martinwolf

IT INDEX

A Proprietary Analysis of Market Value for Key Segments in Information Technology

September 2017

Overview

The ***martin**wolf* IT Index is a proprietary analysis of selected securities of global IT companies, with separate indices for IT Services companies in India and China. The securities are weighted according to the market value of their outstanding shares.

Individual indices are composed of companies determined by the ***martin**wolf* staff to be representatives of their space, and are evaluated on a regular basis to ensure ongoing accuracy.

The ***martin**wolf* IT Index is tracked on a 5-year basis and is accompanied by commentary on the latest industry news and trends. ***(See Page 8 for the formula used to calculate the martinwolf IT Index)***

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***martin**wolf* IT Index September 2017 Analysis:

Overview

As expectations of the Trump administration's fiscal stimulus and pro-business tax reform plans faded well into 2017, the dollar, which soared after the election, saw a nearly 8% decline since the beginning of the year. Yet, despite a lack of policy progress and a tense political climate in Washington, the U.S. economy picked up momentum during the second quarter as GDP hit the 3% mark for the first time in more than two years.

Increasing business investments and robust spending have contributed to an economic expansion that is now the third longest in U.S. history: fixed nonresidential investment rose at a 6.9% rate, while consumer spending, which makes up more than two-thirds of the economy, grew rapidly at a 3.3% rate—the fastest in a year.

While corporate adjusted pretax profits fell at a 0.5% quarterly rate in the second quarter, the rate rose 6.7% over the past year. In the face of persistently soft inflation, the Fed has been moving away from its 2% annual target in the second quarter—and as growth estimates for the third quarter hover around 3.4%, policymakers have been deliberating the delay of an anticipated December rate hike for the sustenance of the economy.

Meanwhile, the Labor Department reported that U.S worker productivity was stronger than anticipated; in what was the strongest performance in two years, productivity increased at a 1.3% rate compared to the second quarter of 2016.

The unparalleled rise in the tech market has led to a rapidly changing environment across the globe.

As the U.S. economy picked up traction as a whole, the tech market sustained its rapid progress to break new records. On July 19, the S&P 500's Tech Sector index hit a new lifetime high of 993.39, topping the intraday high of 993.30 back on March 27, 2000—right in the peak of the dot-com and Y2K tech stocks bubble. With a 22.8% advance, the S&P 500 tech sector has been the best-performing sector this year. On the same day, the Dow, S&P, and Nasdaq set record closing highs—the Dow Jones Industrial Average rose 66.02 points, or 0.31%, to 21,640.75, the S&P 500 rose 13.22 points, or 0.54%, to 2,473.83 and the Nasdaq Composite added 40.74 points, or 0.64%, to 6,385.04.

The strong performance continued well into August as the S&P 500 index and the Dow Jones Industrial Average booked their fifth straight monthly gain in a row. Dow posted its eighth straight record close on August 4, hitting an all-time high of 66.71 points at 22,092.81. Later in the month, on August 31, the Nasdaq index logged another all-time high, closing up 1% at 6,428.66, largely due to the biotech sector.

As a whole, the FAANG stocks have been on a roll. All FAANG stocks rose in the second quarter as these industry titans captured greater market share in their respective sectors. Facebook had its ninth straight quarterly revenue beat, with revenue rising 45% to $9.32 billion from $6.42 billion in the same period a year earlier. Apple also delivered an earnings win for its fiscal third quarter, achieving a $45.4 billion revenue over a $44.89 billion expectation. The company also hit a major goal, selling 41 million iPhones during the quarter to surpass 1.2 billion total iPhones sold, resulting in the stock climbing more than 6% to reach a market capitalization of over $830 billion.

While Amazon missed earnings estimates for the second quarter due to higher growth initiatives—reporting a 40-cent per share profit as opposed to estimates of $1.39—the company has invested in cutting prices for AWS, the market leader in public cloud, and thereby sustained its position as one of the best-performing large-cap stocks in the market with a growth of 40% YTD by the end of the quarter.

The rest of the FAANG stocks have been performing well. Netflix posted record growth in the quarter, posting $2.79 billion in revenue, as opposed to $2.76 billion estimates. While Alphabet's net income of $3.5 billion was down from the $4.9 billion in the same period a year ago, the report included the impact of the EU's $2.7 billion fine—and total revenue amounted to $26 billion, up from the $21.5 billion in the same period a year ago.

The unparalleled rise in the tech market has led to a rapidly changing environment and increasing competition across the globe. Samsung Electronics achieved a milestone this quarter when it overtook Intel as

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the world's largest chipmaker, a title Intel held for nearly a quarter century. As Samsung rapidly gained market share in the memory business, a unit it invested heavily in early on, Samsung's semiconductor unit delivered second-quarter sales of $15.7 billion and operating profit of $7.1 billion, while Intel reported quarterly revenue of $14.8 billion and operating profit of $3.8 billion.

The demand for these emerging markets has simultaneously led to a decline in traditionally strong players. For Cisco's most recent fiscal earnings, total revenue was $12.1 billion, down 4%, with product revenue down 5% and service revenue up 1%. The weakening sales of the networking hardware giant not only indicates that it needs to plan ahead of competitors like Huawei, but also demonstrates the crystallizing shift to subscription software and services. In order to remain competitive, the company must find a way to secure its core business while quickening its transition into the more profitable software business—and it has looked to M&A to gain that edge. The company closed the acquisitions of AI startup MindMeld for $125 million in May and software-defined, wide-area networking (SD-WAN) technology developer Viptela for $610 million in August.

More and more companies are catching on to the permanence of the shift, especially in the solution provider space. Solution provider Perficient bought Chicago-based software consultancy Clarity in June to invest more in its custom app and cloud development capabilities. The shift to cloud has impacted telecom as well; Windstream completed its $227.5 million acquisition of Broadview Networks in late July to expand unified communications (UC) capabilities, and in May, Apollo bought West Corporation for an enterprise value of roughly $5.1 billion—again, largely due to the UC and telecom practices.

While big acquisitions from the likes of Apollo, Cisco and HPE have made their splash earlier in the quarter, tech M&A has cooled down compared to years prior. In recent months, M&A has dwindled down worldwide. In total, tech acquirers have spent just less than $200 billion so far this year, whereas in 2016 and 2015, spending on M&A transactions had surpassed $300 billion—setting 2017 on track to see the lowest level of M&A spending in four years. The spending level for August was the lowest total for the month of August since 2013, and the value of deals in August came in slightly below the average monthly spending so far this year.

Put into context, the slump in deal value could be attributed to an unpredictable M&A landscape and the lack of strategic spending by the industry's traditional big-name acquirers, like IBM, which saw another revenue miss for its 21st straight quarter. On the other hand, as private equity firms have been seeing large returns on their investments, M&A activity has been robust. PE firms announced 77

The IT Services segment experienced continued consolidation in the face of ongoing demand.

deals in August, an average of almost four each business day—which would bring the total number of PE transactions announced this year to 600, well on its way to an increase of 30% compared to last year's totals.

IT Services & BPO

The ***martin****wolf* US IT Services Index grew 15.36% YTD, reflecting both ongoing economic strength and a steadily expanding demand in the IT space. Gartner forecasts of IT services spending to reach $3.5 trillion for the year worldwide—growing at a rate of 2.3%.

As a result of this growth, the segment has experienced ongoing consolidation. Private equity firm Blackstone purchased UK professional services firm Aon for $4.3 billion in May, a few days following its purchase of cloud computing firm Cloudreach. Other significant transactions include Synnex's $600 million purchase of global distributor Westcon Group, which closed in September, and GP Investment's $638 million definitive merger with third party software services firm Rimini Street in May.

After the $8.5 billion deal in April, when HPE split off its enterprise services business and merged it with CSC to create DXC, both DXC and HPE have been adjusting well. DXC Technology shares grew 23.87% since it was listed in March. HPE, after closing the $8.8 billion merger of its software business with Micro Focus International on September 1, saw shares spike up 5% on September 5 after it reported better-than-expected earnings for the third quarter of its 2017 fiscal year: revenue was at $8.21 billion, beating the $7.49 billion as expected by analysts.

In the Commercial IT Professional Services space, more firms have been focusing on expanding their technological portfolios. Accenture expanded its technology capabilities with multiple small acquisitions this year, contributing to its 18.21% growth in the year. On the other hand, Unisys saw its shares drop soon after its recent earnings report of revenue down 11% year-over-year, due to weakness in its Technology segment. Shares have decreased 17.63% in the last year.

In particular, services companies have continued to develop more nuanced cloud capabilities. DXC Technology announced its acquisition of Tribridge, one of the largest independent Microsoft Dynamics 365 integrators, along with Concerto Cloud Services, Tribridge's affiliate company. Tribridge launched Concerto Cloud Services in 2014 as a separate business to offer premium IaaS solutions.

In the IT Supply Chain sector, there was more consolidation among smaller and more specialized players.

In the Managed Services and Infrastructure Services space, Equinix experienced stable growth, with shares rising 22.11% over the last year. Meanwhile, Level 3 Communications grew 4.83% while competitor Digital Reality Trust grew nearly 19% over the last year.

Overall, M&A activity has been picking up more momentum among companies already active in attaining scale. Only a few months after it bought Tricore Solutions, Rackspace announced on September 11 its plans to acquire competitor Datapipe as a strategic geographic and technological acquisition. Through this acquisition, the new combined company would become the largest player in the managed public and private clouds.

IT Supply Chain

The ***martin****wolf* US Supply Chain Index recorded a growth of 15.25% YTD. In the supply chain segment, IT reseller leader ePlus saw significant top-line growth, driving its share price up 67.56% over the last year. Shares of product distributor Tech Data dropped 19% in after-hours trading when it missed its quarterly profit targets and encountered difficulties unlocking rebates from large vendors. However, thanks in part to its acquisition of Avnet Technology Solutions unit, the company saw earnings and revenue growth of 22.5% and 39.8% respectively year-over-year. Share pricing has gone up 15.51% in the last year.

IT Direct Marketers CDW and Insight rose 31.78% and 26.88%, respectively. Shortly after the close of its European Technology Products Group units—excluding those in France—to private equity firm Hilco Capital in late March, Systemax saw significant growth; shares were up 189.88% over the last year.

In terms of M&A, there was more consolidation among smaller and more specialized players. In July, Enterprise Information Management and Supply Chain Business Network provider OpenText acquired Covisint Corporation, an automotive industry-focused Cloud platform providing digital connectivity of business processes and Internet of Things (IoT) enabled processes, for $75 million in enterprise value.

Additionally, global logistics software provider Descartes Systems Group acquired transportation visibility provider MacroPoint for $107 million in August, its third acquisition following the purchase of PCSTrac for approximately $11.25 million in June and its acquisition of ShipRush in May.

With regards to more specialized mergers, Source to Pay (S2P) provider JAGGAER merged with European-based POOL4TOOL, a specialized direct procurement technology provider. Later in August, CXtec, a provider of refurbished networking, communications and data center equipment, acquired Georgia-based IT hardware reseller Atlantix Global Systems.

Software and SaaS

The ***martin**wolf* US Software Index recorded the strongest growth out of the indices, with a rise of 28.3% YTD. The ***martin**wolf* US SaaS Index also recorded robust growth at 25.58% YTD, slightly outpacing the Nasdaq Composite Index, which experienced a growth of 21.64% YTD.

Software has experienced major developments in technology, though M&A dwindled down compared to the big-ticket transactions earlier in the year. However, more private equity firms have been focusing on acquiring high-value companies in the space. In June, private equity firm ESW Capital completed the acquisition of collaboration software company Jive for $462 million with the plan to integrate the company into Aurea's customer experience management platform.

More private equity firms have been focusing on acquiring high-value software companies.

In July, Extreme Networks— the number three player in the enterprise data networking market behind Cisco and HPE and is the only pure-play networking provider— closed its $100 million acquisition of Avaya. While Extreme Networks has traditionally focused on core enterprise networking technology, the Zebra acquisition gave Extreme a wireless LAN presence. Seeking to complete its end-to-end reach in a single combined platform within the next year, the Avaya acquisition would bring deployment simplicity, micro-segmentation and fabric technology with embedded security.

China and India

The ***martin**wolf* China IT Services Index declined 17.32% YTD, while the India counterpart rose 11.22%.

For the first and second quarters of the year, China's GDP rose 6.9% year-over-year, beating analysts' estimates of GDP growth of 6.8% year-over-year—this marked the fastest growth since the third quarter of 2015. In addition, China's trade balance as of July was $46.74 billion.

However, a slowdown may come for the remaining quarters, especially as the government has been shifting its focus to reduce its debt. The focus on debt reduction has carried over into a slowdown of M&A this year compared to the highs of 2015 and 2016, where cross-border deals amounted to $140 billion. As regulators began to survey the dangers that prolific acquirers--like HNA, Fosun International and Dalian Wanda—have posed to the Chinese banking system, lenders in China have been distancing themselves from providing further

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funding. According to the Wall Street Journal, President Xi Jinping signed off on a decision to bar state-owned banks from making new loans to Wanda for its overseas expansion. In addition, a few Chinese banks that helped fund HNA Group Co's global acquisition spree (including the $6 billion Ingram Micro acquisition that closed in December) have been backpedaling; three have stopped extending new loans to HNA.

Yet, after a lukewarm first quarter, Chinese outbound M&A rebounded in the second quarter with deal value increasing 148% quarter-on-quarter. According to Baker McKenzie's Cross-Border M&A Index, Chinese investors were the second most acquisitive cross-border nation by value with 94 deals totaling at $35.9 billion. The industrial sector came in at first, but the consumer and technology sectors also witnessed significant amounts of outbound investments. As a result, government stimulus, loose monetary policy, and rapid credit growth, which helped economic growth so far, could begin to vanish.

As for India, the country saw a GDP growth of 5.7% for the second quarter this year. Indian M&A registered a surge of activity, growing 23% to 15.8 billion, in the first quarter of this year compared to the same period a year ago—but the second quarter saw a slight plateau compared to the record highs of last year. Furthermore, Foreign Institutional Investors (FIIs) withdrew about $1.7 billion of funds from the Indian stock market in August.

However, more transformative M&A deals are expected to come in India, especially as private equity firms continue to navigate the markets across the globe for valuable finds. Global private equity firm KKR raised its $9.3 billion Asian fund in June, with particular interests in pharma, financial services, and tech—so markets across the Asia-Pacific region can anticipate more M&A activity in the future.

About the ***martin****wolf* IT Index

The ***martin****wolf* IT Index includes approximately 100 companies that are a composite representative sampling of enterprise values in the following categories:

1. **IT Services & Business Process Outsourcing (BPO)**
    a. 38 companies, including 16 in BPO

2. **IT Supply Chain Services**
    a. 14 companies
3. **Software**
    a. 11 companies
4. **SaaS**
    a. 32 companies

Below are category descriptions and representative companies:

1. IT SERVICES & BPO

The IT Services category includes companies that provide a range of IT services such as application development, application management, data center operations, testing or quality assurance to organizations on an outsourced basis. Some IT Services companies provide horizontal services to organizations in any industries, while others deliver services by specialized by function or industry. The Business Process Outsourcing (BPO) subcategory includes companies providing both voice (call center) and non-voice based services that are considered "non-core" to an organization’s primary business strategy.

IT Services subcategories and representative companies are:

- **Managed Infrastructure Services:** Digital Realty Trust Inc.
- **Commercial IT Professional Services:** Accenture, Unisys
- **IT Staff Augmentation:** Computer Task Group Inc., ManpowerGroup Inc.
- **Governmental IT Professional Services:** MAXIMUS, Inc., ManTech International corporation
- **Business Process Outsourcing – Voice:** Convergys Corp., Harte-Hanks, Inc.
- **Business Process Outsourcing – Non-Voice:** Automatic Data Processing, Inc.

2. IT SUPPLY CHAIN SERVICES

The IT Supply Chain Services category includes companies providing one or more services that are directly linked to the flow of products, services, finances and information from a source to a customer.

IT Supply Chain Services subcategories and representative companies are:

- **IT Solution Providers:** PC Connection, Systemax Inc.

- **IT Product Distributors:** Arrow Electronics, Ingram Micro

3. SOFTWARE

The Software category includes companies involved in the development, marketing, sale and maintenance of computer software using various distribution models.

Software subcategories and representative companies are:

- **Enterprise Applications:** Microsoft, SAP
- **IT Management Software:** Check Point Software Technologies, Symantec
- **Business Software:** Adobe

4. SAAS

The Software as a Service (SaaS) category is broken out for further analysis. Software as a Service includes companies delivering software of all types only through an on-demand distribution model in which software and its associated data are hosted centrally by a third party, typically in the cloud and accessed by customers using a web browser over the Internet.

Representative SaaS companies are:

- Salesforce.com
- Workday

martin*wolf* IT Index *(India Edition)*

The ***martin****wolf* IT Index *(India Edition)* includes 38 IT Services and Business Processing Outsourcing (BPO) companies traded in the U.S. (NYSE and NASDAQ) and Indian (BSE) stock markets that are a composite representative sampling of enterprise values.

Representative companies are:

- Cognizant
- HCL Technologies
- Infosys
- Tata Consultancy Services
- Wipro

martin*wolf* IT Index *(China Edition)*

The ***martin****wolf* IT Index (*China Edition)* includes 23 IT Services and Business Processing Outsourcing (BPO) companies traded in the U.S. (NYSE, NASDAQ, and OTC), London (LSE AIM), Chinese

(SZSE, SHSE, SEHK) or Taiwanese (TSEC) stock markets that are a composite representative sampling of enterprise values.

Representative companies are:

- Chinasoft International
- Beyondsoft Corporation
- Hundsun Technologies, Inc.

Description and Formula

The ***martin****wolf* IT Index is a market-value-weighted index. The representation of each security in the index is proportional to its last sales price times the total number of shares outstanding, relative to the total market value of the respective index.

The formula used to determine the index value is as follows:

$$\textbf{Index Level} = \frac{\textbf{Current Market Value}}{\textbf{Adjusted Base Period Market Value}} \times \textbf{Base Value}$$

$$\textbf{Adjusted Period Market Value} = \frac{\textbf{Current Market Value After Adjustments}}{\textbf{Current Market Value}} \times \textbf{Previous Base Period Market Value Before Adjustments}$$

Adjustments for securities being added to or deleted from the index, or capitalization changes, are made periodically. Stock splits and stock dividends are likewise adjusted for during the process. In the case of cash dividends, no adjustment is made.

About ***martin****wolf*

martin*wolf* is the world's leading middle market IT M&A advisory. With offices in the San Francisco Bay Area and New York, ***martin****wolf* is focused on companies in the IT Services, IT Supply Chain, IT-Enabled Business Process Outsourcing and Software as a Service (SaaS) space. Since 1997, our team has completed more than 140 transactions in nineteen countries and sold seven divisions of Fortune 500 companies.

Member FINRA, SIPC.

For more information, visit http://www.martinwolf.com.

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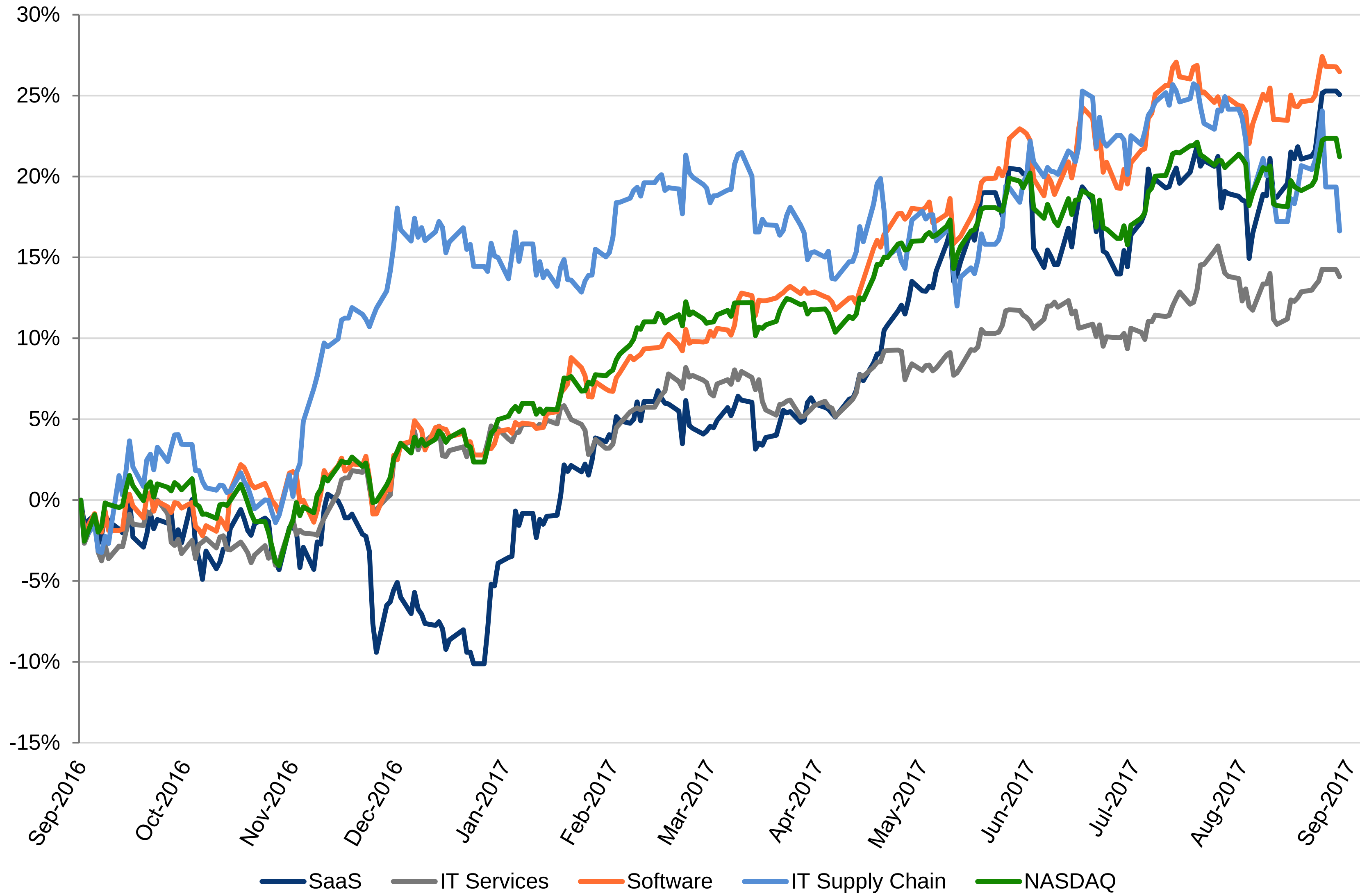

Source: Capital IQ

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Last 5 Years

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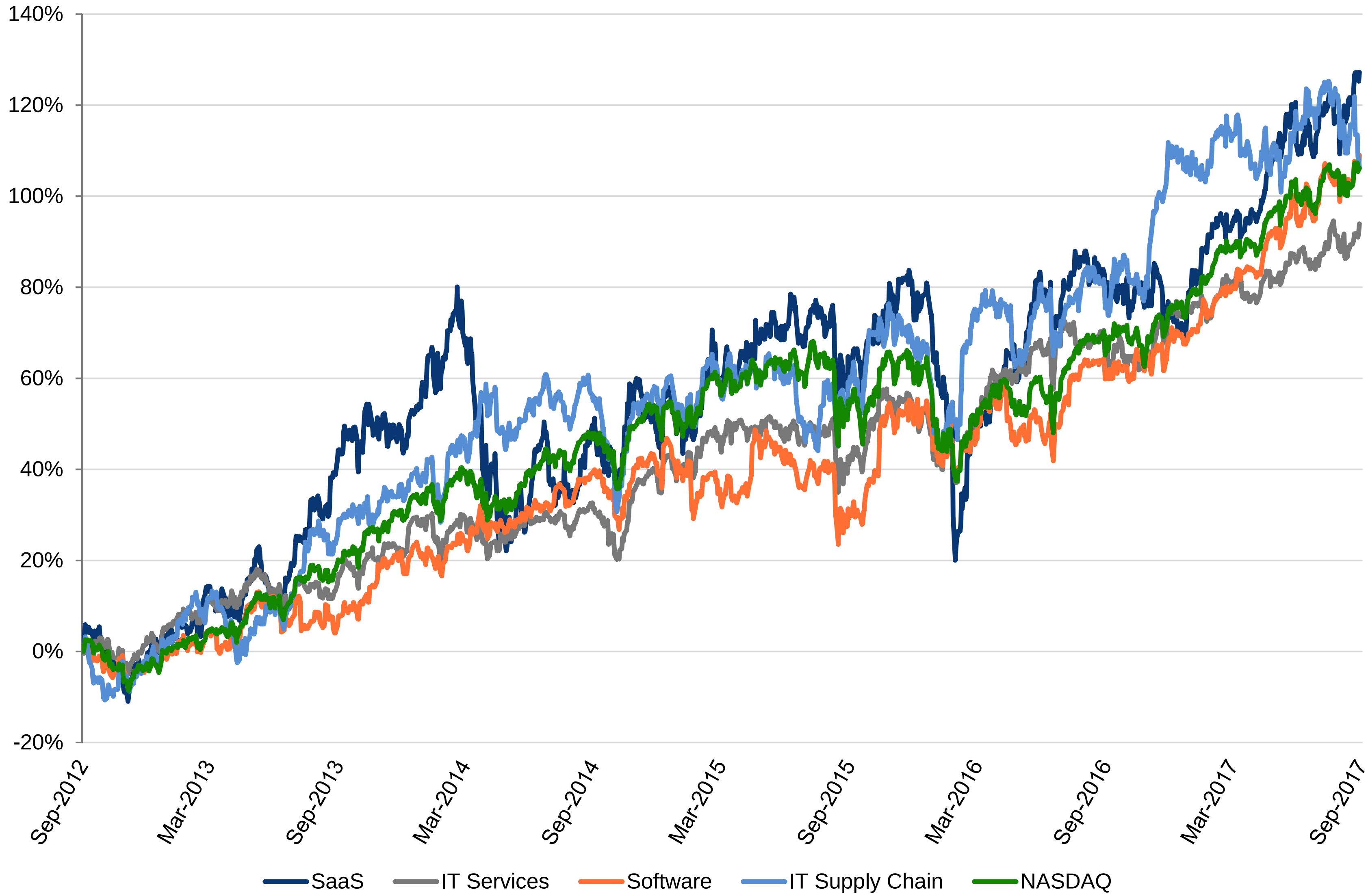

Source: Capital IQ

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LTM

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