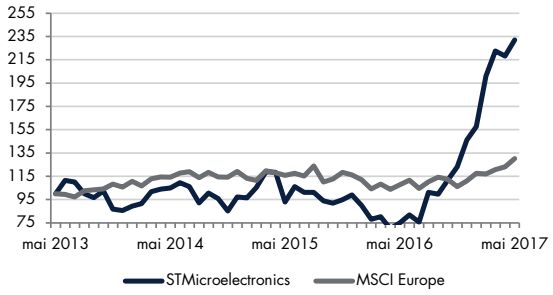
IAM
Independent Asset Management

STMicroelectronics

Market profile

Country	France
Sector	Technology
Industry	Semiconductors
Price (EUR)	15
52-week high	15
52-week low	5
Market Cap (mn)	13'530
Avg. daily volume	2'331'600
Beta	1.3
ISIN	NL0000226223



Key metrics

	2016	2017e	2018e		2016	2017e	2018e
EPS	0.29	0.703	0.917	PE	39.2x	23.5x	18.0x
YoY Growth	53%	142%	30%	EV/EBITDA	8.3x	7.9x	6.7x
Dividend yield	2.1%	1.5%	1.6%	EBIT Margin	2.5%	9.8%	11.4%

Executive Summary

STMicroelectronics is a global leader in the semiconductor market, serving a large range of customers across different areas.
The company's products are used in a wide variety of applications, which can be broadly grouped into three areas:

1. automotive systems
2. industrial systems
3. consumer connected devices

STMicroelectronics is a very diversified company. For this reason it competes with a wide variety of semiconductor companies. This diversified positioning is both a blessing and a curse. STMicroelectronics will never be able to grow as fast as focused competitors. On the other hand, it will never falter. STMicroelectronics now prides itself not to depend on any one client, as no single customer accounts for more than 10% of sales.
One very important opportunity for STMicroelectronics is clearly the smartphone. While Apple has democratized the smartphone, STMicroelectronics is present in almost all smartphones manufactured worldwide.

Currently, the big debate is wether STMicroelectronics' semiconductor content can increase within smartphones, and especially in Apple's upcoming iPhone 8. For obvious competitive reasons, STMicroelectronics is not allowed to divulge such confidential information. Nevertheless, the company has stated that they would need to invest massively in new capital expenditures in 2017 for a new programme. STMicroelectronics' revenue growth and EBIT margins have been very inconsistent over time. This is firstly due to the high cyclicality inherent to the semi-cronductor industry. But in particular, the reason has been STMicroelectronics' lack of focus and over-diversification, all while holding on to loss making businesses much too long. In 2018, the company will appoint a new CEO and there are high hopes that he will be able to refocus the company and increase margins to competitor levels. Looking purely at the stock price, we can see that the stock tripled since a year ago! This incredible feat has mostly been due to increasing earnings estimates. As such, when we look at the forward 12 months price/earnings ratio, we see that the stock is not as expensive as first feared.

STMicroelectronics

Daniel Pfund, Senior Financial Analyst, Fund Manager **May 2017**

Business description

STMicroelectronics is a global leader in the semiconductor market, serving a large range of customers across different areas. The company's strategy takes into account the evolution of the markets they serve and the environment and opportunities they see for the years to come. STMicroelectronics focusses on developing industry-leading products and solutions for the application areas which are expected to experience solid growth rates driven by long-term trends affecting peoples' lives. These trends include population ageing and concentration in cities, ubiquitous connectivity, and the need for more energy efficiency across all applications.

The company's products are used in a wide variety of applications, which can be broadly grouped into three areas:

1. automotive systems
2. industrial systems
3. consumer connected devices

STMicroelectronics products enable smarter driving by making vehicles safer, more environmentally friendly and more connected. The company also helps make smarter homes, cities, workplaces and factories in which things can be done more efficiently and flexibly, in a more sustainable manner, safer and with a better experience for the people at the center. STMicroelectronics' semiconductors enable creators of smart connected consumer devices to develop and bring to market their devices quickly and efficiently. The goal of STMicroelectronics is that their products can be found everywhere microelectronics make a positive and innovative contribution to people's lives *(Fig. 1)*.

History of the company

STMicroelectronics N.V was formed and incorporated in 1987 as a result of the combination of the semiconductor business of SGS Microelettronica (then owned by Società Finanziaria Telefonica (S.T.E.T.), an Italian corporation) and the non-military business of Thomson Semiconducteurs (then owned by the former Thomson-CSF, now Thales, a French corporation).

The company completed its initial public offering in December 1994 with simultaneous listings on the Bourse de Paris (now known as "Euronext Paris") and the New York Stock Exchange. In 1998, the company also listed their shares on the Borsa Italiana S.p.A. The company operated as SGS-Thomson Microelectronics N.V. until May 1998, when they changed their name to STMicroelectronics N.V.

Geographic exposure

STMicroelectronics' sales per geography are disclosed by the company, but since these products are semiconductors, the countries in which they are sold is not necessarily equivalent to the countries where they will be used and assembled into end products. Most likely, the sales occur in these countries for tax reasons. It is indeed surprising to find Singapore responsible for over half of STMicroelectronics' revenues *(Fig. 2)*.

Industry Overview & Competitive positioning

STMicroelectronics is a very diversified company. For this reason it competes with a wide variety of semiconductor companies and it is difficult to measure its market share. This diversified positioning is both a blessing and a curse. STMicroelectronics will never be able to grow as fast as focused competitors. On the other hand, it will never falter. This over diversification stems from their prior reliance on one big customer (Nokia) who quickly lost market share. STMicroelectronics now prides itself not to depend on any one client, as no single customer accounts for more than 10% of sales.

STMicroelectronics is well positioned in growing markets. Smart Driving is not just a fad, as cars integrate more and more semiconductor content each year. The

figure 3 on page 4 shows that electronic components have continuously taken a larger proportion of vehicule costs .

STMicroelectronics has a strong commitment to the automotive vertical. The *figure 4* depicts STMicroelectronics' offer in this segment

Revenues from the automotive industry represent 32% of STMicroelectronics' total. The company estimates they have a 9% market share in this vertical.

Another fast growing segment is the "Internet of Things", a generic name for any device connected to the Internet. These devices need very specific semiconductors, especially for power management or very specialized sensors such as gyroscopes, accelerometers or pressure sensors. STMicroelectronics is able to furnish such highly complex semiconductors in this area *(Fig. 5)*.

One very important opportunity for STMicroelectronics is clearly the smartphone. While Apple has democratized the smartphone, STMicroelectronics is present in almost all smartphones manufactured worldwide as *figure 6* shows:

Currently, the big debate is wether STMicroelectronics' semiconductor content can increase within smartphones, and especially in Apple's upcoming iPhone 8.

For obvious competitive reasons, STMicroelectronics is not allowed to divulge such confidential information. Nevertheless, the company has stated that they would need to invest massively in new capital expenditures in 2017 for a new programme. Capex would increase temporarily between 1.0 and 1.1 billion USD in 2017 for a "newly won program which will ramp substantial revenues in the second half of 2017". Capex should return to a long-term average of 10% of sales or below in 2018.

Sell-side analysts speculate that this new programme is for 3D sensing, which could replace the current Time of Flight technology. If this turns out to be true, the revenue content per iPhone could more than double, which of course would be a strong growth contributor to STMicroelectronics' top-line.One very promising technology that has yet to be mass adopted is virtual reality. This is another area where STMicroelectronics is present with different sensing semiconductors. Virtual Reality will allow various new experiences as depicted in *figure 7*.

Financial Analysis

Growth

Even though STMicroelectonics is a high-tech company, its revenues have not enjoyed a classical growth rate. As the following chart demonstrates, the company's revenues have on the contrary been quite erratic since the start of the millennium. The compound average growth rate is only 0.7% over the last 15 years. The reason for this erratic growth profile comes from management's strategic decisions to close down businesses and change focus. In the past, the company has been active in unsuccessful areas such as set top boxes, as well as in joint ventures that have since been closed down (ST-Ericsson was dissolved in 2013). Why did management have to take such radical decisions? As we will discuss in the next section, it was due to inadequate financial margins. The ST-Ericsson JV has always struggled to break-even, and it was in the best interest to shut down this unprofitable business (Fig 8) .

Margins

Figure 9 depicts STMicroelectronics' operational (EBIT) margin over time.

As we can see, STMicroelectronics' EBIT margins have been very inconsistent. This is firstly due to the high cyclicality inherent to the semiconductor industry. But in particular, the reason has been STMicroelectronics' lack of focus and over diversification, all while holding on to loss making businesses much too long. This is probably a cultural issue, as it is not easy to shutdown factories in France or Italy. Essentially, this means that the business is mostly a fixed cost business. On the upside, this gives hope that operational leverage could once again push margins up again close to double digits. Management has stated that they want to achieve EBIT margins of 10%. This could seem like an ambitious target, as the company was only able to achieve this level once in 2002, but now that the company has got rid of loss making divisions, it seems achievable.
The sell-side analyst consensus also believes that the company can achieve this margin, as it predicts a le-

Text continue on page 7 >>

Fig. 1: STMicroelectronics' end markets
Source: STMicroelectronics

Fig. 2: Company sales by geography (USD Mio)
Source: Company data, IAM Research

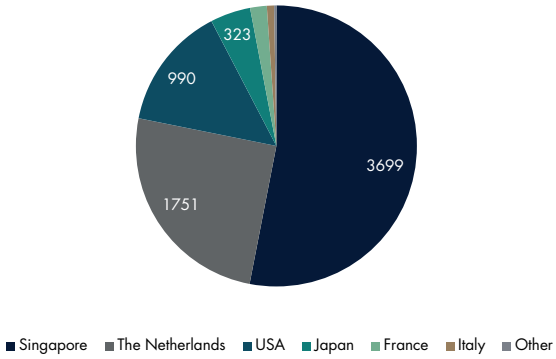


Fig. 3: Electronic component as % of vehicule cost
Source: pwc.de

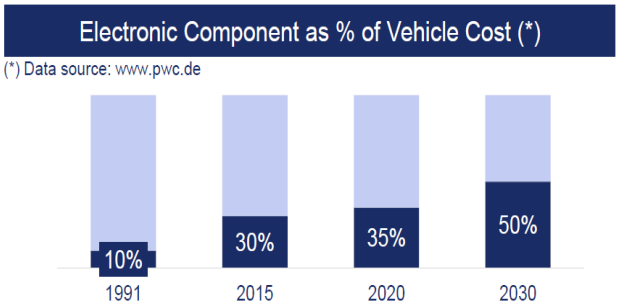


Fig. 4: Smart Driving solutions from STMicroelectronics
Source: STMicroelectronics

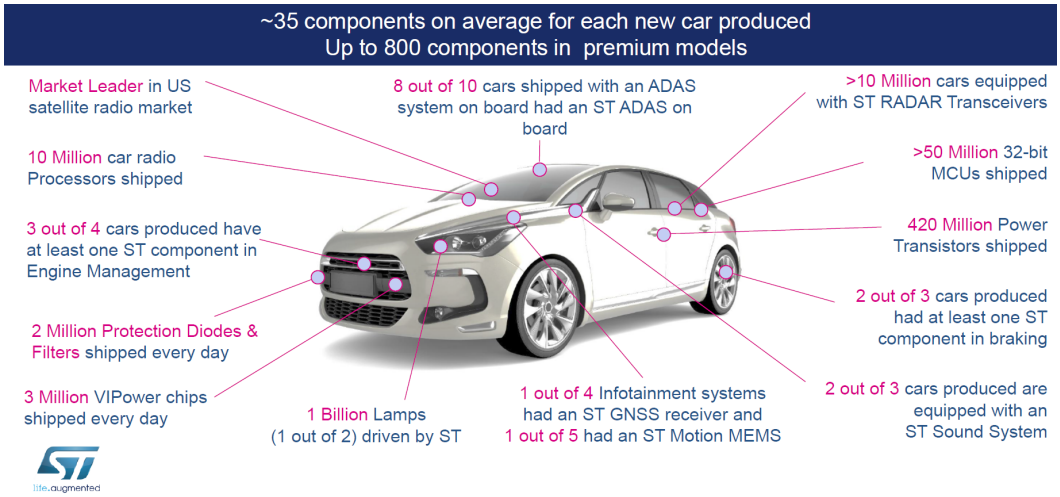


Fig. 5: «Internet of Things» semiconductors
Source: STMicroelectronics

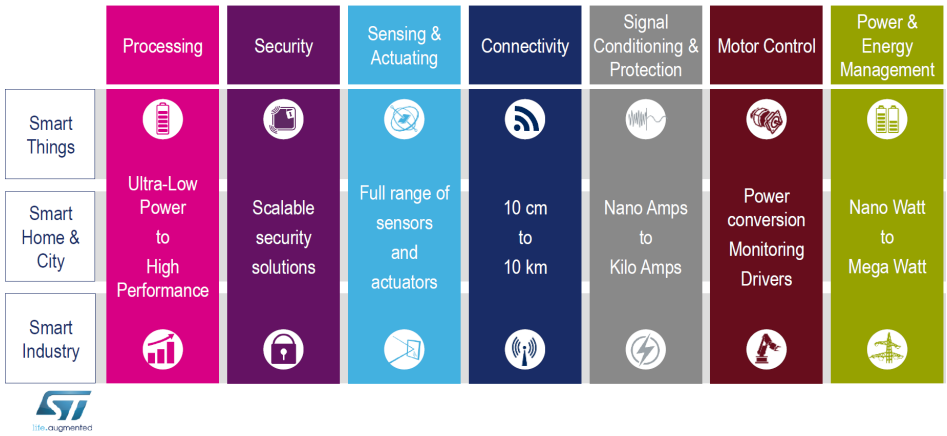


Fig. 6: Smartphone clients
Source: STMicroelectronics

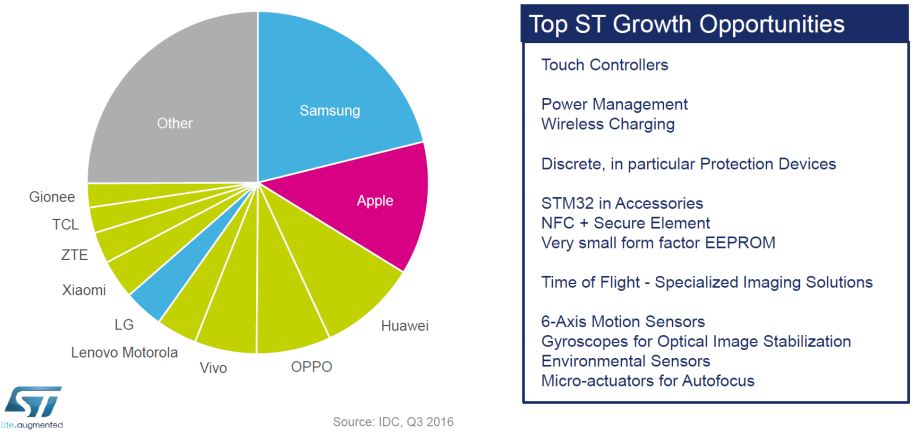


Fig. 7: Virtual Reality Experiences
Source: STMicroelectronics

Fig. 8: Company revenues over time (USD Mio)
Sources: Company data, IAM Research

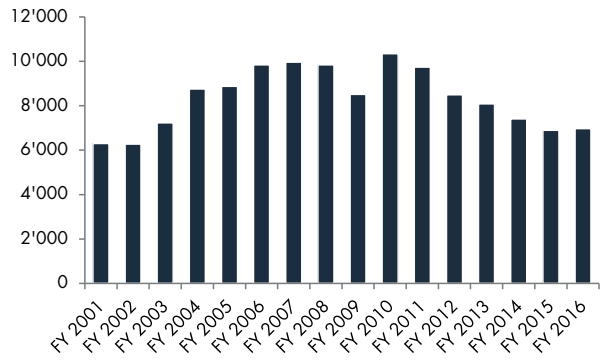


Fig. 9: Company EBIT margin over time
Sources: Company data, IAM Research

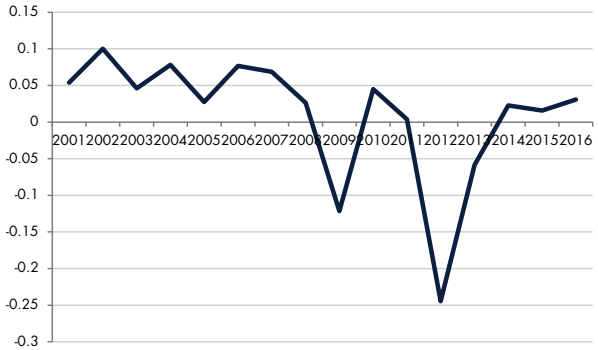


Fig. 10: Company dividend per share over time (USD)
Sources: Company data, IAM Research

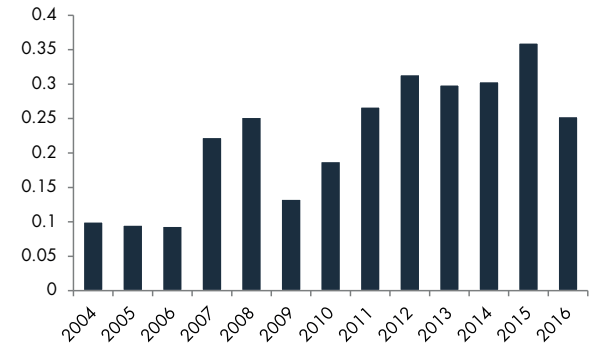


Fig. 11: Company cash flow over time
Sources: Company data, IAM Research

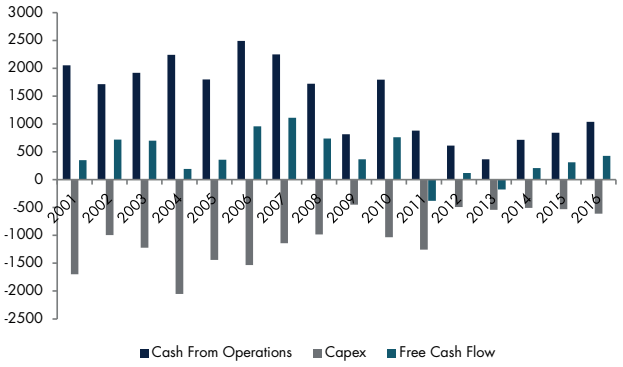


Fig. 12: Company net debt over time (USD Mio)
Sources: Company data, IAM Research

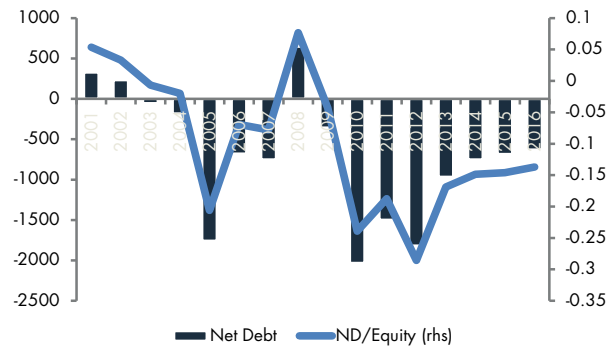
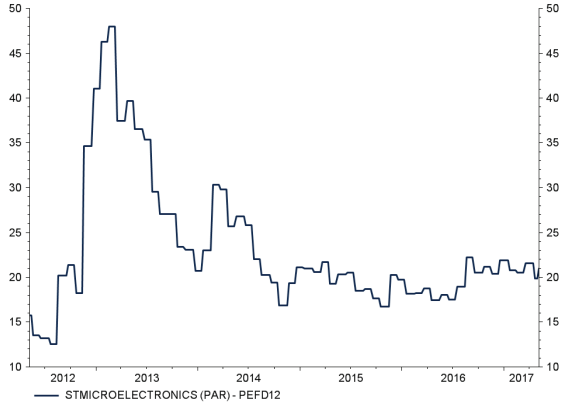


Fig. 13: Company 12M forward P/E over time
Sources: Company data, IAM Research



vel of 11.4% in 2018. This is one of the main reason to invest in STMicroelectronics. The other being that a new CEO will come in 2018 and is widely expected to focus the company.

For comparison, a competitor like Infineon was already able to achieve an EBIT margin of 11.8% in 2016. Even smaller companies such as swiss listed AMS are able to achieve consistent double digit EBIT margins, so with STMicroelectronics' size, it's just a matter of focus to also achieve such margins.

Dividend

STMicroelectronics has continuously paid a dividend, even in loss making years. The *figure 10* shows the dividend per share (in USD) over time.

One reason to continue paying dividends in loss making years may be due to the strong French and Italian government holdings, which together mount to 27.5% of total shares outstanding.

Free Cash Flow

Free Cash Flow has been positive since 2001, expect for two years (2011 and 2013), as depicted in the *figure 11.*

2011 was a special year with natural disasters in Japan and Thailand affecting the whole semiconductor industry.

2013 was a disruptive year specific to the company when the ST-Ericsson JV was dissolved.

Balance Sheet

Probably because the semiconductor industry is a cyclical business, management has always tried to remain prudent with their financial leverage. The tech industry in general abhors debt, and STMicroelectronics is no different.

Figure 12 shows the net debt position, or as the bars are negative, more appropriately the net cash on STMicroelectronics' balance sheet.

Investment case

STMicroelectronics estimates that its serviceable available market amounts to 156 billion USD (compared to the company's revenues of close to 7 bn USD). That would mean that STMicroelectronics only has a 4.5% market share overall. We would highlight that this weak market share is once again the result of STMicroelectronics' broad diversification. If the company were more focused, it could easily gain market share, at the expense of more cyclicality.

The investment case for the company relies on greater focus, new markets (higher revenues) and in fine, better margins. We think the company is on the verge of a new smartphone upgrade cycle, and the company agrees. STMicroelectronics has stated that the new program will amount to hundreds of millions of new revenues per year. This is not surprising, as Apple alone has sold over 201 million iPhones in 2016. If STMicroelectronics' chip is sold only for a couple of dollars, the huge number of units quickly amounts to hundreds of millions in revenues. And we need to keep in mind that this chip is not exclusive to Apple, as STMicroelectronics sells its chips to all major phone makers. There is also the possibility that STMicroelectronics increases their content by selling a module for 5 to 6 USD instead of just a single chip.

The sell side analyst consensus estimates that revenues should grow 10% in 2017 and then 10% again in 2018, with operating margins reaching 9.8% in 2017 and 11.4% in 2018.

Valuation

Looking purely at the stock price, we can see that the stock tripled since a year ago! This incredible feat has mostly been due to increasing earnings estimates. As such, when we look at the forward 12 months price/earnings ratio, we see that the stock is not as expensive as first feared. In 2017, the P/E has in fact remained stable while the stock price advanced by over 40%! (Fig. 13).

Predicting the correct EPS is very difficult, but it seems like the current consensus is still too low. Applying a P/E of 20x to that EPS seems like a fair multiple, as that would imply a P/E to growth (PEG) ratio of 2. The most bullish analyst believes that STMicroelectronics

can achieve an EPS of 1$ in 2017, implying a year end target price of 20$, or 18 EUR.

Risks

STMicroelectronics prides itself on its very high research and development (R&D) spend. R&D represented indeed 1.1 billion USD in 2016, or the equivalent of 16.1% of sales. R&D spend is in fact the highest cost for the company, as one employee in five is active in the R&D department.

But it must be noted that R&D spend is partly funded by government grants. STMicroelectronics also receives certain project-related research tax credits in the French tax jurisdiction. The overall government funding and tax credits could disappear if the governments disengage in their shareholding.

Other relevant considerations

Management and major shareholders

M. Carlo Bozotti is the current CEO since 2005. He will turn 65 years old in 2017 and will be replaced in 2018 (originally thought to be in May 2017, but he extended his contract for one year). The company also describes M. Bozotti as the "sole member of our Managing Board". There are high hopes for an external CEO to come and refocus the company. Rumors have surfaced that M. Eric Meurice would be the chosen external CEO. M. Meurice was a very successful CEO of ASML for 10 years and then chairman.

The main fear is that the new CEO appointment will be a political decision, based on a compromise between the French and Italian governments which together hold 27.5% of the shares. This could result in a CEO lacking industry experience and expertise.