	2.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	1,426	7.6	84.0	7.1	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	1,223	0.0	8.8	80.5	7.8	0.8	0.7	0.2	0.8	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	820	0.0	0.0	14.6	75.9	7.1	0.4	0.1	0.4	0.0	0.4	1.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	792	0.0	0.0	0.0	15.3	66.4	12.8	2.4	1.6	0.3	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	1,598	0.0	0.0	0.0	1.5	11.5	79.8	4.3	0.7	1.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	1,212	0.0	0.0	0.0	0.0	1.0	14.0	76.3	4.6	0.7	1.2	1.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	754	0.0	0.0	0.0	0.0	0.0	2.7	20.0	62.2	11.3	1.7	1.3	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	1,038	0.0	0.0	0.0	0.0	0.0	0.0	2.0	22.2	66.1	6.8	0.7	0.2	0.0	0.9	0.4	0.2	0.6	0.0	0.0	0.0	0.0
BBB-	1,484	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	17.1	74.9	4.5	1.8	0.1	0.1	0.3	0.2	0.1	0.0	0.0	0.0	0.0
BB+	1,206	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	19.5	69.7	8.9	0.2	0.3	0.1	0.0	0.1	0.3	0.0	0.7	0.1
BB	1,420	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	15.7	73.4	7.3	1.6	0.7	0.2	0.0	0.0	0.0	0.1	0.0

**Table 11**

Sovereign Foreign-Currency Average One-Year Transition Rates With Rating Modifier (1975-2012)* (cont.)																							
BB-	1,275	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	14.3	68.9	10.4	1.3	0.9	0.3	0.2	0.3	0.3	1.7
B+	1,556	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.7	14.5	65.0	13.2	3.2	0.6	0.4	0.3	0.3	0.6
B	1,382	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	19.4	68.0	4.6	1.4	1.0	0.4	0.0	2.5
B-	729	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.4	20.6	63.8	3.4	0.7	1.2	0.3	6.3	
CCC+	158	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	5.7	31.0	32.3	6.3	0.0	0.0	19.6	
CCC	46	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	43.5	0.0	10.9	4.4	4.4	30.4	
CCC-	21	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5	19.1	71.4	
CC	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	

For expanded table, see data in the HTML file on RatingsDirect. \*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 12-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 12**

Sovereign Foreign-Currency Average Five-Year Transition Rates With Rating Modifier (1975-2012)*																						
--Rating five years later (%)--																						
Rating as of first of month	#	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	SD
AAA	4,878	88.2	6.0	2.0	2.0	0.0	0.1	0.1	0.6	0.0	0.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	1,280	30.2	47.6	17.4	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	972	10.4	23.7	38.9	15.8	6.7	3.6	0.3	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	586	1.2	17.6	34.5	17.9	6.7	8.2	2.1	1.4	3.1	5.5	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	567	0.0	4.2	12.4	30.9	17.8	13.8	2.3	2.8	6.9	6.7	1.9	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	1,117	0.0	0.0	2.0	12.4	26.4	36.6	8.8	1.2	4.5	4.2	1.6	0.2	0.2	0.0	0.3	0.0	0.1	0.1	0.0	0.6	1.0
A-	945	0.0	0.0	0.0	3.7	6.7	36.3	27.8	11.5	4.9	5.4	1.9	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	533	0.0	0.0	0.0	0.4	7.1	12.6	33.2	21.4	14.1	6.8	4.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	774	0.0	0.0	0.0	0.0	7.1	14.0	20.2	18.6	23.6	8.1	0.9	1.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	3.9
BBB-	1,089	0.0	0.0	0.0	0.0	0.5	5.2	13.3	19.7	21.6	17.4	9.6	4.8	0.1	0.0	0.7	0.5	0.9	0.2	0.0	0.1	5.5
BB+	891	0.0	0.0	0.0	0.0	0.0	1.1	3.7	3.0	13.5	20.8	21.0	26.8	8.1	0.3	1.1	0.1	0.0	0.0	0.0	0.0	0.5
BB	1,036	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	2.8	16.7	22.8	37.9	5.3	5.0	1.2	0.0	0.0	0.0	1.2	0.2	4.2
BB-	884	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	5.1	9.7	33.8	10.6	12.8	5.4	8.4	0.0	0.0	0.0	0.3	12.0
B+	908	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.9	1.3	6.1	3.0	3.3	14.4	24.3	20.3	12.6	1.7	0.2	0.0	1.3	10.5
B	875	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	2.4	1.0	2.1	18.4	17.6	23.7	4.8	1.9	0.3	0.7	0.0	15.7
B-	489	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.8	2.5	2.3	14.9	24.5	19.4	18.6	3.1	0.0	0.0	0.0	11.7
CCC+	112	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	0.0	0.0	14.3	8.0	8.9	0.9	0.0	60.7
CCC	42	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.5	0.0	0.0	0.0	0.0	59.5	
CCC-	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
CC	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0

For expanded table, see data in the HTML file on RatingsDirect. \*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 60-month cohort between 1975 and 2012 annualized. Source: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 13**

**Sovereign Foreign-Currency Average 15-Year Transition Rates With Rating Modifier (1975-2012)\***

**--Rating 15 years later (%)--**

Rating as of first of month	#	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	SD	NR
AAA	2,988	71.7	14.0	6.8	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.7	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	641	44.2	31.1	5.9	16.2	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	526	46.4	17.9	7.4	8.9	8.0	1.9	0.4	7.4	0.0	0.6	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	291	33.7	17.2	3.8	2.8	12.7	11.0	5.2	1.0	1.0	3.4	2.4	4.8	0.0	0.0	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0
A+	213	9.4	0.0	0.0	8.9	8.0	31.0	32.4	0.0	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	358	4.8	8.1	14.5	19.6	11.2	12.6	12.0	9.2	0.3	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	152	0.0	0.0	0.0	0.7	30.3	5.9	18.4	42.8	1.3	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	71	0.0	0.0	0.0	12.7	26.8	60.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	215	0.0	0.0	10.7	7.9	25.6	22.8	0.0	1.4	0.9	2.8	4.7	0.0	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.0	0.0
BBB-	362	0.0	0.0	0.0	0.0	2.5	21.8	22.4	1.1	1.9	9.9	16.0	2.8	1.1	0.3	3.0	0.3	0.0	0.3	0.0	1.9	14.6	0.0
BB+	301	0.0	0.0	0.0	0.0	4.0	7.3	0.0	22.6	10.0	36.2	4.7	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.6	0.0
BB	203	0.0	0.0	0.0	0.0	0.0	0.0	4.9	6.4	11.8	0.0	0.0	10.3	11.8	10.3	16.3	4.4	3.5	0.0	0.0	0.0	20.2	0.0
BB-	198	0.0	0.0	0.0	0.0	7.1	0.0	0.0	7.1	4.6	0.0	11.1	8.1	11.1	0.0	5.6	0.0	0.0	0.0	0.0	0.0	45.5	0.0
B+	170	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	2.9	9.4	0.0	19.4	5.9	0.0	2.9	4.1	0.0	0.0	0.0	0.0	54.7	0.0
B	36	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.4	0.0	36.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.4	0.0
B-	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCC+	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCC	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCC-	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

For expanded table, see data in the HTML file on RatingsDirect. \*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 180-month cohort between 1975 and 2012 annualized. Source: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 14**

**Sovereign Local-Currency Average One-Year Transition Rates (1993-2012)\***

**--Rating one year later (%)--**

Rating as of first of month	Number	AAA	AA	A	BBB	BB	B	CCC/CC	SD	NR
AAA	4,446	96.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	2,588	1.9	90.7	6.0	1.4	0.0	0.0	0.0	0.0	0.0
A	3,622	0.0	3.1	90.3	5.5	0.8	0.3	0.0	0.0	0.0
BBB	2,681	0.0	0.0	5.4	87.0	6.5	1.0	0.2	0.0	0.0
BB	2,795	0.0	0.0	0.0	5.3	84.2	7.8	1.4	1.3	0.0
B	2,824	0.0	0.0	0.0	0.0	8.8	85.5	2.4	2.0	1.3
CCC/CC	325	0.0	0.0	0.0	0.0	0.0	34.8	60.3	4.9	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 12-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

Table 15

Sovereign Local-Currency Average Five-Year Transition Rates (1993-2012)*										
--Rating five years later (%)--										
Rating as of first of month	Number	AAA	AA	A	BBB	BB	B	CCC/CC	SD	NR
AAA	3,521	85.3	13.7	0.2	0.9	0.0	0.0	0.0	0.0	0.0
AA	1,897	8.4	60.2	26.3	4.5	0.6	0.0	0.0	0.0	0.0
A	2,543	0.0	13.5	65.3	16.6	3.0	0.9	0.4	0.4	0.0
BBB	1,808	0.0	0.0	21.7	51.2	18.4	5.1	0.9	2.7	0.0
BB	1,720	0.0	0.0	1.3	19.8	48.3	24.6	1.9	4.1	0.0
B	1,581	0.0	0.0	0.6	4.6	32.6	46.1	4.4	5.5	6.1
CCC/CC	234	0.0	0.0	0.0	6.0	0.0	40.2	34.6	19.2	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 60-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

Table 16

Sovereign Local-Currency Average 15-Year Transition Rates (1993-2012)*										
--Rating 15 years later (%)--										
Rating as of first of month	Number	AAA	AA	A	BBB	BB	B	CCC/CC	SD	NR
AAA	1,262	71.2	19.3	4.5	4.1	1.0	0.0	0.0	0.0	0.0
AA	263	3.0	33.1	48.7	10.7	3.4	0.8	0.4	0.0	0.0
A	235	7.2	17.5	20.4	21.7	23.8	5.1	0.0	4.3	0.0
BBB	293	0.0	0.3	28.0	15.0	39.6	3.4	0.0	13.7	0.0
BB	76	0.0	0.0	18.4	36.8	7.9	14.5	0.0	22.4	0.0
B	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCC/CC	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

\*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 180-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

Table 17

Sovereign Local-Currency Average One-Year Transition Rates With Rating Modifier (1993-2012)*																						
--Rating one year later (%)--																						
Rating as of first of month	#	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	SD
AAA	4,446	96.0	2.7	1.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	652	7.4	77.9	10.6	3.4	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	1,058	0.0	3.3	81.7	10.0	1.0	1.0	1.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	878	0.0	0.0	7.6	77.0	12.2	0.5	0.5	1.9	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	1,276	0.0	0.0	0.9	6.9	73.8	13.8	2.4	1.3	0.1	0.1	0.0	0.0	0.2	0.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0
A	1,232	0.0	0.0	0.0	1.0	12.6	72.4	10.2	2.6	1.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	1,114	0.0	0.0	0.0	0.0	0.1	17.9	67.4	9.4	2.0	0.8	1.1	1.2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
BBB+	1,178	0.0	0.0	0.0	0.0	0.0	0.2	11.7	72.0	10.7	2.2	1.9	0.4	0.3	0.0	0.3	0.3	0.0	0.0	0.0	0.0	0.0



Table 17

Sovereign Local-Currency Average One-Year Transition Rates With Rating Modifier (1993-2012)* (cont.)																					
BBB	706	0.0	0.0	0.0	0.0	0.0	0.0	0.4	15.3	70.1	11.5	1.0	1.3	0.0	0.0	0.3	0.0	0.1	0.0	0.0	0.0
BBB-	797	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.8	8.2	71.4	11.5	3.3	1.1	1.4	0.4	0.4	0.0	0.3	0.0	0.3
BB+	1,145	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.1	11.1	70.7	11.4	3.4	0.2	0.8	0.0	0.0	0.2	0.0	0.6
BB	815	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	18.0	60.9	10.4	3.3	2.1	1.6	0.7	0.0	0.0	2.0
BB-	835	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	10.5	64.9	12.0	4.2	1.7	0.8	1.4	0.0	0.6
B+	1,031	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.8	16.3	63.8	12.1	3.4	0.0	0.0	0.0	0.4
B	1,178	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.5	15.5	70.8	4.2	2.0	0.4	0.0	0.0	1.4
B-	615	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	4.1	21.5	60.8	5.5	0.0	0.2	0.3
CCC+	237	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.5	18.1	70.9	4.2	0.0	1.3
CCC	62	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	64.5	3.2	16.1	0.0	3.2
CCC-	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
CC	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	48.0	8.0	0.0	0.0	0.0	28.0

For expanded table, see data in the HTML file on RatingsDirect. \*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 12-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

Table 18

Sovereign Local-Currency Average 15-Year Transition Rates With Rating Modifier (1993-2012)*																							
--Rating 15 years later (%)--																							
Rating as of first of month	#	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC+	CCC	CCC-	CC	SD	NI
AAA	1,262	71.2	9.7	6.6	3.0	2.7	0.8	1.0	3.1	0.0	1.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	114	0.0	0.0	0.0	0.0	32.5	21.9	10.5	2.6	4.4	17.5	6.1	1.8	0.0	0.0	1.8	0.0	0.9	0.0	0.0	0.0	0.0	0.0
AA	99	0.0	1.0	65.7	4.0	7.1	6.1	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	50	16.0	0.0	0.0	34.0	48.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	105	16.2	27.6	9.5	1.0	0.0	1.9	0.0	27.6	0.0	0.0	16.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	34	0.0	0.0	0.0	0.0	26.5	38.2	8.8	0.0	2.9	0.0	0.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	96	0.0	0.0	0.0	1.0	0.0	21.9	0.0	0.0	2.1	19.8	30.2	2.1	0.0	1.0	10.4	1.0	0.0	0.0	0.0	0.0	10.4	0.0
BBB+	150	0.0	0.0	0.0	0.0	4.7	36.0	14.0	0.0	4.7	14.7	14.7	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	25	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	60.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB-	118	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.9	0.0	10.2	19.5	11.9	14.4	8.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.9
BB+	52	0.0	0.0	0.0	0.0	0.0	0.0	17.3	26.9	11.5	5.8	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.9	0.0
BB	23	0.0	0.0	0.0	0.0	0.0	0.0	21.7	21.7	0.0	0.0	0.0	0.0	0.0	0.0	47.8	0.0	0.0	0.0	0.0	0.0	8.7	0.0
BB-	1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
B+	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
B	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
B-	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCC+	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCC	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CCC-	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CC	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 18**

**Sovereign Local-Currency Average 15-Year Transition Rates With Rating Modifier (1993-2012)\* (cont.)**

For expanded table, see data in the HTML file on RatingsDirect. \*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Average transitions over each 180-month cohort between 1975 and 2012 annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 19**

**Sovereign Foreign-Currency Cumulative Average Default Rate Without Rating Modifiers (1975-2012)\***

Rating	--Time horizon, years§--														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AAA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.3	0.7	1.1	1.6	2.2	2.7	3.4	4.2	5.1	6.1	6.4	6.4	6.4
BBB	0.0	0.7	1.6	2.5	3.4	4.4	4.8	4.8	4.8	4.8	4.8	4.8	5.6	7.0	8.7
BB	0.6	2.0	3.1	3.6	4.8	6.2	7.9	9.2	10.0	10.2	10.6	11.6	12.6	13.3	13.3
B	2.6	5.4	8.1	11.7	14.8	17.7	20.9	24.1	26.3	28.7	29.6	29.6	29.6	32.1	38.8
CCC/CC	37.5	48.1	53.1	56.2	63.0	72.7	80.2	86.9	86.9	86.9	N/A	N/A	N/A	N/A	N/A
Investment grade	0.0	0.1	0.4	0.6	0.9	1.2	1.4	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.5
Speculative grade	2.7	5.1	7.1	9.1	11.3	13.6	16.1	18.4	19.7	20.6	21.2	21.8	22.6	23.5	24.8
All rated	0.9	1.8	2.5	3.3	4.2	5.0	5.9	6.5	6.9	7.3	7.5	7.7	8.0	8.3	8.6

N/A--Not available, there are no observations for this horizon. \*Default rates conditional on survival. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §Cohorts of 12 through 180 months, annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 20**

**Foreign-Currency 'A' Static Pools And Default Rates**

Transition to default rates (%)	Issuers	--Time horizon, years*--														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01/01/1992	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1993	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1994	5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1995	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1996	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1997	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1998	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1999	9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2000	11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1		
01/01/2001	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3			
01/01/2002	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1				
01/01/2003	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9						
01/01/2004	20	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0							
01/01/2005	21	0.0	0.0	0.0	0.0	0.0	0.0	4.8								
01/01/2006	21	0.0	0.0	0.0	0.0	0.0	4.8									
01/01/2007	23	0.0	0.0	0.0	0.0	4.4										

**Table 20**

Foreign-Currency 'A' Static Pools And Default Rates (cont.)															
01/01/2008	20	0.0	0.0	0.0	0.0	5.0									
01/01/2009	20	0.0	0.0	0.0	5.0										
01/01/2010	21	0.0	0.0	0.0											
01/01/2011	21	0.0	0.0												
01/01/2012	15	0.0													
Cumulative default rate§		0.0	0.0	0.3	0.7	1.1	1.6	2.2	2.7	3.4	4.2	5.1	6.1	6.4	6.4

\*First year in the cohort beginning Jan 1. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §From the rating category row in table 19. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 21**

Foreign-Currency 'BBB' Static Pools And Default Rates															
Transition to default rates (%)	Issuers	--Time horizon, years*--													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
01/01/1992	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/1993	6	0.0	0.0	0.0	0.0	0.0	0.0	16.7	16.7	16.7	16.7	16.7	16.7	16.7	16.7
01/01/1994	8	0.0	0.0	0.0	0.0	0.0	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
01/01/1995	7	0.0	0.0	0.0	0.0	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
01/01/1996	4	0.0	0.0	0.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0
01/01/1997	9	0.0	0.0	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
01/01/1998	16	0.0	0.0	0.0	0.0	0.0	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	12.5
01/01/1999	16	0.0	0.0	0.0	0.0	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	12.5
01/01/2000	16	0.0	0.0	0.0	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	
01/01/2001	16	0.0	0.0	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	
01/01/2002	16	0.0	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	
01/01/2003	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2004	12	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2005	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2006	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2007	13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2008	14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2009	17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2010	18	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2011	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
01/01/2012	24	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Cumulative default rate§		0.0	0.7	1.6	2.5	3.4	4.4	4.8	4.8	4.8	4.8	4.8	4.8	5.6	7.0

\*First year in the cohort beginning Jan 1. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §From the rating category row in table 19. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 22**

**Foreign-Currency 'BB' Static Pools And Default Rates**

Transition to default rates (%)	Issuers	--Time horizon, years*--														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01/01/1992	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0
01/01/1993	4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	25.0
01/01/1994	6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	16.7	16.7	16.7	33.3	33.3	33.3	33.3
01/01/1995	8	0.0	0.0	0.0	0.0	0.0	0.0	12.5	12.5	25.0	25.0	25.0	25.0	25.0	25.0	25.0
01/01/1996	10	0.0	0.0	0.0	0.0	0.0	10.0	10.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
01/01/1997	13	0.0	0.0	7.7	7.7	15.4	15.4	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8
01/01/1998	18	0.0	11.1	11.1	16.7	16.7	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2	22.2
01/01/1999	18	0.0	0.0	5.6	5.6	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
01/01/2000	15	0.0	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
01/01/2001	14	7.1	7.1	7.1	7.1	7.1	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
01/01/2002	16	0.0	0.0	0.0	6.3	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
01/01/2003	17	0.0	5.9	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8	11.8
01/01/2004	17	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
01/01/2005	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2006	19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2007	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2008	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2009	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2010	23	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2011	23	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/01/2012	22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cumulative default rates§		0.6	2.0	3.1	3.6	4.8	6.2	7.9	9.2	10.0	10.2	10.6	11.6	12.6	13.3	13.3

\*First year in the cohort beginning Jan. 1. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §From the rating category row in table 19. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 23**

**Foreign-Currency 'B' Static Pools And Default Rates**

Transition to default rates (%)	Issuers	--Time horizon, years*--														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
01/01/1995	4	0.0	0.0	0.0	0.0	25.0	25.0	25.0	25.0	25.0	25.0	50.0	50.0	50.0	50.0	50.0
01/01/1996	5	0.0	0.0	0.0	20.0	20.0	20.0	20.0	20.0	20.0	40.0	40.0	40.0	40.0	40.0	40.0
01/01/1997	4	0.0	0.0	25.0	25.0	25.0	25.0	25.0	25.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
01/01/1998	5	0.0	20.0	20.0	20.0	20.0	20.0	20.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
01/01/1999	7	0.0	0.0	0.0	0.0	0.0	0.0	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6	28.6
01/01/2000	14	0.0	0.0	0.0	7.1	7.1	21.4	21.4	21.4	21.4	21.4	28.6	28.6	28.6	28.6	28.6
01/01/2001	19	0.0	5.3	10.5	10.5	21.1	21.1	21.1	26.3	26.3	31.6	31.6	31.6	31.6	31.6	31.6
01/01/2002	15	0.0	6.7	6.7	13.3	13.3	13.3	13.3	13.3	20.0	20.0	20.0	20.0	20.0	20.0	20.0
01/01/2003	16	12.5	12.5	12.5	18.8	18.8	18.8	18.8	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

**Table 23**

Foreign-Currency 'B' Static Pools And Default Rates (cont.)															
01/01/2004	19	0.0	5.3	10.5	10.5	10.5	10.5	15.8	15.8	15.8					
01/01/2005	21	4.8	9.5	9.5	9.5	9.5	14.3	14.3	19.1						
01/01/2006	23	0.0	0.0	0.0	0.0	4.4	4.4	13.0							
01/01/2007	25	0.0	4.0	4.0	8.0	8.0	16.0								
01/01/2008	28	7.1	7.1	10.7	10.7	21.4									
01/01/2009	28	0.0	3.6	3.6	10.7										
01/01/2010	27	0.0	0.0	7.4											
01/01/2011	32	0.0	6.3												
01/01/2012	33	6.1													
Cumulative default rate§		2.6	5.4	8.1	11.7	14.8	17.7	20.9	24.1	26.3	28.7	29.6	29.6	32.1	38.8

\*First year in the cohort beginning Jan 1. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §From the rating category row in table 19. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 24**

Foreign-Currency 'CCC'/'CC' Static Pools And Default Rates															
Transition to default rates (%)	Issuers	--Time horizon, years*--													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
01/01/1999	3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
01/01/2000	1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
01/01/2001	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
01/01/2002	2	50.0	50.0	50.0	50.0	50.0	50.0	100.0	100.0	100.0	100.0	100.0			
01/01/2003	3	0.0	0.0	33.3	33.3	33.3	66.7	66.7	66.7	66.7	66.7				
01/01/2004	2	0.0	50.0	50.0	50.0	100.0	100.0	100.0	100.0						
01/01/2005	3	33.3	33.3	33.3	66.7	66.7	66.7	66.7	66.7						
01/01/2006	3	33.3	33.3	66.7	66.7	66.7	66.7	66.7							
01/01/2007	1	0.0	100.0	100.0	100.0	100.0	100.0								
01/01/2008	N/A	N/A	N/A	N/A	N/A	N/A									
01/01/2009	1	0.0	0.0	0.0	0.0										
01/01/2010	3	33.3	33.3	33.3											
01/01/2011	N/A	N/A	N/A												
01/01/2012	1	100.0													
Cumulative default rate§		37.5	48.1	53.1	56.2	63.0	72.7	80.2	86.9	86.9	86.9	N/A	N/A	N/A	N/A

\*First year in the cohort beginning Jan. 1. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §From the rating category row in table 19. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect. <http://creditpro.standardandpoors.com>.

**Table 25**

**Sovereign Foreign-Currency Cumulative Average Default Rate With Rating Modifiers (1975-2012)\***

(%)	--Time horizon, years§--														
Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AAA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.7	3.7	3.7	3.7	3.7	3.7	3.7
A	0.0	0.0	0.0	0.8	1.8	3.0	4.3	4.6	5.2	6.9	8.6	8.6	8.6	8.6	8.6
A-	0.0	0.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.3	5.1	6.2	6.2	6.2
BBB+	0.0	0.3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
BBB	0.0	0.7	2.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	6.3	7.4	7.4
BBB-	0.0	0.8	1.7	2.8	5.0	7.2	7.9	7.9	7.9	7.9	7.9	7.9	7.9	9.6	12.6
BB+	0.1	1.3	1.3	1.3	1.3	1.4	2.9	4.6	6.4	6.9	6.9	6.9	6.9	6.9	6.9
BB	0.0	0.9	1.9	2.9	3.6	4.6	5.0	5.0	5.0	5.0	5.5	8.3	11.7	13.6	13.6
BB-	1.7	4.0	6.1	6.6	9.8	13.0	16.5	19.3	19.9	19.9	21.0	21.0	21.0	21.0	21.0
B+	0.6	1.7	3.4	6.6	8.0	10.9	15.4	20.6	22.4	25.3	26.9	26.9	26.9	30.8	39.8
B	2.4	6.1	9.8	14.3	19.4	23.1	25.6	28.2	31.6	35.1	35.8	35.8	35.8	35.8	35.8
B-	7.4	11.7	14.6	17.5	19.7	21.3	23.7	24.8	25.9	25.9	25.9	25.9	25.9	25.9	N/A
CCC+	19.6	24.7	33.1	38.5	50.7	68.7	82.1	91.0	91.0	91.0	N/A	N/A	N/A	N/A	N/A
CCC	39.6	66.0	66.0	66.0	66.0	66.0	66.0	66.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CCC-	77.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CC	100.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Investment grade	0.0	0.1	0.4	0.6	0.9	1.2	1.4	1.5	1.6	1.7	1.9	2.0	2.2	2.4	2.5
Speculative grade	2.7	5.1	7.1	9.1	11.3	13.6	16.1	18.4	19.7	20.6	21.2	21.8	22.6	23.5	24.8
All rated	0.9	1.8	2.5	3.3	4.2	5.0	5.9	6.5	6.9	7.3	7.5	7.7	8.0	8.3	8.6

N/A--Not available, there are no observations for this horizon. \*Default rates conditional on survival. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §Cohorts of 12 through 180 months, annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 26**

**Sovereign Foreign-Currency Cumulative Average Default Rate With Rating Modifiers (1975-2012)\***

(%)	--Time horizon, months--																							
Rtg	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
A+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.6
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.4	0.5	0.6	0.6	0.7	0.7	0.7
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.4	0.7	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.3	1.3	1.3
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.8

**Table 26**

Sovereign Foreign-Currency Cumulative Average Default Rate With Rating Modifiers (1975-2012)* (cont.)																							
BB-	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.5	0.7	1.0	1.4	1.7	1.9	2.0	2.2	2.3	2.5	2.7	2.8	3.0	3.2	3.5	3.8
B+	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.5	0.6	0.6	0.7	0.8	0.8	0.9	1.0	1.2	1.3	1.4	1.5	1.6	1.7
B	0.1	0.3	0.4	0.6	0.9	1.1	1.3	1.5	1.8	2.0	2.2	2.4	2.8	3.2	3.5	3.8	4.1	4.4	4.7	5.0	5.3	5.6	5.9
B-	0.4	1.0	1.6	2.1	2.5	3.1	3.9	4.6	5.2	5.9	6.6	7.4	7.9	8.4	8.9	9.5	9.9	10.3	10.4	10.6	10.9	11.2	11.5
CCC+	1.3	2.5	4.4	6.3	8.2	10.1	12.0	13.9	15.8	17.7	19.0	19.6	20.2	20.2	20.2	20.2	20.2	20.2	20.9	21.5	22.1	22.8	23.4
CCC	5.7	13.2	18.9	24.5	32.1	35.9	37.7	39.6	39.6	39.6	39.6	39.6	41.5	45.3	47.2	49.1	50.9	52.8	56.6	60.4	62.3	64.2	66.0
CCC-	11.1	22.2	33.3	40.7	48.2	55.6	59.3	63.0	66.7	70.4	74.1	77.8	81.5	85.2	88.9	92.6	96.3	100.0	N/A	N/A	N/A	N/A	N/A
CC	23.1	34.6	46.2	57.7	65.4	73.1	80.8	84.6	88.5	92.3	96.2	100.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1
SG	0.2	0.5	0.7	0.9	1.1	1.4	1.6	1.8	2.1	2.3	2.5	2.7	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0
All	0.1	0.2	0.2	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.2	1.3	1.3	1.4	1.5	1.6	1.6	1.7

For expanded table, see data in the HTML file on RatingsDirect. N/A--Not available, there are no observations for this horizon. IG--Investment grade. SG--Speculative grade. All--All rated. \*Default rates conditional on survival. Implied senior debt rating through 1995; sovereign credit ratings thereafter. Horizons consist of monthly cohorts for specified periods annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 27**

Sovereign Local-Currency Cumulative Average Default Rate Without Rating Modifiers (1993-2012)*																
(%)	--Time horizon, years§--															
Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
AAA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
A	0.0	0.0	0.3	0.7	1.2	1.7	2.2	2.9	3.7	4.7	6.0	7.5	9.4	11.8	15.1	
BBB	0.0	0.6	1.2	1.7	2.4	3.1	3.9	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
BB	1.3	2.7	3.1	3.1	3.1	3.1	3.6	4.7	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
B	1.8	2.4	2.9	3.8	5.2	6.9	8.4	10.1	11.3	13.4	13.8	13.8	13.8	13.8	n/a	
CCC/C	6.9	10.3	14.2	16.6	21.4	26.6	32.7	37.8	37.8	37.8	37.8	37.8	37.8	N/A	N/A	
Investment grade	0.0	0.1	0.3	0.5	0.8	1.0	1.3	1.5	1.7	1.9	2.1	2.4	2.7	3.1	3.5	
Speculative grade	1.8	3.0	3.6	4.2	5.2	6.3	7.6	9.2	10.2	11.0	11.2	11.2	11.2	11.2	11.2	
All rated	0.6	1.0	1.3	1.7	2.1	2.6	3.1	3.6	3.9	4.3	4.5	4.7	5.0	5.3	5.7	

N/A--Not available, there are no observations for this horizon. \*Default rates conditional on survival. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §Cohorts of 12 through 180 months, annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 28**

Sovereign Local-Currency Cumulative Average Default Rate With Rating Modifiers (1993-2012)*																
(%)	--Time horizon, years§--															
Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
AAA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AA+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AA-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
A+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	3.2	3.2	3.2	3.2	3.2	3.2	3.2	

**Table 28**

Sovereign Local-Currency Cumulative Average Default Rate With Rating Modifiers (1993-2012)* (cont.)															
A	0.0	0.0	0.0	1.1	2.5	4.1	6.1	6.7	7.8	11.8	16.3	16.3	16.3	16.3	16.3
A-	0.0	0.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.3	4.5	8.2	13.1	20.3
BBB+	0.0	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB-	0.0	1.6	3.5	5.6	8.0	10.7	13.8	14.3	14.3	14.3	14.3	14.3	14.3	14.3	14.3
BB+	0.4	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
BB	1.9	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
BB-	1.8	3.4	4.9	4.9	4.9	4.9	7.0	11.5	14.7	14.7	14.7	14.7	14.7	14.7	N/A
B+	0.4	0.4	0.4	0.4	0.4	0.7	2.4	2.4	4.8	13.8	15.5	15.5	15.5	15.5	N/A
B	1.4	2.4	3.7	5.2	8.5	12.1	14.4	17.1	17.4	17.4	17.4	17.4	17.4	17.4	N/A
B-	5.1	5.5	5.5	6.6	6.6	6.6	6.6	8.1	9.7	9.7	9.7	9.7	9.7	9.7	N/A
CCC+	1.2	1.6	7.2	10.8	18.2	26.7	37.6	47.8	47.8	47.8	47.8	47.8	n/a	N/A	N/A
CCC	17.4	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	N/A
CCC-	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CC	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	30.8	N/A	N/A	N/A	N/A	N/A	N/A
Investment grade	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Speculative grade	0.0	0.1	0.3	0.5	0.8	1.0	1.3	1.5	1.7	1.9	2.1	2.4	2.7	3.1	3.5
All rated	1.8	3.0	3.6	4.2	5.2	6.3	7.6	9.2	10.2	11.0	11.2	11.2	11.2	11.2	11.2

N/A--Not available, there are no observations for this horizon. \*Default rates conditional on survival. Implied senior debt rating through 1995; sovereign credit ratings thereafter. §Cohorts of 12 through 180 months, annualized. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 29**

	Sovereign foreign currency										Basel II benchmarks			
	--Three-year CDRs*--										--10-year average of three-year CDRs§--	--Three-year CDR--		--10-year average of three-year CDRs--
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		Monitoring level	Trigger level	
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.20	0.10
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.20	0.10
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.30	0.25
BBB	6.25	6.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.56	1.81	2.40	3.00	1.00
BB	7.14	0.00	11.76	5.88	0.00	0.00	0.00	0.00	0.00	0.00	2.48	11.00	12.40	7.50
B	10.53	6.67	12.50	10.53	9.52	0.00	4.00	10.71	3.57	7.41	7.54	28.6	35.00	20.00

CDR--Cumulative default rates. \*Last year in the static pool. §Calculated using 10, three-year cohorts beginning Jan. 2001 and ended Jan. 2010. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.



**Table 30**

Basel II Cumulative Default Rate Benchmark Comparison With Sovereign Local-Currency Default Rates														
Sovereign local currency											Basel II Benchmarks			
--Three-year CDRs*--											--10-year average of three-year CDRs§--	--Three-year CDR--		--10-year average of three-year CDRs--
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2003-2012	Monitoring level	Trigger level	Long-run reference
AAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.20	0.10
AA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.80	1.20	0.10
A	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	1.30	0.25
BBB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.26	0.53	2.40	3.00	1.00
BB	8.33	0.00	5.56	7.69	0.00	0.00	0.00	0.00	0.00	0.00	2.16	11.00	12.40	7.50
B	0.00	0.00	0.00	6.25	0.00	5.00	0.00	9.09	3.85	0.00	2.42	28.6	35.00	20.00

CDR--Cumulative default rates. \*Last year in the static pool. §Calculated using 10, three-year cohorts beginning Jan. 2001 and ended Jan. 2010. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 31**

Sovereign Versus Corporate Ratings Default Rates With Rating Modifiers (1975-2012)*																
(%)	--One-year--			--Three-year--			--Five-year--			--10-year--			--15-year--			
	Sov FC	Sov LC	Private sector	Sov FC	Sov LC	Private sector	Sov FC	Sov LC	Private sector	Sov FC	Sov LC	Private sector	Sov FC	Sov LC	Private sector	
AAA	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.8	0.0	0.0	1.0	
AA	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.0	0.9	0.0	0.0	1.3	
A	0.0	0.0	0.1	0.0	0.0	0.3	0.8	0.9	0.6	3.8	4.4	1.7	6.8	15.1	2.6	
BBB	0.0	0.0	0.2	1.7	1.5	1.1	3.6	2.7	2.2	5.2	4.1	4.6	8.4	4.1	6.7	
BB	0.6	1.2	0.9	3.2	3.6	4.6	5.2	3.6	8.4	10.4	5.9	15.1	13.7	5.9	18.5	
B	2.1	1.6	4.3	7.5	2.5	14.1	13.8	4.5	20.2	27.5	12.5	27.8	36.5	N/A	31.8	
CCC/CC	39.1	10.3	26.9	56.5	17.7	41.2	68.3	26.4	46.6	81.0	37.0	51.1	N/A	N/A	54.3	
Investment grade	0.0	0.0	0.1	0.3	0.3	0.5	0.9	0.7	1.1	1.7	1.8	2.5	2.5	3.4	3.5	
Speculative grade	2.6	1.9	4.1	7.0	3.9	11.5	11.3	5.4	16.4	20.2	10.9	23.5	24.7	12.0	27.1	
All rated	0.9	0.6	1.6	2.5	1.4	4.4	4.2	2.1	6.5	7.2	4.2	9.6	8.6	5.9	11.5	

N/A--Not available. Sov FC--Sovereign foreign currency. Sov LC--Sovereign local currency. \*Implied senior debt rating through 1995; sovereign credit ratings thereafter. Sovereign ratings for 1975-2012, corporate ratings for 1981-2012. Both compiled on calendar-year basis. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 32**

Sovereign Foreign-Currency Ratings One-Year Average Transition Matrix (1975-2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	96.9	2.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	7.5	85.0	6.7	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	8.5	80.2	9.4	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	14.3	74.3	7.1	1.4	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0

**Table 32**

Sovereign Foreign-Currency Ratings One-Year Average Transition Matrix (1975-2012) (%) (cont.)																		
A+	0.0	0.0	0.0	16.2	66.2	14.7	1.5	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.0	1.4	11.4	77.9	3.6	2.9	2.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	0.0	1.0	14.7	78.4	3.9	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0
BBB+	0.0	0.0	0.0	0.0	0.0	1.6	19.1	61.9	14.3	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	3.2	19.4	65.6	7.5	2.2	0.0	0.0	1.1	0.0	0.0	1.1	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	16.3	74.0	5.7	2.4	0.0	0.0	0.0	0.8	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	17.3	68.3	8.7	0.0	1.0	0.0	0.0	1.9	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	16.1	73.4	8.1	1.6	0.0	0.0	0.0	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	13.6	70.9	8.2	1.8	0.9	1.8	1.8
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.1	14.8	64.8	12.0	4.2	1.4	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2	70.0	4.2	3.3	1.7
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	20.0	63.1	4.6	7.7
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	4.4	21.7	30.4	39.1

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over each annual cohort between 1975 and 2012. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 33**

Sovereign Foreign-Currency Ratings Three-Year Average Transition Matrix (1975-2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	92.1	5.1	0.9	1.1	0.0	0.2	0.0	0.2	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	22.6	59.1	14.8	2.6	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	1.1	23.2	52.6	16.8	2.1	2.1	0.0	1.1	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	3.5	38.6	36.8	7.0	5.3	1.8	0.0	1.8	3.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	4.8	27.4	33.9	17.7	1.6	1.6	3.2	4.8	0.0	1.6	0.0	1.6	0.0	0.0	1.6	0.0	0.0
A	0.0	0.0	0.0	7.4	25.6	50.4	6.6	1.7	5.0	1.7	0.8	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0
A-	0.0	0.0	0.0	1.1	3.3	33.0	48.4	8.8	2.2	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	1.1
BBB+	0.0	0.0	0.0	0.0	1.8	8.9	26.8	30.4	21.4	7.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0
BBB	0.0	0.0	0.0	0.0	1.3	7.7	15.4	18.0	37.2	9.0	5.1	1.3	0.0	1.3	1.3	0.0	1.3	1.3	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	6.9	12.8	26.5	37.3	10.8	2.9	0.0	0.0	0.0	1.0	0.0	2.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	5.4	30.1	34.4	20.4	3.2	1.1	0.0	1.1	0.0	1.1	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	2.8	8.5	21.7	44.3	12.3	6.6	0.9	0.0	0.0	1.9	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	8.5	26.6	30.9	11.7	5.3	4.3	2.1	6.4	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	1.8	5.5	15.6	35.8	23.9	9.2	3.7	2.8	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	14.1	24.2	35.4	8.1	2.0	6.1	8.1
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	5.6	11.1	29.6	35.2	1.9	13.0	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	18.2	9.1	13.6	54.6	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over each three-year cohort between 1975 and 2012. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 34**

**Sovereign Foreign-Currency Ratings 10-Year Average Transition Matrix (1975-2012) (%)**

Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	77.8	10.8	6.2	3.1	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.9	0.0	0.6	0.0	0.0	0.0	0.0	0.0
AA+	43.8	25.0	17.7	11.5	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	27.9	32.4	11.8	10.3	8.8	1.5	1.5	1.5	0.0	1.5	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	28.0	20.0	8.0	20.0	0.0	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	6.7	3.3	13.3	0.0	10.0	16.7	20.0	3.3	6.7	16.7	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	1.8	3.6	17.9	12.5	19.6	16.1	12.5	7.1	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.8	0.0
A-	0.0	0.0	2.4	11.9	19.1	21.4	4.8	2.4	11.9	16.7	7.1	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	5.6	0.0	5.6	33.3	50.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	2.2	13.3	4.4	15.6	17.8	6.7	13.3	6.7	4.4	6.7	0.0	2.2	0.0	2.2	0.0	4.4	0.0
BBB-	0.0	0.0	0.0	0.0	2.7	23.3	13.7	15.1	15.1	2.7	9.6	5.5	0.0	1.4	0.0	0.0	0.0	11.0	0.0
BB+	0.0	0.0	0.0	0.0	6.0	6.0	12.0	10.0	6.0	10.0	12.0	18.0	10.0	0.0	0.0	2.0	0.0	8.0	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.3	11.1	24.1	13.0	16.7	3.7	7.4	3.7	1.9	1.9	7.4	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	14.0	11.6	2.3	20.9	2.3	0.0	2.3	9.3	0.0	34.9	0.0
B+	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	7.3	9.8	2.4	7.3	9.8	14.6	12.2	0.0	0.0	34.2	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	3.3	0.0	33.3	16.7	6.7	3.3	3.3	26.7	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	15.0	20.0	10.0	10.0	5.0	15.0	0.0	20.0	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	88.9	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over each 10-year cohort between 1975 and 2012. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 35**

**Sovereign Foreign-Currency Ratings Most Recent One-Year Transition Matrix (2012) (%)**

Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	87.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	0.0	77.8	0.0	11.1	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	0.0	33.3	33.3	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.0	0.0	14.3	42.9	28.6	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	88.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	54.6	18.2	18.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	40.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	62.5	25.0	0.0	0.0	0.0	0.0	0.0	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	75.0	6.3	6.3	0.0	0.0	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	81.8	9.1	0.0	0.0	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	50.0	0.0	33.3	0.0

**Table 35**

**Sovereign Foreign-Currency Ratings Most Recent One-Year Transition Matrix (2012) (%) (cont.)**

CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0
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Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over one year for the 2012 cohort. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 36**

**Sovereign Foreign-Currency Ratings Most Recent Three-Year Transition Matrix (2010-2012) (%)**

Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR	
AAA	72.2	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	25.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	0.0	20.0	40.0	0.0	20.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	0.0	28.6	0.0	14.3	14.3	14.3	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0
A	0.0	0.0	0.0	11.1	22.2	33.3	22.2	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	20.0	0.0	0.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0
BBB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1	0.0	28.6	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	28.6	42.9	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	42.9	14.3	0.0	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	50.0	25.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	25.0	12.5	37.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	45.5	27.3	9.1	0.0	0.0	0.0	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	36.4	36.4	0.0	0.0	9.1	0.0	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0	40.0	0.0	20.0	0.0	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	33.3	0.0	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over three years for the 2010 cohort. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 37**

**Sovereign Foreign-Currency Ratings Most Recent 10-Year Transition Matrix (2003-2012) (%)**

Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR	
AAA	68.8	25.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	40.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	33.3	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.0	0.0	0.0	20.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	0.0
A-	0.0	0.0	11.1	33.3	22.2	0.0	0.0	0.0	11.1	0.0	11.1	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	0.0	20.0	0.0	40.0	0.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0	40.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0

**Table 37**

Sovereign Foreign-Currency Ratings Most Recent 10-Year Transition Matrix (2003-2012) (%) (cont.)																				
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	33.3	33.3	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0	
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0	40.0	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	16.7	0.0	16.7	16.7	0.0	0.0	0.0	33.3	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	40.0	20.0	20.0	0.0	0.0	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	20.0	0.0	0.0	40.0	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over 10 years for the 2003 cohort. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 38**

Sovereign Foreign-Currency Ratings Original-To-Last Transition Matrix (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	60.0	25.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0
AA+	0.0	0.0	50.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	20.0	0.0	20.0	40.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0
A+	33.3	0.0	0.0	0.0	33.3	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	12.5	12.5	0.0	25.0	25.0	0.0	0.0	12.5	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	0.0	0.0	0.0	37.5	12.5	25.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5
BBB+	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	12.5	37.5	0.0	0.0	0.0	0.0	12.5	12.5	0.0	12.5	0.0	0.0	0.0	0.0	0.0	12.5	0.0
BBB-	0.0	0.0	0.0	0.0	11.1	11.1	0.0	0.0	11.1	22.2	11.1	11.1	0.0	0.0	0.0	11.1	0.0	11.1	0.0
BB+	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	33.3	16.7	0.0	16.7	0.0	0.0	0.0	0.0	0.0	16.7	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	20.0	10.0	0.0	30.0	20.0	0.0	0.0	0.0	0.0	10.0	0.0
BB-	0.0	0.0	0.0	0.0	0.0	6.7	0.0	6.7	0.0	0.0	13.3	0.0	33.3	0.0	13.3	0.0	0.0	26.7	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	15.0	45.0	20.0	5.0	0.0	10.0	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	0.0	6.7	20.0	26.7	0.0	0.0	20.0	13.3
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	8.3	0.0	0.0	16.7	8.3	0.0	33.3	0.0	25.0	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	20.0	0.0	20.0	40.0	0.0

Note: Original-to-last transition rates compare the issuer rating from the time of first rating to the last rating, regardless of the time elapsed in the interim. Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Source: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 39**

Sovereign Local-Currency Ratings One-Year Average Transition Matrix (1993-2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	96.1	2.3	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	7.6	79.3	11.3	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	4.4	80.2	11.0	0.0	2.2	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	6.5	77.9	13.0	1.3	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	0.9	7.3	73.4	14.7	1.8	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Table 39**

Sovereign Local-Currency Ratings One-Year Average Transition Matrix (1993-2012) (%) (cont.)																		
A	0.0	0.0	0.0	0.9	11.9	69.7	10.1	5.5	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	0.0	0.0	17.6	70.3	8.8	1.1	1.1	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	0.0	1.0	10.7	70.9	11.7	1.9	1.9	0.0	0.0	0.0	0.0	1.9	0.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.8	68.9	13.1	0.0	1.6	0.0	0.0	0.0	0.0	1.6	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	6.8	68.9	10.8	5.4	1.4	2.7	0.0	0.0	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	11.3	71.1	11.3	3.1	0.0	0.0	0.0	1.0	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.1	61.1	11.1	4.2	0.0	1.4	1.4	2.8
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	9.5	67.6	12.2	5.4	0.0	2.7	1.4
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	3.0	16.2	62.6	12.1	5.1	0.0	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	14.9	72.3	4.0	3.0	2.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	7.4	18.5	61.1	7.4	3.7
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.9	20.7	62.1	10.3

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over each annual cohort between 1975 and 2012. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 40**

Sovereign Local-Currency Ratings Three-Year Average Transition Matrix (1993-2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	89.7	5.7	3.2	0.9	0.0	0.3	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	22.9	41.7	12.5	14.6	0.0	2.1	2.1	2.1	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	1.3	5.1	64.1	18.0	2.6	3.9	1.3	2.6	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	1.6	17.5	42.9	20.6	7.9	4.8	3.2	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	2.0	19.0	45.0	18.0	8.0	3.0	2.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	1.0	0.0	0.0
A	0.0	0.0	0.0	2.3	22.5	47.2	12.4	6.7	6.7	0.0	1.1	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0
A-	0.0	0.0	0.0	1.3	11.3	32.5	31.3	11.3	3.8	5.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	3.3	4.4	18.7	40.7	12.1	8.8	6.6	0.0	0.0	0.0	2.2	2.2	0.0	1.1	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	2.0	25.5	47.1	11.8	9.8	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	1.8	1.8	7.1	7.1	42.9	17.9	5.4	5.4	1.8	3.6	1.8	0.0	3.6	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	1.3	5.0	5.0	11.3	47.5	20.0	7.5	1.3	0.0	0.0	0.0	1.3	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	4.8	6.5	24.2	19.4	9.7	11.3	3.2	12.9	1.6	4.8	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	3.7	5.6	13.0	31.5	16.7	11.1	3.7	7.4	5.6	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.4	5.6	19.4	40.3	25.0	2.8	0.0	0.0	2.8
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	3.8	16.5	19.0	38.0	3.8	2.5	5.1	8.9
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	9.1	4.6	4.6	29.6	34.1	11.4	4.6	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9	23.1	11.5	42.3	15.4	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over each three-year cohort between 1975 and 2012. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 41**

Sovereign Local-Currency Ratings 10-Year Average Transition Matrix (1993-2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	83.4	7.6	2.8	4.3	1.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	11.8	11.8	17.7	11.8	11.8	17.7	0.0	5.9	2.9	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	5.1	2.6	43.6	15.4	15.4	7.7	2.6	2.6	0.0	2.6	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	6.9	0.0	6.9	24.1	17.2	13.8	10.3	3.5	3.5	6.9	3.5	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0
A+	3.3	6.7	13.3	33.3	3.3	10.0	10.0	3.3	6.7	3.3	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	4.2	0.0	16.7	33.3	8.3	4.2	12.5	4.2	0.0	8.3	0.0	0.0	0.0	0.0	4.2	4.2	0.0
A-	0.0	0.0	2.5	5.0	7.5	25.0	20.0	12.5	2.5	12.5	10.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	1.7	1.7	26.7	15.0	1.7	5.0	8.3	5.0	23.3	5.0	3.3	3.3	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	11.8	0.0	23.5	23.5	23.5	0.0	0.0	0.0	5.9	5.9	5.9	0.0	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	4.0	0.0	0.0	8.0	28.0	12.0	0.0	8.0	0.0	0.0	8.0	8.0	0.0	24.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	3.2	25.8	9.7	6.5	29.0	6.5	6.5	0.0	3.2	6.5	0.0	3.2	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	5.3	10.5	10.5	5.3	5.3	0.0	15.8	5.3	10.5	15.8	0.0	15.8	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	15.8	0.0	5.3	0.0	5.3	26.3	10.5	5.3	5.3	21.1	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	7.7	15.4	0.0	7.7	23.1	0.0	23.1	7.7	7.7	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	10.5	5.3	0.0	42.1	15.8	10.5	0.0	0.0	5.3	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	20.0	26.7	13.3	0.0	0.0	6.7	0.0	20.0	6.7	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	50.0	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over each 10-year cohort between 1975 and 2012. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 42**

Sovereign Local-Currency Ratings Most Recent One-Year Transition Matrix (2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	87.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	16.7	83.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	0.0	77.8	0.0	11.1	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.0	0.0	0.0	55.6	33.3	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.4	0.0	0.0	14.3	0.0	0.0	0.0	0.0	14.3	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	55.6	22.2	11.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5	12.5	50.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90.0	10.0	0.0	0.0	0.0	0.0	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.3	73.3	6.7	6.7	0.0	0.0	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	81.8	9.1	0.0	0.0	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	50.0	33.3	0.0	0.0

**Table 42**

Sovereign Local-Currency Ratings Most Recent One-Year Transition Matrix (2012) (%) (cont.)																				
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over one year for the 2012 cohort. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 43**

Sovereign Local-Currency Ratings Most Recent Three-Year Transition Matrix (2010-2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	68.4	31.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	33.3	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	16.7	16.7	33.3	0.0	16.7	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	40.0	60.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	0.0	0.0	8.3	16.7	0.0	25.0	25.0	8.3	0.0	0.0	0.0	8.3	0.0	0.0	0.0	0.0	8.3	0.0	0.0
A	0.0	0.0	0.0	0.0	0.0	50.0	33.3	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	20.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	0.0	0.0	12.5	37.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	50.0	0.0	16.7	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	20.0	20.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	11.1	33.3	22.2	22.2	0.0	0.0	0.0	0.0	0.0	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	0.0	20.0	20.0	0.0	20.0	0.0	0.0	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	57.1	28.6	0.0	0.0	0.0	0.0	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	55.6	33.3	0.0	0.0	0.0	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	27.3	45.5	0.0	9.1	0.0	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	20.0	40.0	20.0	0.0	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	33.3	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over three years for the 2010 cohort. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 44**

Sovereign Local-Currency Ratings Most Recent 10-Year Transition Matrix (2003-2012) (%)																			
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR
AAA	68.4	26.3	0.0	0.0	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA+	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA	0.0	20.0	0.0	20.0	0.0	20.0	0.0	20.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	16.7	0.0	0.0	33.3	0.0	0.0	16.7	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0
A+	0.0	0.0	33.3	33.3	0.0	16.7	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	16.7	0.0	0.0	16.7	0.0	0.0	16.7	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	16.7	0.0
A-	0.0	0.0	0.0	16.7	0.0	16.7	50.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB+	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	20.0	0.0	40.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	33.3	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.5	12.5	12.5	12.5	12.5	12.5	0.0	0.0	0.0	0.0	0.0	0.0



**Table 44**

Sovereign Local-Currency Ratings Most Recent 10-Year Transition Matrix (2003-2012) (%) (cont.)																				
BB	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0		
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	28.6	0.0	14.3	14.3	28.6	0.0	
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0	0.0	0.0	0.0	
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	60.0	20.0	20.0	0.0	0.0	0.0	
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	25.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	50.0	0.0

Note: Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Average transitions over 10 years for the 2003 cohort. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

**Table 45**

Sovereign Local-Currency Ratings Original-To-Last Transition Matrix (%)																				
Rating as of Jan. 1	AAA	AA+	AA	AA-	A+	A	A-	BBB+	BBB	BBB-	BB+	BB	BB-	B+	B	B-	CCC/CC	SD	NR	
AAA	52.0	24.0	4.0	4.0	0.0	0.0	0.0	8.0	0.0	4.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
AA+	0.0	0.0	0.0	20.0	0.0	20.0	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0
AA	0.0	14.3	28.6	28.6	0.0	14.3	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AA-	0.0	0.0	0.0	25.0	0.0	0.0	50.0	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A+	16.7	0.0	16.7	16.7	0.0	0.0	16.7	16.7	0.0	0.0	16.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A-	0.0	0.0	0.0	9.1	0.0	9.1	18.2	0.0	18.2	0.0	9.1	9.1	0.0	0.0	0.0	9.1	0.0	9.1	9.1	0.0
BBB+	0.0	0.0	14.3	14.3	0.0	14.3	14.3	0.0	14.3	14.3	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BBB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	16.7	16.7	16.7	16.7	0.0	0.0	0.0	0.0	16.7	0.0	0.0
BB+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.1	11.1	11.1	11.1	22.2	11.1	0.0	0.0	0.0	0.0	11.1	11.1	0.0
BB	0.0	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0	0.0	33.3	11.1	22.2	11.1	0.0	11.1	0.0	0.0
BB-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	40.0	0.0	0.0	0.0	0.0	20.0	0.0
B+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0	17.6	41.2	23.5	0.0	0.0	5.9	5.9	0.0
B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.3	0.0	0.0	0.0	16.7	8.3	25.0	8.3	0.0	25.0	8.3	0.0
B-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	37.5	12.5	25.0	0.0	0.0
CCC/CC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	20.0	20.0	0.0

Note: Original-to-last transition rates compare the issuer rating from the time of first rating to the last rating, regardless of the time elapsed in the interim. Implied senior debt ratings through 1995; sovereign credit ratings thereafter. Sources: "Sovereign Rating And Country T&C Assessment Histories," RatingsDirect, and <http://creditpro.standardandpoors.com>.

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## Endnotes

1) For the individual rating actions, see "Sovereign Rating And Country T&C Assessment Histories," updated regularly on RatingsDirect. For specifications of the engine that makes the calculations, see "CreditPro® Methodology version 1.0," S&P Capital IQ Risk Solutions, June 26, 2012, [www.spcapitaliq.com](http://www.spcapitaliq.com). Since year-end 2012, we have recorded two

additional sovereign defaults (see "Jamaica Ratings Lowered To 'SD' Following Announcement Of Debt Exchange," Feb. 12, 2013, RatingsDirect and "Grenada Ratings Lowered To 'SD' On Announced Debt Restructuring," March 12, 2013, RatingsDirect). These defaults, the governments' second and third, respectively, will be included in next year's update.

2) "Sovereign Ratings Display Stability Over Two Decades," April 5, 1999, RatingsDirect.

3) The main distinguishing feature between a solicited and unsolicited sovereign rating pertains to our contractual relationship with the government. See for example "Ratings On Seven European Sovereigns And The European Central Bank Converted To Unsolicited Ratings," Feb. 17, 2011, and "Global Guidelines For Rating New Issues Of Existing Rated Issuers, And U.S. And Canadian Guidelines For Unsolicited Credit Ratings," Dec. 5, 2012.

4) The data set includes no foreign-currency confidential ratings. It includes local-currency confidential ratings for two sovereigns. We include these confidential ratings in our calculations because we had public foreign-currency ratings on the sovereigns at the time and because the local-currency rating subsequently went public. One of the two local-currency sovereign ratings defaulted while it was confidential (see table 3).

5) Mali subsequently defaulted. It is included in those cohorts for which it was rated as of the beginning of the cohort period (see tables 2 and 3).

6) In other words, transition studies measure rating changes at one period end versus a subsequent period end. In addition, the grouping of obligors in a specific static pool remains constant, and the pools are aggregated and weighted by the number of issuers by rating category. Thus, in our analysis, static pools from earlier years, when there were fewer sovereign ratings, count less in the study than do pools from more recent years, when there are many more sovereign ratings.

7) By its very nature, the set of sovereign data is much smaller than the default and transition data sets of the rest of the firm. Also, one sovereign defaulted twice within a calendar year--the Hellenic Republic in 2012. Thus, we use monthly start dates for the sovereign specific tables in the main body of the text, which can better capture anomalies that arise either because of double defaults within a year or because of rating actions at the beginning or end of a calendar year due to the few number of observations. Regarding our default statistics for private-sector entities (which are subject to commercial law and, thus, not likely to default twice in a single period and which consist of more rated entities by several multiples), they are made on a calendar-year basis. We use this basis for our comparative tables and for our filings with the SEC and other regulatory agencies.

8) "Sovereign Foreign and Local Currency Rating Differentials," Oct. 19, 2005, RatingsDirect.

9) See "Sovereign Ratings And Country T&C Assessments," updated regularly and "Sovereign Rating And Country T&C Assessment Histories" *ibid*.

10) Before 1995, the universe of sovereign ratings was small, and most were investment grade, which have experienced more stable transition rates than speculative-grade sovereigns (see table 6). As a result, upgrade-to-downgrade percentages are less meaningful. For individual rating changes between 1975 and 1995, see "Sovereign Rating And Country T&C Assessment Histories," *ibid*.

11) Cf. Sovereign Rating History, *ibid.* and "Outlooks: The Sovereign Credit Weathervane, Year-End 2012 Update," Jan. 18, 2013.

12) For inclusion in the matrix, the issuer must be in at least one year. In the case of the three-year matrix, we must have rated the sovereign by Jan. 1, 2010; in the case of the 15-year matrix, by Jan. 1, 1998. Thus, there are progressively fewer counts (or observations) the longer the transition period is, given the growth of sovereign ratings and, of course, given that there will be fewer static pools for each added set of 12 monthly cohorts in the matrix.

13) See "Sovereign Government Rating Methodology And Assumptions," RatingsDirect, June 30, 2011.

14) In other words, to be captured in this calculation, a foreign-currency sovereign rating first needed to be raised sometime between Jan. 1, 1975, and Dec. 31, 2010. Then, the calculation sets a two-year horizon from the date of the initial rating action to measure the correlation of subsequent rating actions.

15) "Sovereign Government Rating Methodology" *ibid.*

16) As there have been no defaults within 15 years in the 'AAA' and 'AA' categories, the tables only show the lower categories. The data fields contain the transition-to-default data, which are also weight-averaged in the 'SD' column of tables 6-10. The cumulative default rate (conditioned on survival) is presented at the bottom. We observe that the default rate in a single year can vary a great deal. Thus, in table 21, the 10-year (i.e., 120 month) cumulative default rate for 'BBB' is 16.7% in 1993, 12.5% in 1994, 14.3% in 1995, 25.0% in 1996, 11.1% in 1997, 6.3% in 1998-2002, and 0% in 2003. Carmen Reinhart and Kenneth Rogoff, in their book "This Time Is Different" (Princeton University Press, 2009), argue that after the post-World War II period of few sovereign defaults as a share of the total number of central governments, investors can expect high variation of default rates and higher absolute default rates for given levels of creditworthiness in the years ahead.

17) The cumulative default rate is one minus the proportion of survivors (nondefaulters). At some point, the cumulative default rate will not increase as the horizon expands because the lengthened horizon captures no additional defaults. The cumulative default rate (conditional on survival) differs from the transition-to-default rate (seen in the 'SD' column at the right of the transition matrices) in that the former counts defaults only once, while transition rates count defaults once per observation horizon and averages them. In addition, cumulative default rates capture defaults that have occurred before a cohort period ends.

18) It is interesting to compare these figures that are calculated with monthly start dates with figures compiled with yearly Jan. 1 start dates. The five-year cumulative default rate for foreign-currency sovereign ratings for 1975-2012 by this latter method: 0.8% for the 'A' category, 3.6% for the 'BBB' category, 5.2% for the 'BB' category, 13.8% for the 'B' category, and 68.3% for the 'CCC'/'CC' categories. 15-year cumulative default rates for sovereigns averaged 2.5% for investment-grade sovereigns and 24.7% for speculative-grade ones by setting cohorts on a calendar-year basis, virtually unchanged from the default data compiled by monthly cohorts (see table 31).

19) "Basel II: Compliance of Global Ratings," Oct. 20, 2006, RatingsDirect.

20) See "2012 Annual Global Corporate Default Study And Rating Transitions," March 18, 2013, RatingsDirect.

- 21) Cf. "Standard & Poor's To Explicitly Recognize Credit Stability As A Rating Factor," Oct. 15, 2008, RatingsDirect.
- 22) The Lorenz curve was developed by Max O. Lorenz as a graphical representation of the proportionality of a distribution. Used with ratings, it is one indication of the appropriateness of the rating distribution's rank ordering. The Lorenz curve is derived by plotting out the cumulative proportion of issuers by rating category with the cumulative proportion of defaulters by rating category. To determine relative performance of the Lorenz curve, we compare it with an ideal curve and a random curve. In the ideal curve, all issuers in the lowest rating category ('CCC'/'CC', in this case) default, and all defaults are in the lowest rating category. In the random curve, all defaults occur randomly throughout the rating distribution, so it lies along the diagonal of the chart. The Gini coefficient is a ratio of two areas: the area bounded by the Lorenz curve and the random curve divided by the area bounded by the ideal curve and random curve. The result is a relative performance measure that is between one and zero, one being a Gini coefficient with perfect rank ordering (all defaults in the lowest rating category and all issuers in the lowest rating category default) and zero being a random rank ordering.
- 23) Consistent with the view expressed in our criteria, the only scenario we see in which a private-sector institution would default on its foreign-currency debt and not on its local-currency debt would be if the central bank restricted access to foreign exchange for debt service.
- 24) We subsequently downgraded Cyprus further. See "Cyprus Long-Term Rating Lowered To 'CCC' On Rising Risks To Financial And Economic Stability," March 21, 2013.
- 25) "Timeliness of Payments: Grace Periods, Guarantees, And Use Of 'D' And 'SD' Ratings," Dec. 23, 2010.
- 26) See "Rating Implications Of Exchange Offers And Similar Restructurings, Update," May 12, 2009; "When Would A "Reprofiling" Of Sovereign Debt Constitute A Default?," June 3, 2011; and "Distressed Sovereign Debt Exchanges: Examples From The Past And Lessons For The Future," June 28, 2011, all on RatingsDirect.
- 27) "Argentina Emerges From Default, Although Some Debt Issues Are Still Rated 'D'," June 1, 2005, RatingsDirect.
- 28) See "Sovereign Defaults At 26-Year Low, To Show Little Change In 2007," Sept. 18, 2006, RatingsDirect

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