22 September 2016 | Equity Solutions

Thematic Report

Robotics & Artificial Intelligence

Redefining Human Capabilities

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BUILDING TEAM SPIRIT TOGETHER

SOCIETE GENERALE
Private Banking

Data as of the 22th September 2016
6 p.m. (UT+2)

Executive Summary

The use of robots has historically been concentrated in highly labour-intensive manufacturing industries like, automotives, electrical equipment, machinery, technology hardware to automate repetitive tasks.

We believe the steady improvements in cost, performance and functionality of robotics systems should drive their wider adoption by small and midsized firms along with mega-corporations.

In addition to industrial robots, professional and personal service robots that perform useful non-industrial tasks like surveillance, medical surgery and domestic chores are expected to gross over USD 19.6 bn in sales in 2015-18, according to the International Federation of Robotics.

Growth will be driven by an increase in demand from urban households for domestic cleaning, home security, elderly assistance and growing need for professional service robots in defense, agriculture, logistics and healthcare sectors.

Robotics is a key catalyst in the ongoing fourth industrial revolution or Industry 4.0. Robots are proving better than humans at precision and speed. Going ahead we expect more cognitive and networked robots which can be easily adapted to job requirements.

Robotics market is expected to get transformed in the coming three-four years with enhancement in technologies like artificial intelligence, voice and speech recognition and tactile sensors. These technological advancements should lead to the growing adoption of new categories of robots like **collaborative robots** which can safely work alongside humans and perform a wide array of tasks like precision welding and warehouse handling. **Further, with advances in artificial intelligence, more intelligent robots can be developed that will be able to take decisions based on data analysis** and would learn from the results of those decisions.

We expect the automotive, aerospace & defence, healthcare and financial services sectors to be the key drivers of the robotics revolution over the next decade.

This report presents our analysis on such technologies along with our preferred stocks for these themes. We have selected 9 stocks that are poised to benefit from the robotics and artificial intelligence revolution.

Focus Stocks:

ABB Ltd (SW)

Alphabet Inc (US)

Amazon.com Inc (US)

Dürr AG (DE)

Facebook Inc (US)

General Electric Co (US)

Rockwell Automation Inc (US)

Schneider Electric SE (FR)

Siemens AG (DE)

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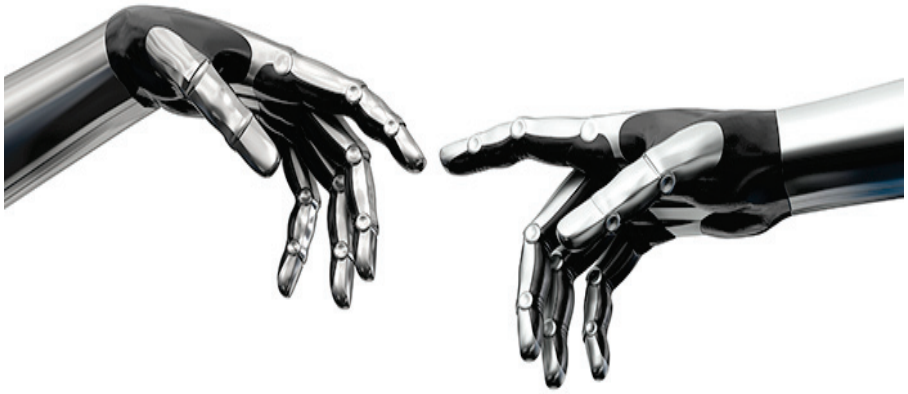
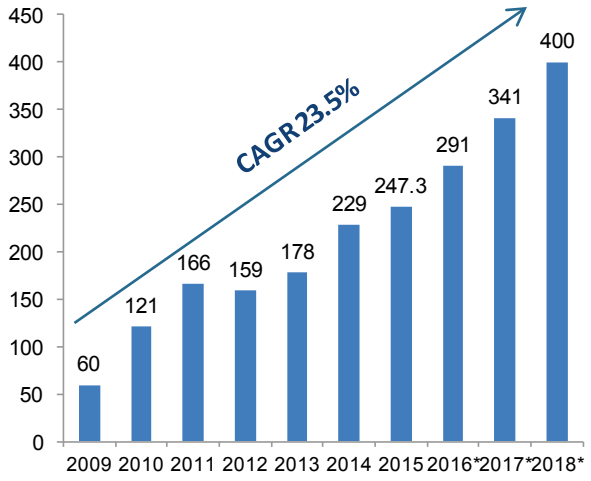
Content



I – Emergence of the robotic industry

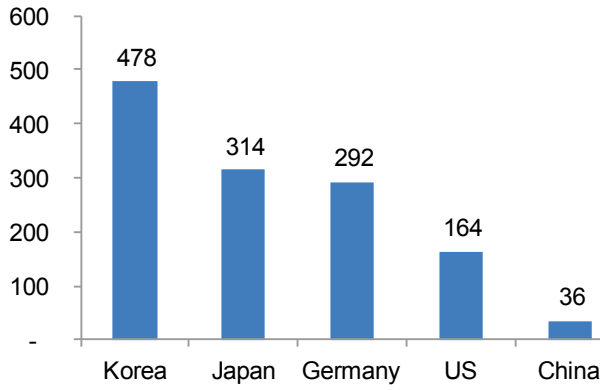
1.1 Industrial Robots

Figure 1: Annual Supply of Industrial Robots (Units in '000)



Sources: SGPB, International Federation of Robotics
**Forecast*

Figure 2: Industrial Robot Density (Per 10,000 employees)



Sources: SGPB, International Federation of Robotics

Industrial Robots

The term 'robotics' was first coined by Russian-born American science-fiction writer Isaac Asimov in 1942 in one of his short stories, portraying robots as helpful servants of man. The earliest and the most prominent use of robots have been done by the manufacturing industry to automate repetitive tasks. The modern day industrial robots with mechanical arms that can be programmed to perform repetitive jobs like painting, welding, assembling, picking-up and placing objects in factories, was popularised by Joseph Engleberger in the 1960s.

Market Overview

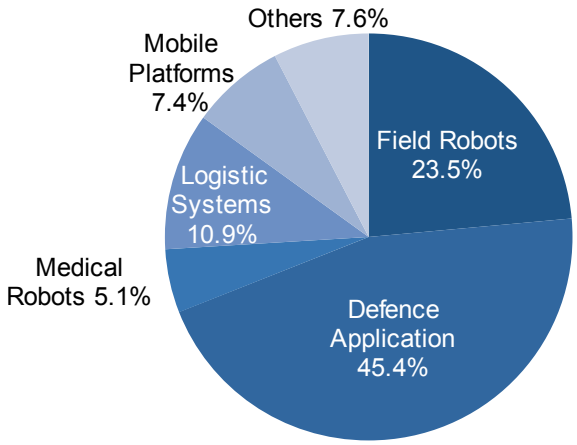
Sales of industrial robots increased by 12% to over ~248,000 units in 2015. In value terms, the global robotics market reached USD 32 bn in 2014 (including software, peripherals and system engineering) as per the International Federation of Robotics (IFR). There were ~1.5 mn operational industrial robots at FY14-end, with the highest operational stock in Japan (>290,000). The IFR expects the global stock of operational robots to grow at a 2014-18E CAGR of 11.9% to 2.33 mn. Sales are concentrated in five countries: China, Japan, the US, the Republic of Korea and Germany together accounted for 75% of total sales in 2015. China is the major demand driver and accounted for 27% of global sales. In 2014, South Korea had the highest robotic density at 478, followed by Japan (314) and Germany (292).

The major market players are ABB, Yaskawa Electric, Fanuc Corp and Kuka. Yaskawa has an edge over local Chinese companies (mainly Siasun Robot & Automation) in terms of robotic systems and product quality. With its strong exposure at 21% in China, Yaskawa should benefit from strong demand in the country. We also expect increasing automation to boost demand in North America and Western Europe. The Chinese government is supporting higher robot adoption through tax breaks and subsidies. Moreover, China offers a highly underpenetrated industrial robotics market with 36 robots per 10,000 employees, much below the average global robotic density of 66.

I – Emergence of the robotic industry

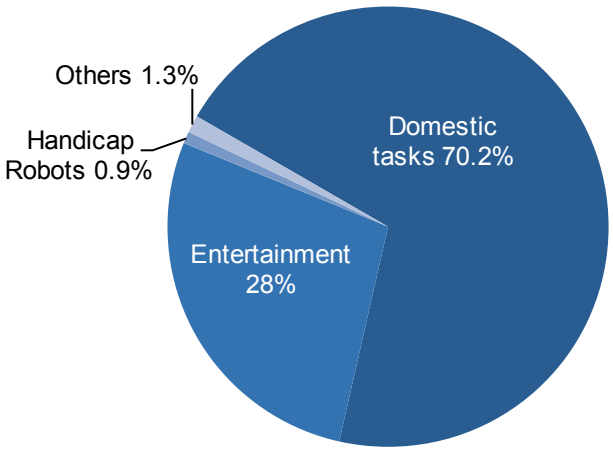
1.2 Service Robots

Figure 3: Professional Service Robots: Breakdown by end-market (based on units sold)



Sources: SGPB, International Federation of Robotics

Figure 4: Personal Service Robots: Breakdown by end-market



Sources: SGPB, International Federation of Robotics

Service Robots

Service robots are defined as robots that perform useful tasks for humans or equipment excluding industrial automation applications. They can be further classified into:

- *Professional service robots:* These are used for commercial tasks and usually need a trained operator. They perform tasks like defence surveillance, medical surgery, office delivery, fire-fighting, and cleaning of public places.

- *Personal service robots:* These are used for non-commercial applications like domestic chores, lawn-mowing, and personal mobility assistance.

Market overview

According to the IFR, sales of professional service robots rose by 11.5% to 24,207 units in 2014. In value terms, it increased by 3% to USD 3.77 bn. IFR estimates that ~172,000 professional service robots have been sold since 1998.

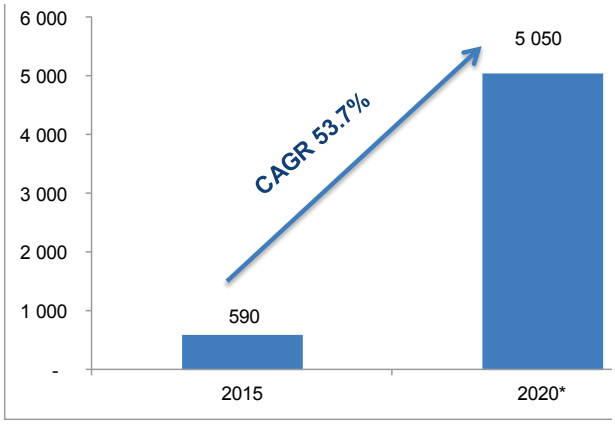
Defence robots (unmanned aerial vehicles, unmanned ground vehicles and demining robots) accounted for over 45% of the total sales, followed by field robots like milking and livestock robots (mobile barn cleaners, automated grazing controllers) which accounted for ~24% of total sales. Medical robots are expected to be the fastest growing sub-segment driving future growth. Personal service robots increased at a faster pace, up 28% YoY to 4.7 mn units. Robots for domestic tasks like cleaning accounted for 70.2% of total units sold, while home entertainment robots accounted for ~28%.

IFR expects overall service robot sales to gross USD 19.6 bn in 2015-18. Growth will be driven by an increase in demand from urban households for domestic cleaning, home security, elderly assistance and growing need for professional service robots in defense, agriculture, logistics and healthcare sectors.

I – Emergence of the robotic industry

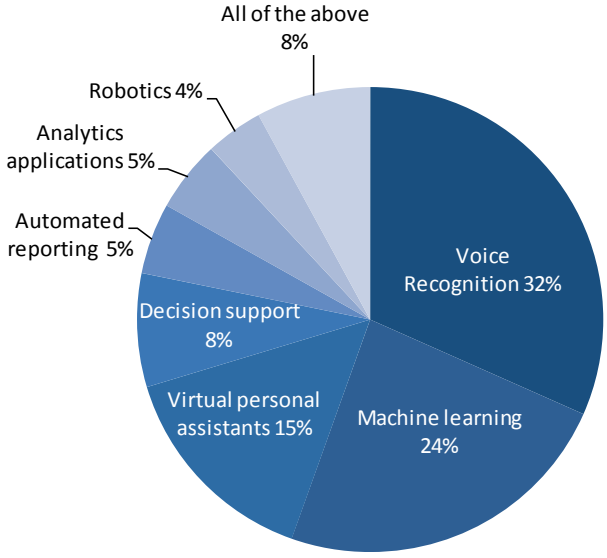
1.3 Artificial Intelligence

Figure 5: Artificial Intelligence Market (in USD millions)



Sources: SGPB, MarketsandMarkets
**Forecast*

Figure 6: Artificial Intelligence Market (in USD millions)



Sources: SGPB, NarrativeScience

Artificial Intelligence (AI) is the science and engineering of making machines intelligent and behave like humans through computer programs and software. The term was first coined by American computer and cognitive scientist John McCarthy in the early 1950s. AI technologies like machine learning, natural language processing, image recognition and speech processing form the backbone of robotics systems in use worldwide.

Machine learning allows computers to derive new standards and rules inferred from large amounts of data to develop human-like intelligence. This has led to improvements in language processing and accuracy of voice and image recognition. Advancements in AI are being increasingly leveraged to create sophisticated robots like collaborative and humanoid robots that can replicate human tasks across many walks of life.

AI is also used for voice recognition and communication (mobile virtual assistants) and by enterprises worldwide for decision support, analytics and automating repetitive processes in areas like financial advisory, media & advertising and healthcare. According to research firm Markets and Markets, the pure-play AI market is expected to grow at a 2015-20E CAGR of 53.65% to reach USD 5.05 bn by 2020. Key players are Alphabet, Facebook, Microsoft and Mobileye among others.

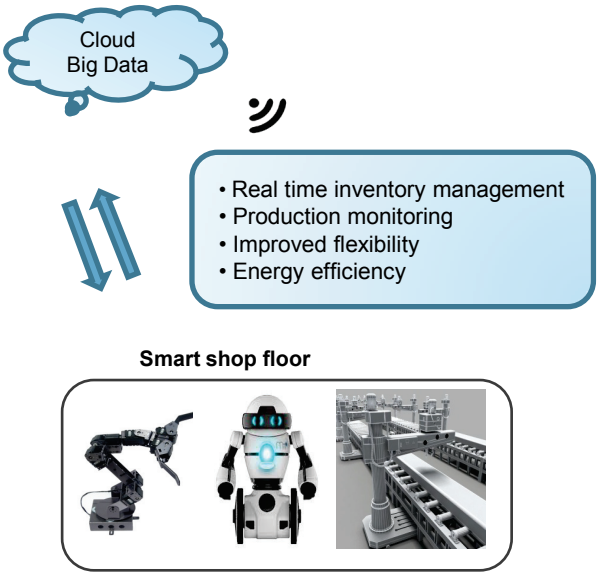
Future growth drivers

Smart Robots: Advanced AI is being used to create robots that can take smart decisions and perform typical everyday human tasks in production, healthcare and in office and home environments.
Big Data and the Internet of Things: Billions of gigabytes of unstructured data generated by connected devices is being analysed by enterprises to make intelligent decisions for increasing efficiency and customer visibility.
Fully autonomous driving: Automobiles with sensors that can identify lane crossings, road signs and potholes through AI-enabled software with image-recognition capabilities are being developed to obviate human intervention for driving vehicles.

II – Robotics: the backbone of Industry 4.0

2.1 Overview

Figure 7: Robotics and Industry 4.0



Source: SGPB

Convergence of information technology and operations technology has changed the world of manufacturing and production. With the integration of Internet of Things (IoT) and big data innovative automation systems are getting developed. This is helping in predicting failures, saving inventory cost, supply chain synchronisation and improving product quality.

Robotics is a key catalyst in the ongoing fourth industrial revolution or Industry 4.0. Robots are proving better than humans at precision and speed. Going ahead we expect more cognitive and networked robots which can be easily adapted to job requirements. Robotics market is expected to get transformed in the coming three-four years with enhancement in technologies like artificial intelligence, voice and speech recognition and tactile sensors. With advances in artificial intelligence, more intelligent robots can be developed that will be able to take decisions based on data analysis and would learn from the results of those decisions.

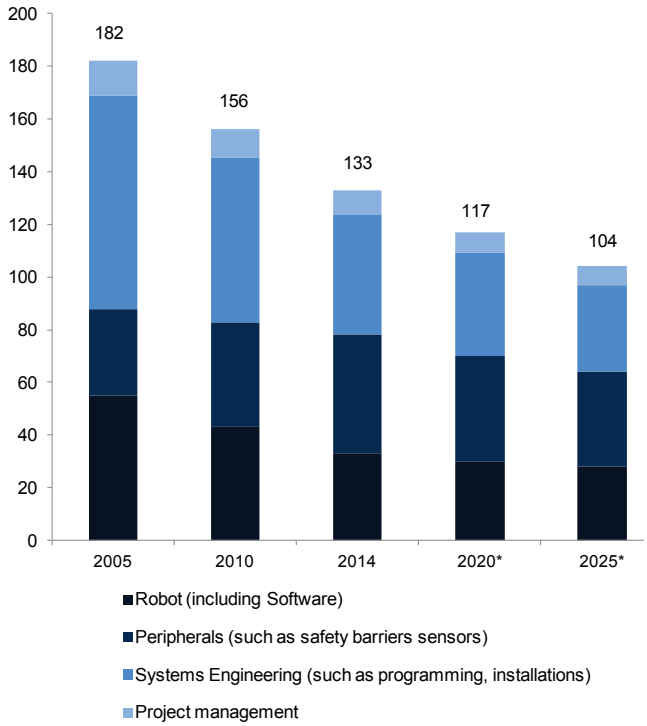
Developed nations are facing increasing life expectancy of employees. Productivity of employees may diminish with aging population and it can be partly safeguarded with intelligent robots and digitisation of production systems. Sustainable automation can be only achieved with efficient and flexible production systems where there is a cooperative network of employees and machines. Hence, collaboration between human and robots is much needed. We expect human-robot collaboration to increase in the coming years and the penetration of sophisticated and advanced robots should increase as there would be more “smart factories” driven by IoT. All the major companies globally are gradually moving towards “smart manufacturing”. However, smart manufacturing set-up needs higher capital investment initially which could be a deterrent for many manufacturing players.

II – Robotics: the backbone of Industry 4.0

2.2 Key drivers

Need for automation in industrial applications: We expect the robotics market to witness secular growth over the coming years due to the increasing demand for automation to increase productivity, improve quality and reduce wastage and human error. Wage hikes and the lack of skilled labour are also aiding demand. Robots were earlier used for repetitive and hazardous work in manufacturing, but now they are also being used in hospitals, at home, in mining, agriculture, for logistics and defence, and in many other industries. Automotive and electronics manufacturing accounts for a large portion of robotics demand. Strong growth in these end-markets is driving the growth of robotics market. China should be a major growth driver for next 3–5 years as it is focusing on industrial growth and innovation-driven manufacturing to achieve the targets of 'Made in China 2025'.

Figure 8: Cost of robotics systems (in USD '000s)



Sources: SGPB, BCG
**Forecast*

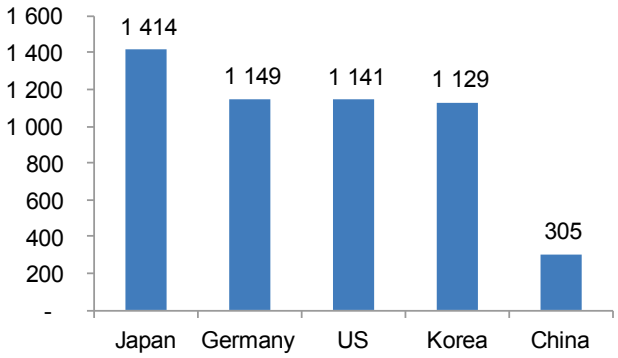
Pricing and performance: According to consulting firm BCG, the total cost of setting up a robot system for spot-welding in the US fell from USD 182,000 in 2005 to ~USD 133,000 in 2014, and is expected to further fall to USD 104,000 by 2025. At the same time, robotic productivity is expected to improve by ~5% every year. Advancements in vision sensors and gripping systems are now enabling robots to perform complex, dangerous and repetitive tasks with minimal human intervention. For example, Japanese robotics giant Fanuc recently demonstrated a high-speed robot that can install very small electronic parts called connectors at high precision and speed to manufacture automotive batteries. Until now, this process was entirely manual, requiring human labour. We believe the steady improvements in cost, performance and functionality of robotics systems should drive their wider adoption by small and midsized firms, in addition to mega-corporations.

Innovation: Collaborative robots are being developed to work together with humans without posing a security risk. ABB's Yumi is a major leap in human-robot collaboration. Yumi works on small-part assembly line side-by-side with humans. Robotics adoption among SMEs is also increasing with reduction in robot price and development of energy-efficient small robots.

III – Four leading Industries

3.1 Automotive

Figure 9: Robotic density in automotive industry (per 10,000 employees)



Sources: SGPB, International Federation of Robotics

KUKA robots used in automotive assembly line

Source: KUKA

Automotive

The automotive industry is the most important end-market for industrial robots worldwide. According to IFR, from 2010 to 2015, robot sales to the automotive industry increased at a CAGR of ~20%. In 2015, the industry accounted for the sale of ~95,000 robots (+1% YoY, ~38% of total supply). Investments in new production facilities in emerging markets and for production modernization in major car producing countries have lead to this strong growth in robot installations. In 2015, automotive electronics parts suppliers for production of batteries and other electronic components in cars also contributed to increased robot adoption.

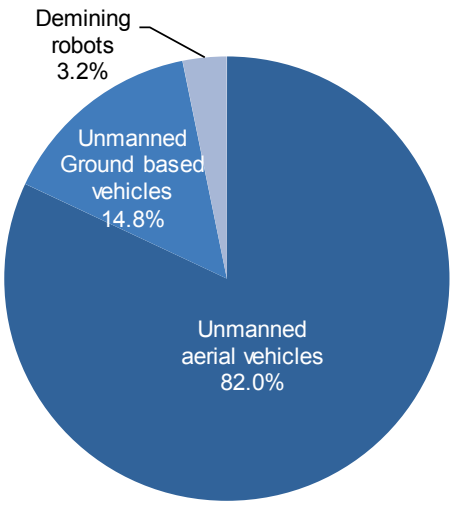
Robots play a key role in boosting quality, reliability and efficiency of automotive manufacturing and assembly lines worldwide. They are primarily used for automating processes like precision spot welding, painting and parts assembly.

We expect this industry to witness strong demand for robots led by increasing need for automation and lack of skilled labour with aging workforce. German auto manufacturers expect robots to be the solution for the expected retirement of the baby-boomers generation between 2015-20 that would lead to the lack of young working class population. According to German car manufacturer Volkswagen, the total average cost of robots is EUR 5/hour over the course of their lifetime compared to about EUR 40/hour for humans.

III – Four leading Industries

3.2 Aerospace & Defence

Figure 10: Usage of robots in Aerospace & Defence (by type)



Sources: SGPB, International Federation of Robotics

BAE Systems Mantis Unmanned Aircraft

Source: BAE Company.

Aerospace & Defence

It is well known that most of the technologies that are part of our daily lives were at first designed for military usages. Similarly, robotics is now everywhere in the aerospace and defence industry. Every company has stakes in this trend, from large conglomerates like General Electric, Airbus or United Technologies, which developed a combination of digitisation and robotics to improve production and supply chains, to highly specialised actors in drones (and related services, mainly big data analysis), smart body sensors for soldiers (developed with health care firms) or predictive crimes software (i.e,. PredPol).

The most obvious (and known) integration of robotics & IA is related to drones and UAV, as these products include both data analytics and robotics. But the biggest market is actually on the production side for both usual military and commercial products. Since the beginning of this industry, aircrafts and military vehicles used to be built up by humans only. This is not the case anymore, the supply chain, including the management of inventory, logistics and planning, is done in large part by robotics. This also impacts both materials and methods.

Manufacturers now use composite components (3D printing is becoming a norm in several areas) and seamless fuselages (getting rid of hundred thousands of riveted and bonded fasteners; Electroimpact Inc, a private company, is a highly innovative firm in aerospace production).

III – Four leading Industries

3.3 Healthcare

Da Vinci Surgical Robot

Source: Intuitive Surgical

Lightweight medical robot LBR MED

Source: KUKA

Healthcare

Robotics is playing an important role in the healthcare sector globally. Robotic-assisted surgery is witnessing high acceptance globally as it maximises surgeon skill and precision. Robots are also being used in radiation therapy, laser osteotomy, elderly care, and multiple other areas. Medical robots account for over a third of professional service robot sales. The average price of these robots is high at ~USD 1 mn (with accessories and services). However, they could provide a price-effective solution in view of the escalating cost of healthcare.

Intuitive Surgical is the market leader in robotic-assisted minimal invasive surgery. The company's da Vinci Surgical Systems provide surgeons with 3D high-definition vision and fine tissue manipulation capability. In view of increasing population of baby boomers and escalating cost of healthcare, robotics could be a price effective solution for elderly care. With the innovation of collaborative robots we expect further penetration of robotics in healthcare as these robots will be working more closely with human operators and should be highly effective. KUKA's Lightweight robot (LBR MED) is a good example of collaborative robotic innovation which has sensory capabilities for safety, high adaptability and simple control system. With advancements in technology, robots are also being used in angiography. Siemens' Artis Zeego system, which is used in angiography, is based on robotic technology. The basic robotic technology for this system was developed by Kuka.

Market size for medical robots are ~USD 1.3 bn accounting for 35% of total sales of professional service robot. Sales declined 5% YoY to 1,224 in 2014, but this does not signify any weakness as these are early days in robotics in healthcare. We expect penetration of medical robots to increase led by high demand and price reduction.

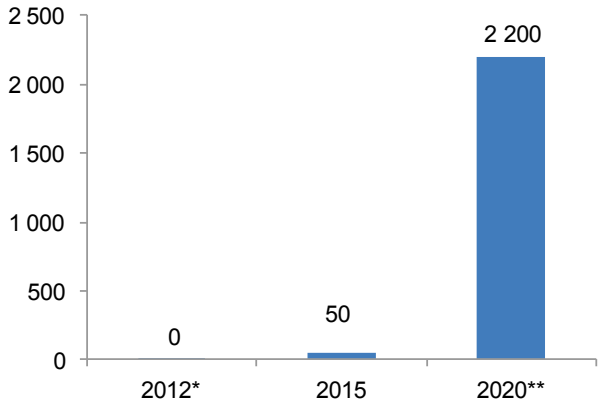
III – Four leading Industries

3.4 Financial Services

Financial Services

The financial services industry has undergone a sea change over the last eight years with stricter regulations, higher competition and increasing digitalisation of services. Another emerging theme is the use of robotics in (1) finance departments for executing basic processes (record journal entries, ledger account reconciliation etc.) (2) regulation, compliance and risk management functions to track disclosures on personal account trading, monitor risk exposure or credit limits and (3) portfolio management through 'robo-advisors'. A robo-advisor is an online investment platform that provides automated investment advice by using algorithms to develop portfolio allocation and provide customised investment recommendations. In the financial services space, robotics has been mainly used to perform 'high-volume, low value-added tasks' that can be standardised through the use of software applications. This has helped in reducing costs (mainly employee), strengthening controls, improving the accuracy and consistency of execution, and in providing individuals with a low-cost alternative for financial advisory services.

Figure 11: Total AUM under robo-advisors (in USD bn)



Sources: SGPB, Yahoo Finance, A T Kearney

** Negligible AUM*
*** Forecast*

Some of the popular robo-advisors are Betterment (AUM >USD 4 bn), Schwab Intelligent Portfolios (AUM ~USD 5.3 bn), Personal Capital (hybrid model, AUM ~USD 2.4 bn), FutureAdvisor (AUM ~USD 695 mn), Wealthfront (AUM ~USD 3.5 bn) and Vanguard (hybrid model, AUM of ~ USD 31 bn). Total AUM under robo-advisors has seen meteoric growth over the last three years from almost zero in 2012 to ~USD 50 bn by 2015 as per Yahoo Finance. The future growth prospects are also robust with A T Kearney, the management consulting firm, expecting AUM under robo-advisors to touch USD 2.2 trn by 2020. This probably prompted Blackrock, the world's largest investment manager, to acquire FutureAdvisor for USD 150 mn in August 2015. It is worth noting that due to the gradual shift in AUM towards robo-advisors, large wealth-management firms are planning to launch a robo-advisor platform to complement their current product offerings and sales-force.

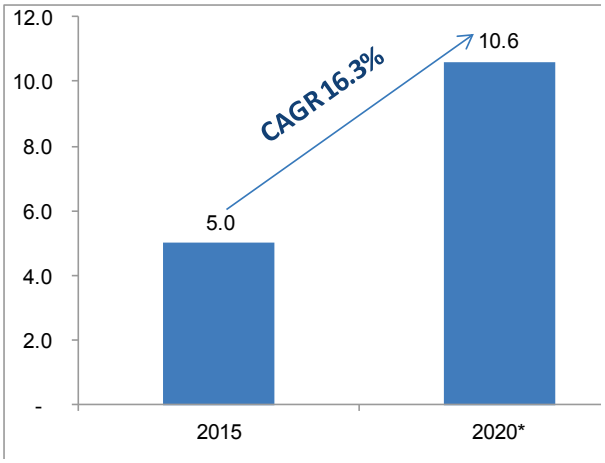
IV – Future of robotics

4.1 Collaborative robots

FANUC CR-35iA collaborative robot

Source: Fanuc Corp

Figure 12: Mobile robots market forecast (in USD bn)



Sources: SGPB, MarketsandMarkets
**Forecast*

Advancements in AI, tactile, vision and sound sensors, humanoid hands, and sophisticated vacuum grippers that enable easy manipulation of objects are leading to the growing adoption of new categories of robots like collaborative robots, mobile robots, personal care robots and humanoid robots.

Collaborative Robots

Collaborative robots (co-bots) are designed to work safely alongside humans in manufacturing environments. Co-bots are smaller in size and more flexible, affordable and user-friendly than traditional stationary industrial robots, because of which SMEs and large corporations are eager to adopt this technology. Advanced technologies like force sensors, collision detection and elastic actuators enable co-bots to follow instructions without the need for regular programming. Co-bots can have a wider penetration across light duty, precise and repetitive tasks like line loading and unloading, material handling, welding, painting, packaging, sorting and polishing.

Mobile robots

Mobile robots have a movable platform to perform various tasks according to their configuration. The integration of mobile robots with various technologies like sensors, image recognition and AI has led to their increased adoption in various sectors such as logistics, warehousing, healthcare and defense. According to research firm MarketsandMarkets, the mobile robots market is expected to grow at a 2015-20 CAGR of 16.31% to USD 10.6 bn by 2020.

Unmanned ground vehicles, including automated guided vehicles (AGVs) have the largest share of mobile robots market, driven by the demand from the warehousing and distribution segments. Defence sector is expected to witness increased adoption of mobile robots like spy drones and unmanned aerial vehicles (UAVs) to perform critical activities in which human life can be exposed to risk.

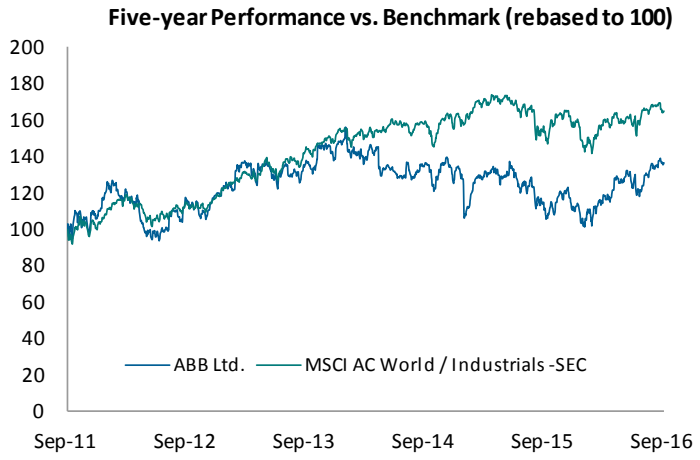
V – Investment opportunities

ABB Ltd (ABBN-CH) – BUY – Target Price: CHF 21.30

Investment case: We expect strong automation demand from US end-markets like food and beverages and automotives. ABB should also benefit from power transmission-related capex and strong demand for discrete automation (mainly robotics) from automotive companies in China and India. The company continues to strengthen its robotics portfolio with new offerings (Connected Services and SafeMove2) in 2Q16. Base orders have stabilised, which indicates that ABB may gradually move to organic growth.

Main risks: Although we expect margin expansion led by the Power Grids segment, any delay in project execution and cost overrun could hamper ABB's overall margins. We do not expect margin expansion in other segments to be able to compensate for margin decline in the Power Grids segment. Further slowdown in the Chinese industrial market would be also be incrementally negative for ABB.

Company Description: ABB is a global leader in power and automation technologies. It provides solutions for energy-efficient electricity generation, transmission and distribution and for increasing productivity in industrial, commercial and utility operations.



Source: FactSet

Description	Current
Currency	Swiss Franc
Market Cap (bn€)	40,57
Price	21,48
52 Wk Low	15,94
52 Wk High	22,17
Profitability	**2017(e)**
Profit Margin	7,13
ROA	6,08
ROE	17,50
ROC *	8,12
Valuation	
PE Ratio 2017(e)	17,23
Price/Sales 2017(e)	1,41
Price/Book 2017(e)	3,21
Dividend Yield	
Dividend Yield 2017(e)	3,53

**Data as of (current year - 1)*
Sources: SGPB & FactSet

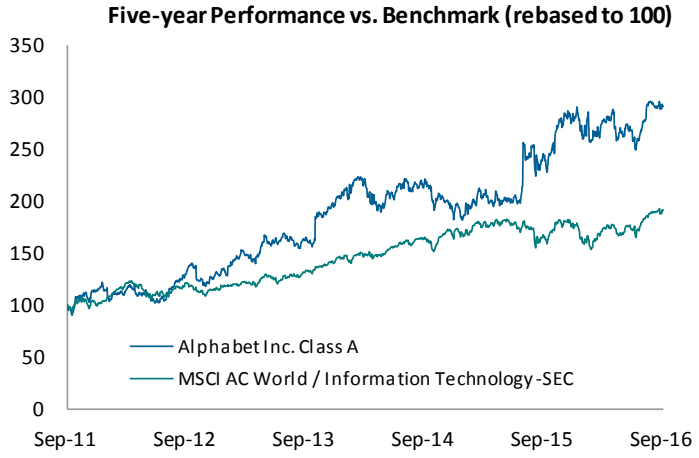
V – Investment opportunities

Alphabet Inc (GOOGL-US) – BUY – Target Price: USD 850.00

Investment case: In our view, Google benefits from the shift towards digital advertising (internet, smartphones etc.) from advertising through traditional media (radio, newspapers). We believe that this shift should last over the long term as the content published on the internet increases and takes over traditional media. The company is able to monetise its platform and is witnessing increasing traction in services like YouTube. We believe given the strong user base, the monetisation should improve further.

Main risks: Google might not be able to maintain its market share in online advertising (~66% in the US) given the rise of players such as Facebook and Microsoft's Bing. Google's margin may fall in the long run due to the ongoing expansion of mobile internet and lower advertising prices on mobile devices as compared to desktops. Also, like other cyclical companies, Google may see some weakness in overall advertising spends.

Company Description: Alphabet is the parent company of Google, the leader in the web-based search segment. Alphabet has two segments: (1) Google, which maintains an index of websites and other online content and makes this available through its search engine and (2) the upcoming/non-search related technologies such as driverless cars.



Source: FactSet

Description	Current
Currency	U.S. Dollar
Market Cap (bn€)	491,36
Price	797,97
52 Wk Low	617,84
52 Wk High	813,88
Profitability	**2017(e)**
Profit Margin	33,89
ROA	14,18
ROE	16,38
ROC *	13,45
Valuation	
PE Ratio 2017(e)	19,69
Price/Sales 2017(e)	6,41
Price/Book 2017(e)	3,18
Dividend Yield	
Dividend Yield 2017(e)	-

**Data as of (current year - 1)*
Sources: SGPB & FactSet

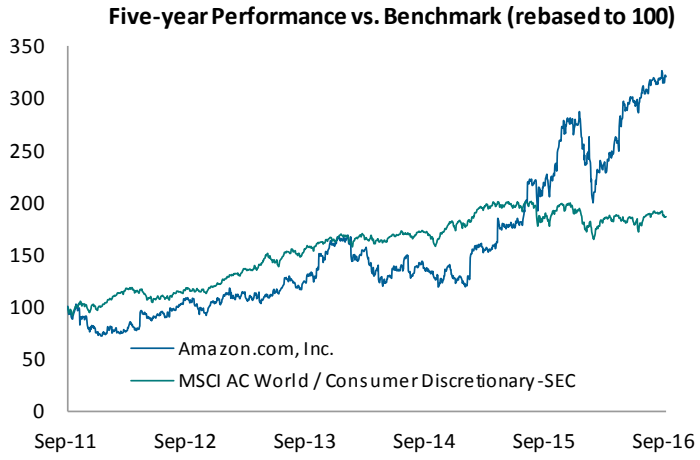
V – Investment opportunities

Amazon.com, Inc (AMZN-US) – BUY – Target Price: USD 880.00

Investment case: Amazon's investments in infrastructure, web services and logistics have enabled it to generate strong cash flow growth and higher returns, a trend we expect to continue. We view Amazon to be well-placed to capitalise on the global growth in e-commerce and m-commerce. Global e-commerce specifically should continue to gain market share from traditional retailers with improved penetration in 2016. The company's high-margin cloud should continue to facilitate revenue growth in our view; along with the Amazon Prime and Fulfilment programmes driving market share in FY16.

Main risks: Amazon's e-commerce business is part of a highly disruptive space and could be affected by superior competition from players with new technology, coupled with increased pressure from offline retailers providing heavy discounts. Macroeconomic headwinds leading to a slowdown in consumer spends may affect the company's revenues.

Company Description: Amazon.com, a Seattle-based Fortune 500 company, is one of the world's largest online retailers. It also operates Amazon Web Services (AWS), a leading cloud-based computing platform, and provides marketing and promotion services (online advertising and cobranded credit-card agreements).



Source: FactSet

Description	Current
Currency	U.S. Dollar
Market Cap (bn€)	330,62
Price	778,52
52 Wk Low	474,00
52 Wk High	790,79

Profitability	2017(e)
Profit Margin	3,19
ROA	5,55
ROE	15,63
ROC *	2,06

Valuation	
PE Ratio 2017(e)	73,90
Price/Sales 2017(e)	2,20
Price/Book 2017(e)	13,97

Dividend Yield	
Dividend Yield 2017(e)	-

**Data as of (current year - 1)*
Sources: SGPB & FactSet

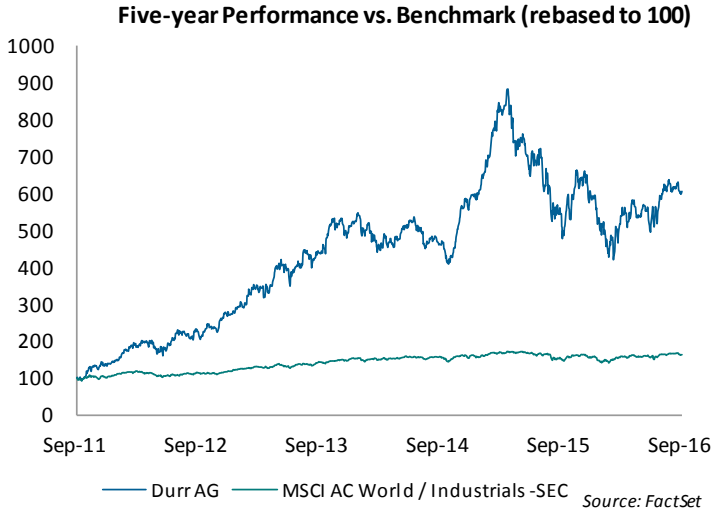
V – Investment opportunities

Dürr AG (DUE-DE) – BUY – Target Price: EUR 90.00

Investment case: We expect Dürr's revenues to benefit from the growing adoption of advanced robots and smart manufacturing floors. In our view, its technologically advanced product offerings and leadership position in a majority of its end-markets provide it with premium pricing power and should enable margin improvement in the medium term. The management has a long-term target of reaching EUR 5 bn in revenues by 2020 (2015-20E CAGR of 6.2%) and EBIT margin of 8-10% by 2020 (6.8% in 2Q16), which we view as achievable.

Main risks: A majority of Durr's revenues are dependent on capex spending in the global automotive industry which is cyclical and susceptible to global macroeconomic weakness. Any delay or failure in the successful integration of the Homag acquisition could negatively impact earnings and lead to downgrades by consensus.

Company Description: Dürr is the worlds' leading supplier of paint shops and assembly automation systems for the automotive, mechanical, chemical and pharmaceutical industries worldwide. It commands global market shares ranging from 30%–60% in 95% of its product portfolio.



Description	Current
Currency	Euro
Market Cap (bn€)	2,56
Price	74,00
52 Wk Low	49,52
52 Wk High	84,88
Profitability	**2017(e)**
Profit Margin	5,09
ROA	5,54
ROE	21,57
ROC *	15,46
Valuation	
PE Ratio 2017(e)	13,48
Price/Sales 2017(e)	0,70
Price/Book 2017(e)	2,75
Dividend Yield	
Dividend Yield 2017(e)	2,74

*Data as of (current year - 1)
Sources: SGPB & FactSet

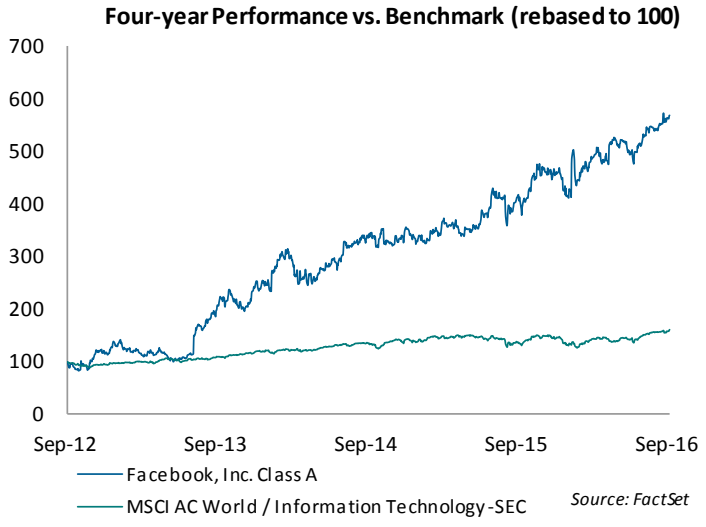
V – Investment opportunities

Facebook Inc (FB-US) – BUY – Target Price: USD 150.00

Investment case: Facebook is one of the biggest beneficiaries of the shift towards internet advertising. The company's platform enables advertisers to target specific audiences, assess the impact of their ad campaign in real time and generate higher return on investment as compared to traditional advertising. Facebook has successfully capitalised the shift to mobile usage, with mobile ad revenues accounting for 82% of its advertising revenues, and we believe this would be its future revenue growth driver.

Main risks: The company generates most of its revenues from advertising. A slowdown in the global economy could result in weaker-than-expected ad spending, which could affect earnings growth. As the business is highly dependent on user engagements, inability to maintain this could lead to a drop in advertiser interest in the platform.

Company Description: Facebook is the world's leading social media platform with over 1.55 bn monthly active users across the globe. Apart from socialising and sharing information, Facebook is used for playing games, publicising events and conducting surveys. The company offers advertisers an opportunity to reach users based on their preferences.



Source: FactSet

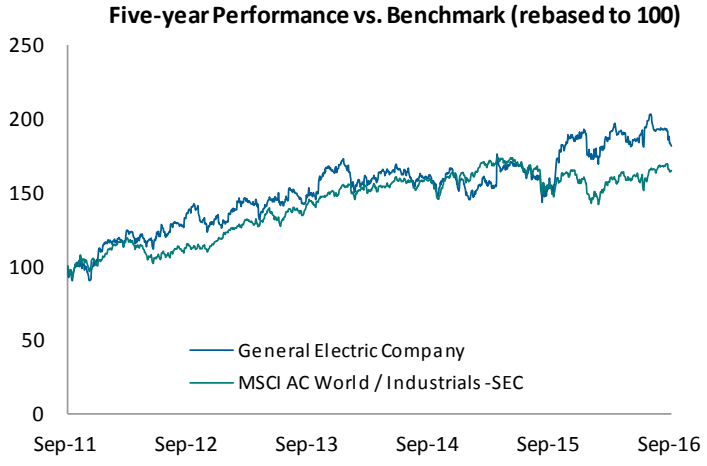
Description	Current
Currency	U.S. Dollar
Market Cap (bn€)	331,95
Price	129,07
52 Wk Low	85,72
52 Wk High	131,98
Profitability	**2017(e)**
Profit Margin	41,11
ROA	18,79
ROE	19,92
ROC *	9,07
Valuation	
PE Ratio 2017(e)	25,62
Price/Sales 2017(e)	10,14
Price/Book 2017(e)	5,18
Dividend Yield	
Dividend Yield 2017(e)	-

**Data as of (current year - 1)*
Sources: SGPB & FactSet

V – Investment opportunities

General Electric (GE-US) – BUY – Target Price: USD 33.50

Investment case:	GE is focused on long-term structural trends like energy efficiency, green energy, transportation, healthcare and urbanisation globally, which should provide stability to its financials. In addition, the company's focus on emerging markets (~64% of the total order book in 2015) should support its growth objectives.
Main risks:	GE is in the process of divesting its financials arm. Any delay in deal signings and lower-than-expected return to shareholders could affect investor sentiment. Oil and gas accounts for ~18% of the company's revenues and is in a slowdown phase with weak order growth. Prolonged weakness in this segment would have a adverse impact on both revenues and margins for the company.
Company Description:	General Electric (GE) is the world's largest industrial conglomerate. It serves virtually all markets worldwide with its products that include trains, power equipment, healthcare equipment, jet engines, turbines, financial products and household appliances.



Source: FactSet

Description	Current
Currency	U.S. Dollar
Market Cap (bn€)	238,26
Price	29,68
52 Wk Low	24,26
52 Wk High	33,00
Profitability	**2017(e)**
Profit Margin	11,49
ROA	3,51
ROE	15,26
ROC *	0,42
Valuation	
PE Ratio 2017(e)	17,22
Price/Sales 2017(e)	2,13
Price/Book 2017(e)	3,27
Dividend Yield	
Dividend Yield 2017(e)	3,31

**Data as of (current year - 1)*
Sources: SGPB & FactSet

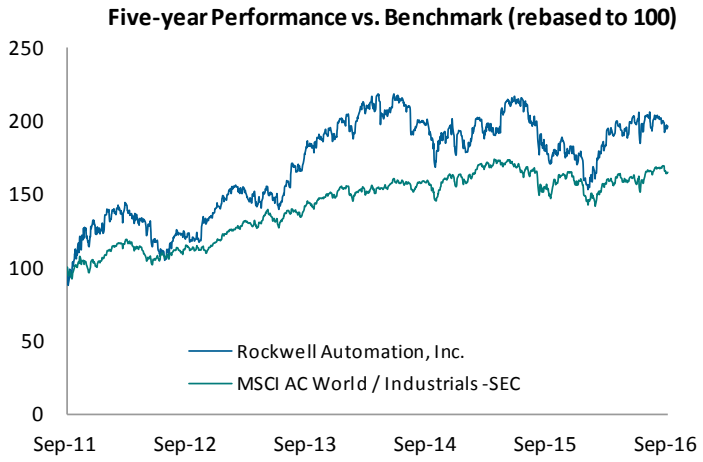
V – Investment opportunities

Rockwell Automation (ROK-US) – BUY – Target Price: USD 127.00

Investment case: Rockwell is witnessing a decline in revenues due to weakness in the heavy industries end-market. However, we expect automation demand from the automotive sector in the US and the global consumer goods industry (F&B and personal care) to offset the impact of low demand from the O&G and mining sectors. The company has made significant technology investments in its Connected Enterprises business, and we expect demand in this domain to increase, led by the growing need to improve productivity, product quality and workplace safety in the manufacturing sector.

Main risks: Although we are optimistic on revenue growth led by the increasing adoption of connected enterprise solutions, this business could grow slower than anticipated as it needs higher capex by customers. Continued weakness in heavy industries in the US, Rockwell's largest geographic market, may keep organic growth under pressure.

Company Description: Rockwell is a pure-play on global industrial automation demand. It provides industrial automation power, control and information solutions to manufacturers. Its product and services help maximise asset utilisation, improve time-to-market and lower enterprise business risks.



Source: FactSet

Description	Current
Currency	U.S. Dollar
Market Cap (bn€)	13,20
Price	113,89
52 Wk Low	87,53
52 Wk High	120,75
Profitability	**2017(e)**
Profit Margin	12,60
ROA	11,70
ROE	36,85
ROC *	21,63
Valuation	
PE Ratio 2017(e)	18,89
Price/Sales 2017(e)	2,50
Price/Book 2017(e)	7,28
Dividend Yield	
Dividend Yield 2017(e)	2,71

** Data as of (current year - 1)*
Sources: SGPB & FactSet

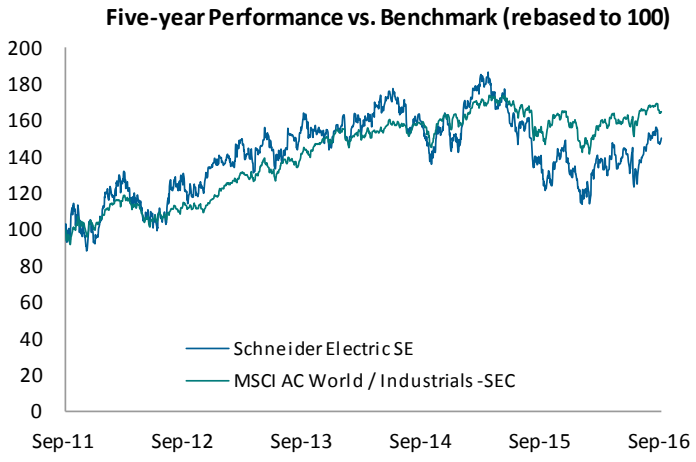
V – Investment opportunities

Schneider Electric SA (SU-FR) – BUY – Target Price: EUR 73.00

Investment case: The strong construction market in the US and improvement in SU's Western Europe business (mainly the Building & Partner and Infrastructure segment) should, in our view, counter the negative impact of lower oil and gas prices and the economic slowdown in China. The management is highly focused on project execution. We remain confident on margin expansion in 2016 although revenues may be flat due to preference for high-margin projects.

Main risks: Sluggish economic growth in China may prolong its industrial slowdown and thus significantly deteriorate the company's overall revenue growth. Order growth could be subdued as lower oil price has impacted capex in the oil and gas sector and may also hamper growth prospects for the coming years.

Company Description: Schneider Electric (SU) is a global leader in energy management and automation. SU offers technology and integrated solutions for utilities and infrastructure, industry, data centres and residential and non-residential buildings. SU has balanced and diversified end-markets and geographic markets.



Source: FactSet

Description	Current
Currency	Euro
Market Cap (bn€)	33,82
Price	59,49
52 Wk Low	45,32
52 Wk High	63,07
Profitability	**2017(e)**
Profit Margin	8,24
ROA	5,00
ROE	9,93
ROC *	5,05
Valuation	
PE Ratio 2017(e)	15,07
Price/Sales 2017(e)	1,39
Price/Book 2017(e)	1,57
Dividend Yield	
Dividend Yield 2017(e)	3,58

**Data as of (current year - 1)*
Sources: SGPB & FactSet

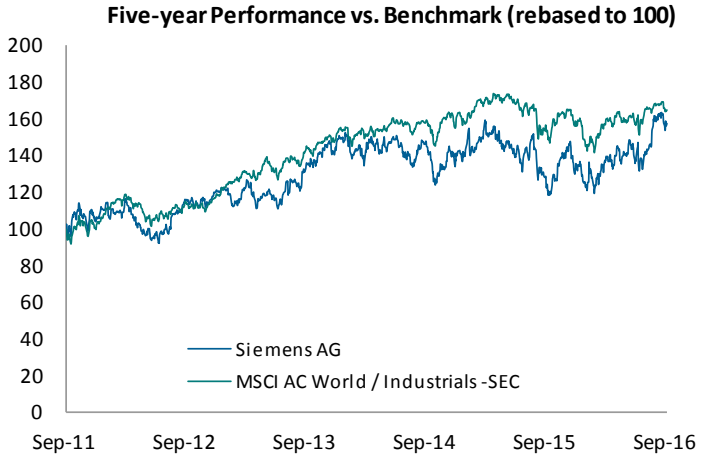
V – Investment opportunities

Siemens AG (SIE-DE) – BUY – Target Price: EUR 113.00

Investment case: Siemens' well-diversified business model has a mix of traditional businesses as well as potential growth areas, which helps offset pressure on any particular segment. In our view, its Healthcare, Energy and Transportation segments should provide long-term stability to revenues, given the rising awareness-driven demand for healthcare equipment in emerging markets (EMs), growing need for energy efficiency globally, and increasing demand for public transport worldwide (with growing urbanisation in EMs and traffic-choked cities in developed countries).

Main risks: Siemens has done a host of acquisitions over the last few quarters. This creates integration risk and poses downside risk to earnings. The acquisitions also pose a risk of write-down in goodwill particularly in the energy related businesses.

Company Description: Siemens is a leading electrical engineering company. It operates through two segments Industrials which includes Power & Gas, Wind Power & Renewable etc and Financials. The company is currently focusing on increasing its presence in the digital and automation space.



Source: FactSet

Description	Current
Currency	Euro
Market Cap (bn€)	83,86
Price	103,75
52 Wk Low	77,91
52 Wk High	109,00
Profitability	**2017(e)**
Profit Margin	7,20
ROA	4,76
ROE	15,97
ROC *	9,05
Valuation	
PE Ratio 2017(e)	13,61
Price/Sales 2017(e)	1,07
Price/Book 2017(e)	2,24
Dividend Yield	
Dividend Yield 2017(e)	3,64

** Data as of (current year - 1)*
Sources: SGPB & FactSet

V – Investment opportunities

Valuations

DESCRIPTION			VALUATION								GROWTH				PROFITABILITY		
Code Factset	Company	Cap (m€)	P/BV		EV/Sales (e)		P/E (e)			Div. Yield	Sales Growth		EPS Growth		EBITDA Margin	Net Margin	ROE
			FY1x	10Yx	FY1x	FY2x	FY1x	FY2x	10Yx	FY1%	FY1%	FY2%	FY1%	FY2%	FY1%	FY1%	FY1%
GOOGL-US	**Alphabet Inc. Class A**	491 355	4.0	5.0	6.5	5.3	23.3	19.7	35.8	0.0	19.0	15.9	15.6	18.5	49.5	32.9	16.4
FB-US	**Facebook, Inc. Class A**	331 949	6.6	7.5	12.6	9.0	32.9	25.6	726.3	0.0	51.7	34.0	73.7	29.0	63.4	42.3	19.9
AMZN-US	**Amazon.com, Inc.**	330 625	20.7	22.2	2.6	2.0	133.0	73.9	193.9	0.0	27.8	22.5	369.2	80.4	11.3	2.1	15.6
GE-US	**General Electric Comp**	238 260	3.2	2.1	2.2	2.2	19.7	17.2	34.4	3.2	7.5	-1.4	14.5	13.3	15.8	10.9	15.3
SIE-DE	**Siemens AG**	83 861	2.4	2.3	1.4	1.3	14.9	13.6	16.6	3.5	5.4	3.9	10.4	8.1	12.9	6.9	16.0
ABBN-CH	**ABB Ltd.**	40 566	3.5	3.7	1.5	1.4	19.4	17.2	18.5	3.4	-5.7	2.1	10.5	11.4	13.6	6.0	17.5
SU-FR	**Schneider Electric SE**	33 816	1.6	1.9	1.6	1.5	16.3	15.1	16.2	3.4	-5.9	1.8	6.2	8.5	15.7	7.7	9.9
ROK-US	**Rockwell Automation,**	13 202	7.1	5.5	2.5	2.5	19.3	18.9	17.3	2.6	-7.2	0.6	-7.8	2.0	21.3	12.4	36.9
DUE-DE	**Durr AG**	2 560	3.2	2.5	0.7	0.7	14.2	13.5	22.2	2.6	-3.7	2.4	10.2	5.9	9.7	5.0	21.6

FY1 Current Unrealized Year, FY2 Next Year.

Data as of 16-09-2016

Sources: SGPB, Factset.

Market Data

FactSet	Company	CCY	Price	52 Weeks High	52 Weeks Low	Avg 6M Daily Turnover	PERFORMANCE (%)					RISK	
							3m	6m	12m	YTD	5y	Volatility	Beta
GOOGL-US	**Alphabet Inc. Class A**	USD	798.0	813.9	617.8	1 362 633	10.2	5.4	19.9	2.6	191.7	4.9	1.1
FB-US	**Facebook, Inc. Class A**	USD	129.1	132.0	85.7	2 807 444	12.8	15.1	38.1	23.3	486.7	10.8	1.1
AMZN-US	**Amazon.com, Inc.**	USD	778.5	790.8	474.0	2 495 759	8.5	35.6	47.6	15.2	225.3	9.4	1.3
GE-US	**General Electric Comp**	USD	29.7	33.0	24.3	1 038 244	-3.1	-1.6	14.5	-4.7	81.8	11.0	1.0
SIE-DE	**Siemens AG**	EUR	103.8	109.0	77.9	211 700	14.1	13.4	21.4	15.4	52.8	24.0	1.1
ABBN-CH	**ABB Ltd.**	CHF	21.5	22.2	15.9	123 656	10.6	16.2	18.0	19.6	29.9	23.3	1.0
SU-FR	**Schneider Electric SE**	EUR	59.5	63.1	45.3	87 223	10.8	7.9	5.0	13.2	41.8	10.6	1.3
ROK-US	**Rockwell Automation,**	USD	113.9	120.8	87.5	94 693	-1.7	4.0	5.9	11.0	91.4	9.4	1.3
DUE-DE	**Durr AG**	EUR	74.0	84.9	49.5	10 656	20.9	15.6	6.7	0.5	491.8	10.7	1.5

Data as of 15-09-2016

Sources: SGPB, Factset.

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Rating System

Investment Rating Definitions:

Buy	Stock that is expected to outperform its MSCI sector index over a 12-month investment horizon.
Neutral	Stock that is expected to perform in line with its MSCI sector index over a 12-month investment horizon.
Sell	Stock that is expected to underperform its MSCI sector index over a 12-month investment horizon.
Restricted	Covered stock that is not rated or assigned a target price as the Societe Generale group has a capital market transaction with that company.

Product Risk Rating

The product category of single equity, stock, share is rated at '4'.

In order to draw the attention of potential investors to the risk linked to each investment solution, Societe Generale Private Banking has ranked each product according to its own specific risk scale from the lowest risk (class 0) to the highest risk (class 4). The risk classification is a Societe Generale Private Banking internal risk indicator. These internal indicators are based on the Value at Risk 95% 1 year (VaR). The VaR corresponds to the maximum amount that the portfolio being considered could lose in normal market conditions over a given period with a given probability (past performances and simulations of performance shall not be considered as a reliable indicator of future performance). If the VaR 95% 1 year is y%, this means that there is a 95% probability that the portfolio will not lose more than y% of its value in one year.

Risk Levels	Losses
0 - Lowest Risk	There is a 95% probability that the product will not depreciate in value in one year.
1 - Low Risk	There is a 95% probability that the product will not lose more than 5% of its value in one year.
2 - Medium Risk	There is a 95% probability that the product will not lose more than 15% of its value in one year.
3 - High Risk	There is a 95% probability that the product will not lose more than 30% of its value in one year.
4 - Highest Risk	There is a minimum of 5% probability that the product will lose more than 30% of its value in one year.

MSCI Disclaimer

Glossary (1/2)

Societe Generale Private Banking Investment Universe

Societe Generale Private Banking defines and maintains an investment universe, aiming at ensuring the liquidity and the meaningful coverage of companies subject to potential investments. This investment universe complies with rules defined as follows:

- **Issuers are constituents of MSCI indices**: The constituents of the indices retained cover developed and emerging countries with increased precision (average market capitalisation) for Germany, Belgium, France, the UK and Switzerland.
- **Market Capitalisation**: To avoid the inclusion of securities whose market capitalisation could be too low in light of the potential investments by clients and/or managers, only securities whose market capitalisation is greater than €500 mn have been chosen.
- **Liquidity**: To ensure minimum liquidity for investments, only securities with a six-month average daily trading volume greater than EUR 300,000 are selected.
- **Reliable Financial Information**: Only securities tracked by at least three sell side financial analysts are included in the universe.
- **Social and Environmental Responsibility Policy of SG Group**: Societe Generale has defined a framework for Social and Environmental Responsibility. This framework sets out restrictions on listed securities identified by SG Group and deleted from the universe.

Societe Generale Private Banking Recommended Universe

The Recommended Universe is made of companies from the Investment Universe as defined by Societe Generale Private Banking guidelines. Members are chosen by Equity Solutions. There are no lower nor upper limits on the number of stocks in the Recommended Universe. There is no specific constraint in term of geographical or industry representation. A company from the recommended universe can be subject to a rating change, as decided by the Equity Solutions expert covering the company. When a stock is downgraded to a Sell rating, it is still followed for at least 3-month, after which Equity Solutions issues a coverage termination alert.

Financial Terms and Acronyms

ADR (American Depositary Receipt): is a negotiable certificate issued by a US bank representing a specified number of shares in a foreign stock that is traded on a US exchange. ADRs are denominated in US dollars, with the underlying security held by a US financial institution overseas.

BACKLOG: often refers to a company's sales orders waiting to be fulfilled. Even if it provides the revenue visibility, the companies usually try to avoid to have an extensive backlog because that creates the risk of unmet demand and thus can have negative impact on future earnings

BENCHMARK: is, generally, a broad market, market-segment stock or bond index that is used as a reference to evaluate the performance of a security, mutual fund or investment manager.

BV (Book Value): is the total value of net assets of a company. It consists of the firm's fixed assets plus its current assets, minus short-term liabilities, long-term creditors and any provisions.

BV/S (Book Value Per Share): is the total value of the net assets of a company divided by the total number of outstanding shares.

C/I (Cost Income Ratio): is used for valuing banks. It shows a company's costs in relation to its income. Formula: (Operating Costs/Operating Income)*100.

CAGR (Compound Annual Growth Rate): is a term used for the geometric progression ratio that provides a constant rate of return over a specific time period.

CAPEX (Capital Expenditure): is the fund used by the company to acquire or upgrade the physical assets such as property, industrial buildings or equipment. The most capital intensive industries include oil, telecom and utilities.

CAR (Capital Adequacy Ratio): is a measure of a bank's capital. It is expressed as a percentage of a bank's risk-weighted credit exposures. Formula: (Tier One Capital + Tier Two Capital)/Risk Weighted Assets.

CET I (Common Equity Tier I Ratio) : is a measure of the bank's common equity capital as a percentage of risk-weighted assets. It is generally compared to a defined benchmark stipulated by the regulatory authority to determine whether a bank is sufficiently capitalised.

DIVIDEND YIELD: Dividend per share or DPS (total dividend paid out divided by the total number of shares) expressed as a percentage of current stock price.

Financial Terms and Acronyms (contd.)

EBIT (Earnings Before Interest and Taxes): profit before taking into account interest payments and income taxes. Also referred to as operating income, it is calculated as a company's gross income minus all its operating expenses.

EBIT Margin: Ratio that expresses EBIT as a percentage of total sales (EBIT/Sales*100); also referred to as operating margin.

EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortisation): profit before taking into account interest payments, income taxes and non-cash operating expenses (depreciation and amortisation). It is calculated as a company's gross income minus its cash operating expenses only.

EPS (Earnings Per Share): is the division of total net profit by the number of shares.

EV (Enterprise Value) is a measure of a company's value, often used as an alternative to straightforward market capitalisation. It is calculated as (market cap + debt + minority interest + preferred shares) − total cash − cash equivalents.

EV/EBITDA: compares the total value of the company to its EBITDA.

EV/SALES: compares the total value of the company to its sales.

FCF (Free Cash Flow): represents the difference between operating cash flow and capital expenditures and shows the company's ability to generate shareholder's value after laying out the money required to maintain or expand its asset base. Without enough cash, it would be difficult for a company to develop new products, make acquisitions, pay dividends and reduce debt.

FFO (Funds from Operations): measures a REIT's operating performance. It is net income plus gains (minus losses) from property sale and purchase. Non-cash expenses like depreciation and amortisation are added back because value of real estate tends to rise over time rather than depreciating like other fixed assets and investments. FFO per share is often used in place of earnings per share when analysing REITs.

FY0: Realised year, **FY1:** Current unrealised year, **FY2:** next year, **FY16E:** Fiscal year 2016 estimation

GDR (Global Depositary Receipt): is very similar to an ADR. It is a bank certificate issued in more than one country for shares in a foreign company. The shares are held by a foreign branch of an international bank. The shares trade as domestic shares, but are offered for sale globally through the various bank branches.

GOODWILL: is an intangible asset that arises as a result of the acquisition of one company by another company for a premium value and can have as origin the value of a company's brand name, solid customer base, good customer relations, good employee relations and any patents or proprietary technology.

GROSS INCOME: gross profit calculated as a company's total sales minus its cost of goods sold (COGS) that corresponds to labour and production costs.

GROSS MARGIN: expresses gross income as a percentage of total sales (Gross Income/Sales*100).

IPO (Initial Public Offering): is the first sale of stock by a private company to the public to expand its growth or, sometimes, repay its debt.

LIKE FOR LIKE (LFL) GROWTH: is a measure of growth in sales, adjusted for new or divested businesses. This is a widely used indicator of retailers' performance. This adjustment is important in businesses that show a significant change through expansion, disposals or closures.

LTV (Loan-To-Value Ratio): is a financial term used to express the ratio of a loan to the value of an asset purchased. The term is commonly used by financial institutions and real estate companies to represent the ratio of the loan as a percentage of the total appraised value of real property.

NAV (Net Asset Value): is similar to book value and is also called per investment unit. NAV is the marked-to-market value of the company's property investments less liabilities.

ND (Net Debt): is calculated as a company's total debt minus cash and other similar liquid assets.

NET MARGIN: is a financial ratio which measures the profitability of the net income of a company. Formula: Net Profit/Sales.

NI (Net Income or Bottom Line): represents a company's total earnings (or profit) which is calculated by adjusting revenues for the costs, depreciation, interest, taxes and other expenses.

OPERATING MARGIN: See definition of EBIT Margin.

ORGANIC GROWTH: is the growth rate that a company can achieve by increasing its output and enhancing sales, excluding any profits or growth from takeovers or M&A activities.

Glossary (2/2)

P/E or PER (Price Earnings Ratio): reflects the trading price of a share in relation to the expected earnings. Formula: Share Price/Earnings Per Share.

P/TBVS (Price To Tangible Book Value): expresses the share price with regard to the accounting value of the company. Formula: Share Price/Tangible Book Value Per Share.

PAYOUT RATIO: is the proportion of earnings paid out as dividends to shareholders and typically expressed as a percentage. A lower payout ratio is generally preferable to a higher payout ratio. A ratio greater than 100% indicates the company is paying out more in dividends than it makes in net income.

PROFIT WARNING: is the announcement made by the company before its earnings release indicating the investors that its earnings would not meet the analysts' expectations.

RWA (Risk Weighted Assets): is a measure of the bank's assets, weighted according to their risk. It involves the risk weighting of both on and off-balance-sheet exposures. It is generally used to calculate risk-based capital ratio which is the ratio of a bank's capital to its risk weighted assets.

REVENUE GROWTH: Illustrates the growth of sales over a given period.

ROA (Return on assets): a financial ratio that is calculated as net income divided by total assets and shows how profitable a company is relative to its total assets

ROC (Return on invested capital): a profitability ratio which is calculated as net income minus dividends divided by total invested capital.

ROE (Return On Equity): The amount of net income returned as a percentage of shareholders' equity. Return on equity measures a corporation's profitability by disclosing how much profit a company generates with the money shareholders have invested.

SHARE BUYBACK (Share Repurchase): A program by which a company buys back its own shares from the marketplace, reducing the number of outstanding shares. It usually indicates that the company's shares are undervalued and pushes the share prices up. SHAREHOLDER'S EQUITY: is the amount of the funds contributed by the owners (the stockholders) plus the retained earnings (or losses).

STOCK SPLIT: is a corporate action in which the company divides its existing shares into multiple shares to make shares seem more affordable for small investors without changing the underlying value of the company.

TBV (Tangible Book Value): is the book value excluding intangible assets.

TBV/S (Tangible Book Value Per Share): allows to estimate the accounting value of a company by measuring its stockholders' equity per share. Formula: Re-valued Net Assets/Total Shares of Company.

WACC (Weighted Average Cost of Capital): also referred to as the firm's cost of capital, it is the rate that a company is expected to pay on an average to all its security holders to finance its assets.

WORKING CAPITAL: is the difference between a company's current assets and current liabilities and shows whether the company has sufficient short-term assets to cover its short-term debts.

Indices

MSCI AC WORLD: is a free float-adjusted market capitalisation weighted index that is designed to measure the equity market performance of developed markets. The MSCI World Index consists of the following 23 developed market country indexes: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, the Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, the UK, and the US (as of 2 June 2014).

MSCI AC ASIA PACIFIC: is a free float-adjusted market capitalisation weighted index that is designed to measure the equity market performance of the developed and emerging markets in the Pacific region. The MSCI AC Pacific Free Index consists of the following 12 developed and emerging market countries: Australia, China, Hong Kong, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Taiwan, and Thailand (as of 2 June 2014).

MSCI EUROPE: is a free float-adjusted market capitalisation weighted index that is designed to measure the equity market performance of the developed markets in Europe. The MSCI Europe Index consists of the following 15 developed market country indexes: Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the UK (as of 2 June 2014).

MSCI EMERGING MARKETS: is a free float-adjusted market capitalisation index that is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 23 emerging market country indexes: Brazil, Chile, China, Colombia, the Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, the Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey* and the UAE (as of 2 June 2014).

MSCI WORLD HIGH DIVIDEND YIELD: is based on the MSCI World Index, its parent index, and includes large- and mid-cap stocks across 23 Developed Markets (DM) countries (as of 31 March 2014). The index is designed to reflect the performance of equities in the parent index (excluding REITs) with higher dividend income and quality characteristics than average dividend yields that are both sustainable and persistent.

MSCI WORLD VALUE: captures large- and mid-cap securities exhibiting overall value style characteristics across 23 Developed Markets countries (as of 31 March 2014). The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 853 constituents, the index targets 50% coverage of the free float-adjusted market capitalisation of the MSCI World Index.

MSCI WORLD GROWTH: captures large- and mid-cap securities exhibiting overall growth style characteristics across 23 Developed Markets countries (as of 31 March 2014). The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend.

MSCI WORLD SMALL CAP: captures small cap representation across 23 Developed Markets (DM) countries (as of 31 March 2014). With 4,302 constituents, the index covers approximately 14% of the free float-adjusted market capitalisation in each country.

MSCI WORLD LARGE CAP: captures large-cap representation across 23 Developed Markets (DM) countries (as of 31 March 2014). With 737 constituents, the index covers approximately 70% of the free float-adjusted market capitalisation in each country.

MSCI EMEA: is a free float-adjusted market capitalisation weighted index that is designed to measure the equity market performance of the emerging market countries of Europe, the Middle East and Africa. The MSCI EM EMEA Index consists of the following 10 emerging market country indexes: the Czech Republic, Greece, Hungary, Poland, Russia, Turkey, Egypt, South Africa, Qatar and the UAE.

MSCI LATAM: captures large- and mid-cap representation across five emerging market (EM) countries (as of 31 March 2014) in Latin America. With 137 constituents, the index covers approximately 85% of the free float-adjusted market capitalisation in each country.

MSCI EMERGING ASIA: captures large and mid-cap representation across eight EM countries (as of 31 March 2014). With 537 constituents, the index covers approximately 85% of the free float-adjusted market capitalisation in each country.

MSCI RUSSIA: is designed to measure the performance of the large- and mid-cap segments of the Russian market. With 22 constituents, the index covers approximately 85% of the free float-adjusted market capitalisation in Russia.

MSCI BRAZIL: is designed to measure the performance of the large- and mid-cap segments of the Brazilian market. With 70 constituents, the index covers about 85% of the Brazilian equity universe.

MSCI INDIA: is designed to measure the performance of the large- and mid-cap segments of the Indian market. With 64 constituents, the index covers approximately 85% of the Indian equity universe.

Euro Stoxx 50: is the leading blue-chip index for the eurozone and provides a blue-chip representation of supersector leaders in the Eurozone. The index covers 50 stocks from 12 Eurozone countries. The Index is licensed to financial institutions to serve as underlying for a wide range of investment products such as Exchange Traded Funds (ETF), Futures and Options and structured products.

FTSE 100: comprises the 100 most highly capitalised blue chip companies, representing approximately 81% of the UK market. It is used extensively as a basis for investment products, such as derivatives and exchange-traded funds.

S&P 500: includes 500 leading companies in the leading industries of the US economy. It is a core component of the US indices that could be used as building blocks for portfolio construction. It is also the US component of S&P Global 1200.

Nikkei 225: is the leading index of Japanese stocks. It is a price-weighted index comprised of Japan's top 225 blue-chip companies on the Tokyo Stock Exchange. The Nikkei is equivalent to the Dow Jones Industrial Average Index in the US.

Sources: FactSet, Bloomberg, MSCI global equity indexes, SGPB

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SG acted as joint bookrunner in Schneider Electric's bond issue (EUR, 8yr).

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