

Ready for takeoff

Global Corporate Capex Survey 2017

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S&P Global
Ratings

Global non-financial corporate capex growth forecasts for 2017

Table 1

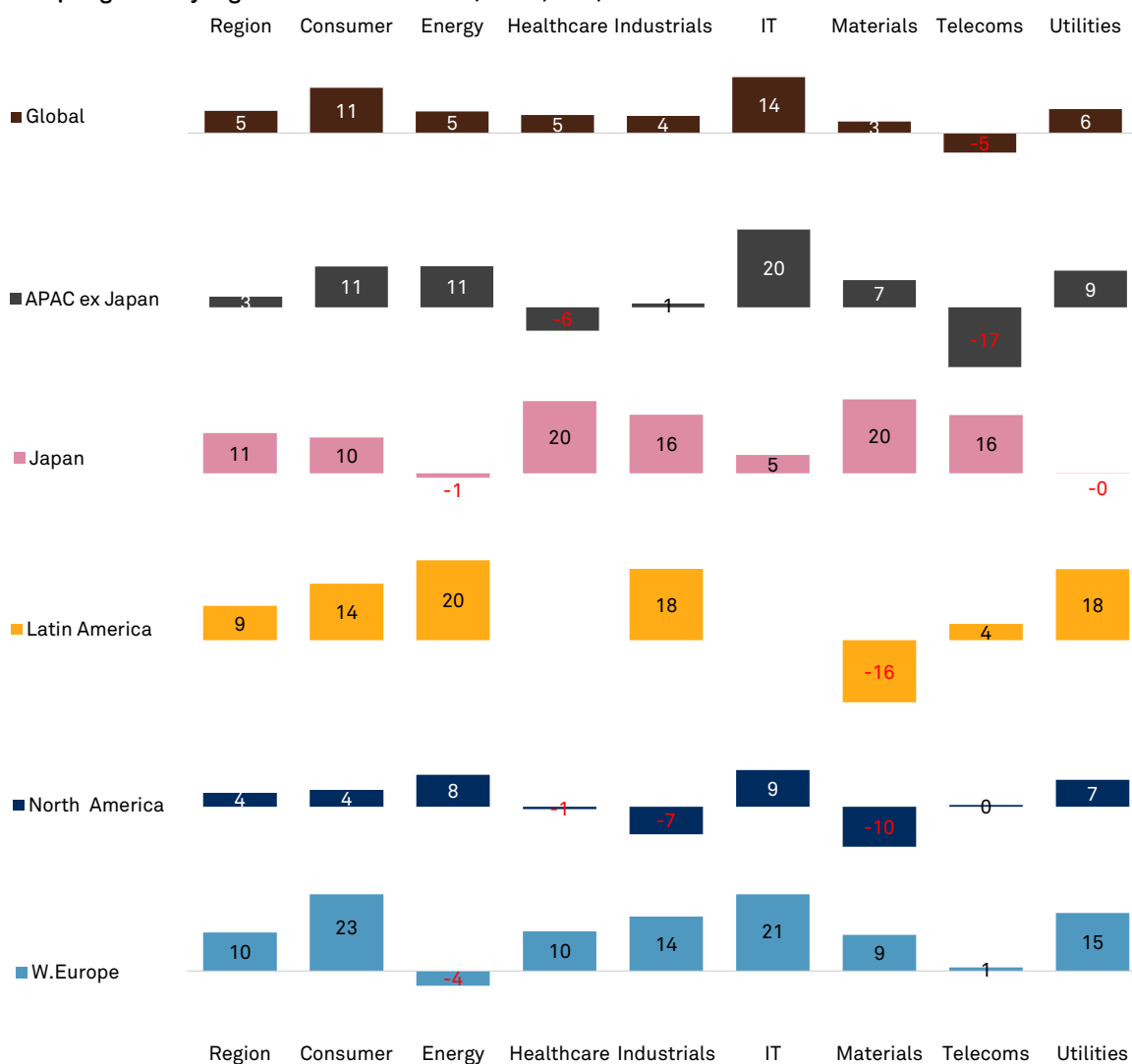
Global capex growth by region and sector in 2017 (YOY%, USD)

Sector	Global	APAC ex Japan	Japan	Latin America	North America	W.Europe
Consumer	+11.2	+10.5	+9.7	+14.1	+4.3	+23.1
Energy	+5.4	+10.6	-1.2	+19.9	+8.1	-3.9
Healthcare	+4.5	-6.1	+19.6	n/m	-0.6	+10.4
Industrials	+4.3	+1.0	+15.8	+17.7	-7.1	+14.2
IT	+13.8	+20.5	+5.0	n/m	+9.3	+20.9
Materials	+2.9	+7.0	+20.4	-15.6	-10.2	+9.4
Telecoms	-4.8	-16.8	+15.8	+4.0	+0.4	+0.9
Utilities	+6.8	+9.4	-0.0	+17.7	+6.9	+15.2
Region	+5.5	+2.7	+10.9	+8.6	+3.5	+10.0

Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000.

Chart 1

Global capex growth by region and sector in 2017 (YOY%, USD)



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Global Capex: Ready for take off

Need to know

- Corporate capex growth is finally turning positive. After four years of decline, we expect global growth of 5.5% in 2017. The recovery is broad-based, with positive growth expected in all regions and in nearly all sectors.
- This is important economically, not only helping to make recoveries more sustainable, but also underpinning the long-term health of a corporate sector that has seen a lost decade of capex spending.
- The upturn follows improved signals from R&D spending, an aggregate recovery in operating performance and, crucially, an end to the commodity capex crunch. Corporate cash balances remain plentiful and a source of medium-term support.
- One concern is that many of the industries investing more are increasingly competing with one another, namely tech, autos and retail. This may mean that the investment upturn may not yield positive results for all.

The global corporate capex outlook finally turns positive

This is the fifth edition of S&P Global Ratings' corporate capex survey and the first one where we can point to a genuinely positive outlook for capital investment. Our latest estimates suggest that inflation-adjusted global corporate capex will rise 5.5% in 2017, following four years of sharp contraction (see chart 2). Excluding energy and materials, prospective capex growth is slightly higher at 6% (see chart 3).

Global capex to grow 5.5% in 2017, ending four years of decline

Current consensus and guidance-based estimates for 2018 and 2019 are less positive, suggesting a stalling of growth. However, our analysis suggests that there is a general tendency for analysts to undershoot with their early estimates of second and third year capex. For this reason, we expect that 2017's upswing will gather momentum, absent an unexpected deterioration in global economic growth, which is not S&P Global Ratings' base case.

While 5%-6% rates of growth are low relative to the more rapid expansion of capex seen in the mid-2000s and in the bounce back immediately after the 2008-2009 crash, this should not detract from what is an important turning point in the capex cycle. Most importantly, this signals not only a returning confidence in the corporate sector but an upturn that it is not reliant on the commodity nexus that drove the prior upswing, the unwinding of which has constrained overall capex prospects.

Chart 2

Global non-financial capex growth

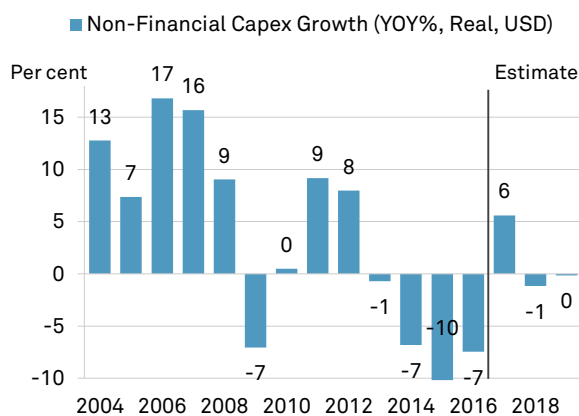
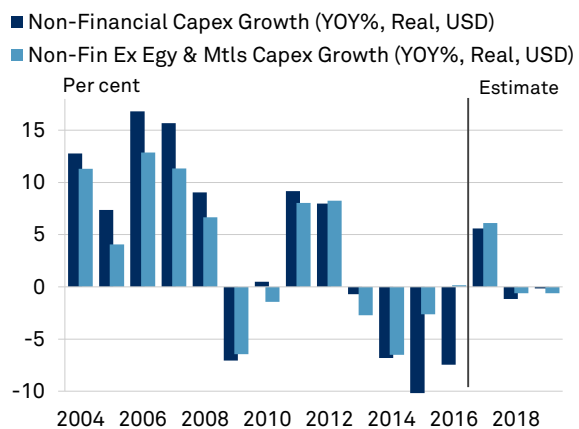


Chart 3

Global non-fin. capex growth ex energy and materials



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

The recovery encompasses all regions and most sectors

Encouragingly, this capex upturn is broad both in terms of regions and industry sectors. All regions are expected to see positive capex growth this year (see chart 4), albeit with significant variation in pace. Both Japan and Western Europe are expected to see double-digit capex growth of 11% and 10%, respectively, while prospects for Asia-Pacific excluding Japan (+3%) and North America (+4%) are more modest. Chart 5 shows the global capex growth outlook broken down into the contribution from each region (regional growth rates weighted by prior-year share of global corporate capex). This emphasizes the breadth of the turnaround. In 2016, only Japan saw a positive contribution; for 2017, all regions are expected to see positive growth, with Western Europe's turnaround the biggest single contributor.

Positive capex growth is expected in all regions; Europe has most positive impact

Chart 4
Global non-financial capex growth by region in 2017

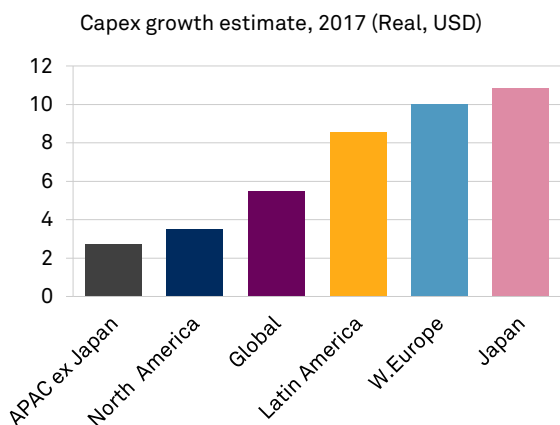
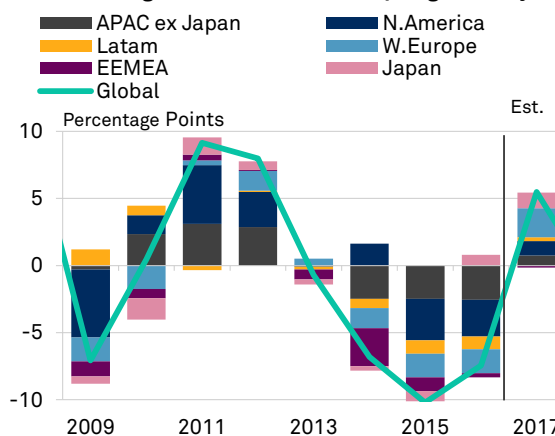


Chart 5
Contribution to global non-financial capex growth by region



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

A similar picture can be seen in terms of prospective sector growth. Only telecoms are expected to see capex decline (see chart 6), reflecting some significant cutbacks expected by some major Chinese telecom companies. Double-digit increases are expected in the IT and consumer sectors and more modest 2%-6% growth rates expected for all others. The sector contribution analysis (see chart 7) again shows how significant and broad the turnaround is. The most important shift is the ending of the great contraction in energy and materials capex, discussed in more detail below. In terms of positive contributions, the biggest uptick comes from the consumer sector, followed by energy and materials.

7 out of 8 sectors to see capex growing, with telecoms the laggard

Chart 6
Global non-financial capex growth by sector in 2017

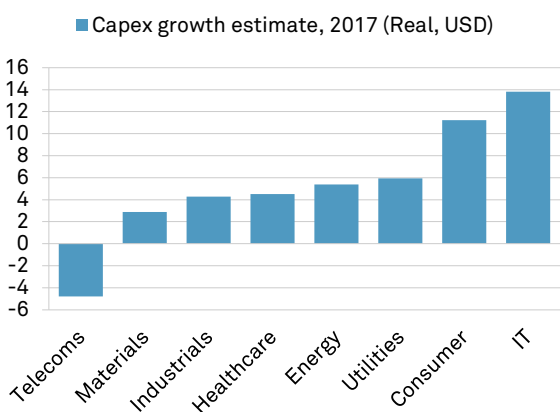
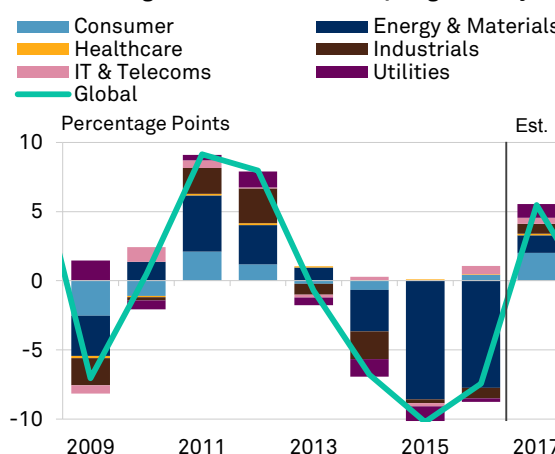


Chart 7
Contribution to global non-financial capex growth by sector



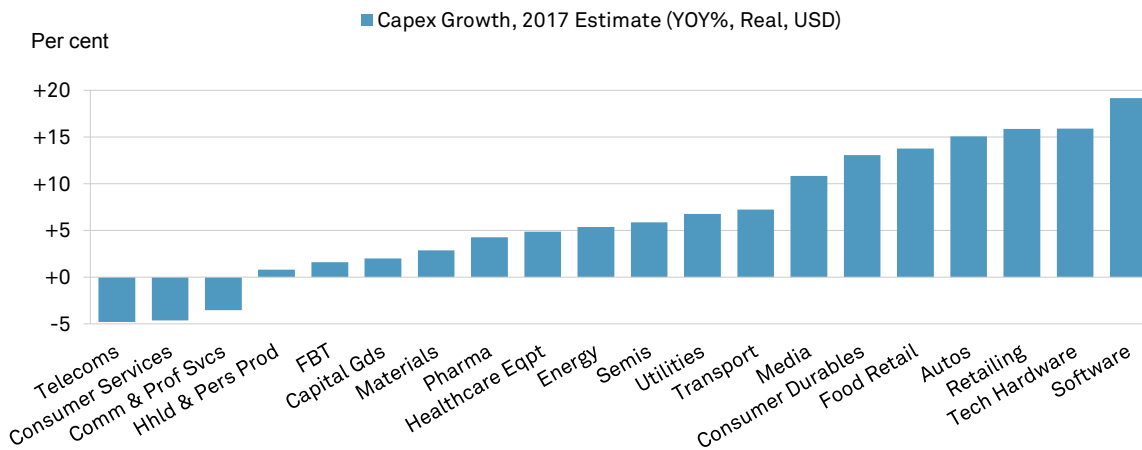
Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Overlapping capex from tech, autos and retail may hurt future returns

Chart 8 drills down further into the industry detail and reinforces the message of a broad-based recovery. Only three out of 20 industries are expected to see capex decline: telecoms, consumer services and commercial and professional services. In contrast, seven industries are expected to see double-digit expansion, led by technology, retail and autos. There is an interesting confluence of investment intentions here; arguably the industries that are expected to invest most are to some degree competing in the same space, with new technology disrupting the auto and retail sectors. So while the capex upturn in these areas is encouraging in a macroeconomic sense, it does raise questions of what it means for returns on capital and future ability to service debt in these heavily-contested areas.

Tech disruption spurring capex in retail and autos

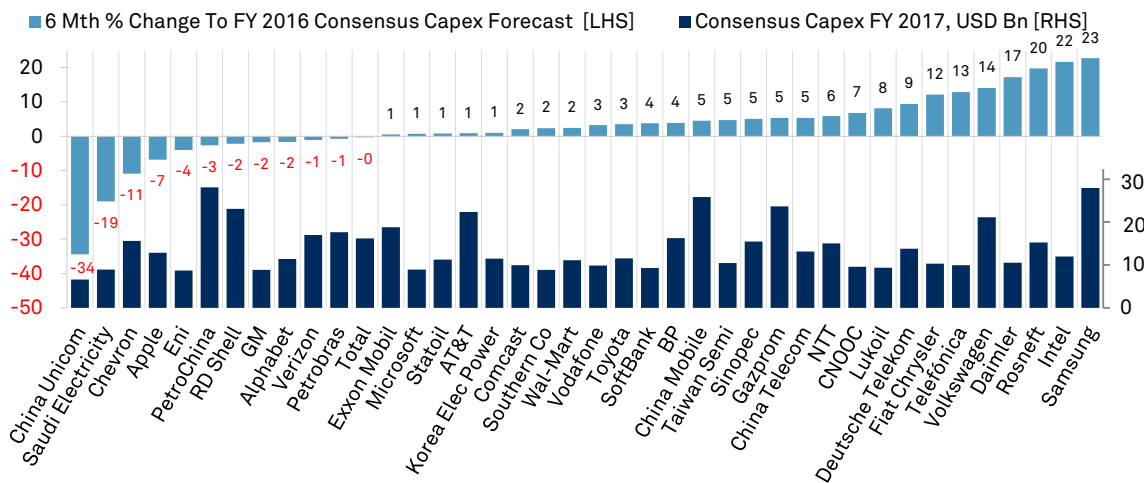
Chart 8
Global non-financial capex growth by industry group in 2017



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

To give a sense of where the improvement in capex momentum has come from at an individual company level, chart 9 shows how consensus forecasts for 2017 capex have changed over the last six months for the 40 companies expected to spend the most this year. Again, it illustrates the breadth of improvement, with two-thirds of the companies seeing forecasts rise. It also shows significant variations in revision trends within industry and region. For example, estimated capex for Samsung and Intel have risen over 20% in the last six months, while projected spending by Apple and Alphabet has fallen.

Chart 9
Revisions to 2017 consensus capex forecasts in last six months for largest capex spenders



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

A lost decade of capex

There should be little doubt as to the broader importance of a turnaround in corporate capex. Recoveries are only just starting to gain serious traction in economies such as the eurozone, despite five years of sub-1% interest rates. Greater capital spending not only signifies growing confidence in the durability of this recovery but, by helping lessen reliance on an extraordinary degree of monetary stimulus, also helps to make the improvement more sustainable in the medium term and less vulnerable to the gradual withdrawal of ultra-cheap money.

It is also important for the longer-term health of the corporate sector, which has suffered a ‘lost decade’ in terms of capital spending. Non-financial capex was \$2.6 trillion in 2016, the lowest figure since 2006’s \$2.4 trillion (see chart 10) and, even after this year’s expected increase, total spending of \$2.7 trillion in 2017 will be less than 2007’s \$2.8 trillion a decade ago. Excluding energy and materials – and the associated commodity-capex boom and bust – does not alter a picture of stagnation. 2016’s spend of \$1.8 trillion is close to the average over the last 10 years and still lower than the \$2 trillion peak in 2012. This matters as capex is by far the most important source of spending on future growth. In 2016, cash acquisitions by our capex universe amounted to \$665 billion and R&D \$416 billion. Capex represented 70% of spending on future growth in 2016, versus 18% for cash acquisitions and 12% for R&D.

Capex essential for sustainable recovery; real term corporate capex where it was a decade ago

Chart 10

Global non-financial corporate capex

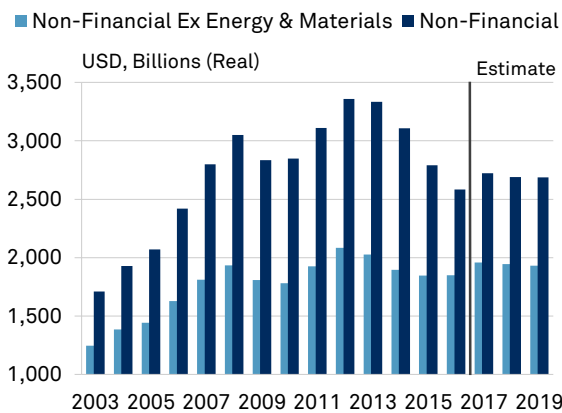
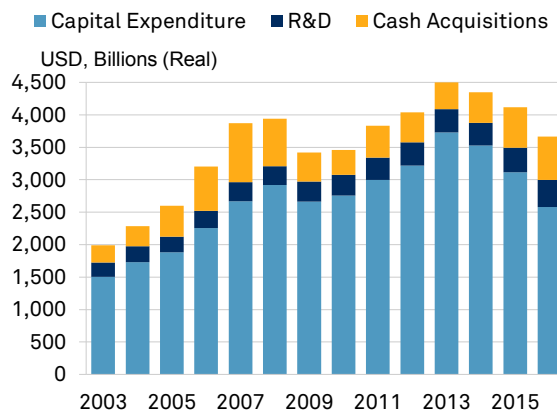


Chart 11

Global non-financial corporate spending on future growth



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Another aspect to highlight is that, in the near term at least, a sustained improvement in capex is likely to be reliant on increased spending in developed markets. Emerging market (EM) capex is heavily geared to commodity capex, explaining the surge in the EM share of global capex from 2003-10 (see chart 12) and its slump since then. In Latin America, energy accounted for 37% of the region’s capex in 2016, but the \$31bn spent was the lowest outlay since 2003 (see chart 13) and down 70% from the 2010 peak.

Chart 12

Emerging market share of global corporate capex

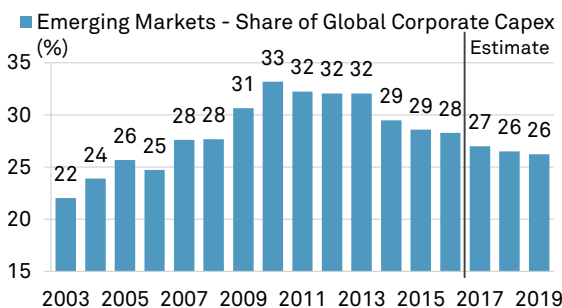
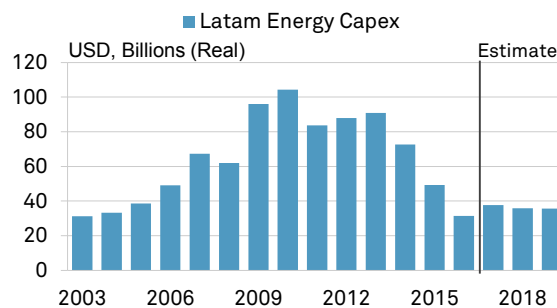


Chart 13

Latin American energy capex



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Why this is unlikely to be a false dawn for capex

How skeptical should we be about this expected pickup in capex? In all of the previous editions of our survey we have argued that consensus optimism about the capex outlook – generally based on positive intentions data (see charts 14 and 15) and observations about the scale of corporate cash holdings – was misplaced. Intentions have improved strongly before, but the translation to ‘present situation’ – actual spending – has remained elusive. Why should it – in that dreaded phrase – be different this time?

Chart 14
IFO World Economic Survey – capital expenditure – all countries

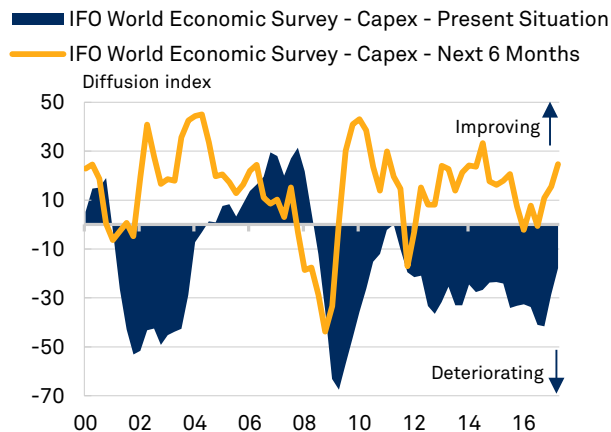
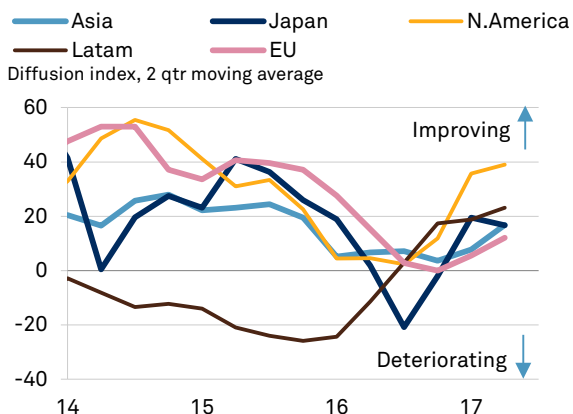


Chart 15
IFO World Economic Survey – capital expenditure – main regional components



Source: Thomson Reuters Datastream, IFO World Economic Survey. The scale of the regular quarterly questions ranges from -100 points to +100 points and the answers are expressed as balance values. The mid-range in the new scale lies at 0 point, where the share of positive and negative answers is equal. There are three possible replies: good/better/higher (+) for a positive assessment representing improvement, satisfactory/about the same/no change (=) for a neutral assessment and bad/worse/lower (-) for a negative assessment representing deterioration. The individual replies are combined for each country without weighting as an arithmetic mean of all survey responses in the respective country.

First, there are other indicators of confidence – tangible and intangible – that suggest that a sustained recovery is underway. One tangible indicator is the pickup in R&D spending by the companies within our capex universe. Real R&D spending rose 6% in 2016, up from 2% the year before and the largest annual increase since 2011 (see chart 16). More intangible, although usually economically significant, is the improvement in purchasing managers indices seen globally since Q4 2016 (see chart 17). Sixteen out of 17 of the larger countries tracked here – representing all regions – are reporting expansion and the average reading suggests a strong rate of expansion in manufacturing.

Global R&D rose 6% in 2017 and PMIs indicate continued expansion

Chart 16
Global non-financial R&D spending (YOY%, Real, USD)

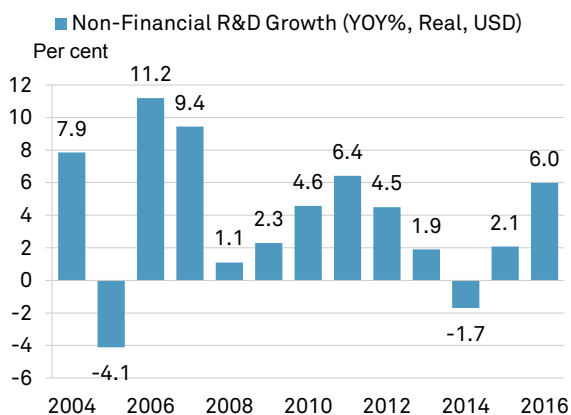
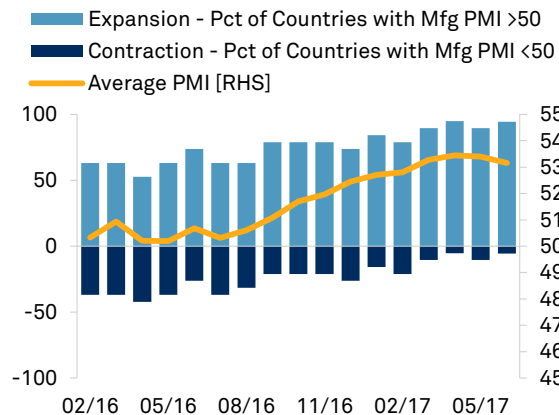


Chart 17
Global PMI trends



Source: S&P Global Market Intelligence, S&P Global Ratings, Markit, Thomson Reuters Datastream. Universe for R&D calculations is Global Capex 2000. PMI data shows average PMI level assessed for 17 countries in Europe, the Americas and Asia-Pacific.

Second, as we have shown in previous reports, capex growth is closely correlated with revenue and profit growth in both direction and magnitude (see chart 18). The improvement in operating performance seen in 2016 was enough to bring about a modest rise in capex for non-financial companies excluding energy and materials. Profit margins too have recovered, back to the midpoint of their post-2004 range (see chart 19). Given favorable sentiment, plentiful and cheap funding and a positive economic outlook we see little reason not to expect that operating trends will remain supportive of rising capex.

Improving operating trends support capex

Chart 18
Global non-financial ex energy and materials corporate sales, EBITDA and capex growth (YOY%, Real, USD)

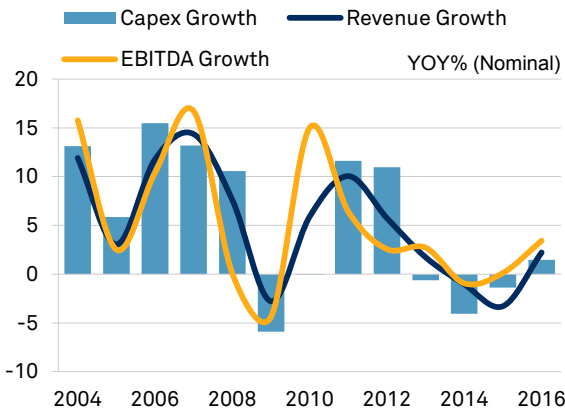
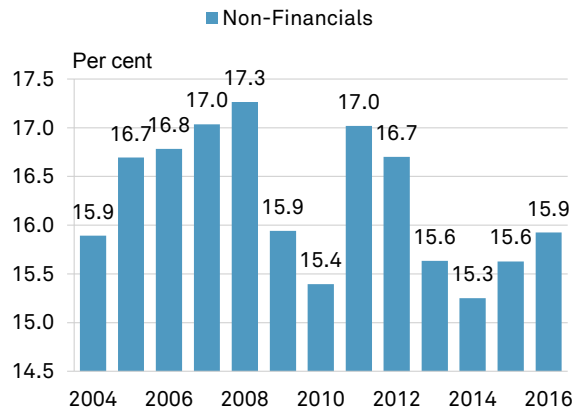


Chart 19
Global non-financial corporate EBITDA margin (%)



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Third, and perhaps most important for overall capex growth in recent years, we appear to have reached the end of the commodity capex crunch underway since 2013. Over that period, combined capex for the energy and materials sectors fell by 45% from \$1,289 billion in 2013 to \$706 billion in 2016. The oil & gas and metals & mining sectors have both shrunk their annual capex in real terms to levels close to what they were spending in 2005 (see charts 20 and 21) and both are expected to see modest increases in capex in 2017. While some sub sectors – notably energy equipment and services – are still expecting further declines, the stabilization of commodity capex is a hugely important turning point. It makes overall capex growth far easier given the sheer weight of these sectors in overall capex. Energy and materials still retain the largest broad sector share of total capex at 19% in 2016, even though this pales in comparison with the 29% peak in 2013.

After a 45% cut in spending since 2013, the commodity capex crash appears over

Chart 20
Global oil and gas capex

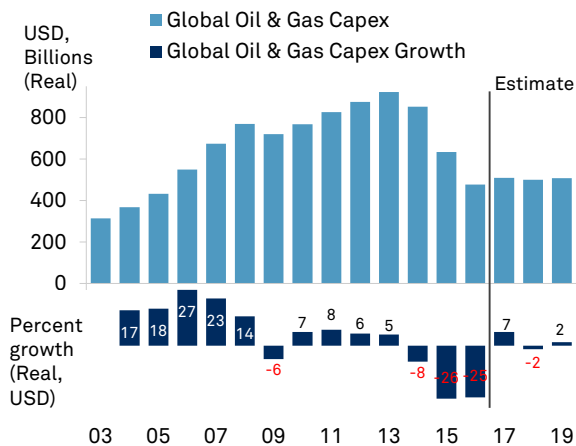
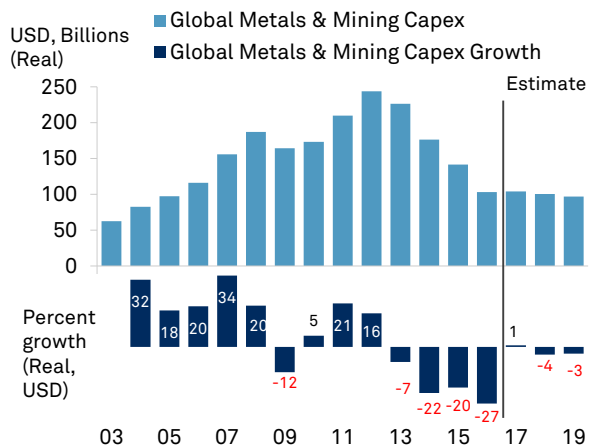


Chart 21
Global metals and mining capex

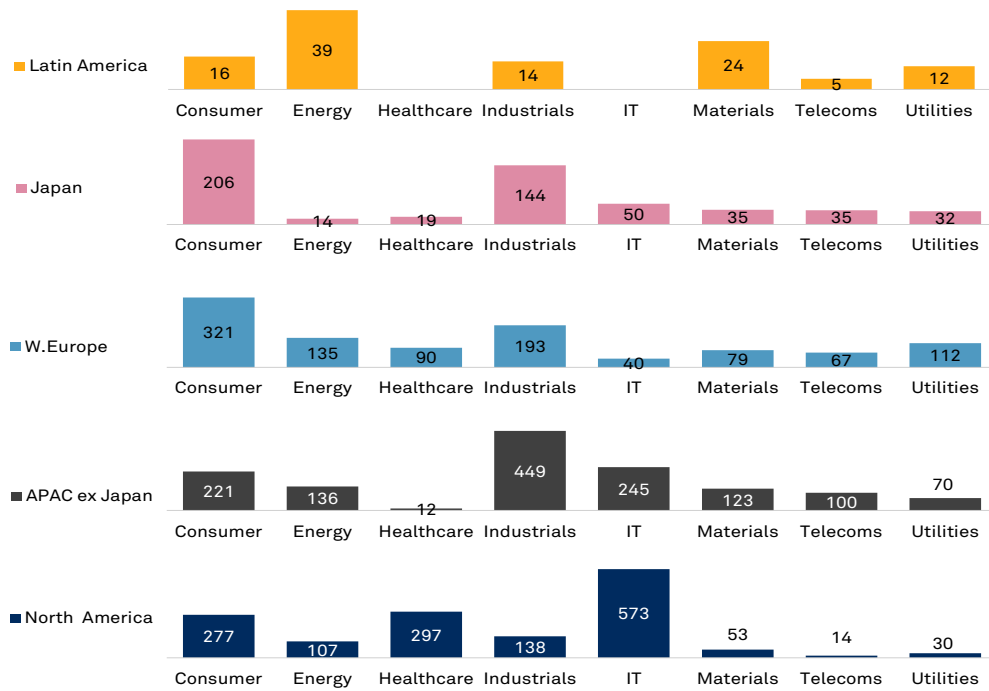


Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Cash remains plentiful but not necessarily destined for capex

Chart 22

Balance sheet cash by region and sector for global capex 2000 companies in 2016 (USD, Bill'n)



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Note that size of bars is not equal across regions – bars are scaled to show largest holdings of cash by industry within each region.

High levels of corporate cash holdings continue to remain a supportive factor for medium-term capex prospects, particularly so if greater confidence in economic growth allows treasurers to move away from the defensive mindset brought about in the wake of the 2008-2009 global financial crisis and the commodity and eurozone problems that followed. There is some evidence that cash is starting to be deployed. The companies in our capex universe held some \$4.8 trillion of cash on their balance sheets in 2016 (equivalent to 9.8% of total assets), still very high in relation to inflation-adjusted levels seen since 2004, but down from the \$5.2 trillion held in 2015 (see chart 23). Charts 22 and 24 show the breakdown of 2016 holdings by region and sector and highlight key cash concentrations – IT in North America, industrials in Asia-Pacific excluding Japan and consumer in Japan and Western Europe.

Capex 2000 companies held \$4.8 trillion of cash in 2016, nearly 10% of total assets

Chart 23

Global non-financial corporate cash and cash / total assets (Real, USD)

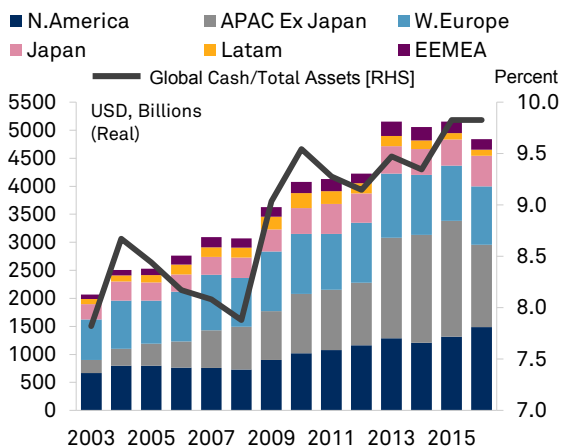
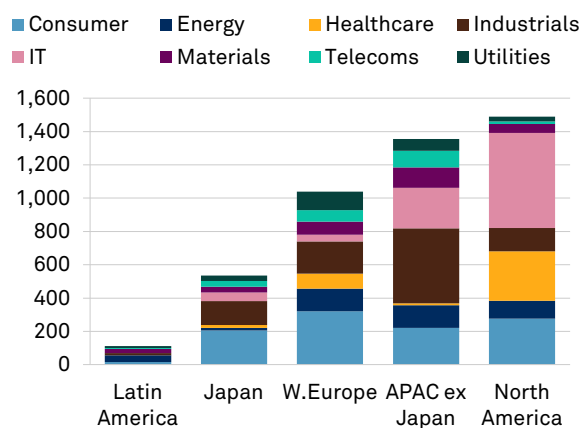


Chart 24

Global non-financial corporate cash by region and sector – FY 2016 (USD)



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. All figures are inflation-adjusted to 2016 prices. See [U.S. Corporate Cash Reaches \\$1.9 Trillion, But Rising Debt And Tax Reform Pose Risk](#), 25 May 2017 for more on US cash holdings.

The question of the degree to which high cash balances might readily translate to capital spending remains vexed. U.S. tech companies have large cash holdings but substantial portions of this cash are held overseas and subject to the vagaries of U.S. corporate tax reform. Similarly, consumer companies have the largest absolute holdings of cash (see chart 25), but these are dominated by autos and retail (see chart 26), areas subject to intense competition, overcapacity, disruption from new technology threatening business models and – for autos– increasingly stringent environmental regulation.

U.S. corporate tax reform has the potential to unlock cash holdings

Chart 25
Global non-financial corporate cash by sector – FY 2016 (USD)

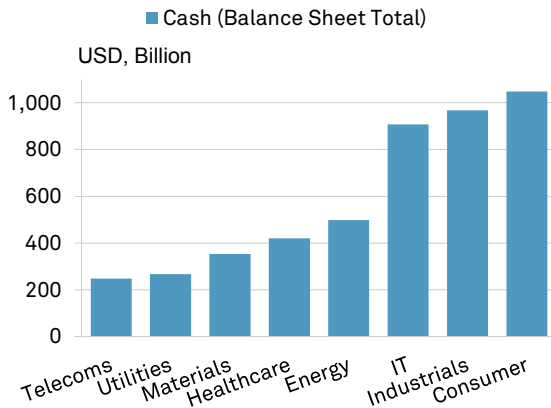
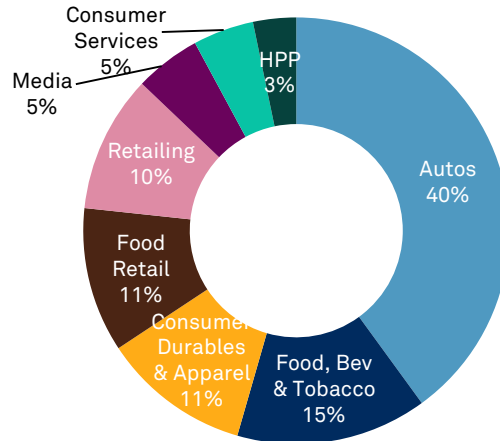


Chart 26
Global non-financial corporate cash by region and sector – FY 2016 (USD)



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. All figures are inflation-adjusted to 2016 prices.

Looking at cash holdings as a proportion of total assets and in relation to the 10-year average of this ratio provides a useful benchmark of the real degree of comfort implicit in current cash holdings (see charts 27 and 28). On this basis only the IT sector, likely mirrored in the North America figure, and Japan look to have cash holdings that are high relative to the last decade. So the question of U.S. tax reform again raises its head, along with the issue of what proportion of any returning cash might be used for capex as opposed to being returned to shareholders.

Chart 27
Global non-financial corporate cash / total assets by sector

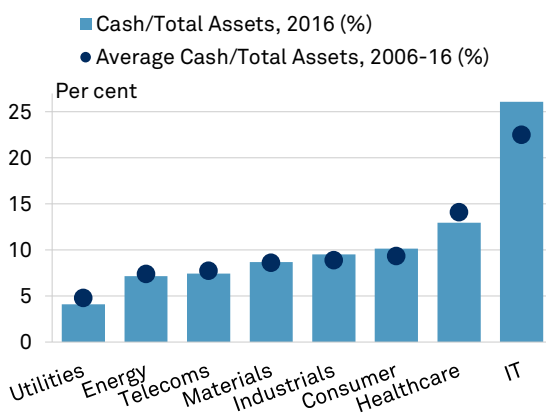
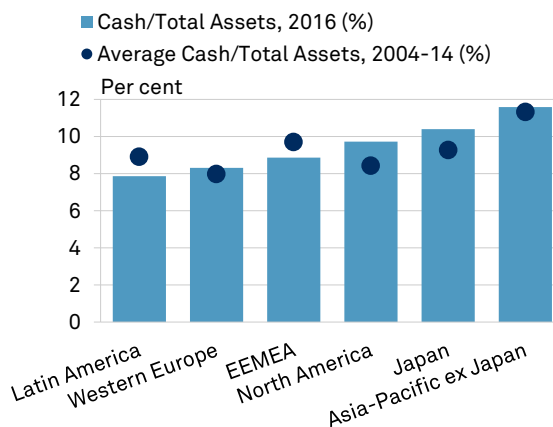


Chart 28
Global non-financial corporate cash / total assets by region



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Analyst pessimism for 2018-2019 should not be a cause for concern

The message of optimism apparent in the upbeat projections for capex growth globally in 2017 might at first glance seem to be undermined by the essentially zero growth forecasts given by analysts and company guidance for growth in 2018 and 2019 (-1% for 2018, 0% for 2019). However, in our 2014 edition we analyzed forecast revision patterns and found that the aggregate market consensus tends to systematically underestimate what companies spend on capex. Although not the case for all forecasts – especially where longer-term capex plans have been laid out by the company – there appears to be a tendency to assume that capex will see some degree of reversion to a lower value.

The market consensus tends to systematically underestimate future capex spending

Updating this analysis (see charts 29 and 30) suggests that this general tendency continues to hold true. Only once since 2010 has the final consensus forecast been lower than initial estimates (in 2015) and this includes years like 2014 and 2016 when capex growth overall was strongly negative. We suspect the oddity of 2015 was due to analysts underestimating just how sharp the contraction in commodity-related capital spending was going to be and that 2014 was not a one-off. In 2016, there was a clearer understanding that the commodity downturn implied a step change lower in related investment.

Chart 29

Evolution of global consensus forecasts for capex by fiscal year

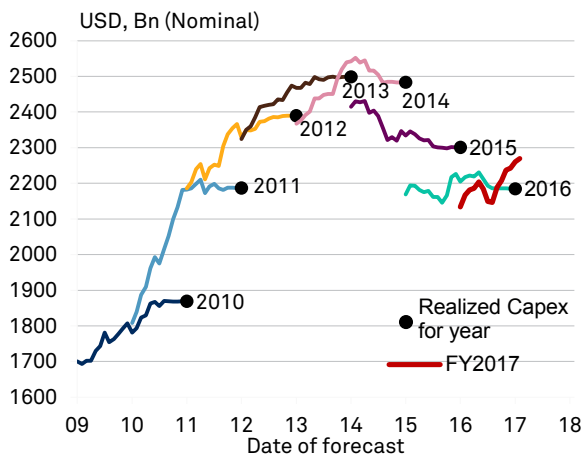
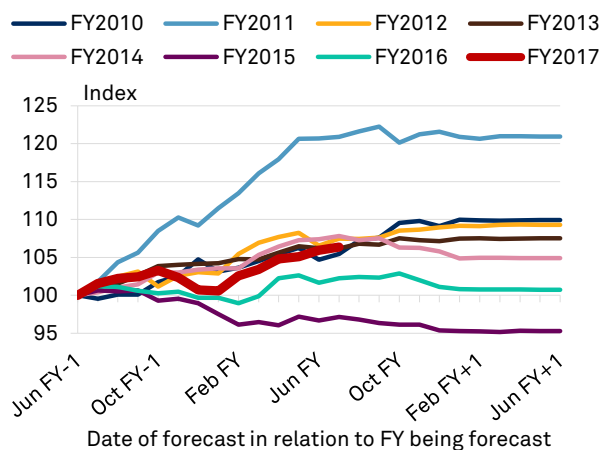


Chart 30

Evolution of global consensus forecasts for capex by fiscal year - indexed



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

Note that data is nominal, so not comparable to real growth rates shown elsewhere in this publication. It only includes companies for which S&P Global Market Intelligence consensus is available, so is a subset of the full index which also includes private and public companies for which no consensus is available.

What does this mean for forecasts for 2018 and beyond? Given the decisively positive turn in capex that we expect to see in 2017, improving operating trends, the end of the commodity capex crunch, supportive cash balances, a decade's worth of stagnant corporate investment in real terms and sustained positive economic momentum, S&P Global Ratings' view is that the capex upturn will have further to run. We expect to see these early estimates for 2018 revised higher in coming months as companies set out their plans for next year. Only a slipping back into recession in one of the major economic regions would seem likely to have the potential to undermine the positive capex momentum now in play.

U.K. capex is not yet showing any adverse effects from EU exit

One final issue to consider is whether or not the U.K.'s impending departure from the EU has had any effect on investment intentions in the U.K. Disentangling single-country trends is difficult given that the majority of the companies in our universe are multinationals and that the actual location of intended capex is not broken out consistently by many companies.

U.K. capex expected to grow 5% in 2017

For U.K.-domiciled companies within our dataset, there is no obvious sign yet that capex intentions have been hampered by Brexit. Capex spending by U.K. companies in our universe is expected to grow 5% this year (see chart 31). This is half the growth rate expected for Western Europe as a whole (+10%) but partly

reflects the UK's relatively high weighting of energy and mining companies. Looking at unweighted consensus revision trends in local currency terms – which moderates the effect of exposure to particular industries and any currency-driven effects – suggests little difference in capex forecast trends between the UK and the eurozone (see chart 32).

Chart 31
U.K. and eurozone non-financial capex growth

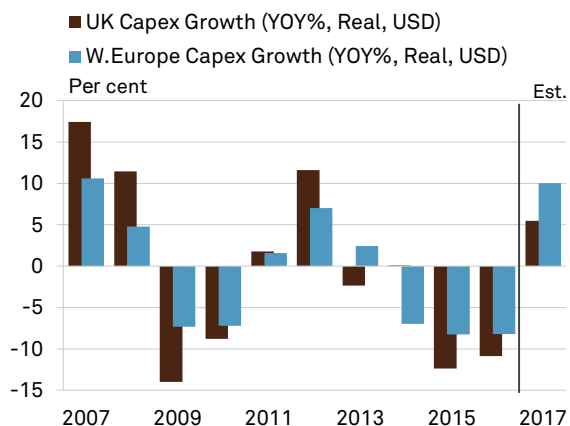
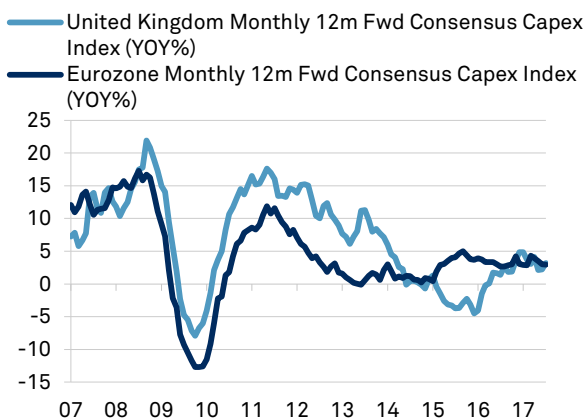


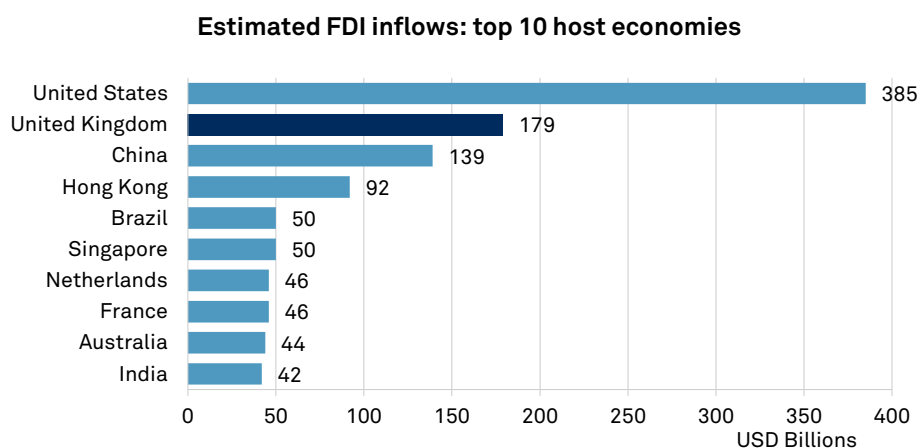
Chart 32
U.K. and eurozone non-financial corporate capex consensus forecast revisions (local currency)



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Revision trends are unweighted indices of monthly local-currency consensus capex forecast changes.

Of course, the reaction of U.K. companies is only part of the picture. The U.K. has been a major beneficiary of foreign direct investment (FDI) with inflows roughly doubling from 2005-2015. Preliminary data for 2016 flows from UNCTAD suggested that the U.K. was the second-largest global recipient of FDI in 2016 (see chart 33). For the moment at least we have no evidence of any adverse impact on FDI.

Chart 33 – Top 10 economies in terms of estimated 2016 FDI inflows



Source: UNCTAD. FDI estimations are based primarily on quarterly FDI data derived from the (extended) directional principle, though there are some countries for which the asset/liability data are used for estimation.

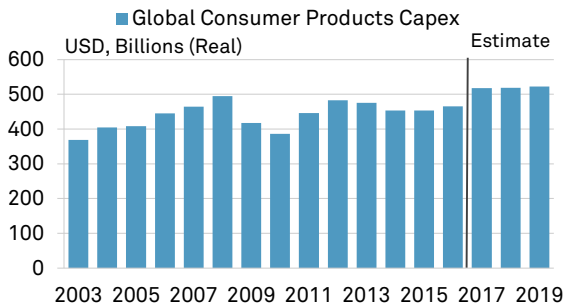
Related Research

- [Global Capex: Where Are We Now?](#) March 17, 2016
- [Global Corporate Capital Expenditure Survey 2015](#), Aug. 3, 2015
- [Global Corporate Capital Expenditure Survey 2014](#), June 30, 2014
- [Global Corporate Capital Expenditure Survey 2013](#), July 10, 2013
- [Cash, Caution and Capex – Why a Trillion Euro Cash Pile Is Unlikely To Drive A European Capex Boom](#), Feb. 5, 2013

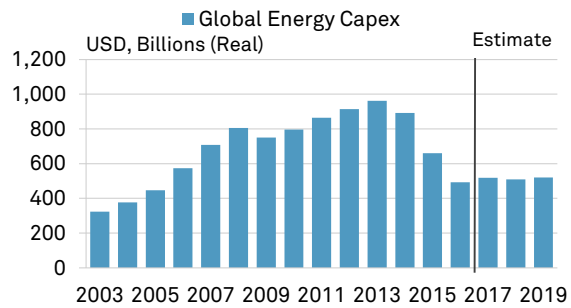
Global capex by sector

Chart 34

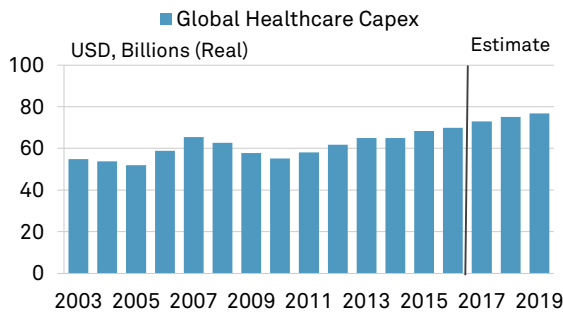
a) Global consumer products capex



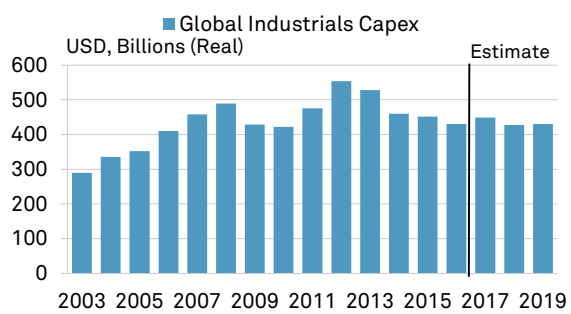
b) Global energy capex



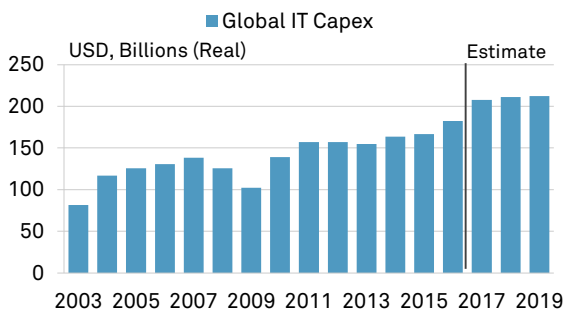
c) Global healthcare capex



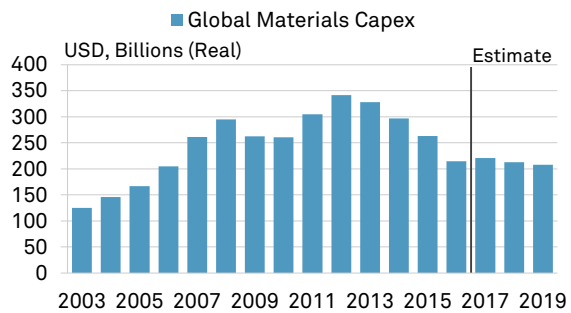
d) Global industrials capex



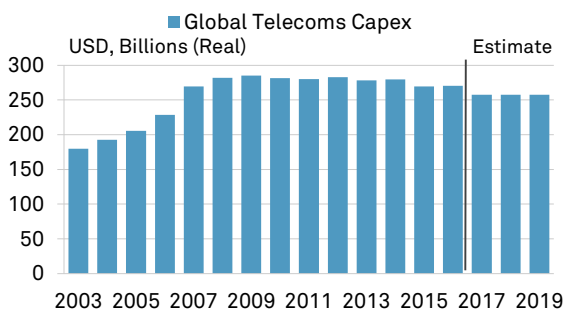
e) Global information technology capex



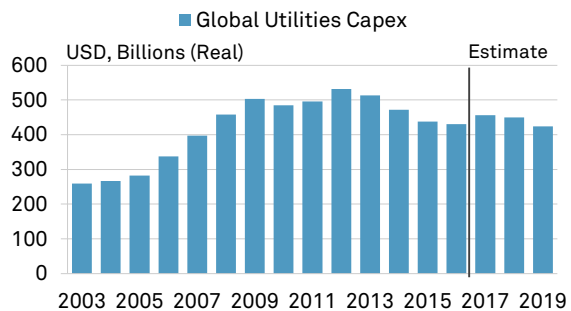
f) Global materials capex



g) Global telecommunications capex



h) Global utilities capex



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. All figures are inflation-adjusted to 2016 prices.

The top 60 global capex spenders

The table below shows the top 60 global non-financial capex spenders contained in our universe, who together invested \$781 billion over the last year. They are ranked in descending order by their nominal U.S. Dollar spending for the last full fiscal year.

The list is less dominated by energy than in prior years, with the sector counting for 17 of the top 60 now, versus 27 in our 2015 edition. Telecoms, utilities and consumer companies – principally auto and retail – are the other sectors that account for the largest shares of the big spending companies.

Table 2

Top 60 Non-Financial Capex Spenders – Global

Company	Country	Sector	Capex FY16 (USD Billion)	Company	Country	Sector	Capex FY16 (USD Billion)
State Grid (China)	China	Utilities	60.2	NextEra Energy	U.S.	Utilities	9.6
Toyota	Japan	Consumer	36.1	Intel	U.S.	I.T.	9.6
China Mobile	Hong Kong	Telecoms	27.1	Deutsche Bahn	Germany	Industrials	9.6
PetroChina	China	Energy	26.1	Eni	Italy	Energy	9.6
Gazprom	Russia	Energy	24.5	General Motors	U.S.	Consumer	9.5
AT&T	U.S.	Telecoms	22.4	Network Rail	U.K.	Industrials	9.5
Royal Dutch Shell	U.K./Neth.	Energy	22.1	Vodafone	U.K.	Telecoms	9.4
Samsung	South Korea	I.T.	20.1	Comcast	U.S.	Consumer	9.1
Chevron	U.S.	Energy	18.1	Exelon	U.S.	Utilities	8.6
TOTAL	France	Energy	18.1	Deutsche Telekom	Germany	Telecoms	8.5
Nissan	Japan	Consumer	17.1	Enel	Italy	Utilities	8.4
Verizon Comms.	U.S.	Telecoms	17.1	Microsoft	U.S.	I.T.	8.3
BP	U.K.	Energy	16.7	PowerChina	China	Industrials	8.3
Exxon Mobil	U.S.	Energy	16.2	LUKOIL	Russia	Energy	8.1
Petrobras	Brazil	Energy	15.1	Energy Transfer	U.S.	Energy	8.1
Saudi Electricity	Saudi Arabia	Utilities	15.0	Hitachi	Japan	I.T.	8.1
China Unicom	China	Telecoms	14.7	Duke Energy	U.S.	Utilities	7.9
China Telecom	China	Telecoms	13.9	China Huadian	China	Utilities	7.8
Volkswagen	Germany	Consumer	13.9	BHP Billiton	Australia	Materials	7.7
Apple	U.S.	I.T.	12.7	Petróleos Mexicanos	Mexico	Energy	7.4
Statoil	Norway	Energy	12.2	CNOOC	Hong Kong	Energy	7.4
SoftBank	Japan	Telecoms	12.1	Russian Railways	Russia	Industrials	7.4
Rosneft	Russia	Energy	11.6	Southern Company	U.S.	Utilities	7.3
Wal-Mart Stores	U.S.	Consumer	11.5	State Power Investment	China	Utilities	7.2
NTT	Japan	Telecoms	11.3	General Electric	U.S.	Industrials	7.2
SinoPec	China	Energy	10.5	Ford	U.S.	Consumer	7.0
Alphabet (Google)	U.S.	I.T.	10.2	Amazon.com	U.S.	Consumer	6.7
Taiwan Semiconductor	Taiwan	I.T.	10.1	América Móvil	Mexico	Telecoms	6.7
Korea Electric Power	South Korea	Utilities	10.0	Fiat Chrysler	Italy	Consumer	6.6
Telefónica	Spain	Telecoms	9.8	ENGIE	France	Utilities	6.6

Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Shows data for last complete fiscal year.

Asia-Pacific ex Japan

The region has the lowest expected capex growth outlook across all regions for 2017 (+2.7%). Strong increases from companies like Samsung are offset by slowing 4G investment by China's largest telecom operators and some continued drag from energy and materials companies.

Table 3

Top 20 Non-Financial Capex Spenders – Asia ex Japan

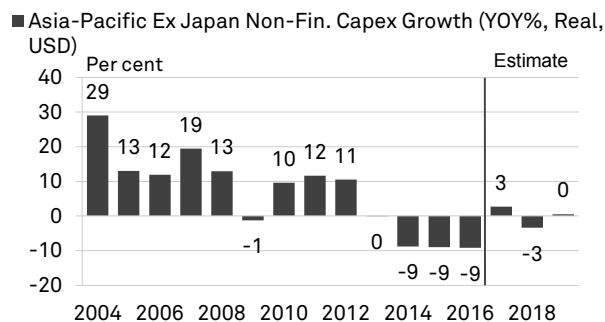
Company	Country	Sector	Capex FY16 (USD Billion)	Company	Country	Sector	Capex FY16 (USD Billion)
State Grid (China)	China	Utilities	60.2	China Huadian	China	Utilities	7.8
China Mobile	Hong Kong	Telecoms	27.1	BHP Billiton	Australia	Materials	7.7
PetroChina	China	Energy	26.1	CNOOC	Hong Kong	Energy	7.4
Samsung	South Korea	I.T.	20.1	State Power Investment	China	Utilities	7.2
China Unicom	China	Telecoms	14.7	China Datang	China	Utilities	6.3
China Telecom	China	Telecoms	13.9	China Eastern Airlines	China	Industrials	5.6
SinoPec	China	Energy	10.5	China Resources National	China	Industrials	5.5
Taiwan Semiconductor	Taiwan	I.T.	10.1	China National Nuclear	China	Industrials	5.3
Korea Electric Power	South Korea	Utilities	10.0	China Comms Construction	China	Industrials	5.3
PowerChina	China	Industrials	8.3	Oil and Natural Gas Corp	India	Energy	5.1

Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Shows data for last complete fiscal year.

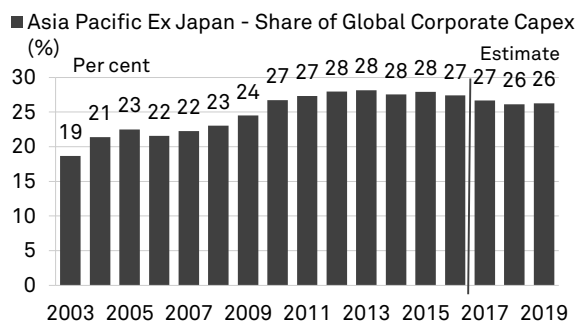
Asia-Pacific ex Japan – Capital expenditure outlook

Chart 35

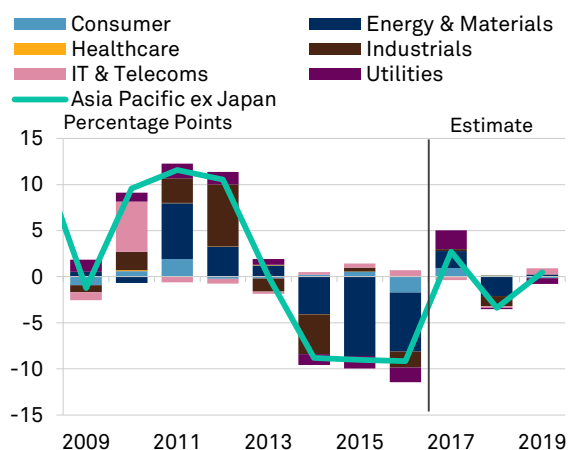
a) Non-financial corporate capex growth



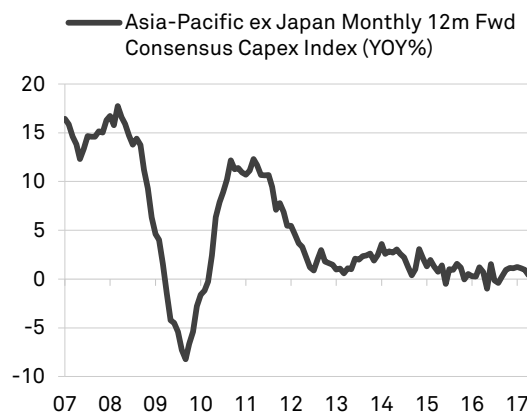
b) Share of global corporate capital expenditure



c) Non-fin. corporate capex growth and sector contribution



d) YOY change in 12m forward consensus capex forecast



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Consensus revisions are unweighted local-currency.

Japan

Relatively low exposure to commodities has allowed Japanese capex to recover more quickly than other regions and strong growth (+10.9%) is expected this year. Amongst the largest spenders, significantly increased 2017 capex is expected from Softbank, NTT and Hitachi.

Table 4

Top 20 Non-Financial Capex Spenders – Japan

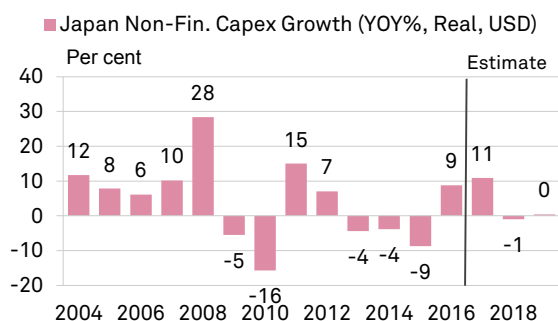
Company	Country	Sector	Capex FY16 (USD Billion)	Company	Country	Sector	Capex FY16 (USD Billion)
Toyota	Japan	Consumer	36.1	Kansai Electric Power	Japan	Utilities	3.5
Nissan	Japan	Consumer	17.1	Sony	Japan	Consumer	3.3
SoftBank	Japan	Telecoms	12.1	KDDI	Japan	Telecoms	3.1
NTT	Japan	Telecoms	11.3	DENSO	Japan	Consumer	3.0
Hitachi	Japan	I.T.	8.1	Kyushu Electric Power	Japan	Utilities	2.8
Tokyo Electric Power	Japan	Utilities	5.7	Seven & i	Japan	Consumer	2.7
Honda	Japan	Consumer	5.7	Mitsui	Japan	Industrials	2.7
East Japan Railway	Japan	Industrials	4.8	Nippon Steel & Sumi. Metal	Japan	Materials	2.7
Aeon	Japan	Consumer	4.6	Tohoku Electric Power	Japan	Utilities	2.6
Inpex	Japan	Energy	4.2	Chubu Electric Power	Japan	Utilities	2.5

Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Shows data for last complete fiscal year.

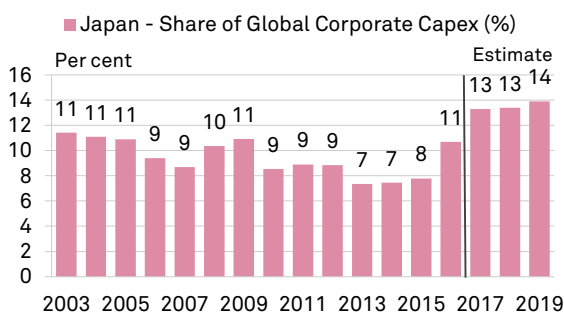
Japan – Capital expenditure outlook

Chart 36

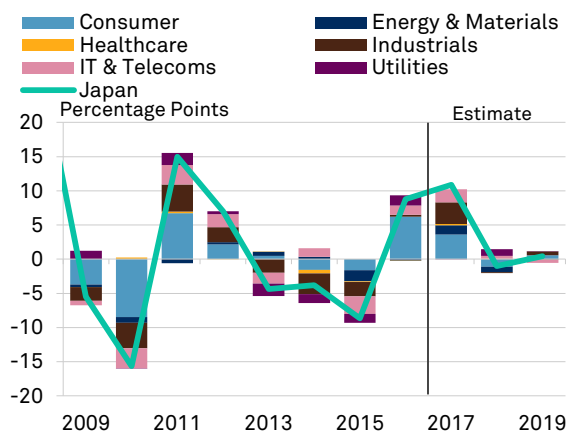
a) Non-financial corporate capex growth



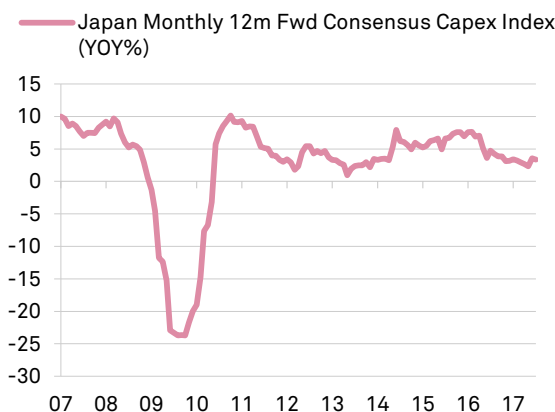
b) Share of global corporate capital expenditure



c) Non-fin. corporate capex growth and sector contribution



d) YOY change in 12m forward consensus capex forecast



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000 Consensus revisions are unweighted local-currency.

Latin America

A bounce back in capex from some of the largest energy companies – Petrobras, Ecopetrol – is expected to contribute to strong (+8.6%) investment growth for the region as a whole. However, Materials companies continue to scale-back spending.

Table 5

Top 20 Non-Financial Capex Spenders – Latin America

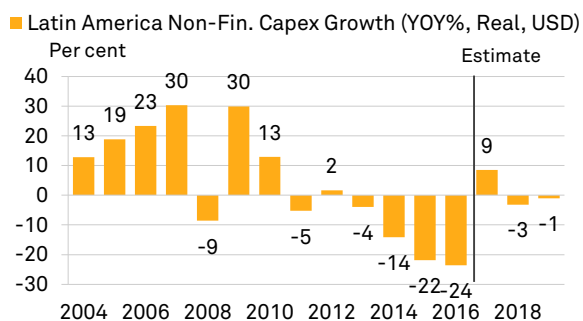
Company	Country	Sector	Capex FY16 (USD Billion)	Company	Country	Sector	Capex FY16 (USD Billion)
Petrobras	Brazil	Energy	15.1	Grupo México	Mexico	Materials	1.6
Petróleos Mexicanos	Mexico	Energy	7.4	Grupo Televisa	Mexico	Consumer	1.4
América Móvil	Mexico	Telecoms	6.7	EPM	Colombia	Utilities	1.3
Vale	Brazil	Materials	5.3	JBS	Brazil	Consumer	1.1
YPF	Argentina	Energy	4.1	Alfa	Mexico	Industrials	1.0
CODELCO	Chile	Materials	3.0	Votorantim	Brazil	Materials	0.9
Telefónica Brasil	Brazil	Telecoms	2.3	FEMSA	Mexico	Consumer	0.9
Ecopetrol	Colombia	Energy	1.9	PETROPERÚ	Peru	Energy	0.9
Fibria Celulose	Brazil	Materials	1.9	Braskem	Brazil	Materials	0.9
CFE	Mexico	Utilities	1.8	Enel Américas	Chile	Utilities	0.8

Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Shows data for last complete fiscal year.

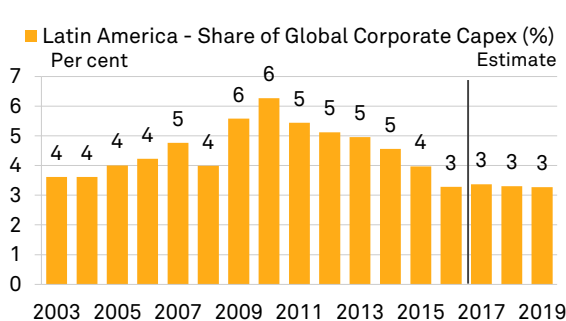
Latin America – Capital expenditure outlook

Chart 37

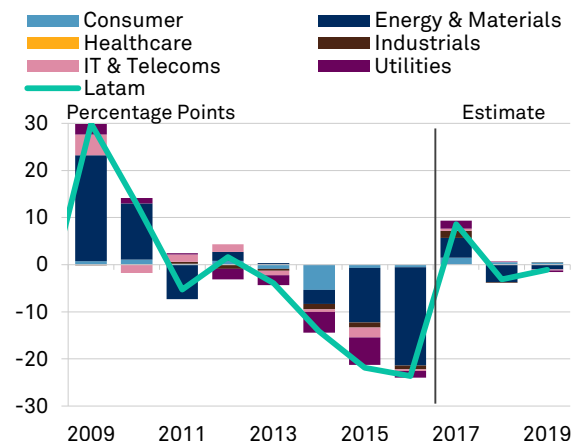
a) Non-financial corporate capex growth



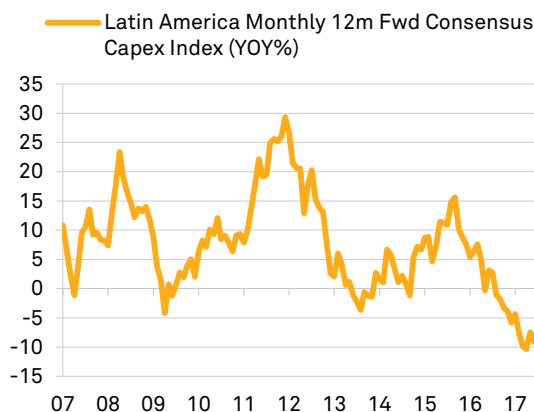
b) Share of global corporate capital expenditure



c) Non-fin. corporate capex growth and sector contribution



d) YOY change in 12m forward consensus capex forecast



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Consensus revisions are unweighted local-currency.

North America

A recovery in oil and gas investment (Chevron, Exxon Mobil) is likely to help North American capex growth turn positive in 2017, bolstered by continued strong capex growth from many technology companies including Intel, Alphabet and Microsoft.

Table 6

Top 20 Non-Financial Capex Spenders – North America

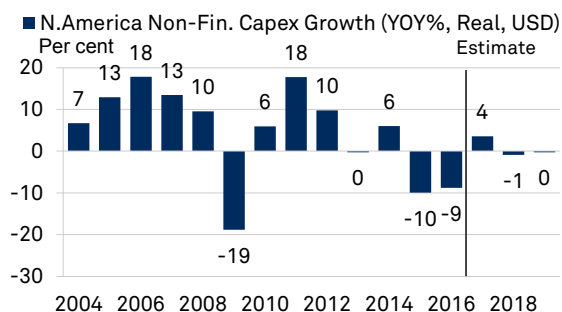
Company	Country	Sector	Capex FY16 (USD Billion)	Company	Country	Sector	Capex FY16 (USD Billion)
AT&T	U.S.	Telecoms	22.4	Comcast	U.S.	Consumer	9.1
Chevron	U.S.	Energy	18.1	Exelon	U.S.	Utilities	8.6
Verizon Comms.	U.S.	Telecoms	17.1	Microsoft	U.S.	I.T.	8.3
Exxon Mobil	U.S.	Energy	16.2	Energy Transfer	U.S.	Energy	8.1
Apple	U.S.	I.T.	12.7	Duke Energy	U.S.	Utilities	7.9
Wal-Mart Stores	U.S.	Consumer	11.5	Southern Company	U.S.	Utilities	7.3
Alphabet (Google)	U.S.	I.T.	10.2	General Electric	U.S.	Industrials	7.2
NextEra Energy	U.S.	Utilities	9.6	Ford	U.S.	Consumer	7.0
Intel	U.S.	I.T.	9.6	Amazon.com, Inc.	U.S.	Consumer	6.7
GM	U.S.	Consumer	9.5	Dominion Energy, Inc.	U.S.	Utilities	6.1

Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Shows data for last complete fiscal year.

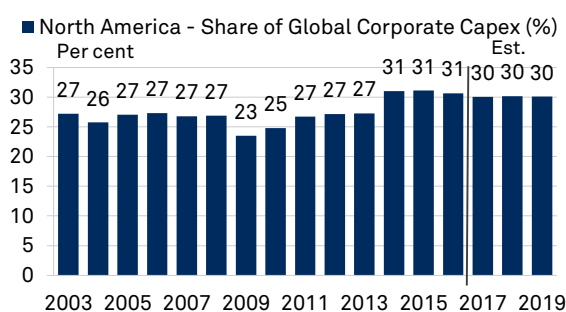
North America – Capital expenditure outlook

Chart 38

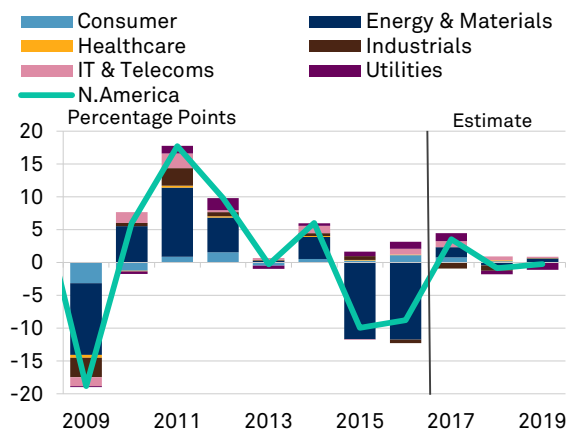
a) Non-financial corporate capex growth



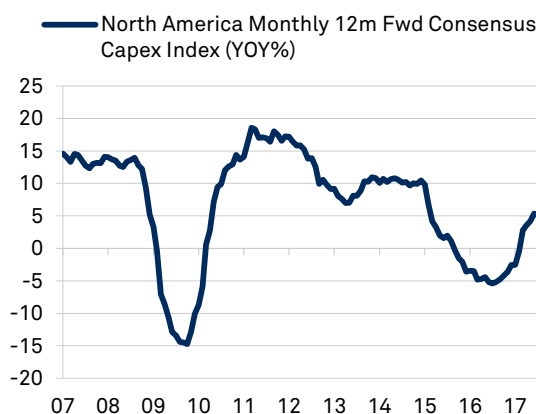
b) Share of global corporate capital expenditure



c) Non-fin. corporate capex growth and sector contribution



d) YOY change in 12m forward consensus capex forecast



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Consensus revisions are unweighted local-currency.

Western Europe

Despite a continued scaling back in investment by many large energy companies, significantly increased investment by auto (Volkswagen, Fiat Chrysler, Daimler and BMW) and utility companies (ENGIE) are key contributors to projected 2017 capex growth of +10.0%.

Table 7

Top 20 Non-Financial Capex Spenders – Western Europe

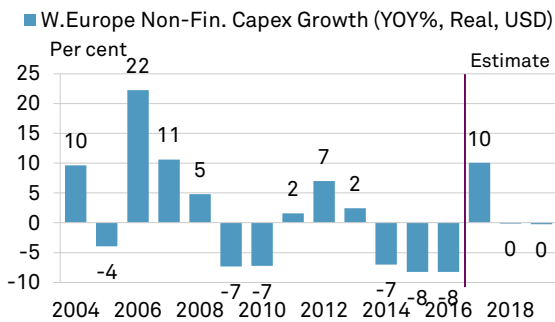
Company	Country	Sector	Capex FY16 (USD Billion)	Company	Country	Sector	Capex FY16 (USD Billion)
Royal Dutch Shell	U.K./Neth.	Energy	22.1	Deutsche Telekom	Germany	Telecoms	8.5
TOTAL	France	Energy	18.1	Enel	Italy	Utilities	8.4
BP	U.K.	Energy	16.7	Fiat Chrysler	Italy	Consumer	6.6
Volkswagen	Germany	Consumer	13.9	ENGIE	France	Utilities	6.6
Statoil	Norway	Energy	12.2	Daimler	Germany	Consumer	6.2
Telefónica	Spain	Telecoms	9.8	BMW	Germany	Consumer	6.1
Deutsche Bahn	Germany	Industrials	9.6	Ferrovie dello Stato Italiane	Italy	Industrials	5.9
Eni	Italy	Energy	9.6	Orange	France	Telecoms	5.8
Network Rail	U.K.	Industrials	9.5	SNCF Réseau	France	Industrials	5.5
Vodafone	U.K.	Telecoms	9.4	Robert Bosch	Germany	Consumer	5.5

Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Shows data for last complete fiscal year.

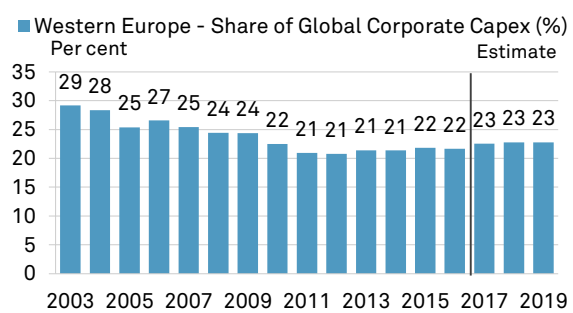
Western Europe – Capital expenditure outlook

Chart 39

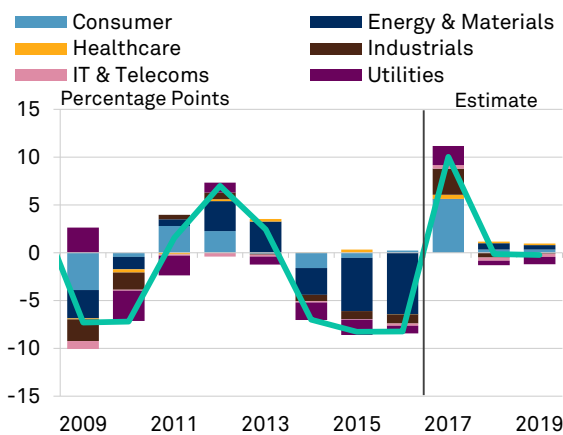
a) Non-financial corporate capex growth



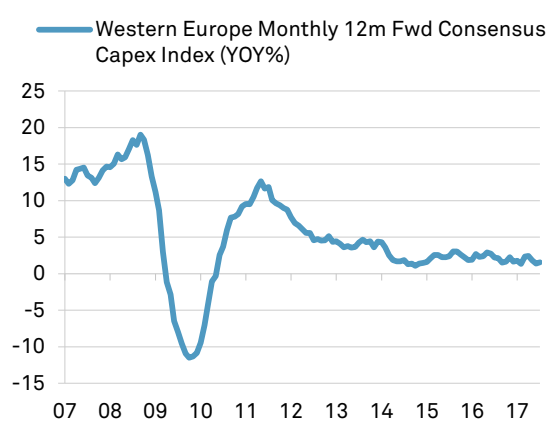
b) Share of global corporate capital expenditure



c) Non-fin. corporate capex growth and sector contribution



d) YOY change in 12m forward consensus capex forecast



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000. Consensus revisions are unweighted local-currency.

Appendix: methodology

Our survey assesses capital expenditure trends for a rolling universe of the 2,000 companies that spend the most globally. It covers public and private companies, rated and unrated and extends the analysis into the subsidiaries that often account for most spending in some regions. All financial data is sourced from S&P Capital IQ and is adjusted into real terms to allow for meaningful long-term and cross-country analysis.

Data sources

Financial data	All financial data used in this report has been derived from S&P Capital IQ. This includes financial statement line items, country and sector identifiers, ratings data and currency adjustments. Growth rates, ratios and real-terms adjustment have then been calculated by S&P Ratings Services.
Economic data	Inflation data comes from the IMF World Economic Outlook (WEO) database via Thomson Reuters Datastream. Purchasing Power Parity (PPP) adjustments, where used, are also from the IMF's WEO.

Universe selection

Ranking	The selected universe represents – for each fiscal year – the top 2000 ranking companies globally in terms of US dollar-denominated capital expenditure. Currency conversion is performed on a historical basis (i.e. using the exchange rate applicable at the date of the financial statement).
Item definition	Capital expenditure is defined as Capital IQ standardized capital expenditure taken from the cash flow statement.
Size of the universe	We have chosen a constant universe of 2000 with a view to ensuring breadth of geographic coverage and a deep enough coverage to capture meaningful global, country and industry trends. Chart 40a shows the maximum, minimum and median capital expenditure undertaken by universe constituents between 2003 and 2016.
Global coverage	A universe of this size also ensures broad and representative geographic coverage. Chart 40b shows the proportion of companies headquartered in each region for the index in 2016. North America and Asia are the dominant regions by numbers of companies, followed by Europe. But there are also meaningful numbers of Latin American and Emerging Europe, Middle East and African companies represented too.
Weighting	All figures are aggregated on a summed basis (rather than being equally-weighted or averages). The biggest capex spenders will have the most bearing on overall growth rates. Chart 40c gives an illustration of the cumulative value of capital expenditure from the biggest spenders to the smallest in our universe. For example, the top 100 companies account for 39% of total capital expenditure and the top 500 account for over 70%.
Type of company	The selection universe includes both publically listed and private non-financial companies. It also covers both operating companies and subsidiaries. Including subsidiaries raises the risk of double-counting, as dual listings often refer to the same financial data. However, there are a significant number of large companies where the overall operating or holding company provides no financial information, with the capital expenditure recorded at the subsidiary level. There are many examples of

this in China. Consequently we have included both types of company and have taken care to exclude duplicating operations on a case-by-case basis.

Calculations

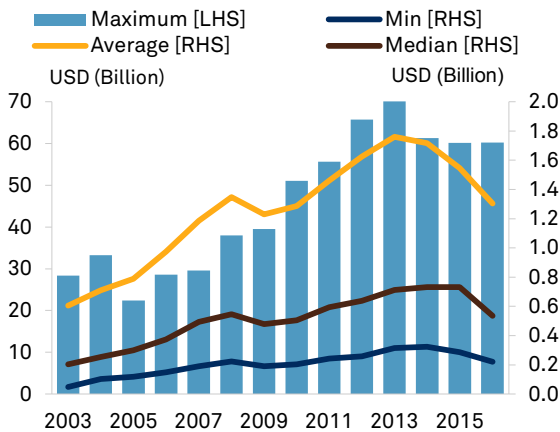
Real-terms adjustment When looking at longer-term trends, particularly including economies where relatively high inflation rates are prevalent, it is important to express values in real terms. We have done this by restating all individual corporate financial items in present-value terms using the IMF's annual inflation series for the country of incorporation. The difference this makes to annual growth rates is illustrated in chart 40d.

Forecasts Forward-looking estimates have been constructed from a combination of company guidance and the CIQ consensus. If company guidance for capital expenditure has been issued or re-iterated since March we have used that in the projection; otherwise we have used the CIQ consensus if available.

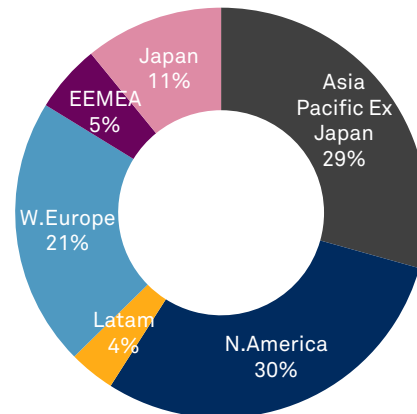
Global Capex 2000 Constituent Analysis

Chart 40

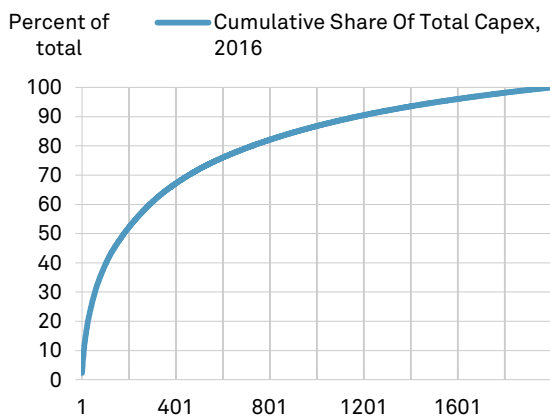
a) Maximum, minimum and median capex by year,



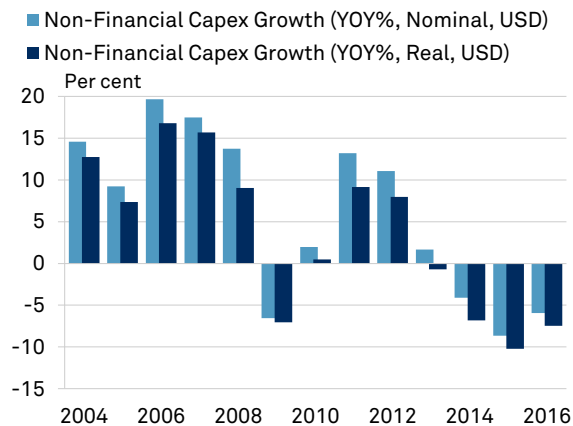
b) Share of constituents by region in 2016 (count)



c) Cumulative share of total capex of constituent companies



d) Real and nominal global non-fin. corporate capex growth



Source: S&P Global Market Intelligence, S&P Global Ratings. Universe is Global Capex 2000

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