Industry Top Trends 2017

Technology

Overview

- **Ratings Outlook:** Rating trends remain mostly stable for the global technology sector, with a slight negative bias primarily due to operating weakness at certain legacy technology companies and, to a lesser degree, due to higher financial leverage incurred by some companies to fund acquisitions and shareholder returns.

- **Forecasts:**

  **Cloud winners and losers** - we view companies positioned to achieve operating growth in cloud solutions favorably compared with those who remain weighted in legacy, on-premise offerings. We expect revenue growth for those companies serving cloud service providers directly or indirectly, including Google, Intel, Microsoft, and SAP.

  **Hardware revenue declines:** We expect traditional technology hardware providers overall will continue to experience low-single-digit percentage revenue declines in 2017, even as spending grows in the low-single digits for the overall technology sector, driven by mid-single-digit PC unit declines, flat performance in enterprise markets, and only flat to low-single-digit smartphone unit growth. We see flash storage hardware and semiconductor equipment manufacturers able to capitalize on 3-D NAND (a type of semiconductor memory architecture) flash storage and cyclical growth from IBM mainframe hardware and software revenues as areas of growth within the broader hardware decline.

- **Assumptions:** **M&A for scale and diversification continues** - we expect firms will continue to prioritize acquisition spending over combined shareholder returns in 2017 as they reshuffle product portfolios to capture growth opportunities. We also expect semiconductor industry consolidation will continue, albeit at an abated pace compared to 2016, supported by a quest by certain companies to achieve scale efficiencies and to reduce exposure to the set of smartphone original equipment manufacturers.

- **Industry Trends:** **Tax policy uncertainty** - the 2016 presidential election has raised expectations of tax relief for firms with significant overseas cash holdings, including Apple, Microsoft, Cisco, Google, and Oracle, amongst others. We generally do not expect major rating actions under scenarios of repatriation tax reform, as we expect that firms with large overseas cash balances will likely continue to manage to conservative financial policy although surplus cash cushions may potentially decline over time.
Ratings trends and outlook

Global Technology

Chart 1 – Ratings distribution

Chart 2 – Ratings distribution by region

Chart 3 – Ratings outlooks

Chart 4 – Ratings outlooks by region

Chart 5 – Ratings outlook net bias

Chart 6 – Ratings net outlook bias by region

Source: S&P Global Ratings. Ratings data measured quarterly with last shown quarter ending December 31, 2016
Industry forecasts

Global Technology

Chart 7 – Revenue growth (local currency)

Chart 8 – EBITDA margin (adjusted)

Chart 9 – Debt / EBITDA (adjusted)

Chart 10 – FFO / debt (adjusted)

Source: S&P Global Ratings. Revenue growth shows local currency growth weighted by prior-year common-currency revenue-share. All other figures are converted into U.S. Dollars using historic exchange rates. Forecasts are converted at the last financial year-end spot rate.
### Key assumptions

#### Technology

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<td><strong>1</strong></td>
<td><strong>Cloud transition involves winners and losers</strong></td>
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<td>A rapidly increasing share of corporate IT workloads moving to public and private cloud architecture will continue to support growth for technology providers well-positioned to participate in this transition at the expense of firms that remain tied to legacy architectures and delivery channels. We expect software-defined architectures will continue to pressure hardware sales and software delivered as a service (SaaS) models will prevail over legacy consumer and enterprise software licenses. Mobility and big data consumption should continue to support cloud service provider sales, storage capacity, and wireless industry sales growth. This technology evolution will continue to pressure legacy businesses weighted in on-premise hardware, traditional printing, perpetual licensing, and mailing equipment markets.</td>
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<td><strong>2</strong></td>
<td><strong>Hardware remains weak</strong></td>
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<td>We expect traditional technology hardware providers overall will continue to experience low-single-digit percentage revenue declines in 2017, even as spending grows in the low-single digits for the overall technology sector, driven by mid-single-digit percentage PC unit secular declines, flat performance in enterprise markets due to cloud workload migration, and smartphone market maturity leading to only flat to low-single-digit smartphone unit growth. However, we see flash storage hardware, semiconductor equipment manufacturers able to capitalize on increasingly difficult process node migration, and cyclical growth from IBM mainframe hardware and software revenues as areas of growth within the broader hardware decline.</td>
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<td><strong>3</strong></td>
<td><strong>Semiconductor sales will grow, primarily from memory</strong></td>
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<td>We expect temporarily constrained memory semiconductor capacity, growing NAND content in computing hardware, and more rational capacity management will result in memory and overall low-single-digit semiconductor sector revenue growth in 2017.</td>
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**Cloud transition involves winners and losers**

Our outlook for 2017 incorporates the accelerating migration of corporate IT spending to cloud environments amid an overall muted level of enterprise hardware demand. While we forecast the global tech sector to grow in the low-single digits in 2017, we expect firms with convincing cloud infrastructure offerings such as Microsoft and Google to outperform tech sector peers whose product and service businesses weighted in traditional on-premise IT architecture. Although the shift to a ratable revenue model may temporarily depress revenues at some software firms, we believe that over the longer term, an increasingly subscription-based software industry will support sector operating growth and creditworthiness. We expect the migration from hardware to software architectures will result in mid-single-digit revenue growth for the software sector overall in 2017.

**Hardware remains weak**

We expect server and legacy storage hardware will continue to decline in 2017 as enterprise customers pull back on premise investment. Networking equipment revenues will likely be flat to slightly down again in 2017, including our expectation for low-single-digit revenues declines at Ericsson and Nokia, as telecom carriers continue to temporarily slow capital expenditures following 4G network spending and as Asian competition remains heady, particularly in European and emerging markets. We see some near-term growth in optical networking and TVs on the adoption of OLED panels. Given industry maturity, we expect low-single-digit revenue growth for the smartphone hardware sector and mid-single-digit revenue decline in the PC sector will continue in 2017.

We expect smartphone unit sales to be up in the low-single digits in 2017. We believe that this market is reaching saturation, however, and that mobile will not return as a major growth area for global hardware players, although smaller firms may be able to grow through regional expansion. We do see a bright spot in optical networking as the Chinese government expands spending on urban connectivity and hyperscale players increasingly deploy fiber in the datacenter.
We expect the substitution of hard-disk-drive (HDD) storage with solid-state drive flash memory and secular PC market declines will continue to pressure HDD sales and result in further moderation of share buybacks at Seagate during 2017. The ongoing decline in printer use will likely continue to keep the pressure on industry participants, including Xerox, to increase investments within subsectors that exhibit growth potential, including the A4-sized format, and will limit share repurchase spending. Legacy mailing equipment and solutions providers, including Pitney Bowes, should continue to experience mid-single-digit percentage revenue declines in 2017. The key factors for ‘BBB’-rated legacy hardware companies, including Pitney Bowes, Seagate, and Xerox, potentially crossing to high yield during 2017 include whether they can restore organic growth while maintaining a conservative financial policy.

Despite PC and enterprise computing market weakness, we expect Dell Technologies’ revenues will grow in the low-single-digit percentage area over the next 12 months, supported by cloud provider customer demand. We also expect Dell will reduce its debt-to-EBITDA ratio to the low- to mid-3x area by fiscal year ending Jan. 31, 2018, from leverage in the mid- to high-3x area in 2017. To consider Dell for an upgrade, we would look for its organic operational growth and repayment of debt to continue, such that leverage declines and remains below the 3x level, and commitment to a financial policy minimizing the potential for leverage to sustain above 3x.

Weak on-premise enterprise hardware spending also continues to pressure distribution sector operating growth. Distributor Tech Data Corp. announced plans to acquire Avnet Inc.’s enterprise computing distribution business for $2.6 billion in September 2016. We expect this deal to improve Tech Data’s client, product, and geographic revenue diversification. Notwithstanding these favorable impacts, if business competition intensifies or end-market conditions remain weak such that its debt-to-EBITDA ratio remains in excess of 3x, Tech Data’s investment-grade rating could be in jeopardy.

**Semiconductor sales will grow, primarily from memory**

Our outlook for the semiconductor industry broadly aligns with our views for the hardware sector, with slowing PC and server sales depressing demand across the sector, although firms with strong flash storage, optical networking, and automotive offerings are likely to outperform peers, in our view. We expect semiconductor memory sector revenue growth, as improving DRAM pricing and growing NAND demand support significant prospects for top line growth at these firms, including Micron and SK Hynix.

HDD and NAND semiconductor provider Western Digital Corp. is less likely to be upgraded before 2018 due to the sizable debt it incurred to fund its May 2016 acquisition of NAND semiconductor provider SanDisk Corp. We expect its leverage will continue to exceed our 2x trigger for rating upgrade consideration in 2017. The stable rating outlook reflects our expectation that SanDisk’s NAND flash memory technologies will enable Western Digital to successfully navigate the threat to its HDD business from SSD substitution.

We expect IT services firms with professional services personnel supporting the cloud transition, such as Accenture, to outgrow competitors whose businesses are more weighted in traditional technology outsourcing. We expect low-single-digit growth for the services subsector overall in 2017.
Key risks and opportunities

Technology

**Leveraging acquisitions remain likely**

We expect firms will continue to prioritize acquisition spending over combined shareholder returns in 2017 as they reshuffle product portfolios to capture growth opportunities, with ongoing weak organic growth environment in mature sectors of the technology industry. Beyond 2017, the merger and acquisition (M&A) growth trajectory may slow for technology companies able to establish solid competitive footing in IoT, software defined solutions, and cloud driven professional services. We expect the development and commercial adoption of 5G wireless communication technology, likely subsequent to 2018, will also bolster overall technology sector operating growth. For 2016 and 2017, however, and as long as capital market conditions are supportive and legacy business pressures persist, M&A will likely remain the global technology sector’s leading route for capital deployment. We also expect semiconductor industry consolidation will continue, albeit at an abated pace compared to 2016, supported by a quest by certain companies to achieve scale efficiencies and to reduce exposure to a concentrated set of smartphone OEMs.

In all technology sectors except software, median shareholder returns from share repurchases and dividends have declined as a percentage of free cash flow since 2015, and dividends remain a modest use of free cash flow. We expect tech companies will generally maintain the resources and debt capacity to pursue M&A and other capital deployment choices in 2017. Although we expect public companies rated below ‘BB-’ to prioritize free cash flow toward debt repayment in 2017, we expect private equity-owned firms will continue to engage in dividend recapitalizations and re-leveraging so long as debt markets tolerate such activity.

**Shifting regulatory landscape**

Two potential policy changes that may be catalyzed by the Trump Administration—tax relief for foreign cash repatriation and greater trade barriers—could significantly affect the technology industry, although the impact on ratings is uncertain. We generally do not expect major rating actions under scenarios of repatriation tax reform, as we expect that firms with large overseas cash balances will likely continue to manage to conservative financial policy, although surplus cash cushions may potentially decline over time.

**The internet of things may revitalize hardware**

In spite of significant publicity, the proliferation of internet connected “things,” the so-called Internet of Things (IoT), ranging from wearable tech to smart appliances, currently represents a very small share of industry spending. If this sector continues to grow, however, it could revitalize overall tech sector growth beyond 2017.

**Leveraging acquisitions remain likely**

A significant number of large, leveraged acquisitions have occurred over the past several years in both investment grade and speculative grade technology sectors. We expect this trend to continue through 2017, as the major catalysts for consolidation, accommodative credit markets, and slow organic revenue growth in many subsectors are likely to persist, and we expect management teams will look to acquisitions to grow earnings. While not every such acquisition led to a negative rating action in 2016, technology industry leverage is at the highest level we have seen since 2013 and we may see more firms trip over our financial downgrade triggers over the next year.

To achieve growth, we expect hardware companies will generally remain active acquirers, particularly of software companies, while continuing to moderate share repurchases. That’s at least partly a result of the ongoing proliferation of software-based services, including server virtualization and software-defined networking, and the rapid growth of hyperscale cloud services, including Amazon Web Services and Microsoft Corp.’s Azure. These developments will continue to constrain top-line performance of hardware OEMs. Semiconductor sector M&A activity increased in 2016 as organic growth tied to hardware product sales has slowed and potential new growth opportunities, especially IoT technologies, attract spending. In addition, some semiconductor companies have diversified their businesses away from wireless device vendors, notably Apple and Samsung, through M&A. For tech services companies, recurring service fee revenues constitute a majority of their revenues, supporting
their ability to increase leverage, including for M&A. When we consider the deleveraging plans some services firms have, the opportunities for further sector consolidation globally, and the maturity of some services industries (including traditional data center outsourcing), we expect services firms will keep prioritizing M&A and debt repayment above share repurchases and dividend spending in 2016 and 2017.

Beyond 2017, the M&A growth trajectory may slow for technology companies able to establish solid competitive footing in IOT, software defined solutions, and cloud driven professional services. We expect the development and commercial adoption of 5G wireless communication technology, likely subsequent to 2018, will also bolster overall technology sector operating growth. For 2017, however, and as long as capital market conditions are supportive and legacy business pressures persist, M&A will likely remain the global technology sector’s leading route for capital deployment.

**Shifting regulatory landscape**

Although the ultimate form of any legal or regulatory changes caused by the recent U.S. election are unknown at this point, two campaign priorities of the Trump Administration—tax policy and trade—could have a significant impact on the technology industry. Tax relief for repatriation of foreign earnings would have a major impact on several large technology firms with significant overseas cash balances, although we currently do not expect these companies will revise their financial policy aggressively enough to trigger a rating downgrade. As these surplus cash balances play a large role in our leverage calculations, repatriation of cash could nonetheless weaken credit standing to the extent that it is used to repurchase shares or pay dividends.

The impact on the technology industry of changes to trade policy are more ambiguous, however we note that many services firms rely heavily on the H1-B visa program, and could be negatively impacted by any legal effort to limit outsourcing corporate activities to offshore providers. Additionally, very few firms that we rate conduct much domestic manufacturing, and we believe that it would be difficult for the sector to rapidly shift away from reliance on largely Asian-outsourced manufacturing firms such as Hon Hai or TSMC.

**The internet of things may revitalize hardware**

The recent rapid growth of internet connected wearable devices and increasing penetration of silicon into household appliances and medical devices has attracted significant media attention recently. While we believe that IOT may be a potential source of future growth for a hardware sector that has been weakened by declining PC and server sales, the current impact on revenues and ratings from IOT is limited by the relatively small scope of this field.

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Cash, debt and returns

Global Technology

Chart 11 – Cash and equivalents / total assets

Chart 12 – Total debt / total assets

Chart 13 – Fixed versus variable rate exposure

Chart 14 – Long term debt term structure

Chart 15 – Cash flow and primary uses

Chart 16 – Return on capital employed

Source: S&P Global Market Intelligence, S&P Global Ratings calculations