

Credit Market Pulse

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Market Intelligence

Editor's Note

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A Potential Trade War Raises Risks

An escalating trade battle between the U.S. and its partners in the form of billions of dollars in retaliatory tariffs is poised to potentially drag down global investor confidence, spending, and economic growth. It is still unclear whether involved parties will negotiate new terms or retaliate into an all-out trade war. Whatever the case, the actions thus far are infusing broad uncertainty around the world.

The first quarter of 2018 was marked by two severe increases in market-implied credit risk in North America, Europe, and Asia Pacific. This negatively impacted the S&P Global BMI given the overall weight these regions represent of stocks globally.

All sectors exhibited increased risk in the quarter. The S&P Global BMI Industrials deteriorated the most, worsening by 154.25%. The announcement by President Trump of potential tariffs on steel and aluminum likely contributed to the increase in perceived risk. The S&P Global BMI Health Care deteriorated the least, worsening by 48.13% over the quarter, although tariffs could drive drug and medical device prices higher.

Tariffs on Canadian Commodities Threaten the Country's Economy

The giant U.S. market is critical for Canadian exports, and President Trump's tariffs on steel and aluminum contributed to the rise of the country's market-implied credit risk in the first quarter of 2018. Exports to the U.S. represent about 45% of Canadian steel production.¹ While the commodity is produced in five provinces, the industry is heavily concentrated in Ontario, the country's largest province in terms of population and GDP. Beginning on July 1st, significantly "Canada Day", Canada retaliated by imposing \$12.6 billion of tariffs on U.S. goods, targeting everything from orange juice to whiskey to washing machines.

Switzerland May be Hit by a Chain Reaction

For the Swiss economy, proposed tariffs touch only about 3% of all exports of steel and aluminum, although individual companies will certainly be hurt.² However, U.S. protectionism measures and any retaliatory responses could trigger increased interest in franc-denominated investments as safe-haven assets. This would undercut the Swiss National Bank's ultra-low interest rate policy aimed at curbing the strength of the currency, and further hurt the country's exporters.

Qatar Benefits from U.S. Support

In a significant development from the previous quarter, Qatar's market-implied credit risk steadily improved for most of the first quarter of

2018. The country worked hard to neutralize the effects of the political and economic embargo imposed on June 5, 2017 by its neighbors – Bahrain, Egypt, the UAE, and Saudi Arabia – with claims that the country's policies have fueled terrorism. Neutralizing efforts have included constructive discussions with the U.S. regarding specific areas of partnership, including defense, counterterrorism, combating extremism, and trade and investment. The U.S. and Qatar believe their continued cooperation will help benefit the interests of both countries, as well as the security and stability of the Gulf region.

U.S. Experiences a Volatile Quarter

U.S. market-implied risk was stable during January of 2018, but increased in the first two weeks of February due to domestic and international pressures. February was certainly one of Wall Street's most volatile months since 2008, with the Dow falling by more than 12% in just two weeks as expectations about a rise in inflation and federal debt levels made investors nervous. While stocks then rallied, the index ended the month about 1,600 points from its record high in late January. In March, several important White House resignations sent political risk higher. This included John Dowd, President Trump's lead lawyer on the Russia investigation, and Lt. Gen. H.R. McMaster, the national security advisor.

Credit Scoring Definitions

Two primary measures of credit risk are used in Credit Market Pulse to score rated, unrated, public, and private entities across the world. Broadly aligned with credit ratings from S&P Global Ratings, our quantitative models provide both a fundamental-based view of default risk to capture the inherent risk of a firm from its financial standing, and a market-based view of default risk to capture emerging risks perceived by the markets.

- PD Model Fundamentals provide an innovative approach to assessing potential default by looking at financial risk and business risk to measure the likelihood of default of public and private banks, corporations, and REITS over one- to five-year time horizons. Models cover more than 250 countries and 20 segments, regions, and industries.
- PD Model Market Signals provides a point-in-time view of credit risk for public companies based on our sophisticated equity-driven model that captures equity market sentiment to provide an early-warning sign of potential default between financial reporting periods. The Market Signal PDs are updated daily and cover 64,000+ public companies globally.

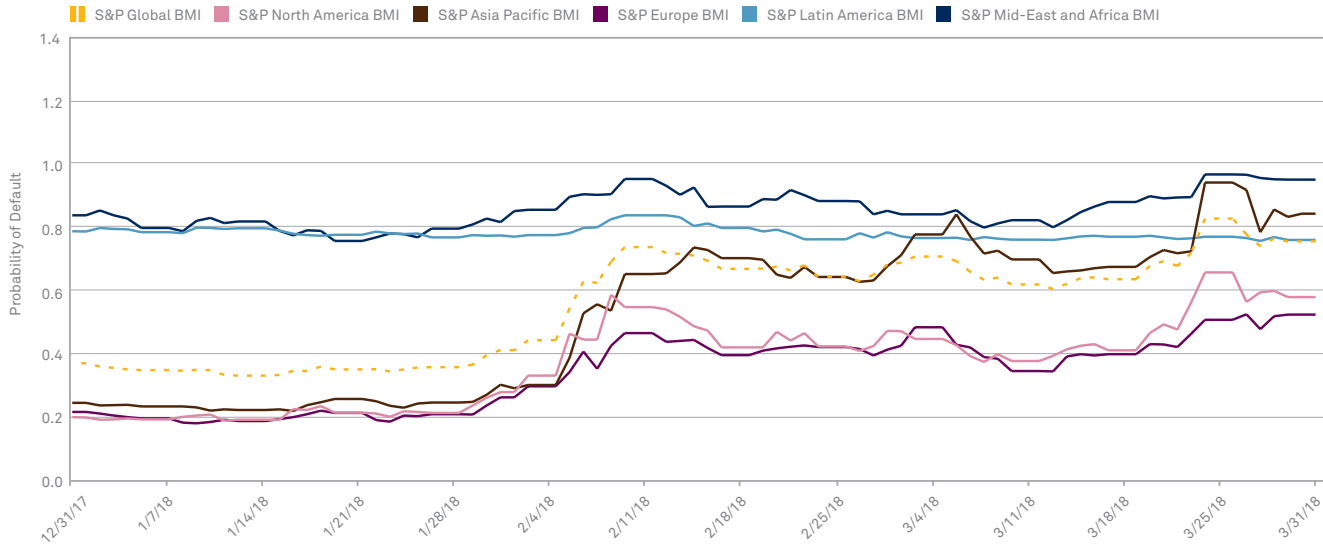
[Learn more about these models, as well as our other award-winning credit risk tools and solutions.](#)

1. According to the Canadian Steel Producers Association.

2. "Swiss companies hit by US tariffs on steel and aluminum", Swiss-American Chamber of Commerce, June 4, 2018.

Regional Risk

Chart 1:
Regional Trends, Market Signal Probability of Default



Source: S&P Capital IQ platform as of May 15, 2018.

During the first quarter of 2018, the S&P Latin America BMI was both the best performing and most stable index. It improved by 3.31% over the quarter and had a standard deviation of 0.02. The worst performing and most volatile index was the S&P Asia Pacific BMI, which deteriorated by 226.85% and had a standard deviation of 0.24 over the same period.

The quarter was marked by two severe increases in market-implied credit risk in North America, Europe, and Asia Pacific: the first during the first two weeks of February and the second during the third week of March. Because of the overall weight these regions represent of stocks globally, the S&P Global BMI was also severely impacted during the period. It started the quarter with a PD of 0.38%, deteriorated to finish with a PD of 0.76%, and experienced a volatility of 0.16.

The S&P North America BMI started the quarter with a PD of 0.21%, deteriorated to finish with a PD of 0.58%, and experienced a volatility of 0.14. Fears that interest rates would increase, in addition to counter signs of rising inflation due to low unemployment and increased wages, drove U.S. stocks to a sell-off. The signing of a two-year spending bill by President Trump, and the expectation that federal debt will increase as a result of the 2017 tax cuts, reinforced the market sentiment. This sell-off reverberated in other regions. In Japan, for example, the Nikkei 225 had its most significant drop since the crisis

of the 1990s. The S&P Asia Pacific BMI started the quarter with a PD of 0.26%, deteriorated to finish with a PD of 0.84%, and experienced a volatility of 0.24.

Political risk drove the market-implied credit risk increase in March. A tumultuous White House, with multiple senior staff departures, and the announcement by the administration of steel and aluminum import tariffs increased expectations of a global trade war. The impact was felt in all major global markets. The S&P Europe BMI started the quarter with a PD of 0.23%, deteriorated to finish with a PD of 0.53%, and experienced a volatility of 0.11.

Indices for Latin America and the Middle East and Africa were decisively more stable--a sign that both regions are, perhaps, are somewhat isolated from the primarily politically driven issues affecting other regions. The S&P Latin America BMI started the quarter with a PD of 0.78% and improved to finish with a PD of 0.76%, while maintaining a volatility of 0.02. It was the only region that improved its market-implied credit profile during the quarter. The S&P Mid-East and Africa BMI started the quarter with a PD of 0.84%, deteriorated to finish with a PD of 0.94%, and experienced a volatility of 0.06.

Political Risk

Canada

Canada ships the majority of its exports to the U.S. and is also the largest supplier of steel and aluminum to the country. As a result, the prospect of a global trade war ignited by President Trump could have severe consequences for its economy. Its market-implied credit risk continued to tick up even after the U.S. administration said that Canada and Mexico would initially be exempt from the tariffs, pending a renegotiated NAFTA.

Switzerland

Switzerland is an unlikely casualty of President Trump's trade rhetoric. The U.S.'s threat to impose tariffs on steel and aluminum imports increased credit risk, potentially sparking a wave of protectionist responses. A global trade war was singled out by the Swiss National Bank as having strong potential consequences for the country's monetary policy, placing downward pressure on inflation as a result of lower global demand, while increasing demand for the Swiss franc.

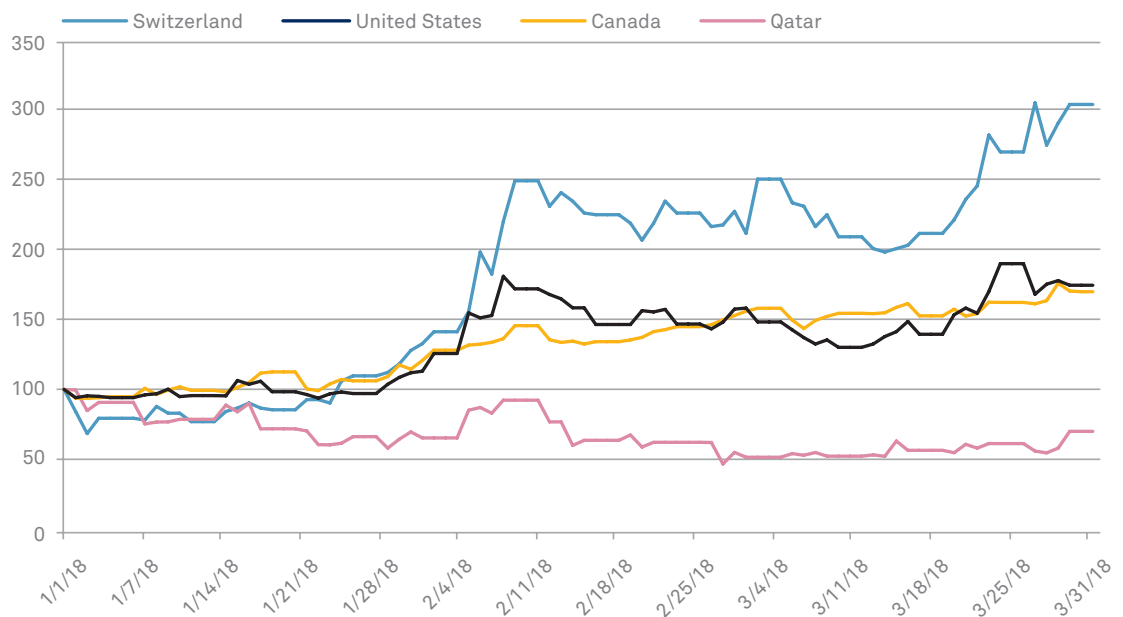
Qatar

In a significant development from the previous quarter, Qatar's market-implied credit risk steadily improved for most of the first quarter of 2018. The country continued to be under an economic and political embargo by its neighbors – Bahrain, Egypt, the UEA, and Saudi Arabia – that continue to accuse Doha of allowing terrorism. However, as a response, Qatar launched a diplomatic offensive to win over support that resulted in the U.S. expressing support for the country, while asking for a mutually-agreed upon solution.

U.S.

U.S. market-implied risk was stable during January, but increased in the first two weeks of February due to domestic and international pressures. February witnessed one of the largest stock market sell-offs in history. Expectations about a rise in inflation and federal debt levels spooked investors. In March, staff departures at the White House, including the lead lawyer on the Russia investigation and the national security advisor, sent political risk higher.

Chart 2:
Country Trends, Market Signal Probability of Default
PDMS Country Benchmark (Index 100= Jan. 1, 2018)



Source: S&P Capital IQ platform as of May 15, 2018.

Industry Risk

Market-Implied Credit Risk

As discussed, the median credit risk of the S&P Global BMI nearly doubled in the first quarter of 2018, increasing to a one-year PD of 0.76% from 0.38%, equivalent to an implied credit score decline to 'bb+' from 'bbb-'. Every sector increased in risk during the quarter, ranging from 48% to 154%.

Best Performers

Best performer is a relative term this quarter since all sectors exhibited increased risk. The index that deteriorated the least was the S&P Global BMI Health Care, which worsened by just 48.13% over the quarter. It started with a PD of 0.27% and finished with a PD of 0.40% and an implied credit score of 'bbb-'. This was a continuation of the trend in the fourth quarter of last year where it was also the best performing sector, although its risk decreased by nearly 17% at that time.

Worst Performers

The worst performing index was the S&P Global BMI Industrials. It deteriorated by 154.25% over the quarter, starting with a PD of 0.4% but finishing at 1.02%, or an implied credit score of 'bb'. The announcement by President Trump of potential tariffs likely contributed to the increase in perceived risk for the sector.

Volatility

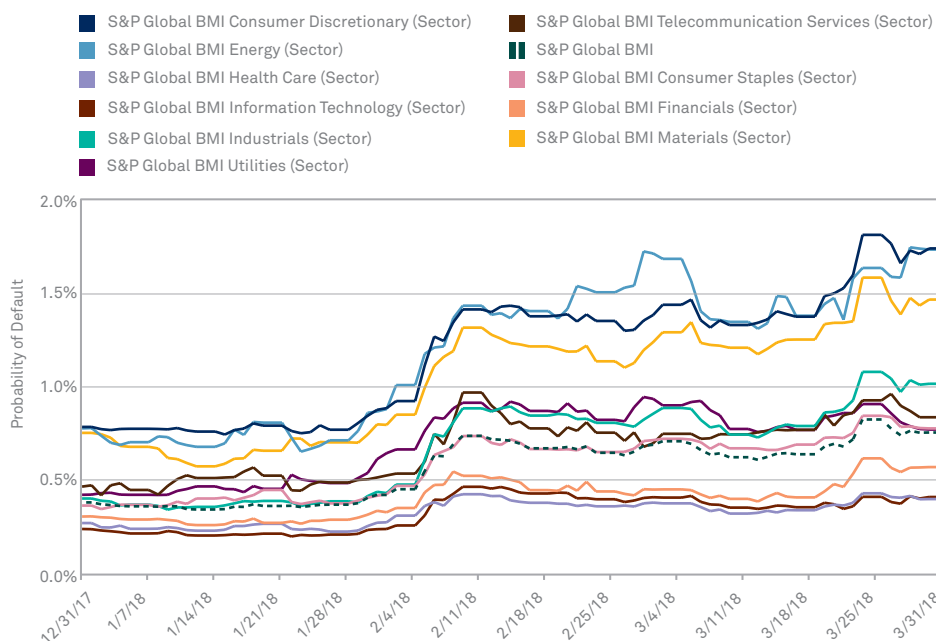
In terms of volatility, it was a relatively stable quarter overall. The S&P Global BMI Health Care was the most stable index, with a standard deviation of 0.07, although, notably, that is actually the same amount of volatility exhibited by the most volatile indices last quarter. The S&P Global BMI Energy index was the most volatile, with a standard deviation of 0.38; that is more than five times the level of the prior quarter when it shared that title with the Materials sector.

Fundamental-Based Credit Risk

Compared to the fourth quarter, the median Fundamental PD improved by 7.02% to 0.60%. Overall, the S&P Global BMI had an implied credit score of 'bb+', which held stable over this time. This implied credit score, driven by financials, is now even with the level of the market-implied PD of 'bb+', which has deteriorated one notch this quarter, as we observed earlier.

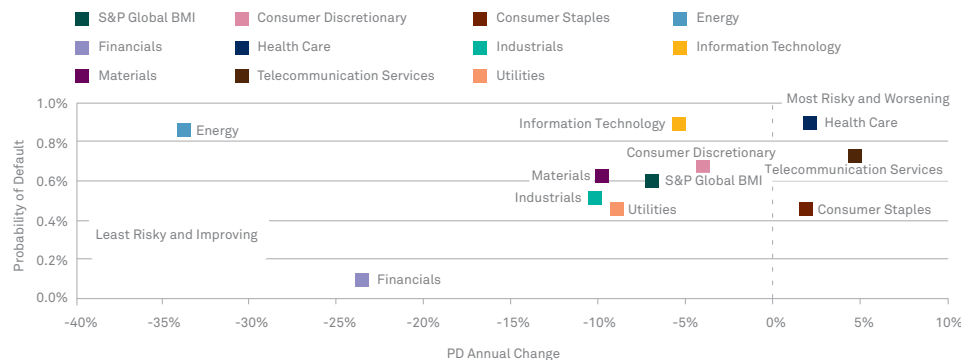
The Energy sector has seen a notable improvement in creditworthiness with a 34% reduction in the median PD in the year-over-year period, resulting in a one-year PD of 0.85%, or an implied credit score of 'bb'. The Financials sector continued its run of year-over-year fundamental improvement that has been underway since the first quarter of 2018. However, the median one-

Chart 3:
Industry Trends, Market Signal Probability of Default



Source: S&P Capital IQ Platform as of May 15, 2018.

Chart 4:
Annual Industry Changes, Fundamental Probability of Default



Source: S&P Capital IQ Platform as of May 15, 2018.

year PD of 0.1%, while down 24% from the first quarter of 2017, is up from 0.09% in the fourth quarter of 2017. It remains the only sector with an implied credit score of 'a-' or higher, up from 'bbb+' in the third quarter of 2017.

Energy now ranks as the third riskiest sector, on median, trailing Information Technology and Health Care. All three sectors continue to hold an implied credit score of 'bb', as they have for the past six quarters.

Movers and Shakers

Consumer Discretionary Continues To Be a Risk Leader

The Consumer Discretionary sector once again accounted for the majority of the riskiest firms, with nine out of the fifteen riskiest falling into this category. Every region had at least one firm from the sector on its risk list. In addition, Europe's three riskiest firms were in in this sector, as were the three riskiest firms globally.

The first quarter of 2018, Steinhoff International Holdings N.V. (JSE:SNH) continued its run as one of the three riskiest public firms, especially after reeling from the third sharpest deterioration in credit quality during the previous quarter. The firm ended the quarter with a one-year forward looking PD of 47.86%, or an implied credit score of 'cc'. The elevated PD is the result of an ongoing accounting scandal at this global owner of numerous household goods and general merchandise brands. This includes Mattress Firm Holding Corp., which it acquired in 2016 and that operates and franchises under the Mattress Firm, Sleepy's, and Sleep Train brand names. The firm's CEO, Markus Jooste, resigned on December 5th, 2017 triggering a selloff in the stock that is drawing comparisons to Enron. During the first quarter, Steinhoff both delayed the fiscal year earnings release and announced that the CFO, Ben la Grange, had stepped down from that position, as well as his seat on the Management Board, to focus on liquidity and the finalization of 2017 financial statements. Mr. la Grange was to be replaced by the CFO of the U.K. subsidiary, Philip Dieperink.

GEDI Gruppo Editoriale S.p.A. (BIT:GEDI), an Italian publishing firm, held the second highest PD this quarter. This was driven by two primary factors. The first was the settlement of a tax dispute, which resulted in a large payment covering most of the settlement, funded by cash, to the

government and subsequent impairment to net income resulting in a cash outflow. The second was a notable increase in total liabilities, driven largely by increased financing, which resulted in an increased leverage ratio.

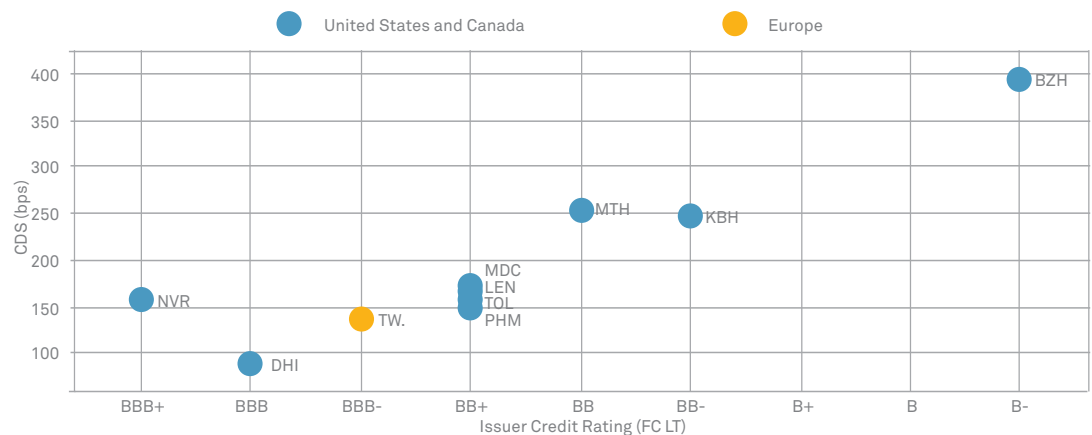
Biggest Movers

North America contributed the three firms with the largest deteriorations in market-implied credit quality during the quarter. NVR, Inc. (NYSE:NVR), a homebuilder, had the largest deterioration, with a PD that rose to 1.56% from 0.01% at the start of the quarter, equivalent to a movement to 'bb-' from 'aaa'. NVR saw its PD rise dramatically starting in late January 2018, as U.S. mortgage rates hit recent highs, spurring concern across the homebuilding industry that the housing market would suffer due to decreasing affordability. The other two firms, Hilton Worldwide Holdings Inc. (NYSE:HLT) and Thor Industries Inc. (NYSE:THO), also came from the Consumer Discretionary sector. Each exhibited large shifts in market-perceived credit quality as they declined to speculative grade-equivalent levels of credit risk.

The trend with NVR is further supported by looking at CDS spreads on [RatingsDirect@Monitor](#), a visualization tool.³ When compared to homebuilding companies rated 'BBB' through 'BB+' by S&P Global Ratings, NVR, rated 'BBB+', shows a wider CDS spread of 153 basis points (bps). This indicates a higher perceived risk from a credit perspective than homebuilding companies such as:

- D.R. Horton, Inc. (NYSE:DHI), rated 'BBB' with a spread of 85bps.
- Taylor Wimpey plc (LSE:TW), rated 'BBB-' with a spread of 136bps.
- PulteGroup, Inc. (NYSE:PHM), rated 'BB+' with a spread of 148bps.

Figure 1:
CDS Spreads by Issuer Credit Rating



Source: RatingsDirect® Monitor, S&P Capital IQ platform as of June 29, 2018. For illustrative purposes only.

3. RatingsDirect® is the official online source for S&P Global Rating's credit ratings and research. RatingsDirect Monitor syncs with a user's portfolio Watch List to bring timely and reliable data, dynamic visualizations, and credit ratings and research on a single screen.

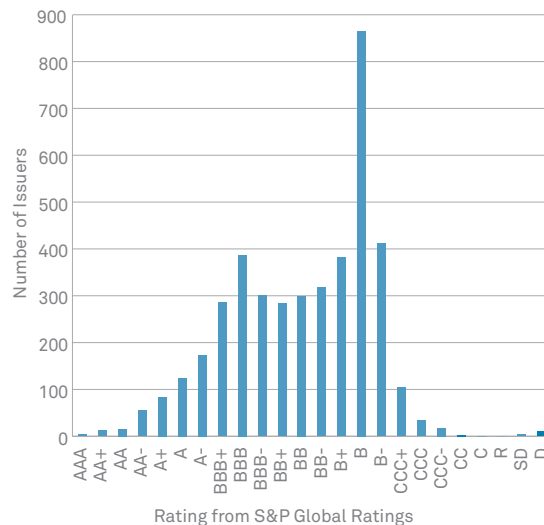
Table 1:
Movers and Shakers

Region	Highest		Improvement		Deterioration	
S&P Global BMI	LSE:MTC Mothercare plc	(cc) (50.18%)	ENXTAM:GTO Gemalto N.V.	bb -> aaa 1.05% -> 0.00%	NYSE:NVR NVR, Inc.	aaa -> bb- 0.01% -> 1.56%
	BIT:GEDI GEDI Gruppo Editoriale S.p.A.	(cc) (49.07%)	TSEC:1712 Sinon Corporation	bb+ -> aa 0.62% -> 0.01%	NYSE:HLT Hilton Worldwide Holdings Inc.	aaa -> bb- 0.00% -> 1.38%
	JSE:SNH Steinhoff International Holdings N.V.	(cc) (47.86%)	NYSE:BGC General Cable Corporation	bbb -> aa+ 0.23% -> 0.01%	NYSE:THO Thor Industries, Inc.	aa -> b 0.01% -> 3.87%
S&P North America BMI	NasdaqCM:ENT Global Eagle Entertainment Inc.	(ccc-) (38.01%)	NYSE:BGC General Cable Corporation	bbb -> aa+ 0.23% -> 0.01%	NYSE:NVR NVR, Inc.	aaa -> bb- 0.01% -> 1.56%
	NasdaqGS:ASCMA Ascent Capital Group, Inc.	(ccc-) (35.80%)	NYSE:KS KapStone Paper and Packaging Corporation	bb -> a+ 1.23% -> 0.04%	NYSE:HLT Hilton Worldwide Holdings Inc.	aaa -> bb- 0.00% -> 1.38%
	NYSE:RRTS Roadrunner	(ccc-) (34.15%)	NYSE:THC Tenet Healthcare Corporation	b -> bbb 4.82% -> 0.19%	NYSE:THO Thor Industries, Inc.	aa -> b 0.01% -> 3.87%
S&P Asia Pacific BMI	ASX:MYR Myer Holdings Limited	(cc) (43.98%)	TSE:5453 Toyo Kohan Co., Ltd.	b -> bbb+ 3.82% -> 0.19%	TSE:1883 MAEDA ROAD CONSTRUCTION Co., Ltd.	aa -> bb- 0.01% -> 2.12%
	TSE:7181 Japan Post Insurance Co., Ltd.	(ccc-) (33.36%)	NZSE:WHS The Warehouse Group Limited	bbb- -> aa- 0.45% -> 0.02%	TSE:9601 Shochiku Co., Ltd.	a+ -> b 0.03% -> 5.13%
	KOSE:A007860 Seoyeon Co., Ltd.	(ccc) (23.67%)	SEHK:341 Café de Coral Holdings Limited	bbb+ -> aa+ 0.13% -> 0.01%	TSE:6923 Stanley Electric Co., Ltd.	aa -> bb- 0.01% -> 1.89%
S&P Europe BMI	LSE:MTC Mothercare plc	(cc) (50.18%)	ENXTAM:GTO Gemalto N.V.	bb -> aaa 1.05% -> 0.00%	DB:FNTN freenet AG	aa -> b+ 0.01% -> 3.40%
	BIT:GEDI GEDI Gruppo Editoriale S.p.A.	(cc) (49.07%)	ENXTPA:IPN Ipsen S.A.	bb+ -> a+ 0.54% -> 0.03%	ENXTPA:VIE Veolia Environnement S.A.	aaa -> bb 0.00% -> 1.02%
	BIT:SO Sogefi S.p.A.	(ccc-) (29.34%)	DB:BWO BUWOG AG	a- -> aaa 0.08% -> 0.00%	LSE:SSPG SSP Group plc	aa- -> b 0.02% -> 3.73%
S&P Latin America BMI	BMV:AZTECA CPO TV Azteca SAB de CV	(ccc-) (37.68%)	BMV:RASSINI A Rassini, S.A.B. de C.V.	b- -> bb+ 7.22% -> 0.66%	BVC:EXITO Almacenes Éxito S.A.	bbb -> b+ 0.25% -> 2.86%
	BOVESPA:BEEF3 Minerva S.A.	(ccc) (21.30%)	BOVESPA:CMIG4 Companhia Energética de Minas Gerais S.A.	b -> bb+ 4.45% -> 0.58%	BMV:LALA B Grupo Lala, S.A.B. de C.V.	bbb -> b+ 0.26% -> 2.25%
	BOVESPA:JSLG3 JSL S.A.	(ccc+) (11.61%)	SNSE:CENCOSUD Cencosud S.A.	bb- -> bbb 2.03% -> 0.30%	BVC:CLH CEMEX Latam Holdings, S.A.	bb+ -> b 0.68% -> 3.84%
S&P Mid-East and Africa BMI	JSE:SNH Steinhoff International Holdings N.V.	(cc) (47.86%)	JSE:TKG Telkom SA SOC Limited	b -> bb+ 3.88% -> 0.80%	JSE:DTC Datatec Limited	bb+ -> ccc- 0.59% -> 27.91%
	JSE:DTC Datatec Limited	(ccc-) (27.91%)	ADX:ETISALAT Emirates Telecommunications Group Company PJSC	a -> aa 0.06% -> 0.02%	DFM:DIB Dubai Islamic Bank P.J.S.C	aa- -> bbb 0.03% -> 0.24%
	JSE:ACL ArcelorMittal South Africa Ltd	(ccc) (23.61%)	JSE:CLR Clover Industries Limited	b+ -> bb+ 2.49% -> 0.72%	JSE:EXX Exxaro Resources Limited	bb+ -> b 0.74% -> 5.87%

Source: S&P Global Market Intelligence as of May 15, 2018.

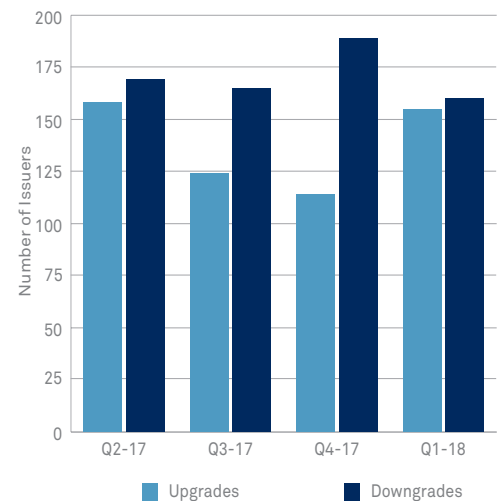
S&P Global Ratings Trends

Chart 5:
Credit Ratings Distribution



Source: S&P Global Market Intelligence as of May 15, 2018.

Chart 6:
Credit Ratings Migration



Ratings Migration

A total of 315 issuers migrated during the last quarter, showing more movement in the rated universe than in the fourth quarter of 2017 with 304 issuers. Of these, 155 issuers were upgraded and 160 downgraded.

The upgrade-to-downgrade ratio recovered strongly this quarter, nearing parity for the first time since the second quarter of 2017. This ratio tracked 0.93, 0.75, 0.60 and 0.97 during the past four quarters, and the recent rise towards parity was a result of the fewest number of downgrades in the past four quarters. There was a 15% decline in downgrades from the prior quarter, and a 36% increase in upgrades. This holds in line with our observations from last quarter that downgrades could be more muted given the relative reduction in the CreditWatch negative distribution.

prior improvement in the ratio in the third quarter. We will watch the ratings migrations trends to see if they maintain near parity levels, but the percentage of firms on CreditWatch Negative remained the same, and at a level that is double those on CreditWatch positive. All else equal, this presages more downgrades in the future.

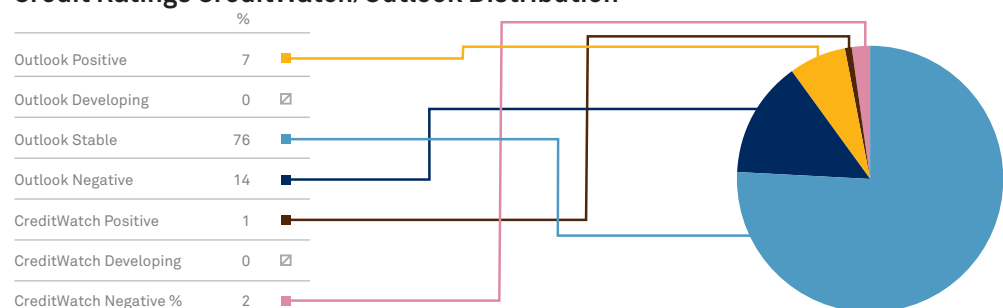
Ratings Distribution

The ratings distribution remained consistent with recent quarters. A total of 34.5% of firms were rated investment grade ('BBB-' or higher), resulting in an investment grade-to-noninvestment grade ratio of 0.53x, slightly lower than 0.54x in the fourth quarter of 2017 and continuing recent trends. There were 76 (4.8%) more firms in the 'B' ratings category (inclusive of +/- notches) than the prior quarter. 'B' remained the most popular rating level, which had 20.7% of all rated industrials.

Firms on CreditWatch

Looking forward, the overall positive/negative ratio of firms on CreditWatch/Outlook held constant with the previous quarter at 0.5. This was after a

Chart 7:
Credit Ratings CreditWatch/Outlook Distribution



Source: S&P Global Market Intelligence as of May 15, 2018.

Quarterly Default Review

Table 2:
2018 Q1 Defaults, Selected Defaults, and Bankruptcies

Company Name	Rating Default Date	Bankruptcy Date	Country	Total Assets (\$USD MM)	Primary Industry
Sears, Roebuck and Co.	3/22/2018		United States	22,474	Department Stores
iHeartCommunications, Inc.	2/1/2018	3/14/2018	United States	12,260	Broadcasting
FirstEnergy Solutions Corp.		3/31/2018	United States	5,514	Electric Utilities
HCR ManorCare, Inc.		3/4/2018	United States	4,098	Healthcare Facilities
Noble Group Limited	3/20/2018		United Kingdom	3,740	Trading Companies and Distributors
Carillion Plc		1/15/2018	United Kingdom	3,669	Construction and Engineering
Claire's Inc.		3/19/2018	United States	2,732	Apparel Retail
Southeastern Grocers, LLC			United States	2,150	Food Retail
Claire's Stores Inc.	3/19/2018		United States	2,001	Apparel Retail
Expro Holdings UK 3 Limited	1/2/2018		United Kingdom	1,761	Oil and Gas Equipment and Services

Source: S&P Capital IQ platform as of May 21, 2018.

Defaults

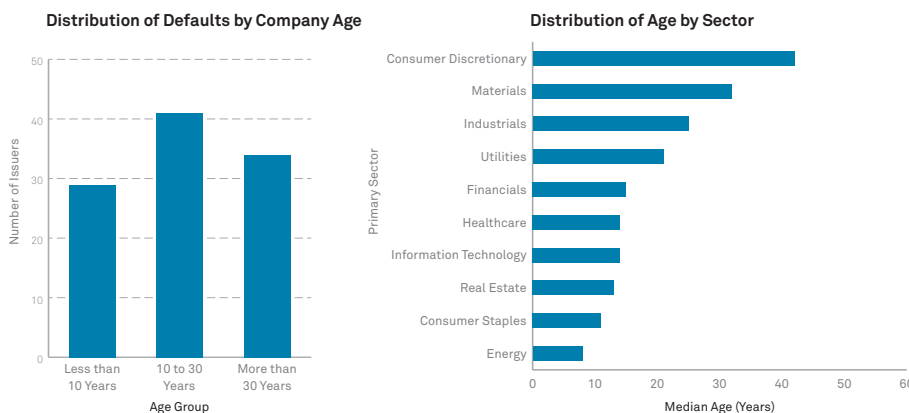
Consumer Discretionary was the sector with the most defaulted assets, totaling \$44.2 billion (59.5% of the total), followed by Industrials with \$11.3 billion (17.2% of the total), and then Utilities with \$5.5 billion (0.6% of the total).

On an industry view, Department Stores had the most defaulted assets with \$24.6 million (32.4% of the total), followed by Broadcasting with \$12.3 billion (16.5% of the total), and then Electric Utilities with \$5.5 billion (7.4% of the total).

Our data includes the founding year for 104 of the 148 companies that either defaulted or declared bankruptcy. Using that information we have illustrated the distribution of bankruptcies by company age (Table 2) – 29 were less than 10 years of age, 41 were between 10 and 30, and 34 exceeded 30. We observe that companies older than 10 years defaulted or declared bankruptcy at a rate 2.6x higher than younger ones.

Furthermore, we observe that the median age of defaulted Consumer Discretionary companies is substantially higher than defaulted companies in other sectors. This is likely reflective of both the distress in the sector as well as the impact that the shift to online shopping has had on traditional brick and mortar retailers, especially those that have struggled to adapt their business models.

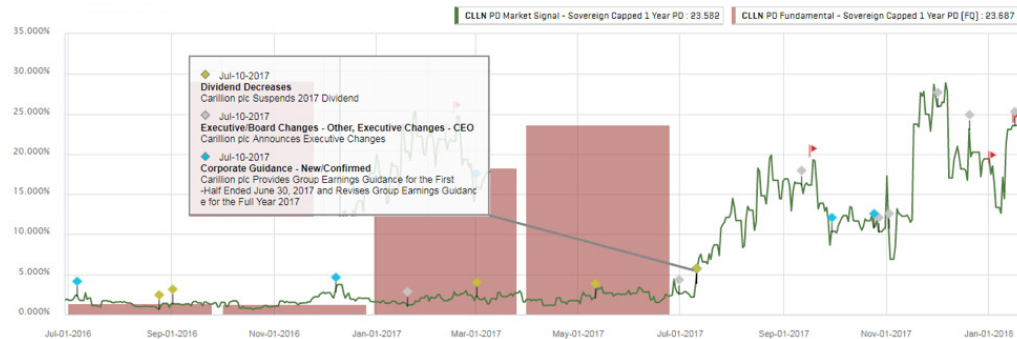
Chart 8:
Defaults by Company Age and Sector



Source: S&P Capital IQ platform as of May 21, 2018.

Single-Entity Default Analysis

Chart 9:
Carillion Plc: Early Warning Default Indicator



Source: S&P Capital IQ platform as of June 29, 2018.

Carillion Plc (“Carillion”), headquartered in Wolverhampton, U.K., was incorporated in 1999. The firm provides maintenance, facilities management, and energy services to buildings and large property estates in public and private sectors, including infrastructure services for roads, railways, and utility networks. It serves many sectors: Aviation, Corporate, Financial Services, Oil and Gas, Central and Local Government, Defense, Healthcare, Transport, Education, Commercial and Retail, and Residential and Leisure.

Carillion had “declining profit margins” and “high adjusted debt [due to] reverse factoring and its unfunded pension deficit”, according to S&P Global Ratings.⁴ When the firm filed for liquidation on January 15, 2018, it had debt and liabilities in excess of £1.5 billion. It was not rated by S&P Global Ratings.

In the first quarter of 2017, Carillion's Fundamental PD of 1.32% was better than the U.K. Construction & Engineering industry median of 4.43%. The PD rose to 18.27% in the first quarter of 2017 from 1.32% the previous quarter – the equivalent of the implied credit score falling to ‘ccc’ from ‘bb’. An additional 30% increase from the first to the second quarter of 2017 brought the Fundamental PD to 24%, six months ahead of Carillion's liquidation. That increase placed Carillion in the worst 25% of the industry by the second quarter of 2017. The most significant factor contributing to the increase in PD is Carillion's EBIT interest coverage, a measurement of the company's ability to pay interest on debt, which fell to -0.32 in the first quarter of 2017⁵ from 2.75 the previous quarter. The elevated PD was also due to total equity and cash interest

coverage, which stood at -£405 million and 0.09, respectively, in the first quarter of 2017, down from £730 million and 2.7 in the previous quarter. During this period, EBIT decreased by £132 million to a net loss of £100 million, and equity decreased by an astonishing £1,135 million. The Fundamental PD illustrates that Carillion's sizable net losses left the company debt ridden and unable to operate.

In the quarter leading up to its compulsory liquidation filing, the median Market Signal PD was 18%, and reached as high as 29%. The Market Signal PD increased nearly six fold, from 2.17% to 12.69% (equivalent to a credit score decrease from ‘bb-’ to ‘ccc+’) during July 2017 in response to a share price decline of nearly 70% during the month. Carillion's share price fell by 39% on July 10th alone, triggered by a profit warning (the first of three) and the announcement of a strategic review.

4. Source: S&P Global Ratings, Carillion's Demise: What's At Stake? https://www.capitaliq.com/CIQDotNet/CreditResearch/SPResearch.aspx?DocumentId=38529831&From=SNP_CRS as published on March 23, 2018.

5. Semiannual data was multiplied by 0.5.

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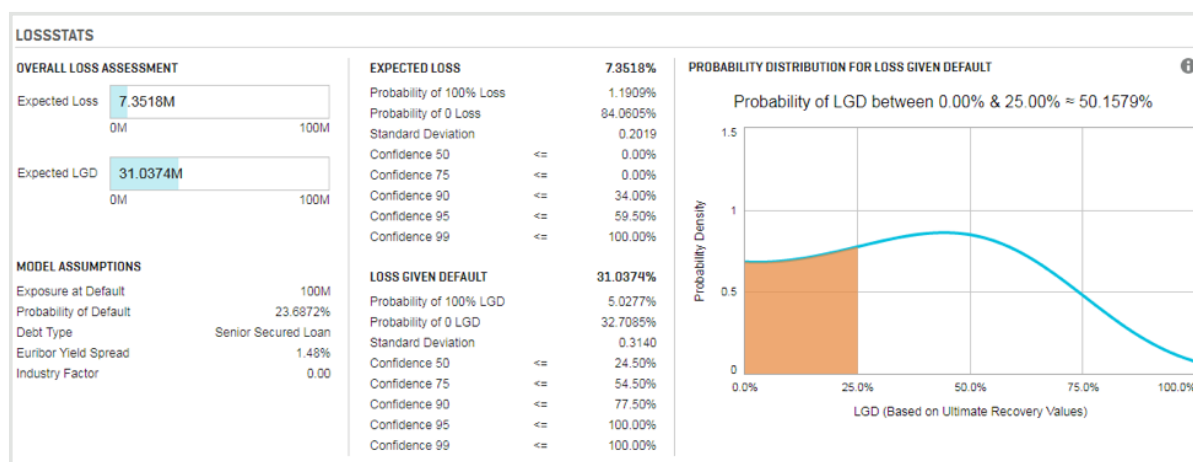
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Single-Entity Recovery Analysis

Figure 2:
Carillion Plc: Sample Recovery Analysis



Source: S&P Capital IQ platform as of June 27, 2018.

Assuming we are a lender to Carillion and have extended them a hypothetical \$25 million GBP senior secured loan, it is possible to estimate the range of potential losses for that loan using S&P Global Market Intelligence's [LossStats™ Model](#).⁶

Applying a set of standardized assumptions about the performance of senior secured loans, Carillion's country default rate, a 23.69% PD, and an exposure amount of \$25 million, the expected loss given default (LGD) for this transaction is \$7.75 million or 31.04%. Furthermore, the probability distribution of losses illustrated below shows that there is a 50.16% probability that LGD will be between 0% and 25%, along with a 32.71% probability of a 0% LGD.

6. A statistical model built upon world class default and recovery data.

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