

Next Debt Crisis: Earnings Recession Threat

September 30, 2019

(Editor's Note: A full list of contacts is provided in Appendix 4)

Key Takeaways

- Very low global corporate profits growth (1%) forewarns possible earnings and economic recessions (we estimate U.S. recession risk at 30%-35%).
- Aggressive corporate leverage (global sample's debt-to-earnings is 4.7x) is likely to rise, although our rated portfolio's leverage should steady.
- Low interest rates are keeping speculative-grade defaults down (2.1%), but high debt levels and slowing economies portend a future spike.

Corporate leverage is worsening in 2019 as debt rises faster than earnings for nonfinancial companies. S&P Global Ratings believes faltering profit growth threatens an earnings recession. This in turn may be a leading indicator of an economic recession. Indeed, after evaluating a variety of factors, our economics team recently raised the risk of a U.S. recession in the next 12 months to 30%-35%.

Weak earnings threaten to drive up corporate leverage. Chart 1-1 indicates that debt and earnings rose in tandem between 2011 and 2017 for a global sample pool of 20,071 nonfinancial corporates (largely unrated). But the trend diverged in first fiscal-half 2019: debt growth jumped while that of earnings fell. Similarly, for our rated portfolio, we project debt will expand faster than earnings in 2019 (see chart 1-2).

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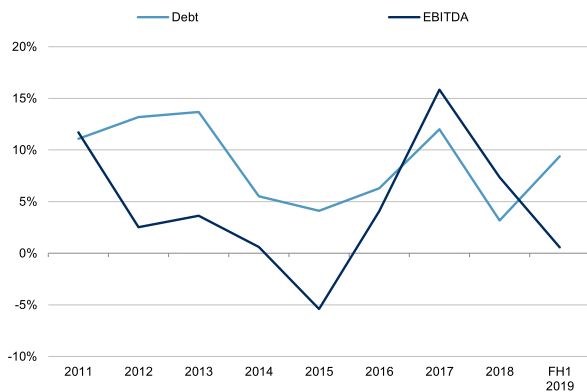
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Chart 1-1

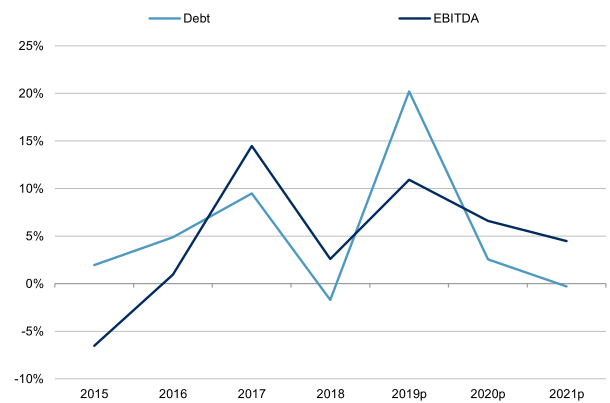
Global Corporate Sample (20,071):
Debt and earnings growth, 2011 to FH1 2019



FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 1-2

Rated Portfolio: Global, 2015- 2021
Global debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Debt rise. Could the higher debt growth in early 2019 be an anomaly? The trend could have been driven by two market developments. First, borrowers returned to market after having been sidelined by a partial shutdown in the U.S. noninvestment grade corporate bond market in the fourth quarter of 2018. Second, lenders and investors perceived signals from the U.S. Federal Reserve in the first quarter 2019 as indicating a "lower for longer" environment. Taken together, we have willing borrowers and willing lenders.

Early warning indicators. We chose a large sample size (20,071 companies) to capture medium-sized enterprises in the study. Such enterprises are more likely than their established larger counterparts to serve as the "canary in the coal mine". Indeed, 85% of the sample (based on borrower count and debt amount) is unrated by S&P Global Ratings (henceforth "the unrated sample"). We believe the default rates are likely to be higher in the unrated sample than in the rated portfolio. The sample's gross debt of US\$30 trillion is equivalent to a substantial two-fifths of the estimated total global nonfinancial corporate debt of US\$73 trillion.

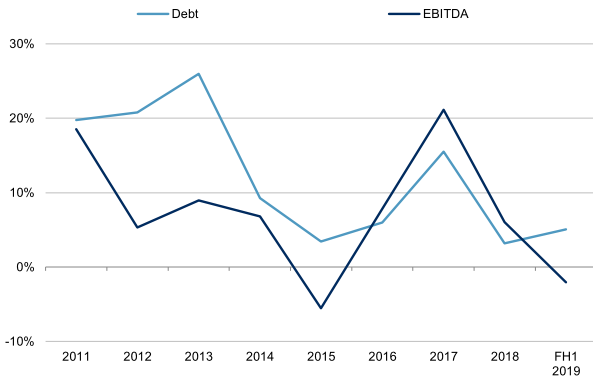
Rated portfolio. As previously alluded, rated corporates tend to be larger than most of those in the unrated sample. This advantage allows rated companies to borrow more relative to size yet enjoy more robust profit margins. Indeed, we project earnings growth of the rated portfolio will improve in 2019 over 2018 (while earnings growth of the unrated sample is declining). However, debt growth of the rated portfolio will also exceed that of earnings (see chart 1-2). More positively, we expect the debt growth rate to moderate to below that of earnings in 2020 and 2021.

Geographies. In the unrated sample, the Asia-Pacific region (chart 2-1) is the primary driver for weaker global earnings growth. We see this phenomenon as tied to China's economic slowdown. Europe (chart 3-1) and Latin America (chart 4-1) are largely flat while North America (chart 5-1) has gone off its recent peak. (Charts for the 10 largest countries or economies by GDP are provided in Appendix 2).

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Chart 2-1

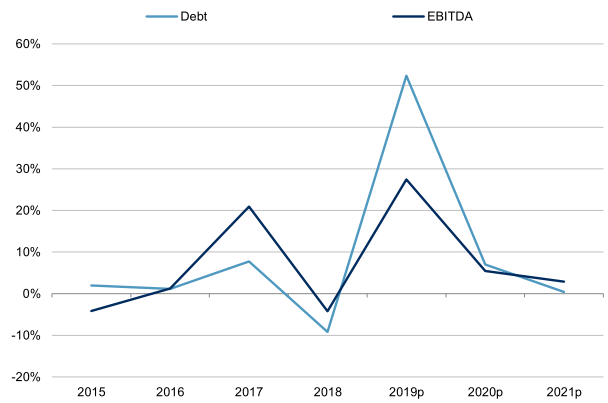
Asia-Pacific Corporate Sample (13,316):
Debt and earnings growth, 2011 to FH1 2019



FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 2-2

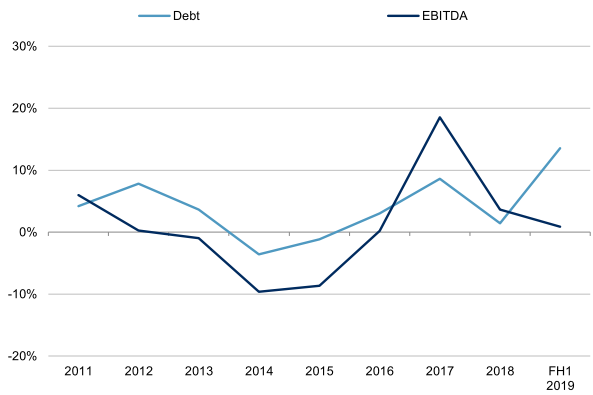
Rated Portfolio: Asia-Pacific, 2015- 2021
Asia-Pacific debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart 3-1

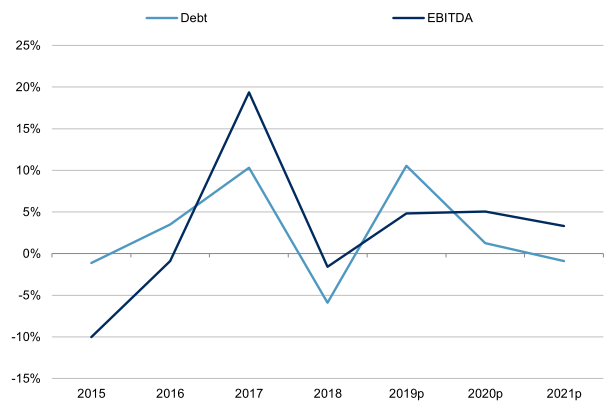
Europe Corporate Sample (2825):
Debt and earnings growth, 2011 to FH1 2019



FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 3-2

Rated Portfolio: Europe, Middle-East, Africa, 2015- 2021
Europe, Middle-East and Africa debt and earnings growth

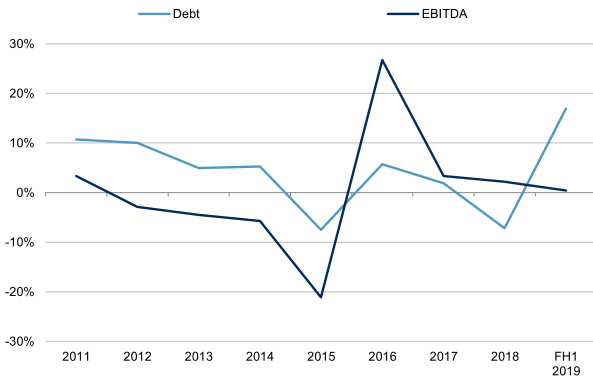


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Chart 4-1

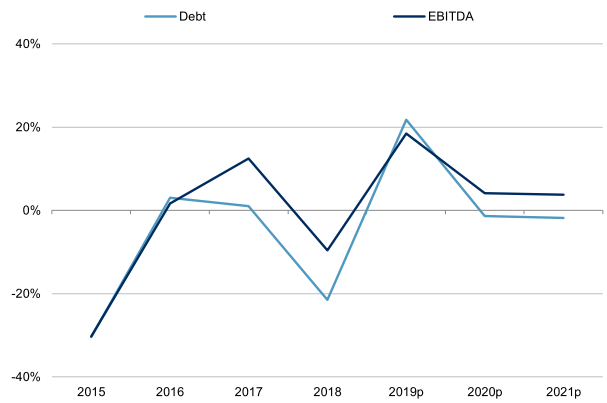
Latin America Corporate Sample (625):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 4-2

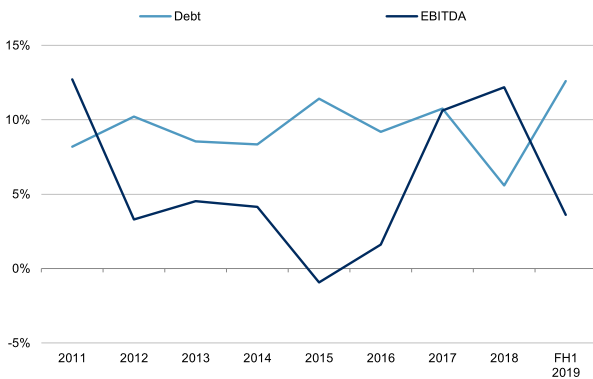
Rated Portfolio: Latin America, 2015-2021
Latin America debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart 5-1

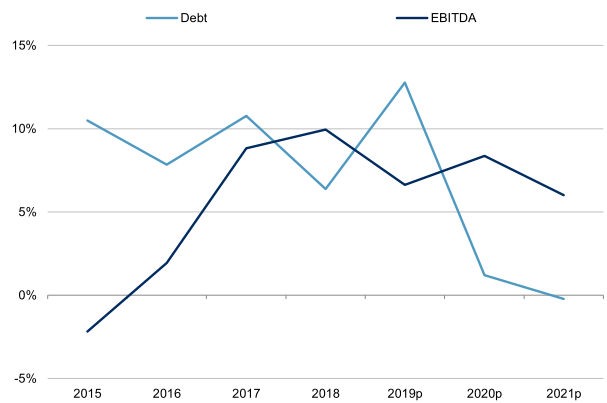
North America Corporate Sample (2,653):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 5-2

Rated Portfolio: North America, 2015-2021
North America debt and earnings growth



p--projected. Source: S&P Global Ratings.
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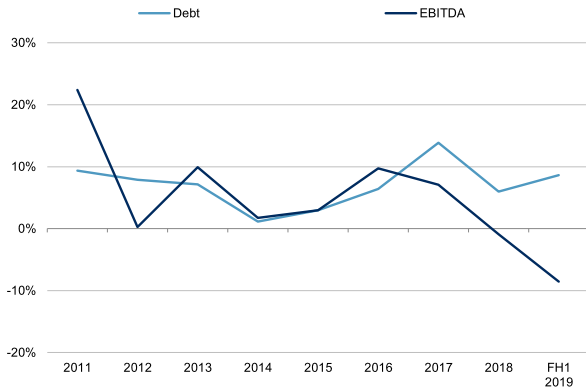
For the rated portfolio, charts 2-2 to 5-2 show historical trends and our projections by geographic region. For Asia-Pacific (chart 2-2); Europe, Middle-East and Africa (chart 3-2); and Latin America (chart 4-2), we expect earnings to grow slightly ahead of debt over the next two years. For North America, the debt build-up from recent mergers and acquisitions (M&A) activity is expected to wind down (chart 5-2), translating to improved leverage. Our projections are base case. In a downside recessionary scenario, compressed earnings could reverse leverage improvements.

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Sectors at risk. Charts 6-1 to 8-1 show three industry sectors which face heightened credit risks. These are auto (chart 6-1 for the unrated sample and chart 6-2 for the rated portfolio), consumer products (charts 7-1 and 7-2), and retail (charts 8-1 and 8-2).

Chart 6-1

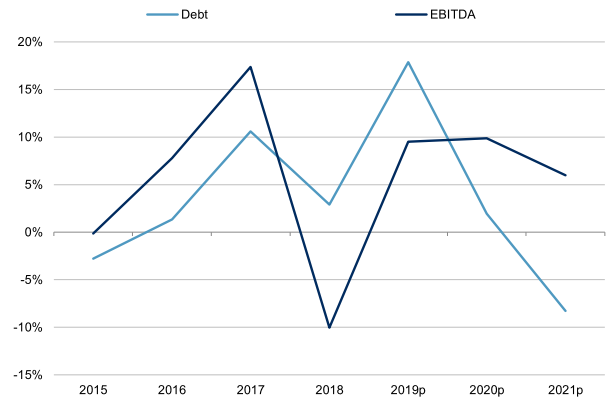
Auto Corporate Sample (583):
Debt and earnings growth, 2011 to FH1 2019



FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 6-2

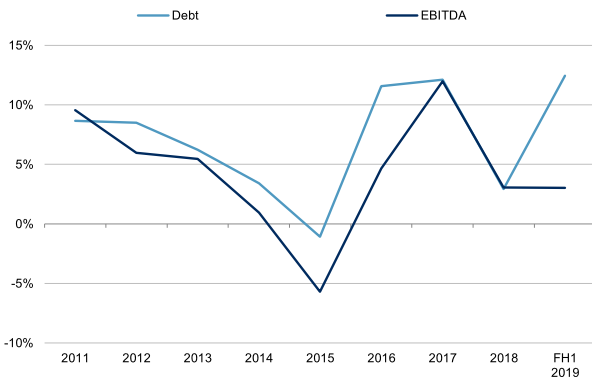
Rated Portfolio: Auto, 2015-2021
Auto debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart 7-1

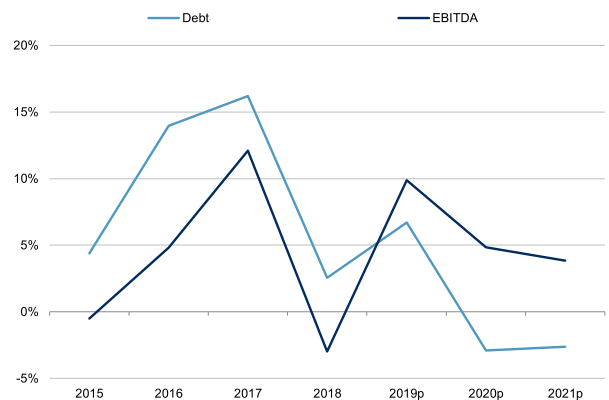
Consumer Products Corporate Sample (2,608):
Debt and earnings growth, 2011 to FH1 2019



FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 7-2

Rated Portfolio: Consumer Products 2015-2021
Consumer products debt and earnings growth

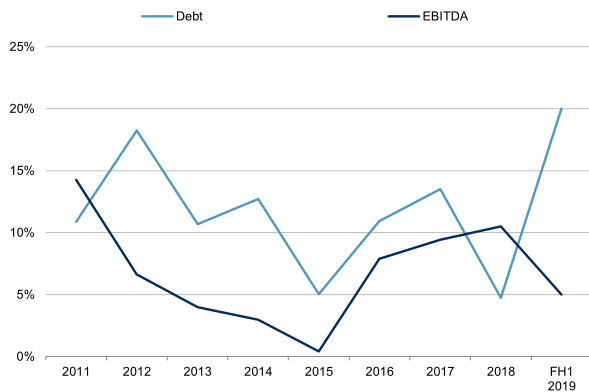


p--projected. Source: S&P Global Ratings.
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Chart 8-1

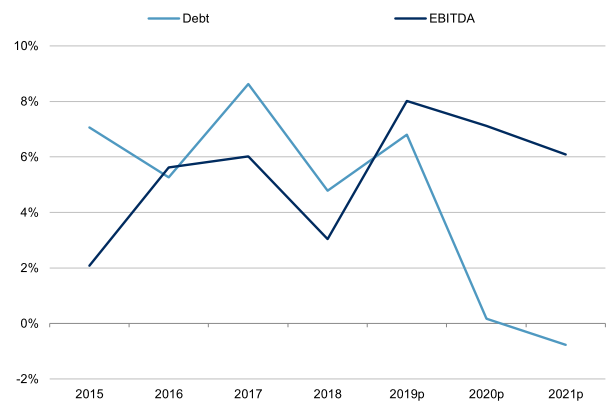
Retail Corporate Sample (823):
Debt and earnings growth, 2011 to FH1 2019



FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart 8-2

Rated Portfolio: Retail 2015- 2021
Retail debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Automotive. The global car industry has lost its main growth engine. Contrary to initial expectations that the setback in the Chinese market would be temporary, sales volumes have now been declining for almost a full year. Prospects of a recovery in the second half of the year are dim.

Consumer products. Liquidity and weak growth prospects underpin the negative outlook bias (i.e., more negative rating outlooks and CreditWatch listings than positive), particularly for speculative-grade issuers. Challenges include refinancing risk, constrained liquidity, and unsustainable capital structures.

Retail. In North America, specialty retailers continue to see declining customer traffic and promotional pricing pressure, resulting in unsustainable capital structures or narrowing liquidity. In Europe, the high street remains under pressure, with pockets of improvement. Apparel and department stores have faced negative pressure for the past two years.

Additional sectors. The top-five rated sectors where credit risk is highest (as measured by our net negative outlook bias) are, by region:

- Asia-Pacific: Automotive, consumer products, gaming, telecoms, and transport cyclical (see report on credit conditions in Asia-Pacific published Sept. 30, 2019).
- Europe: Automotive, steel, technology, real estate, and transport infrastructure (airports) (see Credit Conditions EMEA, Sept. 30, 2019).
- North America: Automotive, consumer products, healthcare, retail, and pharmaceuticals (see Credit Conditions North America, Sept. 30, 2019).

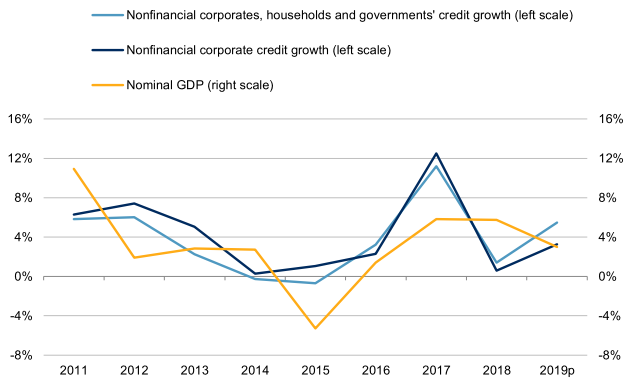
(Charts for additional industry sectors are provided in Appendix 3).

Broader universe. We see the unrated sample as reasonably representative of the wider universe of corporate borrowers. Chart 9 illustrates the macro picture: corporate debt rose faster for the first calendar quarter 2019, while 2019 nominal GDP growth is expected to fall. We presume a co-relationship between nominal GDP growth and earnings growth.

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Chart 9

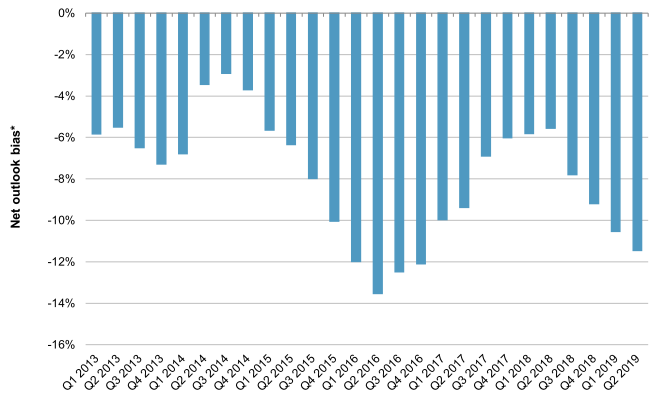
Global Nominal GDP Growth Versus Nonfinancials Credit Growth, 2011 To 2019p



p--projected. GDP data source: International Monetary Fund (IMF). Credit data source: Bank for International Settlements (BIS) except for S&P Global Ratings' projected 2019 based on Q1 2019 data from the International Institute of Finance (IIF).
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Chart 10

Net Outlook Bias Of Our Global Rated Pool
Period: Q4 2012 to Q2 2019



Q--calendar quarter. *The negative outlook bias is calculated by deducting the percentage of negative outlooks and CreditWatch listing against the positive.
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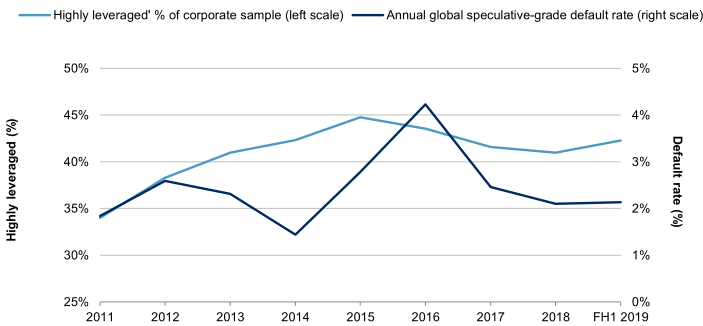
Rating trends. Chart 10 shows the net outlook bias for our global rated corporate portfolio. The worsening ratings outlook trend, which started in third quarter 2018, has been a forward indicator of corporate credit trends. One obvious manifestation of such a trend has been the recent decline in earnings growth.

Default correlation. There appears to be some correlation, albeit imperfect, between the "highly leveraged ratio" of the unrated sample and the annual speculative-grade default rates of our rated portfolio (see chart 11). In chart 12, we show the rising trend of U.S. corporate issuers rated 'B-' and below as a percentage of speculative-grade issue ratings. Past trends have indicated that a profusion of new 'B-' ratings is a leading indicator of default rate spikes (see "The Expansion Of The 'B-' Segment Is Feeding Growing Vulnerabilities," published Sept. 25, 2019). (Highly leveraged is the lowest classification of our six-tier leverage risk categories).

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Chart 11

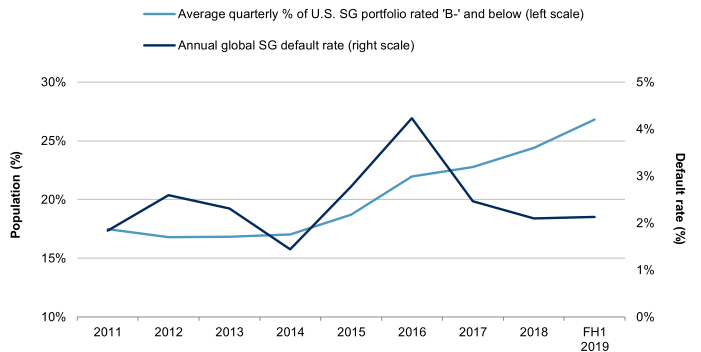
Global Corporate Sample:
'Highly leveraged' ratio and ratings default rate, 2011 to FH1 2019



FH--financial half. Leverage ratios are debt-weighted averages of categorized debt/EBITDA and FFO/debt ratios for a corporate sample. FFO--funds from operations (EBITDA less net interest expense less tax). Country data (debt-weight) source: Bank for International Settlements (BIS). Default rates computed on a trailing 12-month basis. Data as of July 31, 2019. Source: S&P Global Market Intelligence CreditPro; S&P Global Ratings. Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Chart 12

Speculative-Grade:
Percentage of U.S. rated 'B-' and below and default rates

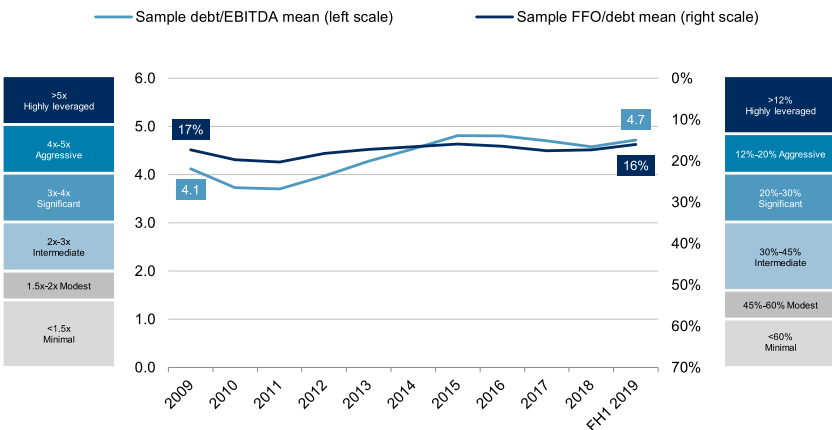


SG--Speculative grade. FH--financial half. Default rates computed on a trailing 12-month basis. Data as of July 31, 2019. Source: S&P Global Market Intelligence CreditPro; S&P Global Ratings. Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

Low interest rates. The decade-long low interest rate environment has helped sustain the debt-servicing ability of corporate borrowers. Chart 13 shows the trend in the ratios of debt-to-EBITDA and funds from operations (FFO)-to-debt for the corporate sample. The FFO-to-debt ratio mean has been largely flat while the debt-to-EBITDA mean has worsened. This is explained by the FFO-to-debt ratio being computed on an after-interest expense basis and the debt-to-EBITDA ratio before. In short, the leverage fundamentals would look worse if not for the prevailing low interest rates.

Chart 13

Global Corporate Sample: Leverage Mean Ratios (BIS-Rewighted), 2009 To FH1 2019



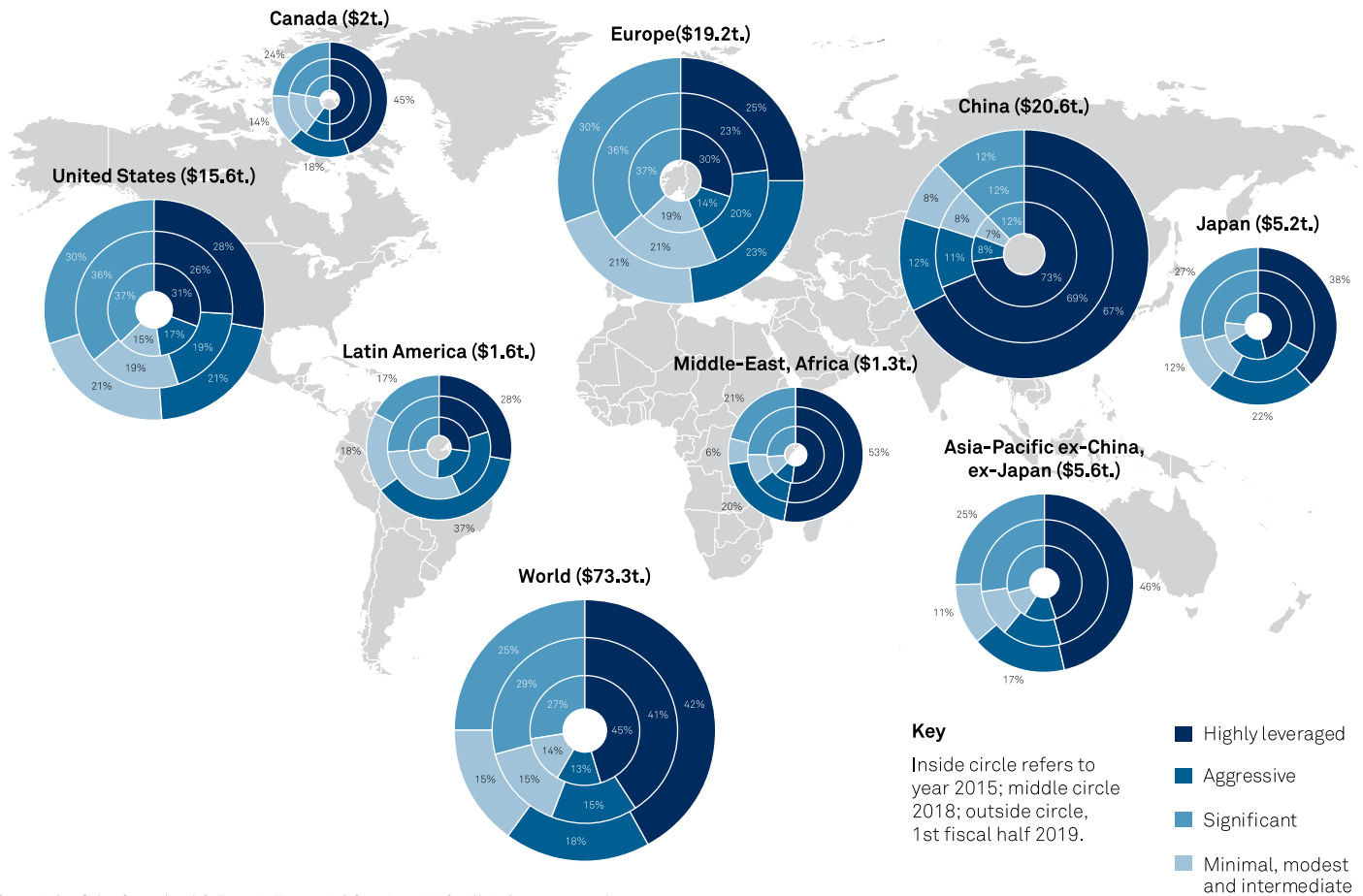
BIS--Bank of International Settlements. FFO--Funds from operations. Leverage ratios are debt-weighted averages of categorized debt/EBITDA and FFO/debt ratios for a corporate sample. Sources include BIS and S&P Global Ratings. Copyright © 2019 by Standard & Poor's Financial Services LLC. All rights reserved.

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China riskiest. The leverage of the unrated sample slightly worsened in first-half 2019 compared with 2018 (see chart 14). Same result when compared with 2015, the most recent trough in global nominal GDP growth (see chart 10). Among geographies, China's corporates (note: some are government-related entities which benefit from potential state support) have the largest absolute debt and, within the unrated sample, the highest risk mix. While China's leverage did hold steady in first-half 2019, the continuing economic slowdown there is likely to apply some pressure. The risk distribution in Europe and the United States remains better than in most emerging markets.

Chart 14

Global Corporates: Leverage Risk Distribution By Region (BIS-Reweighted), 2015, 2018 And FH1 2019



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Related Research

- Trade Tensions Rumble Through Asia-Pacific's Credit System, Report Says, Sept. 30, 2019
- Credit Conditions North America, Sept. 30, 2019.
- Credit Conditions EMEA, Sept. 30, 2019.
- Credit Conditions Latin America, Sept. 30, 2019.

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- Credit Conditions North America, Sept. 30, 2019.
- The Expansion Of The 'B-' Segment Is Feeding Growing Vulnerabilities, Sept. 25, 2019
- Default, Transition, and Recovery: The U.S. Speculative-Grade Corporate Default Rate Is Set To Rise To 3.4% By June 2020, Aug. 23, 2019
- Economic Research: U.S. Business Cycle Barometer: Recession Risk Rises, Aug. 16, 2019
- Credit Trends: A Weakening Economic Outlook And High Leverage Raise Global Corporate Downgrade Prospects, July 30, 2019
- S&P Global Ratings Publishes North American Mid-Year Corporate Credit Outlook And Industry Top Trends Report, July 25, 2019
- European Corporate Credit Outlook Mid-Year 2019: A Switch In Time?, July 25, 2019
- Uncertainty Returns To Asia-Pacific Credit Conditions, Report Says , June 27, 2019
- Next Debt Crisis: Will Liquidity Hold? , March 12, 2019

Appendix 1: The Data Behind The Charts

Data and information behind charts 1-1 to 8-1.

Table A1

Data And Information Behind Charts 1-1 To 8-1

Countries, economies

Sample is drawn from 51 economies described by the International Institute of Finance (IIF) as mature markets and emerging markets i.e.

Asia-Pacific

Australia, China, Hong Kong, India, Indonesia, Japan, Korea (South), Malaysia, New Zealand, Pakistan, Philippines, Singapore, Taiwan, Thailand.

Europe

Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Norway, Poland, Portugal, Russia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom.

Latin America

Argentina, Brazil, Chile, Colombia, Mexico

Middle-East Africa

Egypt, Ghana, Israel, Nigeria, Saudi Arabia, South Africa, United Arab Emirates.

North America

Canada, the U.S.

Sample debt amount

US\$30 trillion gross debt of which:

Asia-Pacific ex-China, US\$5.0 trillion

China, US\$8.1 trillion

Europe, US\$6.4 trillion

Latin America, US\$0.9 trillion.

Middle-East and Africa, US\$1.1 trillion

United States, US\$8.5 trillion

Sample financial data source

S&P Global Market Intelligence

Sample industries

Auto, building materials, capital goods, chemicals, consumer products, forest products, healthcare, homebuilders, infrastructure, media, metals & mining, oil & gas, REITs, retail, services, technology, telecoms, transport and utilities.

Sample size

20,071 nonfinancial corporates (85% unrated) of which:

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Table A1

Data And Information Behind Charts 1-1 To 8-1 (cont.)

Asia-Pacific ex-China, 8,597
China, 4,719
Europe, 2,825
Latin America, 625
United States, 2,200
Other economies, 1,105

Table A2

Data And Information Behind Chart 9

Credit data source

Bank for International Settlements (BIS) except for S&P Global Ratings' projected 2019 based on Q1 2019 data from the International Institute of Finance (IIF)

GDP data source

International Monetary Fund (IMF)

Table A3

Information Behind Chart 10

Net outlook bias computation

We calculate the net outlook bias by deducting the percentage of negative outlooks and CreditWatch listings against the percentage of positive outlooks and CreditWatch listings. A minus figure indicates that the percentage of negative outlooks and CreditWatch listings exceeds the percentage of positive outlooks and CreditWatch listings; and a positive figure, vice versa.

Table A4

Data And Information Behind Charts 11 To 14

Debt

For purposes of computing the leverage ratios, we deduct 50% of cash from gross debt to arrive at adjusted debt.

Default rates

Annual default rates drawn from S&P Global Ratings' Annual Global Corporate Default And Rating Transition studies.

2019 projection based on Credit Trends: A Weakening Economic Outlook And High Leverage Raise Global Corporate Downgrade Prospects, published July 30, 2019.

Geographic weightings

In order to avoid sample size bias, each economy's sample is weighted based on the economy's nonfinancial corporate debt as estimated by the Bank for International Settlements (BIS) when aggregated up to the regional or global level.

Leverage ratios

The two leverage ratios are debt-weighted averages of categorized debt-to-EBITDA and FFO-to-debt ratios:

EBITDA-- earnings before interest, tax, depreciation and amortization.

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Table A4

Data And Information Behind Charts 11 To 14 (cont.)

FFO--funds from operations (EBITDA less net interest expense less tax).

Leverage thresholds

We divided corporate leverage levels into six categories based on the average of the country debt-weighted averages of the debt-to-EBITDA and FFO-to-debt ratios. The categories of "minimal," "modest," and "intermediate" indicate lower risk while "significant," "aggressive," and "highly leveraged" indicate higher risk. The category thresholds are shown in table A5.

Table A5

Leverage Thresholds Applied To Sample Financials

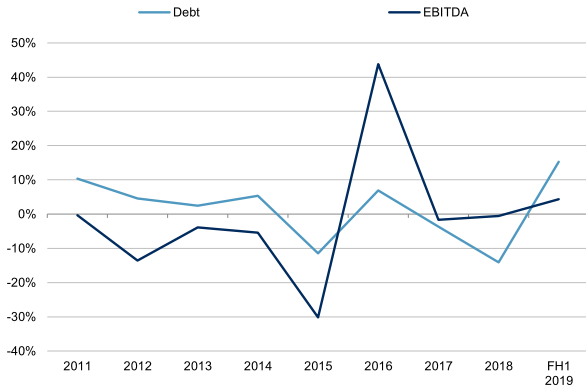
	Standard leverage ratios		For real estate		For utilities	
	FFO/ debt (%)	Debt/ EBITDA (x)	FFO/ debt (%)	Debt/ EBITDA (x)	FFO/ debt (%)	Debt/ EBITDA (x)
Minimal	60+	<1.5	>20	<2.5	35+	<2
Modest	45-60	1.5-2	15-20	2.5-4.5	23-35	3-Feb
Intermediate	30-45	3-Feb	15-Sep	4.5-7.5	13-23	4-Mar
Significant	20-30	4-Mar	9-Jul	7.5-9.5	13-Sep	5-Apr
Aggressive	20-Dec	5-Apr	<7	9.5-13	9-Jun	6-May
Highly leveraged	<12	>5		>13	<6	>6

FFO--funds from operations (EBITDA less net interest expense less tax).

Appendix 2: Geography: Debt And Earnings Growth Trends

Chart B1

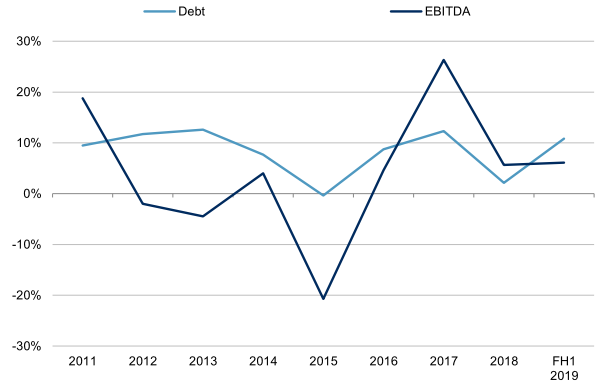
Brazil Corporate Sample (255):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart B2

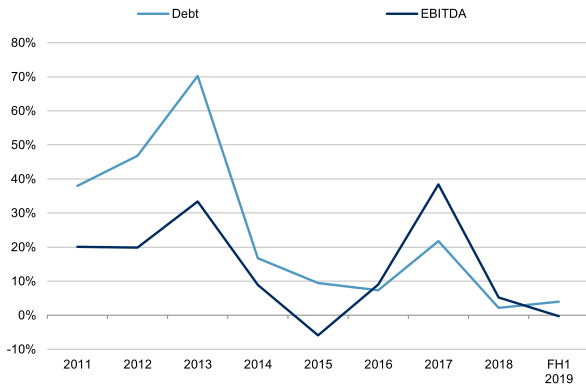
Canada Corporate Sample (445):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart B3

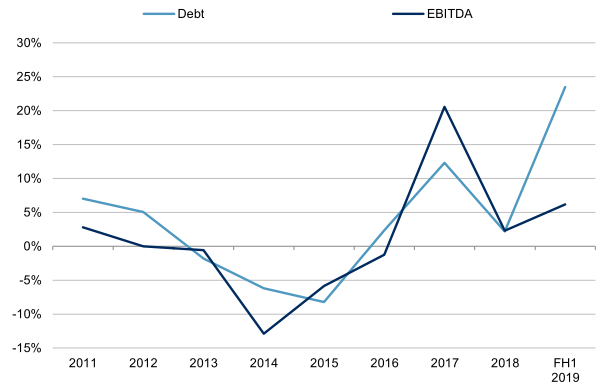
China Corporate Sample (4,719):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart B4

France Corporate Sample (247):
Debt and earnings growth, 2011 to FH1 2019

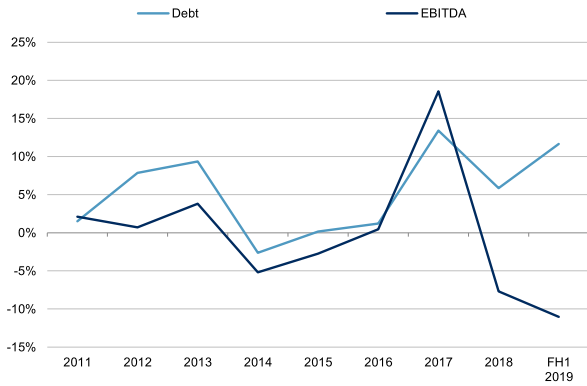


FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Next Debt Crisis: Earnings Recession Threat

Chart B5

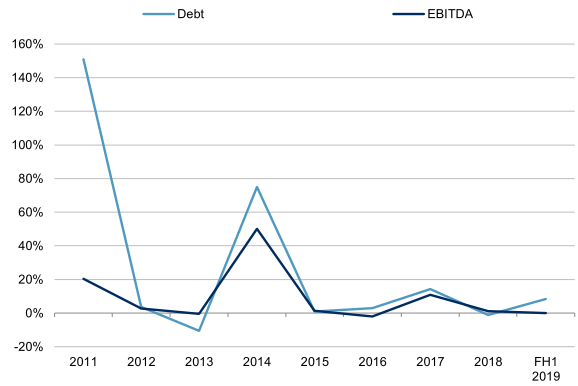
Germany Corporate Sample (282):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart B6

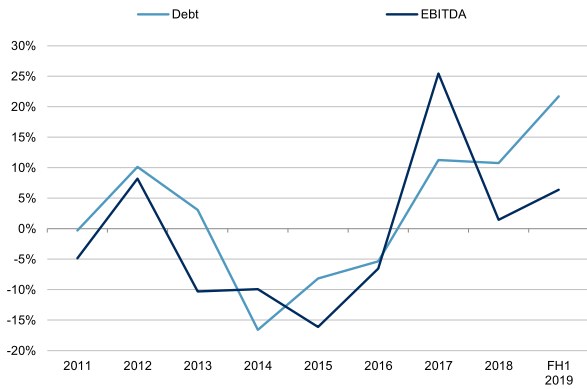
India Corporate Sample (20):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart B7

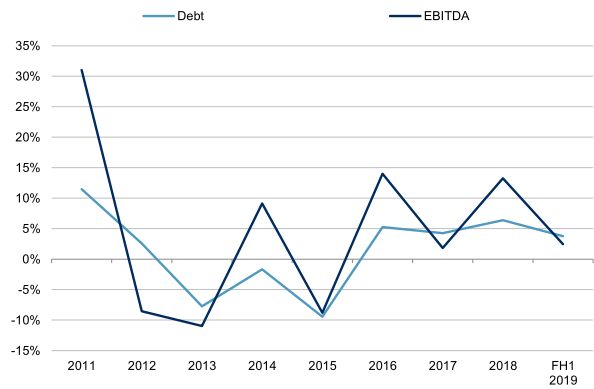
Italy Corporate Sample (146):
Debt and earnings growth, 2011 to FH1 2019



FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart B8

Japan Corporate Sample (2,662):
Debt and earnings growth, 2011 to FH1 2019

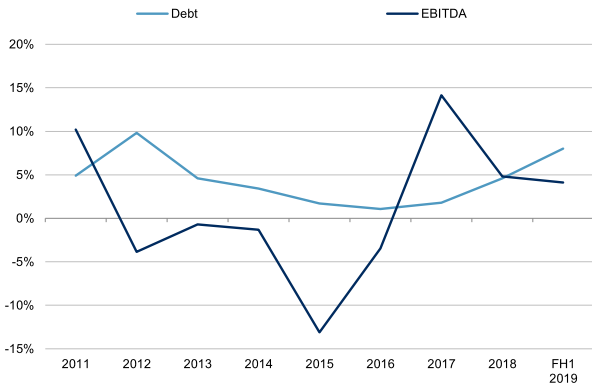


FH--financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Next Debt Crisis: Earnings Recession Threat

Chart B9

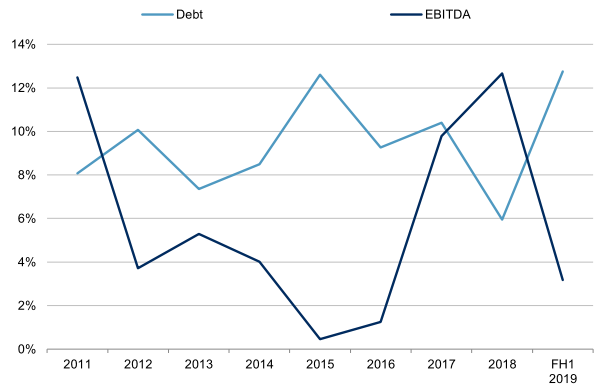
U.K. Corporate Sample (540):
Debt and earnings growth, 2011 to FH1 2019



FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Chart B10

U.S. Corporate Sample (2,200):
Debt and earnings growth, 2011 to FH1 2019



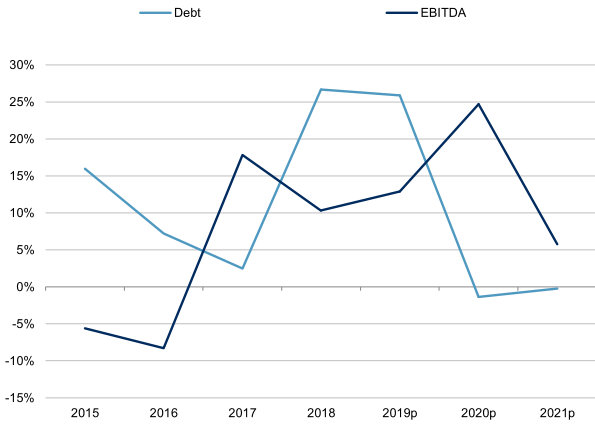
FH—financial half year (year-on-year growth). Sources: Bank for International Settlements, S&P Global Market Intelligence, S&P Global Ratings.
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Appendix 3: Industry: Debt And Earnings Growth Trends

The charts below display the debt and earnings growth rates for the rated portfolio by industry sector.

Chart C1

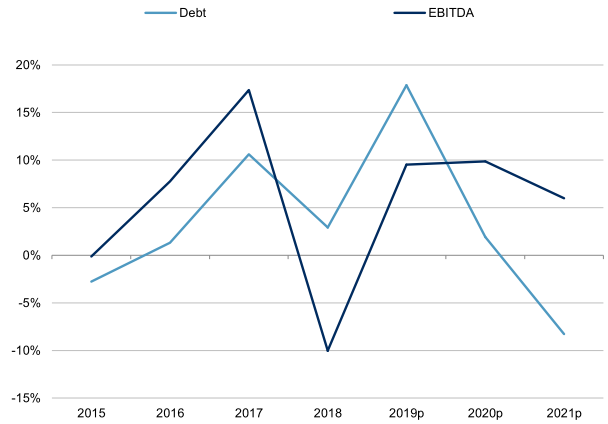
Rated Portfolio: Aerospace And Defense, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C2

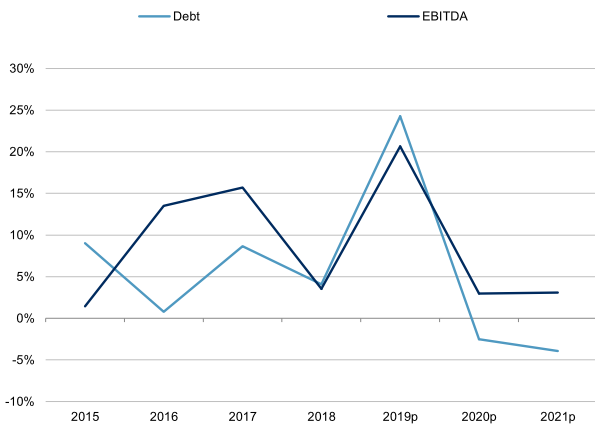
Rated Portfolio: Auto, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C3

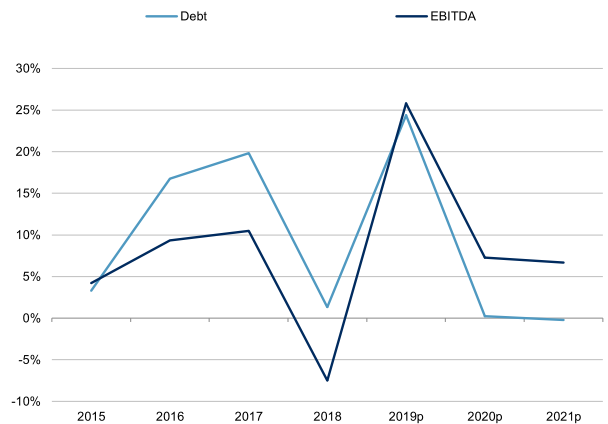
Rated Portfolio: Building Materials, 2015-2021
Debt and earnings growth



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Chart C4

Rated Portfolio: Business And Consumer Services, 2015-2021
Debt and earnings growth

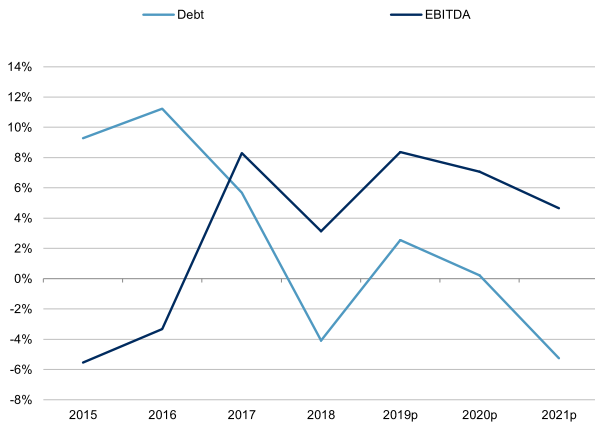


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Next Debt Crisis: Earnings Recession Threat

Chart C5

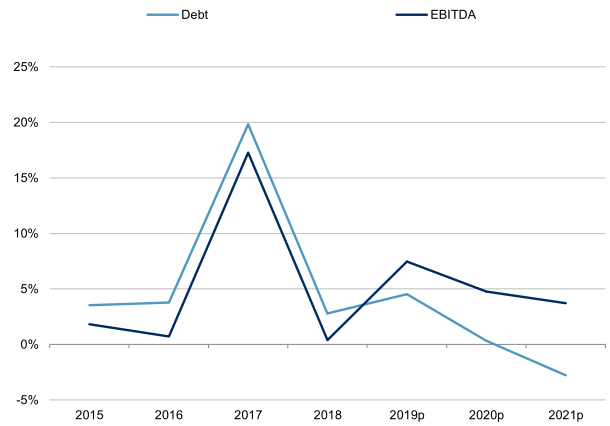
Rated Portfolio: Capital Goods, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C6

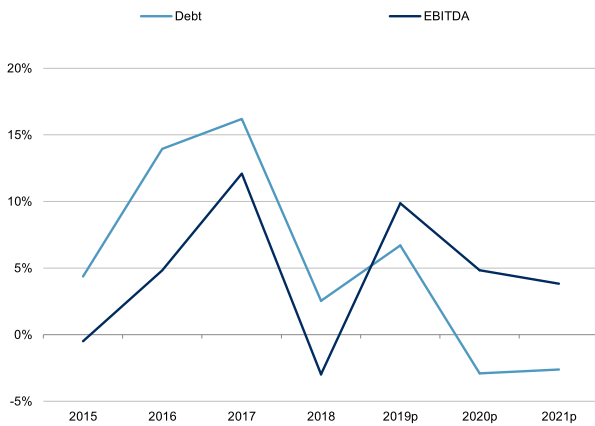
Rated Portfolio: Chemicals, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C7

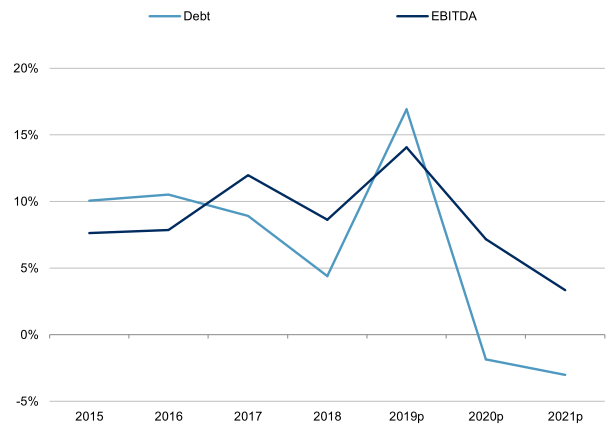
Rated Portfolio: Consumer Products, 2015-2021
Debt and earnings growth



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Chart C8

Rated Portfolio: Containers And Packaging, 2015-2021
Debt and earnings growth

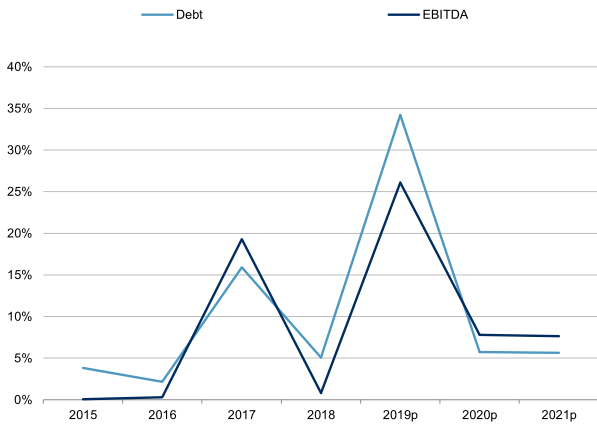


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Next Debt Crisis: Earnings Recession Threat

Chart C9

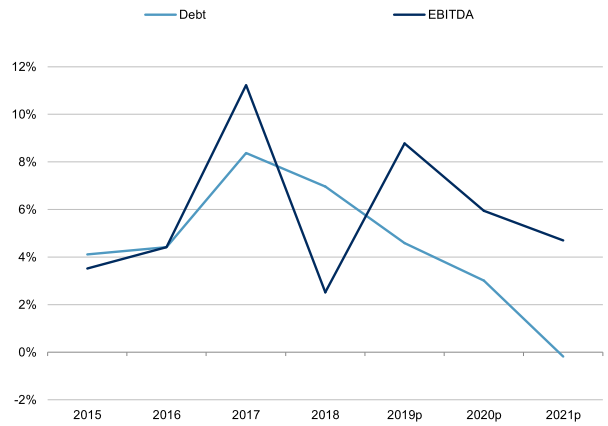
Rated Portfolio: Engineering And Construction, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C10

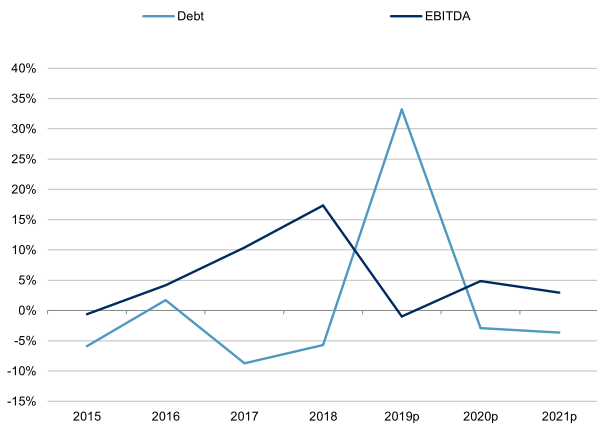
Rated Portfolio: Environmental Services, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C11

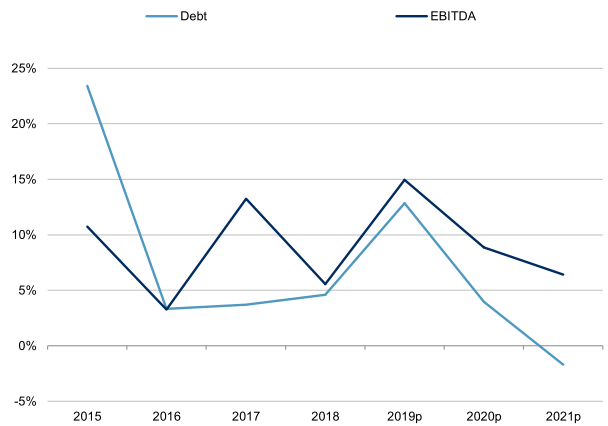
Rated Portfolio: Forest Products, 2015-2021
Debt and earnings growth



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Chart C12

Rated Portfolio: Healthcare Equipment, 2015-2021
Debt and earnings growth

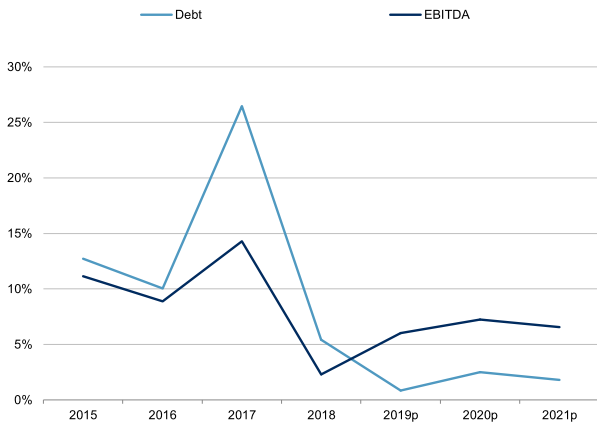


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Next Debt Crisis: Earnings Recession Threat

Chart C13

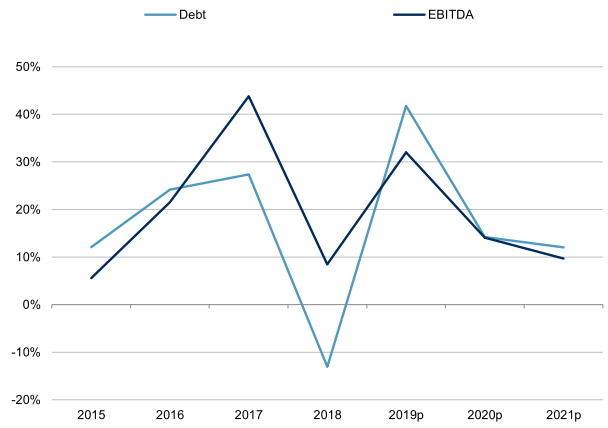
Rated Portfolio: Healthcare Services, 2015-2021
Debt and earnings growth



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Chart C14

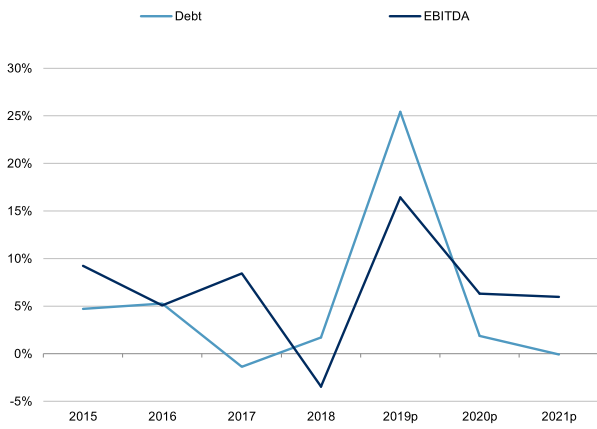
Rated Portfolio: Homebuilders, 2015-2021
Debt and earnings growth



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Chart C15

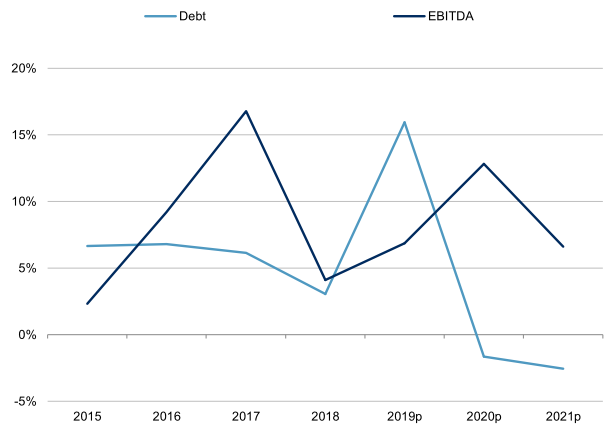
Rated Portfolio: Leisure And Sports, 2015-2021
Debt and earnings growth



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Chart C16

Rated Portfolio: Media And Entertainment, 2015-2021
Debt and earnings growth

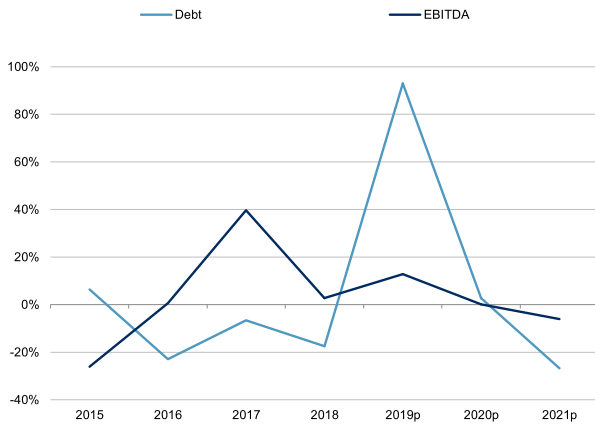


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Next Debt Crisis: Earnings Recession Threat

Chart C17

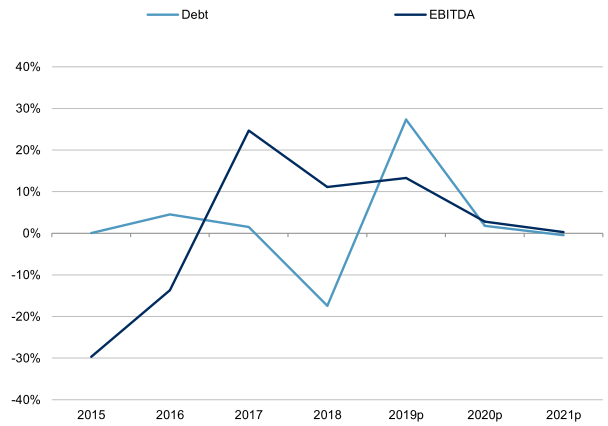
Rated Portfolio: Metals And Mining, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C18

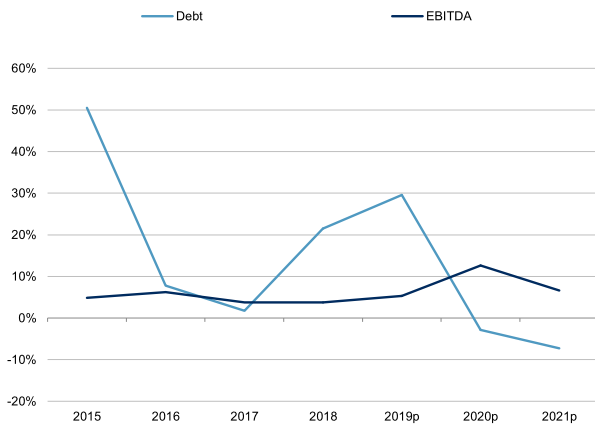
Rated Portfolio: Oil And Gas, 2015-2021
Debt and earnings growth



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Chart C19

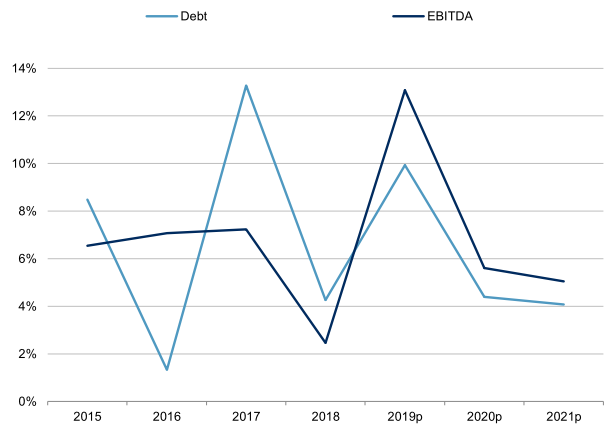
Rated Portfolio: Pharmaceuticals, 2015-2021
Debt and earnings growth



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Chart C20

Rated Portfolio: REITs, 2015-2021
Debt and earnings growth

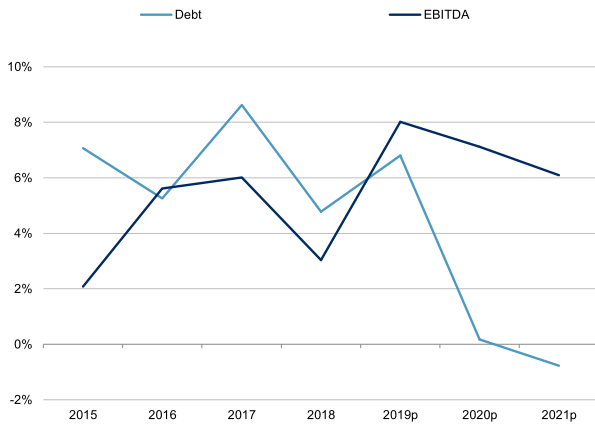


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Next Debt Crisis: Earnings Recession Threat

Chart C21

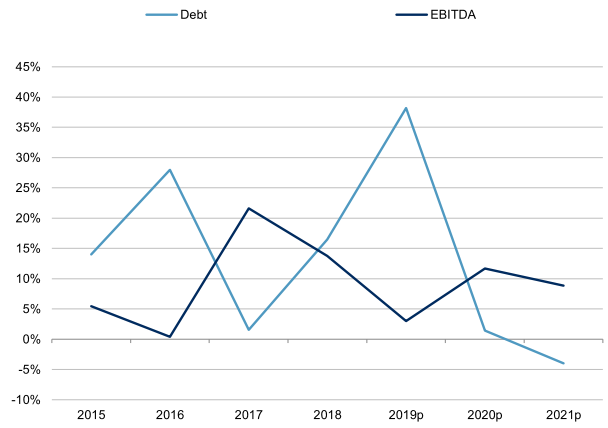
Rated Portfolio: Retail, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C22

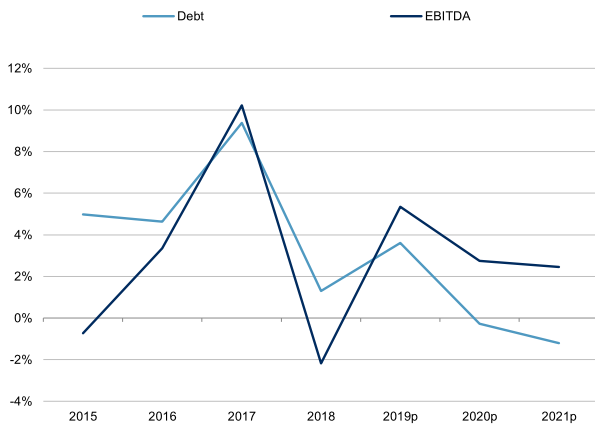
Rated Portfolio: Technology, 2015-2021
Debt and earnings growth



p--projected. Source: S&P Global Ratings.
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Chart C23

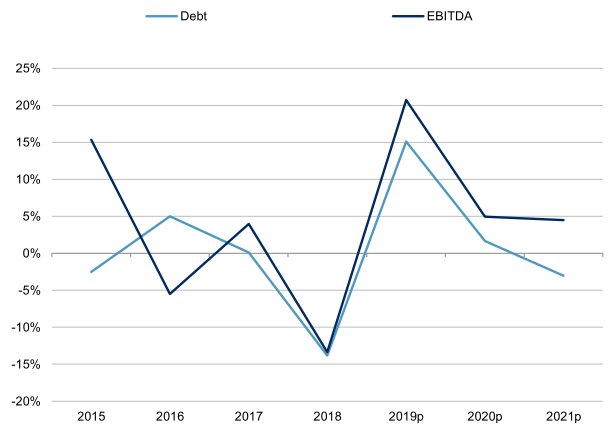
Rated Portfolio: Telecoms 2015- 2021
Debt and earnings growth



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Chart C24

Rated Portfolio: Transportation Cyclical, 2015-2021
Debt and earnings growth

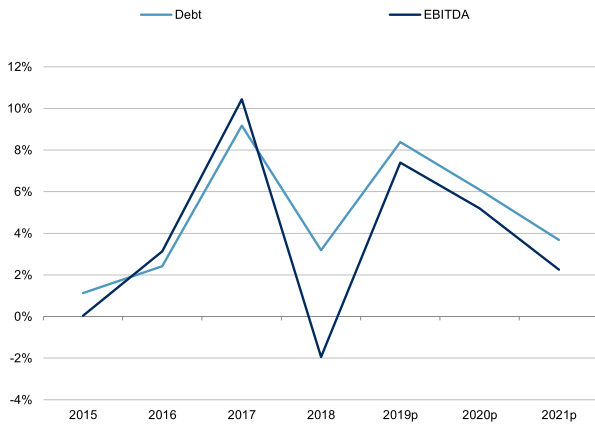


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Next Debt Crisis: Earnings Recession Threat

Chart C25

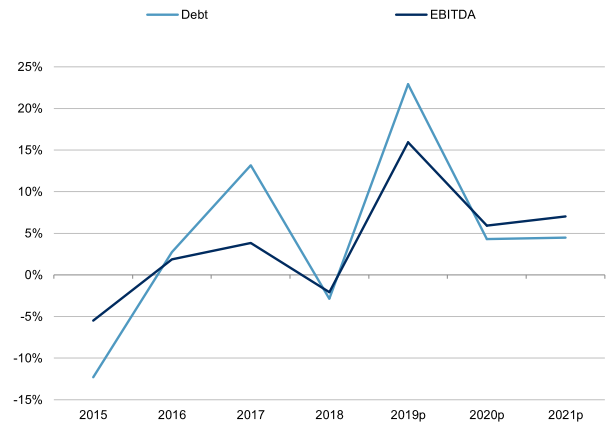
Rated Portfolio: Transportation Infrastructure, 2015-2021
Debt and earnings growth



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Chart C26

Rated Portfolio: Utilities 2015-2021
Debt and earnings growth



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Appendix 4: List Of Contacts

Table A6

Contacts Of Contributors

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