Rating Research Services

Taiwan Ratings Corp.'s 2013 Corporate Default And Rating Transition Study

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Taiwan Ratings Corp.'s 2013 Corporate Default And Rating Transition Study

Coverage

Taiwan Ratings Corp.'s annual default and ratings transition study closely examines the track record of credit ratings that we have assigned since we began operations in 1998. This comprehensive study shows that the movement of ratings has followed a broadly similar pattern to Standard & Poor's Ratings Services' global experience; however, rating movements in Taiwan have been more volatile, particularly at lower rating levels. This study primarily measures ratings migration over time and provides a quantitative measure of ratings distribution and movement.

This report covers 298 issuer credit ratings assigned by Taiwan Ratings between 1998 and 2013, inclusive. It analyzes the movement of ratings on Taiwan-based obligors--industrials, utilities, insurance companies, financial holding companies, banks, securities firms, and other financial institutions. The study includes public and confidentially rated entities, as well as those on which we later withdrew the ratings.

Overview:

- Rating actions grew in 2013 and were upward rating migrations, largely due to the implementation of Standard & Poor's new corporate and insurance ratings criteria.
- 2013 marked the fifth consecutive year of zero defaults by rated obligors in our pool.
- Ratings transitions in Taiwan Ratings' pool largely mirrors that of Standard & Poor's global ratings pool during its rating history to date.

Key Findings

- Rating actions rose in 2013, with upward outnumbering downward actions. The majority of rating actions resulted from Taiwan Ratings implementation of Standard & Poor's new corporate and insurance rating methodology. Upgrades represented 7.94% of all rating actions and downgrades 3.97%. However, if we exclude the impact of the new criteria downward rating actions would take the majority, with 3.17% for downgrades and 1.59% for upgrades. Nonetheless, most of our obligors have maintained relatively stable credit quality since 2010.
- There were no defaults by our rated obligors in 2013 for the fifth consecutive years. The absence of any defaults, in our view, is due to the majority of higher ratings (93.2% of obligors are rated 'twA-' or above) in our issuer pool, and the relatively small issuer pool size. Additional factors were an improved global and domestic economy, and sufficient liquidity in the local financial market to support the credit profiles of most large issuers within the pool.
- The positive correlation between credit ratings transitions and the number of defaults is as valid a foundation for ratings in Taiwan Ratings' pool for 1999-2013, as it is for

Standard & Poor's global pool over the same period.

- The transition of ratings assigned by Taiwan Ratings in 1998-2013 broadly mirrors that of Standard & Poor's global study for 1981-2013, which reveals that higher-rated issuers tend to incur greater rating stability than their lower-rated counterparts. However, it should be noted that the transition within our ratings pool tends to be more volatile at the lower end of the rating scale than Standard & Poor's global ratings pool. This is due to the calibration differences between Taiwan Ratings' and Standard & Poor's rating scales and the statistical limitations of Taiwan Ratings' smaller sample size and shorter rating history.

New Rating Criteria Were Behind The Majority Of Rating Actions

We took more rating actions in 2013 than 2012, with 7.94% of ratings raised and 3.97% lowered (see table 1). The majority of these actions were due to our implementing Standard and Poor's new ratings methodology for corporates and insurers in 2013. However, excluding the impact of the new criteria reverses the overall rating transition, with 3.17% of ratings lowered and 1.59% of ratings raised. Under the revised insurance criteria, the upgrades of six property & casualty insurance companies reflected our view that the insurers' strong capital and earnings solidly underpin their stand-alone credit profiles. In addition, the combined upgrade and downgrade of three corporates were mainly due to the application of new corporate and group criteria to specific obligors.

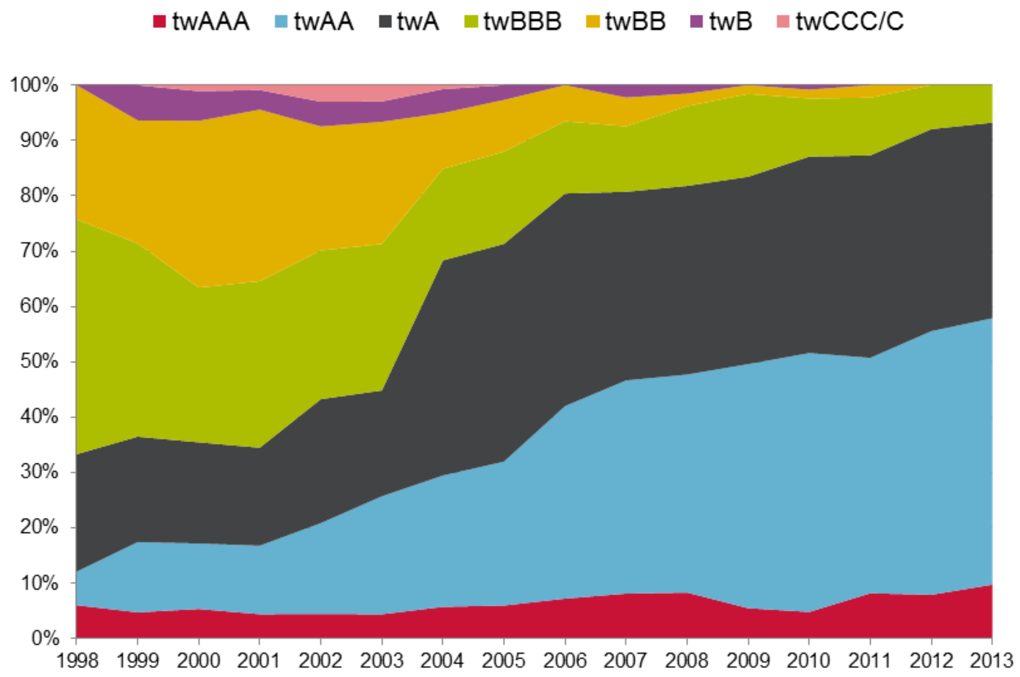
Table 1

Summary Of Annual Ratings Changes In Taiwan, 1999-2013

Year	Issuers as of January 1	Upgrades (%)	Downgrades (%)*	Defaults (%)	Withdrawn ratings (%)	Changed ratings (%)	Unchanged ratings (%)	Downgrade/ upgrade ratio
1999	33	9.09	0.00	0.00	0.00	9.09	90.91	0.00
2000	63	3.17	12.70	1.59	3.17	20.63	79.37	4.00
2001	93	2.15	10.75	0.00	3.23	16.13	83.87	5.00
2002	114	17.54	18.42	0.00	13.16	49.12	50.88	1.05
2003	134	14.93	3.73	0.00	14.18	32.84	67.16	0.25
2004	136	55.15	2.94	0.00	9.56	67.65	32.35	0.05
2005	139	13.67	0.72	0.72	5.76	20.86	79.14	0.05
2006	151	15.89	2.65	0.66	16.56	35.76	64.24	0.17
2007	138	18.12	4.35	3.62	6.52	32.61	67.39	0.24
2008	135	4.44	5.19	1.48	5.93	17.04	82.96	1.17
2009	132	0.76	15.91	0.00	9.85	26.52	73.48	21.00
2010	127	4.72	3.15	0.00	7.09	14.96	85.04	0.67
2011	124	12.10	5.65	0.00	2.42	20.16	79.84	0.47
2012	134	2.99	2.99	0.00	11.19	17.16	82.84	1.00
2013	126	7.94	3.97	0.00	3.97	15.88	84.12	0.50
Weighted average (1999-2013)		13.04	6.01	0.56	8.26	27.88	72.12	0.46

*Excludes downgrades to 'D', shown separately in default column. Note: Rating changes measured from rating as of Jan. 1 to rating as of Dec. 31 exlude all intermediate rating changes. Source: Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro® 7.72;

Taiwan National Scale Corporate Year-End Rating Distribution



Source: Taiwan Ratings Corp.

The credit quality of our rated obligors remained relatively stable in 2013, with 84.12% or ratings unchanged compared with the historical average of 72.12% for Taiwanese obligors. Excluding the criteria change, the ratio of unchanged ratings in 2013 would be even higher at 91.27%. The high ratio of unchanged ratings continues to reflect Taiwan's relatively stable, albeit slowly recovering economy, in our view.

The downgrades in 2013 were all on corporate issuers, similar to the downgrades in 2012. All downgrades except one resulted from the application of new group criteria, continued to reflect our view that a slowdown in China's economy and oversupply were pressuring the credit profiles of commodity producers such as steel companies, and that technology evolution was intensifying competitive and financial pressures on technology focused issuers. By contrast, the financial sector represented the majority of upgrades. However, excluding rating actions under the insurance criteria change, there was only one rating upgrade, which was based on the obligor's improving business and revenue diversification.

Ratings And Default Probability Remain Negatively Correlated

Our study largely supports the existence of a negative correlation between rating levels and default probability, which is broadly similar to the observations of Standard & Poor's global study (see Related Criteria And Research). Nonetheless, the overall number of defaults in our rated pool will continue to develop, given Taiwan Ratings' smaller sample size and shorter review period compared with Standard & Poor's global experience. In particular, a small rating base limited the number of defaults during the earlier years of Taiwan Ratings' established pool (see tables 2, 3, and 4). This study covers ratings migration for 298 entities (as of the end of 2013) for the period 1998-2013 compared with Standard & Poor's global rated pool of 17,049 entities in 1981-2013.

Table 2

Taiwan Cumulative Average Default Rates, 1999-2013 (%)

	--Time Horizon (years)--									
Rating	1	2	3	4	5	6	7	8	9	10
twAAA	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
twAA	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0
twA	0.18	0.38	0.60	0.60	0.60	0.60	0.60	0.60	0.6	0.6
twBBB	0.92	2.19	2.86	3.55	3.55	3.96	4.82	5.75	6.79	6.79
twBB	2.5	4.51	6.04	6.56	8.12	9.72	10.82	11.96	12.57	12.57
twB	2.5	7.50	10.00	10.00	12.57	15.30	21.14	26.99	30.46	30.46
twCCC/C	0	0.00	9.09	45.45	72.73	90.91	100.00	0.00	0	0
Investment grade	0.26	0.62	0.85	1.03	1.03	1.14	1.40	1.71	2.11	2.11
Speculative grade	2.39	4.79	6.82	8.87	11.77	14.31	16.52	18.35	19.34	19.34
All Rated	0.56	1.23	1.76	2.26	2.82	3.44	4.15	4.86	5.43	5.43

Source: Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro® 7.72; Taiwan Ratings Corp.'s Database.

Table 3

Standard & Poor's Global Cumulative Average Default Rates, 1981-2013 (%)

	--Time Horizon (years)--														
Rating	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AAA	0	0.03	0.13	0.24	0.35	0.47	0.53	0.62	0.68	0.74	0.77	0.81	0.84	0.91	0.99
AA	0.02	0.07	0.13	0.24	0.36	0.47	0.58	0.67	0.75	0.84	0.93	1.00	1.08	1.16	1.24
A	0.07	0.17	0.28	0.43	0.60	0.78	1.00	1.19	1.38	1.59	1.78	1.95	2.11	2.27	2.45
BBB	0.21	0.60	1.02	1.53	2.06	2.56	3.01	3.45	3.89	4.33	4.80	5.18	5.53	5.90	6.27
BB	0.8	2.46	4.41	6.29	8.01	9.64	11.03	12.26	13.4	14.39	15.21	15.92	16.52	17.05	17.64
B	4.11	9.27	13.61	16.99	19.55	21.61	23.29	24.65	25.82	26.97	27.95	28.76	29.48	30.15	30.81
CCC/C	26.87	36.05	41.23	44.27	46.75	47.77	48.85	49.67	50.64	51.35	51.99	52.76	53.67	54.40	54.40
Investment grade	0.11	0.30	0.52	0.79	1.07	1.35	1.61	1.86	2.1	2.35	2.59	2.79	2.98	3.17	3.37
Speculative grade	4.02	7.86	11.19	13.86	16.03	17.82	19.33	20.60	21.74	22.78	23.66	24.42	25.09	25.69	26.28
All Rated	1.53	3.02	4.33	5.43	6.35	7.14	7.82	8.39	8.92	9.42	9.85	10.21	10.54	10.84	11.14

Source: Standard & Poor's Global Fixed Income Research, Standard & Poor's CreditPro® www.spcreditpro.com

The statistically smaller and less-diversified ratings in Taiwan Ratings' issuer rating pool (33 issuers in January 1999 and 126 in January 2013) have several distinct aspects compared with Standard & Poor's global ratings pool (see tables 2 and 3) including:

- No defaults for credits rated 'twAA' or higher;
- No issuers rated 'twBB+' or below in our total rated pool in 2013, reflecting the lack of rating requests from less-creditworthy issuers (see chart 1). This is due to the high percentage of financial institutions in our ratings pool (65.1% in 2013) and for which

high creditworthiness, and thus higher ratings, offer operating flexibility of their business models (see table 4).

Table 4

New Issuer Sector Breakdown			
	Financial institutions	Industrials and utilities	Total
1998	31	2.00	33.00
1999	24	6.00	30.00
2000	28	6.00	34.00
2001	10	15.00	25.00
2002	29	12.00	41.00
2003	9	11.00	20.00
2004	6	9.00	15.00
2005	11	11.00	22.00
2006	7	8.00	15.00
2007	13	5.00	18.00
2008	9	2.00	11.00
2009	2	3.00	5.00
2010	1	5.00	6.00
2011	4	4.00	8.00
2012	3	2.00	5.00
2013	7	3.00	10.00
Total	**194**	**104**	**298**
% of total	65.10	34.90	100.00

Our ratings pool continued to show no defaults in 2013, marking the fifth consecutive year of zero defaults since 2009. In our view, this is due to Taiwan Ratings' small and less diversified ratings pool, as well as Taiwan's stabilizing economy in 2013. In addition, at the end of 2013, all of the entities in our ratings pool were rated 'twBB+' or above.

Despite continuing uncertainty over the global economy, the creditworthiness of entities in our ratings pool generally remained stable in 2013. This was mostly supported by a relatively stable domestic economy as well as ample liquidity in the domestic market, which provide Taiwan's corporate and financial service sectors with a cushion against still-weak export growth. Ample liquidity provides easy access to debt funding for domestic industrial sectors at low costs.

For the purpose of global consistency, this study views financial institutions that are placed under regulatory supervision as being in default. However, placing a financial institution under regulatory supervision, to which we assign a 'twR' rating, does not necessarily indicate a default event but emphasizes that the regulator has the power to favor one class of obligations over others or to pay some obligations and not others. Among the nine institutions that Taiwan Ratings rated 'twR' in 2000-2013, five had generally serviced their debt obligations. Subsequently, we did not record these as in 'SD' or selective default, as they did not have debts beyond the legal scope of the government's protection as defined by relevant regulation (i.e. non-deposit debts issued after July 2005).

Taiwan Rating Transitions Largely Mirror Those In Global And

Regional Studies

As mentioned above, our transition study shows a strong mirror to Standard & Poor's observations of rating movements on a global and regional scale. In particular, higher-rated issuers tend to have less ratings volatility than lower-rated entities. For instance, the probability that a Taiwan issuer rated 'twAA' at the beginning of a year will be rated 'twAA' at the end of the year is 93.9% (see table 5), whereas the probability that an issuer rated 'twBB' at the beginning of a year will be rated 'twBB' at the end of the year is only 59.0%. The probability that a global issuer that Standard & Poor's rates 'AA' will retain this rating after one year is 86.4%, whereas the probability that a 'BB' rated global issuer will retain this rating after one year is only 76.3%.

Table 5

Average One-Year Transition Rates (%)

Taiwan Ratings Corp.'s issuer ratings (1999-2013)									
From/To	twAAA	twAA	twA	twBBB	twBB	twB	twCCC/C	D	NR
twAAA	87.27	9.09	0.00	0.00	0.00	0.00	0.00	0.00	3.64
twAA	2.03	93.90	1.48	0.00	0.00	0.00	0.00	0.00	2.59
twA	0.00	6.34	86.23	2.36	0.18	0.00	0.00	0.18	4.71
twBBB	0.00	0.31	10.15	74.15	1.85	0.00	0.00	0.92	12.62
twBB	0.00	0.00	1.00	12.00	59.00	1.00	0.50	2.50	24.00
twB	0.00	0.00	0.00	0.00	10.00	45.00	7.50	2.50	35.00
twCCC/C	0.00	0.00	0.00	0.00	36.36	0.00	63.64	0.00	0.00
Standard & Poor's Global issuer ratings (1981-2013)									
From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	NR
AAA	87.10	8.88	0.53	0.05	0.08	0.03	0.05	0.00	3.27
AA	0.55	86.39	8.26	0.56	0.06	0.07	0.02	0.02	4.07
A	0.03	1.87	87.33	5.48	0.35	0.14	0.02	0.07	4.70
BBB	0.01	0.12	3.59	85.22	3.82	0.59	0.13	0.21	6.31
BB	0.02	0.04	0.15	5.20	76.28	7.09	0.69	0.80	9.74
B	0.00	0.03	0.11	0.22	5.48	73.89	4.46	4.11	11.70
CCC/C	0.00	0.00	0.15	0.23	0.69	13.49	43.81	26.87	14.76
Standard & Poor's Asia excluding Japan issuer ratings (1981-2013)									
From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	NR
AAA	95.45	4.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AA	2.42	87.88	7.27	0.00	0.00	0.00	0.00	0.00	2.42
A	0.00	2.48	90.79	3.62	0.10	0.41	0.00	0.00	2.59
BBB	0.00	0.00	4.83	84.89	3.27	0.55	0.08	0.23	6.15
BB	0.00	0.00	0.00	5.51	75.64	3.95	1.10	0.55	13.24
B	0.00	0.00	0.00	0.00	8.47	66.87	2.12	2.99	19.55
CCC/C	0.00	0.00	0.00	0.00	0.00	12.79	51.16	16.28	19.77

Points to note:

- The majority of Taiwan Ratings' rated categories had a lower stability rate than those rated by Standard & Poor's, due to Taiwan Ratings' smaller issuer rating pool and shorter rating history, as well as the volatility inherent in smaller or weaker financial institutions. However, caution is required in interpreting the higher stability rates associated with the 'twCCC/C' rating category relative to the 'twB' rating category in light of the extremely small sample size. In addition, the somewhat high number of withdrawals diluted the rating stability of the 'twB' rating category (see table 5).

- Most entities in our pool tended to migrate to higher-rating categories in the period 1999-2013, the opposite direction to Standard & Poor's global ratings pool. In our view, this was mainly due to the continued evolution of Taiwan's financial services industry, in which Taiwan Ratings' rating pool is heavily concentrated, and Taiwan's relatively stable economic growth.
- The aforementioned reasons resulted in a lower average downgrade-to-upgrade ratio for Taiwan Ratings' pool of 0.46 times in 1999-2013 compared with 1.36 times for Standard & Poor's global pools over the same period (see tables 1 and 6).
- Our pool is smaller, less diversified, and more concentrated in financial service sector than Standard & Poor's global pool, and the ratings in our pool are more volatile. The frequency range of annual rating changes in Taiwan was 9.1%-67.7% in 1999-2013 and averaged 27.9% over the same period (see table 1). These contrast with the range of annual rating changes in Standard & Poor's global pool of 23.9%-36.2% in 1999-2013 and an average 30.6% over the same period (see table 6).

Table 6

Summary Of Standard & Poor's Global Annual Rating Changes, 1999-2013

Year	Issuers as of January 1	Upgrades (%)	Downgrades (%)*	Defaults (%)	Withdrawn ratings (%)	Changed ratings (%)	Unchanged ratings (%)	Downgrade / upgrade ratio
1999	4544	5.83	11.91	2.13	8.91	28.78	71.21	2.04
2000	4709	6.71	12.42	2.46	7.14	28.73	71.27	1.85
2001	4789	5.83	16.43	3.76	7.58	33.60	66.40	2.82
2002	4816	5.15	18.90	3.57	7.18	34.80	65.20	3.67
2003	4819	6.27	14.34	1.91	7.39	29.91	70.10	2.29
2004	5052	8.43	7.46	0.77	7.24	23.90	76.09	0.88
2005	5345	12.55	9.09	0.60	8.48	30.72	69.28	0.72
2006	5500	12.11	8.47	0.47	8.64	29.69	70.31	0.70
2007	5692	13.33	9.14	0.37	10.51	33.35	66.65	0.69
2008	5792	7.70	15.63	1.78	7.75	32.86	67.14	2.03
2009	5683	4.68	18.76	4.14	8.64	36.22	63.79	4.01
2010	5390	11.63	8.50	1.19	6.46	27.78	72.23	0.73
2011	5718	12.01	11.58	0.79	7.68	32.06	67.94	0.96
2012	5922	8.22	11.92	1.11	6.84	28.09	71.90	1.45
2013	6182	11.19	8.93	1.04	6.55	27.71	72.29	0.80
Weighted average (1999-2013)		8.93	12.15	1.69	7.80	30.56	69.44	1.36

*Excludes downgrades to 'D', shown separately in default column. Source: Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro® www.spcreditpro.com. Note: Rating changes measured from rating as of Jan 1 to rating as of Dec. 31.

Default Implication Of Rating Transitions

We believe that as the pattern of ratings migration for entities within Taiwan Ratings' rated pool continues to develop, as well as the pool size and length of study, defaults and rating transitions are likely to more closely mirror Standard & Poor's global study through future business cycles. However, there remains a major difference in the implicit default risk between Standard & Poor's global scale and Taiwan Ratings' scale, which is positioned as a national scale and excludes direct sovereign risks of a general or systemic nature (Standard & Poor's has assigned the government of Taiwan 'AA-/Stable/A-1+' unsolicited issuer credit ratings).

Based on Standard & Poor's historical observations, cumulative default rates may also be calculated for multi-year periods (Note: the one-year and three-year default rate columns in table 3 are approximately equivalent to the level of the respective 'D' (default) columns in table 7). The slight difference in results between the two tables mainly stems from slight variations in the static pools used to calculate transition to default and cumulative average default rates. Cumulative average default rates are the summary of all available static pools and are calculated using marginal default rates (conditional on survival), while the transition's time horizon limits the number of pools used in the average transition rate.

Table 7

Average One-Year Transition Rates (%)

Standard & Poor's Global issuer ratings (1981-2013)

From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	NR
AAA	87.10	8.88	0.53	0.05	0.08	0.03	0.05	0.00	3.27
AA	0.55	86.39	8.26	0.56	0.06	0.07	0.02	0.02	4.07
A	0.03	1.87	87.33	5.48	0.35	0.14	0.02	0.07	4.70
BBB	0.01	0.12	3.59	85.22	3.82	0.59	0.13	0.21	6.31
BB	0.02	0.04	0.15	5.20	76.28	7.09	0.69	0.80	9.74
B	0.00	0.03	0.11	0.22	5.48	73.89	4.46	4.11	11.70
CCC/C	0.00	0.00	0.15	0.23	0.69	13.49	43.81	26.87	14.76

Average Three-Year Transition Rates (%)

Standard & Poor's Global issuer ratings (1981-2013)

From/To	AAA	AA	A	BBB	BB	B	CCC/C	D	NR
AAA	65.52	21.62	2.37	0.32	0.19	0.08	0.11	0.13	9.66
AA	1.29	64.76	19.30	2.24	0.39	0.24	0.03	0.14	11.61
A	0.07	4.40	67.36	12.04	1.48	0.53	0.11	0.30	13.72
BBB	0.02	0.35	8.55	63.22	7.07	1.91	0.34	1.07	17.47
BB	0.01	0.06	0.61	11.42	45.04	11.87	1.34	4.57	25.07
B	0.01	0.04	0.27	0.92	10.86	40.36	4.48	14.18	28.88
CCC/C	0.00	0.00	0.17	0.74	1.82	16.87	11.14	41.41	27.84

NR--Not rated. Source: Standard & Poor's Global Fixed Income Research; Standard & Poor's CreditPro® 7.72; Taiwan Ratings' Database; Standard & Poor's CreditPro® www.spcreditpro.com

Appendix: Default Methodology And Definitions

This long-term corporate default and rating transition study uses CreditPro® 7.72 software. An issuer credit rating reflects Taiwan Ratings' opinion of a company's overall capacity to pay its obligations (that is, its fundamental creditworthiness). This opinion focuses on the obligor's ability and willingness to meet its financial commitments on a timely basis, and it generally indicates the likelihood of default regarding all financial obligations of the firm. It is not necessary for a company to have rated debt in order to be assigned an issuer credit rating.

Specific issues are typically rated as high as or lower than the issuer rating, depending on their relative priority within the company's debt structure. For lower rated entities, the issuer credit ratings are generally two notches higher than the subordinated debt ratings; otherwise they are generally one notch higher. Therefore, though a 'twBB+' issuer credit rating is generally paired with a 'twBB-' subordinated debt rating, a 'twAA' issuer credit rating usually corresponds to a 'twAA-' subordinated rating.

Standard & Poor's ongoing enhancement of the CreditPro® database used to generate this study may lead to outcomes that differ to some degree from those reported in previous studies. However, this poses no continuity problem because each study reports statistics back to Dec. 31, 1998. Therefore, each annual default study is self-contained and effectively supersedes all previous versions.

Issuers Included In This Study

The study analyzes the rating histories of 298 companies on which Taiwan Ratings had assigned ratings as of Dec. 31, 1998, or that were first rated between that date and Dec. 31, 2013. These include industrials, utilities, insurance companies, financial holding companies, banks, securities firms, and other financial institutions in Taiwan with long-term credit ratings. The global data presented in this report refers to Standard & Poor's ratings histories of all 17,049 companies that were rated by Standard & Poor's as of Dec. 31, 1980, or that were first rated between that date and Dec. 31, 2013. The study includes non-confidentially and confidentially rated entities as well as those whose ratings were withdrawn after initial assignment. The analysis excludes public information (pi) ratings and ratings based on the guarantee of another company. Structured finance vehicles, public-sector issuers, and sovereign issuers are the subject of separate default and transition studies and are excluded from this study.

We excluded subsidiaries with debt that is fully guaranteed by a parent or with default risk that is considered identical to that of their parents. The latter are companies whose obligations are not legally guaranteed by a parent but whose operating or financing activities are so inextricably entwined with those of the parent that it would be impossible to imagine the default of one and not the other. At times, however, some of these subsidiaries might not yet have been covered by a parent's guarantee, or the relationship that combines the default risk of parent and child might have come to an end, or might not have begun. Such subsidiaries were included for the period during which they carried a distinct and separate risk of default.

Definition Of Default

A default event is recorded on the first occurrence of a payment default on any financial obligation, rated or unrated, other than a financial obligation subject to a bona fide commercial dispute; an exception occurs when an interest payment missed on the due date is made within the grace period. Preferred stock is not considered a financial obligation; thus, a missed preferred stock dividend is not normally equated with default. However, we consider distressed exchanges as defaults whenever the debt holders are coerced into accepting substitute instruments with lower coupons, longer maturities, or any other diminished financial terms.

Taiwan Rating's will usually lower an issue rating to 'D' following a company's default on the corresponding obligation. In addition, 'SD' is used whenever we believe an obligor that has selectively defaulted on a specific issue or class of obligations will continue to meet its payment obligations on other issues or classes of obligations in a timely matter. A 'twR' issuer rating indicates that an obligor is under regulatory supervision owing to its financial condition. This does not necessarily indicate a default event, but the regulator may have the power to favor one class of obligations over others or pay some obligations and not others. 'D', 'SD', and 'twR' issuer ratings are deemed defaults for the purpose of this study. A default is assumed to take place on the earliest of: the date Taiwan Ratings revised the ratings to 'D', 'SD', or 'twR'; the date when a debt payment was missed; the date a distressed exchange offer was announced; or the date the debtor filed for or was forced into bankruptcy.

Static Pool Methodology

Taiwan Ratings conducts its default studies on the basis of groupings called static pools. These are formed by grouping issuers by rating category at the beginning of each year covered by the study. Each static pool is followed from that point forward. All companies included in the study are assigned to one or more static pools. When an issuer defaults, that default is assigned back to all of the static pools to which the issuer belongs.

Taiwan Ratings uses the static pool methodology to avoid certain pitfalls in estimating default rates, to ensure that default rates account for rating migration, and to allow default rates to be calculated across multi-period time horizons. Some methods for calculating default and rating transition rates might charge defaults against only the initial rating on the issuer--ignoring more recent rating changes that supply more current information. Other methods may calculate default rates using only the most recent year's default and rating data--this method may yield comparatively low default rates during periods of high rating activity, as they ignore prior years' default activity.

The pools are static in the sense that their membership remains constant over time. Each static pool can be interpreted as a buy and hold portfolio. Because errors, if any, are corrected by every new update, and because the criteria for inclusion or exclusion of companies in the default study are subject to minor revisions as time goes by, it is not possible to compare static pools across different studies. Therefore, every new update revises results back to the same starting date of Dec. 31, 1998, to avoid continuity problems.

Entities that have had ratings withdrawn--that is, revised to NR (not rated)--are surveyed with the aim of capturing a potential default. These companies, as well as those that have defaulted, are excluded from subsequent static pools.

For instance, the 1999 static pool consists of all companies rated as of 12:01 a.m. Jan. 1, 1999. Adding those companies first rated in 1999 to the surviving members of the 1999 static pool forms the 2000 static pool. All rating changes that took place are reflected in the newly formed 2000 static pool. This same method was used to form static pools for 2001 through 2013.

Consider the following example: An issuer is originally rated 'twBB' in mid-1998 and is downgraded to 'twB' in 2000. This is followed by a rating withdrawal (NR) in 2002 and a default ('D') in 2005. This hypothetical company would be included in the 1999 and 2000 pools with the 'twBB' rating assigned to it at the beginning of those years; likewise, it would be included in the 2001 and 2002 pools with the 'twB' rating. It would not be part of the 1998 pool because it was not rated as of the first day of that year, and it would not be included in any pool after the last day of 2002 because the rating had been withdrawn by then. Yet each of the four pools in which this company was included (1999-2002) would record its 2005 default at the appropriate time horizon.

Ratings are withdrawn when an entity's entire debt is paid off or when the program or programs rated are terminated and the relevant debt extinguished. This may also occur as a result of mergers and acquisitions. Other ratings are withdrawn because of a lack of cooperation, particularly when a company is experiencing financial difficulties and refuses to provide all the information needed to continue our surveillance on the ratings.

Default Rate Calculation

Annual default rates are calculated for each static pool: first in units, and later as percentages with respect to the number of issuers in each rating category. Finally, these percentages are combined to obtain cumulative default rates for the 15 years covered by the study.

Issuer-weighted Default Rates

Averages that appear in this study are calculated based on the number of issuers rather than the dollar amounts affected by defaults or rating changes. Although dollar amounts provide information about the portion of the market that is affected by defaults or rating changes, issuer-weighted averages is a more useful measure of the performance of ratings.

Many people in the investment field use statistics from this default study and CreditPro® to estimate the probability of default and the probability of rating transition. It is important to note that we do not imply a specific probability of default; however, our historical default rates are frequently used to estimate these characteristics.

Average Cumulative Default Rate Calculation

Cumulative default rates that average the experience of all static pools are derived by calculating marginal default rates, conditional on survival (survivors being non-defaulters) for each possible time horizon and for each static pool, weight averaging the conditional marginal default rates, and accumulating the average conditional marginal default rates. Conditional default rates are calculated by dividing the number of issuers in a static pool that default at a specific time horizon by the number of issuers that survived (did not default) to that point in time. Weights are based on the number of issuers in each static pool. Cumulative default rates are one minus the product of the proportion of survivors (non-defaulters).

Time Sample

This update limits the reporting of default rates to the selected time horizon; however, the data has been gathered for 15 years and all calculations are based on the rating experience of that period. The maturities of most obligations are much shorter than the selected time horizon. In addition, average default statistics become less reliable at longer time horizons as the sample size becomes smaller and the cyclical nature of default rates increases its effect on averages.

Default patterns share broad similarities across all static pools, suggesting that Taiwan Ratings' rating standards have been consistent over time. Adverse business conditions tend to coincide with default upswings for all pools. Speculative-grade issuers have been hit the hardest by these upswings, but investment-grade default rates also increase in stressful periods.

Transition Analysis

Transition rates compare issuer ratings at the beginning of a time period with ratings at the end of the period. To compute one-year rating transition rates by rating category, the rating on each entity at the end of a particular year is compared with the rating at the beginning of the same year. An issuer that remained rated for more than one year is counted as many times as the number of years it was rated. For instance, an issuer continually rated from the middle of 1998 to the middle of 2003 would appear in the four consecutive one-year transition matrices from 1999 to 2002. All 1999 static pool members still rated on Dec. 31, 2013, had 15 one-year transitions, while companies first rated between Jan. 1, 2012, and Dec. 31, 2012 had only one.

Each one-year transition matrix displays all rating movements between letter categories from the beginning of the year through year-end. For each rating listed in the matrix's left-most column, there are nine ratios listed in the rows, corresponding to the ratings from 'twAAA' to 'D,' plus an entry for NR.

Practical Application Of Transition Rates

Rating transition rates are useful to investors and credit professionals for whom rating stability is important. For instance, investors restricted by law or inclination to invest in top-grade bonds would want to assess the likelihood that Taiwan Ratings' analysts will continue to assign top ratings to their investments. Conversely, investors buying high-yield bonds in hopes of profiting from a rating upgrade would be able to gauge that expectation realistically.

The credit community might also use rating transition information, in part, to determine maturity exposure limits or to measure credit risk in the context of the value-at-risk models. Rating transition matrices could also be constructed to produce stressed default rates. Such matrices are often used in the area of credit risk measurement. In addition, multiyear transition matrices are valuable tools that can be used to forecast future rating distributions and may be better suited for certain applications than are one-year transition matrices.

Comparing Transition Rates With Default Rates

Rating transition rates may be compared with the marginal and cumulative default rates described in the previous section. For example, note that the one-year default rate column of Table 2 is equivalent to column 'D' of the average one-year transition matrix found in Table 5. Average cumulative default rates are the summary of all static pools from 1998 through 2013, while the number of pools used in the average transition rate is limited by the transition's time horizon.

Related Criteria And Research

Related Research

- **2013 Annual Global Corporate Default Study And Rating Transitions**, March 19, 2014
- **2013 Rating Roundup Report**, Dec. 30, 2013

Under Taiwan Ratings' Standard & Poor's policies, only a Rating Committee can determine a Credit Rating Action (including a Credit Rating change, affirmation or withdrawal, Rating Outlook change, or CreditWatch action). This commentary and its subject matter have not been the subject of Rating Committee action and should not be interpreted as a change to, or affirmation of, a Credit Rating or Rating Outlook.