European Equity Strategy
ECB Corporate Bond buying – Impact on Equities

Equity Strategy

Europe including UK

Nick Nelson
Strategist
nick.nelson@ubs.com
+44-20-756 81960

Karen Olney, CFA
Strategist
karen.olney@ubs.com
+44-20-7568 8944

Joao Toniato
Strategist
joao.toniato@ubs.com
+44-20-756 74657

Andras Nagy, CFA
Associate Strategist
andras-a.nagy@ubs.com
+44-20-7568 3577

Kathleen Middlemiss
Analyst
kathleen.middlemiss@ubs.com
+44-20-7567 3574

Ramin Nakisa
Strategist
ramin.nakisa@ubs.com
+44-20-7567 6861

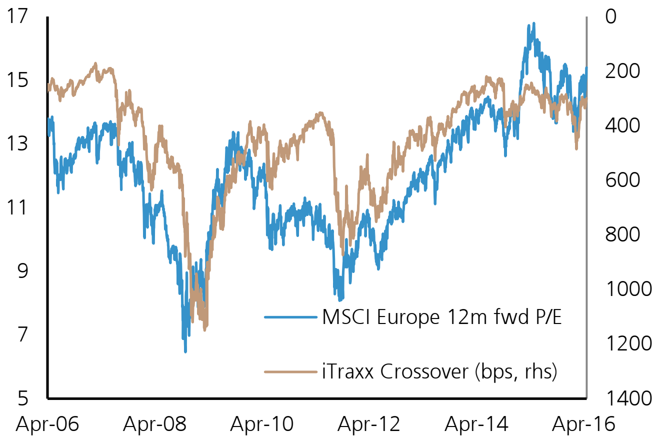
How big might the ECB corporate bond buying program be and will it matter?
Our Credit Strategy team estimate the size of the addressable market as c.€726bn and potential ECB purchases (if in line with those of covered bonds) at c.€8bn or 1% of that universe per month. Additionally, the intention to buy out to 30yrs maturity and up to 70% of an issue suggests a serious commitment. They believe the program will be meaningful and will likely lead to further spread tightening, particularly in lower rated IG and also generate more supply and longer dated issuance (see link).

What does it mean for European Equities?
As credit spreads tighten, this tends to lead to higher P/E multiples (Figure 1). We see a "real world" impact on the ability for corporates to borrow. European companies (BBB) can now borrow at c.1.5% and some significantly lower. The gap between the dividend yield and BBB corporate credit yield has almost doubled in 2yrs (Figure 2). To date, European companies have not followed the US lead for large scale buybacks; this is in part due to a weaker earnings backdrop, differing regulation and a preference for dividends. But this may change at the margin if underlying earnings turn and given the effect of the ECB purchasing program.

Which sectors are the most exposed?
The most leveraged sectors are Telecoms and Utilities. Utilities also have the largest amount of eligible bonds for purchase (23% of total). But we also highlight the sectors that have high leverage combined with exposure to the economic cycle – such as Transport, Cap Goods and Materials. Although the ECB is not buying Bank debt, Banks are also highly correlated and have lagged the recent tightening in credit spreads.

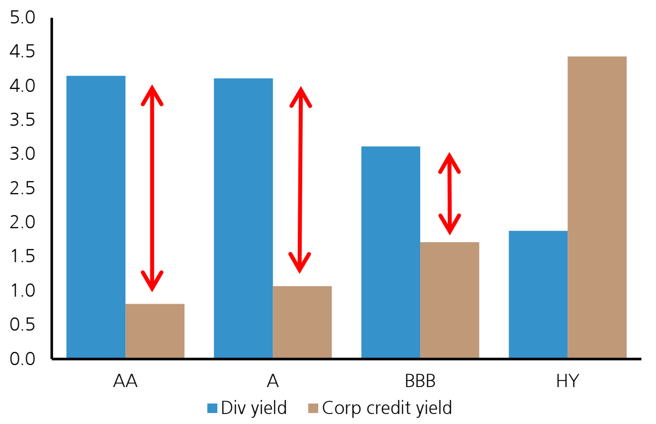
Which stocks are likely to be beneficiaries?
We screen for European stocks most correlated to tightening credit spreads (ING and Renault) and separately, those most leveraged (EDP, TEF, KPN), full list pg. 10-11.

Figure 1: MSCI Europe: 12m fwd P/E ratio vs iTraxx Crossover (inverse)



Source: Thomson Datastream, UBS European Equity Strategy

Figure 2: Europe: Dividend Yield vs Credit Yield Gap



Source: Bloomberg, Datastream, UBS European Equity Strategy

What does ECB buying corporate bonds mean for Equities?

ECB corporate bond buying program: What are they going to buy?

For more details please see our Credit Strategy team's report written by Kathleen Middlemiss and Ramin Nakisa: Global Credit Comment - ECB CSPP: Additional details 26 April 2016

Last week the ECB provided more clarity around the Corporate Sector Purchase Program (CSPP) which is to begin in June. They will buy Investment Grade credit issued by euro zone entities with a maturity of 6 months to 30 years. Work done by our Credit Strategy team suggest this means an addressable market of c.€726bn of over 1,000 individual bonds. Although they will not include Bank debt they will be able to buy Insurance company debt.

Our Credit Strategy team think that the addressable market of IG bonds for purchase is c.€726bn

How much might they buy?

Our Credit Strategy team suggest that they might spend around 10% of the monthly €80bn purchases on corporate bonds (a similar amount to the ratio spent on covered bonds). That would suggest c.1% per month of the €726bn addressable market. The fact that they can go up to 70% in a single issue is another sign that this is likely to be a meaningful program.

…they estimate the ECB might buy c.1% of that market per month…

What might be the impact on credit markets?

The week after the announcement at the March ECB meeting there was the highest Euro IG issuance on record at c. €30bn and we expect issuance to continue to be strong. The inclusion of bonds out to 30 years could also push issuers to print paper at the longer end of the maturity curve.

…putting further downward pressure on yields (particularly lower-rated IG issues) and also attracting new supply

Lower-rated IG issues are likely to be more positively impacted in the near term as investors reach further down the credit curve for yield. Even high-yield funds have benefited strongly.

Below we highlight the implications for European equities at a market, sector and stock level:

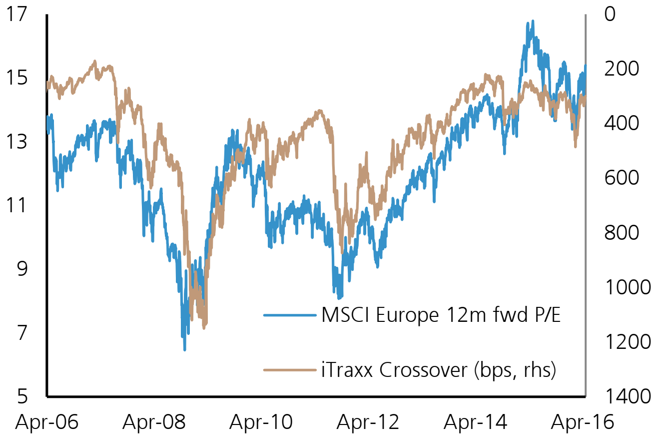
(i) Higher risk appetite, lower volatility and higher P/E multiples…

There has been a reasonable correlation between the P/E multiple the market has been prepared to pay for European equites and the inverse of the iTraxx crossover (CDS index for sub-investment grade credit in Europe). The indirect effect of higher risk appetite as credit spreads tighten has been helpful for equities.

Lower credit spreads have tended to drive higher P/E multiples…

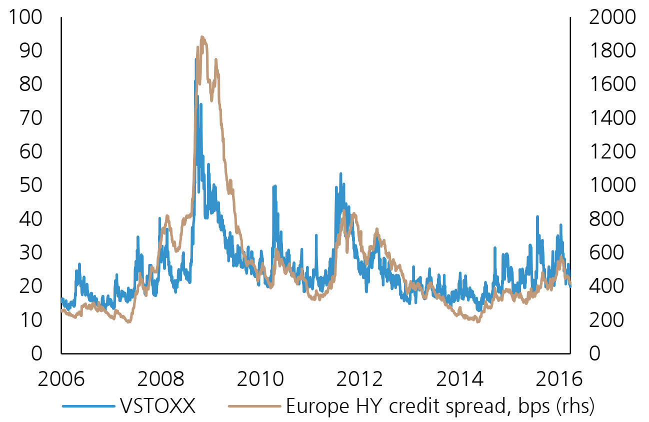
Just looking at the historic relationship between the iTraxx and the P/E suggests that all else equal 100bps fall in the iTraxx adds close to 1 point to the P/E multiple (although this may not be a linear relationship – see Appendix for more details).

Figure 3: MSCI Europe: 12m fwd P/E ratio vs iTraxx Crossover (inverse)



Source: Thomson Datastream, UBS European Equity Strategy

Figure 4: VSTOXX vs EU High Yield Credit spread



Source: Thomson Datastream, UBS European Equity Strategy

(ii) Cheaper funding for corporates

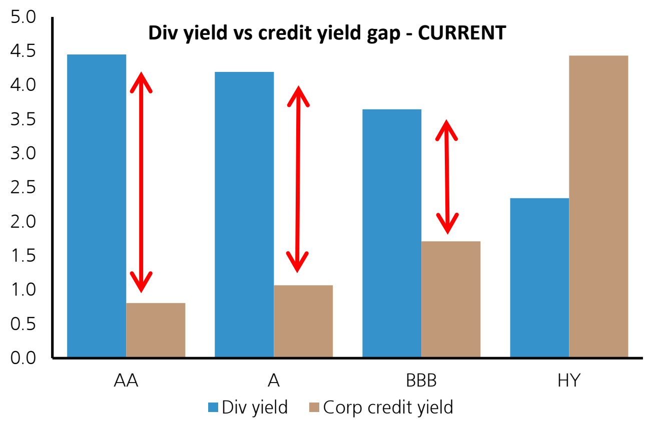
There is another impact on the equity market via the ability for corporates to raise funding at a cheaper level. Whilst the impact of using current sovereign bond yields as a lower risk free rate in a long term DCF model is fraught with complexities and contradictions, the ability of companies to issue debt today at an incredibly low cost is a very real one. Recent examples include Unilever issuing a 4 years zero coupon bond with a yield to maturity of 8bps, Telefonica issuing a 6yr maturing with a 75bps coupon and also longer-dated bonds – such as Sanofi borrowing €700m at 1.20% for 12 years.

There is also a very real impact on the cost of funding for corporates

We have run bottom-up analysis of where companies have higher dividend yields relative to their corporate credit yields, splitting the universe by credit rating. We have taken the average 12m fwd DY for the Stoxx 600 stocks in that credit rating and compared it to the iBoxx EUR corporates all maturities yield.

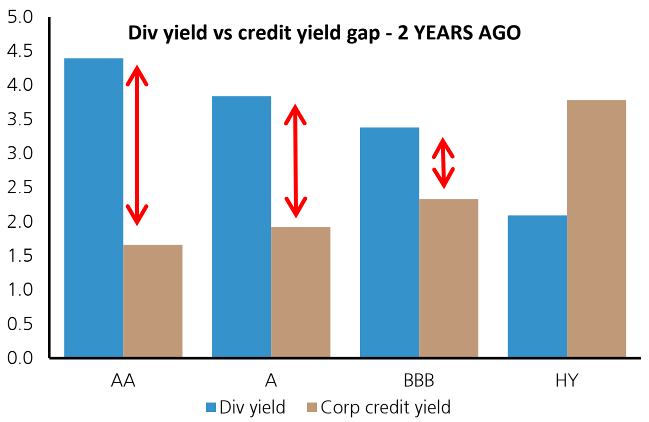
The gap between BBB dividend yields and credit yields has almost doubled from 100bps 2 years ago to 190bps now.

Figure 5: European Dividend yield vs credit yield gap - CURRENT



Source: Bloomberg, Datastream, UBS European Equity Strategy

Figure 6: European Dividend yield vs credit yield gap - 2 YEARS AGO



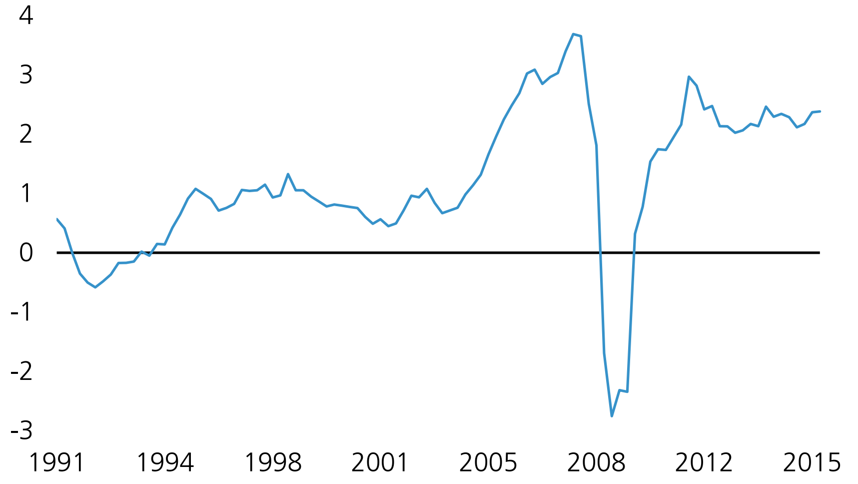
Source: Bloomberg, Datastream, UBS European Equity Strategy

Why are European companies not buying back more shares?

One thing that many international investors ask is why don't European companies buy back more shares? In contrast to the US, European companies have not yet embarked upon an aggressive buyback campaign to shrink the outstanding shares and enhance earnings per share growth. Data below from our US Equity Strategy team shows the sustained and high level of buybacks in the US running at 2.4% of market cap at the end of last year, net of issuance. In Europe we estimate that number was close to 0%.

In contrast with the US, European companies are not buying back shares aggressively

Figure 7: S&P 500 Net Buyback Yield (%)

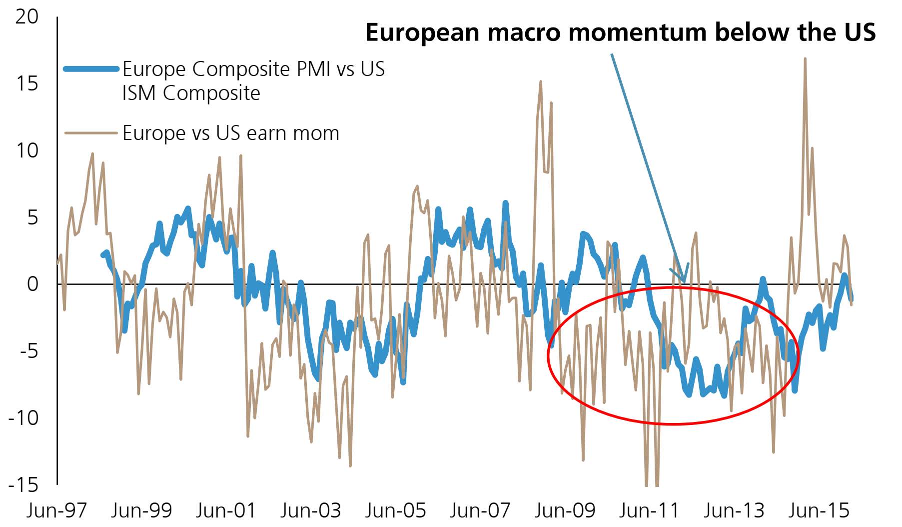


Source: UBS US Equity Strategy, FactSet

We believe there are three reasons for this:

(1) Less confidence in the cycle in Europe. The US economy recovered earlier than the Eurozone and avoided the second recession and Eurozone debt crisis. Corporate management don't want to leverage up balance sheets just ahead of another downturn. But this may be turning, and certainly relative to the US the gap seems to be closing.

Figure 8: Europe Composite PMI minus US ISM Composite Index and relative earnings momentum



Source: Datastream, UBS European Equity Strategy

(1) Europe has lagged behind the US on macro and earnings momentum

This also fits with less enthusiasm for investing in capex – our recent proprietary Evidence Lab survey of 600 Eurozone companies suggested relative limited appetite for the re-gearing balance sheets and expanding capex. *For more details please see our joint Evidence Lab report we published with our Economics team earlier this year:* Evidence Lab: Is Eurozone investment turning? 10 March 2016

(2) More regulation in Europe surrounding buybacks

(2) The process in Europe and regulations surrounding buybacks vary from country to country but in many cases seem to be significantly more onerous and restrictive than those in the US. *For more details please see Appendix 2.*

(3) A higher dividend yield in Europe

(3) Culturally in Europe dividends appear to be very important. There is a reliance by income funds, retirees, individuals, for yield and in the past this has tended to come from dividends rather than share buybacks. The 2016 dividend yield for the Stoxx 600 is 3.7% vs 2.2% for the S&P 500. But if we add together the dividend yield and the buyback yield for the US and Europe they are roughly similar.

But a turn in underlying earnings growth and ability to borrow out to 30yrs may change this…

But some of these factors may be changing: the European macro momentum and underlying earnings may be stabilising. At the same time, given that the ECB are likely to include bonds up to 30yrs in the program, this may lead to European corporates extending the duration and locking in low rates for the future to give themselves options.

Which Sectors benefit?

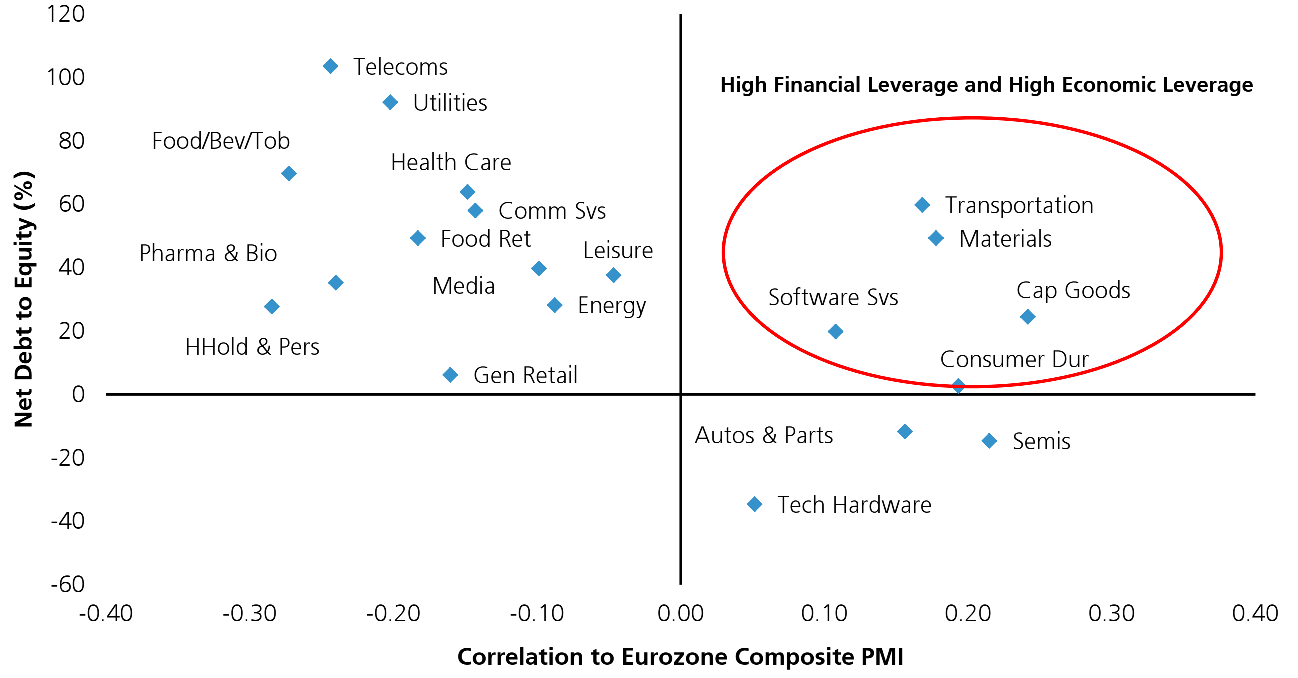
In general, the less cyclical the sector the more leverage the sector can carry. This means that the most leveraged sectors are defensives - Utilities and Telecoms. But there are also sectors where there is high leverage *combined* with cyclicality, such as Transport, Materials and Cap Goods. These are also the sectors that tend to correlate best with the move in credit spreads (*see Figure 9*).

The most leveraged sectors are Telcos and Utilities…

Cross-checking this with the work our Credit Strategy team have done on the addressable market, suggests that the sectors where the ECB is likely to do the most buying are the Utilities, Consumer Non-Cyclical and Telecoms. Combining the credit quality with the sector, BBB corporate bonds issued by Utilities make up the biggest percentage of the bonds available for purchase. *Please see Figure 18 in Appendix for the detailed breakdown.*

…but the biggest beneficiaries may be sectors that are leveraged *and* cyclical – such as Transport, Materials and Cap Goods

Figure 9: European Sectors: Financial Leverage (Net Debt / Equity) vs Economic Leverage (correlation to PMIs)



Source: Datastream, UBS European Equity Strategy, UBS European Market Map

Banks – A Special Mention

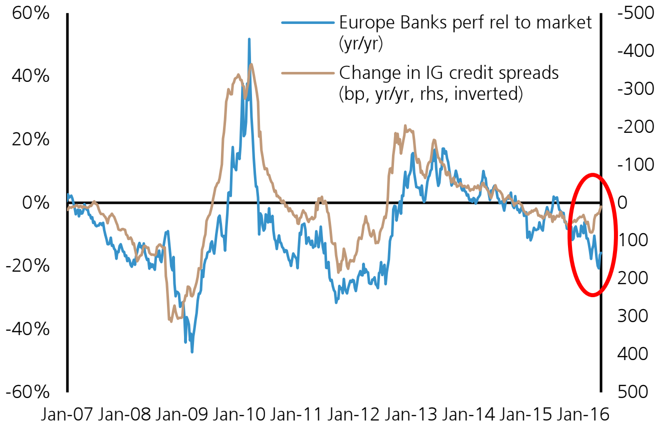
Although the Banks sector does not appear in the scatter chart above given no comparable data for leverage, clearly the sector is one of the most if not the most geared sectors and in many ways is tied to credit yields. Indeed, the relative performance has recently lagged behind that suggested by the move in credit markets.

Banks have had a high correlation to the move in credit spreads…

Banks credit spreads peaked at the market low (February 11). Since then Banks subordinated debt spreads have come in sharply - from 270bps to 190bps.

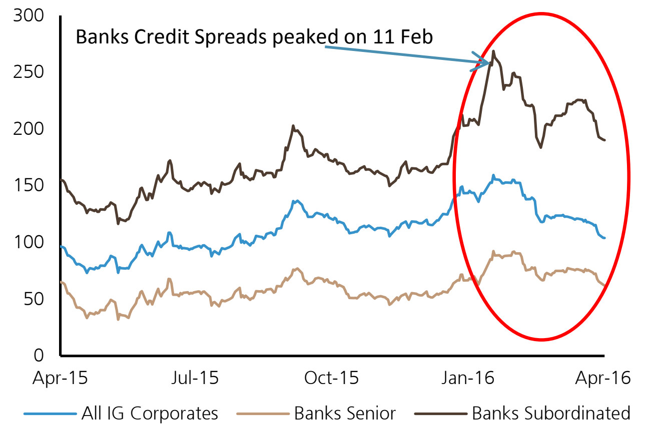
…and cost of borrowing has fallen sharply since Feb 11

Figure 10: European Banks: Relative performance vs the market (%, yoy) vs the Change in IG corporate credit spreads (%, yoy)



Source: Datastream, UBS European Equity Strategy

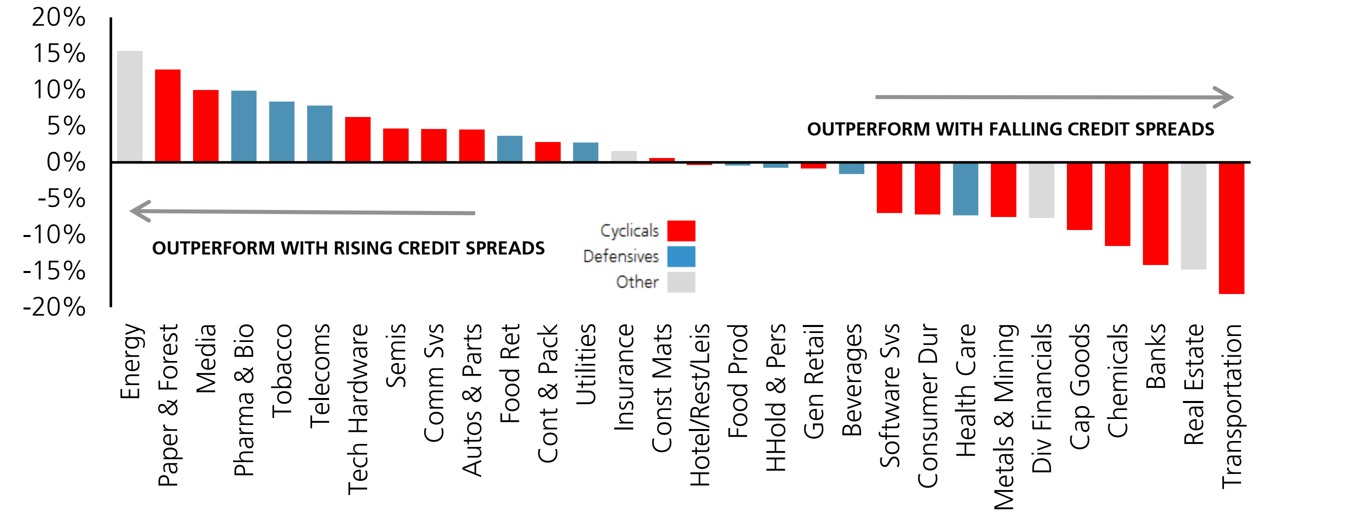
Figure 11: European Banks: Credit Spreads (bp) – tightening since Feb 11



Source: Datastream, UBS European Equity Strategy

Sectors that are both financially leveraged *and* economically cyclical tend to be the best performers as credit spreads tighten: Transport, Real Estate, Banks, Chemicals and Cap Goods.

Figure 12: European Sectors: Correlation to IG corporate credit spreads (since 1999)



Source: Datastream, UBS European Equity Strategy

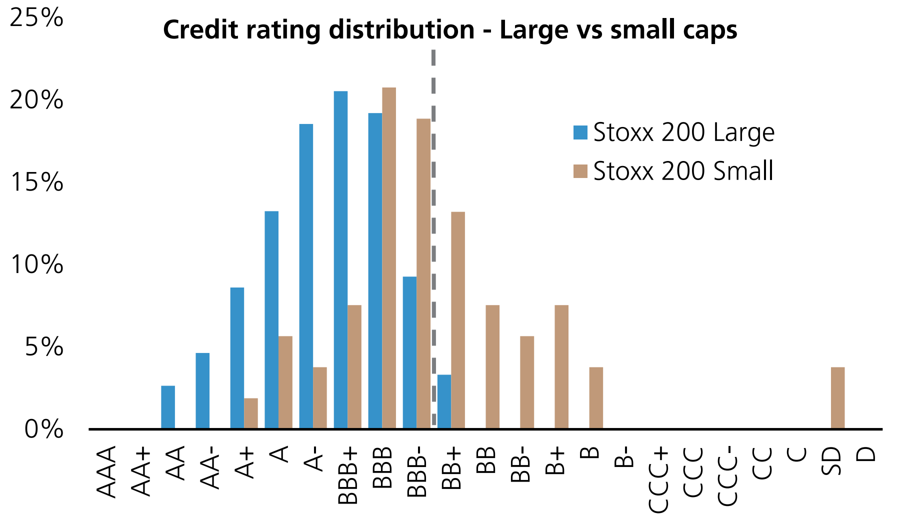
Are Small Caps likely winners?

Small Caps are more leveraged….

At first sight Small Caps appear to be likely winners: they are more leveraged than large caps, tend to be more cyclical and are more domestically exposed.

Small caps are more leveraged than large caps

Figure 13: European Small Caps vs Large Caps Credit Ratings



Source: Bloomberg, UBS European Equity Strategy

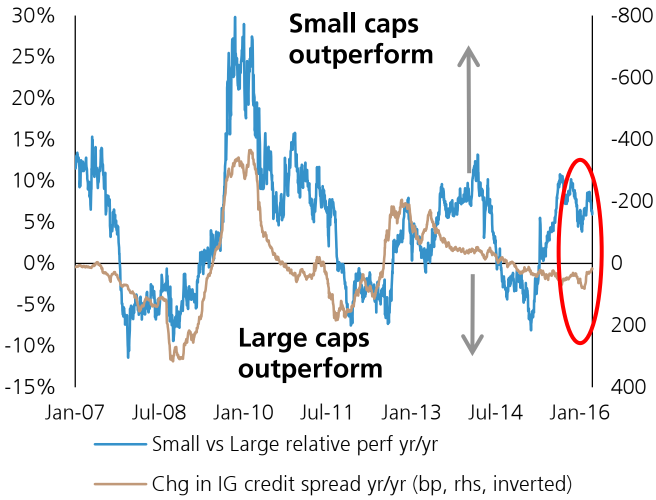
But Small Caps have already outperformed…

But they have already outperformed relative to credit spreads and valuations are at a premium

But small cap outperformance has already moved ahead of the tightening in credit spreads – see Figure 14 - and may have been driven more by sector effects (low weights in energy, commodities and financials) which could now be reversing.

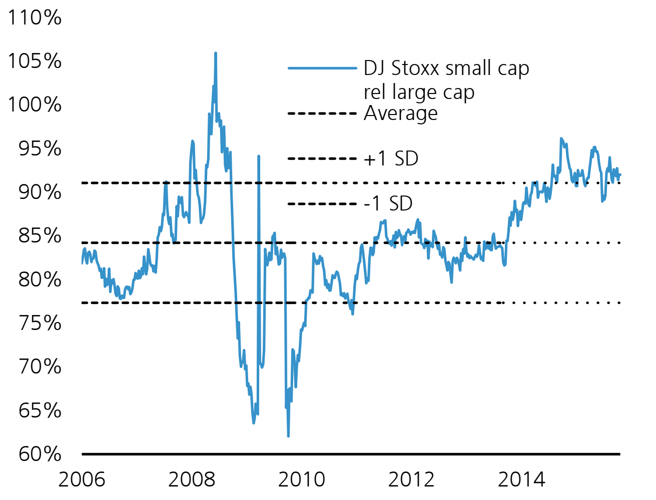
Additionally the valuation of small caps relative to large caps is somewhat stretched at 1 standard deviation above the 10 year average, but with better earnings momentum (again likely due much to sector mix).

Figure 14: Small Caps vs Large Caps relative performance and change in IG Credit



Source: Datastream, UBS European Equity Strategy

Figure 15: Small Caps vs Large Caps: 12m fwd P/E relative



Source: Datastream, UBS European Equity Strategy

Stock Screens:

(1) Most correlated to tightening of credit spreads

We screen for European stocks that have had a high correlation to the move in credit spreads. Whilst this is purely a quantitative screen, it highlights some interesting names. In general, this reflects sectors that are leveraged and also exposed to the economy.

Figure 16: European Stocks most correlated to tighter credit spreads

Name	Sector	Mkt Cap (EUR bn)	Price (p)	Upside to PT	UBS rating	P/E 2016	DY 2016	P/E rel to sector (%) 2016	12m relative performance (%, EUR)	Correlation with credit spreads
ING	Banks	43.2	11.2	30%	Buy	9.5	6.4	59.9	-14.6	**-0.30**
KBC	Banks	20.8	49.8	-6%	Neutral	10.8	5.6	77.3	-11.9	**-0.27**
Renault	Autos	23.9	87.7	25%	Buy	6.9	3.7	36.1	4.8	**-0.24**
ThyssenKrupp	Metals & Mining	11.9	21.0	-3%	Neutral	21.9	0.7	85.1	-2.8	**-0.23**
Voestalpine	Metals & Mining	5.5	31.6	-8%	Buy	9.3	4.5	63.7	-6.6	**-0.22**
Faurecia	Autos	5.1	37.1	-14%	Sell	13.7	2.2	75.1	-3.4	**-0.21**
Infineon	Semiconductors	14.5	13.0	7%	Buy	17.1	2.1	89.6	32.8	**-0.21**
Swedbank	Banks	21.2	175.3	11%	Buy	10.7	7.0	103.8	-0.2	**-0.21**
Boliden	Metals & Mining	4.2	141.3	13%	Buy	21.8	1.5	148.6	-14.4	**-0.21**
Metso	Capital Goods	3.2	21.1	-15%	Sell	15.9	4.5	113.5	-8.7	**-0.21**
Hydro	Metals & Mining	7.6	34.5	-4%	Neutral	22.0	2.9	115.3	-3.1	**-0.20**
Fiat Chrysler	Autos	8.9	7.2	-3%	Neutral	5.8	0.0	34.3	-39.8	**-0.20**
Commerzbank	Banks	9.6	8.4	-11%	Neutral	9.3	3.6	55.9	-22.5	**-0.20**
Old Mutual	Insurance	13.2	187.9	6%	Buy	9.8	3.4	118.5	-12.5	**-0.19**
Erste Bank	Banks	10.8	25.1	25%	Buy	10.3	3.2	28.0	11.8	**-0.19**
Deutsche Bank	Diversified Financials	23.9	17.3	-11%	Neutral	22.8	0.0	137.2	-32.3	**-0.19**
Rio Tinto Plc	Metals & Mining	54.9	2312.0	17%	Buy	25.4	3.4	139.4	-14.0	**-0.18**
AXA	Insurance	55.4	22.7	3%	Neutral	9.3	5.1	25.4	12.5	**-0.18**
Bank of Ireland	Banks	8.8	0.3	0%	Neutral	10.0	2.8	120.7	-23.4	**-0.18**
ProSiebenSat.	Media	9.7	44.9	-11%	Sell	17.7	4.8	85.2	8.5	**-0.18**
RBS Group	Banks	36.5	243.6	27%	Buy	12.6	0.0	85.5	-24.4	**-0.18**
SEB	Banks	19.1	78.5	8%	Neutral	10.4	6.8	50.8	-18.7	**-0.17**
Continental	Autos	39.0	195.0	26%	Buy	12.1	2.2	117.3	1.5	**-0.17**
Volvo B	Capital Goods	21.5	97.1	-2%	Buy	16.6	3.1	91.0	-5.9	**-0.17**
DnB ASA	Banks	18.6	105.6	8%	Buy	8.9	4.7	24.2	-19.8	**-0.16**
Weir	Capital Goods	3.3	1215.0	7%	Buy	18.8	3.9	98.2	-28.2	**-0.16**
Aviva	Insurance	22.7	436.7	4%	Neutral	8.5	5.5	51.2	-8.9	**-0.16**
Valeo	Autos	11.2	141.2	22%	Buy	13.1	2.5	89.3	8.5	**-0.16**
Danske	Banks	23.3	177.9	2%	Neutral	10.1	5.0	122.7	-6.9	**-0.16**
Randstad	Commercial Services	8.7	47.3	6%	Neutral	12.5	3.6	74.5	-7.5	**-0.16**

Source: UBS European Equity Strategy

(2) Leveraged Stock Screen

We screen for the Eurozone stocks that are most leveraged looking at: Net Debt / EBITDA. Real Estate, Transport / Infrastructure stocks, Utilities and Telcos make up the bulk of the list.

Figure 17: Eurozone stocks with highest net debt to EBITDA

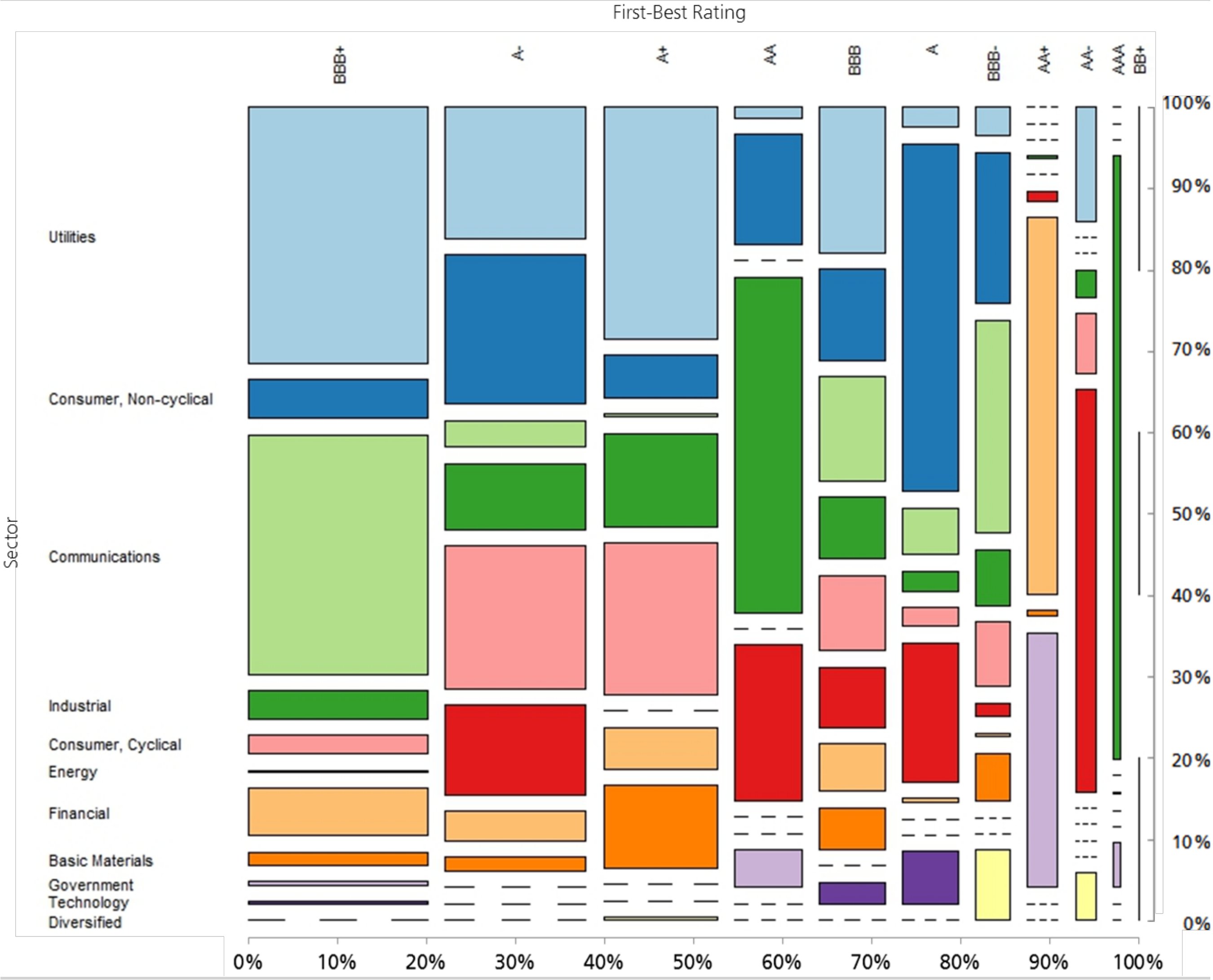
Name	Sector	Mkt Cap (EUR bn)	Price (p)	Upside to PT	UBS rating	P/E 2016	DY 2016	P/E rel to sector (%) 2016	12m relative performance (%, EUR)	Net Debt to Equity 2015	Net Debt to EBITDA 2015
Klepierre	Real Estate	12.8	41.1	-3%	Neutral	18.3	4.4	88.1	6.3	96%	**9.4**
Unibail-Rodamco	Real Estate	23.9	237.2	-3%	Neutral	22.2	4.1	107.1	5.7	85%	**8.4**
Snam	Utilities	18.7	5.3	-1%	Neutral	16.7	4.7	113.8	34.1	184%	**4.9**
Abertis	Transportation	13.8	14.7	-1%	Buy	17.8	5.0	121.2	16.8	444%	**4.7**
AENA	Transportation	18.8	125.4	-1%	Buy	21.2	2.4	144.3	88.1	218%	**4.5**
EDP	Utilities	11.4	3.1	16%	Buy	12.1	5.9	82.6	-4.7	186%	**4.5**
Red Eléctrica	Utilities	10.5	77.3	2%	Neutral	16.0	4.4	108.9	26.2	237%	**4.0**
Telecom Italia	Telecommunications	15.5	0.9	11%	Neutral	19.5	0.0	102.1	-4.4	162%	**3.5**
Pernod	Beverages	25.3	95.3	7%	Neutral	18.6	2.8	77.8	-4.6	64%	**3.4**
Atlantia	Transportation	20.1	24.4	-4%	Neutral	20.9	3.9	142.1	15.6	166%	**3.4**
Telefonica	Telecommunications	45.0	9.9	42%	Buy	14.9	7.5	78.0	-9.6	230%	**3.3**
Iberdrola	Utilities	39.0	6.3	-1%	Neutral	16.6	4.6	113.3	28.0	46%	**3.3**
Veolia Environ	Utilities	11.8	21.5	2%	Neutral	20.0	3.5	136.4	25.9	102%	**3.1**
KPN	Telecommunications	14.3	3.4	25%	Buy	52.7	11.8	275.9	10.5	108%	**2.8**
Gas Natural Fenosa	Utilities	18.4	18.4	-5%	Sell	13.5	5.2	92.4	3.4	101%	**2.8**
Fresenius Medical	Health Care Equipment	23.4	77.8	29%	Buy	21.8	1.3	96.7	15.2	79%	**2.7**
Engie	Utilities	34.5	14.3	15%	Buy	14.1	6.9	96.1	-15.6	59%	**2.6**
Heineken	Beverages	47.0	81.6	13%	Buy	20.7	1.8	86.6	25.6	87%	**2.6**
Anheuser-Busch	Beverages	181.1	112.0	19%	Buy	26.8	3.3	111.8	9.1	101%	**2.5**
Grifols	Pharmaceuticals	10.5	19.4	-28%	Sell	17.7	1.7	105.6	25.5	109%	**2.5**
Fresenius SE	Health Care Equipment	34.9	64.6	8%	Buy	21.1	1.0	93.7	40.3	106%	**2.5**
Aeroports de Paris	Transportation	10.9	110.2	0%	Neutral	22.7	2.6	154.4	10.3	67%	**2.4**
Deutsche Telekom	Telecommunications	72.5	15.7	16%	Buy	18.4	3.8	96.2	6.2	162%	**2.3**
Kering	Consumer Durables	19.0	149.9	18%	Buy	15.9	2.8	99.1	-2.3	43%	**2.3**
Enel	Utilities	37.9	4.0	24%	Buy	13.5	4.5	92.1	12.2	113%	**2.2**
Vinci	Capital Goods	36.5	65.8	6%	Buy	15.2	3.3	91.3	32.8	82%	**2.2**
HeidelbergCement	Construction Materials	14.7	78.5	-3%	Neutral	16.8	1.8	97.5	26.9	35%	**2.2**
Siemens	Capital Goods	77.3	93.9	6%	Buy	13.6	3.8	82.1	7.4	57%	**2.2**
EDF	Utilities	23.2	12.5	-36%	Sell	7.2	8.8	49.3	-39.7	102%	**2.1**
Kerry Group	Food Products	13.7	77.9	12%	Buy	23.7	0.7	101.8	15.1	59%	**2.0**

Source: UBS European Equity Strategy

Appendix

Below we show the "mosaic" table from our Credit Strategy team's publication. They show the addressable market broken down by Sector and also the credit rating. The sector breakdown is slightly different from the equity sectors – right at the bottom "Government" is mostly Deutsche Bahn and "Diversified" is holding companies or venture capital.

Figure 18: CSPP eligible bonds



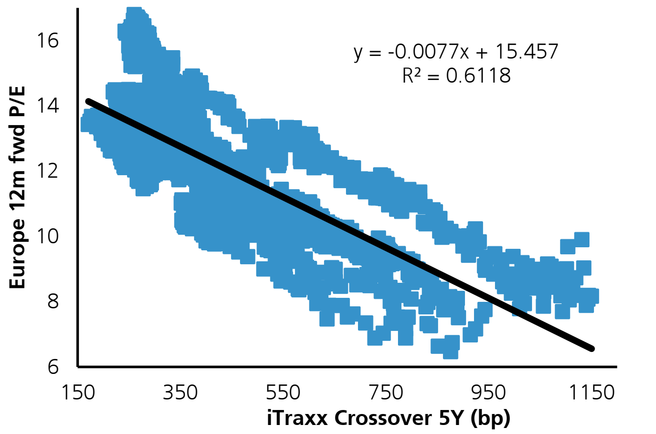
Source: UBS Global Macro Strategy, UBS Global Credit Strategy

Figure 19: Regional buyback rules

Region	Country	Regulatory restrictions on Buybacks	Tax considerations on Buybacks
North America	Canada	No shareholder approval required but buy-back limited to 10% of public float or 5% of total market share. Buyback price is capped at the most recent market price.	
	US	No shareholder approval is required and no limits on quantity or price of buybacks are in place.	Shareholder relief system - Reduced tax rates on dividends received or exclusion of a proportion of dividend income from taxation.
Europe	France	Shareholder approval is required and expires after 18 months. Buy-back quantity is limited at 10% of total market share or 25% of daily volume. Buy-back price is capped at the daily highest price.	Shareholder relief system - Reduced tax rates on dividends received or exclusion of a proportion of dividend income from taxation.
	Germany	Shareholder approval is required and expires after 18 months. Buy-back quantity is limited at 10% of total market share and the allowed price range (min and max) for buy-backs is set as part of the shareholder approval process.	Shareholder relief system - Reduced tax rates on dividends received or exclusion of a proportion of dividend income from taxation.
	Italy	Shareholder approval required and in place for 18 months. Buy-back limited to 10% of total shaares or 25% of monthly volume. Buy-back price is capped at the most recent market price.	Shareholder relief system - Reduced tax rates on dividends received or exclusion of a proportion of dividend income from taxation.
	Netherlands	Shareholder approval is required and expires after 18 months. Buy-back quantity is limited at 10% of total market share and the allowed price range (min and max) for buy-backs is set as part of the shareholder approval process.	Classical corporate taxation - double taxation of corporate profits. Income, before it is distributed as dividends, is taxed at the corporate level, and later taxed again as dividend income at the individual shareholder level.
	Spain	Shareholder approval is required.	Shareholder relief system - Reduced tax rates on dividends received or exclusion of a proportion of dividend income from taxation.
	Switzerland	No shareholder approval is required. Buy-back is limited to 10% of total shares.	
	UK	Shareholder approval is required and expires after 18 months. Buy-back quantity is limited at 15% of total market share. Buy-back price is capped at 5% above the average closing price over the past 5 days.	
Asia	Japan	No shareholder approval is required. Buy-back amount is capped at 25% of daily volume and buy-back price is limmited to last closing price.	Shareholder relief system - Reduced tax rates on dividends received or exclusion of a proportion of dividend income from taxation.
	Hong Kong	Shareholder approval required and expires after 12 months. Buy-back amount limited to 10% of total market shares or 25% of monthly volume. No limitation on buy-back price.	

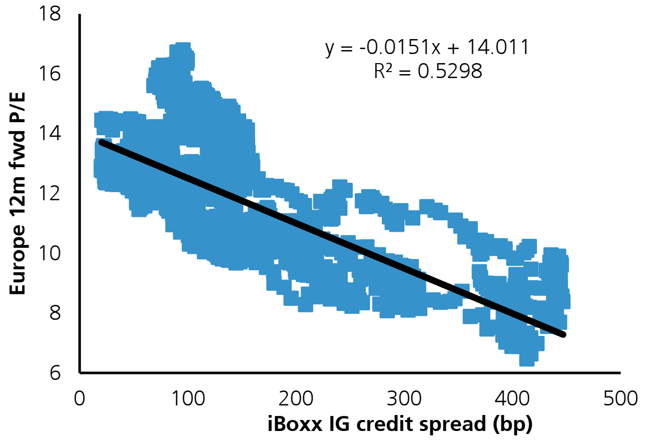
Source: Kim, Schremper and Varaiya, 2013, Survey on Open Market Repurchase Regulations, Corporate Finance Review; Manconi, Peyer and Vermaelen, 2014, Buybacks Around the World, European Corporate Governance Institute

Figure 20: Crossover CDS spreads vs P/E



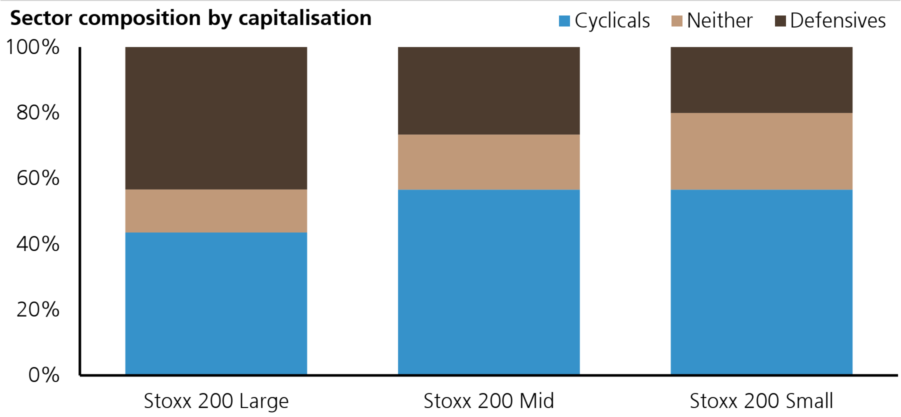
Source: Datastream, UBS European Equity Strategy

Figure 21: IG credit spreads vs P/E



Source: Datastream, UBS European Equity Strategy

Figure 22: Sector composition by market cap



Source: Thomson Datastream, UBS European Equity Strategy

Valuation Method and Risk Statement

Risks include macroeconomic variables (such as GDP growth rates and inflation), economic slowdown, a weakening currency, global economic events, and government policy changes.

Required Disclosures

This report has been prepared by UBS Limited, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

For information on the ways in which UBS manages conflicts and maintains independence of its research product; historical performance information; and certain additional disclosures concerning UBS research recommendations, please visit www.ubs.com/disclosures. The figures contained in performance charts refer to the past; past performance is not a reliable indicator of future results. Additional information will be made available upon request. UBS Securities Co. Limited is licensed to conduct securities investment consultancy businesses by the China Securities Regulatory Commission. UBS acts or may act as principal in the debt securities (or in related derivatives) that may be the subject of this report.

Analyst Certification: Each research analyst primarily responsible for the content of this research report, in whole or in part, certifies that with respect to each security or issuer that the analyst covered in this report: (1) all of the views expressed accurately reflect his or her personal views about those securities or issuers and were prepared in an independent manner, including with respect to UBS, and (2) no part of his or her compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by that research analyst in the research report.

UBS Investment Research: Global Equity Rating Definitions

12-Month Rating	Definition	Coverage[1]	IB Services[2]
Buy	FSR is > 6% above the MRA.	49%	32%
Neutral	FSR is between -6% and 6% of the MRA.	38%	26%
Sell	FSR is > 6% below the MRA.	14%	19%
Short-Term Rating	**Definition**	**Coverage[3]**	**IB Services[4]**
Buy	Stock price expected to rise within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%
Sell	Stock price expected to fall within three months from the time the rating was assigned because of a specific catalyst or event.	<1%	<1%

Source: UBS. Rating allocations are as of 31 March 2016.
1:Percentage of companies under coverage globally within the 12-month rating category.
2:Percentage of companies within the 12-month rating category for which investment banking (IB) services were provided within the past 12 months.
3:Percentage of companies under coverage globally within the Short-Term rating category.
4:Percentage of companies within the Short-Term rating category for which investment banking (IB) services were provided within the past 12 months.

KEY DEFINITIONS: Forecast Stock Return (FSR) is defined as expected percentage price appreciation plus gross dividend yield over the next 12 months. **Market Return Assumption (MRA)** is defined as the one-year local market interest rate plus 5% (a proxy for, and not a forecast of, the equity risk premium). **Under Review (UR)** Stocks may be flagged as UR by the analyst, indicating that the stock's price target and/or rating are subject to possible change in the near term, usually in response to an event that may affect the investment case or valuation. **Short-Term Ratings** reflect the expected near-term (up to three months) performance of the stock and do not reflect any change in the fundamental view or investment case. **Equity Price Targets** have an investment horizon of 12 months.

EXCEPTIONS AND SPECIAL CASES: UK and European Investment Fund ratings and definitions are: Buy: Positive on factors such as structure, management, performance record, discount; **Neutral:** Neutral on factors such as structure, management, performance record, discount; **Sell:** Negative on factors such as structure, management, performance record, discount. **Core Banding Exceptions (CBE):** Exceptions to the standard +/-6% bands may be granted by the Investment Review Committee (IRC). Factors considered by the IRC include the stock's volatility and the credit spread of the respective company's debt. As a result, stocks deemed to be very high or low risk may be subject to higher or lower bands as they relate to the rating. When such exceptions apply, they will be identified in the Company Disclosures table in the relevant research piece.

Research analysts contributing to this report who are employed by any non-US affiliate of UBS Securities LLC are not registered/qualified as research analysts with FINRA. Such analysts may not be associated persons of UBS Securities LLC and therefore are not subject to the FINRA restrictions on communications with a subject company, public appearances, and trading securities held by a research analyst account. The name of each affiliate and analyst employed by that affiliate contributing to this report, if any, follows.

UBS Limited: Nick Nelson; Karen Olney, CFA; Joao Toniato; Andras Nagy, CFA; Kathleen Middlemiss; Ramin Nakisa.

Company Disclosures

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
Abertis[1, 22]	ABE.MC	Buy	N/A	€14.79	28 Apr 2016
AENA S.A.	AENA.MC	Buy	N/A	€125.25	28 Apr 2016
Aeroports de Paris[22]	ADP.PA	Neutral	N/A	€111.35	28 Apr 2016
Anheuser-Busch InBev[3a, 3d, 16]	ABI.BR	Buy	N/A	€112.60	28 Apr 2016
Atlantia	ATL.MI	Neutral	N/A	€24.39	28 Apr 2016
Aviva[5, 7, 13, 16]	AV.L	Neutral	N/A	437p	28 Apr 2016
AXA[5, 7]	AXAF.PA	Neutral	N/A	€22.83	28 Apr 2016
Bank of Ireland[2, 4, 7, 14]	BKIR.I	Neutral	N/A	€0.27	28 Apr 2016
Boliden	BOL.ST	Buy	N/A	SKr143.10	28 Apr 2016
Commerzbank[2, 4, 5, 7, 14]	CBKG.DE	Neutral	N/A	€8.41	28 Apr 2016
Continental	CONG.DE	Buy	N/A	€195.95	28 Apr 2016
Danske Bank[2, 4, 5, 7]	DANSKE.CO	Neutral	N/A	DKr177.20	28 Apr 2016
Deutsche Bank[2, 4, 5, 7, 16]	DBKGn.DE	Neutral	N/A	€17.36	28 Apr 2016
Deutsche Telekom	DTEGn.F	Buy	N/A	€15.78	28 Apr 2016
DnB ASA[2, 4, 7, 22]	DNB.OL	Buy	N/A	NKr105.60	28 Apr 2016
EDF[7]	EDF.PA	Sell	N/A	€12.38	28 Apr 2016
Enel[4, 7]	ENEI.MI	Buy	N/A	€4.05	28 Apr 2016
Energias de Portugal[2, 4, 5, 7]	EDP.LS	Buy	N/A	€3.13	28 Apr 2016
Engie[5, 7]	ENGIE.PA	Buy	N/A	€14.42	28 Apr 2016
Erste Group Bank AG[5, 7]	ERST.VI	Buy	N/A	€25.27	28 Apr 2016
Faurecia	EPED.PA	Sell	N/A	€37.20	28 Apr 2016
Fiat Chrysler[2, 4, 5, 6, 7, 16]	FCHA.MI	Neutral	N/A	€7.33	28 Apr 2016
Fresenius Medical Care[16]	FMEG.DE	Buy	N/A	€78.26	28 Apr 2016
Fresenius SE & Co KGaA	FREG.DE	Buy	N/A	€65.36	28 Apr 2016
Gas Natural Fenosa	GAS.MC	Sell (UR)	N/A	€18.55	28 Apr 2016
Grifols[16]	GRLS.MC	Sell	N/A	€19.43	28 Apr 2016
HeidelbergCement[13]	HEIG.DE	Neutral	N/A	€79.00	28 Apr 2016
Heineken	HEIN.AS	Buy	N/A	€82.15	28 Apr 2016
Iberdrola[7]	IBE.MC	Neutral	N/A	€6.28	28 Apr 2016
Infineon Technologies AG[7]	IFXGn.DE	Buy	N/A	€12.96	28 Apr 2016
ING[2, 4, 5, 6, 7, 16]	ING.AS	Buy	N/A	€11.11	28 Apr 2016
KBC Groep NV[5, 7]	KBC.BR	Neutral	N/A	€49.85	28 Apr 2016
Kering[7]	PRTP.PA	Buy	N/A	€150.80	28 Apr 2016
Kerry Group	KYGa.I	Buy	N/A	€77.50	28 Apr 2016
Klepierre SA[2, 4, 5, 7]	LOIM.PA	Neutral	N/A	€41.15	28 Apr 2016
KPN Telecom[4, 5, 7]	KPN.AS	Buy	N/A	€3.35	28 Apr 2016
Metso[13]	MEO1V.HE	Sell	N/A	€21.13	28 Apr 2016
Norsk Hydro[22]	NHY.OL	Neutral	N/A	NKr34.53	28 Apr 2016
Old Mutual Plc[7]	OML.L	Buy	N/A	188p	28 Apr 2016
Pernod Ricard	PERP.PA	Neutral	N/A	€95.35	28 Apr 2016
ProSiebenSat.1 Media SE	PSMGn.DE	Sell	N/A	€45.10	28 Apr 2016

Company Name	Reuters	12-month rating	Short-term rating	Price	Price date
Randstad	RAND.AS	Neutral	N/A	€47.61	28 Apr 2016
RBS Group[2, 4, 5, 16]	RBS.L	Buy	N/A	245p	28 Apr 2016
Red Electrica de España[13]	REE.MC	Neutral	N/A	€77.58	28 Apr 2016
Renault[7]	RENA.PA	Buy	N/A	€88.26	28 Apr 2016
Rio Tinto Plc[7, 16]	RIO.L	Buy	N/A	2,330p	28 Apr 2016
SEB Group[2, 4, 5, 7]	SEBa.ST	Neutral	N/A	SKr78.70	28 Apr 2016
Siemens[4, 5, 7]	SIEGn.DE	Buy	N/A	€94.27	28 Apr 2016
Snam[7]	SRG.MI	Neutral	N/A	€5.32	28 Apr 2016
Swedbank[2, 4, 5, 7]	SWEDa.ST	Buy	N/A	SKr175.60	28 Apr 2016
Telecom Italia[1, 4, 5, 7, 16]	TLIT.MI	Neutral	N/A	€0.87	28 Apr 2016
Telecom Italia Saving shares[1, 4, 5, 7, 16]	TLITn.MI	Neutral	N/A	€0.70	28 Apr 2016
Telefonica[2, 3b, 3c, 4, 7, 16]	TEF.MC	Buy	N/A	€9.95	28 Apr 2016
ThyssenKrupp	TKAG.DE	Neutral	N/A	€20.97	28 Apr 2016
Unibail-Rodamco[2, 4, 5, 7]	UNBP.AS	Neutral	N/A	€238.25	28 Apr 2016
Valeo[13]	VLOF.PA	Buy	N/A	€141.70	28 Apr 2016
Veolia Environnement	VIE.PA	Neutral	N/A	€21.67	28 Apr 2016
Vinci	SGEF.PA	Buy	N/A	€66.00	28 Apr 2016
Voestalpine AG	VOES.VI	Buy	N/A	€31.80	28 Apr 2016
Volvo B[7]	VOLVb.ST	Buy	N/A	SKr97.35	28 Apr 2016
Weir[4, 5, 7, 14]	WEIR.L	Buy	N/A	1,213p	28 Apr 2016

Source: UBS. All prices as of local market close.
Ratings in this table are the most current published ratings prior to this report. They may be more recent than the stock pricing date

1. UBS Limited is acting as manager/co-manager, underwriter, placement or sales agent in regard to an offering of securities of this company/entity or one of its affiliates.
2. UBS AG, its affiliates or subsidiaries has acted as manager/co-manager in the underwriting or placement of securities of this company/entity or one of its affiliates within the past 12 months.

3a. UBS AG, Hong Kong Branch, is acting as financial advisor to China Resources Beer (Holdings) Company on the acquisition from Anheuser-Busch InBev SA/NV (ABI) of SABMiller's 49% equity stake in China Resources Snow Breweries.

3b. UBS Limited is acting as advisor to Telefonica SA on the acquisition of 11.1% stake in Mediaset Premium

3c. UBS Ltd is advising Telefonica SA on the potential sale of its UK subsidiary Telefonica 02 UK to Hutchinson Whampoa Ltd.

3d. UBS Securities LLC is acting as advisor to Molson Coors on the acquisition of SABMiller's stake in MillerCoors JV

4. Within the past 12 months, UBS AG, its affiliates or subsidiaries has received compensation for investment banking services from this company/entity or one of its affiliates.
5. UBS AG, its affiliates or subsidiaries expect to receive or intend to seek compensation for investment banking services from this company/entity within the next three months.
6. This company/entity is, or within the past 12 months has been, a client of UBS Securities LLC, and investment banking services are being, or have been, provided.
7. Within the past 12 months, UBS Securities LLC and/or its affiliates have received compensation for products and services other than investment banking services from this company/entity.
13. UBS AG, its affiliates or subsidiaries beneficially owned 1% or more of a class of this company`s common equity securities as of last month`s end (or the prior month`s end if this report is dated less than 10 days after the most recent month`s end).
14. UBS Limited acts as broker to this company.
16. UBS Securities LLC makes a market in the securities and/or ADRs of this company.
22. UBS AG, its affiliates or subsidiaries held other significant financial interests in this company/entity as of last month`s end (or the prior month`s end if this report is dated less than 10 working days after the most recent month`s end).

Unless otherwise indicated, please refer to the Valuation and Risk sections within the body of this report. For a complete set of disclosure statements associated with the companies discussed in this report, including information on valuation and risk, please contact UBS Securities LLC, 1285 Avenue of Americas, New York, NY 10019, USA, Attention: Investment Research.

Global Disclaimer

This document has been prepared by UBS Limited, an affiliate of UBS AG. UBS AG, its subsidiaries, branches and affiliates are referred to herein as UBS.

Global Research is provided to our clients through UBS Neo and, in certain instances, UBS.com (each a "System"). It may also be made available through third party vendors and distributed by UBS and/or third parties via e-mail or alternative electronic means. The level and types of services provided by Global Research to a client may vary depending upon various factors such as a client's individual preferences as to the frequency and manner of receiving communications, a client's risk profile and investment focus and perspective (e.g. market wide, sector specific, long-term, short-term, etc.), the size and scope of the overall client relationship with UBS and legal and regulatory constraints.

All Global Research is available on UBS Neo. Please contact your UBS sales representative if you wish to discuss your access to UBS Neo.

When you receive Global Research through a System, your access and/or use of such Global Research is subject to this Global Research Disclaimer and to the terms of use governing the applicable System.

When you receive Global Research via a third party vendor, e-mail or other electronic means, your use shall be subject to this Global Research Disclaimer and to UBS's Terms of Use/Disclaimer (http://www.ubs.com/global/en/legalinfo2/disclaimer.html). By accessing and/or using Global Research in this manner, you are indicating that you have read and agree to be bound by our Terms of Use/Disclaimer. In addition, you consent to UBS processing your personal data and using cookies in accordance with our Privacy Statement (http://www.ubs.com/global/en/legalinfo2/privacy.html) and cookie notice (http://www.ubs.com/global/en/homepage/cookies/cookie-management.html).

If you receive Global Research, whether through a System or by any other means, you agree that you shall not copy, revise, amend, create a derivative work, transfer to any third party, or in any way commercially exploit any UBS research provided via Global Research or otherwise, and that you shall not extract data from any research or estimates provided to you via Global Research or otherwise, without the prior written consent of UBS.

This document is for distribution only as may be permitted by law. It is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction where such distribution, publication, availability or use would be contrary to law or regulation or would subject UBS to any registration or licensing requirement within such jurisdiction. It is published solely for information purposes; it is not an advertisement nor is it a solicitation or an offer to buy or sell any financial instruments or to participate in any particular trading strategy. No representation or warranty, either expressed or implied, is provided in relation to the accuracy, completeness or reliability of the information contained in this document ('the Information'), except with respect to Information concerning UBS. The Information is not intended to be a complete statement or summary of the securities, markets or developments referred to in the document. UBS does not undertake to update or keep current the Information. Any opinions expressed in this document may change without notice and may differ or be contrary to opinions expressed by other business areas or groups of UBS. Any statements contained in this report attributed to a third party represent UBS's interpretation of the data, information and/or opinions provided by that third party either publicly or through a subscription service, and such use and interpretation have not been reviewed by the third party.

Nothing in this document constitutes a representation that any investment strategy or recommendation is suitable or appropriate to an investor's individual circumstances or otherwise constitutes a personal recommendation. Investments involve risks, and investors should exercise prudence and their own judgement in making their investment decisions. The financial instruments described in the document may not be eligible for sale in all jurisdictions or to certain categories of investors. Options, derivative products and futures are not suitable for all investors, and trading in these instruments is considered risky. Mortgage and asset-backed securities may involve a high degree of risk and may be highly volatile in response to fluctuations in interest rates or other market conditions. Foreign currency rates of exchange may adversely affect the value, price or income of any security or related instrument referred to in the document. For investment advice, trade execution or other enquiries, clients should contact their local sales representative.

The value of any investment or income may go down as well as up, and investors may not get back the full (or any) amount invested. Past performance is not necessarily a guide to future performance. Neither UBS nor any of its directors, employees or agents accepts any liability for any loss (including investment loss) or damage arising out of the use of all or any of the Information.

Any prices stated in this document are for information purposes only and do not represent valuations for individual securities or other financial instruments. There is no representation that any transaction can or could have been effected at those prices, and any prices do not necessarily reflect UBS's internal books and records or theoretical model-based valuations and may be based on certain assumptions. Different assumptions by UBS or any other source may yield substantially different results.

This document and the Information are produced by UBS as part of its research function and are provided to you solely for general background information. UBS has no regard to the specific investment objectives, financial situation or particular needs of any specific recipient. In no circumstances may this document or any of the Information be used for any of the following purposes:

(i) valuation or accounting purposes;

(ii) to determine the amounts due or payable, the price or the value of any financial instrument or financial contract; or

(iii) to measure the performance of any financial instrument.

By receiving this document and the Information you will be deemed to represent and warrant to UBS that you will not use this document or any of the Information for any of the above purposes or otherwise rely upon this document or any of the Information.

Research will initiate, update and cease coverage solely at the discretion of UBS Investment Bank Research Management. The analysis contained in this document is based on numerous assumptions. Different assumptions could result in materially different results. The analyst(s) responsible for the preparation of this document may interact with trading desk personnel, sales personnel and other parties for the purpose of gathering, applying and interpreting market information. UBS relies on information barriers to control the flow of information contained in one or more areas within UBS into other areas, units, groups or affiliates of UBS. The compensation of the analyst who prepared this document is determined exclusively by research management and senior management (not including investment banking). Analyst compensation is not based on investment banking revenues; however, compensation may relate to the revenues of UBS Investment Bank as a whole, of which investment banking, sales and trading are a part.

For financial instruments admitted to trading on an EU regulated market: UBS AG, its affiliates or subsidiaries (excluding UBS Securities LLC) acts as a market maker or liquidity provider (in accordance with the interpretation of these terms in the UK) in the financial instruments of the issuer save that where the activity of liquidity provider is carried out in accordance with the definition given to it by the laws and regulations of any other EU jurisdictions, such information is separately disclosed in this document. For financial instruments admitted to trading on a non-EU regulated market: UBS may act as a market maker save that where this activity is carried out in the US in accordance with the definition given to it by the relevant laws and regulations, such activity will be specifically disclosed in this document. UBS may have issued a warrant the value of which is based on one or more of the financial instruments referred to in the document. UBS and its affiliates and employees may have long or short positions, trade as principal and buy and sell in instruments or derivatives identified herein; such transactions or positions may be inconsistent with the opinions expressed in this document.

United Kingdom and the rest of Europe: Except as otherwise specified herein, this material is distributed by UBS Limited to persons who are eligible counterparties or professional clients. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. **France:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities France S.A. UBS Securities France S.A. is regulated by the ACPR (Autorité de Contrôle Prudentiel et de Résolution) and the Autorité des Marchés Financiers (AMF). Where an analyst of UBS Securities France S.A. has contributed to this document, the document is also deemed to have been prepared by UBS Securities France S.A. **Germany:** Prepared by UBS Limited and distributed by UBS Limited and UBS Deutschland AG. UBS Deutschland AG is regulated by the Bundesanstalt fur Finanzdienstleistungsaufsicht (BaFin). **Spain:** Prepared by UBS Limited and distributed by UBS Limited and UBS Securities España SV, SA. UBS Securities España SV, SA is regulated by the Comisión Nacional del Mercado de Valores (CNMV). **Turkey:** Distributed by UBS Limited. No information in this document is provided for the purpose of offering, marketing and sale by any means of any capital market instruments and services in the Republic of Turkey. Therefore, this document may not be considered as an offer made or to be made to residents of the Republic of Turkey. UBS AG is not licensed by the Turkish Capital Market Board under the provisions of the Capital Market Law (Law No. 6362). Accordingly, neither this document nor any other offering material related to the instruments/services may be utilized in connection with providing any capital market services to persons within the Republic of Turkey without the prior approval of the Capital Market Board. However, according to article 15 (d) (ii) of the Decree No. 32, there is no restriction on the purchase or sale of the securities abroad by residents of the Republic of Turkey. **Poland:** Distributed by UBS Limited (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce regulated by the Polish Financial Supervision Authority. Where an analyst of UBS Limited (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce has contributed to this

document, the document is also deemed to have been prepared by UBS Limited (spolka z ograniczona odpowiedzialnoscia) Oddzial w Polsce. **Russia:** Prepared and distributed by UBS Bank (OOO). **Switzerland:** Distributed by UBS AG to persons who are institutional investors only. UBS AG is regulated by the Swiss Financial Market Supervisory Authority (FINMA). **Italy:** Prepared by UBS Limited and distributed by UBS Limited and UBS Limited, Italy Branch. Where an analyst of UBS Limited, Italy Branch has contributed to this document, the document is also deemed to have been prepared by UBS Limited, Italy Branch. **South Africa:** Distributed by UBS South Africa (Pty) Limited (Registration No. 1995/011140/07), an authorised user of the JSE and an authorised Financial Services Provider (FSP 7328). **Israel:** This material is distributed by UBS Limited. UBS Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. UBS Securities Israel Ltd is a licensed Investment Marketer that is supervised by the Israel Securities Authority (ISA). UBS Limited and its affiliates incorporated outside Israel are not licensed under the Israeli Advisory Law. UBS Limited is not covered by insurance as required from a licensee under the Israeli Advisory Law. UBS may engage among others in issuance of Financial Assets or in distribution of Financial Assets of other issuers for fees or other benefits. UBS Limited and its affiliates may prefer various Financial Assets to which they have or may have Affiliation (as such term is defined under the Israeli Advisory Law). Nothing in this Material should be considered as investment advice under the Israeli Advisory Law. This Material is being issued only to and/or is directed only at persons who are Eligible Clients within the meaning of the Israeli Advisory Law, and this material must not be relied on or acted upon by any other persons. **Saudi Arabia:** This document has been issued by UBS AG (and/or any of its subsidiaries, branches or affiliates), a public company limited by shares, incorporated in Switzerland with its registered offices at Aeschenvorstadt 1, CH-4051 Basel and Bahnhofstrasse 45, CH-8001 Zurich. This publication has been approved by UBS Saudi Arabia (a subsidiary of UBS AG), a Saudi closed joint stock company incorporated in the Kingdom of Saudi Arabia under commercial register number 1010257812 having its registered office at Tatweer Towers, P.O. Box 75724, Riyadh 11588, Kingdom of Saudi Arabia. UBS Saudi Arabia is authorized and regulated by the Capital Market Authority to conduct securities business under license number 08113-37. **Dubai:** The information distributed by UBS AG Dubai Branch is intended for Professional Clients only and is not for further distribution within the United Arab Emirates. **United States:** Distributed to US persons by either UBS Securities LLC or by UBS Financial Services Inc., subsidiaries of UBS AG; or by a group, subsidiary or affiliate of UBS AG that is not registered as a US broker-dealer (a **'non-US affiliate'**) to major US institutional investors only. UBS Securities LLC or UBS Financial Services Inc. accepts responsibility for the content of a document prepared by another non-US affiliate when distributed to US persons by UBS Securities LLC or UBS Financial Services Inc. All transactions by a US person in the securities mentioned in this document must be effected through UBS Securities LLC or UBS Financial Services Inc., and not through a non-US affiliate. UBS Securities LLC is not acting as a municipal advisor to any municipal entity or obligated person within the meaning of Section 15B of the Securities Exchange Act (the "Municipal Advisor Rule"), and the opinions or views contained herein are not intended to be, and do not constitute, advice within the meaning of the Municipal Advisor Rule. **Canada:** Distributed by UBS Securities Canada Inc., a registered investment dealer in Canada and a Member-Canadian Investor Protection Fund, or by another affiliate of UBS AG that is registered to conduct business in Canada or is otherwise exempt from registration. **Brazil:** Except as otherwise specified herein, this material is prepared by UBS Brasil CCTVM S.A. to persons who are eligible investors residing in Brazil, which are considered to be: (i) financial institutions, (ii) insurance firms and investment capital companies, (iii) supplementary pension entities, (iv) entities that hold financial investments higher than R$300,000.00 and that confirm the status of qualified investors in written, (v) investment funds, (vi) securities portfolio managers and securities consultants duly authorized by Comissão de Valores Mobiliários (CVM), regarding their own investments, and (vii) social security systems created by the Federal Government, States, and Municipalities. **Hong Kong:** Distributed by UBS Securities Asia Limited and/or UBS AG, Hong Kong Branch. **Singapore:** Distributed by UBS Securities Pte. Ltd. [MCI (P) 018/09/2015 and Co. Reg. No.: 198500648C] or UBS AG, Singapore Branch. Please contact UBS Securities Pte. Ltd., an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110); or UBS AG, Singapore Branch, an exempt financial adviser under the Singapore Financial Advisers Act (Cap. 110) and a wholesale bank licensed under the Singapore Banking Act (Cap. 19) regulated by the Monetary Authority of Singapore, in respect of any matters arising from, or in connection with, the analysis or document. The recipients of this document represent and warrant that they are accredited and institutional investors as defined in the Securities and Futures Act (Cap. 289). **Japan:** Distributed by UBS Securities Japan Co., Ltd. to professional investors (except as otherwise permitted). Where this document has been prepared by UBS Securities Japan Co., Ltd., UBS Securities Japan Co., Ltd. is the author, publisher and distributor of the document. Distributed by UBS AG, Tokyo Branch to Professional Investors (except as otherwise permitted) in relation to foreign exchange and other banking businesses when relevant. **Australia:** Clients of UBS AG: Distributed by UBS AG (Holder of Australian Financial Services License No. 231087). Clients of UBS Securities Australia Ltd: Distributed by UBS Securities Australia Ltd (Holder of Australian Financial Services License No. 231098). Clients of UBS Wealth Management Australia Ltd: Distributed by UBS Wealth Management Australia Ltd (Holder of Australian Financial Services Licence No. 231127). This Document contains general information and/or general advice only and does not constitute personal financial product advice. As such, the Information in this document has been prepared without taking into account any investor's objectives, financial situation or needs, and investors should, before acting on the Information, consider the appropriateness of the Information, having regard to their objectives, financial situation and needs. If the Information contained in this document relates to the acquisition, or potential acquisition of a particular financial product by a 'Retail' client as defined by section 761G of the Corporations Act 2001 where a Product Disclosure Statement would be required, the retail client should obtain and consider the Product Disclosure Statement relating to the product before making any decision about whether to acquire the product. The UBS Securities Australia Limited Financial Services Guide is available at: www.ubs.com/ecs-research-fsg. **New Zealand:** Distributed by UBS New Zealand Ltd. The information and recommendations in this publication are provided for general information purposes only. To the extent that any such information or recommendations constitute financial advice, they do not take into account any person's particular financial situation or goals. We recommend that recipients seek advice specific to their circumstances from their financial advisor. **Korea:** Distributed in Korea by UBS Securities Pte. Ltd., Seoul Branch. This document may have been edited or contributed to from time to time by affiliates of UBS Securities Pte. Ltd., Seoul Branch. **Malaysia:** This material is authorized to be distributed in Malaysia by UBS Securities Malaysia Sdn. Bhd (Capital Markets Services License No.: CMSL/A0063/2007). This material is intended for professional/institutional clients only and not for distribution to any retail clients. **India:** Prepared by UBS Securities India Private Ltd. (Corporate Identity Number U67120MH1996PTC097299) 2/F, 2 North Avenue, Maker Maxity, Bandra Kurla Complex, Bandra (East), Mumbai (India) 400051. Phone: +912261556000. It provides brokerage services bearing SEBI Registration Numbers: NSE (Capital Market Segment): INB230951431, NSE (F&O Segment) INF230951431, NSE (Currency Derivatives Segment) INE230951431, BSE (Capital Market Segment) INB010951437; merchant banking services bearing SEBI Registration Number: INM000010809 and Research Analyst services bearing SEBI Registration Number: INH000001204. UBS AG, its affiliates or subsidiaries may have debt holdings or positions in the subject Indian company/companies. Within the past 12 months, UBS AG, its affiliates or subsidiaries may have received compensation for non-investment banking securities-related services and/or non-securities services from the subject Indian company/companies. The subject company/companies may have been a client/clients of UBS AG, its affiliates or subsidiaries during the 12 months preceding the date of distribution of the research report with respect to investment banking and/or non-investment banking securities-related services and/or non-securities services. With regard to information on associates, please refer to the Annual Report at: http://www.ubs.com/global/en/about_ubs/investor_relations/annualreporting.html

The disclosures contained in research documents produced by UBS Limited shall be governed by and construed in accordance with English law.

UBS