



Corporate Debt to GDP: Should We Worry?

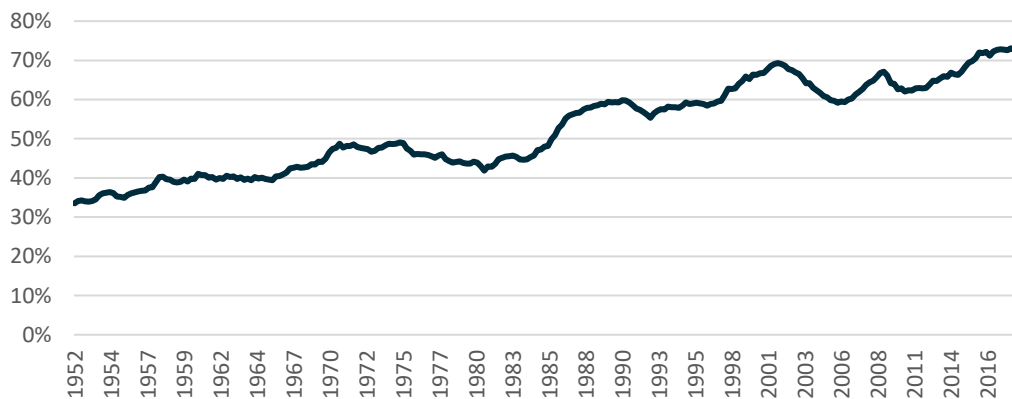
In recent years there have been increasing concerns over corporate debt build-up in the US and Europe. Debt levels are considered high IF they cannot be sustained – in our assessment, a difficult claim to make for US and European companies.



The marked increase in the stock (volume) of corporate debt both in developed and emerging markets, particularly in comparison to the GDP levels, has triggered a concern over the balance sheets of the corporate sector and the build-up of financial risks.

Indeed, the total debt dynamic for instance in the US appears unsustainable, reaching ~73% of GDP in 2019 (Figure 1). Debt to GDP in European countries has reached 130-140% of GDP, up 10-25 percentage points compared to the 2008 levels¹.

Figure 1: Nonfinancial corporate debt (loans, bonds and other debt securities) to GDP, Source: FRED



Download LINKS Mira Agent Based Model (ABM): a class of models for simulating the interactions of organizations or groups with a view to assessing their effects on the system as a whole:

<https://linksanalytics.com/request-trial>

¹ For a relatively recent summary in most countries see “Rising Corporate Debt: Peril or Promise?”, McKinsey Global Institute

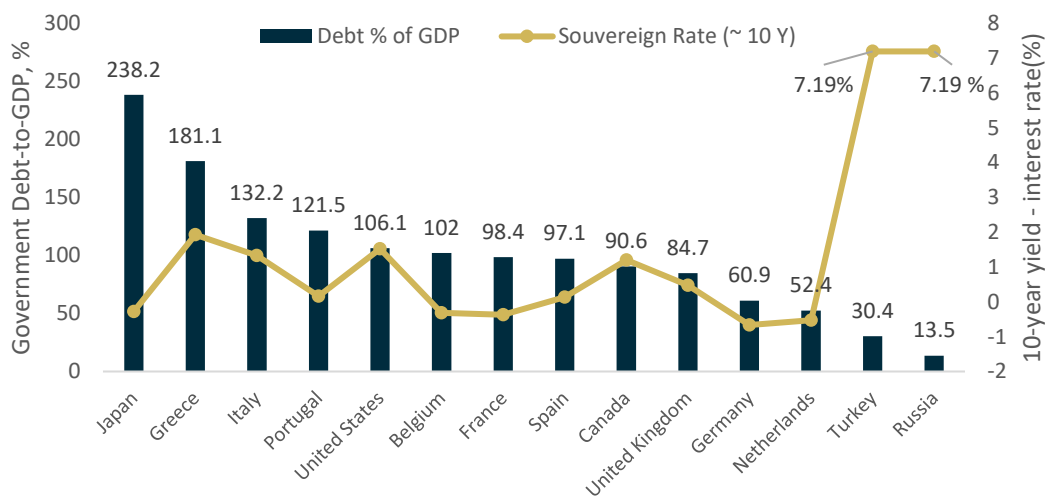


Sustainability of Debt

Increasing debt levels compared to any benchmark are usually a cause for concern. However, there is a common misconception that higher debt levels automatically translate into riskier business or worse balance sheet. If this were the case, there would be a direct relationship between the level of debt adjusted for the economy (GDP) and the interest rate, which reflects the riskiness of debt.

A particularly telling illustration of this issue is the cross-country differences in debt-to-GDP vs. the yields on sovereign bonds. Assuming higher sovereign bond yields indicate some form of risk compensation, the large differences in interest rates should somehow be explained by debt stock. It is evident that even within the same currency zone, Portugal and Spain have approximately the same yield, while Portugal's debt is 22% higher. Japan has the highest debt level in the group, yet its yield is at the same level as Germany and Netherlands. Finally, Turkey and Russia have the lowest level of government debt in the list, yet their rates are over 7% (Figure 2). Clearly, debt-to-GDP is not a good indication of risk or sustainability of debt. ***If anything, there is probably an inverse relation, with countries/companies that have healthier prospects being able to raise more debt at lower yields.***

Figure 2: Government debt-to-GDP ratios and sovereign bond yields, Source: Trading Economics, Bloomberg



If debt-to-GDP is a poor indicator for the public sector, it is doubly so for the corporate sector:

- i. GDP reflects the whole economy and not the corporate sector issuing the debt
- ii. GDP is a “total revenue” flow metric, which includes corporate investment, whereas debt sustainability has to do with profitability and the size of the balance sheet (a stock measure)

Getting back to basics, in order to sustain debt a corporation must be able to:

- i. pay interest expenses of the **existing outstanding debt** out of profits (otherwise new debt would be required to pay the interest, which would put the company on an unsustainable path),
- ii. be able to pay interest expenses of **any new debt** that is rolled to cover the maturing portion of the existing outstanding debt.



The second point here is critical: any static analysis of balance sheet ignores the dynamics of a deteriorating market. On an ongoing basis, a company's interest expenses have little to do with the market rates; the coupon payments are usually fixed, very much like fixed mortgage interest payments. Current market rates become problematic when a company has to refinance the debt. If the risk and liquidity environment in the market deteriorates and the company has to roll over a portion of its debt, the new interest rates will affect that part of interest expenses.

Consequently, both current state and a potential stress test is required for assessing the sustainability of the corporate debt.

Current Stock of Debt

In order to assess the sustainability of debt we look at the dynamic of **interest coverage ratio**: Earnings Before Interest, Tax, Depreciation & Amortization (EBITDA) over Total Interest Expenses aggregated over the universe of BBB-rated corporate debt issuers in the US and Europe.

The choice of BBB-rated cohort is important: S&P's BBB rating is the borderline between investment- and sub-investment grade and combines about 40% of all issuers. It is this cohort that in a way "hides" the risks, as any systemic deterioration would result in their downgrade into sub-investment grade and massive sell-off/outflows of money due to the mandate restrictions of investors. Higher rated bonds have a significant cushion for rating downgrades, while sub-investment grade bonds are perceived as explicitly risky and treated as such.

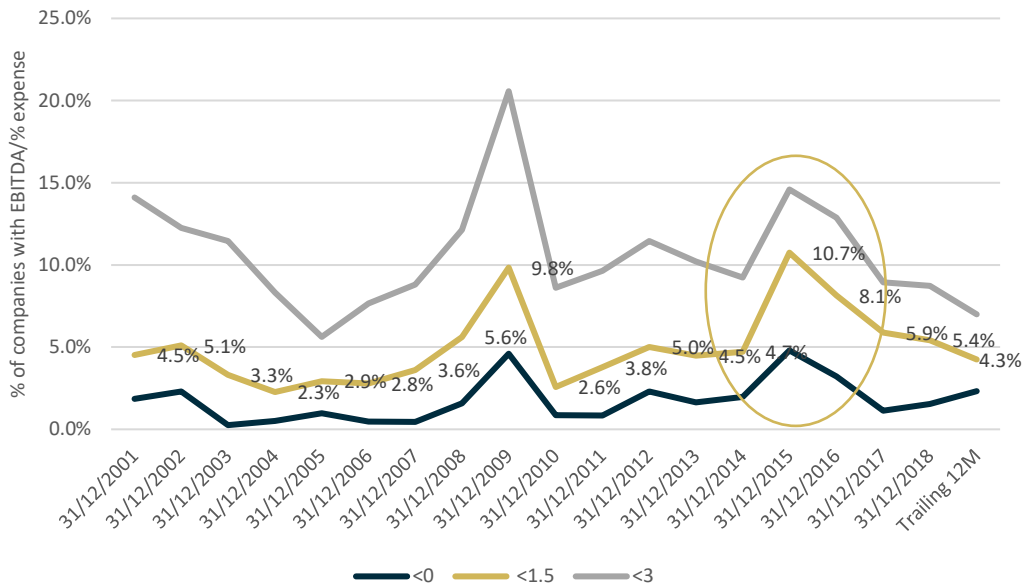
Our universe includes over 3500 issues of 568 issuers from 34 countries. We aggregate EBITDA and total interest expenses by year and monitor the total percentage of companies that are:

- i. loss making, i.e. $EBITDA/Interest\ costs < 0$
- ii. $EBITDA/Interest\ costs < 1.5$ – a threshold generally considered risky in the literature
- iii. $EBITDA/Interest\ costs < 3$

Any significant increase in the dynamic of interest coverage would indicate increasing risks of corporate debt. Although there is a noticeable increase in % of risky companies in 2015, the trend has been improving since then. The most recent level (using trailing 12-month earnings and interest expenses) is at 4.3% for companies with interest coverage under 1.5x, which is only marginally elevated compared to 2000s, but certainly not an indication of any serious unsustainability, at least in terms of the proportion of companies (Figure 3).

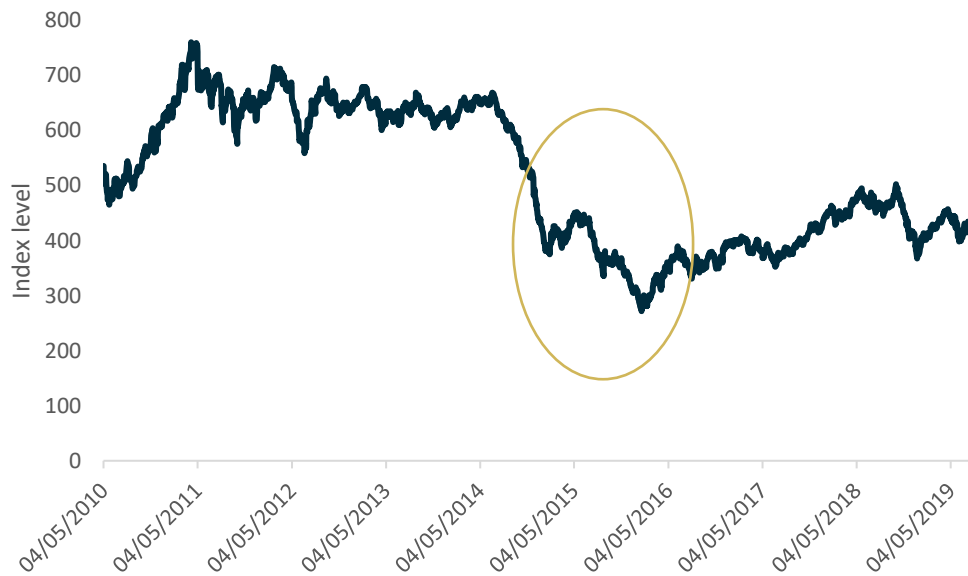


Figure 3: Percentage of companies with EBITDA/% expense below 0, 1.5 and 3, Source: Bloomberg, LINKS Calculations



The sudden increase of risk in 2015 is interesting, as it coincides with the massive fall in commodity prices (Figure 4) and a significant increase in a likelihood of a crisis. The pending downturn was “averted” at the time first by the stimulus in China, which helped shore up commodity prices and later by the fiscal stimulus applied by the incoming Republican administration in the US.

Figure 4: S&P GSCI Commodities Index, Source: Bloomberg



At the same time, spreads on sub-investment grade bonds increased too, indicating an increasing risk environment (Figure 5). It is possible that most recently we have been experiencing another episode of increasing risk aversion and higher spreads/lower commodity prices. It is also possible that the interest coverage ratios in Figure 3 are lagging and may actually increase in the next



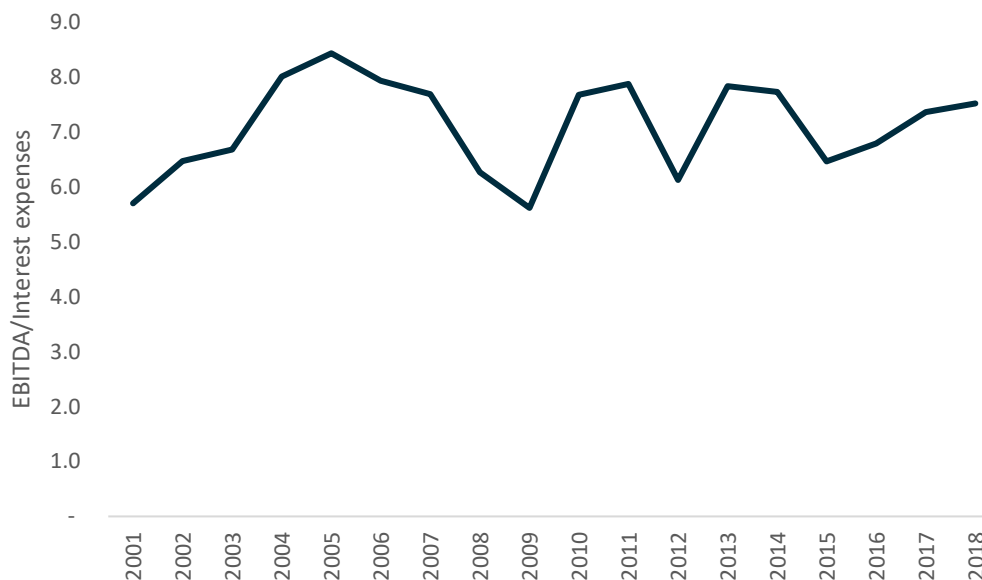
months and quarters. However, the one observation is still evident: **there is no long-term secular deterioration of sustainability of debt as measured by interest coverage ratio.**

Figure 5: Bloomberg Barclays Corporate High Yield Index Option-Adjusted Spread



While Figure 3 focuses on the number of companies that are at risk, a valid question is whether there is a deterioration of total aggregate interest coverage ratio— for all companies in our universe over the past decade? There have clearly been cyclical weaknesses, however, the overall interest coverage has been remarkably stable over the last 18 years (Figure 6).

Figure 6: EBITDA/Interest expenses of the complete universe, Source: Bloomberg, LINKS Calculations

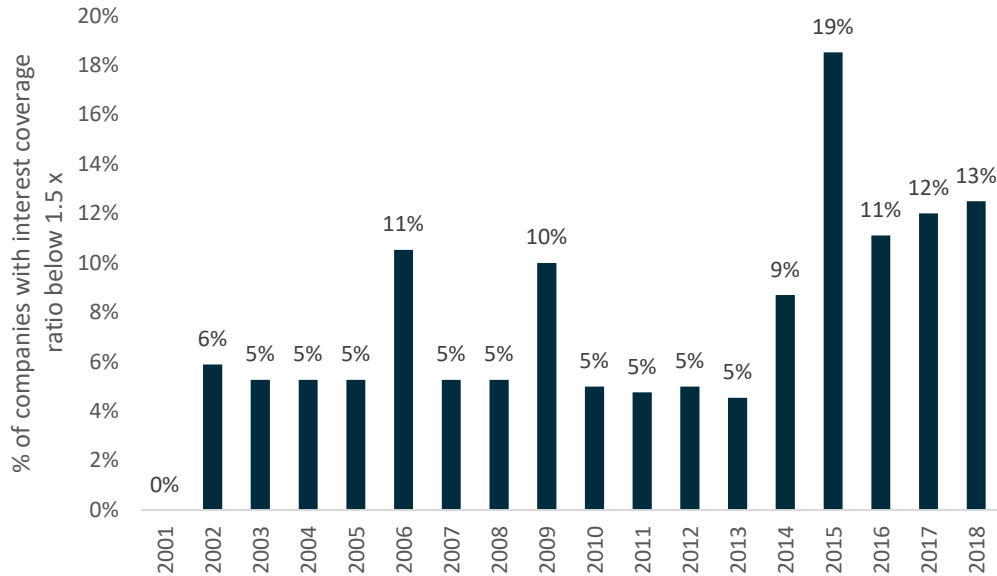


Our conclusion is that despite the increasing debt levels relative to GDP, the corporate sector does not show any deterioration in its ability to service the debt compared to the recent history beyond the typical cycle-related changes.



In terms of country-specific performance, the only country (among the developed country peers) with marked worsening of interest coverage ratio is Germany (Figure 7). This is in line with the German Industrial Crisis risk scenario introduced in early 2019 in Mira ABM.

Figure 7: % of companies with interest coverage ratio under 1.5 x, Germany, Source: LINKS calculations



The analysis so far addresses the issue of debt servicing under the normal circumstances. In the next section we assess the results of a stress test of debt roll over at higher interest rates.

Stress Test: Expanding Spreads

A negative scenario in a typical liquidity crisis has three stress components in it:

- i. Spreads increase sharply, which has an impact on any refinancing that companies must do. To be clear, higher spreads affect only the short-term portion of long-term debt and short-term debt.
- ii. Profits fall due to a cyclical downturn, which impacts EBITDA.
- iii. Bank loans are usually tied to covenants that may often be breached during a liquidity crisis and cause a need for refinance of even long-term debt.

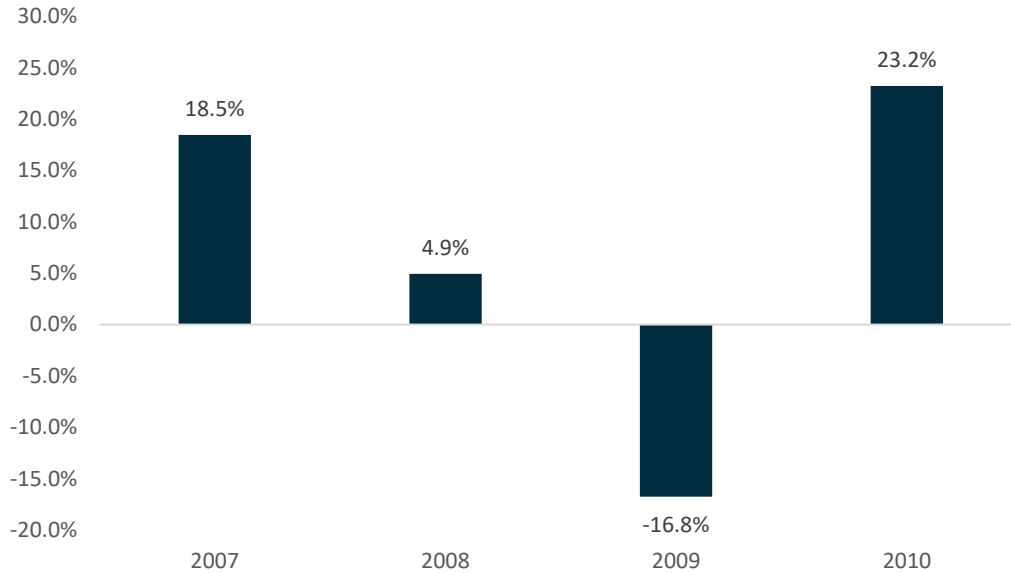
The importance of the third component may be decreasing over time as the share of bonds in global corporate debt has doubled in the past ten years. Although there may be covenants attached to bond issues too, companies often have better control over the structure and punitiveness of those covenants; many bond issues are without covenants altogether.

But as far as the first two components are concerned, they affect both the numerator and the denominator of interest coverage ratio. Taking as a reference point the 2008 crisis, we assume a spread expansion of 15%, i.e. over a very short period the company's borrowing costs expand by 15%. Furthermore, we assume that all short-term debt and current portion of long-term debt will be refinanced at higher rates and we ignore the companies' cash positions.



In terms of profitability, we assess the impact of 2008 crisis on the same universe of companies. At the lowest point in 2009, EBITDA was down 16.8% (Figure 8). The caveat in this study is the survivorship bias – the actual universe of companies in 2008 may have had worse performance. However, as the credit markets have changed significantly since then, it is not necessarily the case that the bond universe of 2008 is more representative.

Figure 8: EBITDA change year-on-year, BBB bond current selection of companies, Source: Bloomberg, LINKS calculations

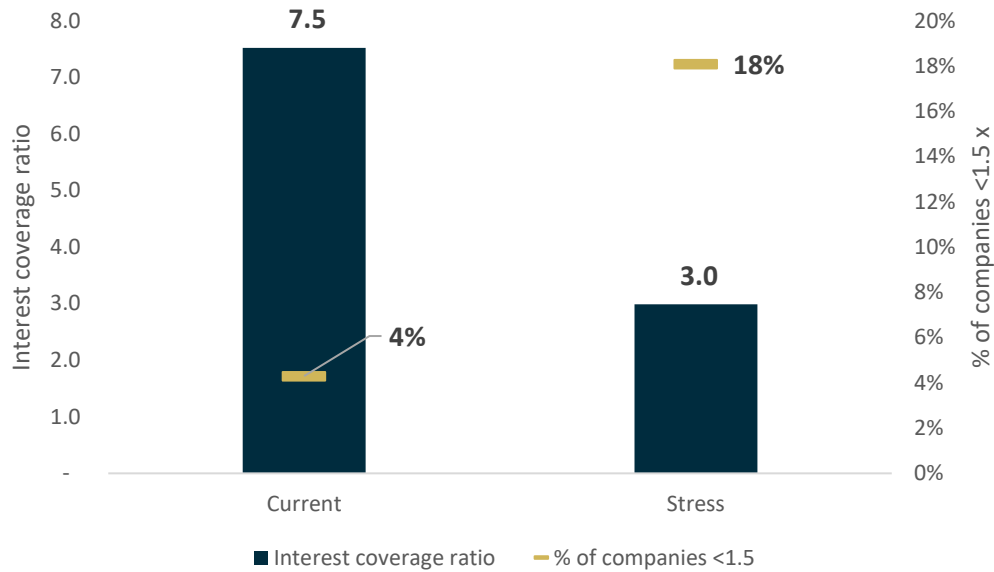


At any rate, for describing a stress scenario we assume a slightly worse EBITDA drop of 25%. The combination of 15% expansion of spreads and 25% drop in EBITDA is a reasonably severe scenario, in our view, particularly since the cash holdings of companies and liquid assets that can be used to bring down the debt in case of emergency are ignored.

The resulting numbers indicate a balance-sheet impact that is more drastic than in 2008, however, arguably still in the range of sustainability. Percentage of companies that fall under 1.5x interest coverage increases to 18% from 4.3%, while the overall interest coverage ratio of the underlying companies falls from 7.5 to 3.0 (Figure 9). From the perspective of the total portfolio and considering the ability of companies to react to worsening market environment, only a part of 18% of companies will eventually be downgraded to sub-investment grade. Overall interest coverage ratio of 3x is still a sustainable level and may not be a reason for concern.



Figure 9: Stress scenario results - Interest coverage ratio (ICR) and % of companies with ICR below 1.5x, Source: LINKS Analytics



Although a major severe event will cause certain deterioration in corporate balance sheets, it is likely that companies will largely survive such an event. In addition to the financial analysis that points in this direction, there are also strategic reasons behind the financial strength of companies.

Beyond the mechanical assessment of the debt levels and likely impact of crises on profitability we must note also the **qualitative change** in the companies that issue debt and equity instruments and are in the US and Western Europe.

Balance sheet strength of a company stems from its ability to generate and defend (cash) profits. This axiom can be intuitively broken down into components of where a profit comes from: **costs** and **revenues**.

When it comes to costs, companies have been tremendously successful in the past 20 years in:

- transforming fixed costs into variable costs (outsourcing and automation);
- holding under control the bargaining power of labor.

At the same time, on the revenue side, companies of today have increasingly “platform-ised” their markets and products, with the resulting winner-take-all market shares and better price control. To illustrate this, let us examine the approximate market share of top ten companies in S&P500 in 2000 and nowadays (Table 1). Of course, there is no objective way of arriving at a single market share number for a large company, as market share numbers depend on the geographic and industry definitions of markets. The data in Table 1 are more intended as an intuitive aid in order to contrast the difference between the companies in 2000s and at present. Clearly, there is a bigger proportion of companies with double-digit market share today compared to 2000s.



Table 1: Top ten companies by market capitalization in S&P500 and their market shares in core products, Source: Bloomberg, LINKS calculations, various sources for market share

2000	Market Share	2019	Market Share
General Electric	10-25%	Microsoft	50%
Exxon	<5%	Apple	35%
Pfizer	~5%	Amazon	37%
Citigroup	5-7%	Facebook	72%
Cisco Systems	55%	Alphabet	92%
Wal-Mart	9%	JP Morgan Chase	9%
Microsoft	97%	Johnson & Johnson	20%
AIG	4-5%	Visa	61.50%
Merck	3%	P&G	15-70%
Intel	70-80%	Exxon Mobil	3-5%

 double-digit %

Given this ability to manage costs and defend revenues, the overall profit margins have been increasing consistently over the past two decades, and it could be argued that US/European companies in principle have greater ability to withstand financial shocks, as they can be a lot more proactive in managing their costs and revenues. This could also explain the reason behind marginally higher debt levels: lower risk businesses traditionally can take up higher debt in order to maximize shareholder returns.

Conclusion

In recent years accumulation of corporate debt in the US and Europe has caused significant unease among investors. Although the level of debt adjusted for GDP is certainly higher than ever, assessment of sustainability of debt is far more relevant. Given its own history and adjusted for underlying profitability by means of interest coverage ratio, the debt levels of the most vulnerable section of the corporate debt universe – the BBB-rated companies, are in-line with historical averages in the developed countries. At approximately 7.5 x interest coverage ratio is at the high-end of historical range.

The absolute value of debt or debt compared to the balance sheet may be higher than average (as profit margins are also higher than average), however, sustainability of the debt in an extreme stress scenario is still reasonable, with the overall interest coverage ratio falling to 3.0 and the percentage of companies with interest coverage ratio of under 1.5 reaching 18%.

Finally, there is an argument to be made that the companies of today have significantly better control over their costs and revenues, given their ability to outsource, use automation, lower level of unionization and higher market shares. This translates both into higher margins (which explains how companies can have more debt without impacting interest coverage ratio), and more importantly, into the ability of companies to proactively manage their cash flows in adverse



scenarios. This ability means that other things held constant, companies can safely take on more debt.

Our conclusion applies to the US and European companies (with a notable exception of Germany). Corporate debt markets in the Emerging Market countries are considerably more heterogenous and requires specific analysis on case-by-case basis upon request from institutions and based on specific mandates.

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