TAIWAN'S TOP 50 CORPORATES

September 2015

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Introduction

We warmly welcome you to our latest study of Taiwan's top 50 corporates, covering the island's largest corporations by revenue in 2014. Our survey of Taiwan's top corporates includes an assessment of the 14 industry sectors in which these companies operate, to inform our views on which sectors are most vulnerable to the current global (especially for China) economic environment, as well as the rising strength of China's domestic supply chain.

We selected these companies, which we believe are representative of their industries, from a pool of the largest revenue earners. Each credit highlight features an evaluation of the company's business risk and financial risk profiles and key credit considerations, all based on Taiwan Ratings'/Standard & Poor's credit rating methodology.

The key findings of the report are:

- Taiwan's top 50 corporates by revenue have maintained their profitability and credit ratios during the recent drop in global economic growth, but face growing credit risks from weaker overseas demand and rising competition.
- Technology firms among the top 50 corporates have stronger financial risk profiles than non-tech firms', because the more conservative debt-usage policies of tech firms support a faster response to market changes.
- Transportation cyclical, regulated utilities, and oil refining and marketing sectors have the weakest stand-alone credit profiles among the top 50, while retailing, semiconductor and telecom sectors have the strongest.

We have prepared an additional three commentaries to address our views, including (1) how the strengthening Chinese supply chain in the technology sector will impact the technology sector throughout Asia (including Taiwan); (2) how Taiwan's leading conglomerate groups manage their rising financial leverage; and (3) how large Taiwanese telecom operators are facing constrained revenue growth through a wave of merger and acquisitions.

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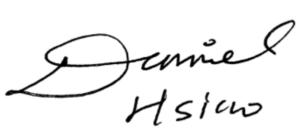
The commentaries and rating analyses in this publication are extracted from research contained on our subscriber site, Ratings Research Services.



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Sector Review:

Taiwan's Top Corporates Have The Financial Strength To Ride Out The Current Economic Slowdown

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A slow recovery in key overseas markets is impeding Taiwan's economic growth potential and raising the credit risks for its largest corporations. Our study of the top 50 corporates by revenue shows that weak growth in global trade, particularly from China, as well as growing competition from China's native supply chain are the key credit risks for Taiwanese corporates over the next two years. Taiwan Ratings Corp. expects the top 50 corporates mostly to sustain their financial strengths during the next one to two years, supported by generally high cash balances and ample liquidity in Taiwan's banking sector.

Taiwanese corporates face an uncertain period before the global economy and export growth return to a stable footing. Taiwan is usually an early beneficiary from rising global trade owing to the economy's high export dependence and its position as a significant supplier of industrial products including electronic components, chemicals and metal parts in the global supply chain. However, the recent recovery in U.S. durable goods consumption has not generated the boost to Taiwan's exports that the market expected, and instead export volume shrank in the first half of 2015. The decline was exacerbated by weaker GDP growth in China, price deflation and competition from continuing overcapacity in China, and slowing global demand for IT products that require semiconductors and other components manufactured in Taiwan.

Overview:

- Taiwan's top 50 corporates by revenue have maintained their profitability and credit ratios during the recent drop in global economic growth, but face growing credit risks from weaker overseas demand and rising competition.
- Technology firms among the top 50 corporates have stronger financial risk profiles than non-tech firms', because the more conservative debt-usage policies of tech firms support a faster response to market changes.
- Transportation cyclical, regulated utilities, and oil refining and marketing sectors have the weakest stand-alone credit profiles among the top 50, while retailing, semiconductor and telecom sectors have the strongest.

Taiwan's declining exports signal the growing risk of weak demand in the region, despite strong evidence of a sustained U.S. economic recovery and somewhat decent growth in core European markets. In addition, the rising strength of China's domestic supply chain is likely to replace foreign companies (including Taiwanese firms) as the primary raw material and component suppliers to China's vast corporate sector. Moreover, excess capacity in China's commodity sectors, such as steel, chemicals, and cement, is likely to constrain the performance of Taiwanese firms until supply and demand are in balance.

High-Tech And Non-Tech Sectors Share Similar Business Risk Profiles

Our review of the top 50 corporates by revenue in 2014 reveals the median business risk profile as "satisfactory" and the median financial risk profile as "modest," compared with Taiwanese obligors or "fair" and "intermediate," respectively, compared with their global peers (see table 1 and chart 1). In our assessment, Taiwan's high-tech and non-tech sectors share similar business risk profiles, but the technology sector has a stronger financial risk profile.

Table 1

Taiwan Top 50 Corporates By Revenue In 2014

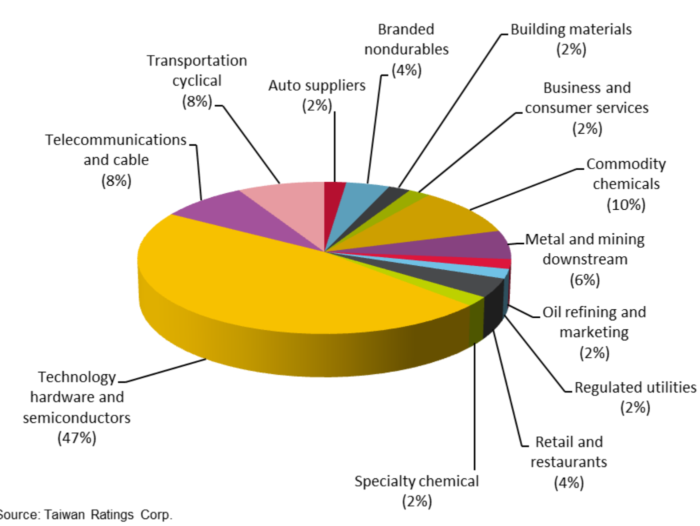
Rank	Company	Industry	(Mil. NT$)
1	Hon Hai Precision Industry Co. Ltd.	Technology hardware and semiconductors	4,213,172
2	CPC Corp., Taiwan	Oil refining and marketing	1,191,814
3	Pegatron Corp.	Technology hardware and semiconductors	1,019,739
4	Quanta Computer Inc.	Technology hardware and semiconductors	926,321
5	Formosa Petrochemical Corp.	Commodity Chemicals	913,085
6	Compal Electronics, Inc.	Technology hardware and semiconductors	845,701
7	Taiwan Semiconductor Manufacturing Co. Ltd.	Technology hardware and semiconductors	762,806
8	Taiwan Power Co.	Regulated utilities	642,747
9	Wistron Corp.	Technology hardware and semiconductors	592,347
10	ASUSTeK Computer Inc.	Technology hardware and semiconductors	477,408
11	WPG Holding Ltd.	Technology hardware and semiconductors	452,472
12	INVENTEC Corp.	Technology hardware and semiconductors	435,600
13	Innolux Corp.	Technology hardware and semiconductors	428,662
14	Uni-President Enterprises Corp.	Branded Nondurables	425,187
15	AU Optronics Corp.	Technology hardware and semiconductors	408,179
16	Formosa Chemicals & Fibre Corp.	Commodity Chemicals	401,454
17	China Steel Corp.	Metal and mining downstream	366,511
18	Synnex Technology International Corp.	Technology hardware and semiconductors	331,533
19	Acer Inc.	Technology hardware and semiconductors	329,684
20	Nan Ya Plastics Corp.	Commodity Chemicals	325,473
21	Tingyi (Cayman Islands) Holding Corp.	Branded Nondurables	324,032
22	Advanced Semiconductor Engineering Inc.	Technology hardware and semiconductors	256,591
23	Pou Chen Corp.	Business and consumer services	243,976
24	Far Eastern New Century Corp.	Telecommunications and cable	235,507
25	Lite-On Technology Corp.	Technology hardware and semiconductors	230,632
26	Chunghwa Telecom Co. Ltd.	Telecommunications and cable	226,609
27	Formosa Plastics Corp.	Commodity Chemicals	216,589
28	MediaTek Inc.	Technology hardware and semiconductors	213,063
29	President Chain Store Corp.	Retail and resturants	207,989
30	Delta Electronics Inc.	Technology hardware and semiconductors	190,635

Taiwan Top 50 Corporates By Revenue In 2014 (cont'd)

Rank	Company	Industry	(Mil. NT$)
31	HTC Corp.	Technology hardware and semiconductors	187,911
32	Walsin Lihwa Corp.	Metal and mining downstream	162,987
33	Chi Mei Corp.	Commodity Chemicals	151,830
34	China Airlines Ltd.	Transportation cyclical	150,582
35	Hotai Motor Co. Ltd.	Retail and resturants	144,852
36	Evergreen Marine Corp. (Taiwan) Ltd.	Transportation cyclical	144,284
37	United Microelectronics Corp.	Technology hardware and semiconductors	140,012
38	Yang Ming Marine Transport Corp.	Transportation cyclical	134,778
39	Qisda Corp.	Technology hardware and semiconductors	133,511
40	Eva Airways Corp.	Transportation cyclical	133,090
41	TPK Holding Co., Ltd	Technology hardware and semiconductors	129,517
42	Cheng Shin Rubber Ind. Co. Ltd.	Auto Suppliers	129,014
43	Taiwan Cement Corp.	Building Materials	118,326
44	Taiwan Mobile Co. Ltd.	Telecommunications and cable	112,624
45	Tatung Co.	Technology hardware and semiconductors	112,609
46	WT Microelectronics Co. Ltd.	Technology hardware and semiconductors	107,766
47	Chang Chun Petrochemical Co. Ltd.	Specialty Chemical	105,555
48	Yulon Motor Co. Ltd.	Auto Manufacturing	104,973
49	Far EasTone Telecommunications Co. Ltd.	Telecommunications and cable	94,176
50	Dragon Steel Corp.	Metal and mining downstream	91,750

NT$--New Taiwan dollar. Source: CommonWealth and company data. Note: Sales are based on consolidated basis except Hotai Motor Co. Ltd. and Yulon Motor Co. Ltd.

Chart 1
Taiwan Top 50 Corporates By Sector



Source: Taiwan Ratings Corp.
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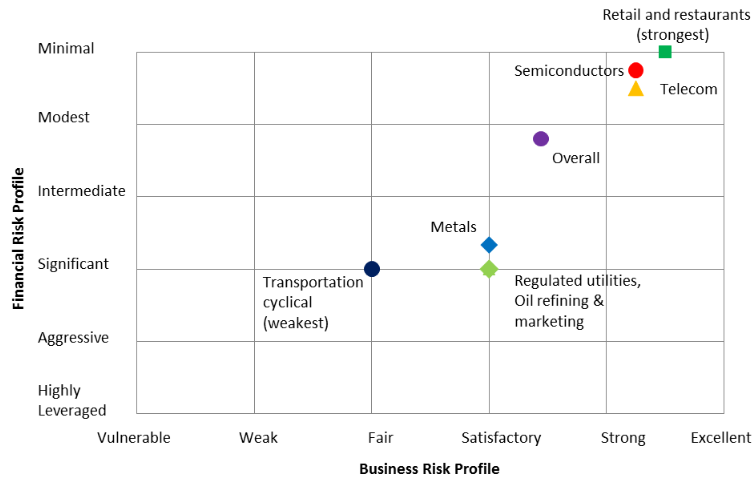
In our view, the transportation cyclical sector has the weakest business risk profile among the top 50 corporates, followed by auto manufacturing and consumer electronics (branded technology companies) sectors. Conversely, the transportation cyclical, regulated utilities, and oil refining and marketing sectors have the weakest financial risk profiles. Overall, we believe the transportation cyclical, regulated utilities, and oil refining and marketing sectors have the weakest stand-alone credit profiles among Taiwan's top 50 corporates (see chart 2). This is mainly due to firms' aggressive debt use that increases their financial leveraging. In addition, many companies in these sectors have weaker profitability due to either weak earnings in the competitive transportation cyclical sector or the Taiwan government's pricing intervention in the oil, gas, and electricity sectors.

Chart 2
Taiwan Top 50 Corporates' Strongest And Weakest Business And Financial Risk Profiles



Source: Taiwan Ratings Corp.

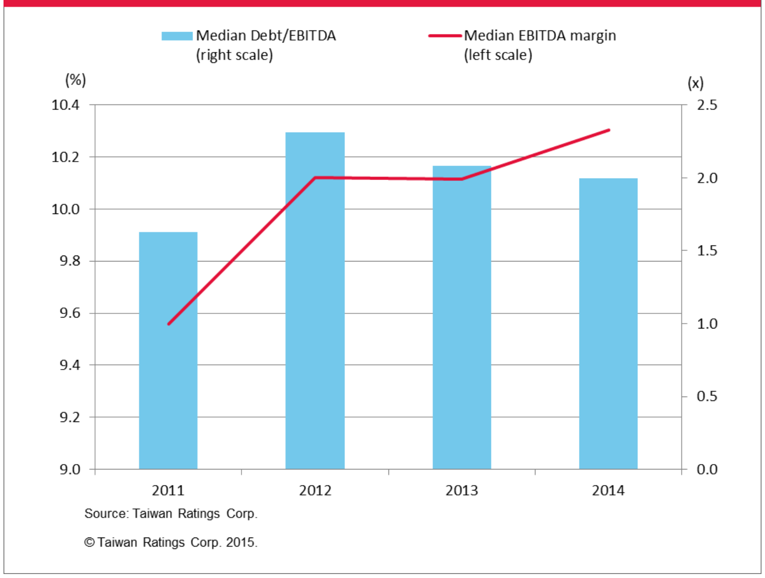
We also assess the retail, semiconductor (a subsector of technology hardware and semiconductors), and telecommunication sectors to have the strongest credit profiles, supported by their established market positions and conservative debt-use policy. Nevertheless, we believe telecom operators may pursue growth opportunities through acquisitions over the next one to two years, which could weaken their financial strength to some extent. These acquisitions would be subject to regulatory approval but could improve operators' competitive positions through enlarged business scale or product diversity if granted.

Weakening Overseas Demand Is Likely To Drive Down Profitability For Some

We believe several key factors could weaken the top 50 corporates' profitability in 2015. These include slackening growth for IT products and a slowdown in overall global demand for Taiwanese products, particularly from China, where overcapacity has resulted in price deflation and rising competition. This is despite the benefit of declining commodity costs to sectors such as transportation cyclical, commodity chemicals, and metals, which we reflected in our outlook revision on **Yang Ming Marine Transport Corp.** to "positive" from "stable" on April 29, 2015.

Our analysis of median EBITDA margins for the top 50 corporates reveals that overall profitability improved slightly to 10.3% in 2014, up from 9.6% in 2011, partly as the result of lower raw material costs for coal and iron ore (see chart 3). For instance, **Taiwan Power Co.**'s (Taipower) EBITDA margin rose to 28% in 2014, up considerably from 17.1% in 2012, and buoyed by the effect of tariff hikes and lower coal prices. Meanwhile, EBITDA margins in the metals sector rose almost threefold to 18% from 6.8% over the same period, also as a result of lower material costs.

Chart 3
Taiwan Top 50 Corporates' EBITDA Margin and Debt/EBITDA Ratio



Profit margins in the technology sector were generally stable in 2014, except for consumer electronics firms whose EBITDA margins improved to 2.9% in 2014 from 0.8% a year earlier. This boost was largely the result of restructuring efforts by **HTC Corp.** and **Acer Inc.,** which helped to lower their cost position. However, we believe Taiwanese consumer electronics companies, including smartphone and PC branded companies, will continue to experience severe competition from branded IT firms from China as well as globally, due to a lack of product differentiation and control on operating platforms.

Our research also shows that oil prices have been strongly influential over the profitability of transportation cyclical and commodity chemical sectors. Oil (fuel) is the major cost item for transportation companies and the main feedstock for chemical companies. The median EBITDA margin for the transportation cyclical sector trended up to 16.6% in 2014 from 9.1% in 2011, while the median margin for Taiwan's commodity chemical sector trended down to 7.9% from 15.6% over the same period. While raw material costs are also an important factor determining profitability for commodity chemical and steel producers, the impact of continued overcapacity in China appears to constrain profitability most in these sectors. We expect overcapacity in China's chemical and steel sectors to remain significant over the next one to two years, though lower oil prices should provide some support for the chemical sector's profitability over the same period.

Cash Flow Protection Levels Are Also Likely To Come Under Pressure

We expect the level of cash flow protection to weaken among the top 50 corporates in 2015. This is based on our expectation of falling profitability and high cash dividends that limit corporates' ability to reduce debt, despite the likelihood of lower capital expenditures this year. The median cash flow protection level (measured by the ratio of debt to EBITDA) of the top 50 corporates improved to 2.0x in 2014 from 2.3x in 2012. This was the result of slightly better profitability and lower capital expenditure (capex), despite higher cash dividend payouts and rising debt over the same period. Sectors with substantial reductions in capital expenditure in 2014, include oil refining and marketing (such as **CPC Corp., Taiwan**), telecommunications, commodity chemical, specialty chemical, and metals.

We expect to the telecom sector to increase capex in 2015, due to another round of 4G license bidding, while capex is unlikely to grow in other sectors with the exception of overseas expansion by large conglomerates such as the **Formosa Plastics Corp.** group and mining acquisitions by the **China Steel Corp.** group. The telecom sector's capex in 2014 was lower due to the high fees paid at 4G mobile license auctions in 2013, while the decline in capex in other sectors during the same period reflects the impact of government policies promoting environmental protection ahead of domestic capacity expansion by the oil refining, chemical, and metal sectors.

Most technology companies among the top 50 corporates reduced their capex in 2014, with the exception of semiconductor and electronics manufacturing service (EMS) sectors. However, we expect the median capex for these two sectors to decline in 2015, due to weakening global demand and their customers' relatively high inventory levels. The median capex for the computer hardware and components sub-sector declined the most among technology companies, of which **TPK Holding Co. Ltd.** had the greatest decline in capex in response to the company's weakening performance in recent years.

Our research shows that the median cash dividend payout among the top 50 corporates increased during the period 2011-2014. We believe this reflects the pressure on listed companies to meet their shareholders' rising expectations for higher cash dividends, especially for companies with limited growth opportunities. Moreover, a change in Taiwan's Company Law in 2011 that allowed companies to distribute cash dividends from surplus capital added further flexibility for companies to meet their shareholders' expectations.

We predict corporates in the semiconductor, retail, chemical, auto supplier, and building material sectors will increase their cash dividend payouts in 2015, similar to their practice in 2014, despite weaker performances over the last two years. The updated Company Law can particularly help companies with a weaker operating performance in the previous year to use their higher capital surplus to fund future dividend payouts.

Meanwhile, the median debt level (adjusted for surplus cash) for the top 50 corporates was slightly higher in 2014 compared with 2012. Taipower and CPC had the highest debt in 2014, but Taipower was able to generate positive free operating cash flow for the first time in at least ten years. This was the result of a tariff hike and lower coal cost that helped to slightly reduce the company's debt level. We expect Taipower's profitability and cash flows to increase moderately in 2015, supported by lower fuel costs and the implementation of a new tariff setting mechanism that will further reduce the company's debt. Conversely, we don't expect CPC to reduce its debt in 2015, because the company's cash flow generation is still insufficient to cover its capital expenditures, even though the company's capex declined substantially in 2014.

In the branded non-durable sector, median debt levels rose substantially in 2014, especially for **Tingyi (Cayman Islands) Holding Corp.**, whose operating cash flow was unable to meet its capex needs or support a cash dividend payout. We expect Tingyi's debt level to remain high due to a slowdown in the Chinese instant noodle and beverage markets. Meanwhile, we expect the semiconductor sector to maintain a relatively low debt level in 2015, aided by more conservative capital expenditures despite the sector's weakening profitability and higher cash dividend payouts. The semiconductor sector managed to reduce its median debt level in 2014, supported by a relatively good operating performance, particularly by **Taiwan Semiconductor Manufacturing Co. Ltd.** (TSMC), which returned to a net cash position.

Transportation Cyclical Firms Are More Vulnerable To Economic Downturns

Transportation cyclical

In our opinion, companies within the transportation cyclical sector averaged a "fair" business risk profile and "significant" financial risk profile compared with other Taiwanese obligors, and "weak" and "aggressive" risk profiles, respectively, compared with global obligors (see table 2).

Table 2

Taiwan's Top 50 Corporates: Transportation Cyclical Sector

Sales ranking	Company	BRP	FRP
34	China Airlines Ltd.	Fair	Significant
36	Evergreen Marine Corp. (Taiwan) Ltd.	Fair	Significant
38	Yang Ming Marine Transport Corp.	Fair	Aggressive
40	Eva Airways Corp.	Fair	Intermediate
	Average	Fair	Significant

BRP--Business risk profile; FRP--Financial risk profile. Note: Risk profiles are in comparison with other Taiwanese obligors. Source: Taiwan Ratings Corp.

In our view, demand and disciplined capacity expansion remain the keys to recovery for the container shipping and airline sectors, despite both sectors have benefited from the recent fall in fuel costs. Meanwhile, continuing overcapacity and slower-than-expected demand growth in the highly cyclical container shipping subsector are likely to maintain current downturn for operators throughout 2015. We believe freight rates for Asia/European routes are likely to remain at a low level, despite improvement in some freight rates for transpacific routes. Airlines are also likely to face a continued weak operating environment (excluding routes between Taiwan and China), given rising competition from low-cost carriers and weaker cargo performance. However, direct flights between Taiwan and China and stable fuel prices could partly support airlines' performances in 2015. We believe that such direct flights that are not code shared with foreign carriers remain undersupplied, which supports more stable pricing for the route.

Government Policies Could Reshape Credit Profiles In The Regulated Utilities And Oil Refining Sectors

Utilities & oil refining

We assess the business risk profile for the utilities and oil refining sectors as "satisfactory," and the financial risk profile as "significant" compared with other Taiwanese obligors, or "fair" and "aggressive," respectively, compared with global obligors (see table 3).

Table 3

Taiwan's Top 50 Corporates: Utilities & Oil Refining Sector

Sales ranking	Company	BRP	FRP
2	CPC Corp., Taiwan	Satisfactory	Significant
8	Taiwan Power Co.	Satisfactory	Significant
	Average	Satisfactory	Significant

BRP--Business risk profile; FRP--Financial risk profile. Note: Risk profiles are in comparison with other Taiwanese obligors. Source: Taiwan Ratings Corp.

Taipower and CPC play very important policy roles within Taiwan's power and energy sectors, and government policies can exert significant influence over the companies' management and stand-alone credit profiles. The Taiwan government has in the past leveraged these companies to provide subsidies to the general public by freezing the tariffs they can set or limiting final energy prices when fuel or material costs were high, resulting in substantial losses and rising debt levels for both firms. The government has more recently implemented pricing mechanisms for power tariff and energy prices that are more considerate of fuel and oil price volatility, which could help both companies to improve their earnings. However, it remains unclear if this pricing mechanism will be able to reflect rapid increases in oil or fuel prices in a consistent manner. Moreover, we believe the government's decision to mothball the still uncompleted fourth nuclear power plant and shut down the country's fifth naphtha cracker will weaken the related company's stand-alone credit profile.

Established Market Positions Underpin Retail And Semiconductor Sector Credit Profiles

Retail

We view retail companies on average as possessing a "strong" business risk profile and "minimal" financial risk profile compared with other Taiwanese obligors, and "satisfactory" and "modest" risk profiles, respectively, compared with global obligors (see table 4).

Table 4

Taiwan's Top 50 Corporates: Retail Sector			
Sales ranking	Company	BRP	FRP
29	President Chain Store Corp.	Excellent	Minimal
35	Hotai Motor Co. Ltd.	Strong	Minimal
	Average	Strong	Minimal

BRP--Business risk profile; FRP--Financial risk profile. Note: Risk profiles are in comparison with other Taiwanese obligors. Source: Taiwan Ratings Corp.

Retail companies such as **President Chain Store Corp.** (PCSC) and **Hotai Motor Corp.**, benefit from an established market position and net cash position. We expect PCSC's 7-11 convenience chain stores to maintain their dominant market position in Taiwan with about 50% market share and a large operating scale with comprehensive service offering. We also expect the company to utilize its strong network and integrated operations to further entrench its dominant local market position.

Hotai Motor also benefits from a strong domestic market share and the strong brand equity of Toyota Motor Corp.'s passenger vehicles, which it represents in Taiwan. Toyota cars have broad popularity among local buyers, as demonstrated by a leading 32.9% share of new car sales in 2014. In addition, Hotai Motor has implemented a successful merchandising strategy to promote Toyota cars and maintain customer loyalty, which we expect to help maintain Hotai Motor's strong domestic market position over the next one to two years. We also believe that Hotai Motor's long and solid relationship with Toyota partly offsets the risks associated with Hotai Motor's complete reliance on the sales of Toyota cars for its revenue.

Mergers & Acquisitions Offer A Potential Long-Term Credit Boost To Telecom Operators

Telecommunication

We assess the telecom sector as having on average a "strong" business risk profile and "minimal" financial risk profile compared with other Taiwanese obligors, and "satisfactory" and "modest" risk profiles, respectively, compared with global obligors (see table 5).

Table 5

Taiwan's Top 50 Corporates: Telecommunication Sector			
Sales ranking	Company	BRP	FRP
24	Far Eastern New Century Corp.	Strong	Intermediate
26	Chunghwa Telecom Co. Ltd.	Excellent	Minimal
44	Taiwan Mobile Co. Ltd.	Strong	Minimal
49	Far EasTone Telecommunications Co. Ltd.	Strong	Minimal
	Average	Strong	Minimal

BRP--Business risk profile; FRP--Financial risk profile. Note: Risk profiles are in comparison with other Taiwanese obligors. Source: Taiwan Ratings Corp.

We expect the leading telecom operators in Taiwan--**Chunghwa Telecom Co. Ltd., Far EasTone Telecommunications Co. Ltd.** (a key subsidiary of **Far Eastern New Century Corp.**), and **Taiwan Mobile Co. Ltd.**--to maintain their competitive advantages despite new entrants to the market following bidding on fourth generation (4G) licenses. This view is underpinned by our assessment that the three firms have sufficient economies of scale and a well-established customer base. However, the roll-out of 4G services has not led to improved profitability due to the cost of unlimited data plans and still-strong competition across the sector. In our view, the entrance of new operators is unlikely to weaken the credit profiles of the three largest operators over the next two to three years, given their established user base and more comprehensive service offering. Nonetheless, rising opportunities for industry consolidation and investment in cable TV companies as is potentially the case with Far EasTone (see Related Research) could heat up competition among the three leading players.

Semiconductor

We assess the semiconductor sector as averaging a "strong" business risk profile and "minimal" financial risk profile compared with other Taiwanese obligors, and "satisfactory" and "modest" risk profiles, respectively, compared with global obligors (see table 6).

Table 6

Taiwan's Top 50 Corporates: Semiconductor Sector

Sales ranking	Company	BRP	FRP
7	Taiwan Semiconductor Manufacturing Co. Ltd.	Excellent	Minimal
22	Advanced Semiconductor Engineering Inc.	Strong	Modest
28	MediaTek Inc.	Strong	Minimal
37	United Microelectronics Corp.	Strong	Minimal
	Average	Strong	Minimal

BRP--Business risk profile; FRP--Financial risk profile. Note: Risk profiles are in comparison with other Taiwanese obligors. Source: Taiwan Ratings Corp.

In our view, semiconductor foundry, assembly and testing, as well as IC design firms, will largely maintain their competitive advantages and credit profiles over the next 12 months, given players' leading market positions in their respective subsectors. Nonetheless, we expect competition to intensify due to the strengthening competitiveness of Chinese players that benefit from favorable Chinese government policies, the growth of large branded Chinese IT companies, and strong demand in China that favors local suppliers. Moreover, Chinese peers are beginning to enhance their technological know-how and grow larger through M&A activity locally and globally, which has helped to narrow the technology gap with their Taiwanese counterparts. For example, **Jiangsu Changjiang Electronics Technology Co. Ltd.** recently formed an investment consortium to acquire Singapore-headquartered **STATS ChipPAC Ltd.**, the world's fourth largest semiconductor packaging and testing company. Meanwhile, China's state-owned **Tsinghua Unigroup Co. Ltd.** announced an offer to buy U.S. chipmaker **Micron Technology Inc.** for US$23 billion in July 2015.

However, we expect major Taiwanese semiconductor firms to be able to cope with the rising challenge from Chinese firms without compromising their market positions. This is in light of the sector's high technology barriers, good scale economies, and the advantage of a complete, well established and efficient semiconductor supply chain in Taiwan. Moreover, we believe Taiwanese semiconductor firms will maintain their solid financial profiles, underpinned by high surplus cash on the balance sheet (see Related Research).

GREs Tend To Have Higher Financial Leverage Than Conglomerate Groups'

We assess government-related entities (GREs) among Taiwan's top 50 corporates as having a "satisfactory" business risk profile and "significant" financial risk profile on average compared with other Taiwanese obligors, and "fair" and "aggressive" risk profiles, respectively, compared with global obligors (see table 7). Meanwhile, we view companies within the top 50 that belong to a local conglomerate group as also having a "satisfactory" business risk profile but a "modest" financial risk profile on average compared with other Taiwanese obligors, and "fair" and "intermediate" risk profiles, respectively, compared with global obligors (see table 8).

Table 7

Taiwan's Top 50 Corporates: Government Related Entities

Sales ranking	Company	BRP	FRP
2	CPC Corp., Taiwan	Satisfactory	Significant
8	Taiwan Power Co.	Satisfactory	Significant
17	China Steel Corp.	Strong	Intermediate
26	Chunghwa Telecom Co. Ltd.	Excellent	Minimal
34	China Airlines Ltd.	Fair	Significant
38	Yang Ming Marine Transport Corp.	Fair	Aggressive
	Average	Satisfactory	Significant

BRP--Business risk profile; FRP--Financial risk profile. Note: Risk profiles are in comparison with other Taiwanese obligors. Source: Taiwan Ratings Corp.

Table 8

Taiwan's Top 50 Corporates: Conglomerates

Sales ranking	Company	BRP	FRP
5	Formosa Petrochemical Corp.	Strong	Modest
14	Uni-President Enterprises Corp.	Strong	Modest
15	AU Optronics Corp.	Satisfactory	Modest
16	Formosa Chemicals & Fibre Corp.	Strong	Modest
17	China Steel Corp.	Strong	Intermediate
24	Far Eastern New Century Corp.	Strong	Intermediate
27	Formosa Plastics Corp.	Strong	Modest
29	President Chain Store Corp.	Excellent	Minimal
35	Hotai Motor Co. Ltd.	Strong	Minimal
36	Evergreen Marine Corp. (Taiwan) Ltd.	Fair	Significant
39	Qisda Corp.	Fair	Intermediate
40	Eva Airways Corp.	Fair	Intermediate
48	Yulon Motor Co. Ltd.	Fair	Minimal
49	Far EasTone Telecommunications Co. Ltd.	Strong	Minimal
50	Dragon Steel Corp.	Satisfactory	Significant
	Average	Satisfactory	Modest

BRP--Business risk profile; FRP--Financial risk profile. Note: Risk profiles are in comparison with other Taiwanese obligors. Source: Taiwan Ratings Corp.

GREs in our survey range from the low industry risk regulated utilities sector (Taipower) to the high industry risk transportation cyclical sector (**China Airlines Ltd.** and Yang Ming Marine). Excluding the exceptional case of Chunghwa Telecom, the financial leverage of these GREs is generally above the average of the top 50 corporates as well as the average of conglomerate group companies. However, we believe GREs will maintain their better access to capital markets and higher interest coverage ratios compared with similarly leveraged non-GRE peers, partly because of their government-owned status and therein potential support in times of financial distress.

The Taiwan government has in the past demonstrated its financial support for weaker GREs, as in the case of two transportation cyclical companies--Yang Ming Marine and China Airlines. The government subscribed to the companies' bonds or shares either through other financially stronger GREs or government funds. Moreover, the government remains the largest shareholder in several large and important domestic banks, which are also likely to provide funding flexibility to GREs in times of financial distress.

Conglomerate group companies in our top 50 survey belong mostly to the non-tech sector, and range from commodity chemical, steel, branded non-durable and retailing, to telecom, transportation and auto manufacturing, with the exception of the high-tech BenQ group (**AU Optronics Corp.** and **Qisda Corp.**). In our assessment, the non-tech companies in the top 50 generally possess established market positions in their respective sectors. Indeed, some have successfully built up vertical integration business lines (such as the Formosa Plastics group), while others have created diversified business portfolios, (such as Far Eastern New Century). However, we believe their credit profiles could come under threat from the companies' overseas expansion strategies or during the initial phase of entering new sectors. This is because of the new and unfamiliar risks on entering new business environments including usually higher country risk, different industry risk, new competitive dynamics, customer and supplier relationships, and operation risks. Nonetheless, we expect companies' financial strengths and generally solid banking relationships with Taiwan's banking sector to provide some buffer to meet the potential challenges in the road ahead (for more details see related research).

Corporates' Financial Strengths Partly Offset Slowing Demand And Rising Competition Risk

Taiwan Ratings expects the island's top 50 corporates to face weakening profitability and credit profiles over the next 12 months. The sluggish global recovery, China's cooling economy, rising Chinese technological competition, and lingering over-capacity in some Chinese commodity sectors all hold the potential to diminish the creditworthiness of Taiwan's largest corporates. In addition, the island's transportation cyclical sector is particularly vulnerable to economic downturns and players have the weakest business and financial risk profiles among the 50 corporates we surveyed.

Despite the challenging operating environment, we expect Taiwan's largest corporates to mostly sustain their financial strengths during the next one to two years, supported by their generally high cash balances and ample liquidity in Taiwan's banking sector. The key to maintaining or even improving their credit profiles rests on several factors, among which we believe the most critical are the potential to sign free trade agreements with other countries, especially with China, better product differentiation, and building technology barriers that restrict future competition.

Related Criteria And Research

Related Criteria

- **Corporate Methodology,** www.standardandpoors.com, Nov. 19, 2013
- **Corporate Methodology: Ratios And Adjustments,** www.standardandpoors.com, Nov. 19, 2013

Related Research

- **Sector Review: China's Emerging High-Tech Sector Won't Significantly Dampen Regional Competitors' Medium-Term Creditworthiness,** www.taiwanratings.com, Sept. 1, 2015
- **Sector Review: Taiwan's Top Corporate Conglomerates Can Manage Their Growing Financial Risks,** www.taiwanratings.com, Sept. 1, 2015
- **Sector Review: Taiwan's Telecom Firms Could Be Dialing Up Their Acquisition Activity To Boost Revenue,** www.taiwanratings.com, Sept. 1, 2015
- **Asia-Pacific Credit Outlook 3Q 2015: Downgrade Risk Eases In The Near Term, Yet Latent Concerns Remain,** www.globalcreditportal, July 15, 2015
- **Credit Conditions: Navigating A Delicate Balance In Asia-Pacific: China Growth, Credit Risk And Increased Market Volatility,** www.globalcreditportal, July 13, 2015
- **Economic Research: Asia-Pacific Could Be Entering A Steady State Of Slower Growth,** www.globalcreditportal, July 8, 2015

Under Taiwan Ratings' 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.

Sector Review:

Taiwan's Top Corporate Conglomerates Can Manage Their Growing Financial Risks

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Major corporate conglomerates in Taiwan are showing their willingness to expand, but the risk of rising financial leverage could weaken their credit quality. Group expansion is mostly taking place through subsidiaries because the parents' core businesses have largely matured in the domestic market or face various constrains to grow further. As a result, Taiwan Ratings Corp. believes the creditworthiness of Taiwanese corporate entities under major conglomerate groups is often linked to the parent's strategic plans.

Higher capital spending over the past few years has pushed up conglomerates' debt level. These range from the **Formosa Plastics Corp.** group's steel mill project in Vietnam, **Far Eastern New Century Corp.** (FENC) group's 4G license costs and related investment and **China Steel Corp.** group's capacity additions, to Evergreen group's fleet expansion and **Uni-President Enterprises Corp.** and Yulon Motor groups' expansion in China. We believe conglomerates' expansion plans could result in higher financial risks if the investment returns do not lead to improved profitability or if the conglomerates fail to monetize part of their assets or investment holdings to reduce their growing financial leverage.

Overview:

- Taiwan's large corporate conglomerate groups have the tools to manage their rising financial leverage.
- Group expansion strategies have a clear influence on a subsidiary's credit profile.
- Tech and non-tech conglomerates have different strategies for growth.

Taiwan's Leading Conglomerates Have Diverse Credit Strengths And Weaknesses

The conglomerates reviewed in this study have diverse business risk and financial risk profiles (see table 1). We assess the key credit strengths of Taiwan's top conglomerates as:

- Established market positions in their respective sectors.
- Business scale and product diversity are generally in line with their global peers'.
- Operating efficiency is generally stronger thanks to good management expertise or

leveraging operations in China.
- A track record of generally good operating performance.
- Profitable but varies according to industrial sector.
- Financial risk profiles are in line with the average of Taiwan's top 50 corporates.
- Solid banking relationships and generally low interest costs.
- Good asset disposal capabilities, including land holdings and equity investments.

By contrast, we view the key credit weaknesses as:
- Reliance on the Taiwan or the Greater China regional market; Taiwan's market is mature, whereas the Chinese market is increasingly competitive.
- Commodity companies face expansion constraints in Taiwan due to environmental protection concerns.
- Long-term disadvantages from not signing more free trade agreements.
- Rising competition from Chinese peers across all sectors.
- Risks from investing in overseas markets or in other business lines.
- Rising financial leverage.

Table 1

Taiwanese Conglomerate Companies' Business And Financial Risk Profiles

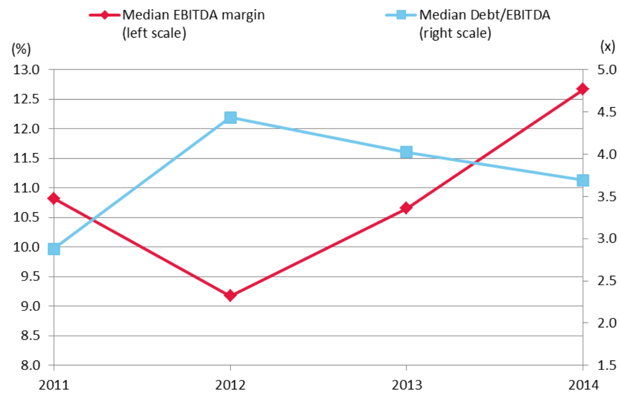
Company	Sales ranking in 2014	Business risk profile	Financial risk profile
Formosa Petrochemical Corp.	5	Strong	Modest
Uni-President Enterprises Corp.	14	Strong	Modest
AU Optronics Corp.	15	Satisfactory	Modest
Formosa Chemicals & Fibre Corp.	16	Strong	Modest
China Steel Corp.	17	Strong	Intermediate
Far Eastern New Century Corp.	24	Strong	Intermediate
Formosa Plastics Corp.	27	Strong	Modest
President Chain Store Corp.	29	Excellent	Minimal
Hotai Motor Co. Ltd.	35	Strong	Minimal
Evergreen Marine Corp. (Taiwan) Ltd.	36	Fair	Significant
Qisda Corp.	39	Fair	Intermediate
Eva Airways Corp.	40	Fair	Intermediate
Yulon Motor Co. Ltd.	48	Fair	Minimal
Far EasTone Telecommunications Co. Ltd.	49	Strong	Minimal
Dragon Steel Corp.	50	Satisfactory	Significant

Note: For an entity to belong to a conglomerate, we require it to meet one of the following criteria: (1) The parent and subsidiaries are all in the top 50 list, which is based on revenue in 2014, such as the Formosa Plastics group, Uni-President group, Far Eastern New Century (FENC) group, and China Steel group; (2) The group members have cross shareholdings and are in the top 50 corporate list, such as the Formosa Plastics group, BenQ group, and Evergreen group; (3) The parents are in the top 50 list and its subsidiaries are rated by either TRC or S&P, such as Hotai Motor and Yulon Motor. Source: Company data, Taiwan Ratings Corp.'s estimates.

Key Financial Ratios Record The Uneven Effects Of Expansion

Based on our median analysis, the debt-to-EBITDA ratio of Taiwanese conglomerate groups improved over the past two year, largely as the result of improving profitability (see chart 1). Lower material prices for the China Steel group, lower fuel cost for the Evergreen group, and better market conditions for BenQ group all contributed to improving margins.

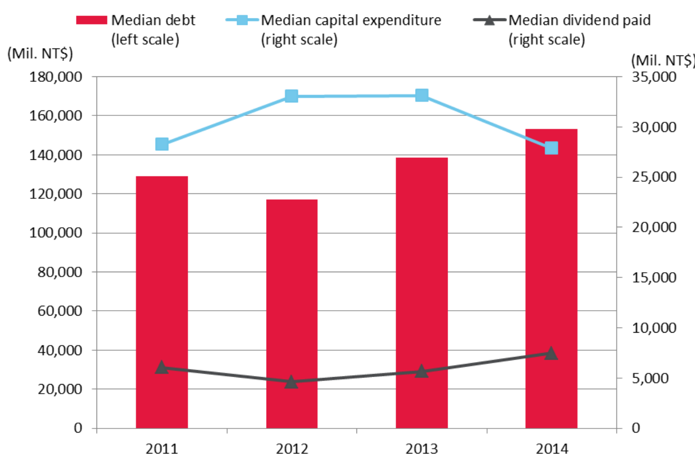
Chart 1
Taiwan Top Conglomerates' Debt And Profitability Ratios



Source: Company data, Taiwan Ratings Corp.'s estimates.

Conversely, conglomerates' debt has increased over the past few years, due to moderately high capital spending (see chart 2). This includes the Formosa Plastics group's Vietnamese steel mill project, FENC group's 4G related investment in network construction and license acquisition, China Steel group's capital investments (**Dragon Steel Corp.'s** expanded blast furnace capacity), Evergreen group's investment in more fuel efficient planes and vessels, as well as Uni-President and Yulon Motor group's expansion in China. However, we expect non-tech corporate groups to be more conservative in their expansion plans over the next two years, given the current regional oversupply of non-tech goods, a slowdown in China's economic growth, and weakened corporate financial risk profiles.

Chart 2
Taiwan Top Conglomerates' Median Debt, Capital Expenditure & Dividend Paid



NT$-New Taiwan dollar. Source: Company data, Taiwan Ratings Corp.'s estimates.

High-Tech Corporate Groups Tend To Spin-off To Meet Market Changes

Conglomerate group companies in our Taiwan top 50 survey belong mostly to the non-tech sector. These range from commodity chemical, steel, branded non-durable and retailing, to telecom, transportation and auto manufacturing, with the exception of the high-tech BenQ group (**AU Optronics Corp.** and **Qisda Corp.**).

In our assessment, the non-tech companies in the top 50 generally possess established market positions in their respective sectors. Indeed, some have successfully built up vertical integration business lines (such as the Formosa Plastics group), while others have created diversified business portfolios, (such as FENC). However, we believe non-tech firms' credit profiles could come under threat from the companies' overseas expansion strategies or during the initial phase of entering a new sector. This is because of the new and unfamiliar risks on entering new business environments including usually higher country risk, different industry risk, new competitive dynamics, customer and supplier relationships, and operation risks. Moreover, the higher capital expenditure in the early stage of expansion would generally be made at the expense of rising financial leverage.

Tech companies often spin-off individual departments or business units to adapt to the industry's rapidly changing structure as a result of shortened business and product cycles. This has been the case for **ASUSTeK Computer Inc.** and **Pegatron Corp.**, as well as **Acer Inc.** and **Wistron Corp.** Large technology groups often find it difficult to improve margins, pursue growth, or expand market share as competition rises. Spin-offs can allow an entity, branch, or subsidiary to re-focus on its core business and be better positioned for future success. Moreover, the strong financial risk profiles of high-tech firms, including a strong balance sheet, relatively high cash balance, and good access to the local banking system, further support the choice to spin-off business units or pursue other structural changes including mergers and acquisitions.

However, spin-offs are less common in the non-tech sector, due to the relatively more stable nature of non-tech industries. In addition, Taiwan's large non-tech corporate groups have focused on internal organic growth instead of pursuing major acquisitions over the past years. One result of this has been a rising debt level due to moderately high capital spending on core business growth or the pursuit of a more diversified business portfolio. Nonetheless, we expect large non-tech groups to pursue relatively conservative expansion plans over the next few years, aside from completing ongoing expansion projects. We base this on our view of general oversupply in the Greater China region, China's slowing economic growth, and corporates' weakened financial risk profiles.

To Consolidate, Or Not To Consolidate, That Is The Question

In our view, the structure and actions of a parent group can have a significant impact on our determination of the credit rating on an individual group entity. This is because the creditworthiness of the parent group (group credit profile; GCP) provides a better picture of the entity's unique strengths and weaknesses, and the group's consolidated financial report is critical to assess its financial risk profile. The group status under the group credit profile for rated entities is shown in table 2, as follows.

Table 2

Group Status Of Conglomerate Entities Within Taiwan's Top 50 Corporates		
Group	Subsidiary Name	Group Status*
Formosa Plastics Group	Formosa Plastics Corp.	Core
	Nan Ya Plastics Corp.	Core
	Formosa Chemicals & Fibre Corp.	Core
	Formosa Petrochemical Corp.	Core
	Formosa Heavy Industries Corp.	Strategically important
	Mai-Liao Power Co.	Strategically important
	Formosa Taffeta Co. Ltd.	Moderately strategic
	Formosa Plastics Corp. U.S.A.	Moderately strategic
Uni-President Group	Uni-President Enterprise Corp.	Ultimate parent, core
	Uni-President China Holdings Ltd.	Core
Hotai Motor Group	Hotai Motor Co. Ltd.	Ultimate parent, core
	Hotai Finance Corp.	Core
	Hotai Leasing Corp.	Core
Yulon Motor Group	Yulon Motor Co. Ltd.	Ultimate parent, core
	Taiwan Acceptance Corp.	Core
FENC Group	Far Eastern New Century Corp.	Ultimate parent, core
	Far EasTone Telecommunications Co. Ltd.	Strategically important, insulated
China Steel Group	China Steel Corp.	Ultimate parent, core
	Dragon Steel Corp.	Core

*Based on Taiwan Ratings Corp.'s assesment under Standard & Poor's Ratings Services Corporate Criteria: Group Rating Methodology, Nov. 19, 2013. Source: Taiwan Ratings Corp. estimates.

According to International Accounting Standards, the key issue for consolidating a financial report is whether or not the parent has controlling power over a subsidiary. "Control" refers to the ability to dictate a group member's strategy and cash flow, and generally threshold for ownership is 50%; however, control maybe present even if ownership is below 50% when the parent group:

- Has over half of the voting rights through agreements with other shareholders,
- Has authority over the business and financial strategy due to regulations or agreements in place,
- Has the right to appoint most board members, or
- Has majority control of the voting rights on the subsidiary's board.

Large Taiwanese business groups are usually family-owned businesses and tend to exercise control using large shareholders' individual holdings and/or cross-holdings among their subsidiaries. Cross-holding has several advantages, but mainly ensures that ownership remains over group members and maintain wider banking relationship, while to avoid the requirement of financial consolidation in accounting. As a result, for those groups which are not required to prepare consolidated financial reports under international accounting standards sometimes make it difficult for investors to clearly understand the group credit profile.

Non-Consolidated Subsidiaries And Idle Assets Could Share A Group's Financial Burden

In our view, corporate groups can exercise and achieve their expansion goals through direct and indirect influence over their non-consolidated subsidiaries' business strategies and financial policies, depending on the complexity of the group structure. This influence often includes leveraging a subsidiary's balance sheet, which can alleviate the group's financial leverage, while at the same time negatively affecting the subsidiary's financial risk profile. In addition, groups can dispose of part of their shares in consolidated or non-consolidated listed subsidiaries to reduce the financial burden of expansion, while still maintaining a similar level of "control" over the subsidiaries. Moreover, Taiwan's corporate conglomerates generally have large idle or unused land or factories following their part relocation of production capacity to China. As a result, the disposal or development of land assets also could generate additional cash flow for the group.

A good example of this shared burden is the Formosa Plastic group's overseas steel mill investment project in Vietnam, which required capital expenditure of about US$10 billion. To lessen the impact on the core companies' financial risk and business risk profiles, the group has committed to reducing the core companies' holding in Vietnam-based **Formosa Ha Tinh Steel Corp.** to 49%, by transferring part of the total investment to non-consolidated subsidiaries--**Formosa Heavy Industries Corp., Mai Liao Power Corp.,** and **Formosa Plastics Corp. U.S.A.**, as well as external strategic partners, such as China Steel. As a result, we expect the subsidiaries' potential need to provide capital injections or debt guarantees for the steel mill project to negatively affect their financial risk profiles over the next three years. But through the efforts of joint-investment, Formosa Plastics group can reduce its financial investment. Moreover, the group has announced its intention to dispose of part of its shareholdings in key core company **Formosa Petrochemical Corp.**, held through three other core companies--**Formosa Plastics Corp.**, **Nan Ya Plastics Corp.**, and **Formosa Chemicals & Fibre Corp.**--to manage the firms' financial leverage while maintaining their control over Formosa Petrochemical.

Land properties are valuable to Taiwan, and the non-tech conglomerates generally own their idle land properties to support their finances. FENC and Yulon Motor groups have displayed their intentions to develop idle lands near Taipei City by transforming them into residential or commercial properties, which will help the groups to generate cash flow. Nevertheless, such development projects usually take several years to complete. In addition, the cash flow generated from the projects may not be sufficient to reduce the group's financial leverage, especially when the projects are designed for leasing rather than one-off sales.

Conglomerate Groups Manage Their Financial Leverage With Discretion

Our study shows that the top conglomerate groups in Taiwan have raised their financial leverage to meet their business expansion needs over the past several years. But before they see any return on their capital spending, some groups have utilized their subsidiaries, both consolidated and non-consolidated entities, to share the financial burden. For some groups, asset disposals and divestments have provided a much needed source of cash; while for others, funding has come from leveraging idle land and property holdings to develop into residential or commercial properties. We believe that in general, Taiwan's conglomerate groups and particularly those in the non-tech sector, have good ability to manage their rising financial leverage throughout the course of business expansion. But the greatest challenge is whether conglomerate groups can resist the prevailing low interest environment in Taiwan and avoid piling up unmanageable debt.

Related Criteria And Research

Related Criteria

- **Group Rating Methodology**, www.standardandpoors.com, Nov. 19, 2013
- **Corporate Methodology,** www.standardandpoors.com, Nov. 19, 2013

Related Research

- **Sector Review: Taiwan's Top Corporates Have The Financial Strength To Ride Out The Current Economic Slowdown**, www.taiwanratings.com, Sept. 1, 2015

Sector Review:
Taiwan's Telecom Firms Could Be Dialing Up Their Acquisition Activity To Boost Revenue

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Taiwan's saturated telecom market is forcing operators to seek new business opportunities. Mergers and acquisitions could be one of the fastest ways to achieve this in what has become an intensely competitive market served largely by an oligopoly of players. Taiwan's telecom operators face increasing difficulties to expand revenue by raising tariffs, despite continuous investment in service upgrades. Regulatory interventions in recent years and additional price competition have thinned margins with little room for near-term improvement.

Taiwan Ratings Corp. believes consolidation with smaller telecom players or acquisitions involving the cable TV sector offer a more immediate solution to accelerate revenue growth without overly hurting long-term credit profiles, particularly for operators with solid balance sheets. Mergers and acquisitions could help operators to diversify revenue streams from more stable sources while also providing long-term growth opportunities and partly offset the effect of intensifying competition as the industry further consolidates. Nonetheless, we expect the three main players to maintain heavy capital investments in next-generation services to preserve their competitive advantages in the pursuit of mid-to-long-term revenue growth. Meanwhile, second-tier players are also likely to seek opportunities to strengthen their market position and catch up with the leaders.

Overview:

- Intense price competition could constrain improvement in organic revenue streams in the near term.
- Substantial capital investments, particularly to deploy 4G services also constrain players' free operating cash flow but support mid-to-long term revenue prospects.
- Mergers and acquisitions could accelerate revenue prospects and solidify business positions without necessarily jeopardizing credit quality, depending on a company's financial strength.
- Regulatory restraints are the key risk in the feasibility of potential acquisition targets.

Service And Business Expansion Could Weaken Creditworthiness

On the one hand, we expect operators' credit metrics to weaken moderately over the next one to two years due to likely further heavy investments in license acquisitions and the resultant capital expenditure to roll out these new services. Such investments are necessary for leading operators including **Chunghwa Telecom Co. Ltd.**, **Taiwan Mobile Co. Ltd.**, and **Far EasTone Telecommunications Co. Ltd.**, to maintain their current competitive advantages, while for second-tier players such as **Taiwan Star Telecom Corp. Ltd.** and **Asia Pacific Telecom**, there is also a need to gain market share through increased investment in new product offerings.

On the other hand, investments in M&A activity could also lead to an immediate and significant rise in an operator's debt levels and weaken its credit metrics, but may have diverse implications for its business risk profile, given the varied nature of potential acquisition targets. For example, a merger between smaller telecom operators may help to improve their weak market position and accelerate the goal of achieving economies of scale. We believe smaller players are less likely to be of interest to leading telecom operators because these smaller, second-tier players are mostly loss-making and merging with them would create limited synergies as a result of their weak market positions. In our view, cable TV companies offer a far more attractive target for telecom operators, providing revenue diversity and greater opportunity for long-term business expansion.

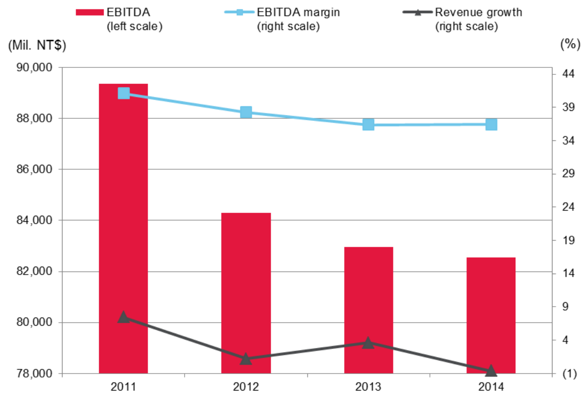
History shows that M&A activity also has the potential to materially affect the acquiring company's credit metrics, given the high price-to-EBITDA ratios in previous such transactions here in Taiwan. Nonetheless, there are also benefits for telecom operators to diversify their revenue base by acquiring more stable business divisions. M&A activity also offers good positioning for telecom companies to capture future growth opportunities under the growing trend of digital convergence (the merging of information technology, telecom, consumer electronics, and entertainment industries into one conglomerate).

Substantial Short-term Revenue Gain Or Margin Improvement Are Unlikely

In our view, Taiwan's telecom operators are unlikely to regain substantial revenue growth organically over the next several years. This is mainly due to strong market pressure on wireless voice and text revenue, fierce competition in the saturated market, established consumer behavior, and to a lessening extent the impact of regulatory intervention. Taiwan's mobile telecom industry has reached a high degree of saturation with a smartphone penetration rate at 78% according to a recent survey by Google Inc. Given the limited room for growth in the subscriber base, telecom operators are striving to implement service upgrades that would help improve the average revenue per user (ARPU).

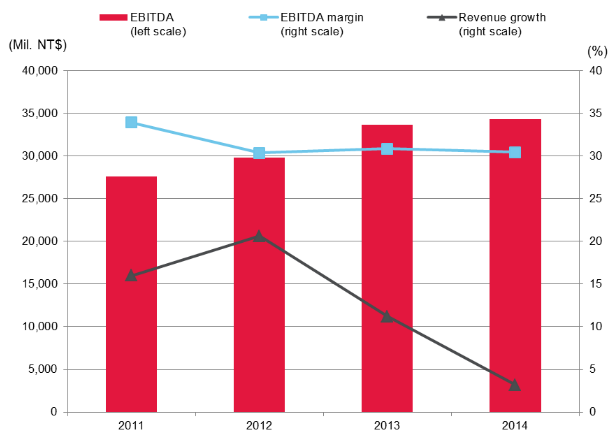
We believe telecom operators will struggle to gain meaningful revenue growth from a potential ARPU uplift or improving margin in the near term, despite the likelihood that consumer adoption of fourth generation (4G) services will continue to rise rapidly (see charts 1, 2 and 3). In our view, consumers' lower acceptance of tiered-pricing along with fierce competition between leading players increases the difficulty for operators to benefit from 4G. This is despite the fact that data consumption by 4G users is about two times that of 3G users. Intense competition among leading players is also likely to contain margin improvement across the industry because we expect players to extend their unlimited data plan promotions and increase handset subsidies to accelerate 4G service uptake. These factors will restrain EBITDA growth and extend the payback period for operators' significant investments on 4G license acquisition and network build-up.

Chart 1
Chunghwa Telecom Co. Ltd. Key Financial Ratios



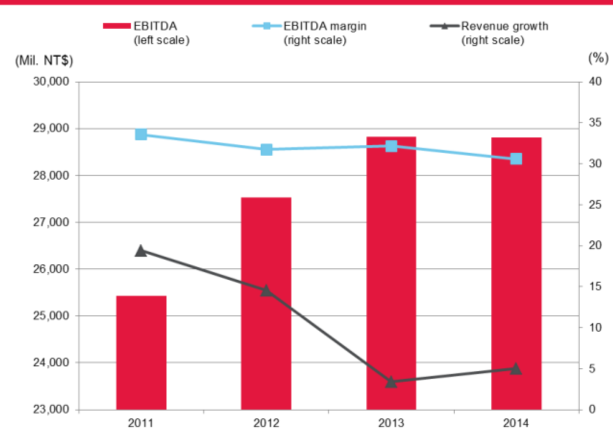
Source: Company data; Taiwan Ratings Corp.

Chart 2
Taiwan Mobile Co. Ltd. Key Financial Ratios



Source: Company data; Taiwan Ratings Corp.

Chart 3
Far EasTone Telecommunications Co. Ltd. Key Financial Ratios



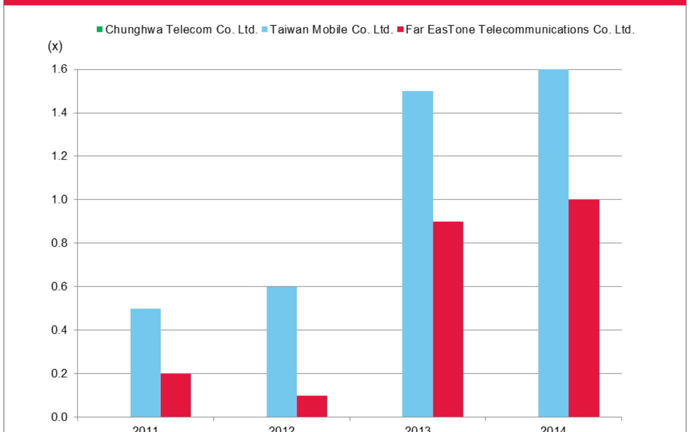
Source: Company data; Taiwan Ratings Corp.

We believe telecom operators in Asia Pacific are unlikely to restore their profitability to the level seen three to four years ago, despite the marginal revenue growth derived from new-generation service offerings. Operators throughout the region, including those in Australia, Hong Kong, Japan, Singapore, and South Korea, are investing heavily into 4G networks to boost mobile revenues. However, we believe the sector's weakening profitability along with stiffening competition could result in weaker credit quality for some operators, as evidenced by Standard & Poor's Ratings Services recent downgrade of **Nippon Telegraph & Telephone Corp.** (NTT) to 'AA-' from 'AA' in January 2015. The limited revenue growth and falling margins in Taiwan's telecom sector are in line with those in regional telecom markets.

Firms Maintain High Capital Investment Despite Weakening Financials

We expect operators' capital investments for 4G network deployment and fixed-line services to remain high and possibly trend upward over the next two years. This would be represented by a ratio of capital expenditure to revenue at 10%-15%, which could rise to 20%-25% taking into account further 4G spectrum acquisition costs. Operators will need to maintain such high investment to achieve persistent revenue growth and to solidify their competitive strengths amid rising competition. We expect companies' strong internally-generated cash flows to largely support these high investments; nevertheless, we believe the leading players' financial strengths and solid balance sheets will weaken in due course. The question of how much will depend on how fast debt increases due to 4G license acquisition costs or if investment returns are lower-than-expected.

Chart 4
Adjusted Debt/EBITDA Ratios For Taiwan's Top Three Telecom Companies



Note: The top three telecom firms are selected by revenue in 2014. Chunghwa Telecom's adjusted debt/EBITDA was zero in all four years. Source: Company data; Taiwan Ratings Corp.

We believe that aside from a peak in capital expenditure for the rollout of 4G serves over the past one to two years, spectrum auctions continue to represent a significant portion of operators' capital outlay. Auctions held for 4G licenses in 2013 ended considerably higher than our expectation, and lifted the debt-to-EBITDA ratios for Taiwan Mobile from 0.6x to 1.5x and for Far EasTone from 0.1x to 0.9x, respectively (see chart 4, above). Conversely, Chunghwa Telecom's debt-to-EBITDA ratio has remained comfortably at 0x as of the end of 2013. However, we don't expect operators to pay off their huge investments in the near term despite their rising debt leverage. This is because fierce competition continues to limit improvement in EBITDA.

We expect the costs of acquiring 4G spectrum licenses in the next round of bidding to be lower than those in the first round in 2013. However, capital investments to support network buildup will remain significant with restrained future earnings improvements. Therefore we expect the leading operators to experience diminishing financial buffers over the next few years mainly as a result of a slow payback from their investments. The impact of future capital expenditures in addition to other capital outflows has led us to take various rating actions on telecom firms and their corporate parents. These include our outlook revision on Taiwan Mobile to "negative" from "stable" in June this year, reflecting our view of the company's diminishing financial buffer, cash outflow for spectrum acquisitions from **Ambit Corp.**, and likely rising debt from upcoming 4G license bidding over the next few years (see Related Research).

We have also lowered our rating on Far EasTone's parent, **Far Eastern New Century Corp. (FENC),** and as a result, lowered the rating on the telecom operator in June 2015, to reflect our view of group's rising debt level partly as a result of upcoming 4G license bidding (see related research). The only exception among the three largest operators is Chunghwa Telecom, on which we have taken no rating actions this year because we expect the company's net cash position and very low leverage to provide sufficient cushion for lower investment return in the short term and to support potential acquisitions without materially jeopardizing the company's credit profile.

Operators Begin Exploring M&A Opportunities To Boost Revenue Sources

We expect telecom operators to become increasingly active in mergers and acquisitions or strategic investments in Taiwan's telecom sector over the next few years. This is in line with the trend in other countries in Asia Pacific. We also expect regional peers such as Singapore Telecommunications Ltd. to continue investments in high-growth market segments including digital life business. M&A activity in Taiwan, however, is likely to flow less smoothly as overseas, due to the constraint of local regulations and the high price multiples (of price to EBIDTA) historically associated with M&A transactions.

Despite regulatory barriers, Taiwan's telecom operators are now actively searching for ways to diversify their business scope amid the increasingly saturated local telecom market. In our view, cable TV companies are the most likely acquisition targets for telecom operators because of the potential for industry synergies through service convergence. These include service bundling, exploring new revenue areas, and enriching cross platform content. Nonetheless, we still expect to see further consolidation among telecom players over the next few years. This is because smaller operators recognize the importance of enhancing their competitive advantages through mergers to rapidly establish their network. The sector's top three players could also be interested in acquiring smaller operators for their spectrum holdings as well as market share. In our view, these consolidations are likely to be positive for larger players but potentially negative for the remaining smaller players left in an increasingly consolidated and competitive market.

In our opinion, the uplift that M&A activity or strategic alliances could bring to the acquiring firm's business risk profile depends on the size of the targets' main operations, market position, and resultant synergies. However, the benefits of mergers or alliances may only materialize in the mid-to-long term rather than having an immediate effect, while at the same time these investments could cause an immediate significant rise in the acquiring companies' debt levels. This was the reason behind our outlook revision on Far EasTone to "negative" from "stable" in August, to reflect the risk that Far EasTone's bond investment in a special purpose vehicle that would invest in a cable TV network may weaken Far EasTone and FENC's financial risk profile. We could lower the rating on Far EasTone if the debt investments materialize.

Regulations Are A Key Barrier For Mergers & Acquisitions

We expect the telecom regulator to lessen its role in price setting over the next few years. Nonetheless, we believe regulatory risks will remain the key issue for telecom players to pursue mergers and acquisitions particularly in the cable TV sector, from the three leading operators to smaller players such as **Asia Pacific Telecom**. This is because Taiwan's Radio And Television Act prohibits political parties, government agencies and the military from investing in the local media industry, including cable TV firms, and yet several telecom operators such as Taiwan Mobile and Far EasTone are in small part owned by government-related funds (e.g. pensions funds) due to their status as blue chip listed companies in Taiwan.

In our view, legal amendments that could raise the ownership cap in the media sector are unlikely to materialize over the next one to two years. This will restrain telecom operators from directly owning cable TV operators for the foreseeable future. But this has not stopped telecom operators from preparing for positive legal changes in the long-term. We believe that if the regulator raises the cap on government ownership in media such that Taiwan Mobile and Far EasTone are allowed to directly invest in the sector, then the most likely acquisition targets are **Kbro Co. Ltd.** and **China Network Systems Co. Ltd.** (CNS). Telecom operators have so far pursued indirect investment in these entities such as taking the main shareholder positon through a private investment company or through bond investments (as is the case for Far EasTone investing in CNS, which is awaiting regulatory approval).

Conversely, Chunghwa Telecom, which is over 30% government owned, faces more stringent obstacles to invest in the cable TV sector because we believe it's highly unlikely that constraints on government ownership in the media will be removed. However, Chunghwa Telecom has more financial resources to fund potential investments than any of its domestic competitors. Therefore, we expect the company to enrich its media business and diversify its revenue base through a variety of other measures. These include continuously developing the delivery of television services via the Internet (commonly known as IPTV), expanding the company's enterprise business such as information and technology communication (ICT) solutions and cloud business, and making overseas investments.

We expect regulatory hurdles to remain a key consideration for Taiwanese telecom operators when pursuing inorganic growth through investments. We also believe that capable financial strengths and financial planning will be important factors deciding the effect of an operator's expansion strategy on its credit quality.

Related Criteria And Research

Related Research

- **Sector Review: Taiwan's Top Corporates Have The Financial Strength To Ride Out The Current Economic Slowdown**, www.taiwanratings.com, Sept. 1, 2015.
- **Media Release: Outlook On Far EasTone Telecommunications Revised To Negative On Likely Higher Debt From Bond Purchase; Ratings Affirmed**, www.taiwanratings.com, Aug. 5, 2015
- **Media Release: Rating On Far EasTone Telecommunications Lowered To 'twAA-' On Weaker Group Credit Profile; Outlook Stable**, www.taiwanratings.com, June 26, 2015
- **Media Release: Rating On Far Eastern New Century And Yuan Ding Investment Lowered To 'twA+' On Rising Financial Leverage; Outlook Stable**, www.taiwanratings.com, June 26, 2015
- **Media Release: Outlook On Taiwan Mobile Co. Ltd. Revised To Negative From Stable On Rising Financial Leverage; 'twAA/twA-1+' Ratings Affirmed**, www.taiwanratings.com, June 2, 2015

Sector Review:

China's Emerging High-Tech Sector Won't Significantly Dampen Regional Competitors' Medium-Term Creditworthiness

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Chinese manufacturers of technology products and components are rapidly widening their global market presence. Many high-tech firms have made firm inroads into the highly competitive domestic supply chain, backed by aggressive government support. Taiwan Ratings Corp. believes this development could pose a significant threat to more established technology companies in Asia. We expect the growth of Chinese technology firms to increasingly constrain the credit profiles of competitors throughout Asia, but the impact on individual players will depend on the level of their product differentiation, technological strengths, and business diversity. However, we do not expect significant deterioration in overseas firms' credit profiles, at least in the medium term.

In our view, China's enormous IT market, favorable government policies, and advancing technology capability will support continued expansion in the nation's technology sector, particularly for semiconductor and thin-film-transistor liquid crystal display (TFT-LCD) manufacturers. This is despite China's slowing economic growth in recent quarters. We also expect Chinese technology companies to be more aggressive in their overseas expansion amid slowing demand growth at home, which could trigger more intense competition and price deflation. Moreover, we expect China's branded technology firms' to foster a stronger local supply chain to support their rapid expansion, which could further add to competition in the regional technology supply chain.

Overview:

- China's branded technology hardware companies are making strong market share gains, which along with favorable government policies should help to strengthen the local supply chain over the next two to three years.
- The majority of rated high-tech firms in Asia will continue to benefit from scale advantages, product differentiation, technology leadership, and business diversity, but commoditized product manufacturers are likely to suffer from rising Chinese competition.
- Mobile device, TV and TFT-LCD panel makers face the highest competition risk from Chinese competitors, and other high-tech firms will see a low-to-medium effect on their business risk profiles.

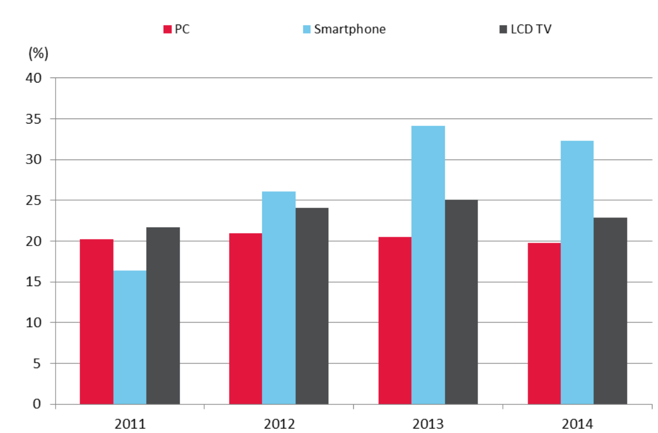
We expect established smartphone and TV manufacturers to come under increasing pressure from their low-cost Chinese competitors, as well as diminishing product and service differentiation, and Chinese players' brand advantage in their enormous home market. TFT-LCD panel makers could also experience oversupply and rising competition over the next two years because of aggressive expansion and the advancing technology capability of Chinese competitors. However, we believe Korean manufacturers **Samsung Electronics Co. Ltd.** and **LG Electronics Inc.** are unlikely to face immediate ratings pressure as Chinese competitors expand. This is because Samsung and LG's business diversity as well as scale and technology advantages should allow both companies to maintain their product differentiation over the next few years.

In addition, we expect major semiconductor companies and Japanese diversified electronics companies to avoid material competitive pressure over the next two years because of high market and technology barriers to new entrants. However, some players with a smaller operating scale or concentrated business portfolio such as **MagnaChip Semiconductor Corp.** and **Sharp Corp.** could see their operations weaken over the next two years from direct and indirect Chinese competition in the already highly competitive electronics markets.

China's Technology Sector To Maintain Fast Growth Despite The Slowing Economy

We expect China's IT and consumer electronics companies to further expand their market share, particularly in emerging markets and China's domestic market, which will remain the world's largest over the next two years (see chart 1). This is based on our view of the strengthening technology capability and low cost structure of China's technology firms. In addition, we expect Chinese players to be more aggressive in their pursuit of overseas growth through pricing competition and more aggressive promotions amid slowing growth in domestic demand.

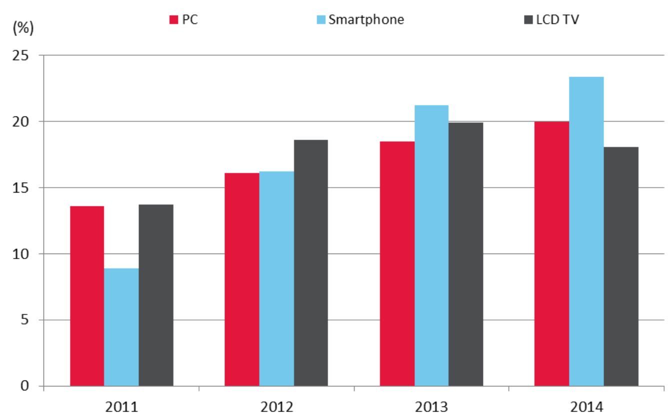
Chart 1
China's Share Of Global Demand For Major IT Products



LCD--Liquid crystal display. Source: IDC, Gartner, Displaysearch. © Taiwan Ratings Corp. 2015.

At present, China's high-tech firms remain largely constrained in the domestic market and have only achieved limited foreign sales. We expect China's consumer electronics markets, including TV and smartphone sectors, to slow down significantly in 2015 because of China's slowing economic growth and market saturation. Overseas acquisitions by Chinese firms should also help to increase their market share at home and abroad, such as the relatively recent acquisition by **Legend Holdings Corp.** of **International Business Machines Corp.'s** server business and **Google Inc.'s** Motorola Mobility smartphone business (see chart 2).

Chart 2
Global Market Shares Of Leading Chinese Brands



LCD--Liquid crystal display. Note: Chinese branded companies include: PCs--Legend Holdings Corp.; Smartphone: Huawei Technologies Co. Ltd., Legend Holdings Corp., ZTE Corp., Yulong Computer Telecommunication Scientific (Shenzhen) Co. Ltd., TCL Corp., and Xiaomi Inc.; LCD TV: TCL Corp., Hisense Group, Skyworth Digital Holdings Ltd., and TPV Technology Ltd.

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We believe the expansion of branded Chinese technology companies together with the Chinese government's supportive policies will spur faster development of the local hardware supply chain. China is the world's largest IT products manufacturing center and has a low cost structure, yet the country still imports the majority of key manufacturing components. We expect the Chinese government to further increase its support for the technology sector especially on semiconductor manufacturing. At the same time, we expect the government to reduce the nation's huge IT trade deficit via a number of measures. These include providing access to capital for expansion and acquisitions, offering direct subsidies on investment in technology development and cutting-edge facilities, as well as imposing national technology and security standards, anti-trust powers on foreign companies, and possibly import tariffs on key IT subsectors. China imported over US$210 billion worth of semiconductors in 2014.

The Chinese government has recently increased its support for local semiconductor manufacturers through a fund dedicated to semiconductor investments and government related entities. The fund worth Chinese renminbi (RMB) 120 billion was established in June this year and has already supported the local semiconductor by injecting capital into **Semiconductor Manufacturing**

International Corp. (SMIC). The government also provided support for local firms' overseas acquisitions, including **Jiangsu Changjiang Electronics Technology Co. Ltd.'s** (JCET's) acquisition of Singapore-based **STATS ChipPAC Ltd.** This is in addition to **Tsinghua Unigroup's** (a government owned investment holding company) privatization of **Spreadtrum Communications Inc.** and **RDA Microelectronics Inc.** in 2014. We believe the Chinese government could also use its influence in the development of the nation's technology sector and in the procurement strategies of major technology companies to promote the local supply chain. According to our studies, the Chinese government held substantial influence over nearly half of the country's top 100 high-tech companies in 2014 based on government ownership (see table 1).

Table 1

The Impact Of China's Growing Technology Sector On Rated Technology Companies*

Sectors	Impact on credit profile†	Rated technology companies in APAC excluding China	Peers among China's Top 100 technology corporates and significant other firms§
Branded smartphone, TV	Medium to high	Samsung Electronics Co. Ltd., LG Electronics Inc., Sharp Inc., Sony Corp.,	Huawei Technologies Co. Ltd., Legend Holdings Corp., ZTE Corp., TCL Corp., Yulong Computer Telecommunication Scientific (Shenzhen) Co. Ltd., Hasee Computer Co. Ltd., Cosun
Branded digital camera, office electronics, diversified and others	Low	Canon Inc.,Casio Computer Co. Ltd., Fujifilm Holdings Corp., Ricoh Co. Ltd., Panasonic Corp.	
TFT LCD (thin-film transistor liquid crystal display)	Medium-to-high	Samsung Electronics Co. Ltd., LG Electronics Inc., Sharp Inc.	BOE Technology Group Co. Ltd., Shenzhen China star Optoelectroincs Technology Co. Ltd. (CSOT), InfoVision Optoelectronics (Kunshan) Co. Ltd., Tianma Microelectronics, CEC Panda LCD Technology ††
TFT LCD components and materials	Low	Asahi Glass Co. Ltd.	Tunghsu Group Ltd.
Hardware components	Low-to-medium	FCI Asia Pte Ltd., Kingboard Chemical Holdings Ltd., Precision Capital Pte. Ltd., TDK Corp., Unimicron Technology Corp., Nan Ya Printed Circuit Board Corp.	Fujian Electronics and Information (Group) Co. Ltd., Goertek Inc., Shengyi Technology Co. Ltd., Shenzhen O-Film Tech Co. Ltd., Red Board Ltd.
Electronics manufacturing services	Low	Hon Hai Precision Industry Co. Ltd.	BYD Co. Ltd.
Seminconductor Equipment	Low	ASM Pacific Technology Limited	
Semiconductor foundry	Low-to-medium	Taiwan Semiconductor Manufacturing Co. Ltd., United Microelectronics Corp., MagnaChip Semiconductor Corp., Samsung Electronics Co. Ltd.	Semiconductor Manufacturing International Corp., Shanghai Huahong (Group) Co. Ltd.,
IDM and fabless	Low	Samsung Electronics Co. Ltd., Sony Corp.	Datang Telecom Technology Co. Ltd., China Resources Microelectronics Ltd., Spreadtrum Communications Inc. and RDA Microelectronics Inc., HiSilicon Technologies Co.
Memory	Low	Samsung Electronics Co. Ltd., SK Hynix Inc., Toshiba Inc.	Hitech Semiconductor Co. Ltd.**
Semiconductor assembly and testing	Medium	Global A&T Electronics Ltd., Stats ChipPac Ltd.	Nantong Huada Microelectronics Group Co. Ltd., Jiangsu Xinchao Technology Group Co. Ltd.
Software & IT Services	Low	Fujitsu Ltd., Infosys Ltd., Rolta India Ltd., Tata Consultancy Services Ltd., Wipro Ltd., NEC Corp.	Founder Group, Inspur Group Co. Ltd.

*Refers to corporates rated by Standard & Poor's Ratings Services or Taiwan Ratings Corp. § According to the compilation of China's top 100 technology corporates in 2014 by the Ministry of Industry and Information Technology of The People's Republic of China, published on July 14, 2015. † 'High' means more than two notches impact on credit quality, 'Medium' means one-to-two notches and 'Low' means zero to one notch impact according to Standard & Poor's rating defintion. **Hitech is SK Hynix's subsidiary in China. ††CEC Panda LCD Technology is 8% owned by Sharp.. Note: CSOT is a subsidary of TCL Corp. and HiSilicon is a subsidary of Huawei Technologies Co. Ltd. Source: Standard & Poor's., Ministry of Industry and Information Technology of The People's Republic of China.

Mobile Device, TV, And TFT-LCD Firms Are Most Vulnerable To Chinese Competition

We expect smartphone and TV makers to face the highest margin pressure among all high-tech subsectors over the next two to three years. Chinese competitors are making strong market share gains supported by their low-cost structure, diminishing product and service differentiation, and home turf advantage. In particular, we expect Samsung and LG to experience more margin pressure going forward. Samsung's share decline in China's smartphone market and weakening margins from its TV sales are significant indicators of such a trend. In addition, Chinese companies will gradually reap the benefits of investment in better technology and design, which could further increase competition in increasingly mature consumer electronics markets.

We believe that as Chinese firms gradually catch up in terms of technology they will exert increasing pressure on margins throughout the TFT-LCD and related sectors. Pricing pressures are likely to constrain operating performances over the next few years, given the aggressive capacity expansion by Chinese companies. Larger global competitors such as Samsung, LG, and Sharp will experience increasing competition in the already very competitive market, in our opinion. But larger firms' strengths in terms of better technology in small-to-medium sized TFT-LCD panels, large production scale, and the development of new technologies such as AMOLED (active-matrix organic light-emitting diode) displays could partly offset the growing competition risk if companies can maintain their leading technology edge.

In our view, Samsung and LG's business diversity and stronger brand names globally, help to partly offset the risk from China's rising technology sector. In addition, Samsung benefits from its scale advantages and integrated production models with strong semiconductor and component capability that enables the company to maintain its advantage in hardware development, despite a lack of significant differentiation in its software. We also expect LG to maintain its market share in global TV markets and remain a leading supplier of premium small-to-medium size panels over the next one to two years.

However, the tech sector's profitability could inevitably deteriorate in light of a growing potential for oversupply in the next two years, even if larger manufacturers could maintain their product differentiation through an increase in sales of technologically advanced product such as AMOLED screens. We believe Sharp is particularly vulnerable given its weaker cost structure and weakening technology position in TFT-LCD production. Aggressive expansion in China is also likely to increase overcapacity risk to a material level beginning in the second half of 2015. For example, two new 8.5 generation fabrication (fab) plants will begin ramping up production this year with more fab expansion to come in 2017 and 2018.

Rising Competition Has No Material Impact On Semiconductor Companies, For Now

We believe major semiconductor companies are unlikely to experience significant margin pressure over the next two years, given the high technology barriers to new entrants. The Chinese government has actively supported the development of a domestic supply chain through grants and better access to capital, as well as the formation of joint ventures with leading global companies. We expect China's IC design sector to grow stronger particularly in logic and communications semiconductors for smartphones and tablets, because of lower technology barriers in these subsectors. The growing IC design sector could in turn facilitate the foundry sector in China, in our view.

We expect leading foundry companies such as **Taiwan Semiconductor Manufacturing Co. Ltd.** (TSMC) and Samsung to maintain their leading edge, despite Chinese player SMIC's improving performance. We believe major Chinese IC designers will continue to rely on the advanced manufacturing capability of leading foundries such as TSMC for advanced products such as application processors. While the Chinese government's support for SMIC to build a partnership with **Qualcomm Inc.** should help SMIC advance its technology base, we do not expect the company to narrow its technology gap with TSMC and Samsung anytime soon. However, smaller players such as **MagnaChip Semiconductor Corp.** are likely to face growing operating pressure because their major Korean customers are struggling to maintain their market share. **United Microelectronics Corp.** is also likely to come under pressure if SMIC accelerates its developments of 28 nanometer process technology.

High technology barriers should prevent potential Chinese competition from posing a material threat to Asia-based memory chip companies over the next two to three years. We believe it is quite unlikely that Chinese companies will rapidly acquire advanced technology and build up the necessary scale through acquisitions to compete with established players in the medium term, given that leading technology in dynamic random access memory (DRAM) and NAND flash memory is controlled by just a few Korean, Japanese and US players. We believe JECT's recent acquisition of STATS ChipPAC will accelerate the development of advanced semiconductor assembly and testing in China, but is unlikely to materially change the structure of the outsourced semiconductor assembly and test industry over the next two years. This is because of the time needed to build up new customer relationships. However, small players such as **Global A&T Electronics Ltd.** will likely experience more competitive pressures because of the lower cost structure of Chinese players.

Restructuring Will Leave Japanese Electronics Firms Largely Free Of Direct Chinese Competition

We do not expect Chinese competition to have significant negative effect on Japanese diversified electronics companies over the next two years. This is because Japan's tech players have largely restructured their product mix and reduced their exposure to commodity type consumer electronics products (see related research). Japanese consumer electronics companies have switched their focus to infrastructure, energy, auto, and health care sectors that largely have limited direct competition from Chinese tech firms. This includes Sony's recent exit from China's smartphone market and Sharp's exit from the North America TV market. We believe these actions could reduce the business risk associated with such competitive product segments. In addition, the technology of high-end digital cameras, CMOS image sensors, and office electronics such as printers are tightly guarded by leading Japanese and US companies and no significant Chinese competition is likely to emerge within the next two years.

In addition, we believe China's IT services companies are unlikely to challenge Indian's stronghold in the IT services sector, given Indian companies' cost and language advantages in developed markets. The China government's primary focus remains to strengthen the nation's hardware capability to reduce its huge deficit from the import of key components. In addition, Japanese IT services companies, whose markets are largely concentrated in Japan, will continue to benefit from Japan's recovering economy and free of significant external competition.

EMS Companies Can Withstand Rising Competition

We believe existing electronics manufacturing services (EMS) companies can maintain a competitive edge and satisfactory margins against their Chinese rivals over the next one to two years. This is despite the rapid growth of a competing supply chain in China. In our view, Chinese companies still lack the scale economies, product development capability, and more importantly the integration into upstream component manufacturing that could help customers to shorten their design and production cycles. Nonetheless, competition from Chinese EMS companies could still pressure margins for their counterparts in Asia because of price competition. We expect other hardware component makers, such as for printed circuit boards (PCBs), to face a higher risk of margin erosion due to increasing competition. Leading companies such as **Unimicron Technology Corp.** have already experienced significant margin erosion from their sales of PCB used in smartphone applications, and have seen their overall profitability deteriorate substantially over the past two years.

Business Diversity, Technology Barriers, And Strong Market Positions Mitigate Near-Term Credit Risk

We expect the rise of China's technology sector along with its low cost structure and improving technology capability to increase pricing and margins pressures on many technology companies in Asia over the next two years (see table 2). This is particularly significant for products such as smartphones, TVs, TFT-LCD panels and some hardware components in which manufacturers find it increasingly difficult to maintain product and technology differentiation. However, we believe that most of the manufacturers can withstand the rising competition risk without material deterioration in their business risk profiles for now, supported by their technology leadership, strong market position, and business diversity. This includes players such as Samsung and LG that we believe are experiencing the most significant pressure from rising Chinese competition on their consumer electronics and TFT-LCD panel businesses.

Table 2

Ratings On Asian Technology Companies*

	Corporate credit rating	Outlook
Canon Inc.	AA	Stable
FUJIFILM Holdings Corp.	AA-	Stable
Samsung Electronics Co. Ltd.	A+	Stable
Taiwan Semiconductor Manufacturing Co. Ltd.	A+; twAAA	Stable
Alibaba Group Holding Ltd.	A+	Stable
Ricoh Co. Ltd.	A	Stable
Tata Consultancy Services Ltd.	A	Stable
Tencent Holdings Ltd.	A	Stable
TDK Corp.	A-	Stable
Asahi Glass Co. Ltd.	A-	Stable
Hon Hai Precision Industry Co. Ltd.	A-; twAA+	Stable
Infosys Ltd.	A-	Stable
Wipro Ltd.	A-	Stable
Panasonic Corp.	BBB+	Positive
Fujitsu Ltd.	BBB+	Stable
NEC Corp.	BBB	Stable
LG Electronics Inc.	BBB	Stable
Casio Computer Co. Ltd.	BBB	Stable
Sony Corp.	BBB-	Stable
Genpact Ltd.	BBB-	Stable
Semiconductor Manufacturing International Corp.	BBB-	Stable
SK Hynix Inc.	BB+	Positive
Kingboard Chemical Holdings Ltd.	BB+	Stable
ASM Pacific Technology Ltd.	BB+	Stable
STATS ChipPAC Ltd.	BB	Stable
Rolta India Ltd.	BB-	Stable
FCI Asia Pte Ltd.	BB-	Stable
Pactera Technology International Ltd.	BB-	Stable
iEnergizer Ltd.	B	Stable
Global A&T Electronics Ltd.	B-	Stable
Sharp Corp.	B-	Negative
MagnaChip Semiconductor Corp.	CCC+	Negative
United Microelectronics Corp.	twAA-	Stable
Unimicron Technology Corp.	twA+	Negative
Nan Ya Printed Circuit Board Corp.	twA+	Stable

*Rated by Standard & Pooor's Ratings Servicesand Taiwan Ratings Corp. as of Aug.28, 2015

Conversely, the business risk profiles of Asia hardware and semiconductor companies with concentrated business portfolios, small scale, or weaker technology such as Sharp, MagnaChip and Global A&T could weaken more significantly and elevate rating pressure over the next one to two years. In addition, we expect major Chinese high-tech firms to rapidly strengthen their technology and capacity through in-house developments or overseas acquisitions supported by favorable government policy, despite our anticipation of a limited competitive threat from such actions over the next one to two years. Nonetheless, a failure to strengthen technology leadership and innovation to sustain market shares could still drive margins lower and gradually weaken the business risk profiles of leading hardware companies, in our view.

Related Criteria And Research

Related Research

- **Sector Review: Taiwan's Top Corporates Have The Financial Strength To Ride Out The Current Economic Slowdown**, www.taiwanratings.com, Sept. 1, 2015
- **Japanese Electronics Companies Make Progress In Restructuring, If Unevenly--But Competition May Cap Profitability**, www.globalcreditportal.com, Dec. 5, 2014
- **Sector Review: Taiwan's IT Hardware Sector Faces Increasing Risk From Chinese Competitors,** www.taiwanratings.com, Sept.1, 2014

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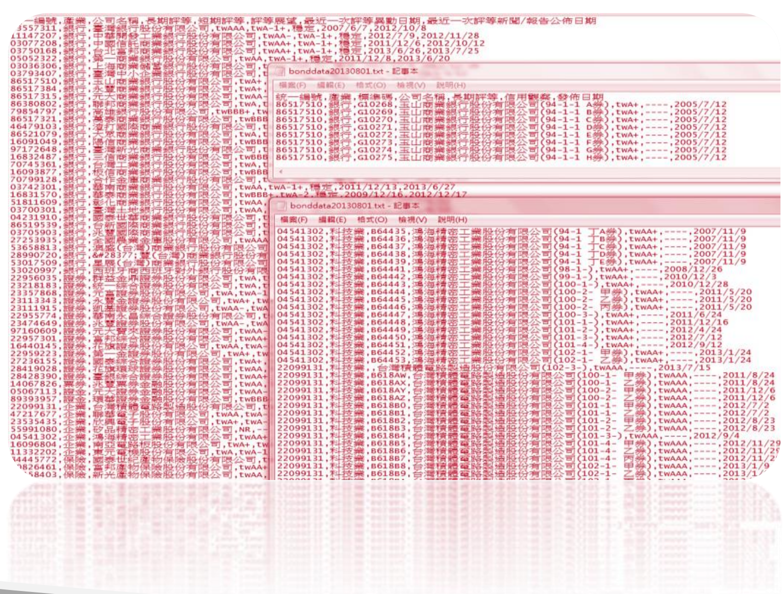

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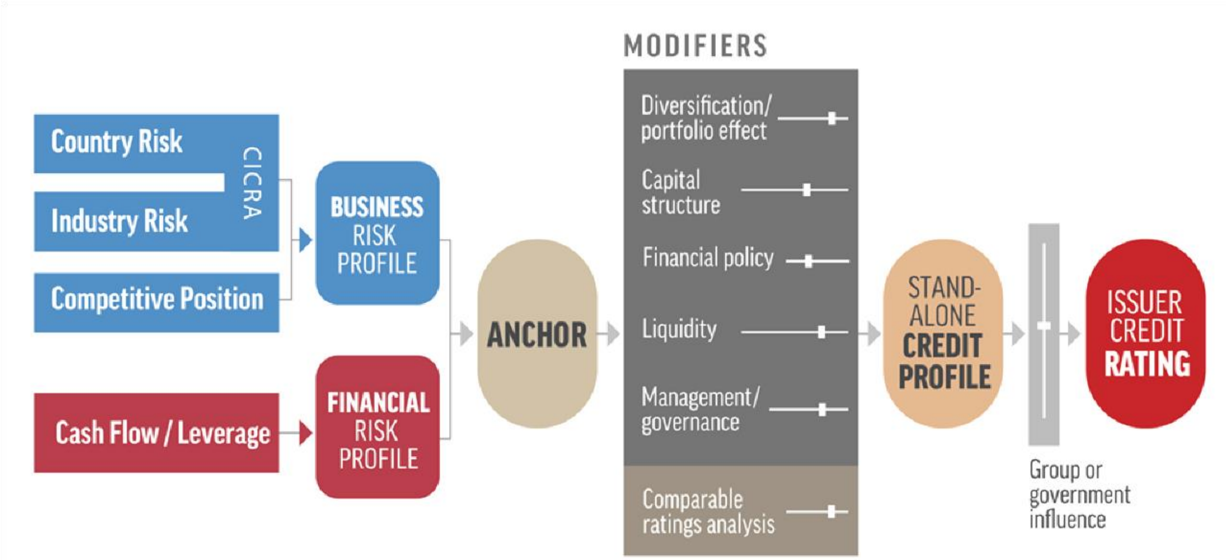
TAIWAN RATINGS' CORPORATE RATINGS CRITERIA FRAMEWORK



Note: Taiwan Ratings Corp. (TRC) uses Standard & Poor's Ratings Service's corporate ratings criteria framework (Corporate Methodology, published Nov. 19, 2013) to first arrive at our global scale rating estimate. We then use the mapping table below to arrive at the TRC scale ratings, as well as rating descriptors.

Standard & Poor's Global Scale Rating	TRC Scale Rating	
	Long-term rating	Short-term rating
A & above	twAAA	twA-1+
A- to A	twAA+	twA-1+
BBB+ to A-	twAA	twA-1+
BBB to BBB+	twAA-	twA-1 to twA-1+
BBB- to BBB	twA+	twA-1
BB+ to BBB-	twA	twA-2 to twA-1
BB+	twA-	twA-2
BB to BB+	twBBB+	twA-3 to twA-2
BB- to BB	twBBB	twA-3
B+ to BB-	twBBB-	twA-3
B+	twBB+	twB
B to B+	twBB	twB
B	twBB-	twB
B- to B	twB+	twB
B-	twB	twB
B-	twB-	twC to twB
CCC+	twCCC+	twC
CCC	twCCC	twC
CCC-	twCCC-	twC
CC	twCC	twC
C	twC	twC
R	R	R
SD	SD	SD
D	D	D

Source: Understanding Taiwan Ratings' Ratings Definitions, Nov. 18, 2014

TAIWAN'S TOP CORPORATES: BUSINESS AND FINANCIAL RISK PROFILES

Financial Risk Profile \ Business Risk Profile	Vulnerable	Weak	Fair	Satisfactory	Strong	Excellent
Minimal			50	6 26	3 13 18 23 27 28 30 34 37 44	10 22 32 39
Modest			1 24	4 11 25 46	2 5 7 19 20 21 29 31 36 41 43	
Intermediate			15 33 42	48	9 17 35	
Significant			8 16 45	12 14 38	47	
Aggressive			40 49			
Highly leveraged						

Note: Entities are placed alphabetically within each quadrant. Source: Taiwan Ratings Corp. estimates. © Taiwan Ratings Corp. 2015

For scatter graph legend please see the following page.

SCATTER GRAPH LEGEND								
No.	Entity	Business Risk Profile	Financial Risk Profile	No.	Entity	Business Risk Profile	Financial Risk Profile
1	Acer Inc.	Fair	Modest	26	INVENTEC Corp.	Satisfactory	Minimal
2	Advanced Semiconductor Engineering Inc.	Strong	Modest	27	Lite-On Technology Corp.	Strong	Minimal
3	ASUSTeK Computer Inc.	Strong	Minimal	28	MediaTek Inc.	Strong	Minimal
4	AU Optronics Corp.	Satisfactory	Modest	29	Nan Ya Plastics Corp.	Strong	Modest
5	Chang Chun Petrochemical Co. Ltd.	Strong	Modest	30	Pegatron Corp.	Strong	Minimal
6	Cheng Shin Rubber Ind. Co. Ltd.	Satisfactory	Minimal	31	Pou Chen Corp.	Strong	Modest
7	Chi Mei Corp.	Strong	Modest	32	President Chain Store Corp.	Excellent	Minimal
8	China Airlines Ltd.	Fair	Significant	33	Qisda Corp.	Fair	Intermediate
9	China Steel Corp.	Strong	Intermediate	34	Quanta Computer Inc.	Strong	Minimal
10	Chunghwa Telecom Co. Ltd.	Excellent	Minimal	35	Synnex Technology International Corp.	Strong	Intermediate
11	Compal Electronics, Inc.	Satisfactory	Modest	36	Taiwan Cement Corp.	Strong	Modest
12	CPC Corp., Taiwan	Satisfactory	Significant	37	Taiwan Mobile Co. Ltd.	Strong	Minimal
13	Delta Electronics Inc.	Strong	Minimal	38	Taiwan Power Co.	Satisfactory	Significant
14	Dragon Steel Corp.	Satisfactory	Significant	39	Taiwan Semiconductor Manufacturing Co. Ltd.	Excellent	Minimal
15	Eva Airways Corp.	Fair	Intermediate	40	Tatung Co.	Fair	Aggressive
16	Evergreen Marine Corp. (Taiwan) Ltd.	Fair	Significant	41	Tingyi (Cayman Islands) Holding Corp.	Strong	Modest
17	Far Eastern New Century Corp.	Strong	Intermediate	42	TPK Holding Co., Ltd	Fair	Intermediate
18	Far EasTone Telecommunications Co. Ltd.	Strong	Minimal	43	Uni-President Enterprises Corp.	Strong	Modest
19	Formosa Chemicals & Fibre Corp.	Strong	Modest	44	United Microelectronics Corp.	Strong	Minimal
20	Formosa Petrochemical Corp.	Strong	Modest	45	Walsin Lihwa Corp.	Fair	Significant
21	Formosa Plastics Corp.	Strong	Modest	46	Wistron Corp.	Satisfactory	Modest
22	Hon Hai Precision Industry Co. Ltd.	Excellent	Minimal	47	WPG Holding Ltd.	Strong	Significant
23	Hotai Motor Co. Ltd.	Strong	Minimal	48	WT Microelectronics Co. Ltd.	Satisfactory	Intermediate
24	HTC Corp.	Fair	Modest	49	Yang Ming Marine Transport Corp.	Fair	Aggressive
25	Innolux Corp.	Satisfactory	Modest	50	Yulon Motor Co. Ltd.	Fair	Minimal

Note: Risk profiles are based on TRC scale descriptors. Source: Taiwan Ratings Corp. estimates © Taiwan Ratings Corp. 2015

CREDIT HIGHLIGHTS OF TAIWAN'S TOP 50 CORPORATES

Acer Inc.

TRC business risk profile: **Fair**
TRC financial risk profile: **Modest**
Main sectors of operations: Branded personal computers (PCs)
Key credit considerations:

- Challenges to restructure its business.
- Established market position and brand recognition.
- Relatively high cash balance to support business restructuring.
- Conservative financial policy with light capital expenditure and minimal dividend payout.
- Limited position in mainstream mobile and wearable device markets.
- High business concentration in personal computers.

Advanced Semiconductor Engineering Inc.

TRC business risk profile: **Strong**
TRC financial risk profile: **Modest**
Main sectors of operations: Outsourced semiconductor assembly and testing services (OSATS)
Key credit considerations:

- Largest player in OSATS market.
- Stable profitability amid intensifying competition.
- Satisfactory operating efficiency supported by scale economies and integrated business model.
- Strong cash flow protection metrics due to stable cash generation.

ASUSTeK Computer Inc.

TRC business risk profile: **Strong**
TRC financial risk profile: **Minimal**
Main sectors of operations: Branded PC components, notebooks, tablets, servers and smartphones
Key credit considerations:

- Established market position and brand recognition.
- Increasing but still low exposure to mainstream mobile and wearable devices market.
- High business concentration in personal computers.
- Low leverage level with high cash balance.
- Conservative financial policy with moderately high dividend payout but light capital expenditure.

Note: Ratings are as of Aug. 28, 2015

AU Optronics Corp.

TRC business risk profile: Satisfactory
TRC financial risk profile: Modest
Main sectors of operations: Thin film transistor liquid crystal display (TFT-LCD) panels
Key credit considerations:

- Satisfactory market position as the world's fourth largest TFT-LCD manufacturer.
- Margin pressure from intensifying price competition.
- Adequate operating efficiency with improving cost structure.
- Improving cash flow coverage ratio due to recovering profitability despite rising capital expenditure.
- Very high volatility of cash flow coverage ratios caused by industry cyclicality and volatile profitability.

Chang Chun Petrochemical Co. Ltd.

TRC business risk profile: Strong
TRC financial risk profile: Modest
Main sectors of operations: Specialty chemicals
Key credit considerations:

- Strong domestic market position supported by robust R&D capability.
- Product differentiation helps defend the company from 'fierce competition in commodity chemicals and sustain profitability at a satisfactory level.
- Diverse product mix, wide product application, and low customer concentration.
- Moderate volatility in profitability due to exposure to volatile feedstock prices.
- Moderating capital expenditure helps to improve the company's credit ratios.

Cheng Shin Rubber Ind. Co. Ltd. (twA+/Stable/twA-1)

TRC business risk profile: Satisfactory
TRC financial risk profile: Minimal
Main sectors of operations: Tire manufacturing
Key credit considerations:

- Above-average profitability.
- Good product and customer diversity.
- Fair, albeit growing, market position.
- Moderately high industry risks.
- Sustainable free operating cash flow.
- Reduced debt leverage despite high capital expenditures.
- Adequate liquidity.
- Weaker technology and branding power relative to peers'.
- High volatility in its cash flow.

Note: Ratings are as of Aug. 28, 2015

Chi Mei Corp. (twA+/Stable/twA-1)

TRC business risk profile: Strong
TRC financial risk profile: Modest
Main sectors of operations: Manufacturing styrene resins, acrylic, and synthetic products
Key credit considerations:

- Leading market position and cost structure as the world's largest (Acrylonitrile-Butadiene-Styrene (ABS) resin producer.
- Improving cash flow protection given a lowered debt burden, somewhat conservative capital expenditure plan, and recovering operating performance.
- Gradual debt reduction using free operating cash flow and the proceeds of investment disposals.
- Moderately high industry risk despite improving market conditions.
- Higher profitability volatility from relatively high product concentration in ABS resin and lack of integration into upstream materials.

China Airlines Ltd. (twBBB+/Stable/twA-3)

TRC business risk profile: Fair
TRC financial risk profile: Significant
Main sectors of operations: Passenger airline and air cargo services
Key credit considerations:

- Satisfactory market position as Taiwan's largest air carrier in passenger and cargo.
- Improving profitability supported by lower fuel prices and a more fuel-efficient fleet.
- "Moderate" likelihood of extraordinary government support.
- "Adequate" liquidity.
- High industry risks with high demand cyclicality, oversupply, and intense competition.
- Weak, albeit improving, cash flow protection ratios.
- Aggressive financial leverage to support fleet expansion.

China Steel Corp. (twAA-/Stable/twA-1+)

TRC business risk profile: Strong
TRC financial risk profile: Intermediate
Main sectors of operations: Integrated steel manufacturer
Key credit considerations:

- Dominant domestic position as Taiwan's largest steel producer and sole integrated steel producer.
- Low-cost competitiveness and good operating efficiency.
- "Adequate" liquidity.
- "Moderate" likelihood of extraordinary government support.
- Moderately high industry risk.
- High debt usage due to large capital expenditures.
- Relatively weak but improving credit metrics compared to its peers'.

Note: Ratings are as of Aug. 28, 2015

Chunghwa Telecom Co. Ltd. (twAAA/Stable/twA-1+; AA/Stable/--)

TRC business risk profile: Excellent
TRC financial risk profile: Minimal
Main sectors of operations: Integrated telecom services
Key credit considerations:

- Dominant position in Taiwan's telecommunications sector.
- Above-average diversity supported by complete and integrated telecom product lines.
- Very strong cash flow generation, which is more than sufficient to support large capital expenditures.
- Very conservative financial policy with low risk tolerance.
- Anticipated very low debt leverage, despite likely high dividend payout.
- Margin pressure due to regulatory intervention and competition.
- Potentially fiercer competition for mobile 4G services.

Compal Electronics, Inc.

TRC business risk profile: Satisfactory
TRC financial risk profile: Modest
Main sectors of operations: Manufacturing of notebook PCs
Key credit considerations:

- Satisfactory market position as the second largest notebook original design manufacturer (ODM) service provider.
- High business and customer concentration.
- Relatively weak profitability compared with its industry peers'.
- High volatility of cash flow coverage ratios due to high industry risk, customer concentration, and volatile working capital requirement.

CPC Corp., Taiwan

TRC business risk profile: Satisfactory
TRC financial risk profile: Significant
Main sectors of operations: Oil refining and marketing
Key credit considerations:

- An "extremely high" likelihood that the government of Taiwan would provide extraordinary financial support in the event of financial distress.
- Strong market position in petroleum and Liquefied Natural Gas (LNG) products.
- Strong operating scale with satisfactory diversification.
- Excellent standing in credit market due to its status of state-owned enterprise.
- Relatively weaker operating efficiency than that of its peers.
- High financial leverage level.

Note: Ratings are as of Aug. 28, 2015

Delta Electronics Inc.

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Power electronics, energy management, and smart green life products
Key credit considerations:

- Strong competitive advantage with leading position in PC power components and healthy growth momentum from other businesses.
- Improving profitability with evolving business model.
- Satisfactory business diversification across product offerings and customer mix.
- Minimal credit ratios due to low debt level.
- High volatility of cash flow coverage ratios due to industry risks.

Dragon Steel Corp. (twA+/Stable/twA-1)

TRC business risk profile: Satisfactory
TRC financial risk profile: Significant
Main sectors of operations: Steel
Key credit considerations:

- Strengthening operating efficiency, product mix, and profitability.
- Enhanced competitive advantage given its parent group's dominant leadership in Taiwan.
- Adequate liquidity.
- Core entity to the parent group, China Steel Corp.
- Weaker scale and diversification due to its relatively small capacity compared with its peers'.
- Moderately high industry risk.
- Relatively weaker capital structure and credit metrics as a result of its high debt usage from previous capacity expansion.

Eva Airways Corp.

TRC business risk profile: Fair
TRC financial risk profile: Intermediate
Main sectors of operations: Passenger airlines and air cargo services
Key credit considerations:

- Satisfactory market position as Taiwan''s second largest air carrier in passenger and cargo.
- Improving profitability supported by lower fuel prices and a more fuel-efficient fleet.
- High industry risk with high demand cyclicality, intense competition, substantial exposure to volatile oil prices, and event risks.
- Likely elevation in debt level and persistent negative free operating cash flow because of the delivery of 11 B777-300ER aircraft over the next two years.
- Credit metrics to slightly weaken over the next two years.

Note: Ratings are as of Aug. 28, 2015

Evergreen Marine Corp. (Taiwan) Ltd.

TRC business risk profile: Fair
TRC financial risk profile: Significant
Main sectors of operations: Container shipping
Key credit considerations:

- Satisfactory market position as the world 5th largest container shipping company.
- Well-diversified geographic operations and strong presence in more-profitable transpacific routes.
- High industry risks in the shipping sector, including intense competition, volatile pricing, and high capital intensity.
- Thin and volatile profitability over the past five years.
- Fleet upgrade with mega-vessels will increase debt and keep free operating cash flow at a negative level over the next four to five years.

Far Eastern New Century Corp. (FENC; twA+/Negative/twA-1)

TRC business risk profile: Strong
TRC financial risk profile: Intermediate
Main sectors of operations: Telecom, petrochemical, polyester, textile, and property development
Key credit considerations:

- Stable and strong profitability from Far EasTone Telecommunications.
- Some business diversity and diverse equity investments.
- Stable cash flow generation supported by Far EasTone's strong cash flow.
- Strong interest coverage ratios.
- Good financial flexibility with large liquid equity holdings and valuable land bank.
- High demand cyclicality in the petrochemical and polyester industry.
- Weaker profitability of FENC's petrochemical business.

Far EasTone Telecommunications Co. Ltd. (twAA-/Negative/twA-1+)

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Telecom
Key credit considerations:

- Good market position in Taiwan's oligopoly wireless telecommunications industry.
- Strong cash flow generation and moderate capital expenditures support its robust credit profile.
- High business concentration on Taiwan's saturated mobile communication market.
- EBITDA margin likely to trend down mainly due to rising competition and subsidy costs.
- Likely to maintain high cash dividend supported by strong and stable cash flow generation, in line with its peers.
- Recent corporate bond investment plan involving a local cable TV operator may weaken Far EasTone's financial risk profile.

Note: Ratings are as of Aug. 28, 2015

- Rating is capped at one notch higher than that of its parent, FENC.

Formosa Plastics Group (Four Core Companies) (twAA-/Stable/twA-1+; BBB+/Stable/--)

TRC business risk profile: Strong
TRC financial risk profile: Modest
Main sectors of operations: From oil refining and naphtha cracking to plastics and polyesters
Key credit considerations:

- Strong operating efficiency and product diversity.
- Strong domestic market position in the petrochemical and oil refining industries.
- Commitment on deleveraging and reduction of ownership in Formosa Ha Tinh Steel Corp.
- Disposable investment enhances its financial flexibility.
- Anticipated improvement in the group's leverage, due to improving profitability and debt reduction efforts.
- High-risk non-core investments.
- Highly cyclical commodity chemical industry.
- Asset concentration and rising regulatory risk on environmental protection.
- Weak cash flow adequacy for the current ratings.

Hon Hai Precision Industry Co. Ltd. (twAA+/Stable/twA-1+; A-/Stable/--)

TRC business risk profile: Excellent
TRC financial risk profile: Minimal
Main sectors of operations: Electronics manufacturing services (EMS)
Key credit considerations:

- Strong market position as the world's largest EMS provider by market share.
- Strong operating efficiency backed by an unrivalled vertically integrated production model.
- Relatively high cash balance with modest adjusted debt leverage.
- Strong operating cash flow.
- Strong liquidity.
- Heightening industry risks amid increasing competition and persistent margin pressure.
- High customer concentration.

Hotai Motor Co. Ltd.

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Passenger and commercial vehicle sales
Key credit considerations:

- Strong relationship with Toyota Motor Corp. as its sole agent in Taiwan.
- Sustained leading market position with stable profitability in Taiwan's passenger car market.

Note: Ratings are as of Aug. 28, 2015

- Low debt level with a high cash balance.
- Likely higher performance volatility due to saturated auto market and Hotai Motor's concentration risk.
- High volatility of cash flow coverage ratios.

HTC Corp.

TRC business risk profile: Fair
TRC financial risk profile: Modest
Main sectors of operations: Branded smartphone
Key credit considerations:

- Net cash position with plenty of cash on hand, but solid balance sheet may continue to deteriorate with weak operating performance.
- Weakening market position amid rising competition in the smartphone market.
- Continued margin pressure and high business volatility due to rising operating expense, more intense competitive dynamics, and declining economies of scale.
- Likely very high volatility of cash flow coverage ratios.

Innolux Corp.

TRC business risk profile: Satisfactory
TRC financial risk profile: Modest
Main sectors of operations: Thin film transistor liquid crystal display (TFT-LCD) panels
Key credit considerations:

- Satisfactory market position as the world's third largest TFT-LCD manufacturer.
- Adequate operating efficiency with improving cost structure.
- Improving cash flow coverage ratio due to recovering profitability, despite rising capital expenditure needs.
- Margin pressure from intensifying price competition.
- Very high volatility of cash flow coverage ratios caused by industry cyclicality and volatile profitability.

INVENTEC Corp.

TRC business risk profile: Satisfactory
TRC financial risk profile: Minimal
Main sectors of operations: Original design manufacturer (ODM) producing notebook computers, servers, and mobile devices.
Key credit considerations:

- Satisfactory market position with growing smart device business.
- Low debt leverage with high cash balance.
- High business and customer concentration.

- High volatility of cash flow coverage ratios due to high industry risk, customer concentration, and volatile working capital movement.

Lite-On Technology Corp.

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Various technology components products, ranging from optoelectronics and handheld device components, power supply and PC/servers components, and storage products
Key credit considerations:

- Good market position in diversified product lines.
- High surplus cash supports strong credit metrics.
- Persistent margin pressure.
- Highly competitive nature of the global electronics components industry.
- High volatility of cash flow ratios.

MediaTek Inc.

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: IC design firm
Key credit considerations:

- World's top IC-design company with strong market position in system-on-chip (SOC) for wireless communications.
- Intensifying price competition will weigh on MediaTek's profitability.
- Product mix upgrade with increasing contribution from mid-to-high-end products.
- High industry risks, including rapid technology changes and short product cycles, induce revenue volatility.
- Low debt leverage with plenty of cash on hand.

Pegatron Corp.

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Electronics manufacturing services (EMS)
Key credit considerations:

- One of the leading global EMS providers.
- Improving margin trend, despite continued pressure from increasing wage level in China.
- Low debt leverage with high cash balance.
- High customer/business concentration.
- High volatility of cash flow coverage ratios due to high industry risk, customer concentration, and volatile working capital movement.

Note: Ratings are as of Aug. 28, 2015

Pou Chen Corp.

TRC business risk profile: Strong
TRC financial risk profile: Modest
Main sectors of operations: Athletic and casual footwear manufacturing and sportswear retail
Key credit considerations:

- Largest athletic and casual footwear manufacturer globally.
- Credit ratios remain strong despite declining margin.
- Heightening cost pressure as a result of rising labor cost in China.
- Weakening cost structure is gradually squeezing profitability.
- High customer concentration risk.

President Chain Store Corp. (PCSC)

TRC business risk profile: Excellent
TRC financial risk profile: Minimal
Main sectors of operations: Convenience store chain operator
Key credit considerations:

- Mature and stable operating environment for domestic convenient store chain market.
- PCSC's 7-11 stores' hold a dominant position in Taiwan.
- Benefit from Taiwan's aging population due to PCSC's high penetration rate and close service distance.
- Strong operating efficiency supports above-average profitability with very low volatility.
- Low financial leverage with high cash balance and moderate capital expenditure.

Qisda Corp.

TRC business risk profile: Fair
TRC financial risk profile: Intermediate
Main sectors of operations: Original design manufacturing (ODM) service provider of electronic products
Key credit considerations:

- One of the largest LCD monitor and projector manufacturers globally.
- Strategic relationship with leading TFT-LCD panel maker AU Optronics Corp.
- Improving profitability.
- Improving, albeit still weak, credit metrics.
- Concentrated customer and product base.

Note: Ratings are as of Aug. 28, 2015

Quanta Computer Inc.

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Original design manufacturing (ODM) service provider of electronic products
Key credit considerations:

- Global market leader in notebook ODM industry.
- Low debt leverage with high cash balance.
- High business and customer concentration. High volatility of cash flow coverage ratios due to high industry risk, customer concentration, and volatile working capital movement.

Synnex Technology International Corp.

TRC business risk profile: Strong
TRC financial risk profile: Intermediate
Main sectors of operations: 3C products (computer, communication and consumer electronic products) distributor
Key credit considerations:

- Leading market shares in the Asia Pacific technology distribution sector.
- Scale economy.
- Adequate operating diversity and efficiency.
- Stable profitability.
- Thin profit margins.
- High debt leverage.

Taiwan Cement Corp.

TRC business risk profile: Strong
TRC financial risk profile: Intermediate
Main sectors of operations: Production and marketing of cement
Key credit considerations:

- Good market position in Taiwan and China's cement markets.
- Continued strengthening in credit metrics through strong operating cash flow.
- High industry risks associated with fragmentation, oversupply, and cyclicality in China's cement industry.
- Performance volatility is lowered through its independent power plant with power purchase agreement with Taiwan Power Co.

Note: Ratings are as of Aug. 28, 2015

Taiwan Mobile Co. Ltd. (twAA/Negative/twA-1+)

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Telecom
Key credit considerations:

- Good market position in Taiwan's oligopoly wireless telecommunications industry.
- Continued margin pressure due to fierce competition and a growing contribution from low-margin retailing.
- High appetite to pursue growth through acquisitions.
- Slightly weakening credit metrics due to high capital expenditure in recent years.
- Sustained high cash dividend supported by strong and stable cash flow generation, in line with its peers.

Taiwan Power Co. (Taipower)

TRC business risk profile: Satisfactory
TRC financial risk profile: Significant
Main sectors of operations: Providing power generation, power grid operation, and electricity transmission and distribution services to end users.
Key credit considerations:

- An "extremely high" likelihood that the government of Taiwan would provide extraordinary financial support to Taipower in the event of financial distress.
- New tariff setting scheme will enable Taipower to generate more stable, albeit still weak, profitability and prevent further deterioration in the company's debt leverage.
- Very low industry risk due to Taipower's regulatory-supported operating dominance as the island's only integrated power company.
- Intermediate interest coverage that reflects Taipower's strong access to low-cost debt due to the company's dominant market position and its status as a very important government owned entity.
- Very weak cash flow adequacy due to low profitability and high debt.

Taiwan Semiconductor Manufacturing Co. Ltd. (twAAA/Stable/twA-1+; A+/Stable/--)

TRC business risk profile: Excellent
TRC financial risk profile: Minimal
Main sectors of operations: Semiconductor foundry
Key credit considerations:

- Dominant market position in the global semiconductor foundry business.
- Advanced technology capability supporting very strong profitability.
- Very strong cash flow generation.
- Conservative financial leverage.
- Ability to maintain positive discretionary cash flow, despite still-aggressive capital expenditures.

Note: Ratings are as of Aug. 28, 2015

- Strong liquidity.
- High cyclicality and intensive capital nature of the semiconductor foundry industry.
- Rapid technological changes.

Tatung Co.

TRC business risk profile: Fair
TRC financial risk profile: Aggressive
Main sectors of operations: Ranging from digital display, home appliance, new energy, energy solutions, heavy electrics, wire & cable, to motors.
Key credit considerations:

- Weak market position on major product segments, despite some brand recognition.
- Still weak and volatile profitability, despite business restructuring efforts.
- High operating leverage and weak operating efficiency.
- Weak credit metrics and cash flow coverage ratios.
- Multiple core business units and diversified investments.

Tingyi (Cayman Islands) Holding Corp. (BBB+/Stable/--)

TRC business risk profile: Strong
TRC financial risk profile: Modest
Main sectors of operations: Food & beverage (F&B)
Key credit considerations:

- Leading market position and strong brand name in China.
- Extensive national distribution network.
- Good operating efficiency.
- Good operating cash flows.
- Moderate capital expenditure Slowdown in the instant noodles and beverage market in China.
- Exposure to volatile raw material prices.
- Increase in debt leverage following debt-funded acquisition of its Shanghai operational center

TPK Holding Co. Ltd.

TRC business risk profile: Fair
TRC financial risk profile: Intermediate
Main sectors of operations: Capacitive touch sensors, modules, and displays
Key credit considerations:

- Good market position in touch panel segment with solid position in high-end products.
- Force-touch technology to support revenue growth and margin recovery over the next one to two years.
- Credit metrics to improve with capital expenditure to decline over the next two years.
- Moderately high customer and product concentration.

Note: Ratings are as of Aug. 28, 2015

- Substantial decline in profitability due to intense price competition from low-to-mid-end products and lowered utilization.

Uni-President Enterprises Corp. (twAA-/Stable/twA-1)

TRC business risk profile: Strong
TRC financial risk profile: Modest
Main sectors of operations: Food & beverage (F&B), retailing, and tinplate manufacturing
Key credit considerations:

- Excellent position in Taiwan's convenience store market, strong position in local F&B markets, and satisfactory albeit improving position in China's F&B markets.
- Above-average business diversity to support stable performance.
- Higher industry risk in China's F&B market due to intense competition and volatile material cost.
- Weaker-than-peer cash flow adequacy ratio, mostly due to its increasing debt level to support expansion.
- Somewhat high cash balance to cope with expansion and market volatility.

United Microelectronics Corp. (twAA-/Stable/twA-1+)

TRC business risk profile: Strong
TRC financial risk profile: Minimal
Main sectors of operations: Semiconductor foundry
Key credit considerations:

- Satisfactory market position in the global foundry business.
- Strong cash flow generation.
- Free operating cash flow to turn positive with a policy to keep capital expenditures within its operating cash flow.
- Strong liquidity.
- Weaker technology capability comparing to that of global leading peers.
- High cyclicality and intensive capital nature of the semiconductor foundry industry.
- Rapid technological changes.
- Low debt leverage.

Walsin Lihwa Corp.

TRC business risk profile: Fair
TRC financial risk profile: Significant
Main sectors of operations: Wire and cable, specialty steel, and micro-electromechanical systems
Key credit considerations:

- Weak global market position
- Limited product diversification and high exposure in volatile and oversupplied industries including wire and cable and specialty steel.
- Weak profitability due to low margin from wire and cable business and intense competition in the steel sector.
- Weak credit ratios due to margin pressure.
- Strong interest coverage ratios.
- High volatility of cash flow coverage ratios due to industry risks.

Wistron Corp.

TRC business risk profile: Satisfactory
TRC financial risk profile: Modest
Main sectors of operations: Original design manufacturers (ODM) for computer and consumer electronics products.
Key credit considerations:

- Weaker market position in notebook ODM than peers', but mobile device assembly business is likely to increase.
- A more diversified product and client mix relative to that of its local peers.
- Margin pressure over the next two years.
- Moderate debt level.
- High volatility of cash flow coverage ratios due to high industry risk, customer concentration, and volatile working capital movement.

WPG Holding Ltd.

TRC business risk profile: Strong
TRC financial risk profile: Significant
Main sectors of operations: Electronic components distributor
Key credit considerations:

- Largest electronic component distributor in Asia with adequate product diversification.
- Higher-than–industry-average growth supported by high exposure in China and other emerging markets.
- Stronger interest coverage ratios mitigate its weaker financial leverage ratio.
- Continuous margin pressure with increasing exposure to low-margin products and competition.
- Very high working capital needs lead to high debt level.

WT Microelectronics Co. Ltd.

Note: Ratings are as of Aug. 28, 2015

TRC business risk profile: Satisfactory
TRC financial risk profile: Intermediate
Main sectors of operations: Electronic components distribution services
Key credit considerations:

- Satisfactory market position as the fourth largest electronic component distributor in Asia with adequate product diversification.
- Higher-than–industry-average growth supported by high exposure in China and penetration into niche products with high growth potential.
- Slightly improving profitability with increasing contribution from niche products but still weaker compared with leading global peers.
- Stronger interest coverage ratios mitigate the firm's weaker financial leverage ratio.
- High working capital needs lead to high debt level.

Yang Ming Marine Transport Corp. (twBBB/Positive/twA-3)

TRC business risk profile: Fair
TRC financial risk profile: Aggressive
Main sectors of operations: Container shipping
Key credit considerations:

- "Moderately high" likelihood of extraordinary government support.
- Substantial exposure to the volatile long-haul container shipping market.
- Weak and volatile profitability due to over-competition and market cyclicality.
- Still-limited operating scale relative to its global larger peers'.
- Fair market position as a mid-size container carrier in the global market.
- Highly financially leveraged due to intensive capital expenditures for fleet expansion.
- Somewhat weak operating cash flow as a result of weak and volatile profitability.
- Relatively higher interest coverage compared with its peers'.
- Adequate liquidity with good access to banking facilities.

Yulon Motor Co. Ltd.

TRC business risk profile: Fair
TRC financial risk profile: Minimal
Main sectors of operations: Auto manufacturing
Key credit considerations:

- Satisfactory market position of Nissan-branded car sales in Taiwan.
- Relatively weak own-brand business with limited market share.
- Small production scale relative to global peers' but adequate geographic diversity.
- Adequate operating efficiency.
- Somewhat weak operating cash flow as a result of weak and volatile profitability.
- Low debt leverage.
- Large holding of cashable land assets will provide financial flexibility.

Note: Ratings are as of Aug. 28, 2015

TAIWAN'S TOP 50 CORPORATES: MEDIANS OF FINANCIAL RATIOS

	EBITDA margin (%)				FFO cash interest coverage (x)				EBITDA interest cover (x)			
Industry sector	2014	2013	2012	2011	2014	2013	2012	2011	2014	2013	2012	2011
Technology hardware & semiconductors	5.1	4.7	4.6	5.8	20.0	20.0	18.3	21.4	16.1	17.6	14.9	15.7
Computer hardware	13.2	13.3	12.0	8.6	22.3	19.9	20.2	10.9	20.1	16.2	18.9	19.5
Consumer electronics	2.9	0.8	5.6	5.8	116.1	72.8	237.9	276.2	81.4	58.6	181.5	132.3
Electronics manufacturing services	2.8	2.7	2.4	2.6	13.8	18.5	11.6	15.8	9.5	16.2	8.1	15.5
Semiconductors	30.2	28.2	26.7	27.2	98.7	159.1	124.9	295.6	67.0	80.8	76.0	171.0
Technology distributors	2.0	1.8	2.0	2.1	7.2	9.3	14.5	18.7	6.9	8.0	8.1	10.4
Auto Manufacturing	2.8	1.2	2.7	7.3	8.2	1.6	2.9	15.9	5.4	1.7	2.8	10.6
Auto supplier	24.5	23.5	20.5	15.2	22.5	20.3	13.3	12.1	26.6	24.5	16.7	14.1
Branded nondurables	10.7	10.1	10.5	10.2	20.5	21.7	19.8	34.7	13.4	15.8	15.6	29.0
Building materials	23.1	21.8	17.5	21.5	13.2	12.5	7.3	9.0	14.1	13.1	7.2	9.3
Business and consumer services	7.9	9.3	10.4	9.6	17.2	16.3	15.3	12.6	13.9	13.4	13.1	12.8
Commodity chemicals	7.9	7.2	7.6	15.6	12.2	13.5	11.1	32.0	11.1	13.7	10.0	26.7
Metal and mining downstream	18.0	16.2	6.8	10.9	14.3	9.9	9.6	7.7	13.7	9.5	8.4	7.1
Oil refining and marketing	0.5	2.8	(1.0)	(1.9)	1.5	7.4	(2.7)	(6.7)	0.9	5.4	(2.4)	(6.1)
Regulated utilities	28.0	24.8	17.1	19.3	11.8	8.9	5.8	7.2	3.5	3.3	2.1	2.7
Retail and resturants	9.8	9.2	8.9	8.5	130.3	160.7	132.9	158.6	(4.5)	(2.1)	16.3	21.0
Specialty chemical	17.6	14.8	15.6	17.6	10.3	20.7	20.4	49.0	37.4	24.0	23.4	39.7
Telecommunications and cable	30.5	31.5	31.1	33.8	67.4	306.4	284.9	178.3	32.2	35.1	36.4	55.6
Transportation cyclical	16.6	12.9	11.6	9.1	14.7	10.3	10.5	8.3	6.1	5.2	5.0	4.0
All industries	10.3	10.1	10.1	9.6	15.7	16.9	14.3	20.0	12.9	14.0	10.2	14.9

	FFO/debt (%)				Return on capital (%)				Debt/EBITDA (x)			
Industry sector	2014	2013	2012	2011	2014	2013	2012	2011	2014	2013	2012	2011
Technology hardware & semiconductors	60.8	50.5	51.4	31.5	9.0	9.8	11.0	13.2	0.9	1.4	0.7	1.1
Computer hardware	53.6	48.0	21.6	13.5	7.9	8.4	4.3	4.6	1.0	1.8	2.1	3.0
Consumer electronics	1,000.0	1,000.0	1,000.0	1,000.0	5.6	(0.2)	21.2	34.0	0.0	0.0	0.0	0.0
Electronics manufacturing services	31.0	44.1	119.1	37.3	15.6	14.5	11.8	12.0	0.9	1.4	0.7	1.4
Semiconductors	203.5	139.7	115.4	59.1	19.1	13.6	11.0	17.4	0.1	0.3	0.3	0.0
Technology distributors	12.8	13.0	15.6	22.3	9.0	9.7	9.8	13.2	6.4	6.4	5.3	3.5
Auto Manufacturing	98.2	1.7	8.7	78.2	0.9	0.4	0.6	6.8	0.8	4.1	6.1	1.0
Auto supplier	61.9	57.2	40.6	26.0	17.7	20.1	18.0	12.7	1.3	1.4	2.1	3.1
Branded nondurables	36.4	64.0	54.5	54.2	11.5	13.6	12.8	14.9	2.4	1.9	1.8	2.1
Building materials	40.9	34.1	22.9	27.8	10.7	9.6	7.2	9.5	2.0	2.4	3.5	2.9
Business and consumer services	44.6	47.9	57.7	37.0	9.3	11.4	12.9	8.9	2.0	1.8	1.6	2.4
Commodity chemicals	28.5	24.6	27.3	52.2	6.0	8.2	2.1	9.5	3.2	3.6	3.3	1.7
Metal and mining downstream	19.5	12.5	12.3	6.2	5.0	3.0	(0.9)	1.2	4.3	7.9	7.0	13.6
Oil refining and marketing	0.0	6.3	(3.6)	(6.2)	(3.7)	1.3	(4.5)	(5.8)	77.5	13.3	(34.7)	(17.4)
Regulated utilities	8.3	6.6	3.0	4.6	3.4	1.2	(1.1)	(0.6)	8.8	11.0	17.2	13.8
Retail and resturants	73.3	74.4	80.0	66.1	29.4	26.9	26.6	28.1	0.5	0.5	0.5	0.6
Specialty chemical	45.3	41.3	33.9	67.7	10.3	8.5	8.7	13.8	2.0	2.1	2.7	1.3
Telecommunications and cable	56.1	76.7	149.3	172.1	13.7	15.3	15.6	15.0	1.3	1.2	0.4	0.4
Transportation cyclical	15.5	11.0	13.8	9.7	3.3	1.5	2.6	(0.4)	5.3	7.3	6.4	8.2
All industries	28.5	32.7	31.2	28.5	8.6	8.4	8.5	10.1	2.0	2.1	2.3	1.6

	Capital expenditures (Mil. NT$)				Debt (Mil. NT$)				Dividend Paid (Mil. NT$)			
Industry sector	2014	2013	2012	2011	2014	2013	2012	2011	2014	2013	2012	2011
Technology hardware & semiconductors	60.8	50.5	51.4	31.5	9.0	9.8	11.0	13.2	0.9	1.4	0.7	1.1
Computer hardware	53.6	48.0	21.6	13.5	7.9	8.4	4.3	4.6	1.0	1.8	2.1	3.0
Consumer electronics	1,000.0	1,000.0	1,000.0	1,000.0	5.6	(0.2)	21.2	34.0	0.0	0.0	0.0	0.0
Electronics manufacturing services	31.0	44.1	119.1	37.3	15.6	14.5	11.8	12.0	0.9	1.4	0.7	1.4
Semiconductors	203.5	139.7	115.4	59.1	19.1	13.6	11.0	17.4	0.1	0.3	0.3	0.0
Technology distributors	12.8	13.0	15.6	22.3	9.0	9.7	9.8	13.2	6.4	6.4	5.3	3.5
Auto Manufacturing	98.2	1.7	8.7	78.2	0.9	0.4	0.6	6.8	0.8	4.1	6.1	1.0
Auto supplier	61.9	57.2	40.6	26.0	17.7	20.1	18.0	12.7	1.3	1.4	2.1	3.1
Branded nondurables	36.4	64.0	54.5	54.2	11.5	13.6	12.8	14.9	2.4	1.9	1.8	2.1
Building materials	40.9	34.1	22.9	27.8	10.7	9.6	7.2	9.5	2.0	2.4	3.5	2.9
Business and consumer services	44.6	47.9	57.7	37.0	9.3	11.4	12.9	8.9	2.0	1.8	1.6	2.4
Commodity chemicals	28.5	24.6	27.3	52.2	6.0	8.2	2.1	9.5	3.2	3.6	3.3	1.7
Metal and mining downstream	19.5	12.5	12.3	6.2	5.0	3.0	(0.9)	1.2	4.3	7.9	7.0	13.6
Oil refining and marketing	0.0	6.3	(3.6)	(6.2)	(3.7)	1.3	(4.5)	(5.8)	77.5	13.3	(34.7)	(17.4)
Regulated utilities	8.3	6.6	3.0	4.6	3.4	1.2	(1.1)	(0.6)	8.8	11.0	17.2	13.8
Retail and resturants	73.3	74.4	80.0	66.1	29.4	26.9	26.6	28.1	0.5	0.5	0.5	0.6
Specialty chemical	45.3	41.3	33.9	67.7	10.3	8.5	8.7	13.8	2.0	2.1	2.7	1.3
Telecommunications and cable	56.1	76.7	149.3	172.1	13.7	15.3	15.6	15.0	1.3	1.2	0.4	0.4
Transportation cyclical	15.5	11.0	13.8	9.7	3.3	1.5	2.6	(0.4)	5.3	7.3	6.4	8.2
All industries	28.5	32.7	31.2	28.5	8.6	8.4	8.5	10.1	2.0	2.1	2.3	1.6

FFO--Funds from operations. Source: Taiwan Ratings Corp.

TAIWAN RATINGS' CORPORATE RATINGS LIST

Issuer	Taiwan Ratings Corp. ratings*		Standard & Poor's Ratings Services foreign currency ratings*	
	Rating	Outlook	Rating	Outlook
Chunghwa Telecom Co. Ltd.	twAAA	Stable	AA	Stable
Taiwan Semiconductor Manufacturing Co. Ltd.	twAAA	Stable	A+	Stable
Taoyuan International Airport Corp.	twAAA	Stable		
Hon Hai Precision Industry Co. Ltd.	twAA+	Stable	A-	Stable
Nan Ya Plastics Corp.	twAA-	Stable	BBB+	Stable
Formosa Chemicals & Fibre Corp.	twAA-	Stable	BBB+	Stable
Formosa Petrochemical Corp.	twAA-	Stable	BBB+	Stable
Formosa Plastics Corp.	twAA-	Stable	BBB+	Stable
Far EasTone Telecommunications Co. Ltd.	twAA-	Negative	BBB	Negative
China Steel Corp.	twAA-	Stable		
Hotai Leasing Corp.	twAA-	Stable		
Taiwan Sugar Corp.	twAA-	Stable		
Uni-President China Holdings Ltd.	twAA-	Stable		
Uni-President Enterprises Corp.	twAA-	Stable		
United Microelectronics Corp.	twAA-	Stable		
Mai-Liao Power Corp.	twAA-	Negative		
Shinkong Number One Real Estate Investment Trust	twAA	Stable		
Taiwan Mobile Co. Ltd.	twAA	Negative		
Chi Mei Corp.	twA+	Stable		
Cheng Shin Rubber Ind. Co. Ltd.	twA+	Stable		
Dragon Steel Corp.	twA+	Stable		
Formosa Heavy Industries Corp.	twA+	Stable		
Formosa Taffeta Co. Ltd.	twA+	Stable		
Fubon Number One Real Estate Investment Trust	twA+	Stable		
Fubon Number Two Real Estate Investment Trust	twA+	Stable		
Nan Ya Printed Circuit Board Corp.	twA+	Stable		
TECO Electric & Machinery Co. Ltd.	twA+	Stable		
Asia Cement Corp.	twA+	Negative		
Far Eastern New Century Corp.	twA+	Negative		
Unimicron Technology Corp.	twA+	Negative		
Yuan Ding Investment Corp.	twA+	Negative		
Wan Hai Lines Ltd.	twA-	Stable	BB+	Stable
Cathay Number One Real Estate Investment Trust	twA-	Stable		
Union Finance & Leasing (Int'l) Corp.	twA-	Stable		
USI Corp.	twA-	Stable		
Carplus Auto Leasing Corp.	twA	Stable		
Sinyi Realty Inc.	twA	Stable		
China Airlines Ltd.	twBBB+	Stable		
Solar Applied Materials Technology Corp.	twBBB+	Stable		
Yang Ming Marine Transport Corp.	twBBB	Positive		
*Ratings as of Aug. 28, 2015.				

GLOSSARY OF FINANCIAL RATIOS AND FORMULAS

Key Ratios

Core debt-payback ratios:

- Funds from operations (FFO)/debt
- Debt/EBITDA

Supplemental debt-payback and debt-service ratios:

- Cash flow from operations (CFO)/debt
- Free operating cash flow (FOCF)/debt
- Discretionary cash flow (DCF)/debt
- (FFO + interest)/cash interest (FFO cash interest cover)
- EBITDA/interest

Profitability ratios:

- EBIT/revenues (EBIT margin)
- EBITDA/revenues (EBITDA margin)
- EBIT/average beginning-of-year and end-of-year capital (return on capital)

Glossary

Capital: Debt plus noncurrent deferred taxes plus equity (plus or minus all applicable adjustments). Capital expenditures: Funds spent to acquire or develop tangible and certain intangible assets (plus or minus all applicable adjustments).

Cash interest: For the purposes of calculating the FFO cash-interest-cover ratio, "cash interest" includes only cash interest payments on gross financial debt (including bank loans, debt capital market instruments, finance leases, and capitalized interest). Cash interest does not include any Standard & Poor's-adjusted interest on debt-like obligations, such as postretirement benefit obligations or operating leases.

CFO (cash flow from operations): CFO is also referred to as operating cash flow. This measure reflects cash flows from operating activities (as opposed to investing and financing activities), including all interest received and paid, dividends received, and taxes paid in the period (plus or minus all applicable adjustments). For companies that do not use U.S. GAAP, we reclassify as CFO any dividends received, or interest paid or received, that a company reports as investing or financing cash flows.

Current tax expense: This is the amount of income taxes payable on taxable profit, or income tax recoverable from tax losses, in an accounting period (plus or minus all applicable adjustments). Current tax expense is to be distinguished from deferred tax expense.

DCF (discretionary cash flow): FOCF minus cash dividends paid on common stock and preferred stock (plus or minus all applicable adjustments).

Debt: Gross financial debt (including items such as bank loans, debt capital market instruments, and finance leases) minus surplus cash (plus or minus all applicable adjustments).

Dividends: Dividends paid to common and preferred shareholders and to minority interest shareholders of consolidated subsidiaries (plus or minus all applicable adjustments).

EBIT: A traditional view of profit that factors in capital intensity, but also includes interest income, the company's share of equity earnings of associates and joint ventures, and other recurring, nonoperating items (plus or minus all applicable adjustments).

EBITDA: A company's revenue minus operating expenses, plus depreciation and amortization expenses, including impairments on noncurrent assets and impairment reversals (plus or minus all applicable adjustments). Dividends (cash) received from affiliates, associates, and joint ventures accounted for under the equity method are added, while the company's share of profits and losses from these affiliates is excluded.

Equity: Common equity and equity hybrids and minority interests (plus or minus all applicable adjustments).

FFO (funds from operations): EBITDA, minus net interest expense minus current tax expense (plus or minus all applicable adjustments).

FOCF (free operating cash flow): CFO minus capital expenditures (plus or minus all applicable adjustments).

Interest: This is the reported interest expense figure, including noncash interest on conventional debt instruments (such as payment-in-kind, zero-coupon, and inflation-linked debt), minus any interest income derived from assets structurally linked to a debt instrument (plus or minus all applicable adjustments).

Net interest expense: This is the reported interest expense figure, including noncash interest on conventional debt instruments (such as payment-in-kind, zero-coupon, and inflation-linked debt), minus the sum of interest income and dividend income (plus or minus all applicable adjustments).

Revenues: Total sales and other revenues we consider to be operating (plus or minus all applicable adjustments).

[Source: Corporate Methodology: Ratios And Adjustments, published Nov. 19, 2013.]

TAIWAN RATINGS' RATINGS DEFINITIONS

Issuer Credit Ratings

A Taiwan Ratings issuer credit rating is a forward-looking opinion about the overall creditworthiness of a debt issuer, guarantor, insurer, or other provider of credit enhancement ("obligor") to meet its financial obligations as they come due, relative to other Taiwanese obligors. Such Taiwanese obligors include all active borrowers, guarantors, insurers, and other providers of credit enhancement residing in Taiwan, as well as foreign obligors active in Taiwan's financial markets.

Issuer credit ratings do not apply to specific obligations, as they do not take into account the nature and provisions of the obligation, its standing in bankruptcy or liquidation, statutory preferences, or the legality and enforceability of the obligation. In addition, they do not take into account the creditworthiness of the guarantors, insurers, or other forms of credit enhancement on the obligation.

Counterparty credit ratings and corporate credit ratings are all forms of issuer credit ratings.

Long-Term Issuer Credit Ratings

Long-Term Issuer Credit Ratings Category*	Definition
twAAA	An obligor rated 'twAAA' has an extremely strong capacity to meet its financial commitments relative to that of other Taiwanese obligors. 'twAAA' is the highest issuer credit rating assigned according to Taiwan Ratings national scale.
twAA	An obligor rated 'twAA' differs from the highest-rated obligors only to a small degree, and has a very strong capacity to meet its financial commitments relative to that of other Taiwanese obligors.
twA	An obligor rated 'twA' is somewhat more susceptible to the adverse effects of changes in circumstances and economic conditions than higher-rated obligors. Still, the obligor has a strong capacity to meet its financial commitments relative to that of other Taiwanese obligors.
twBBB	An obligor rated 'twBBB' has an adequate capacity to meet its financial commitments relative to that of other Taiwanese obligors. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitments.
twBB; twB; twCCC; and twCC	Obligors rated 'twBB', 'twB', 'twCCC', and 'twCC' on the Taiwan Ratings credit rating scale are regarded as having high risk relative to other Taiwanese obligors. While such obligors will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposure to adverse conditions relative to other Taiwanese obligors.
twBB	An obligor rated 'twBB' denotes somewhat weak capacity to meet its financial commitments, although it is less vulnerable than other lower-rated Taiwanese obligors. However, it faces ongoing uncertainties or exposure to adverse business, financial, or economic conditions, which could result in an inadequate capacity on the part of the obligor to meet its financial commitments.
twB	An obligor rated 'twB' is more vulnerable than obligors rated 'twBB'. The obligor currently has a weak capacity to meet its financial commitments relative to other Taiwanese obligors. Adverse business, financial, or economic conditions would likely impair the obligor's capacity or willingness to meet its financial commitments.
twCCC	An obligor rated 'twCCC' is currently vulnerable relative to other Taiwanese obligors and is dependent upon favorable business and financial conditions to meet its financial commitments.
twCC	An obligor rated 'twCC' is currently highly vulnerable to defaulting on its financial commitments relative to other Taiwanese obligors. The 'twCC' rating is used when a default has not yet occurred, but Taiwan Ratings expects default to be a virtual certainty, regardless of the anticipated time to default.
R	An obligor rated 'R' is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision, the regulators may have the power to favor one class of obligations over others or pay some obligations and not others.
SD and D	An obligor rated 'SD' (selective default) or 'D' is in default on one or more of its financial obligations including rated and unrated financial obligations but excluding hybrid instruments classified as regulatory capital or in non-payment according to terms. An obligor is considered in default unless Taiwan Ratings believes that such payments will be made within five business days, or within the earlier of the stated grace period or thirty calendar days. A 'D' rating is assigned when Taiwan Ratings believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due. A 'SD' rating is assigned when Taiwan Ratings believes that the obligor has selectively defaulted on a specific issue or class of obligations but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. An obligor's rating is lowered to 'D' or 'SD' if it is conducting a distressed exchange offer.
NR	An issuer designated 'NR' is not rated.

*The credit ratings from 'twAA' to 'twCCC' may be modified by the addition of a plus (+) or minus (-) to show relative strength with the rating category. Source: Taiwan Ratings' Ratings Definitions, Jan. 6, 2015

Short-Term Issuer Credit Ratings

Short-Term Issuer Credit Ratings Category*	Definition
twA-1	An obligor with a 'twA-1' short-term credit rating has a strong capacity to meet financial commitments relative to that of other Taiwanese obligors. Within this category, certain obligors are designated with a plus sign (+). This indicates that the obligor's capacity to meet its financial commitment on these obligations, relative to that of other obligors in the Taiwanese market, is extremely strong.
twA-2	An obligor with a 'twA-2' short-term credit rating has a satisfactory capacity to meet financial obligations relative to that of other Taiwanese obligors.
twA-3	An obligor with a 'twA-3' short-term credit rating has an adequate capacity to meet financial commitments relative to that of other Taiwanese obligors. However, the obligor is more vulnerable to adverse changes in business circumstances or economic conditions than higher-rated obligors.
twB	An obligor with a 'twB' short-term credit rating has a weak capacity to meet financial commitments, relative to that of other Taiwanese obligors, and is vulnerable to adverse business, financial, or economic conditions.
twC	An obligor with a 'twC' short-term credit rating has a doubtful capacity to meet financial commitments.
R	An obligor rated 'R' is under regulatory supervision owing to its financial condition. During the pendency of the regulatory supervision, the regulators may have the power to favor one class of obligations over others or pay some obligations and not others.
SD and D	An obligor rated 'SD' (selective default) or 'D' has failed to pay one or more of its financial obligations (rated or unrated), excluding hybrid instruments classified as regulatory capital or in nonpayment according to terms, when it came due. An obligor is considered in default unless Taiwan Ratings believes that such payments will be made within any stated grace period. However, any stated grace period longer than five business days will be treated as five business days. A 'D' credit rating is assigned when Taiwan Ratings believes that the default will be a general default and that the obligor will fail to pay all or substantially all of its obligations as they come due. A 'SD' credit rating is assigned when Taiwan Ratings believes that the obligor has selectively defaulted on a specific issue or class of obligations, excluding hybrid instruments classified as regulatory capital, but it will continue to meet its payment obligations on other issues or classes of obligations in a timely manner. An obligor's rating is lowered to 'D' or 'SD' if it is conducting a distressed exchange offer.
NR	An issuer designated 'NR' is not rated.

*Apply to an obligor's capacity to meet financial commitments over a time horizon of less than one year. Source: Taiwan Ratings' Ratings Definitions, Jan. 6, 2015

CreditWatch

CreditWatch highlights our opinion regarding the potential direction of a short-term or long-term rating. It can be applied to issuer ratings and issue ratings, as well as insurer financial strength ratings and fund credit quality ratings. It focuses on identifiable events and short-term trends that cause ratings to be placed under special surveillance by Taiwan Ratings' analytical staff. Ratings may be placed on CreditWatch under the following circumstances:

- When an event has occurred or, in our view, a deviation from an expected trend has occurred or is expected and when additional information is necessary to evaluate the current rating. Events and short-term trends may include mergers, recapitalizations, voter referendums, regulatory actions, performance deterioration of securitized assets, or anticipated operating developments.
- When we believe there has been a material change in performance of an issue or issuer, but the magnitude of the rating impact has not been fully determined, and we believe that a rating change is likely in the short-term.
- A change in criteria has been adopted that necessitates a review of an entire sector or multiple transactions and we believe that a rating change is likely in the short-term.

A CreditWatch listing, however, does not mean a rating change is inevitable, and when appropriate, a range of potential alternative ratings will be shown. CreditWatch is not intended to include all ratings under review, and rating changes may occur without the ratings having first appeared on CreditWatch. The "positive" designation means that a rating may be raised; "negative" means a rating may be lowered; and "developing" means that a rating may be raised, lowered, or affirmed.

Rating Outlooks

A Taiwan Ratings' rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years). It can be applied to issuer ratings and issue ratings, as well as insurer financial strength ratings. In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. An outlook is not necessarily a precursor of a rating change or future CreditWatch action.

- Positive means that a rating may be raised.
- Negative means that a rating may be lowered.
- Stable means that a rating is not likely to change.
- Developing means a rating may be raised or lowered.
- N.M. means not meaningful.

RELATED CRITERIA

Please find below a selected list of published criteria by Taiwan Ratings Corp. and Standard & Poor's Ratings Services. Ratings information can be found at Standard & Poor's public Web site at **www.standardandpoors.com** unless otherwise stated.

- Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Understanding Taiwan Ratings' Rating Definitions, www.taiwanratings.com, Nov. 18, 2014
- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Corporate Methodology, Nov. 19, 2013
- Methodology: Industry Risk, Nov. 19, 2013
- Group Rating Methodology, Nov. 19, 2013
- Corporate Methodology: Ratios And Adjustments, Nov. 19, 2013
- Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012

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Taiwan Ratings Credit & Risk Training Series

Understanding Rating Criteria & Methodology

Taiwan Ratings Corp. has opened up a "Credit and Risk Training" series in order to facilitate Taiwan's financial industry in enhancing its financial supervision mechanism and to assist financial institutions and corporations, domestic and abroad, to better understand TRC's rating criteria and rating methodology. The training program is conducted in a variety of formats, which include lectures, case studies, and group discussions. Participants will be provided with a comprehensive curriculum that combines academic theories and their real-world applications

The training will allow trainees to:

- Understand TRC's rating criteria and methodology thoroughly.
- Get in touch with TRC's senior credit analysts and professionals in the credit rating industry.
- Learn the required skills to develop their own analytical criteria.
- Gain an insight on current and significant credit-related issues.

Training given solely by TRC or through cooperation with a third-party vendor:

- Credit and Risk Training Series—Financial Institution Credit Risk Analysis
- Credit and Risk Training Series—Insurance Credit Risk Analysis
- Credit and Risk Training Series—Corporate Credit Risk Analysis
- Credit and Risk Training Series—Structured Finance Credit Risk Analysis
- Other customized training based on individual needs (not including consulting service)

Training Features

- Direct Access with Analysts: Our courses provide you with the opportunity to interact with our senior analysts, work through live case studies from your local market and discuss current market developments first hand.
- A workshop approach: The high degree of interaction allows participants to immediately apply their learning to real credits, cementing their understanding of these concepts. Case studies for the workshop are selected from the local market, allowing attendees to leverage our knowledge of the local market and current credit issues.
- Understand your rating: Whether you are a client of Taiwan Ratings or you deal with our credit ratings in your work, attendees will gain an in-depth understanding of what drives our ratings.
- Provide clients with flexible training options: Except for public training courses held by Taiwan Ratings and our third-party Business partners, we also offer an in-house, custom-made training program. Please contact our training consultants to design the right program for your organization.

Taiwan Ratings'

Credit & Risk Training

Course Consultants

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