

Special Comment

Moody's Global Credit Policy

July 2009

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Summary

This report is Moody's second study of Latin American corporate bond and loan issuers and their historical credit performance, migration, default, and recovery experience. Broad conclusions include the following:

- Since 1990, Moody's has rated the bonds and loans of 420 Latin American financial and non-financial corporates. The Moody's-rated corporate universe in the Latin American region grew rapidly over the past 18 years, from only a handful of rated issuers at the beginning of the 1990s to 165 issuers with Moody's-rated debt in June 2009.
- The average credit quality of Latin American issuers has improved steadily in recent years and the share of issuers with speculative grade ratings in the region has been falling since 2000, to less than 60% in mid-2009. The industrial corporate sector, financial sector, and the utility and transportation sectors represent respectively 45%, 35%, and 20% of total issuers in June 2009.
- Two Moody's-rated Latin American issuers defaulted during 2008, impacting a total of \$0.8 billion of debt. In addition, five rated issuers defaulted during the first half of 2009, impacting another \$2.5 billion of debt. Since 1990, a total of 59 rated and 63 unrated Latin American issuers have defaulted, impacting \$23.4 billion and \$12.0 billion of debt respectively. Most of the defaults occurred between 1998 and 2003, with only five defaults occurring in the following four years.

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Analyst Contacts:

New York 1.212.553.1653

Elena Duggar
Analyst

Kenneth Emery
Senior Vice President

Daniel Gates
Team Managing Director

Susan Knapp
Team Managing Director

Celina Vansetti-Hutchins
Senior Vice President

Sao Paulo 55.11.3043.7300

Alexander I. Carpenter
Senior Vice President



Moody's Investors Service

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- Speculative-grade cumulative default rates for Latin American issuers have been similar to those of global issuers. The rating distributions of these two groups differ, however, with Latin American issuers historically carrying lower average ratings. As a result, the aggregate average default rate is slightly higher for Latin American issuers than for global issuers.
- Issuer-weighted average recovery rates have been very similar for defaulted senior unsecured bonds of Latin American and global issuers. Rating migration rates have been broadly similar for Latin American and global issuers as well.

Introduction

This report is Moody's second detailed examination of the credit and default experience of Latin American corporate bond and loan issuers. Although Moody's has been tracking defaults in Latin America since the early-1900s, when a number of Mexican and Brazilian railway companies became distressed prior to WWI, the time period covered in this study is from 1990 to June 2009. The 1990 starting date marks the beginning of the modern era of corporate bond finance in Latin America, which followed the resolution of the widespread loan defaults of the early 1980s.

Data and Methodology

This study examines the rating histories and default experience of 420 Latin American corporate issuers which have had Moody's-rated local and/or foreign currency debt outstanding within the 1990-H1 2009 period. Moody's corporate default research is derived from Moody's proprietary database of credit ratings and defaults for non-financial and financial corporates which have issued long-term bonds or loans. In June 2009, 165 Latin American financial and non-financial corporate bond or loan issuers held Moody's ratings.¹

Moody's global default database, of which the data in this study is a subset, covers over 5,000 defaults by issuers both rated and unrated by Moody's worldwide. Moody's has compiled this information using a variety of sources, including various print and online publishing sources, press releases, press clippings, internal memoranda, and records of analyst contacts with rated issuers. Moody's default database includes about 230 defaulted bond and loan issues of Latin American firms since 1990, both rated and non-rated.

The basic unit of study in this report is the corporate bond or loan issuer's individual rating history. Moody's issuer ratings provide a rank-ordering of firms' credit risks, which generally does not vary with either the size or number of bonds that a firm may have outstanding. Additionally, in most cases, when an issuer defaults on one of its bonds or loans, it defaults on all of them. Therefore, Moody's normally reports its default statistics on an "issuer-weighted" basis, i.e. the fraction of issuers that default, rather than on an "issue-" or "volume-weighted" basis. Furthermore, to the extent that historical default experience is predictive of future experience, issuer-weighted statistics are likely to provide the most reliable guide to future default experience. If instead we were to weight our statistics by the number of debt issues or their par amounts, we would place undue emphasis on the particular historical experiences of a few large or very frequent issuers of corporate bonds. For the purpose of this study, corporate bond ratings on either domestic- or foreign-currency denominated debt are considered. We exclude any debt that was backed by a guarantor outside the corporate family (e.g. a bond insurance company).² We also exclude sovereign and sub-sovereign debt issuers.

Moody's definition of default includes three types of default events:

- A missed or delayed disbursement of interest and/or principal;
- Filing for bankruptcy, administration, legal receivership, or other legal blocks (perhaps by regulators) to the timely payment of interest and/or principal; or

¹ This study focuses on issuers which have had Moody's-rated debt outstanding during the period of study. In addition, Moody's also has issuer ratings or corporate family ratings on issuers which either did not have Moody's-rated debt at any time during the 1990-H1 2009 period or had only national scale ratings.

² When available, an issuer's senior unsecured rating is used as the indicator of the credit quality. In the absence of such a rating, Moody's infers an equivalent senior unsecured rating from the issuer's other rated debt obligations.

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- A distressed exchange where: (i) the issuer offers debt-holders a new security or package of securities that amount to a diminished financial obligation (such as preferred or common stock, or debt with a lower coupon or par amount); or (ii) the exchange had the apparent purpose of helping the borrower avoid default.

This definition is intended to capture events that change the relationship between the debt-holder and debt issuer from the relationship which was originally contracted, and which subject the debt-holder to an economic loss. We seek to identify only those economic losses that are the result of a credit event. Technical defaults (covenant violations, etc.) are not included in Moody's definition of default.³

Issuer Characteristics

Exhibit 1 presents the domicile of the universe of rated Latin American firms covered in this report. The determination of domicile is not made simply on the basis of the country of incorporation. Instead, Moody's uses a broad set of criteria to determine the effective – as opposed to the legal – domicile of rated corporate bond issuers. In addition to legal domicile, we also consider the jurisdiction under which a firm might file for bankruptcy and the location of the majority of its revenues and assets.

Exhibit 1: Country of Domicile of Latin American Moody's-Rated Corporate Issuers, 1990-H1 2009

Countries of Domicile		
Argentina	Chile	Mexico
Aruba	Colombia	Panama
Bahamas	Costa Rica	Peru
Bolivia	Dominican Republic	Puerto Rico
Brazil	Ecuador	Uruguay
British Virgin Islands	Guatemala	Venezuela
Cayman Islands	Jamaica	

The increasing use of domicile of convenience and the growth of transnational corporate families make the determination of the “true” country of domicile more challenging. This specific issue is important here given the disproportionate number of issuers domiciled in the Caribbean region exclusively for tax purposes. In order to exclude these tax-haven related issuers, this study includes only Caribbean subsidiaries of other Latin American companies and a small number of Caribbean companies whose domicile is consistent with the firms' core activities. Overall, the current study includes the individual credit history of 420 issuers.

Exhibit 2 presents the industry mix among Latin American issuers as of June 2009. Slightly more than one-third of Latin American issuers are financial firms, about one-half are industrial companies, and 20% are utility and transportation companies, providing a diverse universe of issuers.

³ It is important to note that economic losses suffered by debt-holders due to changes in market conditions and/or market prices are not considered defaults as long as the terms of the obligation are being met. Additionally, missed payments which are cured within the contractually-specified grace period are not considered a default.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Exhibit 2: Distribution of Latin American Corporate Issuers by Broad Sector as of June 2009

Broad Industry	Number of Issuers	Share
Banking	46	27.9%
Finance	2	1.2%
Industrial	74	44.8%
Insurance	2	1.2%
Other non-bank	3	1.8%
Public utility	20	12.1%
Real estate finance	5	3.0%
Transportation	13	7.9%
Total	165	100.0%

Exhibit 3 presents the geographical distribution of the issuers and indicates the dominance of the largest countries in the region - Brazil, Mexico, Chile, and Argentina - which account for 76% of all rated issuers in mid-2009.

Exhibit 3: Distribution of Latin American Corporate Issuers by Country of Domicile as of June 2009

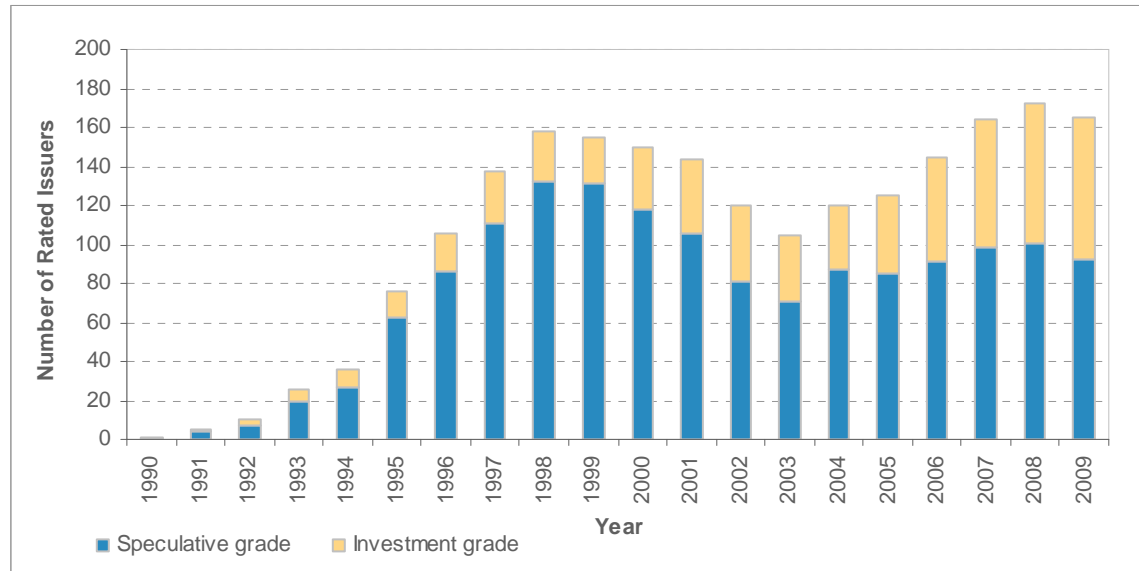
Country of Domicile	Number of Issuers	Share
Argentina	21	12.7%
Aruba	1	0.6%
Bahamas	3	1.8%
Bolivia	3	1.8%
Brazil	56	33.9%
Cayman Islands	16	9.7%
Chile	14	8.5%
Colombia	2	1.2%
Dominican Republic	1	0.6%
Guatemala	2	1.2%
Jamaica	1	0.6%
Mexico	34	20.6%
Panama	3	1.8%
Peru	3	1.8%
Puerto Rico	3	1.8%
Uruguay	2	1.2%
Total	165	100%

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Trends in Credit Quality: Rating Distribution of Latin American Corporate Issuers

Exhibits 4 and 5 present changes in the number of rated issuers and their rating distribution over time. From only a few investment-grade issuers in 1990, Latin America quickly developed into a more varied universe of ratings with a majority of issuers having a speculative-grade rating.

Exhibit 4: Evolution of Moody's-Rated Latin American Debt Issuers Included in the Study, 1990-H1 2009



As shown in Exhibits 4 and 5, the share of issuers with speculative-grade ratings increased through 1999. Since 2000 the credit quality of Latin America issuers has improved steadily, with the share of speculative-grade issuers falling substantially, despite periods of credit crises such as the default by the Government of Argentina in 2001.

The relative scarcity of issuers rated A or above has been due to the relatively low sovereign ratings in the Latin American region historically. Indeed, as of mid-2009, only sovereign bonds issued by the government of Chile and the Bahamas were rated A or above.⁴ Note, however, that it is not uncommon for a corporate issuer to carry a bond rating that is higher than the sovereign debt rating, although the number of corporate issuers rated higher than their respective sovereign has declined during the current global financial crisis.⁵ Such issuers obviously have strong creditworthiness relative to other issuers in the domestic market. Although historically the majority of the issuers rated A or above in the region were subsidiaries of multinationals, more recently the majority has come to be “home-grown” companies, including Telmex and America Movil. Appendix IV presents the list of issuers rated A or above included in this study.

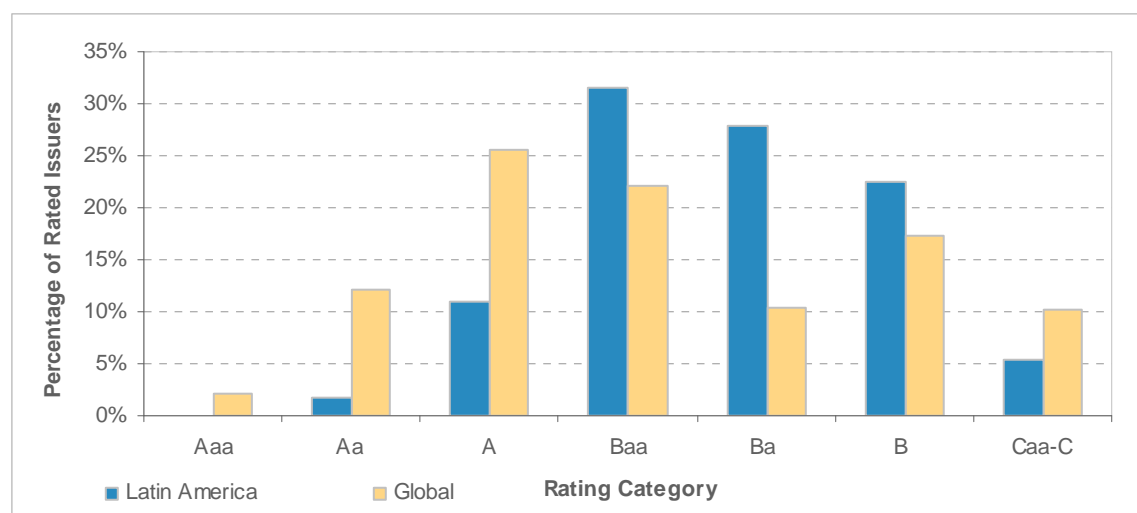
⁴ The Cayman Islands are also rated at Aa3, but have no debt.

⁵ Moreover, since 2001, Moody's has taken an individual approach to evaluating the possibility for certain securities to pierce the “country ceiling” due to special circumstances. For instance, a security issued under foreign law may pierce the country ceiling even if the issuer cannot. For more details, refer to Moody's Rating Methodology “A Guide to Moody's Sovereign Ratings”, December 2008.

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Exhibit 5: Distribution of Period-End Latin American Corporate Issuers by Whole Letter Rating (number of issuers and percent of total)

Year	1990	1995	2000	2005	H1 2009
Aaa	0	1	0	0	0
Aa	0	1	2	2	3
A	1	3	2	11	18
Baa	0	8	28	27	52
Ba	0	17	25	49	46
B	0	46	89	28	37
Caa-C	0	0	4	8	9
Investment grade	1	13	32	40	73
Speculative grade	0	63	118	85	92
All	1	76	150	125	165
Year	1990	1995	2000	2005	H1 2009
Aaa	0.0%	1.3%	0.0%	0.0%	0.0%
Aa	0.0%	1.3%	1.3%	1.6%	1.8%
A	100.0%	3.9%	1.3%	8.8%	10.9%
Baa	0.0%	10.5%	18.7%	21.6%	31.5%
Ba	0.0%	22.4%	16.7%	39.2%	27.9%
B	0.0%	60.5%	59.3%	22.4%	22.4%
Caa-C	0.0%	0.0%	2.7%	6.4%	5.5%
Investment grade	100.0%	17.1%	21.3%	32.0%	44.2%
Speculative grade	0.0%	82.9%	78.7%	68.0%	55.8%

Exhibit 6: Rating Distribution of Latin American and Global Corporate Issuers, June 2009

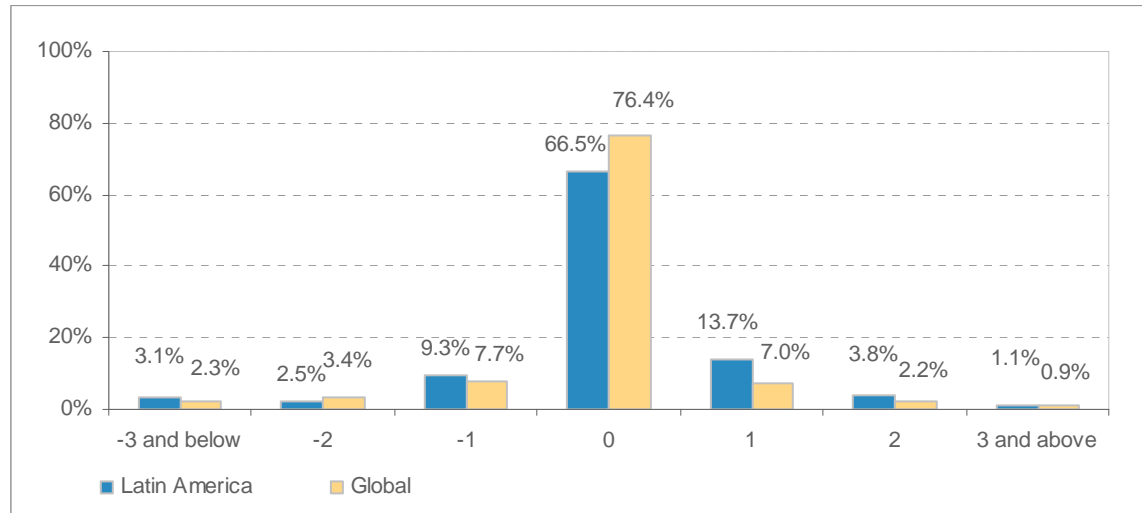
The rating distributions of Latin American and global corporate issuers as of June 2009 are compared in Exhibit 6. As discussed above, we see that compared to the global corporate sample the share of Latin America issuers is higher in the Baa and Ba categories, and lower in the Aaa, Aa and A rating categories. As of June 2009, the median rating in the Latin American region was Ba compared to Baa for the global sample.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Trends in Credit Quality: Transition Matrices and Rating Changes

Exhibit 7 displays the historical average frequency of alpha-numeric rating changes for Latin America and the global universe of rated corporate issuers over the period 1990-2008. For example, a category of "0" indicates no rating change over the twelve-month period. A category of "-1" indicates a single-notch alpha-numeric rating downgrade, while "+2" indicates a two-notch alpha-numeric rating upgrade. The vertical axis indicates the percentage of issuers in each category.

Exhibit 7: Annual Frequency of Alpha-Numeric Rating Changes, 1990-H1 2009



Latin American ratings have been slightly less stable than the global corporate universe, with 66.5% of Latin American ratings exhibiting no rating changes in a typical year versus 76.4% for global corporates. This is primarily due to the higher probability of one-notch upgrade within a typical year for Latin American issuers. On average, Latin American issuers have experienced a 23.0% probability (13.7% upgrade and 9.3% downgrade) of a single alpha-numeric rating change over a one-year horizon. Changes in excess of a single alpha-numeric rating change, whether upgrades or downgrades, have been extremely infrequent over a one-year horizon.

Rating migration matrices present a more complete picture of changes in rating quality over time. Exhibit 8 shows average annual, whole-letter rating migration rates since 1990. Each cell in the matrix shows the weighted average fraction of issuers who held a given row's rating at the beginning of the measurement period and the column rating it held at the end of the period, including defaults and withdrawn ratings (WRs). The weights correspond to the size (number of issuers) of the annual cohorts. Global statistics are presented alongside for comparison.

The largest values in the transition matrix are along the diagonal, reflecting the fact that the most likely rating for an issuer at the end of a given year is the rating with which it began the year. For example, a Latin American issuer rated Baa at the beginning of a given year has an 86.4% historical probability of remaining Baa at the end of the same year. By contrast, those elements that are off the diagonal reflect transitions to higher (the triangle below the diagonal) or lower (the triangle above the diagonal) rating categories within one year. For example, within the same Baa-rated category an issuer has a historical probability of 3.4% of being downgraded to a Ba rating and a 3.8% historical probability of being upgraded to A within one year. The farther one moves away from the diagonal, the smaller the migration rates, thereby generally reflecting a relatively low historical probability of issuers moving across more than one rating category during the course of a year.⁶

⁶ Note that rates of transitions to default do not precisely equal the one-year cumulative default rates reported later on in Exhibit 14 because the latter include statistical adjustments for rating withdrawals.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Exhibit 8: Average One-Year Rating Migration Rates for Latin America and Globally, 1990-H1 2009

Latin America									
Rating from:	Rating to:								
	Aaa	Aa	A	Baa	Ba	B	Caa-C	D	WR
Aaa	36.84%*	63.16%*	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Aa	0.00%	81.17%	4.32%	0.00%	0.00%	0.00%	0.00%	0.00%	14.51%
A	0.00%	3.65%	86.75%	1.02%	0.00%	0.00%	0.00%	0.00%	8.58%
Baa	0.00%	0.00%	3.80%	86.43%	3.43%	0.44%	0.17%	0.34%	5.37%
Ba	0.00%	0.00%	0.15%	6.34%	74.64%	7.35%	0.68%	0.25%	10.59%
B	0.00%	0.00%	0.00%	0.27%	9.97%	70.34%	6.73%	3.02%	9.68%
Caa-C	0.00%	0.00%	0.00%	0.00%	0.08%	7.01%	46.72%	21.80%	24.39%

Global									
Rating from:	Rating to:								
	Aaa	Aa	A	Baa	Ba	B	Caa-C	D	WR
Aaa	86.56%	8.99%	0.34%	0.02%	0.06%	0.01%	0.00%	0.00%	4.02%
Aa	0.92%	85.88%	7.45%	0.28%	0.04%	0.01%	0.02%	0.02%	5.39%
A	0.07%	2.84%	86.53%	5.09%	0.38%	0.08%	0.03%	0.05%	4.94%
Baa	0.04%	0.20%	4.64%	84.29%	3.91%	0.81%	0.30%	0.18%	5.63%
Ba	0.00%	0.06%	0.40%	6.21%	73.25%	8.01%	0.88%	0.83%	10.36%
B	0.01%	0.04%	0.14%	0.35%	4.99%	72.85%	6.87%	3.69%	11.04%
Caa-C	0.00%	0.02%	0.05%	0.20%	0.46%	8.09%	62.96%	15.00%	13.23%

* Latin America Aaa estimates based on only one issuer.

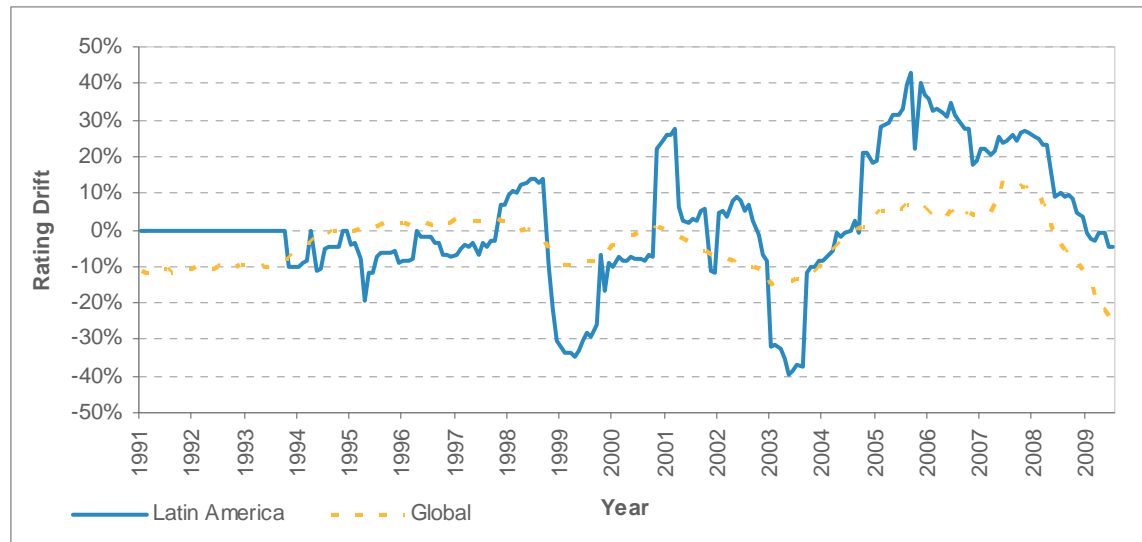
One-year migration rates for Latin American issuers are remarkably similar to the global experience. The most significant difference is the lower stability of Latin American Caa-C rated issuers in favor of a greater propensity to default and be withdrawn. Latin American issuers seem to exhibit relatively higher withdrawal rates for Aa and A rating categories as well; however these estimates are based on a limited sample of issuers. Estimated Aaa migration rates for Latin America are based on the experience of one issuer only (which was later downgraded to Aa1) and as such are not representative of the true probability of downgrade and do not provide a meaningful comparison to their global counterpart.

"Rating drift", the net percentage of upgrades relative to downgrades, provides a useful indicator of changes in aggregate credit quality. Positive drift indicates overall improvement in credit quality, while negative drift signals overall deterioration in credit quality. Alternatively, no drift (when upgrades and downgrades are roughly equal for a given time period) indicates a stable credit environment.

Latin American and global annual rating drift rates (upgrade rate minus downgrade rate divided by total rating count outstanding) are presented in Exhibit 9. On average, upgrades and downgrades in Latin America have more or less offset each other across the sample. As a result, the average rating drift is slightly positive at 1.9% relative to -3.3% globally. However, Exhibit 9 shows that rating volatility has been greater among Latin American issuers than among global issuers, as would be expected of a more narrowly defined region with a large share of speculative-grade issuers.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Exhibit 9: Annual Rating Drift for Latin America and Globally, 1990-H1 2009 (upgrades minus downgrades divided by total rating count outstanding)



In the years preceding the beginning of the current global financial crisis, the credit quality of Latin American issuers had been characterized by improving average credit quality. Both globally and in Latin America, upgrades overwhelmingly exceeded downgrades - an event without a precedent throughout the sample period of this study. Since the end of 2008, the credit cycles of the two regions have converged on a downward path, consistent with our expectations for a continued gradual softening in credit quality and a growing number of defaults globally.

Historical Latin American Corporate Defaults

In the period between 1990 and June 2009, 122 issuers of corporate bonds and loans in the Latin American region defaulted on a total of \$35.4 billion of bonds and loans. Of these, 59 issuers were rated by Moody's with a total default volume of \$23.4 billion. Exhibit 10 presents a chronological summary of the number of defaults and the volume of defaulted debt for Latin American issuers, both rated and unrated. In addition, Appendix II lists the defaulted issuers chronologically. We note that our default studies focus on Moody's-rated defaults. We present available information on unrated defaults as well in this section, but we caution that coverage of unrated defaults is incomplete and likely inconsistent over time.

Since the 1999-2003 period, the number of defaults has declined sharply within the region. Only one issuer defaulted in the region over 2004 and 2005, three issuers defaulted in 2006, and one issuer defaulted in 2007. The number of defaults picked up slightly in 2008 with 14 issuers defaulting on \$3.4 billion of debt, representing the highest number of volume of defaulted debt since 2003. The two Moody's-rated issuers which defaulted in 2008 include Controladora Comercial Mexicana S.A.B. de C.V., a supermarkets operator in Mexico, and Cap Cana, S.A., a resort developer in the Dominican Republic.

In addition, there have been 16 defaults in the first half of 2009, involving 5 rated issuers and 11 unrated issuers, on a total amount of \$3.8 billion of debt. The Moody's-rated issuers include four meat producers from Brazil: Arantes Alimentos Ltda., Arantes International Ltd., Independencia S/A, Independencia International Ltd.; and one glass manufacturer from Mexico: Vitro, S.A.B. de C.V..

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Exhibit 10: Latin American Corporate Default Counts and Volumes in Millions of \$, (Bonds and Loans) as of June 2009

Year	Rated Count	Unrated Count	Total Count	Rated Volume	Unrated Volume	Total Volume
1995	1	4	5	\$100.00	\$273.07	\$373.07
1996	1	1	2	\$207.40	\$100.00	\$307.40
1997	2	2	4	\$310.00	\$105.00	\$415.00
1998	0	3	3	\$0.00	\$449.53	\$449.53
1999	7	7	14	\$1,907.73	\$854.25	\$2,761.98
2000	3	0	3	\$388.12	\$0.00	\$388.12
2001	7	4	11	\$2,598.29	\$669.62	\$3,267.91
2002	18	15	33	\$10,838.16	\$4,629.50	\$15,467.66
2003	10	2	12	\$3,503.80	\$823.86	\$4,327.66
2004	0	0	0	\$0.00	\$0.00	\$0.00
2005	1	0	1	\$100.00	\$0.00	\$100.00
2006	2	1	3	\$167.03	\$7.83	\$174.86
2007	0	1	1	\$0.00	\$37.70	\$37.70
2008	2	12	14	\$790.74	\$2,655.60	\$3,446.34
2009	5	11	16	\$2,450.00	\$1,413.75	\$3,863.75
Total	59	63	122	\$23,361.27	\$12,019.71	\$35,380.98

Exhibit 11 presents the geographical distribution of Latin American defaulters. Unsurprisingly, the highest concentration of defaulters is found in the region's largest countries with Argentina, Mexico and Brazil together accounting for 94% and 77% of the region's total defaulted volume and count, respectively. The largest rated default was Argentinean bank Banco de Galicia y Buenos Aries affecting \$1.9 billion in 2002, while the largest unrated default was that of Brazilian telecommunication company BCP Telecommunications affecting \$1.8 billion worth of debt also in 2002. Overall, Argentina accounts for the largest amount of defaults, both as measured by the count of defaulted issuers and total volume of defaulted debt.

Exhibit 11: Geographical Distribution of Latin American Corporate Defaulters, Counts and Volumes (Millions of \$), 1990-H1 2009

Country	Rated Count	Unrated Count	Total Count	Rated Volume	Unrated Volume	Total Volume
Argentina	21	22	43	\$10,553.44	\$3,986.95	\$14,540.39
Brazil	11	25	21	\$3,720.75	\$6,099.49	\$9,820.24
Cayman Islands	1	0	1	\$100.00	\$0.00	\$100.00
Chile	1	0	1	\$340.00	\$0.00	\$340.00
Colombia	1	0	1	\$150.00	\$0.00	\$150.00
Dominican Republic	2	0	2	\$535.27	\$0.00	\$535.27
Jamaica	0	1	1	\$0.00	\$50.00	\$50.00
Mexico	16	14	30	\$7,178.52	\$1,845.57	\$9,024.09
Panama	1	0	1	\$125.17	\$0.00	\$125.17
Puerto Rico	2	1	3	\$238.12	\$37.70	\$275.82
Uruguay	2	0	2	\$320.00	\$0.00	\$320.00
Venezuela	1	0	1	\$100.00	\$0.00	\$100.00
Total	59	63	122	\$23,361.27	\$12,019.71	\$35,380.98

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Exhibit 12 presents the broad industry distribution of defaults during the period of our analysis. Most of the defaults – 74% of default counts and 71% of the default volume - occurred in the broad category of industrial companies. This is followed by utility and transportation companies, which together account for 15% of the default count and 15% of the default volume. Finally, banking and finance companies defaults together represent 11% of the count and 14% of the default volume, reflecting the relatively high number of financial crises that engulfed the Latin American region over the period of this study.

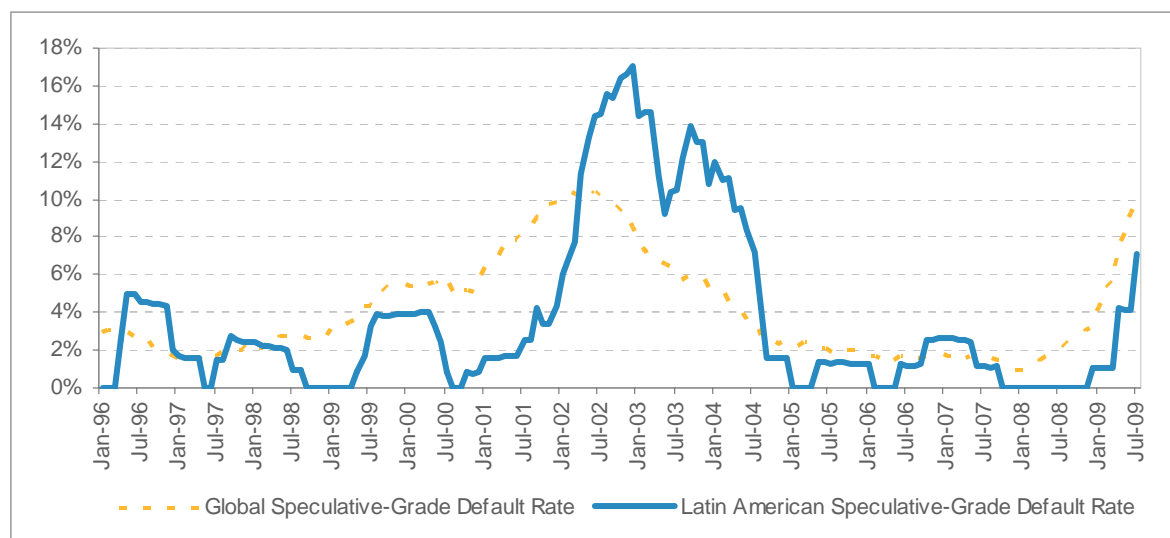
Exhibit 12: Distribution of Latin American Corporate Defaulters by Broad Sector, Counts and Volumes (Millions of \$), 1990-H1 2009

Year	Rated Count	Unrated Count	Total Count	Rated Volume	Unrated Volume	Total Volume
Banking	7	3	10	\$3,778.77	\$349.53	\$4,128.30
Finance	0	2	2	\$0.00	\$187.50	\$187.50
Industrial	46	44	90	\$16,855.21	\$8,224.71	\$25,079.92
Public utility	3	9	12	\$1,866.85	\$2,259.89	\$4,126.74
Real estate finance	1	1	2	\$335.27	\$182.75	\$518.02
Transportation	2	4	6	\$525.17	\$815.33	\$1,340.50
Total	59	63	122	\$23,361.27	\$12,019.71	\$35,380.98

Latin American Cumulative Default Rates

Exhibit 13 presents average annual speculative-grade default rates for Moody's-rated Latin American issuers. While the relatively small sample of Latin American issuers makes its speculative-grade default rate more volatile than its global counterpart, the credit cycle in Latin America appears to have largely mirrored the global cycle. In particular, speculative-grade default rates remained relatively low through the 1990s, followed by a spike in default rates during the 2002-04 period as the telecom and internet sectors experienced deep distress globally and as Latin America went through the Argentinean sovereign debt crisis. As conditions slowly recovered globally, the Latin American region also witnessed a period of consolidation and stronger credit quality.

Exhibit 13: Global and Latin American Issuer-Weighted Speculative-Grade Default Rates, 1996–H1 2009



In June 2009, the issuer-weighted speculative-grade default rate for Latin American issuers stood at 7.1%, slightly below the global speculative grade default rate of 10.3% in June 2009.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Exhibit 14 presents one-year through ten-year issuer-weighted average cumulative default rates for Latin American issuers. Also presented are the global statistics for comparison. As in our other default studies, historical cumulative default rates are calculated by averaging the experiences of issuer cohorts formed at monthly frequencies.⁷ By forming and tracking such cohorts of all Moody's-rated issuers at the beginning of every month, we replicate the experience of a portfolio of both seasoned and new-issue bonds purchased in any given month. The dynamic nature of the cohorts allows the estimation of cumulative default risk over multi-year horizons. It also allows for the comparison and averaging of default rates over different periods. Appendix I at the end of the report described the methodology for estimating cumulative default rates.

Exhibit 14: Latin American and Global Issuer-Weighted Cumulative Default Rates, 1990-H1 2009

Latin America	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Aa	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
A	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
Baa	0.353%	1.053%	1.914%	2.893%	4.096%	4.886%	5.338%	5.338%	5.338%	5.338%
Ba	0.260%	1.329%	4.052%	8.430%	11.128%	13.111%	14.352%	15.659%	17.725%	19.476%
B	3.169%	8.899%	13.747%	16.914%	20.260%	24.658%	28.583%	31.020%	32.024%	32.024%
Caa-C	24.826%	31.807%	36.958%	44.655%	53.569%	53.569%	53.569%
Investment Grade	0.259%	0.780%	1.441%	2.217%	3.200%	3.862%	4.257%	4.257%	4.257%	4.257%
Speculative Grade	3.636%	7.545%	11.544%	15.292%	18.474%	21.880%	24.718%	26.672%	28.084%	28.863%
All Latin America	2.747%	5.761%	8.894%	11.862%	14.447%	17.095%	19.268%	20.721%	21.790%	22.391%

Global	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Aaa	0.000%	0.022%	0.022%	0.022%	0.022%	0.022%	0.022%	0.022%	0.022%	0.022%
Aa	0.018%	0.044%	0.056%	0.079%	0.109%	0.130%	0.150%	0.160%	0.162%	0.195%
A	0.047%	0.136%	0.255%	0.393%	0.579%	0.781%	1.002%	1.272%	1.553%	1.821%
Baa	0.185%	0.489%	0.854%	1.267%	1.717%	2.188%	2.655%	3.148%	3.688%	4.328%
Ba	0.873%	2.359%	4.178%	6.187%	7.849%	9.601%	11.158%	12.746%	14.623%	16.605%
B	3.907%	9.346%	14.814%	19.661%	24.197%	28.676%	33.172%	37.098%	40.666%	43.888%
Caa-C	16.062%	27.200%	36.571%	43.976%	50.113%	54.240%	57.298%	60.506%	64.237%	69.296%
Investment Grade	0.083%	0.225%	0.394%	0.587%	0.810%	1.041%	1.275%	1.532%	1.801%	2.094%
Speculative Grade	4.418%	9.110%	13.604%	17.532%	20.919%	24.053%	26.958%	29.550%	32.071%	34.463%
All Global	1.617%	3.287%	4.817%	6.103%	7.184%	8.141%	8.993%	9.752%	10.475%	11.162%

As Exhibit 14 illustrates, Moody's ratings powerfully rank-order default risk at all horizons both in Latin American and globally, as the probability of default rises with lower ratings.

A comparison between Latin American and global default rates show that, on average, default rates are broadly similar by rating category. In fact, considering the heterogeneity of the countries in Latin America, as well as the comparatively small sample of issuers, the similarity between Latin American and global cumulative default rates is striking. The one-year Caa-C rating category default rate is slightly higher for Latin American issuers, but the difference narrows over longer time horizons, with the four-year Caa-C default rate being virtually identical for Latin American and global issuers. The relatively small size of the Latin American sample, as well as the clustering of corporate defaults around the years of sovereign crises in the region explain the higher one-year Caa-C Latin American default rate.

⁷ Monthly cohorts have the advantage of capturing rating changes that occur within a calendar year. The default rates are calculated based on cohorts of all issuers holding a given estimated senior unsecured rating at the start of a given month. The cohorts are dynamic in that they change based on whether these issuers leave the cohort due to default or non credit-related reasons (e.g. maturing of debt). While the cohort frequency is monthly, the accumulation periodicity remains 12 months, so that we track default rates over horizons of one year, two years, three years, etc.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

The consistency between global and Latin American cumulative default rates is a key result of this study and highlights how Moody's rating system offers an unbiased opinion of relative default risk across regions with significantly different characteristics. The aggregate default rate tends to be higher in Latin America, but this finding is driven by the lower average rating mix of the region, not substantial differences in default rates within individual rating categories. As previously shown in Exhibit 6, a higher fraction of Latin American issuers is rated in the speculative grade category compared to the global sample, which leads to a higher overall default rate. As illustrated in Exhibit 14, the speculative grade default rate is similar for Latin American and global issuers. The investment grade default rate is slightly higher for Latin America compared to the global sample, but the estimation is based on the limited number of issuers rated investment grade in the Latin American region, especially in the earlier half of the period of study, and the results are likely not conclusive.

Rating Performance Measures

The default rates presented above demonstrate that Moody's Latin American corporate ratings are correlated with subsequent default experience at long investment horizons. One of the desirable properties of an efficient rating system is its ability to separate the low credit risks from the high credit risks. A key metric designed to measure the relative accuracy of a rating system is the cumulative accuracy profile (CAP). The CAP curve is constructed by plotting, for each rating category, the proportion of defaults accounted for by issuers with the same or lower rating against the proportion of all issuers with the same or lower rating.

Exhibit 15: One-Year Cumulative Accuracy Profiles, 1990-H1 2009

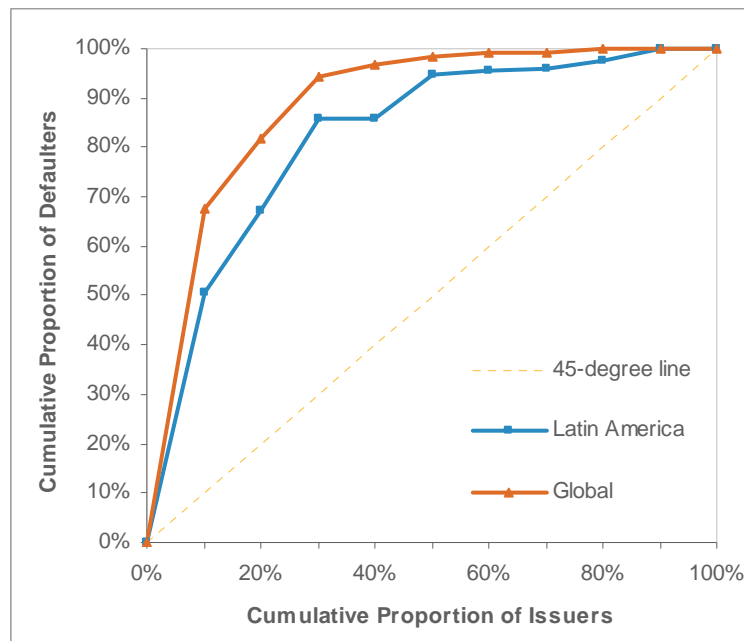


Exhibit 15 presents the one-year-ahead horizon CAP curves for Latin American and for global ratings observed between 1990 and 2008. The CAP curve is useful for making a visual assessment of the information content embedded in the relative ranking of credit risk provided by a set of ratings. A rating system that possessed no predictive information about default risk would lie on the 45-degree line. The further the CAP curve bows towards the top left corner, the better it is at identifying defaults in the riskiest rating categories.

The CAP plots reveal that historically both global and Latin American ratings have done a good job rank-ordering one-year default risk. Across regions, issuers historically have carried low ratings one year prior to default. For example, 95% of defaulters in Latin America carried a rating of B1 or lower 12 months before default, while B1 rated issuers or below accounted for approximately 90% of defaulting issuers globally.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

A summary measure of rating accuracy that compresses the information depicted in the CAP curve into a single summary statistics is the accuracy ratio (AR). The AR is the ratio of the area between the CAP curve and the 45-degree line to the total area above the 45-degree line. The AR lies between minus one and plus one (or -100% and +100%), similar to a correlation statistics. As can be inferred by the CAP curves in Exhibit 15, Moody's global ratings have had modestly higher accuracy ratios than their Latin American counterparts. The historical average one-year accuracy ratio for Latin American ratings is 87.4% for the 1990-H1 2009 period, compared to 90.6% for global ratings during the same period.

Recovery Rates in Default

Moody's ratings are statements about expected credit losses, which equals the probability of default times the expected loss severity rate (i.e., one minus the expected recovery rate) given default. Since the probability of default is usually the same across the various obligations of an issuer, differences in ratings across an issuer's capital structure generally reflect different expectations of recovery rates in the event of default.

Commensurate with our practice in our global corporate default study, in Exhibit 16, we estimate recovery rates using 30-day post-default bid prices on defaulted debt, although no trades may have taken place at these prices. Appendix III provides a list of recovery prices for defaulted debt in the Latin American region.

Exhibit 16: Historical Recovery Rates for Global and Latin American Issues by Lien Position (rated and unrated issuers), 1990-H1 2009

Global	Lien Position	Issuer-weighted	Number of issuers
Loan	Sr. Secured	63.3	353
Bond	Sr. Secured	49.0	200
Bond	Sr. Unsecured	34.7	615
Bond	Subordinated	28.2	591
Latin America			
Bond	Sr. Secured	58.4	7
Bond	Sr. Unsecured	35.7	44

Exhibit 16 presents the average recovery rates for the Latin American region and for the global sample, with one caveat that the number of observations in Latin America is quite small compared to the global universe. We see that issuer-weighted recovery rates at the senior unsecured level, where data is more abundant, compare very closely with their global counterparts. The monotonic relationship between instrument seniority and recovery rate is clearly visible in both the global sample and in the Latin American sample.

Credit Loss Rates

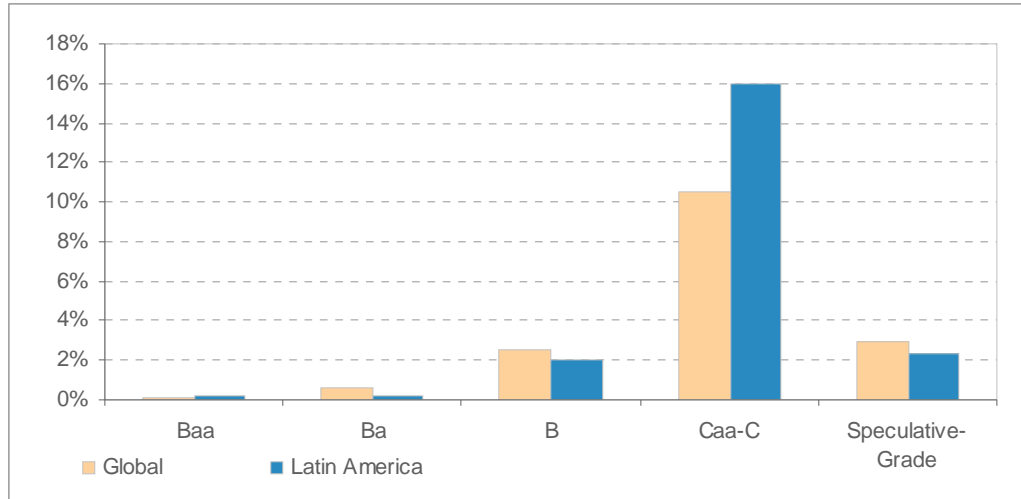
In the previous sections we examined the two main components of credit loss: the probability of default and the severity of loss given default (one minus recovery rate). In this section, we bring these two components together to discuss credit losses and demonstrate that Moody's ratings effectively differentiate credit loss rates.

Moody's ratings process is designed to produce a consistent measure of relative credit risk, which in large part is determined by credit losses. Credit losses are defined mathematically as follows:

$$\text{Credit Loss Rate} = (\text{Default Frequency}) * (1 - \text{Recovery Rate})$$

Credit losses can be defined as the loss incurred in total return by a buy-and-hold bond portfolio due to default. Exhibit 17 presents average annual credit losses for portfolios based on Moody's broad letter rating categories.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Exhibit 17: One-Year Credit Losses for Latin American and Global Issuers, 1990-H1 2009

Average speculative-grade one-year credit loss rates across the two regions are very similar. At the broad rating level, Baa, Ba and B category loss rates are extremely close to each other, while the largest difference is found at the Caa-C level. This difference in loss rates at the Caa-C level is entirely a function of differences in the regions' default rates, itself motivated by a relatively small sample of issuers rated Caa-C in the Latin American region and the clustering of defaults around years of sovereign crisis. At the aggregate speculative-grade level, Latin American loss rates are very similar to their global counterpart, reflecting the similarities in both aggregate default and recovery rates. Importantly, these results signal that Moody's ratings in Latin America are consistent with Moody's ratings globally as indicators of credit loss rates.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Moody's Related Research

Special Comments:

- Corporate Default and Recovery Rates, 1920-2008, February 2009 (114844)
- European Corporate Default and Recovery Rates, 1985-2008, May 2009 (115292)
- Default and Recovery Rates of Asia-Pacific Corporate Bond and Loan Issuers, Excluding Japan, 1990-1H2007, September 2007 (104737)
- Emerging Market Corporate and Sub-Sovereign Defaults and Sovereign Crises: Perspectives on Country Risk, February 2009 (113931)
- Sovereign Default and Recovery Rates, 1983-2008, March 2009 (115232)
- Sovereign Defaults and Interference: Perspectives on Government Risks, August 2008 (110114)
- Strong Loan Issuance in Recent Years Signals Low Recovery Prospects for Loans and Bonds of Defaulted U.S. Corporate Issuers, June 2008 (109457)
- Guide to Moody's Default Research: June 2009 Update, June 2009 (118044)
- Measuring Corporate Default Rates, November 2006 (100779)
- Moody's Senior Ratings Algorithm and Estimated Senior Ratings, February 2009 (114614)
- Latin American Corporate Credit Quality Not Yet Stabilizing, July 2009 (118353)

Rating Methodology:

- Moody's Approach to Evaluating Distressed Exchanges, March 2009 (115337)
- A Guide to Moody's Sovereign Ratings, December 2008 (98177)
- Sovereign Bond Ratings, September 2008 (109490)

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

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Appendix I: Methodology and Data Sources

Methodology Changes in This Year's Report

The historical data contained in Moody's 2008 global default study includes a number of revisions relative to previous years' publications. Moody's occasionally discovers historical defaults, leading to minor revisions of the historical data. As always, the data contained in the most recently published Moody's default study supersedes the data published in previous reports.

Change in Senior Rating Algorithm

In January 2009, we applied a smoothing procedure in the senior rating algorithm to estimate every issuer's senior unsecured ratings. This enhancement aims at ironing out artificial rating changes that are not resulting from the change of an issuer's credit quality, but due to the switch of reference debt based on which the estimated senior unsecured rating is derived from. The implementation of smoothing procedure is particularly important to structural breaks when Moody's introduced new debt ratings, refined its rating scale and adjusted its notching practices. For example, the introduction of issuer ratings on Oct 25th 1999 will result in numerous artificial rating changes if the smoothing procedure is not in place. For other times, the impact of smoothing is modest. For instance, only 3% of Moody's-rated issuers observe adjustments in their estimated senior unsecured ratings (mostly by one notch) on January 1st, 2009.

Removal of Special Purpose Vehicles

In January 2009, we removed substantial number of special purpose vehicles from Hartford Financial Services Group, Inc., Principal Financial Group, Inc., and Protective Life Corporation. These SPVs are non-insurance conduits and mostly Aa3 or A1 credits. None of them have defaulted.

Rating Migration Calculations

A rating migration matrix completely summarizes changes in credit ratings over a given time horizon. The cells of the matrix are discrete-time estimates of rating migration probabilities. They show rate of rating change measured at two points in time; e.g. the start and end of one year. When calculating credit rating migration rates, Moody's treats rating changes, rating withdrawals, and defaults as mutually exclusive states. For example, an issuer that is downgraded on the day of default is counted only as a default, not a downgrade or a downgrade and default. Similarly, an issuer whose rating is withdrawn on the day of default is counted as a default, not a withdrawal.

The probability that an issuer's rating i held on cohort date y will transition to rating j (which includes default and withdrawal) over a time horizon T is calculated as:

$$p_{ij}^y(T) = \frac{n_{ij}^y(T)}{n_i^y(0)}$$

The weighted average rating migration rate for all cohorts y in the historical data set Y is calculated as:

$$\bar{p}_{ij}(T) = \frac{\sum_{y \in Y} n_{ij}^y(T)}{\sum_{y \in Y} n_i^y(0)}$$

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Default Rate Calculations

Moody's method for calculating cumulative default rates is a discrete-time approximation of the nonparametric continuous-time hazard rate approach.⁸ Cumulative default rates are calculated from marginal default rates, which represent the probability that an issuer that has survived in the sample through a particular date will default over the next time interval (typically, one year) following that date.

The marginal default rate for issuers holding rating i on cohort date y is the ratio of the number of defaulting issuers in period t divided by the number of issuers exposed to the risk of default in period t :

$$d_i^y(t) = \frac{x_i^y(t)}{n_i^y(t) - x_i^y(t-1) - \frac{1}{2}[w_i^y(t) + w_i^y(t-1)]}$$

The denominator of the marginal default rate adjusts for defaults that occur prior to time interval t , as well as rating withdrawals, $w(t)$, that occur in periods prior to interval t and a small adjustment for withdrawals that occur in time interval t . Cumulative default rates for investment horizons of length T , $D(T)$, are built up from the marginal default rates:

$$D_i^y(T) = 1 - \prod_{t=1}^T [1 - d_i^y(t)]$$

Or, expanding the above equation (and dropping indices for brevity):

$$D(T) = d(1) + d(2)[1 - d(1)] + d(3)[(1 - d(1))(1 - d(2))] + \dots + d(T)\left(\prod_{t=1}^{T-1} [1 - d(t)]\right)$$

In the first time period, a fraction of the credit exposures in the cohort either defaults or survives. The credit exposures that survive period one may then go on to default or survive in period two; those that survive period two may go on to default or survive in period three, etc. Because the time periods are non-overlapping and the probability of default in each period is assumed to be independent, the T -period cumulative default rate is defined as one minus the product of the T marginal survival rates.

The calculation of the average cumulative default rate for rating class i , $\bar{D}_i(T)$, is derived from the weighted average marginal default rates, $\bar{d}_i(t)$, calculated from all the available cohort marginal default rates in the historical data set Y :

$$\bar{D}_i(T) = 1 - \prod_{t=1}^T [1 - \bar{d}_i(t)]$$

where

$$\bar{d}_i(t) = \frac{\sum_{y \in Y} x_i^y(t)}{\sum_{y \in Y} n_i^y(t)}$$

The default rates calculated in multi-year rating migration matrices are not comparable to those calculated using Moody's discrete-time hazard rate method described above. Rating migration matrices account for rating withdrawals separately (in the column labeled WR) while the hazard rate method incrementally adjusts the

⁸ See Moody's Global Credit Research "Measuring Corporate Default Rates", November 2006.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

denominator of the marginal default rate to remove rating withdrawals. Occasionally, withdrawal-adjusted rating migration matrices are calculated as follows:

$$p_{ij}^y(T)^* = \frac{p_{ij}^y(T)}{(1 - p_{iw}^y(T))}$$

Using this method, all issuers whose ratings are withdrawn are removed. In effect, data for issuers whose ratings are withdrawn is completely discarded. This method generally yields higher default rate estimates than the hazard rate method. Hence, Moody's hazard rate-derived default rate estimates lay between unadjusted migration matrix-derived default rates and withdrawal-adjusted migration matrix-derived default rates.

Recovery Rate Calculations

Moody's estimates defaulted debt recovery rates using market bid prices observed roughly 30 days after the date of default. Recovery rates are measured as the ratio of price to par value. Using post-default prices to measure recovery (or its complement, loss severity) parallels common practice in the credit default swaps market. Moreover, recovery rates measured in this way are most relevant for cash bond investors who liquidate their holdings shortly after default as often required by their portfolio governance rules or their own investment objectives. For investors holding defaulted securities until ultimate resolution, prices observed shortly after default are generally accepted as the market's estimate of discounted expected ultimate recovery rates.

The alternative approach of directly measuring ultimate realized recoveries presents a number of estimation challenges, including the appropriate discount rate to apply to cash-flows and valuing the assets used to pay creditor claims, which may include illiquid new securities (e.g., equity and derivative instruments) as well as physical assets. The table below defines the various ways Moody's calculates recovery rates.⁹ For the purposes of measuring expected credit loss rates, we rely on issuer-weighted mean recovery rates.

Statistic	Definition
Issuer-Weighted Mean Recovery Rates	They are derived by estimating mean recovery rates for each issuer, then averaging them across issuers. They are useful for predicting recovery rates for portfolios that are well diversified across issuers.
Value-Weighted Mean Recovery Rates	They represent the average of recovery rates on all defaulted issuers, weighted by the face value of those issues. These estimates are useful for predicting recovery rates on the market portfolio.
Issuer-Weighted Median Recovery Rates	They are estimated as median of issuer-weighted recovery rates and are used for predicting the most likely recovery rate for a randomly selected issuer.
Issue-Weighted Mean Recovery Rates	They are estimated using recovery rates for each issue and taking the average of all issues. While this measure is widely reported, it is useful only for predicting the average recovery rate on a portfolio of default bonds diversified across issues but without reference to issuer or issue size.

⁹ This table is derived from Moody's Special Comment "Recovery Rates on Defaulted Bonds and Preferred Stocks, 1982-2003", December 2003.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Credit Loss Rate Calculations

Moody's credit ratings are opinions of relative expected credit losses. Credit losses are therefore a function of both probability of default (PD) as well as the severity of default (LGD). The expected credit loss rate for rating category i is calculated as the product of the T-horizon average issuer-weighted default rate and the T-horizon average issuer-weighted senior unsecured loss severity rate (where $r(T)$ is the average senior unsecured recovery rate at horizon T):

$$l_i(T) = \bar{D}_i(T) \times (1 - \bar{r}_i(T))$$

CAP Curve and Accuracy Ratio

In addition to assigning low ratings to issuers that ultimately default, the effectiveness of a rating system depends on its ability to assign high credit ratings to issuers that do not default. In other words, an efficient rating system is able to separate the low credit risks from the high credit risks. A metric designed to measure this aspect of ratings performance is the cumulative accuracy profile (CAP) plot.¹⁰ The CAP plot graphs the cumulative proportion of defaults from a portfolio (the y-axis) against the proportion of issuers exposed to the risk of default (the x-axis), sorted by riskiness. A rating system that randomly identified defaults from non-defaults would plot a line directly on the 45-degree line. The more powerful the discriminatory power of the rating system, the further the CAP curve bows toward the top left corner.

CAP curves are powerful tools for visualizing rating performance, but can be unwieldy from making comparisons over many time periods. A summary measure of rating accuracy that can be derived from the CAP curve is the accuracy ratio (AR). The accuracy ratio is the ratio of the area between the CAP curve and the 45-degree line to the total area above the 45-degree line. A rating system that perfectly differentiates defaults from non-defaults would score an AR of 100%, while a rating system that had zero predictive ability would score 50%.¹¹

Data Sources

Moody's bases the results of this study on its proprietary database of ratings and defaults for corporate bond and loan issuers. Municipal and sub-sovereign debt issuers, structured finance securities, private placements, and issuers with only short-term debt ratings are excluded unless otherwise noted. In total, Moody's data covers the credit experiences of over 18,000 corporate issuers that sold long-term public debt at some time between 1920 and 2008. As of January 1, 2008 approximately 6,000 corporate issuers held a Moody's long-term bond, loan, or corporate family rating.

Moody's database of corporate defaults covers over 3,600 long-term bond defaults by issuers both rated and non-rated by Moody's. Additional data sources, such as Lehman Brothers index data, supplemented Moody's proprietary data in the construction of the aggregate dollar volume-weighted default rates. Defaulted bond pricing data was derived from Bloomberg, Reuters, and TRACE. The majority of these market quotes represent an actual bid on the debt instrument, although no trade may have occurred at that price. Over the 1982-2008 period, the dataset includes post-default prices for approximately 3,000 defaulted instruments issued by over 1,400 defaulting corporations. Moody's makes the 1970-2008 credit rating, default, and recovery rate data used in this study available through its Default Risk Service (DRS) database.

¹⁰ For a more detailed discussion of rating accuracy metrics see Moody's Global Credit Research "Measuring the Performance of Corporate Bond Ratings", November 2006.

¹¹ The accuracy ratio possesses the same information about discriminatory power as the area under the receiver-operator characteristics curve (AROC) and the Gini coefficient. Each measure quantifies rank rather than scale.

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Appendix II: Chronological List of Latin American Corporate Rated and Unrated Defaulters, 1990-H1 2009

Default Year	Company	Domicile	Defaulted Amount (millions)	Moody's Rated
1995	Aerovias de Mexico S.A. de C.V.	Mexico	\$100.00	no
1995	Alto Parana S.A.	Argentina	\$60.00	no
1995	Grupo Synkro S.A. de C.V.	Mexico	\$50.00	no
1995	Mesbla S.A.	Brazil	\$63.07	no
1995	Banco Economico S.A., Cayman Islands Branch	Cayman Islands	\$100.00	yes
1996	Grupo Situr, S.A. de C.V.	Mexico	\$100.00	no
1996	Grupo Tribasa, S.A. de C.V.	Mexico	\$207.40	yes
1997	Gatic S.A.I.C.F.I.A.	Argentina	\$37.00	no
1997	Grupo Simec, S.A. de C.V.	Mexico	\$68.00	no
1997	Buenos Aires Embotelladora S.A.	Argentina	\$60.00	yes
1997	Grupo Mexicano de Desarrollo, S.A.	Mexico	\$250.00	yes
1998	Alpargatas S.A.I.C.	Argentina	\$220.00	no
1998	Banco Mayo Cooperativo Limitado	Argentina	\$100.00	no
1998	Banco Medefin UNB S.A.	Argentina	\$129.53	no
1999	Central Termica Guemes S.A.	Argentina	\$60.00	no
1999	Consortio G Grupo Dina, S.A. de C.V.	Mexico	\$163.99	no
1999	Supercanal Holding S.A.	Argentina	\$300.00	yes
1999	Hidroelectrica Piedra del Aguila S.A.	Argentina	\$200.00	no
1999	Mechala Group Jamaica Limited	Jamaica	\$50.00	no
1999	Pyosa, S.A. de C.V.	Mexico	\$30.00	no
1999	Sharp Do Brazil S.A. - Equipamentos Eletronicos	Brazil	\$120.00	no
1999	Sociedad Comercial del Plata S.A.	Argentina	\$230.26	no
1999	Altos Hornos de Mexico, S.A. de C.V.	Mexico	\$950.00	yes
1999	Bufete Industrial, S.A.	Mexico	\$100.00	yes
1999	Grupo Azucarero Mexico, S.A. de C.V.	Mexico	\$77.93	yes
1999	Grupo Tribasa, S.A. de C.V.	Mexico	\$109.80	yes
1999	Tevecap S.A.	Brazil	\$250.00	yes
1999	TV Filme, Inc.	Brazil	\$120.00	yes
2000	El Comandante Capital Corporation	Puerto Rico	\$60.84	yes
2000	Nutritional Sourcing Corporation	Puerto Rico	\$177.28	yes
2000	Transtel Pass Through Trust	Colombia	\$150.00	yes
2001	Aerolineas Argentinas SA	Argentina	\$327.50	no
2001	Alpargatas S.A.I.C.	Argentina	\$80.20	no
2001	Constran SA	Brazil	\$61.92	no
2001	Sanluis Corporation, S.A. de C.V.	Mexico	\$200.00	no
2001	ACINDAR Industria Argentina de Aceros S.A.	Argentina	\$100.00	yes
2001	Compania de Alimentos Fargo S.A.	Argentina	\$30.00	yes
2001	Hylsa, S.A. de C.V.	Mexico	\$804.12	yes
2001	IMPSAT Fiber Networks, Inc.	Argentina	\$650.00	yes
2001	Industrias Metalurgicas Pescarmona SAIC y F	Argentina	\$150.00	yes
2001	Multicanal S.A.	Argentina	\$739.00	yes

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Default Year	Company	Domicile	Defaulted Amount (millions)	Moody's Rated
2001	PYCSA Panama S.A.	Panama	\$125.17	yes
2002	Aguas Argentinas SA	Argentina	\$280.50	no
2002	Arte Grafico Editorial Argentino S.A.	Argentina	\$250.00	no
2002	Autopistas Del Sol SA	Argentina	\$380.00	no
2002	Banco General de Negocios S.A.	Argentina	\$120.00	no
2002	BCP Telecommunications	Brazil	\$1,775.10	no
2002	CAPEX S.A.	Argentina	\$338.00	no
2002	Companhia Energetica do Maranhao	Brazil	\$48.60	no
2002	Compania de Inversiones de Enegría SA	Argentina	\$220.00	no
2002	Compania Latinoamericana Infraestructura & Servicios S.A.	Argentina	\$100.00	no
2002	Grupo Cydsa, S.A. de C.V.	Mexico	\$200.00	no
2002	Inversora Eletrica de Buenos Aires S.A.	Argentina	\$230.00	no
2002	Klabin, SA	Brazil	\$85.44	no
2002	Loma Negra C.I.A.S.A.	Argentina	\$171.30	no
2002	Sideco Americana S.A.	Argentina	\$125.00	no
2002	Transener S.A.	Argentina	\$305.56	no
2002	Alestra, S. de R.L. de CV	Mexico	\$570.00	yes
2002	Banco Comercial S.A.	Uruguay	\$220.00	yes
2002	Banco de Galicia y Buneos Aries	Argentina	\$1,899.50	yes
2002	Banco De Montevideo S.A.	Uruguay	\$100.00	yes
2002	Banco Hipotecario S.A.	Argentina	\$1,109.27	yes
2002	Cablevision SA	Argentina	\$827.67	yes
2002	Compania de Alimentos Fargo S.A.	Argentina	\$120.00	yes
2002	CTI Holdings S.A.	Argentina	\$262.85	yes
2002	Edelnor SA	Chile	\$340.00	yes
2002	Globo Comunicacoes e Participacoes S.A.	Brazil	\$1,173.54	yes
2002	IMASAC S.A.	Argentina	\$80.00	yes
2002	Mastellone Hermanos S.A.	Argentina	\$225.00	yes
2002	Metrogas S.A.	Argentina	\$195.64	yes
2002	Net Servicios de Comunicacao S.A.	Brazil	\$248.48	yes
2002	Pecom Energia, SA	Argentina	\$900.00	yes
2002	Scotiabank Quilmes S.A.	Argentina	\$250.00	yes
2002	Telecom Argentina Stet-France Telecom SA	Argentina	\$1,431.21	yes
2002	Telefonica de Argentina	Argentina	\$885.00	yes
2003	Companhia Energetica de San Paulo	Brazil	\$525.57	no
2003	Parmalat Brazil	Brazil	\$298.29	no
2003	Azteca Holdings, S.A. de C.V.	Mexico	\$359.08	yes
2003	CANTV Finance Ltd.	Venezuela	\$100.00	yes
2003	Corporacion Durango S.A. de C.V.	Mexico	\$605.00	yes
2003	Grupo Iusacell Cellular, SA De C.V.	Mexico	\$415.72	yes
2003	Grupo Iusacell, SA De C.V.	Mexico	\$350.00	yes
2003	Grupo TMM, S.A.	Mexico	\$400.00	yes
2003	Satelites Mexicanos, S.A. De C.V.	Mexico	\$524.00	yes
2003	Tiete Certificates Grantor Trust	Brazil	\$300.00	yes

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Default Year	Company	Domicile	Defaulted Amount (millions)	Moody's Rated
2003	Transportadora De Gas del Sur S.A.	Argentina	\$250.00	yes
2003	Tricom SA	Dominican Republic	\$200.00	yes
2005	Banco Santos S.A.	Brazil	\$100.00	yes
2006	GW Servicios S.A.	Mexico	\$7.83	no
2006	CP Cimento e Participacoes S.A.	Brazil	\$78.73	yes
2006	SanCor Cooperativas Unidas Ltda.	Argentina	\$88.30	yes
2007	Nutritional Sourcing Corporation	Puerto Rico	\$37.70	no
2008	SanLuis Rassini, S.A. de C.V.	Mexico	\$150.00	no
2008	Corporacion Durango S.A. de C.V.	Mexico	\$520.00	no
2008	Controladora Comercial Mexicana S.A.B. de C.V	Mexico	\$455.47	yes
2008	Cap Cana, S.A.	Dominican Republic	\$335.27	yes
2008	Transportadora de Gas del Norte S.A.	Argentina	\$22.10	no
2008	Sementes Selecta	Brazil	\$400.00	no
2008	Quatro Marcos	Brazil	\$125.00	no
2008	Margen Alimentos	Brazil	\$85.00	no
2008	Agrenco	Brazil	\$600.00	no
2008	Grupo Naoum	Brazil	\$180.00	no
2008	Viana Trading	Brazil	\$62.50	no
2008	Dudony	Brazil	\$42.00	no
2008	Frigorifico Estrela	Brazil	\$156.00	no
2008	Avibras	Brazil	\$313.00	no
2009	Arantes Alimentos Ltda.	Brazil	\$150.00	yes
2009	Arantes International Ltd.	Brazil	\$150.00	yes
2009	Independencia S/A	Brazil	\$625.00	yes
2009	Independencia International Ltd.	Brazil	\$525.00	yes
2009	Vitro, S.A.B. de C.V.	Mexico	\$1,000.00	yes
2009	Industrias Unidas, S.A. de C.V.	Mexico	\$35.00	no
2009	Metrofinanciera, S.A. DE C.V.	Mexico	\$182.75	no
2009	Gissa	Mexico	\$38.00	no
2009	Supermercado Gimenes	Brazil	\$35.00	no
2009	Leite Nilza	Brazil	\$88.00	no
2009	Companhia Albertina	Brazil	\$100.00	no
2009	Casa & Video	Brazil	\$132.00	no
2009	Grupo Redencao	Brazil	\$25.00	no
2009	Infinity Bio-Energy Brasil Participacoes	Brazil	\$476.00	no
2009	Grupo Guimaraes	Brazil	\$139.00	no
2009	VarigLog	Brazil	\$163.00	no

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Appendix III: Chronological List of Recovery Prices on Rated and Unrated Latin American Corporate Debt, 1990-H1 2009

Year	Issuer Name	Country	Seniority	Default Type	Recovery Rate
1997	Buenos Aires Embotelladora S.A.	Argentina	Sr. Unsecured	Missed interest payment	70.3
1997	Grupo Mexicano de Desarrollo, S.A.	Mexico	Sr. Unsecured	Missed interest payment	45.0
1999	Altos Hornos de Mexico, S.A. de C.V.	Mexico	Sr. Unsecured	Missed principal payment	29.5
1999	Altos Hornos de Mexico, S.A. de C.V.	Mexico	Sr. Unsecured	Missed principal payment	34.0
1999	Altos Hornos de Mexico, S.A. de C.V.	Mexico	Sr. Unsecured	Missed principal payment	39.0
1999	Central Termica Guemes S.A.	Argentina	Sr. Unsecured	Missed interest payment	15.0
1999	Grupo Azucarero Mexico, S.A. de C.V.	Mexico	Sr. Unsecured	Distressed exchange	44.8
1999	Hidroelectrica Piedra del Aguila S.A.	Argentina	Sr. Unsecured	Missed interest payment	40.0
1999	Mechala Group Jamaica Limited	Jamaica	Sr. Unsecured	Bankruptcy	37.0
1999	Sharp Do Brazil S.A.- Equipamentos Eletronicos	Brazil	Sr. Unsecured	Missed interest payment	40.0
1999	Supercanal Holding S.A.	Argentina	Sr. Unsecured	Missed interest payment	51.5
1999	TV Filme, Inc.	Brazil	Sr. Unsecured	Missed interest payment	29.0
2000	El Comandante Capital Corporation	Puerto Rico	Sr. Secured	Missed interest payment	53.0
2000	Nutritional Sourcing Corporation	Puerto Rico	Sr. Unsecured	Distressed exchange	47.0
2000	Nutritional Sourcing Corporation	Puerto Rico	Sr. Unsecured	Distressed exchange	47.0
2000	Transtel Pass Through Trust	Colombia	Sr. Secured	Missed interest payment	40.0
2001	ACINDAR Industria Argentina de Aceros S.A.	Argentina	Sr. Unsecured	Suspension of payments	23.0
2001	IMPSAT Fiber Networks, Inc.	Argentina	Sr. Unsecured	Missed interest payment	3.0
2001	IMPSAT Fiber Networks, Inc.	Argentina	Sr. Unsecured	Missed interest payment	4.0
2001	IMPSAT Fiber Networks, Inc.	Argentina	Sr. Unsecured	Missed interest payment	4.0
2001	Multicanal S.A.	Argentina	Sr. Unsecured	Missed principal payment	33.5
2001	Multicanal S.A.	Argentina	Sr. Unsecured	Missed principal payment	47.0
2001	Multicanal S.A.	Argentina	Sr. Unsecured	Missed principal payment	52.0
2001	Multicanal S.A.	Argentina	Sr. Unsecured	Missed principal payment	82.0
2002	Alestra, S. de R.L. de CV	Mexico	Sr. Unsecured	Missed interest payment	36.0
2002	Autopistas Del Sol SA	Argentina	Sr. Unsecured	Missed interest payment	22.0
2002	Autopistas Del Sol SA	Argentina	Sr. Unsecured	Missed interest payment	23.0
2002	Banco Comercial S.A.	Uruguay	Sr. Unsecured	Missed interest payment	35.0
2002	Banco de Galicia y Buneos Aries	Argentina	Sr. Unsecured	Missed interest payment	20.0
2002	Banco Hipotecario S.A.	Argentina	Sr. Unsecured	Missed principal payment	25.0
2002	Cablevision SA	Argentina	Sr. Unsecured	Missed principal payment	22.0
2002	Cablevision SA	Argentina	Sr. Unsecured	Missed principal payment	22.0
2002	Cablevision SA	Argentina	Sr. Unsecured	Missed principal payment	22.0
2002	Compania de Alimentos Fargo S.A.	Argentina	Sr. Unsecured	Missed interest payment	15.0
2002	Compania Latinoamericana Infraestructura & Servicios S.A.	Argentina	Sr. Unsecured	Missed interest payment	10.0
2002	CTI Holdings S.A.	Argentina	Sr. Unsecured	Suspension of payments	5.0
2002	Edelnor SA	Chile	Sr. Unsecured	Chapter 11	35.0
2002	Edelnor SA	Chile	Sr. Unsecured	Chapter 11	35.0
2002	Globo Comunicacoes e Participacoes S.A.	Brazil	Sr. Unsecured	Missed interest payment	18.0

Latin American Corporate Default and Recovery Rates, 1990-H1 2009

Year	Issuer Name	Country	Seniority	Default Type	Recovery Rate
2002	Globo Comunicacoes e Participacoes S.A.	Brazil	Sr. Unsecured	Missed interest payment	19.0
2002	Globo Comunicacoes e Participacoes S.A.	Brazil	Sr. Unsecured	Missed interest payment	19.0
2002	Grupo Cydsa, S.A. de C.V.	Mexico	Sr. Unsecured	Distressed exchange	45.0
2002	Hylsa, S.A. de C.V.	Mexico	Sr. Unsecured	Missed interest payment	57.0
2002	IMASAC S.A.	Argentina	Sr. Unsecured	Missed interest payment	30.0
2002	Inversora Eletrica de Buenos Aires S.A.	Argentina	Sr. Unsecured	Missed interest payment	3.0
2002	Mastellone Hermanos S.A.	Argentina	Sr. Unsecured	Missed interest payment	22.0
2002	Net Servicos de Comunicacao S.A.	Brazil	Sr. Unsecured	Missed interest payment	30.0
2002	Pecom Energia, SA	Argentina	Sr. Unsecured	Distressed exchange	54.0
2002	Pecom Energia, SA	Argentina	Sr. Unsecured	Distressed exchange	60.0
2002	Pecom Energia, SA	Argentina	Sr. Unsecured	Distressed exchange	61.0
2002	Telecom Argentina Stet-France Telecom SA	Argentina	Sr. Unsecured	Suspension of payments	25.0
2002	Telecom Argentina Stet-France Telecom SA	Argentina	Sr. Unsecured	Suspension of payments	28.0
2002	Telecom Argentina Stet-France Telecom SA	Argentina	Sr. Unsecured	Suspension of payments	29.0
2002	Telecom Argentina Stet-France Telecom SA	Argentina	Sr. Unsecured	Suspension of payments	33.0
2002	Telecom Argentina Stet-France Telecom SA	Argentina	Sr. Unsecured	Suspension of payments	33.5
2002	Telecom Argentina Stet-France Telecom SA	Argentina	Sr. Unsecured	Suspension of payments	35.0
2002	Telefonica de Argentina	Argentina	Sr. Unsecured	Distressed exchange	45.0
2002	Telefonica de Argentina	Argentina	Sr. Unsecured	Distressed exchange	47.0
2002	Transener S.A.	Argentina	Sr. Unsecured	Missed interest payment	24.0
2002	Transener S.A.	Argentina	Sr. Unsecured	Missed interest payment	26.0
2003	Azteca Holdings, S.A. de C.V.	Mexico	Sr. Secured	Distressed exchange	100.00
2003	CANTV Finance Ltd.	Venezuela	Sr. Unsecured	Missed interest payment	99.5
2003	Corporacion Durango S.A. de C.V.	Mexico	Sr. Secured	Missed interest payment	43.0
2003	Corporacion Durango S.A. de C.V.	Mexico	Sr. Unsecured	Missed interest payment	40.5
2003	Corporacion Durango S.A. de C.V.	Mexico	Sr. Unsecured	Missed interest payment	41.0
2003	Corporacion Durango S.A. de C.V.	Mexico	Sr. Unsecured	Missed interest payment	44.0
2003	Grupo Iusacell, SA De C.V.	Mexico	Sr. Unsecured	Missed interest payment	32.0
2003	Grupo TMM, S.A.	Mexico	Sr. Secured	Missed principal and interest payments	75.0
2003	Grupo TMM, S.A.	Mexico	Sr. Unsecured	Missed principal and interest payments	72.0
2003	Satelites Mexicanos, S.A. De C.V.	Mexico	Sr. Unsecured	Missed interest payment	47.5
2003	Transportadora De Gas del Sur S.A.	Argentina	Sr. Unsecured	Missed principal payment	48.0
2003	Tricom SA	Dominican Republic	Sr. Unsecured	Missed interest payment	53.0
2007	Nutritional Sourcing Corporation	Puerto Rico	Senior Secured	Chapter 11	64.0
2008	Cap Cana, S.A.	Dominican Republic	Senior Secured	Missed principal and interest payments	34.0
2008	Controladora Comercial Mexicana S.A.B. de C.V	Mexico	Senior Unsecured	Bankruptcy	32.2
2008	Corporacion Durango S.A. de C.V.	Mexico	Senior Unsecured	Bankruptcy	26.0
2009	Arantes Alimentos Ltda.	Brazil	Senior Unsecured	Bankruptcy	20.0
2009	Vitro, S.A.B. de C.V.	Mexico	Senior Unsecured	Missed interest payment	22.5
2009	Vitro, S.A.B. de C.V.	Mexico	Senior Unsecured	Missed interest payment	22.5

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Appendix IV: Latin American Issuers with Debt Rated A3 or Above, June 2009

Company Name	Country	Industry	Rating
BBVA Bancomer, S.A.	Mexico	Banking	Aa2
HSBC Mexico, S.A.	Mexico	Banking	Aa2
Banco Santander-Chile	Chile	Banking	Aa3
Corporacion Nacional del Cobre de Chile	Chile	Industrial	Aa3
Banco Nacional de Comercio Exterior, S.N.C.	Mexico	Banking	A1
Banco Nacional de Mexico, S.A.	Mexico	Banking	A1
Banco Santander, S.A. (Mexico)	Mexico	Banking	A1
BFB Leasing S.A., Arrendamento Mercantil	Brazil	Banking	A1
BNDES Participacoes S.A. - BNDESPAR	Brazil	Banking	A1
Dibens Leasing S.A. - Arrendamento Mercantil	Brazil	Finance	A1
ItauBank Leasing S.A. Arrendamento Mercantil	Brazil	Banking	A1
Banco Mercantil del Norte, S.A.	Mexico	Banking	A2
Banco Mercantil del Norte, S.A. (Cayman I)	Cayman Islands	Banking	A2
Guardian Industries V.P.S. de R.L. de C.V.	Mexico	Industrial	A2
Petroleo Brasileiro S.A. - PETROBRAS	Brazil	Industrial	A2
America Movil S.A.B. de C.V.	Mexico	Industrial	A3
Coca-Cola FEMSA, S.A.B. de C.V.	Mexico	Industrial	A3
Corp. Interamericana de Bebidas, SA. de CV	Panama	Industrial	A3
Empresa Nacional del Petroleo	Chile	Industrial	A3
Itauseg Participacoes S.A.	Brazil	Industrial	A3
Telefonos de Mexico, S.A.B. de C.V.	Mexico	Industrial	A3

* Equivalent senior unsecured rating.

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Author

Elena Duggar

Production Associate

Judy Yuen

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