Crystal Maze

Centenary of the Russian Revolution

2017

Neil Dwane | Global Strategist

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Understand. Act.

Regional Ideas

1

Europe

2

USA

3

Asia

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1

25 Years of the European Union

EUROPE Ideas

Fiscal stimulus – a stock market driver for 2017

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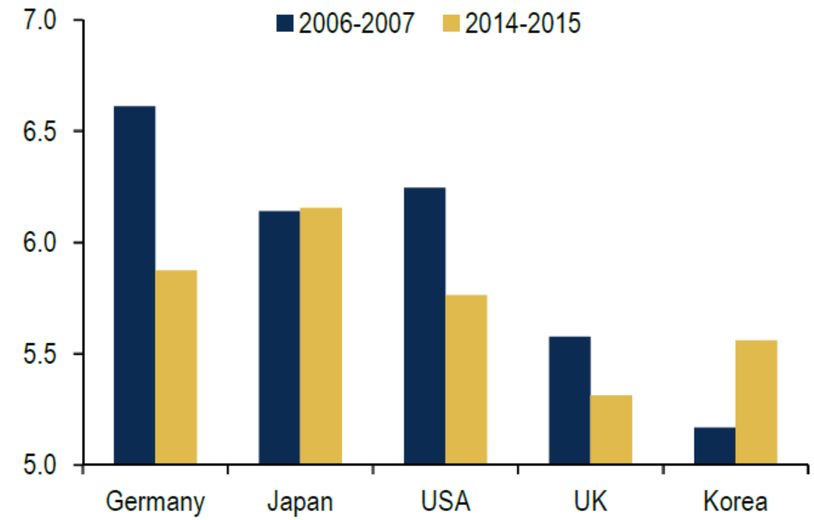
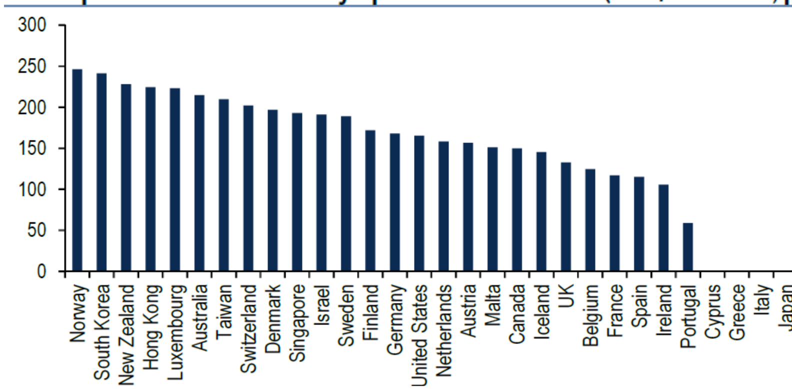
- Several years of government belt-tightening have led to a deterioration in global infrastructure quality
- QE around the globe helped to stabilize financial markets but failed to re-inflate economies in most countries so far
- With global yields being at depressed levels the pressure is rising on governments to address these issues by direct and indirect fiscal measures as it recently has been the case in Korea, Canada and Japan
- Upcoming elections in the U.S. and Europe along with economic risks arising from Brexit will likely force other governments to change their reluctant attitude towards infrastructure investments and tax reforms
- The indirect benefits of tax reforms for consumers and corporates are harder to predict, but there is a clear investment theme from the impact of public infrastructure spending for sectors like industrials, materials, energy and to a lesser degree for defense and healthcare
- Public debt levels in some EU countries will act as a barrier for drastic changes but the need to drive GDP and inflation up and to stop the erosion of infrastructures should be arguments enough to complement QE with fiscal stimulus
- Both presidential candidates in the U.S. are in favour of extra stimulus measures if they would be elected
- In Europe, the EU could consider changing the accounting rules for such investments with respect to the Maastricht criteria
- Mid term while the benefits of fiscal stimulus seem quite obvious, there is however the risk of overshooting by the governments with respect to inflation and as a consequence a de-stabilization of financial markets in case of sharply rising interest rates

Deteriorating global infrastructure quality (1-7 score, 7 best)



Source: International Monetary Fund

Fiscal space: distance to country-specific limits on debt (debt/GDP ratio, ppts)



Source: Moody's Analytics

Are Central Banks still credible ?

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While Central Banks mission is to defend the value of the money (vs inflation), they justify their Quantitative Easing policy by ::

- Re-ignating inflation to depreciate debts,
- Reflating the economy and stimulating growth to near full employment,
- Reducing public interest charges and giving governments the time to reform economy, adapt public spending and curb fiscal deficits.

But are these targets convincing ?

- Re-ignating inflation : but is it as easy as in the past ?

- Globalization spurs competition between low qualified jobs in developing countries and that of developed ones : the former cap any increase of the latter that would stem from full employment,
- Uberization connects offer and demand outside usual channels and traditional equipment, and weigh on prices,
- Decentralization of infrastructure networks in energy production, in telecommunication, in sourcing food retailing or catering (etc.) weigh on prices too.

- Stimulating growth : but can it resume as in the past ?

- "Moore Law" effects make economy and capital more and more immaterial : the way to stimulate growth cannot be the same as in the 1950-80 period,
- Uberization and decentralization squeeze intermediaries, reduce investment needs and workforce employed, question the real value of some tangible assets (and of related debts). They reallocate added value between suppliers, actors of the e.economy and end-customers.

- Giving governments the time to reform economy : but have they any reason to use it ?

Central Banks have become independent from governments over the last 30 years in order to establish their credibility. But :

- Governments are independent from Central Banks and have no legal nor political reasons to take their recommendations into account,
- Are central banks <u>really</u> independent as most of their assets are government debentures (of which quality ?), their decision to raise rates would deepen (already high) government fiscal deficits, they cannot increase their capital without government consent ?

If the targets of Central Banks Quantitative Easing look questionable,

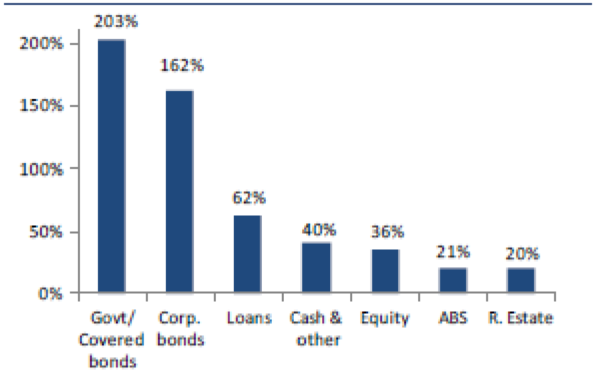
is not their Zero Interest Rate Policy the level Zero of Monetary Policy ?

5

If ‘Brexit means Brexit’, what does Brexit actually mean… (for insurance)?

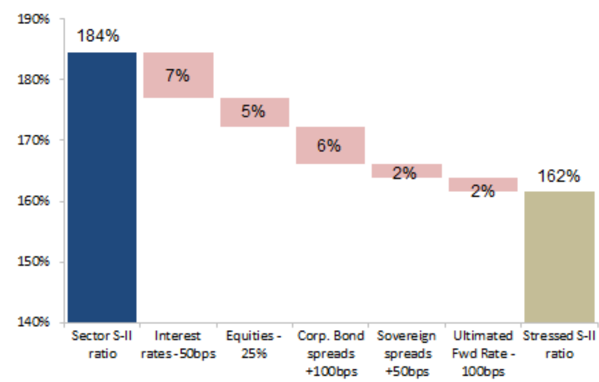
- Outcome of Brexit negotiations is clearly an unknown - in the meantime, the only certainty is uncertainty.
- This is dangerous for insurers if it leads to any of the following: continued low (or negative) interest rates, credit spread widening, or ratings migration.
- Added concern comes from divergent capital regulations and accounting standards, which make an already opaque sector more difficult to analyse.
- Given that actual Brexit is still a few years away – the key driver for UK life insurers will simply be negative macro sentiment given concerns over asset quality (particularly real estate), solvency sensitivities and underlying earnings momentum.

Chart 38: Sector investment Gearing (% of TNAV inc. minorities), 2015



Source: Company Data, Autonomous

Euro sector - Solvency macro sensitivities:



Source: Autonomous

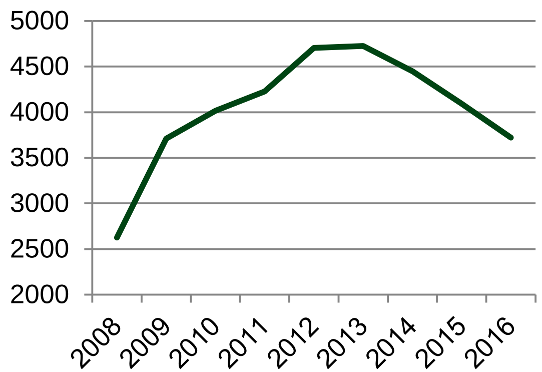
Winners?

Stocks with earnings defensive to volatility: non-spread based savings providers, asset gatherers (focus on those owning distribution), exchanges.

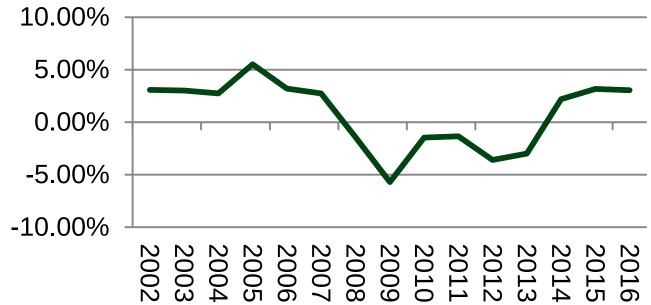
Non-life insurance names to remain expensive due to uncorrelated, and primarily dollar-based, earnings.

Spain will get more attractive with political risks decreasing

Unemployment (Sept)

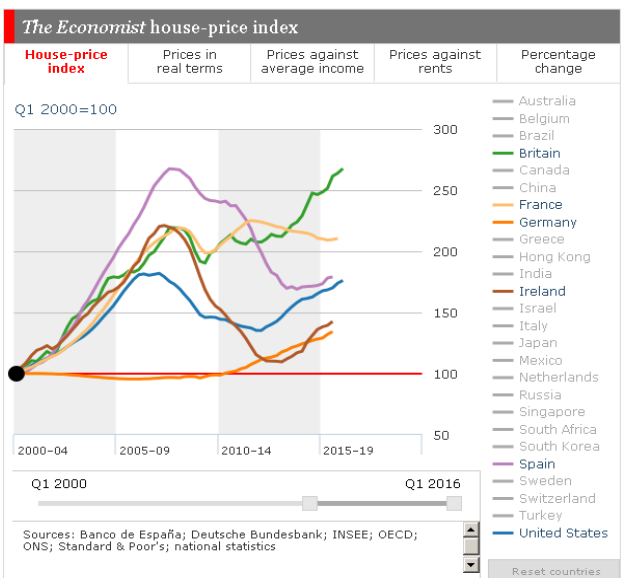


Soc. Sec registrations (YoY, Sept/Sept)



- Consumer confidence supported by an improving Employment market.
- Debt /GDP ratios improved for HH and Corporates
- The Real Estate market cooled down in recent years

- International Investors will have a look at Spain again, with the political situation clearing up.



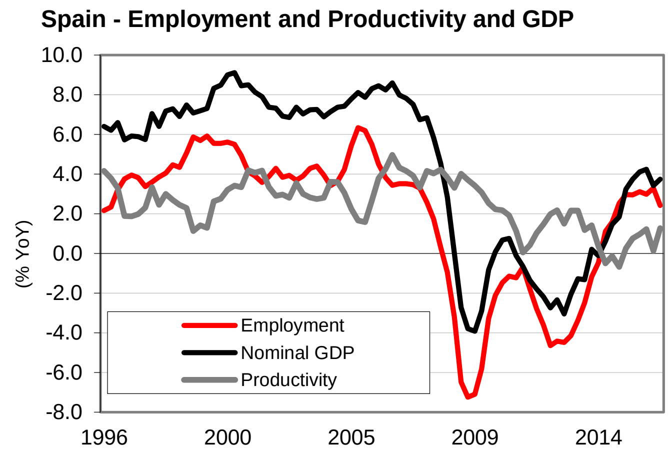
Source: N+1

Macroeconomic outlook: N+1 Equities, Government, EU & IMF forecasts

		N+1 Equities		EU authorities		Spanish Govt		IMF	
	2014A	2015A	2016E	2017E	2016E	2017E	2016E	2017E	2016E	2017E
Real GDP at constant prices (YoY %)	1.4	3.2	3.1	1.9	3.0	2.3	2.9	2.3	3.1	2.2
Private consumption	2.4	3.1	3.3	1.8	3.0	1.0	3.3	2.6	n.a.	n.a.
Public consumption	0.1	2.7	0.2	-0.1	1.0	1.0	1.0	0.9	n.a.	n.a.
Gross fixed capital formation	3.4	6.4	4.1	4.1	4.7	5.0	5.4	4.2	n.a.	n.a.
Domestic demand	2.2	3.7	2.8	1.8	2.9	2.6	3.2	2.5	n.a.	n.a.
Exports	4.2	5.4	5.8	4.4	4.5	5.2	5.4	5.7	n.a.	n.a.
Imports	7.6	7.5	5.5	4.5	5.8	5.8	7.0	6.7	n.a.	n.a.
External Demand	-0.8	-0.5	0.3	0.1	-0.3	-0.1	-0.3	-0.2	n.a.	n.a.
Public Debt (% GDP)	97.7	99.2	100.3	101.0	100.3	99.6	99.1	n.a.	99.0	n.a.
Fiscal deficit (% GDP)	-5.7	-5.1	-4.7	-3.7	-4.6	-3.1	-4.6	-3.1	-4.5	-3.1
Unemployment rate	24.4	22.1	19.8	18.3	20.0	18.1	19.7	17.8	19.4	18.0

Source: N+1 Equities, EU (European Economic Forecast), Ministerio de Economía y Competitividad, IMF (WEO update January 2016 & July 2015)

Spanish economy continues to outperform Europe



Source: INE and Santander

- **Spain has structurally improved**
  - The crisis has been a catalyst for implementation of some long needed structural reforms. Though lack of government in 2016 has put a break on this, the reforms are bearing fruits: Improving competitiveness and labour market, improving fiscal metrics, healthier financial sector (compared to other PIGS countries).
  - After the burst of the housing bubble and a massive correction, property market has started to recover from depressed levels.
  - Corporate and household leverage has declined and will continue at good pace, with low interest payments in light of lower for longer interest rates.
- **Spanish economy continues to recover at good speed**
  - Despite the difficulties to form a new government after two inconclusive general elections, economic growth has held up surprisingly well.
  - After strong GDP growth into 2016, it will probably decelerate a bit, but growth rates still much ahead of European average.
  - Internal demand, in particular private consumption, has driven GDP growth. This should continue, as unemployment declines and salaries gradually pick up.
- **Political uncertainty**
  - Times of clear political majorities are over in Spain; as usual in other countries, Spain now needs coalition and compromises.
  - Spain's conservative Partido Popular is likely to continue to govern the country (in coalition with Ciudadanos).
  - Risk from extreme left populist party Unidos Podemos is coming down. Also traditional socialist party PSOE has weakened, with resignation of their leader Mario Sanchez.
  - Going forward probably less stability and structural reforms than desirable, but business environment unlikely to deteriorate in 2017.

Spanish domestic cyclicals should benefit from continued macro tailwind

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Greek stock market: A relief after a prolonged period of stress?

Improved outlook for Greece…

…after prolonged period of stress ?

- **Economy:**
  - Hold-up better than feared despite capital controls and austerity program. Economic activity set to improve from 2017 onwards driven by structural reforms and privatization.
- **Review and Reforms:**
  - Second review to start in autumn 2016 with more reforms to be implemented. Despite the noise of last year, government shows commitment and execution is better than expected.
- **Debt and QE:**
  - Debt is one of the main topics and debt restructuring scores high on the agenda. ECB is conducting a debt sustainability analysis with potential implication for the Quantitative Easing (QE) program. An inclusion into QE would support yield conversion and pave the way for Greece taping the bond market again.
- **Banks and Stock market:**
  - Key for the profitability of the banks is asset quality as non performing loan exposure (NPEs) remains massive (account for more than half of loans). Banks have submitted a plan to reduce the NPEs by 40% until 2019YE. Key for success is execution (combination of write-offs, recoveries, sale and foreclosure) supported by a normalization of the economy.
  - The performance of the economy and the banks are interconnected. A normalization of both improves the overall earnings outlook and offers a re-rating of the Greek assets from depressed levels.
- **Political Risk:**
  - Main opposition party (leading in polls) is regarded as business friendly. Hence even if early election arises, that´s more an upside than downside risk.

Key for the stock market is normalization of the Greek economy and performance of the banks

Source: Wikipedia, November 2016

“Redistribution” of Leverage in China: Green shoots for de-leveraging?

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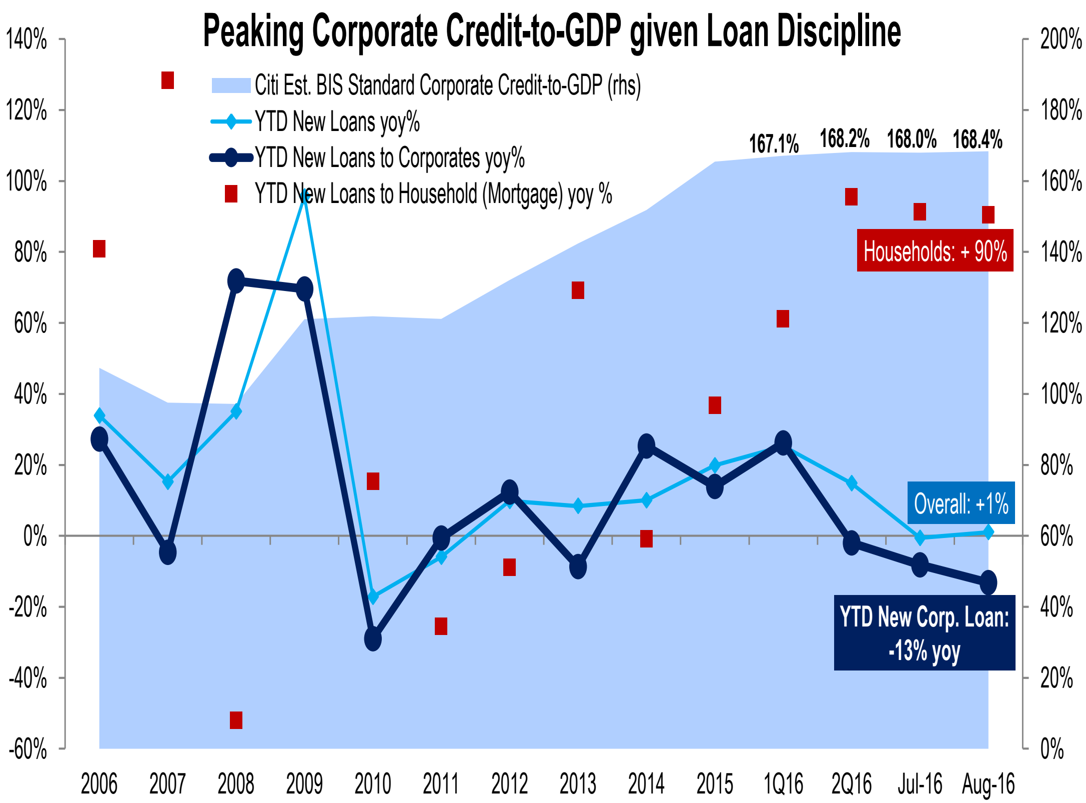
August corporate new bank loans continue to fell sharply

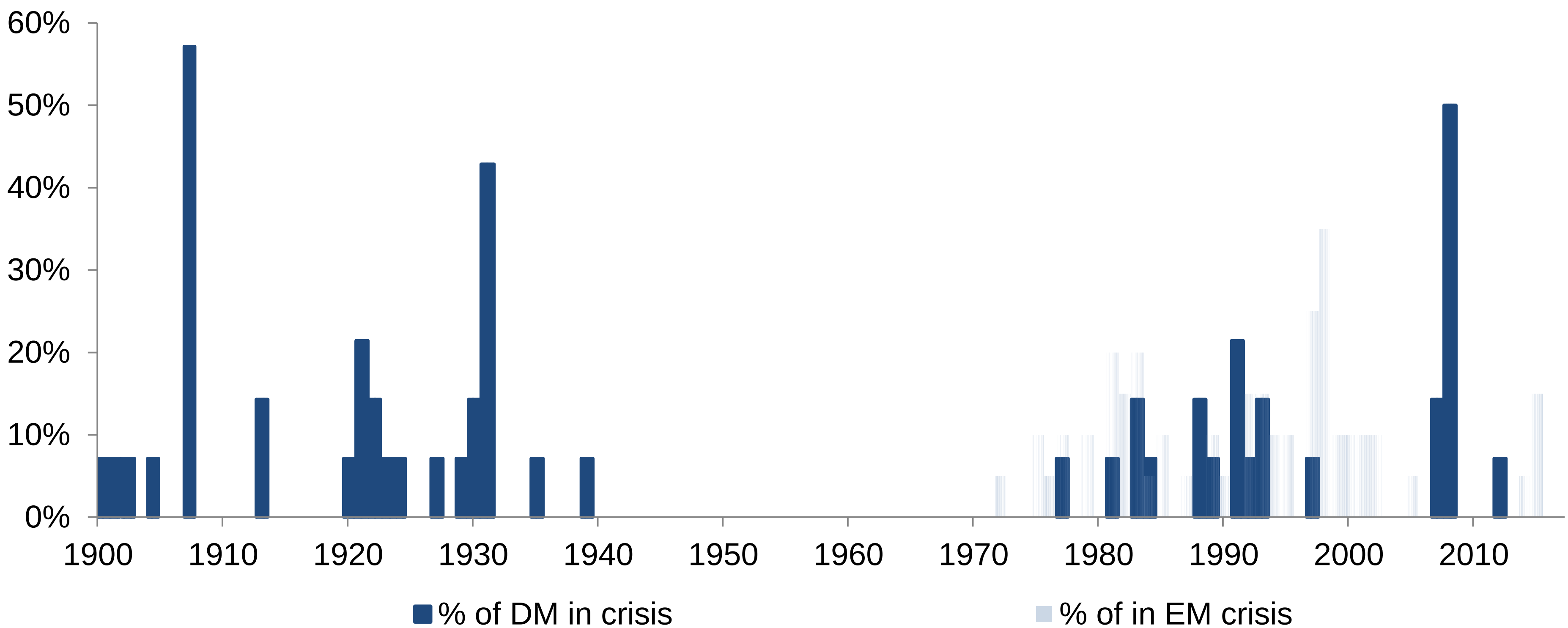


- We all agree that high leverage is a huge challenge for the Chinese economy and the overall debt level in China will continue to rise in the next years
- However, there is a policy shift underway in China: new loans to corporates have been decelerating whereas loans to private households are clearly pick up.
- This development has been in line with an official statement a few months back that “China should strive for a more balance distribution of debt leverage among the public-sector, corporates and households”
- If banks can continue with the lending discipline to corporates, it creates some conditions for a smooth de-leveraging process for China and transition towards a more consumption-based economy.

Sources: Citibank as of September 2016

Financial crises become the „new normal“ – be prepared for new crisis popping up somewhere

Share of countries in crisis since 1900



We observe a rising incidence of financial crisis since the collapse of the Bretton Woods system in 1971. Too easy monetary and financial conditions globally have clearly been conducive to this development. Countries with strong strong credit and house price increases are most vulnerable: watch out for China, Turkey, Brazil, Hong Kong, Canada, Sweden, Australia, to name a view.

Source: AllianzGI, Datastream; R. Shiller, M.Schularick and A.Taylor (2009): „Credit Booms Gone Bust: Monetary Policy, Leverage Cycles and Financial Crisis, 1870-2008“; L.Laeven and F.Valencia:, IMF WP/08/224 „Systemic Banking Crisis Database“; definition of crisis years according to Schularick/Taylor (1900-2010) and Laeven/ Valencia (1970-2008); own estimates for years since 2008; DM: G7, Australia, Sweden, Norway, Denmark, Spain; EM: BRICS, Turkey, Poland, Hungary, Turkey, Israel, Kuwait, Hong Kong, Singapore, Thailand, Philippines, Indonesia, Korea, Malaysia, Mexico, Argentina, Chile; data as at July 2016

Housing booms or bubbles ? The flip-side of credit growth in many economies

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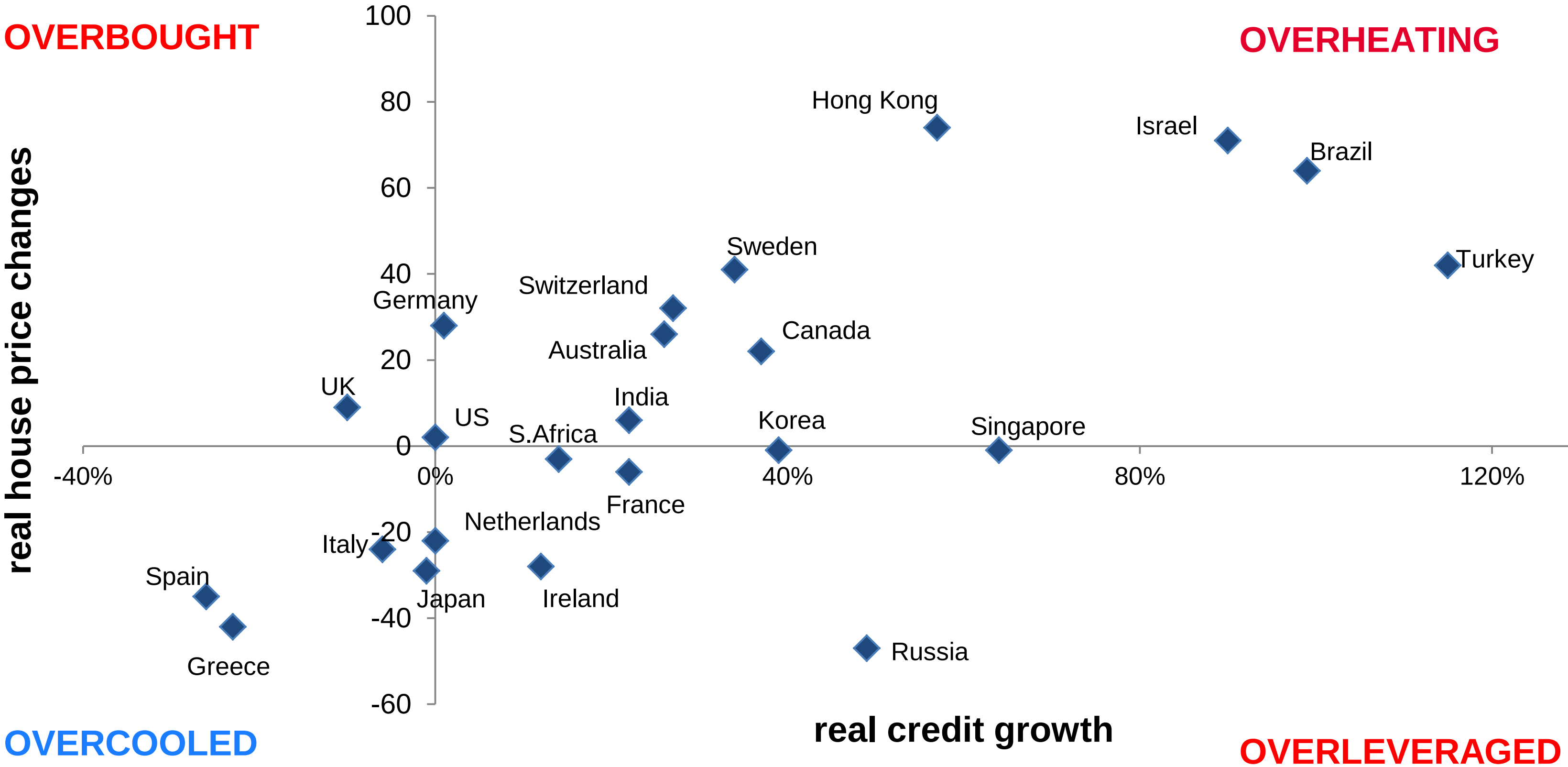
Real house price changes vs real private sector credit growth since q4 2008

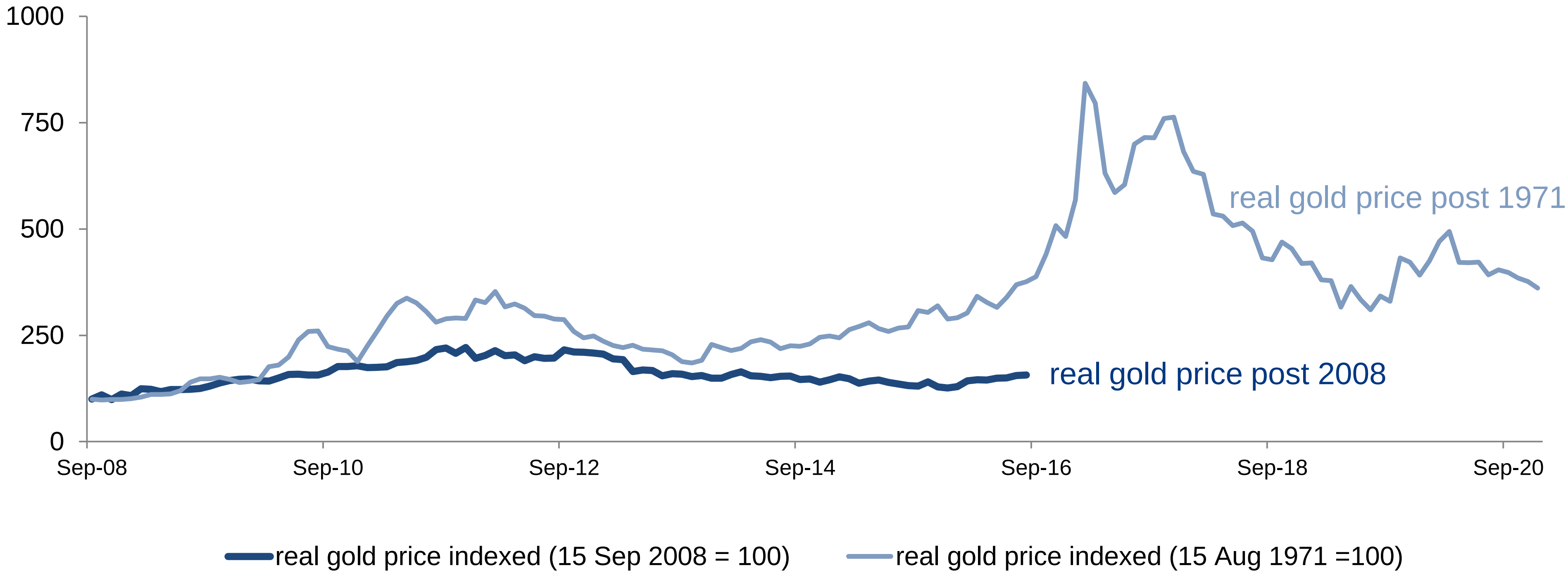


The rise in private sector leverage is also mirrored in booming real estate markets. Sharply rising private leverage in combination with house price booms has often been a precursor to a significant economic slowdown.

Source: Allianz GI, The Economist, BIS; legend: real house price performance based on latest available data (q1 16 or earlier); Turkey: price performance data since 2010;

Gold price: outlooks depends on Fed policy.
Sharp increase expected only in case if "Helicopter money" becomes reality

Real gold price since 2008 vs post-Bretton Woods



The Fed policy and, hence, real short rates, are a key driver of the gold price near term. Gold has substantial upside only if and when "Helicopter Money" becomes reality.

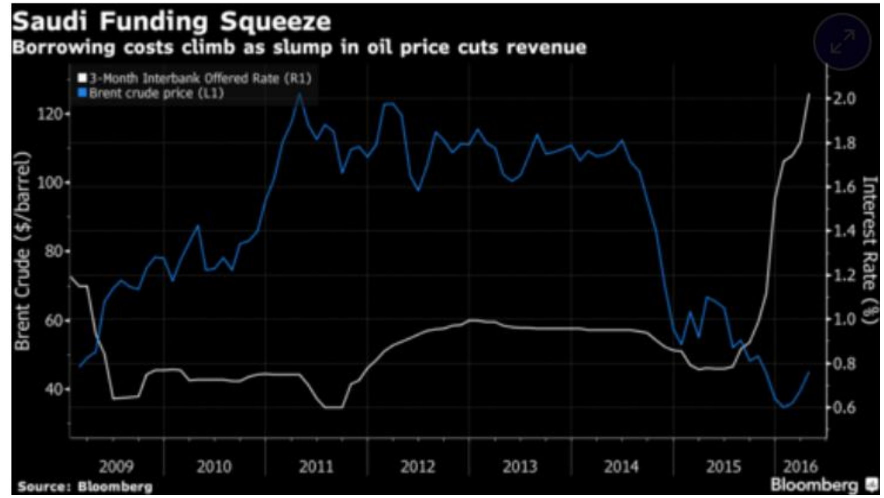
Source: Allianz Global Investors Economics & Strategy, Datastream.

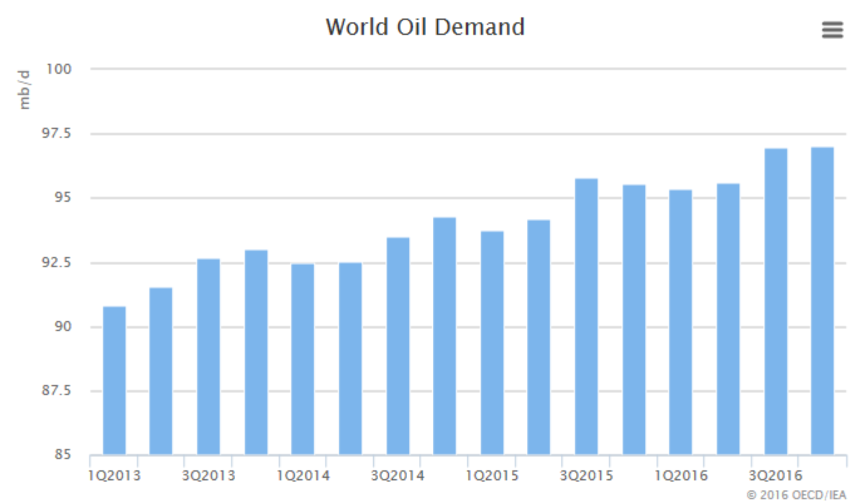
2017 oil price averages > $60/bbl

Peak demand is a while away yet!

Oil prices <$60 don't work for National or Independent Oil Companies:

- OPEC is dysfunctional but Saudi can move oil prices alone - a cut would only be giving up share taken from Iran
- Saudi is more financially stressed than it appears so a supply cut is now very likely to happen
- Russia is likely supportive given they are also producing at record levels and suffering financially
- IOC's have made impressive cost cuts but still struggle to cover reduced capex and dividends below $60
- 2017 forward curve sees a gradual increase to $55 by year end – the market is still pretty negative
- $60 is the tipping point at which the industry can start to sanction projects more frequently and works for producers and service companies
- Upside in oil price rebound is capped to $65/70 by unusually high supply outages normalising and US shale growing again
- Demand is likely to increase by > 1mn bbl/d unless we have a global recession



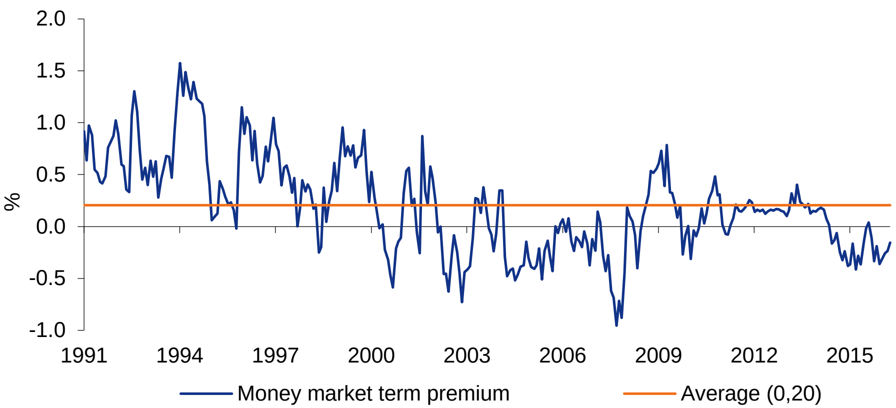


US Treasuries – For whom the (valuation) bell tolls

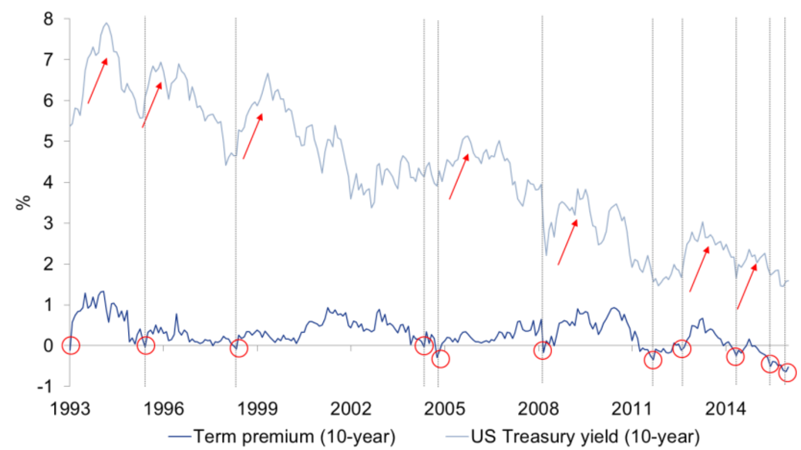
While bond bears have been frustrated by the ongoing resilience of US Treasuries, there are strong reasons from a valuation standpoint to not throw in the towel just yet.

1. Financial markets are out of sync with analysts and FOMC members regarding the expected timing and amount of rate hikes by the Federal Reserve. The short-end term premium is at historically sub-average levels, having traded below zero for the better part of the past two years. Obviously, **investors still anticipate lower policy rates not only than the majority of FOMC members but also than the average analyst**.
2. Second, term premia at the long end of the yield curve, which reflect the extra return investors demand to hold longer-term bonds instead of investing in a series of short-term securities, bottomed out at record low negative levels in August 2016. **Historically, a negative term premium proved unsustainable** and was usually followed by higher 10-year interest rates in the following months.

Bond markets still more sanguine on a patient Fed than economists



When long-end term premium troughed in negative territory, 10-year...



...Treasury yields usually increased in the following six months

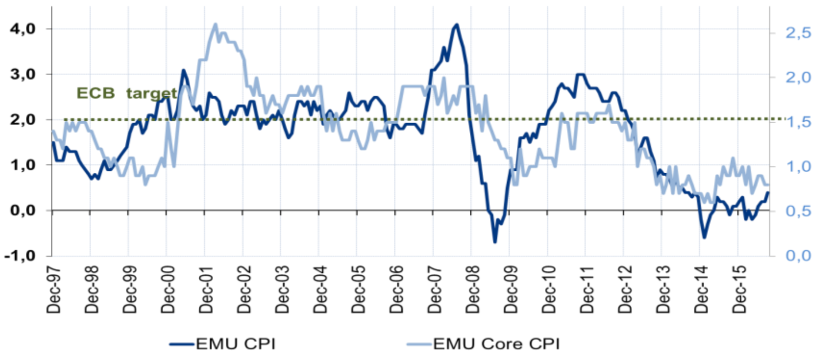
(basis points)	Term premium	Change in 10y Treasury yields over the following 1 month	3 months	6 months
30.09.1993	-11	+4	+41	+136
29.02.1996	-3	+23	+75	+85
29.01.1999	-9	+64	+70	+125
31.01.2005	-2	+25	+7	+15
30.06.2005	-29	+36	+41	+48
28.11.2008	-16	-71	+9	+54
31.05.2012	-35	+9	-1	+6
30.04.2013	-11	+46	+90	+88
30.01.2015	-25	+35	+39	+54
29.02.2016	-51	+3	+11	-15
31.08.2016	-63	+1		
Average		**+16**	**+38**	**+59**
Hit ratio		**91%**	**90%**	**90%**

Lack of compensation for duration risk (=beta) highlights the vulnerability of US Treasuries. Negative long-end term premia have regularly been a harbinger of rising interest rates.

Note: Money market term premium based on implicit 3-month interest rates (12-month forward) vs. consensus 3-month interest rate expectations (12-month forward). Long-end term premium based on regression of 1-year forward rates vs. subsequent 1-year excess returns of 10-year fixed receiver swaps. Source: Bloomberg, Credit Suisse, Consensus Economics

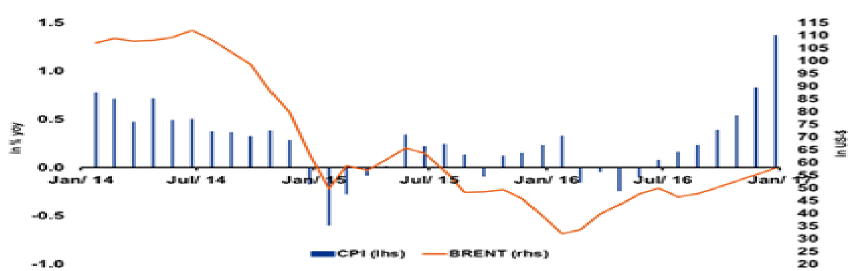
Headline inflation rate ready to accelerate

Headline Inflation (l.a) & Core Inflation rate in Euro Zone



Source : bloomberg, AGI data

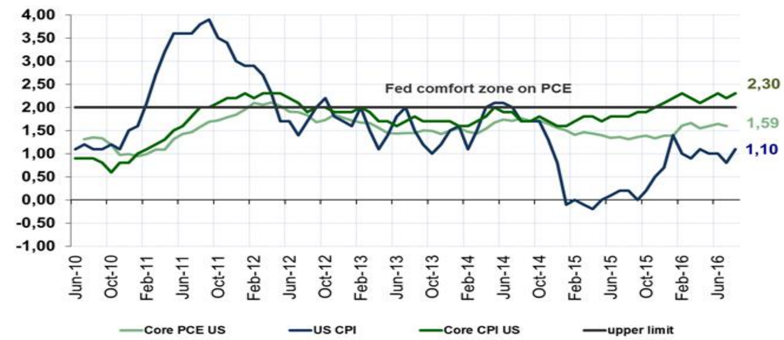
EZ CPI simulation w. Oil prices at forwards



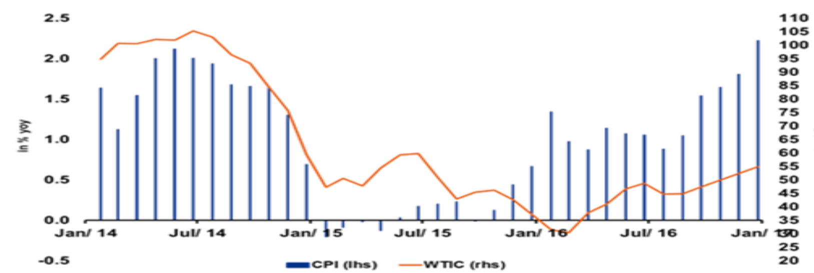
Source : AGI Data, sept 2016

- By year-end, the inflation rate is expected at 1% and above in early 2017, with the assumption of broadly stable crude prices.
- Fading indirect base effects from past commodity prices fall will lead to higher headline inflation prints.
- The core inflation will also move towards 1% by year-end and will edge up at a slow path as the output gap is closing gradually.

US Inflation



US CPI simulation w. Oil prices at forwards



Source : AGI Data

- In US also, strong catch up effect by year-end for the headline following the gains in oil prices will drive the CPI back to near 2% by year-end.
- The core CPI inflation has been running above 2% all the year and is now at 2.3% yoy. The core PCE is expected to pick up gradually to the 2% FED target.
- Positive signals coming from evidence of tensions in labor markets: notably an acceleration in the spread job switcher wage growth vs stayer, indicator used as an advanced measure of slack in the labor market)

Why are the ILBs especially attractive now ?

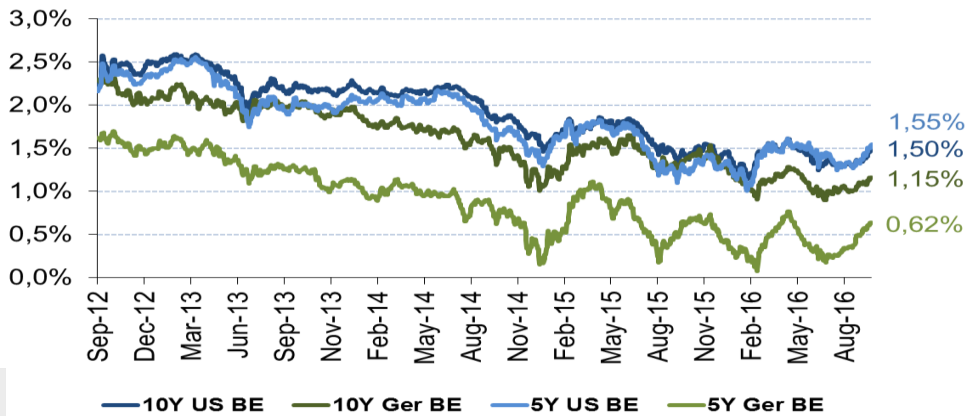
Valuations - Still at lows

- Breakevens remain obstinately low and below reasonable forecasts: the expectations for 2017 are at 0.71% and 0.81% for 2018 so 70bp below the ECB forecasts
- In US also, the levels are lows compared to realistic forecasts. Once again, the sharp decrease in oil price the last 2 years and risk aversion has led to sharp breakevens decrease.
- A progressive change of minds-et of the market participants should happen. The market should be reassured and gain more confidence in the next inflation data releases. This will alleviate some downside risks to the inflation outlook sentiment and allow the inflation expectations to come back to levels closer to the actual situation

QE program for Euro

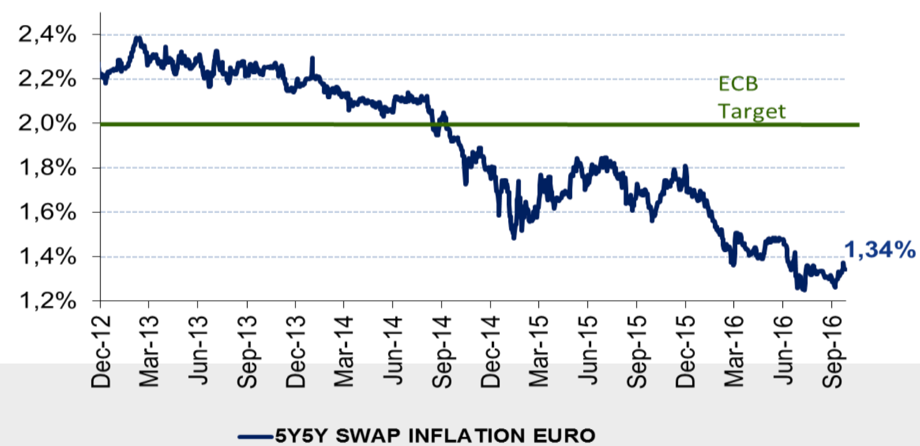
- While the market has been keen to believe the ECB commitment to act when persistent deflation was threatening, it raised doubts about its willingness to act when inflation is undershooting target.
- The ultimate goal of the European Central Bank (ECB)'s Quantitative Easing (QE) program is to increase inflation expectations, which is very likely to boost ILB prices in the mid-term. This is a question of credibility for the ECB.

5 Years & 10 Years Inflation Breakeven



source : bloomberg, AGI data

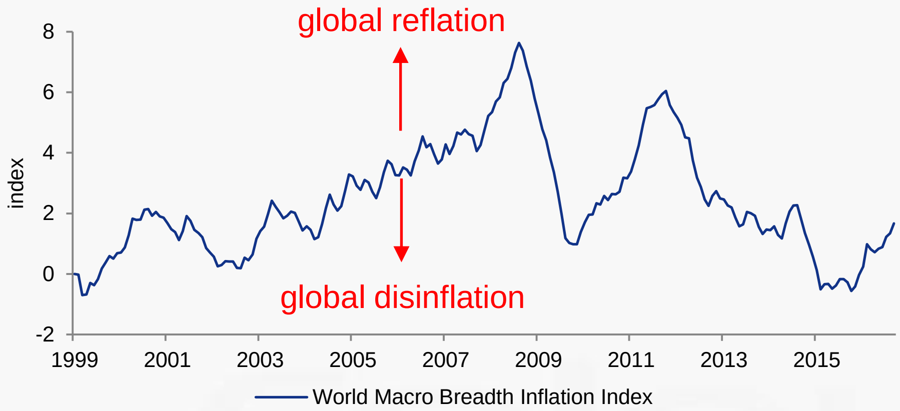
5Y5Y inflation level/ ECB inflation risk



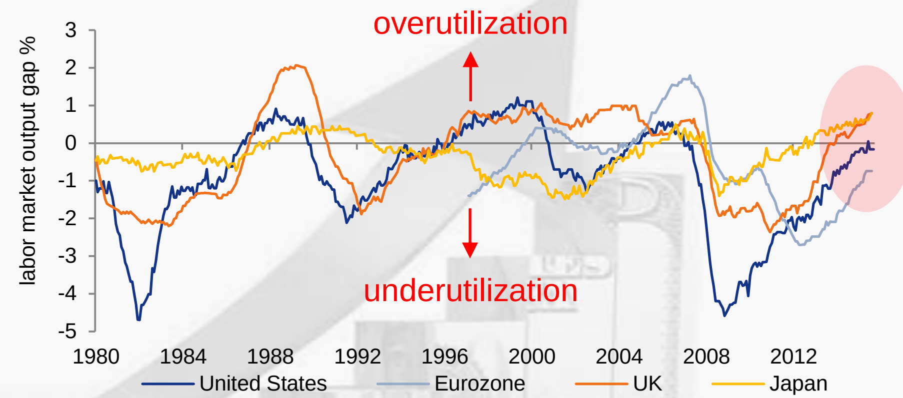
source : bloomberg, AGI data

Overweight inflation-linked vs. nominal bonds

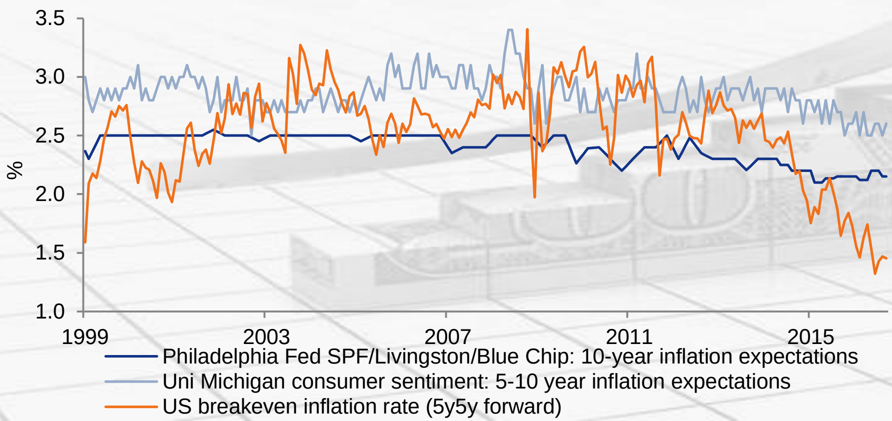
Growing signs of a moderate global reflationing...



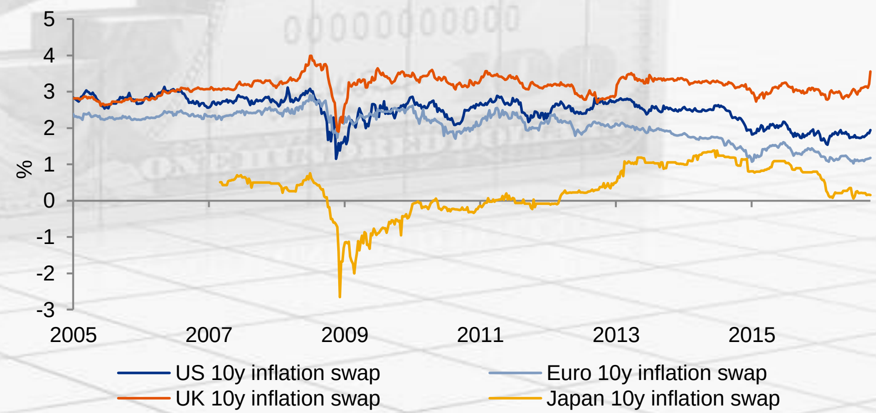
...in an environment of shrinking output gaps...



...and still undershooting inflation compensations...



...offer opportunities for long breakeven positions



Global reflation trend and subdued market based inflation compensations offer an attractive environment for long breakeven positions (=overweight of inflation-linked vs. nominal bonds).

Source: Bloomberg

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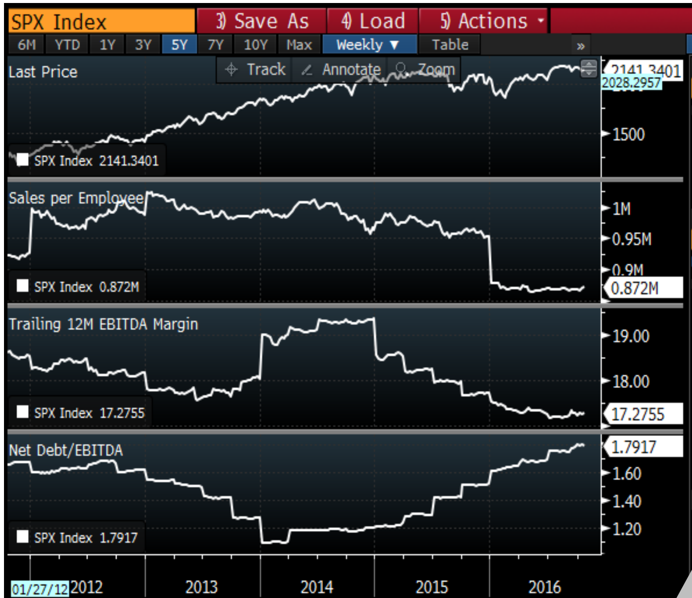
US bull market coming to an end



- Inefficiencies: Recent data suggests that US corporates have accumulated inefficiencies on their income statements and balance sheets. See the **drop in sales per employee and the drop in the operating margin**. Labor cost rising faster than the CPI, i.e. top line cannot keep up with costs, and lack of USD tailwind are not helping their income statements either. **Net leverage has increased** since its lowest point and whilst we are not back at 2009 levels this is partly thanks to peaking EBITDA. If margins continue to decline in a rising interest rate environment, debt refinancing will be difficult and the probability of a credit event increases.

- Valuation: **US equity valuations are peaking** (see Shiller P/E graph) and whilst the numbers are not at 2000 levels, the economy is also not experiencing the technological shock that it experienced back then. Expectations were overly optimistic but the economy did see higher productivity gains than nowadays which makes a comparison to the current situation inappropriate. The lack of alternatives has driven valuations high this time but interest in US bonds and Japanese or European equities as alternatives is rising driven by the tightening cycle in the US and the further easing in the rest of the major developed markets.

- Which brings me to my next point: A rate hike will be a major driver for US equities and once the monetary policy starts its normalization path the Fed will also stop reinvesting the proceeds from the maturing bonds it bought mainly as part of its QE cycle. 25% of the assets on the Fed's balance sheet will mature in the next 1 to 5 years, and this liquidity will be retrieved from the market – double blow to rates.

Factors that could break this cycle:

- Fiscal stimulus following the election - economically difficult as the US has been running a budget deficit for the past 14 years.

- Rates and labor costs stay low

- Pick up in aggregate demand

- A new technological shock, i.e. the US reinvents itself.

Source: Bloomberg and www.econ.yale.edu

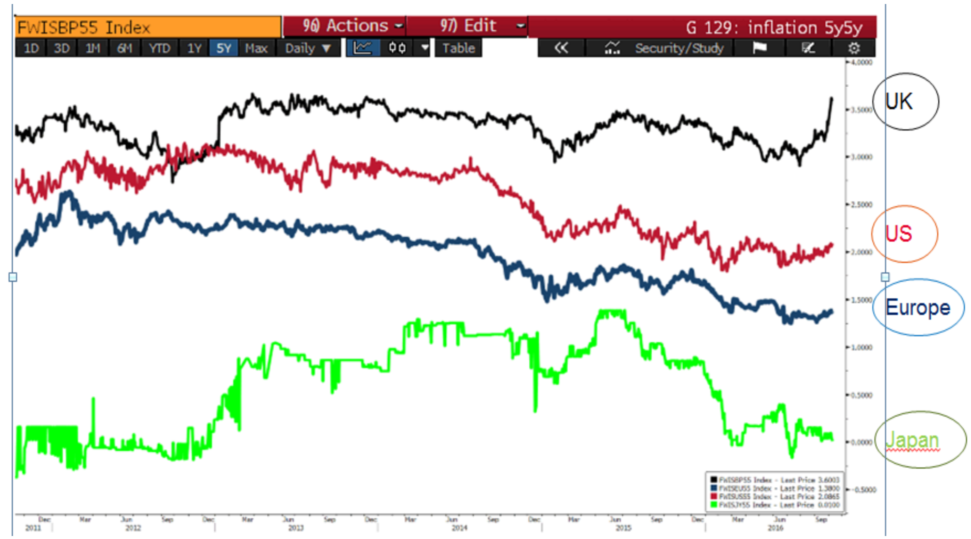
Underweight the UK market

- Underweight UK stocks, in particular the part more exposed to a possible slowdown in domestic demand, the MCX Index
- With a further fall in Sterling, British inflation could exceed the official target and confront the BoE with conflicting objectives, if growth is slowing significantly
- Considering political uncertainty, current account deficit, budget deficit, etc… the market still seems too indulgent vs domestic earnings growth perspective
- The valuation premium of UK equities vs. the rest of Europe, PER stands at 16.2x (2016E) and 14.6x (2017E) vs. 14.6x and 13x, might shrink

The fall of Sterling vs. UKX and MCX

The FTSE 250 Index: valuation & performance

Inflation rate expectations

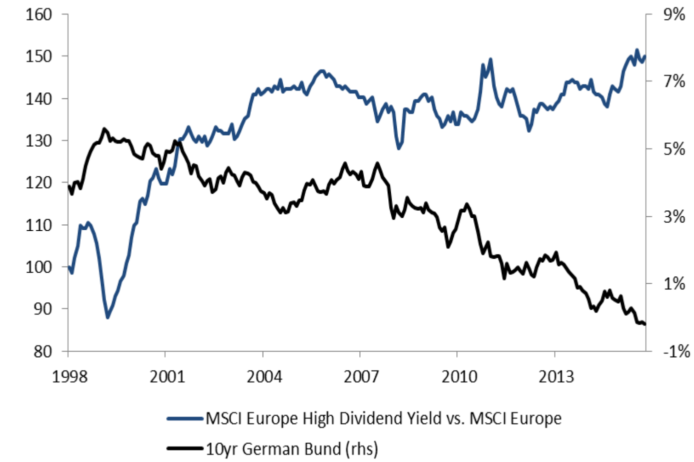


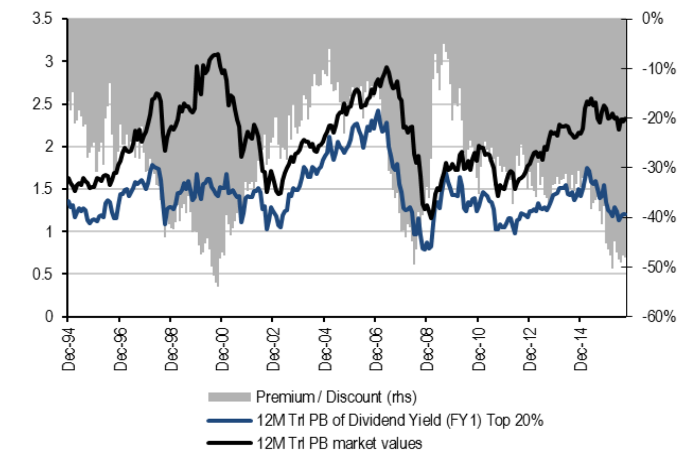
Sell the bond proxies and buy value

- Bond proxy sectors such as consumer staples are priced for perfection despite a weak economic backdrop.
- The justification for these valuations is “low interest rates” in a “world of scarce growth.” Many investors think bond proxy stocks are low risk because they are defensive. But this is an illusion. The repricing has already happened. Only downside valuation risk remains.
- Meanwhile, the macro backdrop is changing. Central banks are falling out of love with QE-forever policies. Many are actively supporting fiscal policy. As a result, long-term interest rates may be about to rise, leading to a significant downward shift in bond-proxy valuations.
- Yet many other stocks are not priced for perfection at all. Some are cyclical. Others are in out of favour sectors. This is where the investment opportunities are today.

Dividend stocks in Europe are less correlated to interest rates than many people think and are still relatively cheap

- Dividend Investing has proven to be a successful strategy over the long-term relative to the market (see upper chart)
- Additionally, the chart also shows high dividend payers are only slightly correlated to long-term interest rate moves
- So contrary to the consensus view, they should not be greatly affected by yield movements
- However, dividend stocks are still inexpensive vs. the broader market on P/B for example (see lower chart)
- We think this relatively low valuation should make dividend stocks an appealing investment proposition going forward

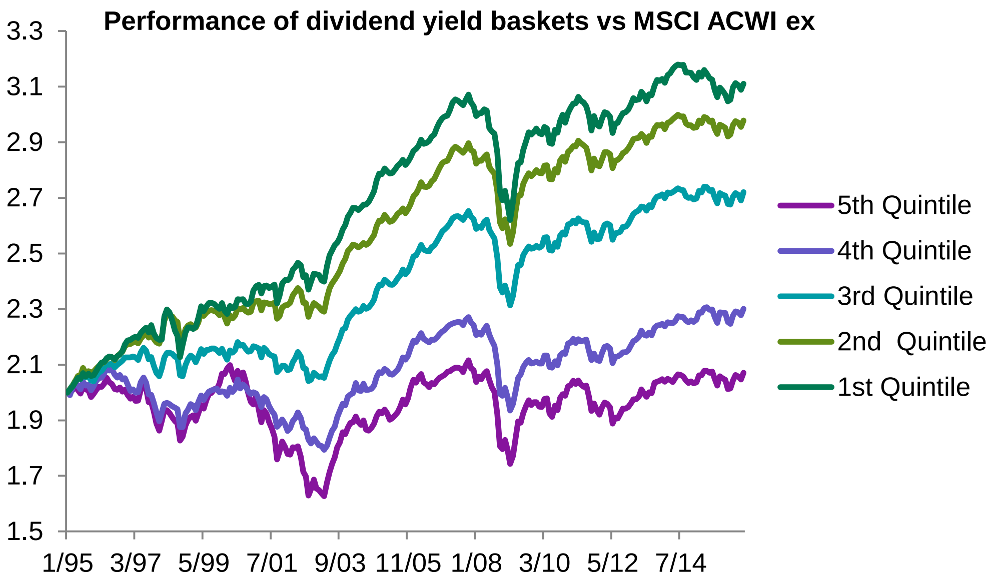




Source: HSBC, Thomson Reuters Datastream, MSCI

Dividend Yields: a successful strategy for international equity

Allianz Global Investors



Sharpe Ratio	1st quartile	2nd quartile	3rd quartile	4th quartile
1 year	-0.21	-0.37	-0.15	-0.19
3 years	0.14	0.21	0.22	0.16
5 years	**0.28**	0.22	0.12	0.01
7 years	**0.46**	0.40	0.36	0.22

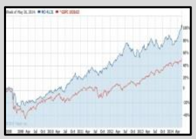
- A dividend yield strategy for an international universe (i.e. MSCI World ex. USA) has displayed a high degree of consistency in outperformance with a mostly favourable risk-return profile
- We conclude that financial repression stays in place and global low policy rates will remain lower and for longer.
- Therefore, for 2017, we believe the "hunt" for yield will continue.
- This strategy will continue to work well different regions, including Europe and Asia Pacific and therefore makes sense to be part of the international dividend strategy

Sources: Internal calculations and Citibank as of August 2016

Alpha to be made on sector and style allocation in 2017 – Defensive Growth bias should finally play out again

Key parameters for top down sector and style allocation including projected development during 2017

Defensive Growth



Lower for longer | GDP Growth | finally accelerating

Foreseeing low but stable DM growth, with US recession risks potentially rising towards the end of 2017. Chinese growth expected to fade in HY1 2017.

Staying low | Inflation Expectations | rising

Question if oil-induced inflation pick up is sustainable? Watch wage growth, services CPI

Lower for longer | Bond yields | rising

Rising uncertainty about central bank strategies should increase term premia, but limited ability to exit stimulus. Subdued growth still keeping yields down. Inflation key source of volatility. Fiscal policy another question mark.

Cyclical Value

Legend: ▼ = estimated degree of style support today ▼ = projected degree of style support end of 2017

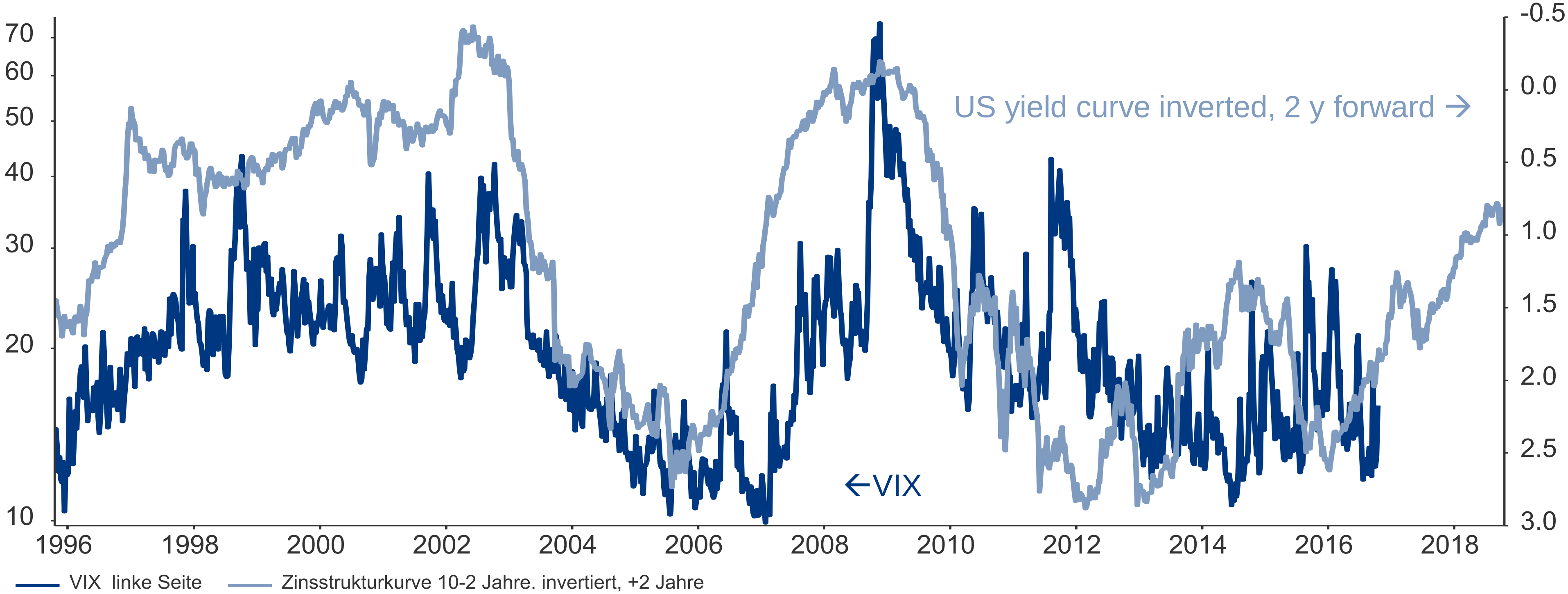
While we do not foresee a major acceleration of growth in 2017, the path of inflation expectations and bond yields looks less clear. Looking through potential volatility, we believe in an only moderate pick up of inflation expectations and bond yields, still favoring Defensive Growth stocks despite elevated valuations.

Source: AllianzgGI Economics & Strategy. View expressed as of October 21th 2015.

24

Expect volatility to trend up again in the coming two years

US Vix vs yield curve (inverted)



Source: Thomson Reuters Datastream, AllianzGI Economics & Strategy 10/18/2016

Investors are overestimating central bank puts. Our model indicates increasing volatility for the quarters ahead reflecting the change in (US) monetary policy direction. Political risk is another potential source for rising vola..

2017 – cyclical European sectors with attractive dividend yields

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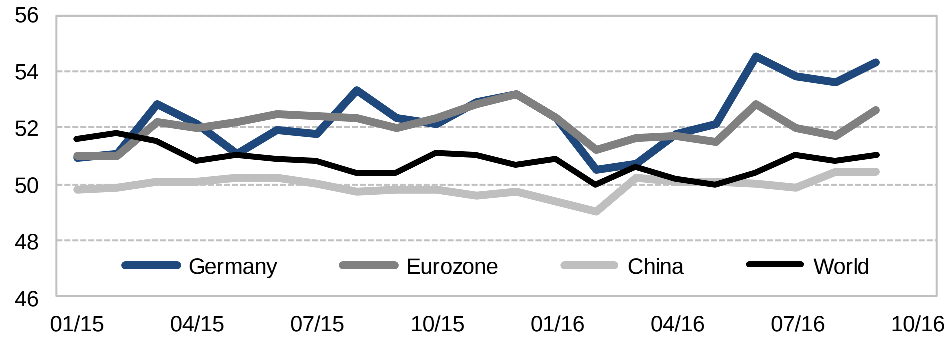
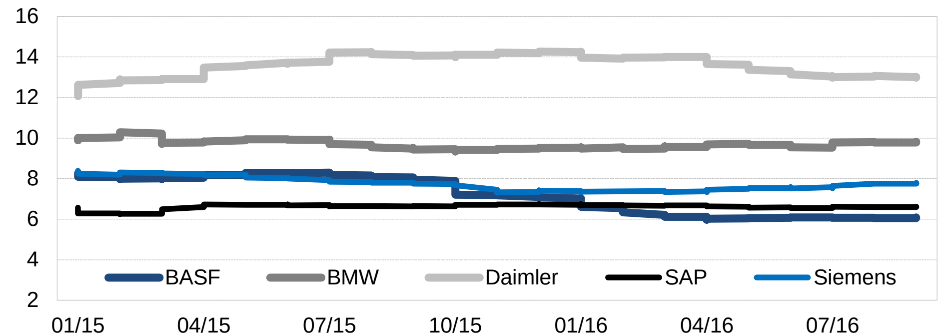
Robust manufacturing purchasing manager indices



Expected EBIT for FY2016 for DAX cyclicals in € bn



Cyclical Stoxx sectors with robust earnings, attractive dividends

October 2016	Price in €	Valuation P/E 2017E	Valuation dividend yield %
Stoxx Autos	485	7	3.6
Stoxx Chemical	804	14	3.3
Stoxx Industrial	443	15	2.9

Source: Bloomberg, Factset market consensus

- Over the last quarters the bulk of global leading indicators – e.g. the manufacturing purchasing manager indices - have been able to stabilise at or slightly above the level of 50.

- Against this backdrop of quite robust leading indicators, many cyclical companies have enjoyed robust EBIT and dividend forecasts over the last months.

- However, due to many risk factors investors have lost faith in the sustainability of earnings and dividends of cyclical companies: in Aug 2015 China growth worries, in Sep 2015 the auto emissions scandal, in Jan 2016 the oil price slump below 30 $, in Feb 2016 intensifying fears over the Eurozone banking sector, and finally in Jun 2016 the unexpected Brexit vote.

- Due to this long list of risk factors many cyclicals with robust earnings and dividends still offer expected dividend yields of 3% to 5%. Cyclical sectors such as Auto, Chemicals and Industrials should enjoy a good performance until the end of 2017 as investors should realise that their dividend outlook is more robust than

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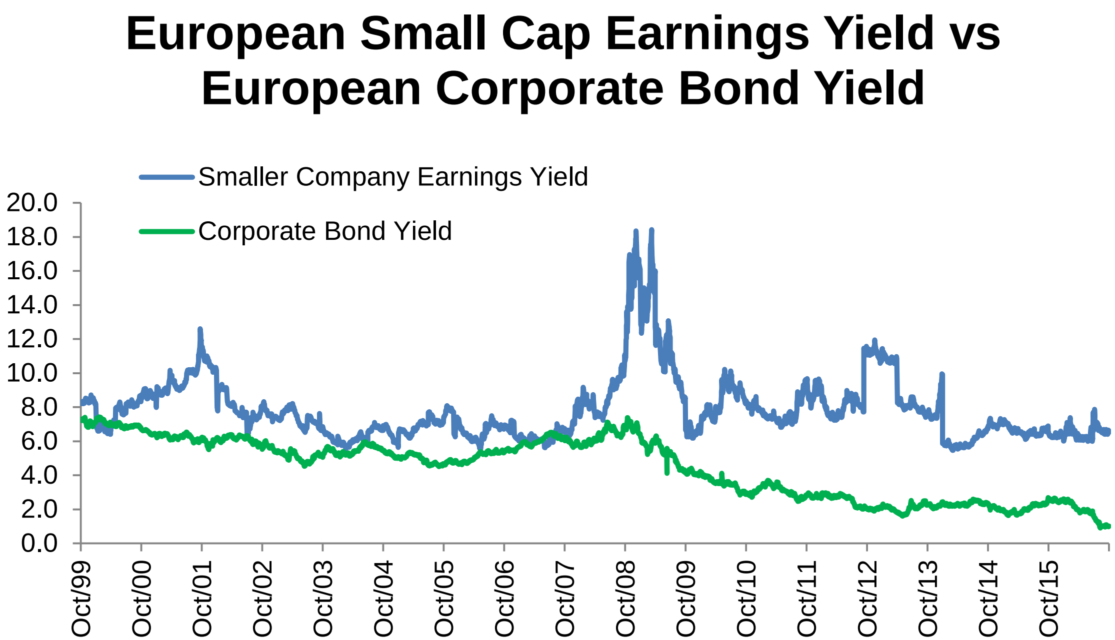
European Smaller Companies very exposed to M&A
from Large Companies looking for growth



Source: Bloomberg

- The difference between Pan-European Small Cap earnings yields and Pan-European Corporate Bond yields remains at historically high levels
- European Large Company earnings remains low or in decline
- European Small Company earnings continue to grow
- The Financial and Strategic argument for M&A is strong and compelling

- Larger companies are faced with structurally low growth, financially repressed, western end markets for the medium term and their Emerging Markets appear weak in the near term
- Corporate confidence at Board level is improving and leaning towards acquisitive growth
- **M&A in European Smaller companies should continue further in 2017**

China Supply Side Reform: End of Chinese dumping for steel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China Expo

EU imposes anti-dumping duties on Chinese steel products

(Xinhua)

Updated: 2016-10-08 10:20

Comments Print Mail Large Medium S

BRUSSELS - The European Union (EU) provisional anti-dumping duties on impo swift reaction to unfair competition."


Home | Anti-Dumping | Anti-Dumping Investigation of Rebar Imports Initiated

INDUSTRY NEWS

Anti-Dumping Investigation of Rebar Imports Initiated

by Jeff Yoders on OCTOBER 12, 2016

Style: Industry News Category: Anti-Dumping, Ferrous Metals, Metal Prices, Product Developments


Govt alleges Chinese non-cooperation in stainless steel countervailing duty investigation

Monthly Chinese steel export (mt)

As China is developing towards a consumer led economy, many old economy capacities (e.g. cement, steel) are no longer needed and production is currently heavily exported. This has brought the world to the brink of a trade war as countries around the world are pushing back on subsidized dumping.

In the latest 5-year-plan (2016-2020) the Chinese seemed to concede to these complaints and came up with concrete steps to reduce excess capacity in the key industries. If enforced over the next couple of years, Chinese capacity consolidation could reverse the detrimental impact that has unfolded over the last decade in many industries in China and globally. Perennial low-margin businesses would experience a renaissance.

Energy transition: is it relevant for investment?

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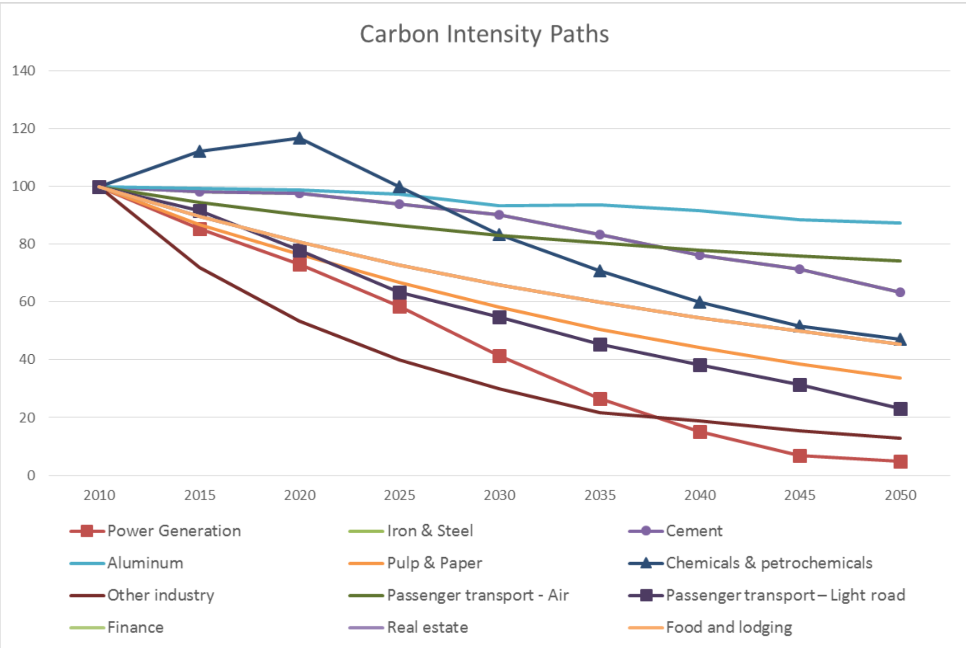
Drivers?

- International agreement on the **2°C goal**: a high ambition supported by governments
  - China, the US and India have now ratified the Paris agreement, the 55% of the global emissions threshold was achieved
    –> **Paris agreement to enter into force** on Nov. 2016.

Power generation: the need for the fastest and biggest reduction of GHG intensity



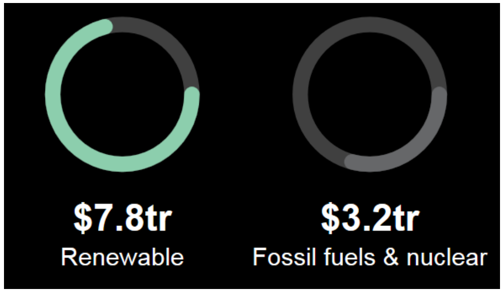
Sources: IEA ETS 2DS 2014

- Most significant carbon reduction to come from **power generation** and **passenger transportation.**

- **Significant demand growth**:

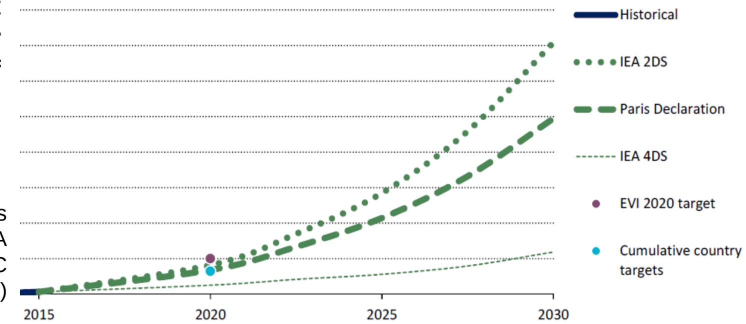
Renewables: a significant part of investments in power generation

Sources: Bloomberg New Energy Finance,I Investment forecast by 2040



Deployment scenarios for the stock of electric cars to 2030

Sources: IEA analysis based on IEA (2016b), UNFCCC (2015b)



- **Increasing competitiveness** :
  - Renewables keep getting cheaper: solar cost to decline by 60% and onshore wind by 40% by 2040 (BNEF).
  - Batteries costs are decreasing and new affordable technologies are now available to cut emissions.

How to play it?

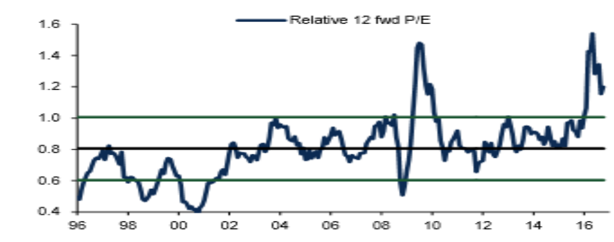
- Capital goods: Renewable equipment, Grid infrastructure, Energy storage solutions.
- Utilities: Grid, renewable and supply leaders, Transforming utilities.
- Clean mobility: OEMs suppliers, Semi / tech, Energy storage solutions

Basic Resources: Underperformer in 2017

- A significant China credit impulse – paid by increases in public debt - has helped to improve short-term economic data and to support commodity prices
- As a result, the Basic Resources segment rallied >40% year to date and is the outperformer of the year
- Self-fullfilling prophecy: As long as the perception in the market remains supportive (undervalued / underowned) and and the economic data improvement paints over the fragile demand basis, the sector will continue to rallye
- In the course of 2017, the market will challenge the demand / supply situation, the Chinese public debt levels and the high valuations again, and we will see a de-rating of the sector.

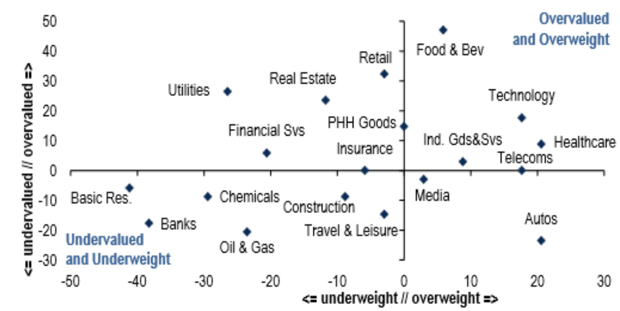
Sources: AGI, Goldman Sachs, Bank of America Merrill Lynch

Chart 18: Basic Resources relative 12m Fwd P/E



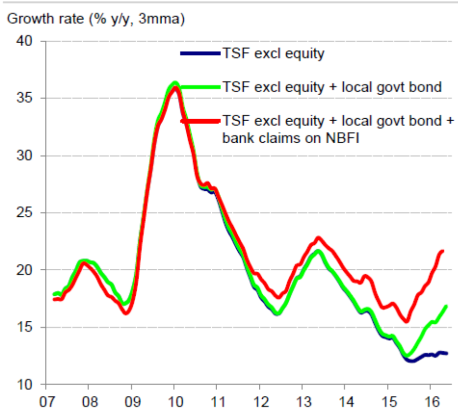
Source: BofA Merrill Lynch European Quant Strategy, Lines are long run avg and +/-1SD

Chart 18: European sector valuation vs. positioning

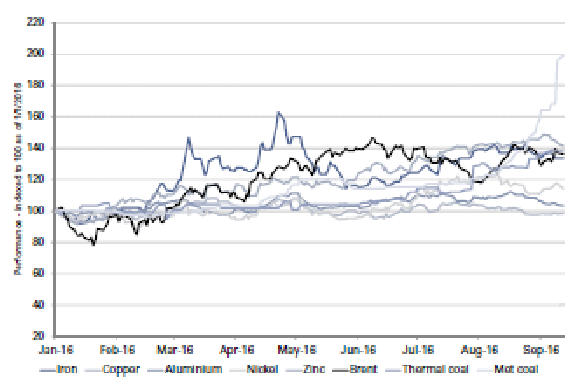


Source: BofA Merrill Lynch Regional Fund Manager Survey

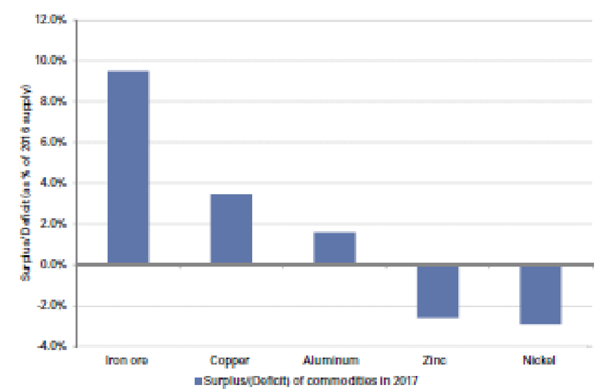
Figure 1: Total social financing – recent distortions



Commodity performance (indexed to 100 as of 1/1/2016)



Surplus/(deficit) of major commodities in 2017E



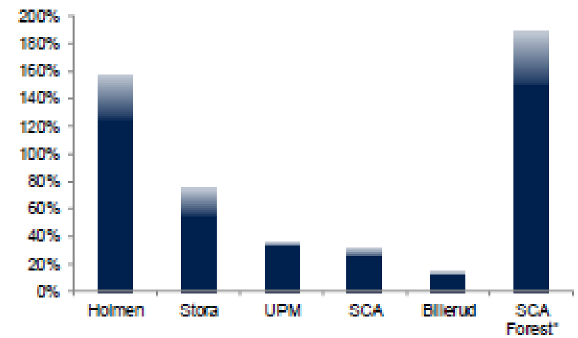
Pulp & Paper - "Old school" sector on the move …
… creating "new sector opportunity" and likely triggering some M&A

Swedish Svenska Cellulosa is splitting up into two companies, pure forestry asset and hygiene business. Being the "Elephant in the room", this sets precedent for all sector to change

Status quo: Integrated business models, in which forestry assets bind high share of company EV Separation

- ➢ Separation generating attractive investment opportunity of pure play forestry asset
- ➢ Setting free capital and capacity for repositioning non-forestry business models, some are in urgent need doing so

Forest value as % of EV on transaction pricing



Source: ABG Sundal Collier.

New Forestry Companies

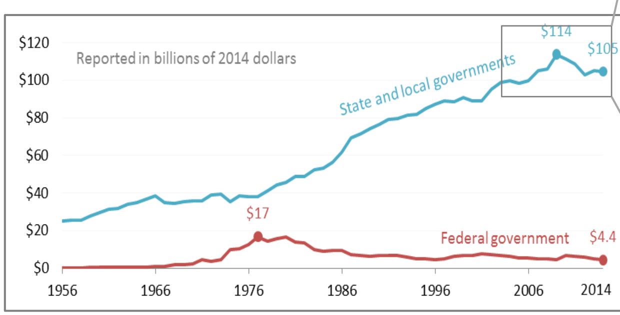
- ✓ Very stable business model
- ✓ Forest grows 2 -5% pa
- ✓ Real asset, similar characteristics to real estate
- ✓ Uniqueness offering diversification benefits
- ✓ Implied European Valuation much cheaper vs. listed US pears
- ✓ Expected to become income stocks

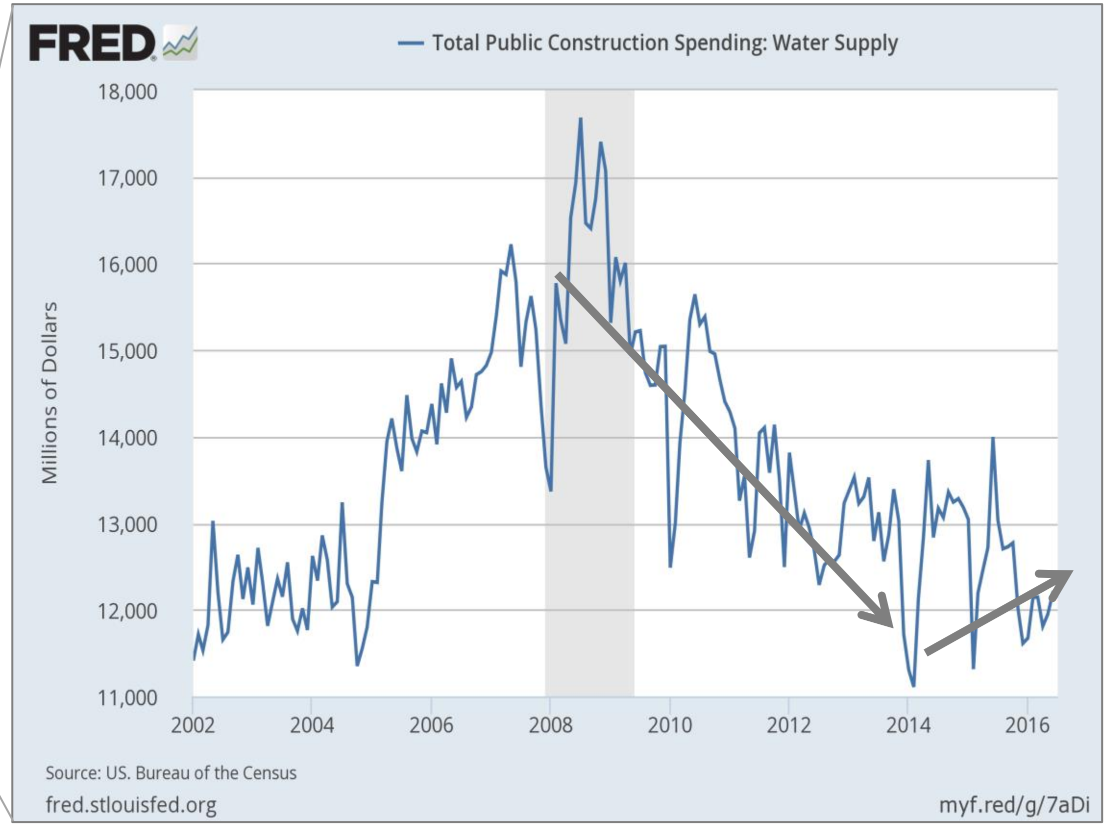
Implication to sector

- ➢ More focus and higher RoCE
- ➢ Setting free capital for bolt-on M&A
- ➢ Strategic alliances and asset swaps likely
- ➢ Niche companies might become attractive M&A targets
- ➢ Shrinking paper business might be spun-off similar to German Utility examples of 2016

US Infrastructure: Total spending on water infrastructure has finally reached a turning point

- US water Infrastructure spending has been a 5% cagr market for decades
- The GFC resulted in budget cuts on state and municipality level, resulting in 7 years of spending declines while infrastructure kept on aging
- Underlying need for upgrading will now coincide with catch-up investments of delayed replacement work





Source: Congressional Budget Office, *Public Spending on Transportation and Water Infrastructure, 1956 to 2014 (March 2015)*, graphed by the Environmental Finance Center at the University of North Carolina, Chapel Hill.

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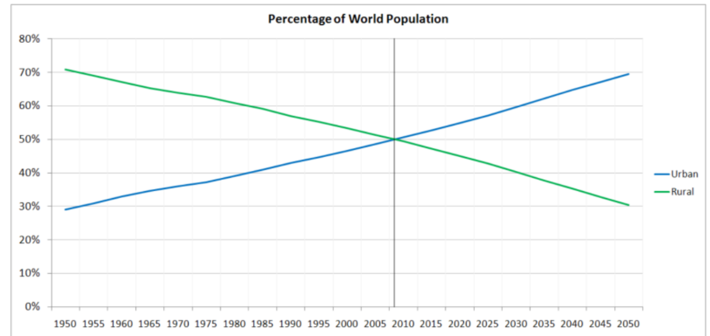
Urbanisation process – a multi years driver

- Urbanisation process
  - concentration of better opportunities
  - industrialisation process also of agriculture
  - local and global economic and social changes

- Effects on the market
  - real estate and product/service inflation in major cities
  - investments in infrastructure
  - investments in environmental protecting measures
  - development on new products and services



Data Source: United Nations, http://esa.un.org/unup/p2k0data.asp

Urbanization levels (percent urban) 1950–2050 by geographical region

GEOGRAPHICAL AREA	1950	1970	1990	2010	2030	2050
World	30	37	43	52	60	66
Sub-Saharan Africa	11	18	27	35	45	55
Northern Africa	26	37	46	50	56	63
Asia	18	24	32	45	56	64
China	12	17	26	49	69	76
India	17	20	26	31	39	50
Europe	52	63	70	73	77	82
Latin America and the Caribbean	41	57	71	78	83	86
Northern America	64	74	75	81	84	87
Oceania	62	71	71	71	71	74

Source of statistics: United Nations Population Division (2014)

33

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Civil Aerospace cycle weakening ?!

- Starting with the positive:
- Multi-year record order backlog for both Airbus and Boeing. Global Airline industry with record profits in 2016.
- Cheap financing still easily available. Aircraft leasing companies are in good shape.

- But: signs of market weakening:
- Low level of aircraft scrapped adding to overall capacity. Capacity growth slightly exceeded traffic growth in recent months. Traffic growth has started to slow somewhat.
- High number of airline profit warnings due to yield pressure from too much capacity, demand impact from geopolitical difficulties and currency movements.
- Overall order intake has slowed. Long-list of major airlines having deferred medium-term delivery slots especially in Q3 with risk of more to come. Book-to-bill for FY16 now likely falling to below 1x.
- Weakness of many currencies against the USD make plane purchases more expensive

- Limited risk for 16/17 production rates given high level of prepayments made but despite overbooking policy we see risks for the additional production ramp-up towards the end of this decade. We also see the risk that the aftermarket players could see a negative growth impact already during 2017.

Digital & Urbanization change how we trade:
We are optimistic on the logistic property market potential

Urbanization trend is an opportunity

- Densification of metropolitan areas justifies the need to build bigger platforms.
- More retail clients for one property means higher profitability.

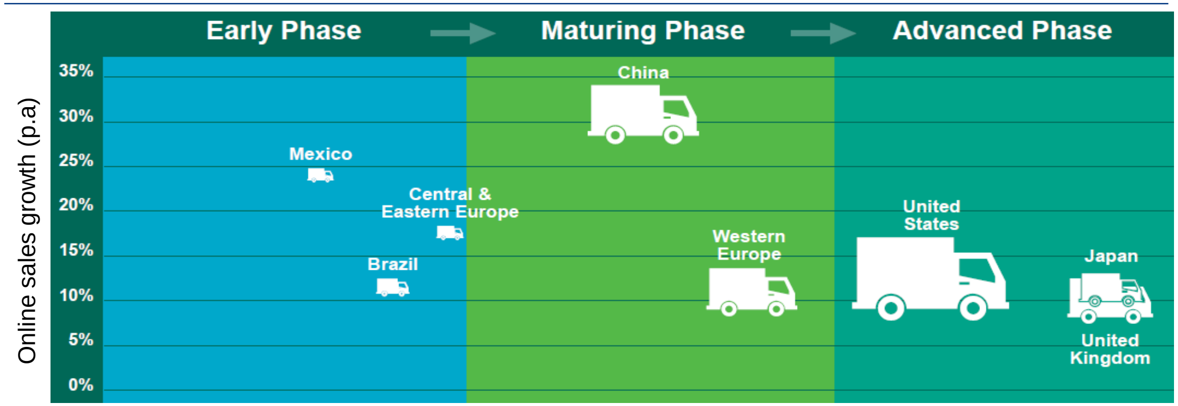
Logistic properties come of age

- Out of town with specific tenants' requirements, logistic properties was not favored by institutional investors until recently.
- Now, this asset class is one of the favorite of institutional investors mainly because of high income generation and positive rental growth.
- Blackstone is preparing the marketing of Logicor, the biggest European logistic portfolio ever (c. EUR 10bn), this should have a massive impact on the sector.

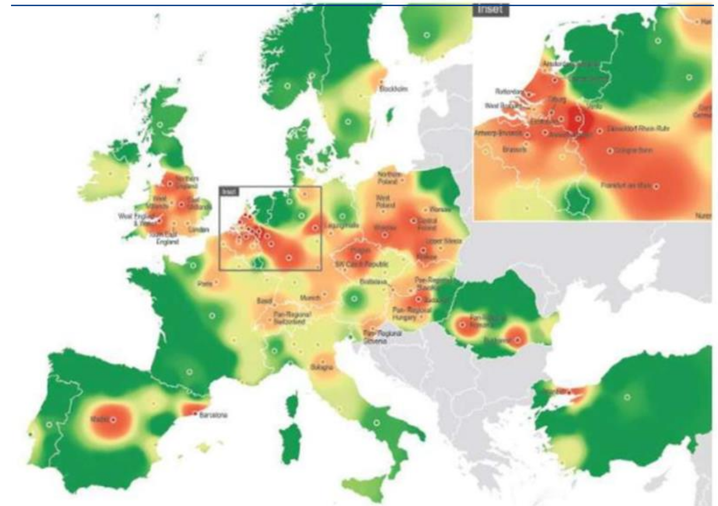
Undersupply will drive rents up

- Logistic properties benefit the most from e-commerce: online retailers cannot develop themselves properly without a strong distribution arm.
- Online sales would require more and more space: should the on-line sales continue to increase, we need 10%+ new supply each year.

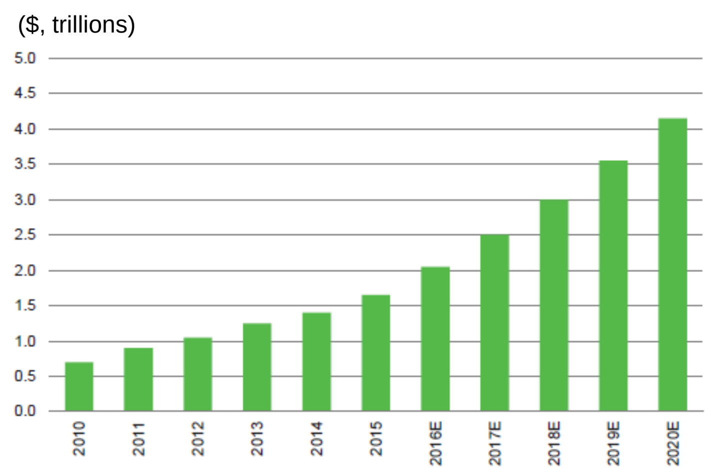
Online sales growth should generate more demand for industrial space



Dense urban areas require large industrial platform

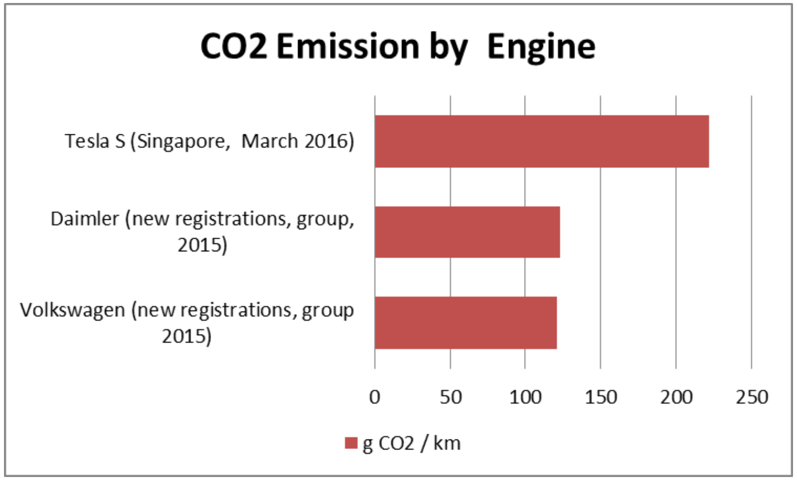


Global online sales are still on its way up



Source: Prologis, AllianzGI as of October 2016

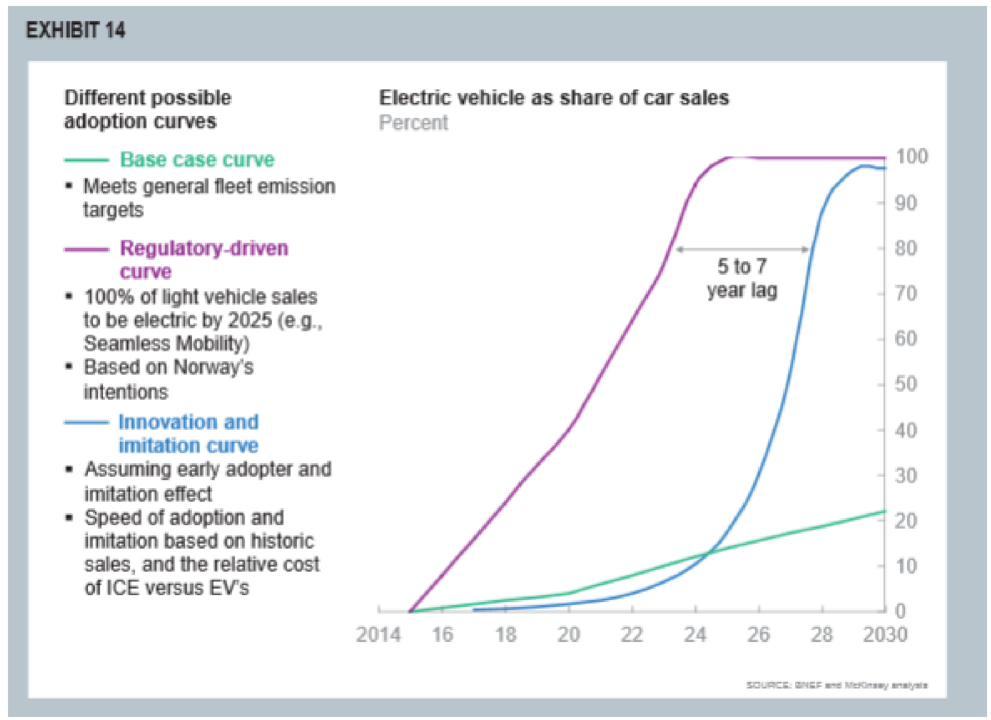
- Diesel car put on the spot: Perception vs. reality



- Electric vehicle seen as panacea, but full value chain carbon emissions are almost 2x higher than diesel cars (example: Singapore registration Tesla S).
- Target CO2 emissions (95 g/km) by 2020 require a significant diesel share in the mix, as diesel engines are more efficient than gasoline powered cars.
- Particulate matter: Problem solved - Already dealt with via particle filters. Did you know that electric vehicles likewise generate particulate matter (via tyre abrasion) ?
- NOX: Latest diesel generation completely removes NOx by conversion into nitrogen & water using urea solutions.

China drives Electric Vehicles closer to parity

- With the highest CO2 emissions in the world & local air pollution, China isn't short of reasons to welcome EV's.
- China became the largest market for EVs in 2016, targeting 600,000 vehicle sales in 2016.
- As well as subsidies already in place, the National Development and Reform Commission are proposing either EV mandates on car producers or carbon credits similar to California's ZEV credit system, either of which would catalyse clean car production.
- With a 25% import levy on foreign made vehicles, 19 out of the 20 largest EV suppliers are Chinese companies.
- For a battery to qualify for subsidies, the manufacturer must have had 12 months of continuous operations in China – Samsung SDI & LG Chem, accounting for 15% of lithium-ion battery market, have thus far failed to qualify.
- As experienced with solar panels, China's entry onto the battery stage will accelerate the path to commoditisation of lithium-ion technology.
- The blue line in the adjacent graph shows how EV sales are likely to rapidly cannibalise internal combustion engine vehicles, once parity (expected in ~2026) is reached.



BNEF : https://about.bnef.com/white-papers/integrated-perspective-future-mobility/

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Level one and two of Autonomous Driving penetrating quickly

- New technologies in cars in the past usually took 15 years to reach a penetration rate of more than 50%. For ADAS (Automated Driver Assistance Systems) it is likely to be 5-10 years.
- The immediate driver to this is the inclusion of ADAS in NCAP New Car Assessment Programmes) globally. Getting 5 stars for safety is going to be impossible without functions such as Autonomous Emergency Braking, Adaptive Cruise Control and Lane Departure Warning.
- 2017 will see a major step in Level 2 Autonomous Driving, where cars use automation to fulfil 2 or more functions of driving simultaneously.
- What‘s needed are sensors, cameras, actuators and ASICs made by Valeo, Sensata, Mobileye, Continental, Delfi, Denso and AMS.

Picture source: Continental AG

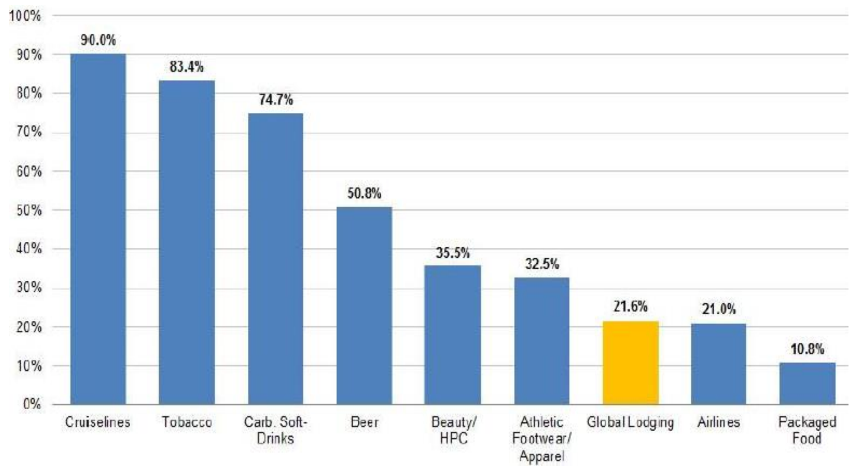
 38

Global hotel industry: consolidation in progress

Consolidation within the global hotel industry has been gathering pace over the last 12 months and it is not over.

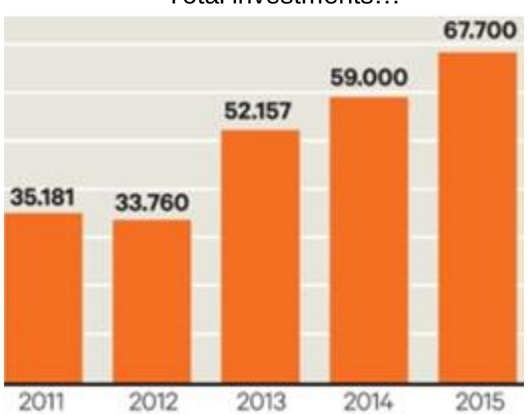
- This industry still remains one of the most fragmented industries globally with the 5 biggest hotel groups controlling only 22% of the overall number of rooms.
- Scale increasingly matters in this disrupted industry. Faced with growing competition and the online and distribution challenges, hotel operators need to react and to adapt. Gaining scale and IT capabilities becomes critical to preserve long term growth and profitability. Consolidation helps to improve competitiveness and visibility by allowing for reduced costs, improved bargaining position with OTAs, improved brand awareness and increased investment capabilities to digitalize and modernize the offer.
- Increasing appetite of the Chinese for hotel assets overseas. Many reasons: means to invest their cash in a safer way (cf economic turmoil at home), government has become more supportive lifting some of the restrictions on foreign investments, need to reduce their dependence on manufacturing, gain expertise on a growing area domestically etc.
- Financial repression context is supportive.

A stilll fragmented global industry

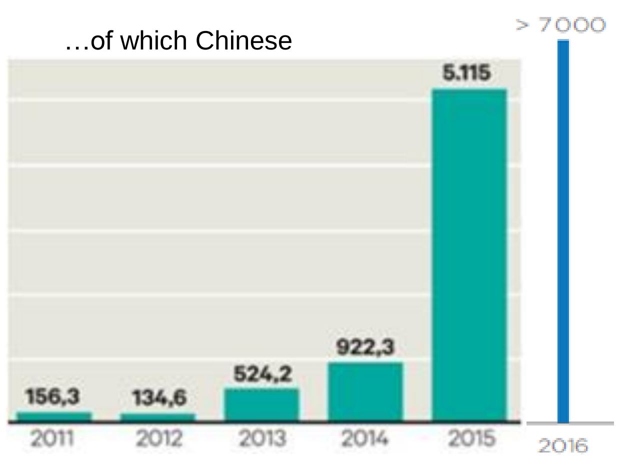


Global hotel real estate market (in $ million)

Total investments…



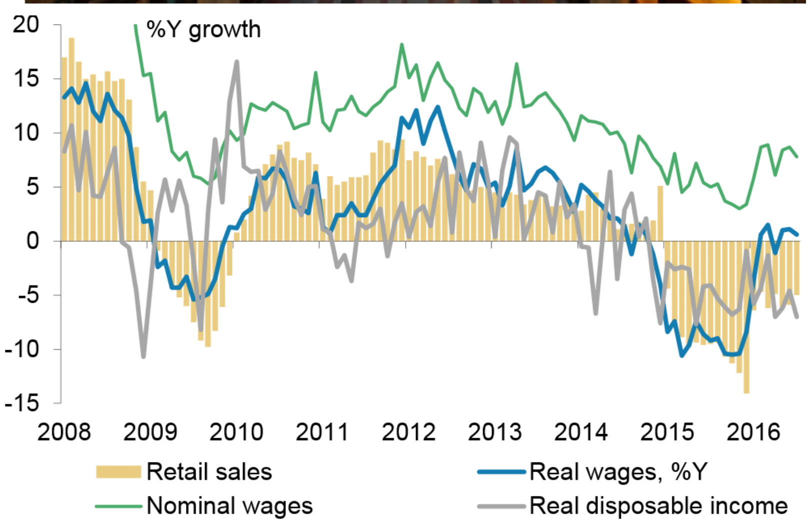
…of which Chinese



« LES ECHOS » / SOURCE : JLL HOTELS & HOSPITALITY GROUP

Ongoing consolidation. Last top 10 with Chinese players.

The Russian consumer is slowly coming back to life



The Russian economy entered a recession in 2014 …

Following the oil price drop and US & EU sanctions the Russian economy went into recession mode in 2014, which continued throughout the first half 2016.

… which led to a prolonged fall in consumer spending.

The recession resulted in real wages and therefore real disposable income starting to shrink by late 2014, so consumers cut their spending as evidenced by falling retail sales. While real wage growth moved into positive territory in the first half 2016, real disposable income – and therefore consumer spending – remained negative due to a rising savings rate.

Recent months saw first signs of recovery …

The fall of real disposable income was slowing in the third quarter 2016 and consumer spending started to increase on a sequential base, driven by larger cities and middle-income consumers. Consumer confidence is rising, even though the indicator is still deep in negative territory.

… and consumer spending is expected to grow again in 2017 …

2017 is the year when the Russian economy is expected to slowly grow again. Resulting nominal wages increases amid a stabilizing savings rate and falling inflation should lead to a recovery of real disposable income and result in rising consumer spending.

… even though the recovery is likely to be slow and bumpy.

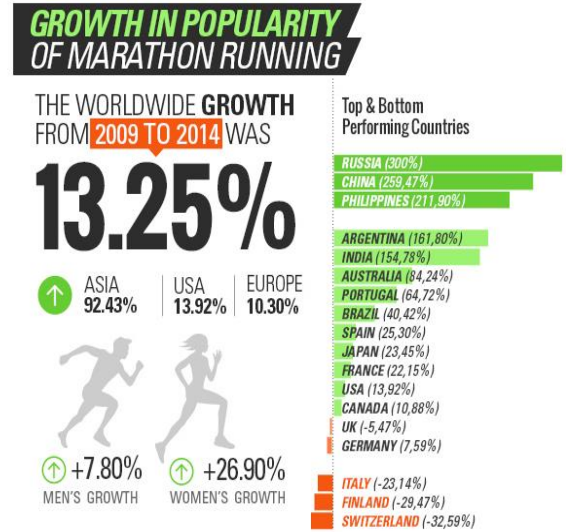
Geopolitical tensions, weak growth compared to past upswings in the economic cycle and an uneven distribution of wage increases will weigh on consumers and is likely to prevent a V-shaped recovery.

Russian consumer spending should start growing again in 2017 after a trend reversal in the second half 2016. But as the recovery is likely to be slow and bumpy, sectors/stocks have to be picked carefully.

Sources: Morgan Stanley, UBS, Wikipedia Creative Commons

Active Lifestyle
– Up for a run?! Excel in 2017.

- Consumers are becoming increasingly more health conscious and want to lead more active lives.
- They choose a bigger variety of sports and (outdoor) recreational activities, the „well-being“ trend is at the forefront .
- This is true for millennials, who put more effort on work-life balance and a generally healthy and active lifestyle, as well as the 50+ generation, which nowadays devotes more time and money to sports and outdoor activities.
- Being active is a truly global trend with very supportive macro drivers, such as a growing global middle class, higher disposable incomes and a generally new approach to consumption, also supported by accelerating digitalization.



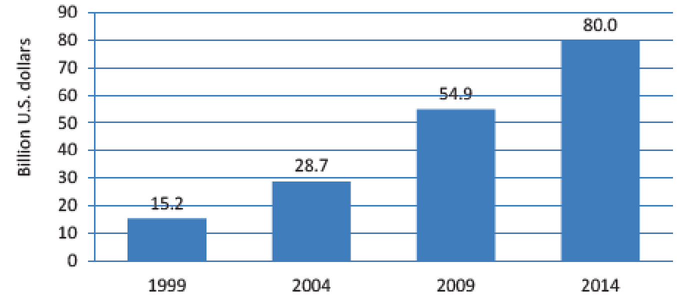
- Play this theme via strongly positioned and innovative companies in the Fitness & Leisure, Sports/ Outdoor and Athleisure categories, but also into businesses with exposure to wider consumer health.

Source: Thule Investor Presentation, 2016. Thule Annual Report 2015.

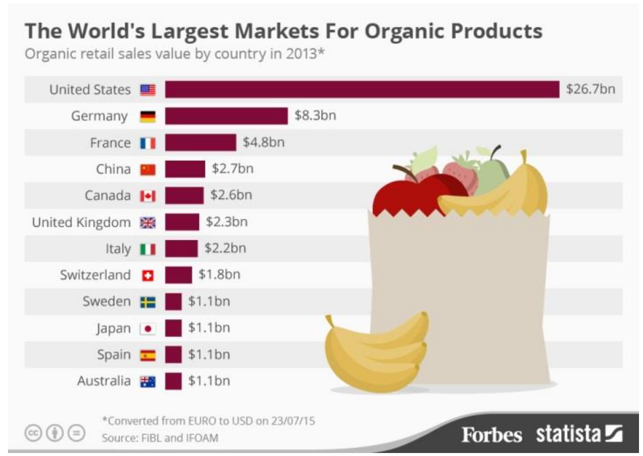
Organic food market growth

- World organic food & drink market advancing at CAGR of 12% between 1999-2014. Market watchdogs TechSci and Euromonitor forecasting acceleration to 16% in 2015-2020.
- 2015 US organic food demand (11%) outgrowing total US food industry (3%). 52% of US organic shoppers are millennials with children, 35% are Generation X parents, 14% Baby Boomer parents. Generational change to drive future increase in US organic food share of currently 5%.
- Eating habbits of Chinese and Indian parents and middle-class households equally changing towards clean/green labels.
- Comparable trend in personal care products.
- Risk of adverse mix shifts for processed food, flavor, color, nutrition ingredients producers (e.g. Chr Hansen, Givaudan, DSM, Croda).
- Organic inputs more expensive, prices more volatile, markets less fragmented. Risk of lower profitability and higher earnings fluctuations for incumbents who quickly adapt. Superior purchasing scale key factor in defending overall market share.

Global organic food and drink market



Source: Organic Monitor



Source: FIBL, IFOAM, Forbes

Organic food substitution to potentially weigh on growth and mix of the traditional market incumbents.

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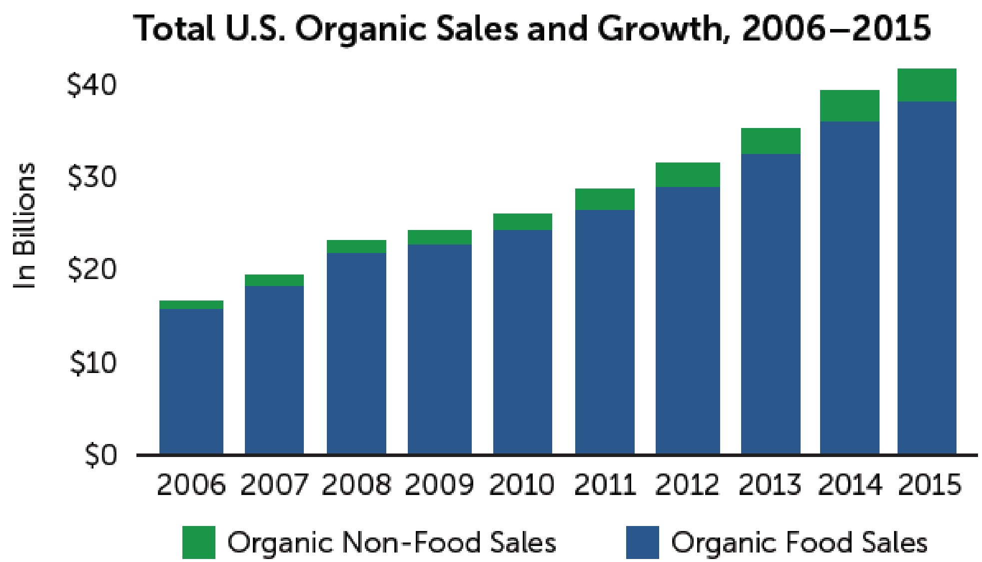
Healthy Diet

- Consumers increasingly have a preference for healthier and freshly prepared foods & beverages.
- Many are seeking out for a simplified and "clean" ingredient list as well as organic/natural products while at the same time avoiding bad ingredients such as e.g. HFCS, sugar, nitrates etc.
- We expect these trends to accelerate in 2017.

Source: Kerry Group presentation.



Source: OTA: US Organic: State of the Industry

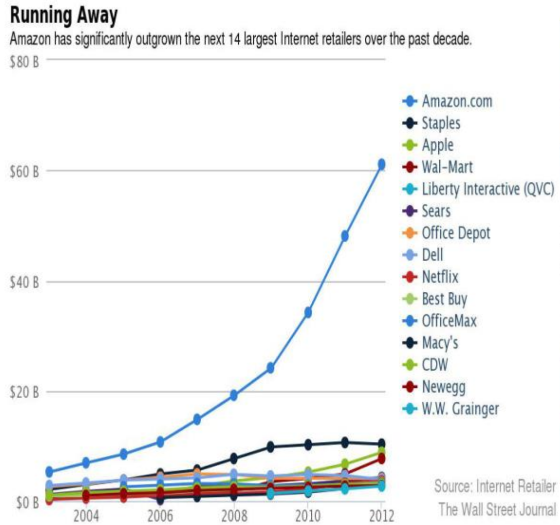
New European Fashion Online Brand - **ZalAso**– Amazon have a look !

▪Status Quo

- Stationary retailers vs. internet retailers is an ongoing game
- Key parameters are: Scale, Brand, Efficient logistic and distribution, market leadership
- Market share losses are huge for stationary retailers
- Rising capital injection in all relevant European online pages – Ready to grow and to burn money
- Private Equity is focusing on these names as well

▪Action point / Challenge

- Alibaba and Amazon are the real competitors for Zalando, Asos, Nelly, Yoox, AutoTrader, JustEat, Delivery Hero, Takeaway.com
- The European Brands have to consolidate as fast as they can to establish one brand in Europe in order to get the scalability benefits
- **Merger & Acquisition will be the core activity in the coming 18 months among the core European brands and Yoox-Net-A-Porter transaction was only the beginning**
- Speed is key



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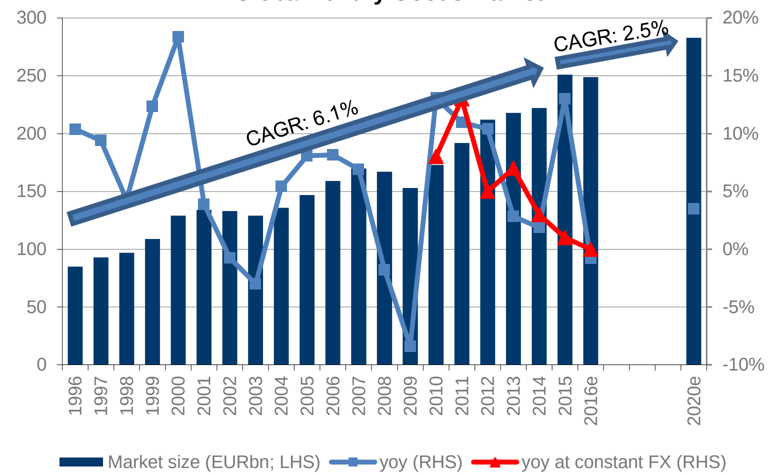
Luxurious growth is over

Luxury goods companies are facing a lower and more difficult long-term outlook

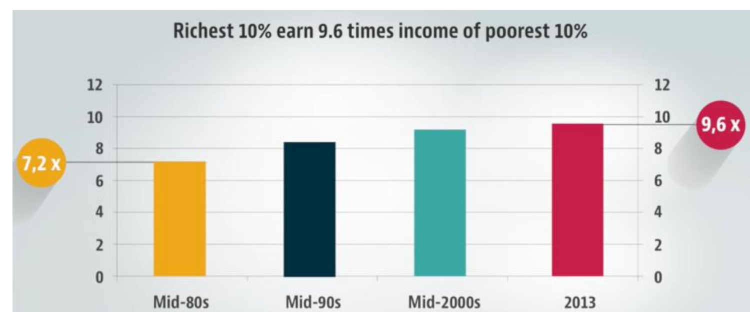
- The global market for luxury goods has grown by an average of 6% p.a. over the past 20 years, 2.4x global real GDP. We expect the recent slow-down to be more than temporary, with market growth roughly half the historic rate in the coming years.
- Ever increasing income inequality - a key driver for luxury demand - is unlikely to expand forever, evidenced by the noticeable rise in public discontent.
- While tourists, which account for roughly 40% of luxury spend, are a structurally growing segment, currency swings and terror attacks lead to fast changes to where they spend, creating challenges for luxury goods companies who are under-exposed to the right places.
- Sales to Chinese consumers who already account for 30% of the global luxury market will continue to grow. However, these shoppers have become more sophisticated over the past decade with regard to the brands on offer and their real quality. The easy times for big global, first-mover brands are gone.
- In a digitally-connected world, significant price differentials across geographies are unsustainable. Companies have already started to adjust prices down, weighing on industry sales and profitability, but price gaps have not yet closed enough.
- Research has shown than Millennials and Generation Z care less about material goods and seem less willing to save up to buy a luxury product, creating a long-term challenge for the industry to recruit new consumers.

Global Luxury Goods Market



Source: Altagamma/Bain, AllianzGI

OECD income inequality



Source: OECD

In a sector where growth is more scarce and volatile, picking the winners will be key to create alpha

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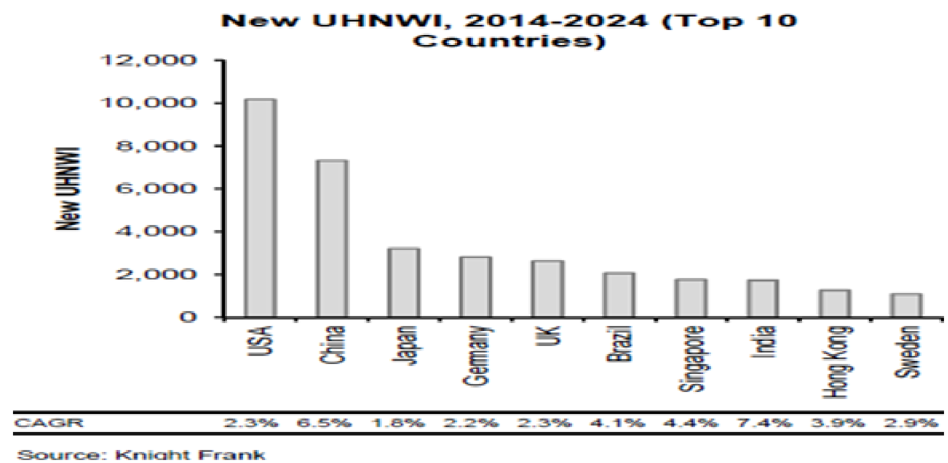
Luxury sector, a secular trend?

Ultra rich people in china will catch-up

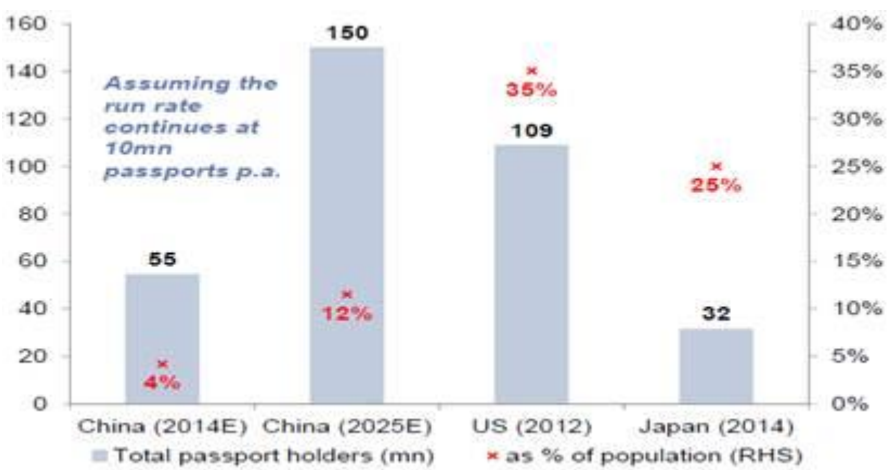
1. Tourism and luxury spendings have still a huge potential thanks to Chinese people :

- Only 4% has a passport in China, ratio to reach 12% in 2025
- the Ultra High Net Worth Individuals in China will grow dramaticcally in the next decade

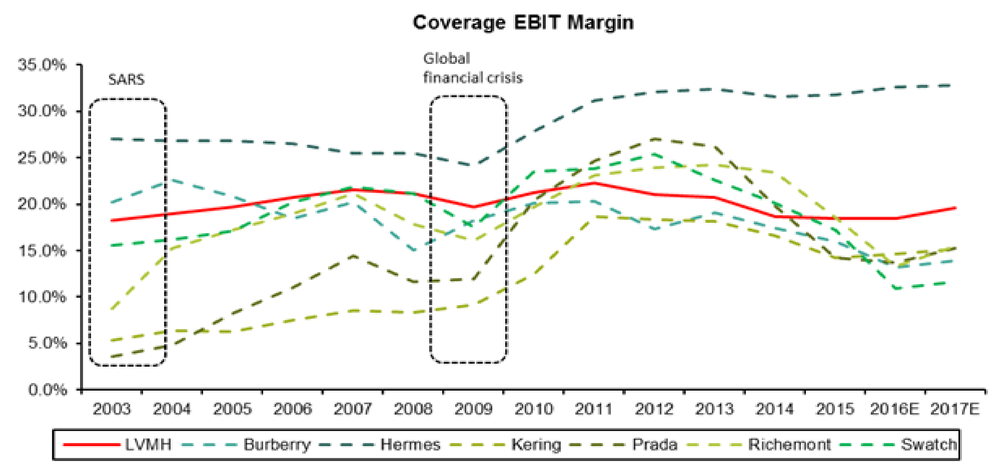
2. The players in the industry are not cyclical when they are well diversified



% of people having a passport



The most diversified players are not cyclical



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Nursing Home Operators – Benefit From Secular Growth Trend
Driven by favourable demographics

- **Long term demographic trend**

People are getting older and need more stationary care. The proportion of the population aged over 85 years is expected to grow by c. 3.0% a year between now and 2030

- **Increasing # of nursing homes and beds**

There are currently 2.5m nursing home beds in Western Europe. About 30,000 additional beds are required each year

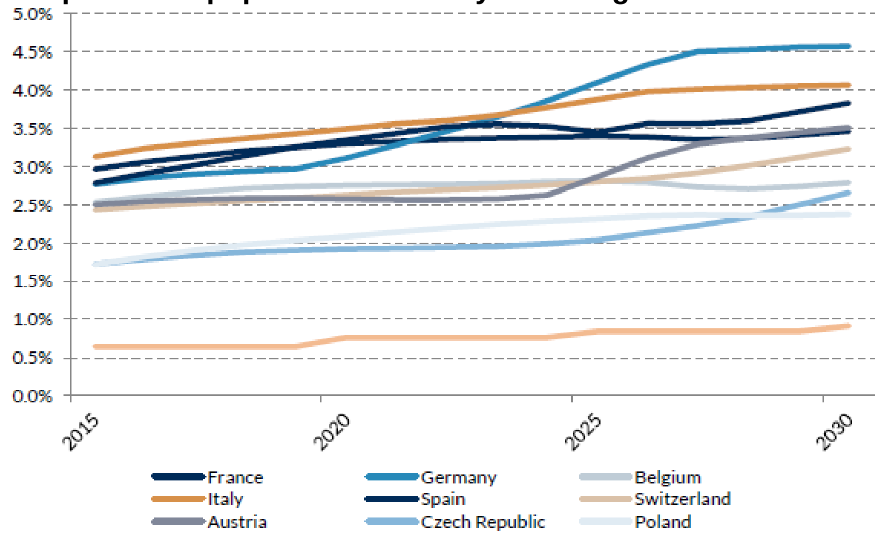
- **Consolidation and shift to private operators**

Public nursing home operators still dominate the market. However, due to weak financials and increasing regulation more and more public operators are driven to turn to private operators

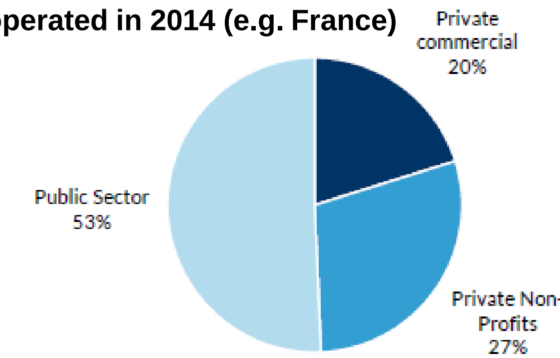
=> Direct investment in private nursing home operators

The largest private nursing home operators in Europe are the two listed companies **Korian** and **Orpea**. Both profit from the strong secular growth trend

Proportion of population over 85 years of age



Number of beds operated in 2014 (e.g. France)



Source of graphs: KeplerCheuvreux 09/2015

US Drug Pricing Pressure

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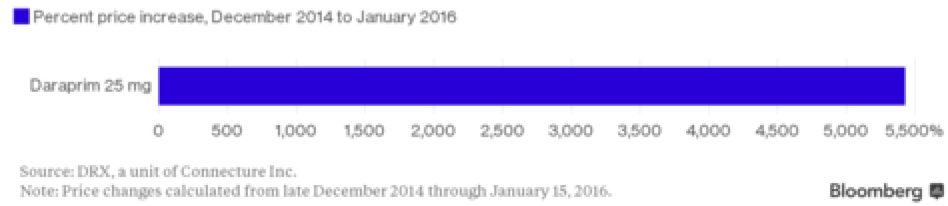
Controversy has significant political, economic and social implications

The New York Times

Another Drug Pricing Ripoff

By THE EDITORIAL BOARD AUG. 25, 2016



- The main perceived risk to the pharmaceutical sector is from US drug pricing pressure resulting in:
  - Heightened scrutiny ahead of the Presidential election
  - Accusations of price gouging
  - Fear of adverse changes to the market-based pricing system
  - Broader ESG concerns

- We believe these concerns are overdone:
  - Legislative changes are unlikely regardless of the next President due to lack of congressional support
  - Executive powers of the President are limited and unlikely to achieve material change
  - US market is already quite efficient given high generic penetration
  - Key stakeholders, including government payers, recognise pricing needs to incentivise innovation

- While there have been high-profile instances where generics have failed to launch, we view these cases as the exception rather than the rule.

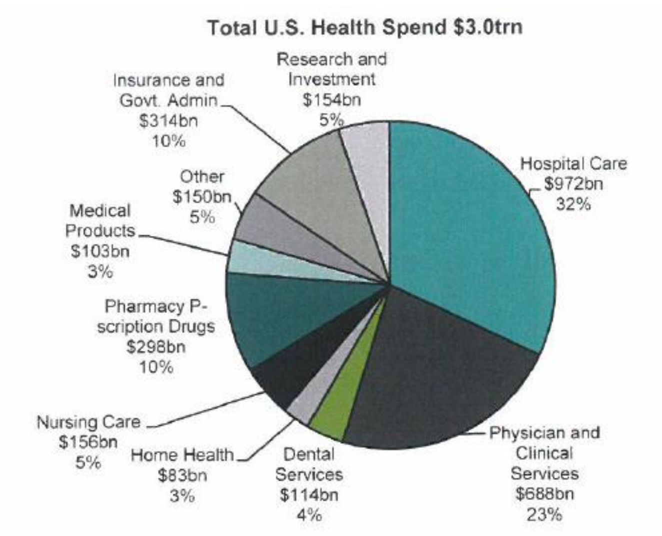
- Products which are truly innovative and best-in-class will be able to maintain a high price.

- Furthermore, the pharmaceutical industry benefits from:
  - Considerable barriers to entry
  - Favourable secular trends
  - Modest near-term patent expiries
  - Significant late-stage pipelines

Potential weakness due to headline risk may present an attractive entry point.

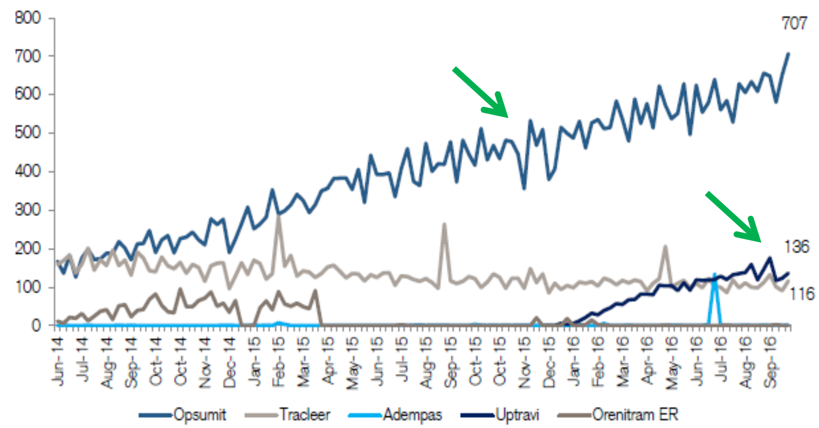
Don’t give up Pharma Stocks

- The golden age of broad based drug price increases are over - but demography still drives up volumes!
- Drug prices are a popular target for cost-savings, but as % of total healthcare costs still unchanged at 10% vs a total of 55% for hospital care and clinical services
- Therefore, look for companies owning drugs/-classes with proven effect on morbidity and hospitalization that see impressive launches due to expected savings - overall, payors and drug companies will find a balance on cost / benefit



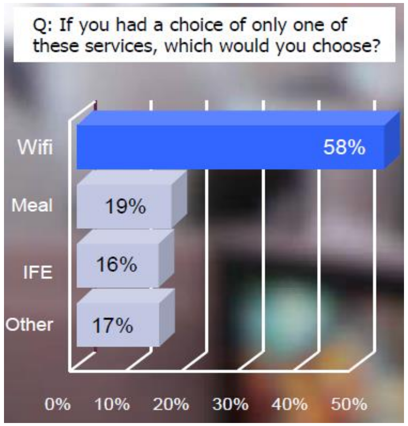
Source: CMS NHE projections (2014A data) and Bernstein analysis

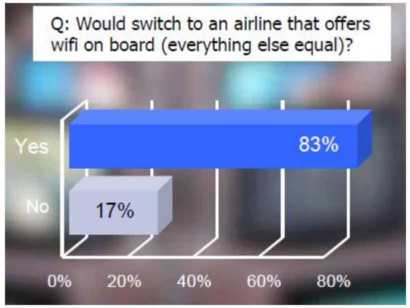
New prescriptions per week in pulmonary hypertension



Global Satellite Industry – Theme: Airplane Cabin Connectivity with Internet Broadband; Growth is just at the beginning of the S-Curve!

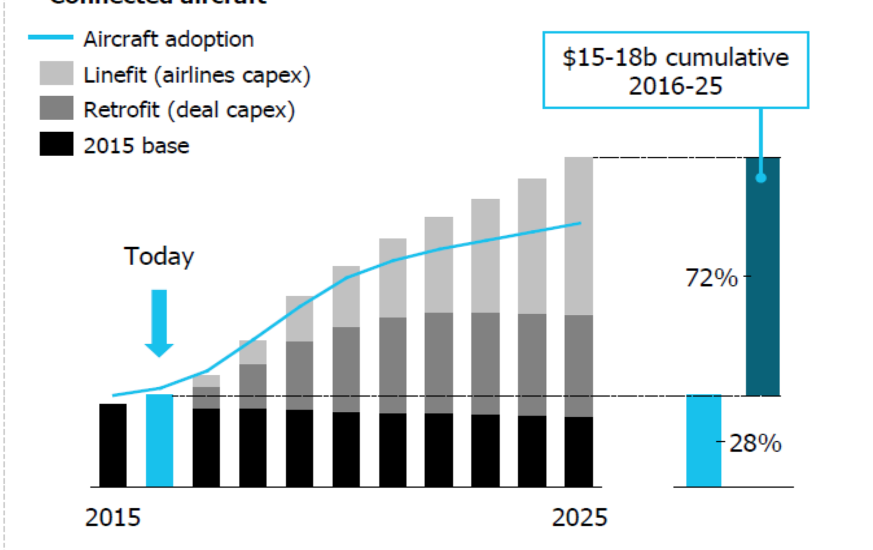
Passengers want internet WiFi before any other service and they want WiFi now or they will switch!



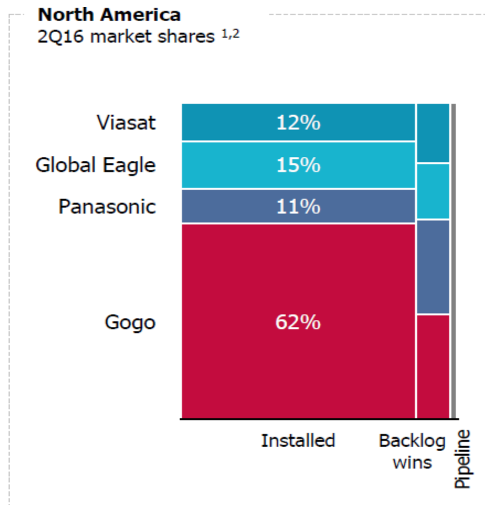


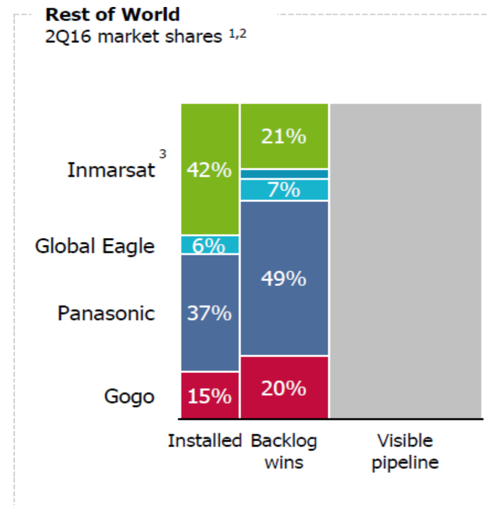
We are entering a 5-year phase of rapid market scale up from today's early stages, with still over 70% to capture.

Connected aircraft [2]



Competitive landscape is diverse with Gogo dominating the North American market and Inmarsat being particular strong in Europe.





But, only Inmarsat is running its own satellite network while all other service providers have to lease capacity from different satellite operators.

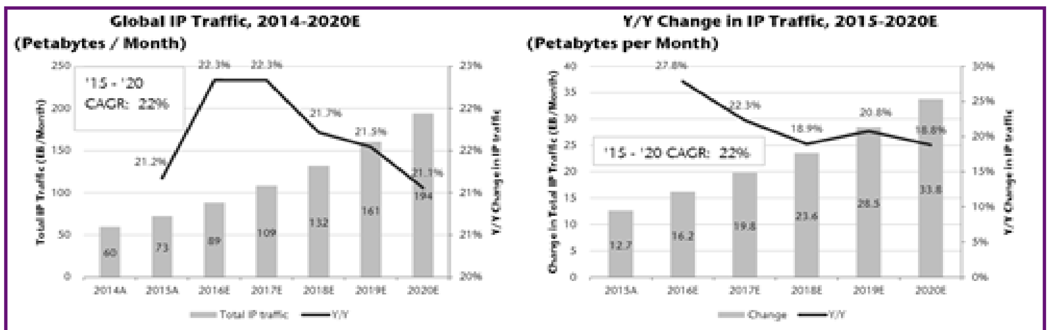
Figure 36. In-flight WiFi Systems On Offer, 2016

In-flight WiFi Systems	GEE (Row 44)	Gogo	Inmarsat/OnAir	Panasonic	Thales	ViaSat
Market share (2015)	14%	51%	7%	19%	9%	1%
Satellite Network	No	No	Yes	No	No	No
IFE Hardware	No	No	No	Yes	Yes	Yes
Connectivity	Yes	Yes	Yes	Yes	Yes	Yes
IFE Content	Yes	No	No	No	No	No
Products	Airconnect Global	ATG (North America) ATG-4 (North America) Ka 2Ku	EAN GX Aviation	eXconnect eXTV eXPHONE	InFlyt LiveTV	Exede In The Air
Satellite Provider	Hughes Ka SES Ku	Intelsat Ku OneWeb Ku SES Ku	Inmarsat L Inmarsat GX (ka) Inmarsat S	Eutelsat Ku Intelsat Ku SES Ku Telesat Ku	Inmarsat GX	Eutelsat Ka

Source: Gogo (market shares), Company Reports, Citi Research

Internet upgrade cycle

- Over the past years the need for high-speed internet increased tremendously due to consumer (streaming, gaming, surfing, etc.) and business needs (cloud computing, Web 2.0) as depicted in IP traffic graph below.
- Service providers that compete for customers and governments that want to ensure economic competitiveness invest heavily into IT infrastructure to provide reliable high-speed internet.
- This caused an upgrade cycle around the globe from 10 to mostly 100 gigabit Ethernet. Besides consumers and businesses main beneficiaries will be sectors that are exposed to IT infrastructure Capex such as the optical industry.
- This development will likely last for several years with revenue growth rates for the optical industry that could be in the mid-twenties throughout this upgrade cycle.



Source: Cisco Visual Networking Index

Source: Cisco Visual Networking Index, Jefferies

China

In 2015, China updated its internet coverage targets as part of its 13th 5-year plan.

For mobile broadband coverage the target is to increase penetration from 57% in 2015 to 85% by 2020.

For fixed broadband coverage, the target is to increase coverage from 40% in 2015 to 70% by 2020.

Metro

An upgrade cycle for several North American and European Metro rings to 100G is about to kick off.

Verizon recently began deployments of 100G optical gear in US Metro networks, experts expect At&T to quickly follow.

Datacenters

Public cloud/Web 2.0 increase the necessity for hyperscale data centers that will use larger bandwidth.

These hyperscale players are some of the earliest adopters of the highest speed optics for Datacom applications and spend aggressively on infrastructure Capex.

Drivers

Sources: Northland, PiperJaffray, Neophotonics, Cisco, Jefferies

Internet of Things (IoT)

https://agi.my.salesforce.com/_ui/core/chatter/topics/TopicPage?id=0TOd00000004KsE&ref=search_inline

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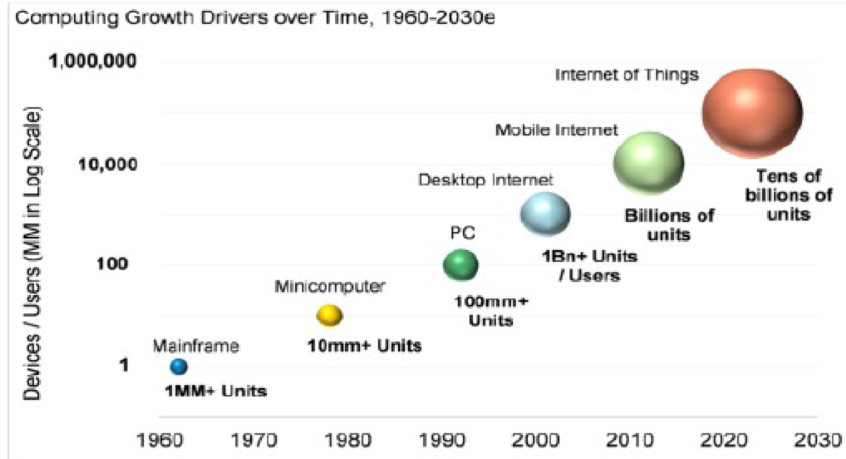
- If all objects and people in daily life were equipped with identifiers, they could be managed and inventoried by computers. Besides using RFID, the tagging of things may be achieved through such technologies as near field communication, barcodes, QR codes and digital watermarking.

- The IoT is a giant network of objects (devices, machines, vehicles, buildings, and people) connected by computing systems. These systems can monitor and manage these objects and produce data on an ongoing basis. This (big) data needs to be stored and secured. Analysis of this data may lead to new business opportunities or the transformation of existing processes.

- Huge growth opportunity due to the unit numbers involved. Primary beneficiaries are semiconductor makers, specialized machine-to-machine module makers, and the providers of the software to lash it all together.

Exhibit 1: Huge potential for the Internet of Things

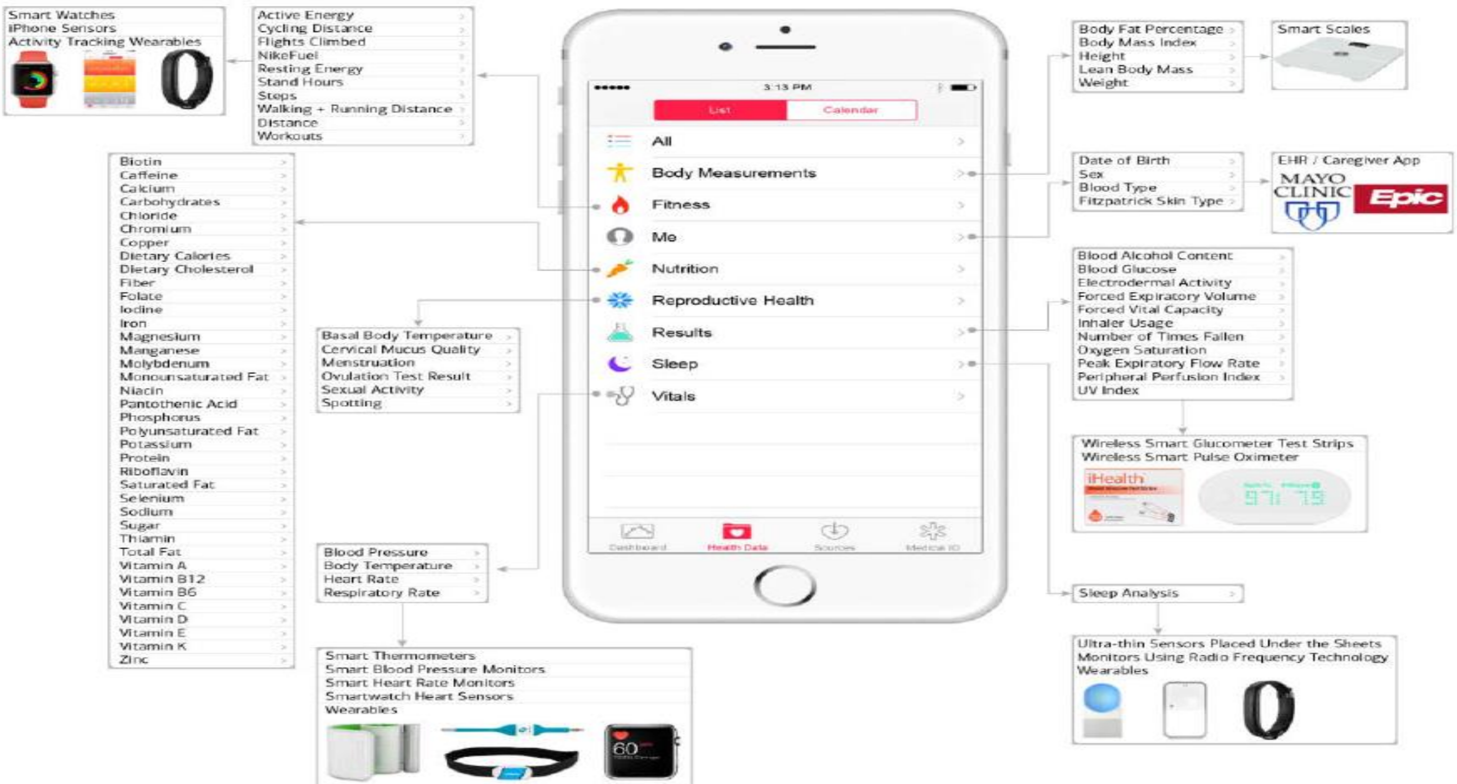


	2010	2011	2012	2013	2014 E
Machine-to-machine connections (millions)	75	108	149	195	247
Growth		44%	38%	31%	27%
Incremental connections (millions)		33	41	46	52

Source: Morgan Stanley

Tech is going to focus on Healthcare: Apps instead of Drugs?

- Big data has the potential to change the healthcare industry as new technologies increase the amount of health data that individuals generate.
- Via apps real time medical data such as heart rate, blood pressure, glucose level or x-rays will be generated and diseases can be anticipated, treated or even prevented much earlier and more effectively.
- Tech companies might take the healthcare market if doctors prescribe apps to patients; while on the other hand healthcare companies did not adopt many new technologies so far.



Source: BofA Merrill Lynch Global Research, Apple company website

Digital Device Exhaustion

- Checking smartphones 221x a day (UK average), anxiety over social media notifications, screen fatigue, personal relationships increasingly digital, short attention spans, a loss of control!
- People may have reached their limit with ever invasive technology and seek to limit exposure for the sake of mental health
- Related concerns limiting the love affair with technology are those of privacy and ever invasive targeted marketing
- Product marketers and future disruptors to focus on real world experiences and target what actually matters to people such as a sense of accomplishment, learning a skill, trying something new, face to face interaction, travel and health
- 2017 is likely to see an increased technology rationing with consumers ever more aware of what makes them happy and motivated to limit continual distraction and reclaim their time.

With structural long-term drivers, the power semiconductor market, should be at the forefront of technology investors' minds

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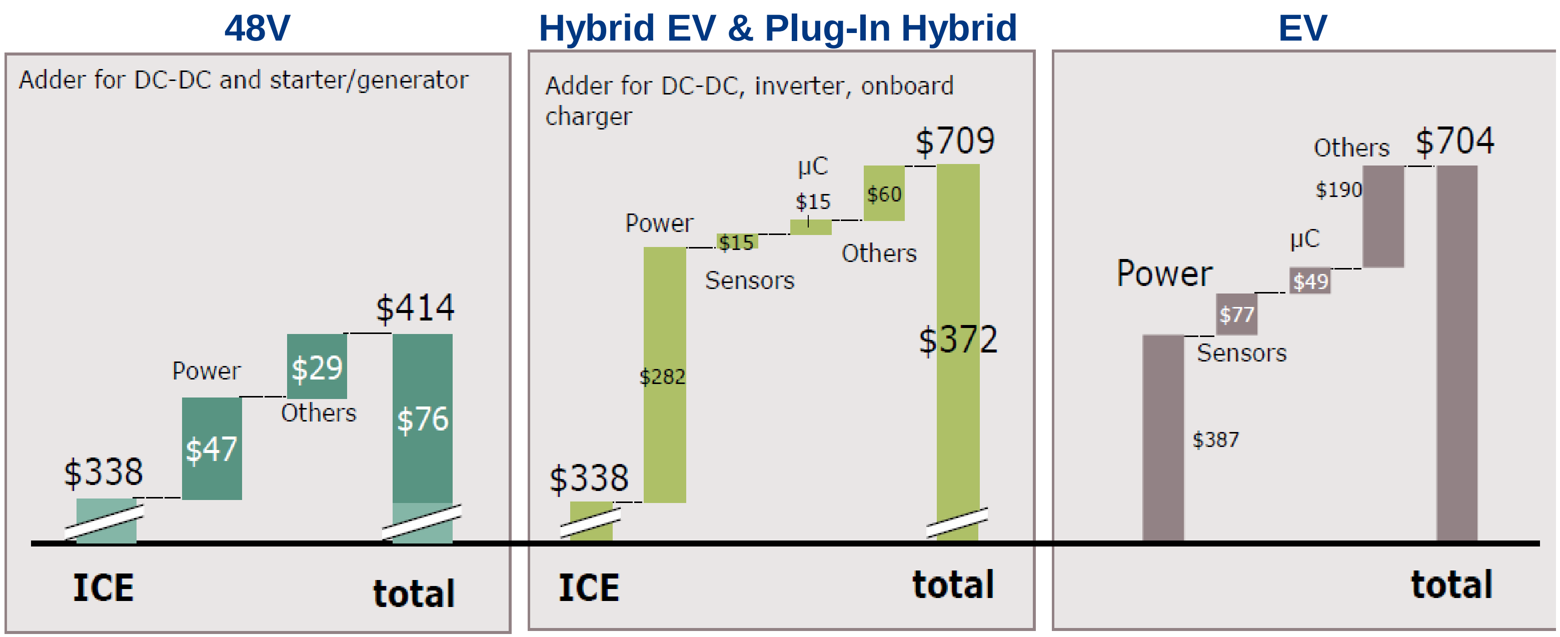
Average semiconductor content by degree of electrification
(EV : Electric Vehicule - ICE : Internal Combustion Engine)

- The rise of electric vehicles result in an acceleration of demand.
- Growth could near 10% p.a. for over a decade.



- Power semiconductors are components required to manipulate and transform high-energy current.
- Examples of use cases include pulling enough energy from a battery pack to provide a seven-seater vehicle with enough acceleration to match that of a Ferrari!
- At ~$16bn, the small power semiconductor segment usually goes unnoticed, but is now riding a major inflection point.

Source : IHS Markit (January 2016), Infineon (April 2016), Bernstein Research (September 2016)

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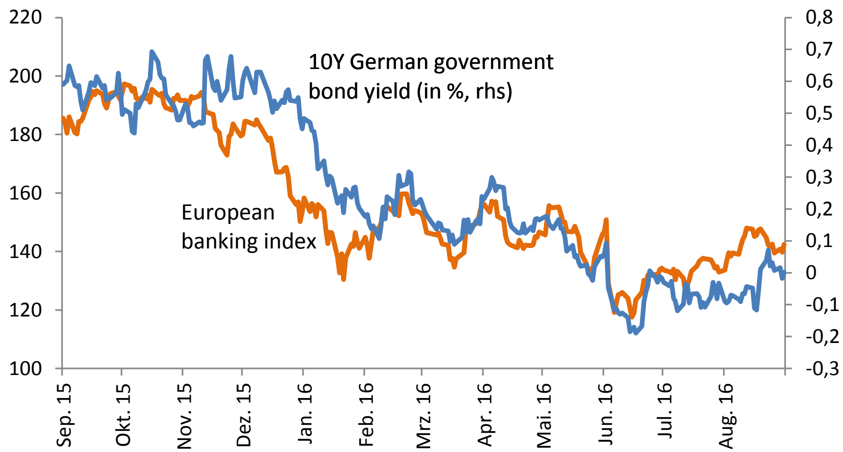
Crystal Maze 2017
Banks benefit from end of QE and lighter than feared regulation

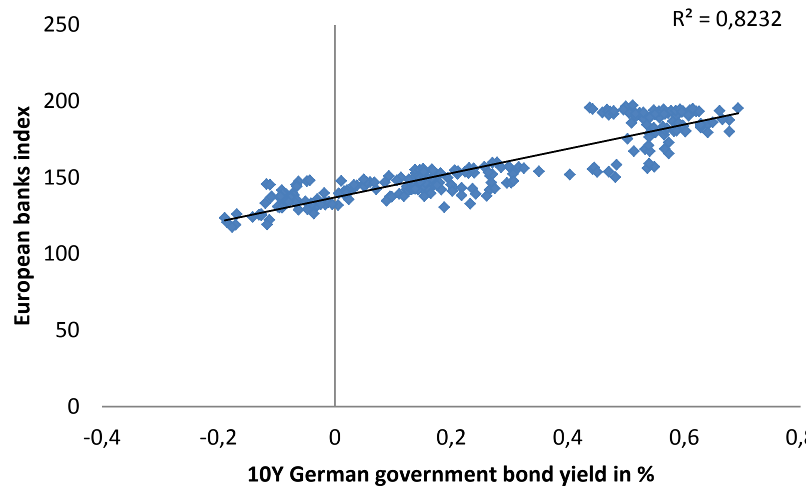
- Banking stocks closely correlated with interest rates. Falling and negative rates led down the sector for most of 2016.
- QE is coming to an end as the supply of eligible paper is drying up.
- After QE we would expect spreads for peripheral bonds to widen again. Banking stocks in peripheral Europe should therefore still be avoided. In core Europe rates should at least no longer fall.
- On top of this we expect the finalisation of the Basel capital rules for Banks in early 2017. We are getting a lot of evidence that the implementation into European regulation will be far less onerous than feared.
- All this should lead to a moderate re-rating of the banking sector, which after heavy underperformance in 2016 is now trading on bombed out multiples.

10Y yield vs. banking index



Source: Bloomberg, AGI

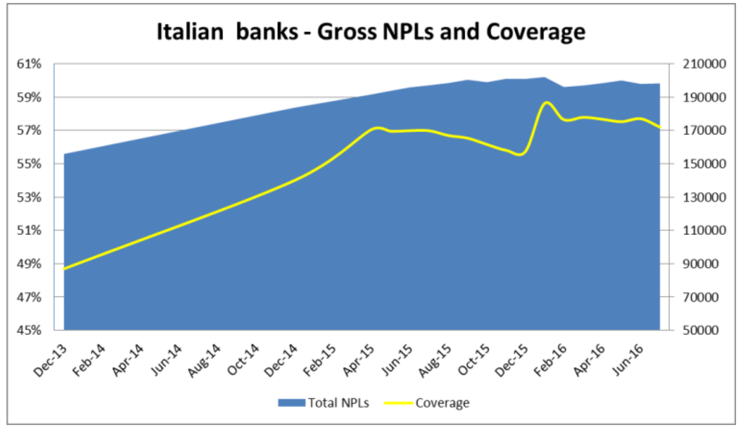
Over 82% correlation



Source: Bloomberg, AGI

Italian banking system at a crossroads

- Share prices of Italian banks have massively suffered from asset quality concerns in 2016.
- The ECB and capital markets are pushing for a clean-up of the system, for NPL disposals (that can only happen at the cost of capital positions).
- A lot of preparatory works has been done in order to create a deep and liquid ABS/ NPL market (GACS guarantee scheme, Atlante fund(s), credit ratings in preparation, credit servicers at work etc.).
- Whether the ABS/ NPL market will take off now depends on a series of forthcoming events with binary outcomes:
  - the successful sale of 4 small banks under resolution (currently state-owned)
  - the successful restructuring of Banca Vicenza and Veneto Banca (currently owned by Atlante)
  - a stable political environment after the constitutional referendum
  - <u>most of all</u>: The successful market solution for Monte Dei Paschi's asset quality (hence: capital) problem. A failure would have severe contagion effects on other – probably not only Italian – banks.
- Though it clearly is a huge challenge: The removal of these obstacles would pave the way for a gradual reduction of non-performing exposures.
- As a result, building confidence that the Italian banks have found a way out of their asset quality challenge would trigger a significant rerating of Italian banking sector, remove the banking stocks from their current trough valuations.



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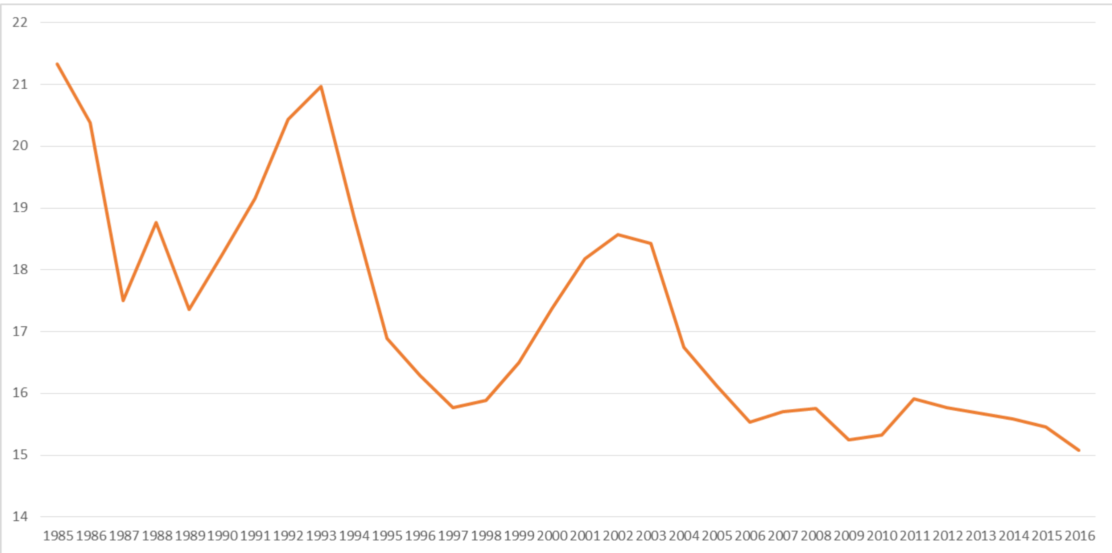
Crystal Maze 2017
How to benefit if Insuretechs win market share? Buy Reinsurance!

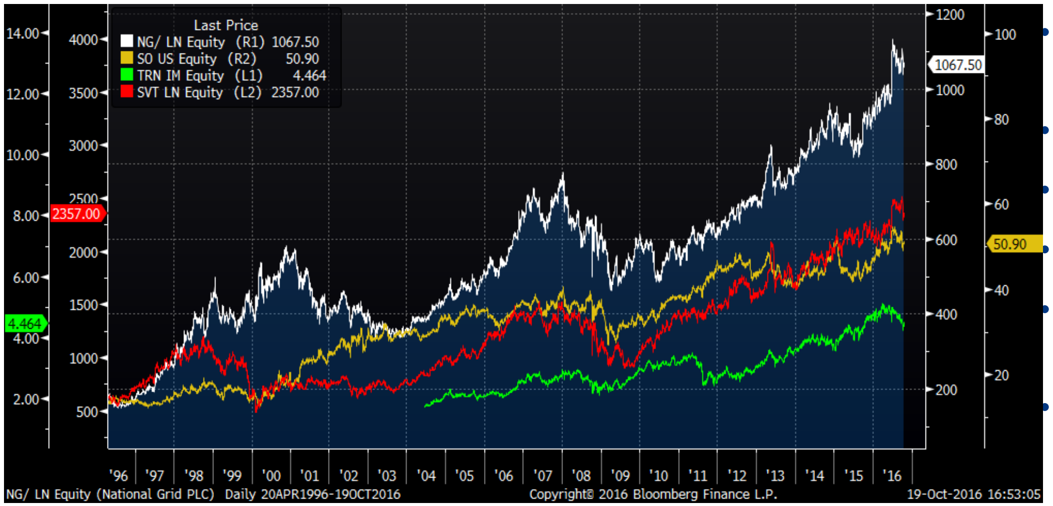
- Cession rates of primary insurers have decreased over the last years dampening the growth of Reinsurance
- Insuretechs will try to grab the interface with clients from the primary insurers
- Typically they lack product expertise and solvency capital
- Reinsurance will provide this to them sometimes underwriting until 100% of the business
- Reinsurance growth should accelerate with a rising market share of Insuretechs in the future at the cost of incumbent primary insurance companies

Global cession rates



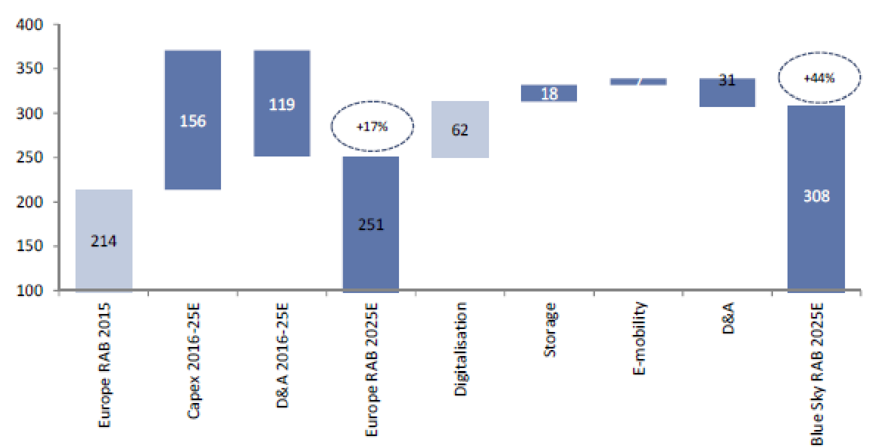
Source: Munich Re, AGI

Utility Infrastructure spend set to continue to drive up regulated utility share prices.



- Higher capex is being driven by need to update old infrastructure.
- Demand for connecting Distributed Energy Resources is growing.
- Networks need to get smarter; digitalisation.
- Allowed returns set to stay above cost of capital.
- Regulated asset bases continue to grow at 2-5%pa.
- Dividend yields remain attractive; >3.5-5% for most and growing.
- M&A activity to remain robust.

Power distribution European RAB evolution: base case and blue sky to 2025 (€ bn)



Source: Goldman Sachs Global Investment Research.

59

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2

200 Years of NYSE

USA Ideas

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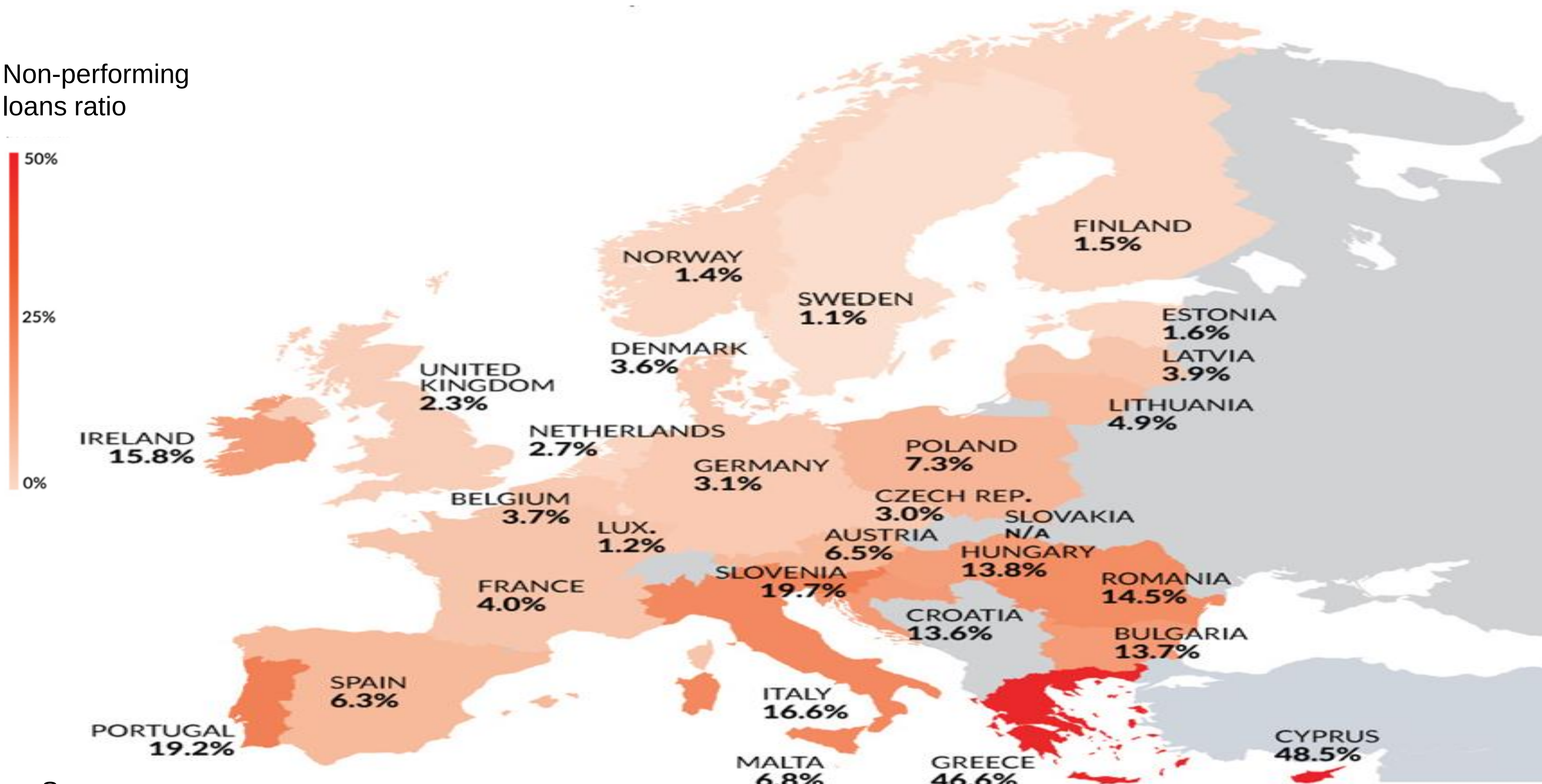
One reason a Brexit makes sense: the UK escapes a swath of troubled loans and fiscal problems. More political turmoil to come……..

Non-performing loans are at dangerous rates throughout the EU, and banks are feeling the heat

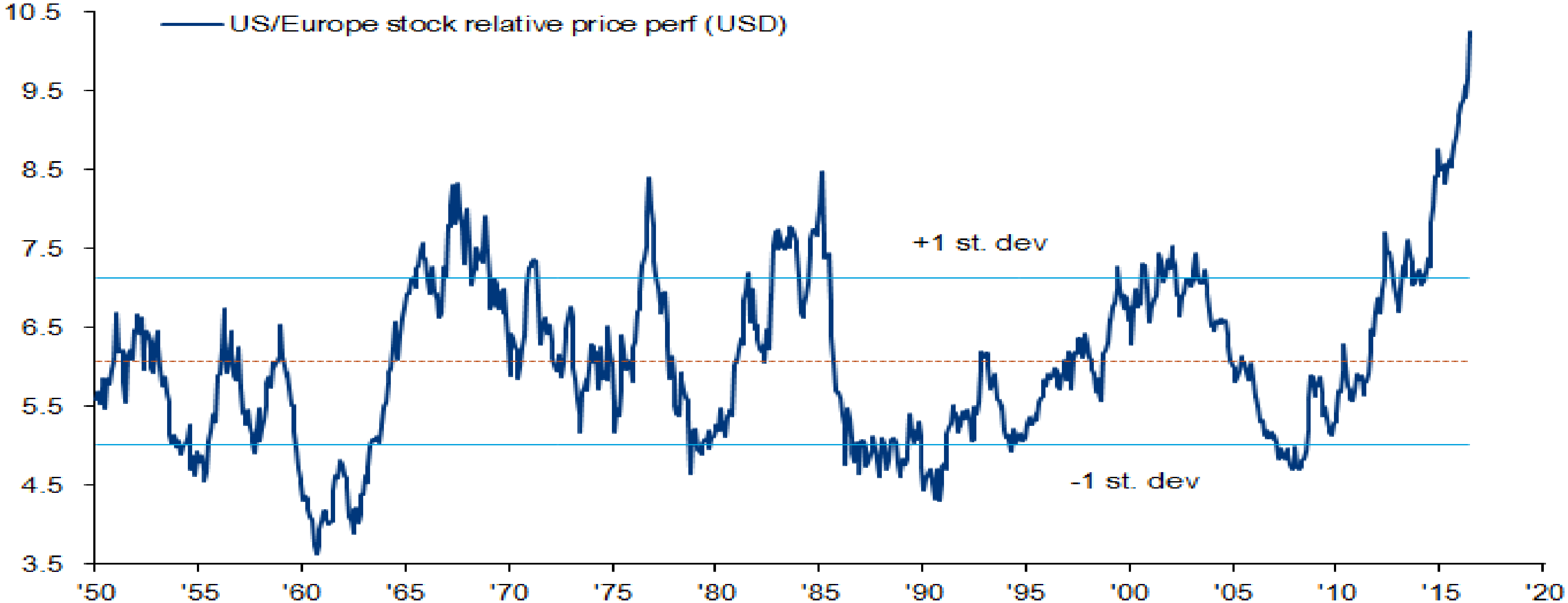
As of March 2016



- Source: EBA Risk Dashboard, visualcapitalist.com

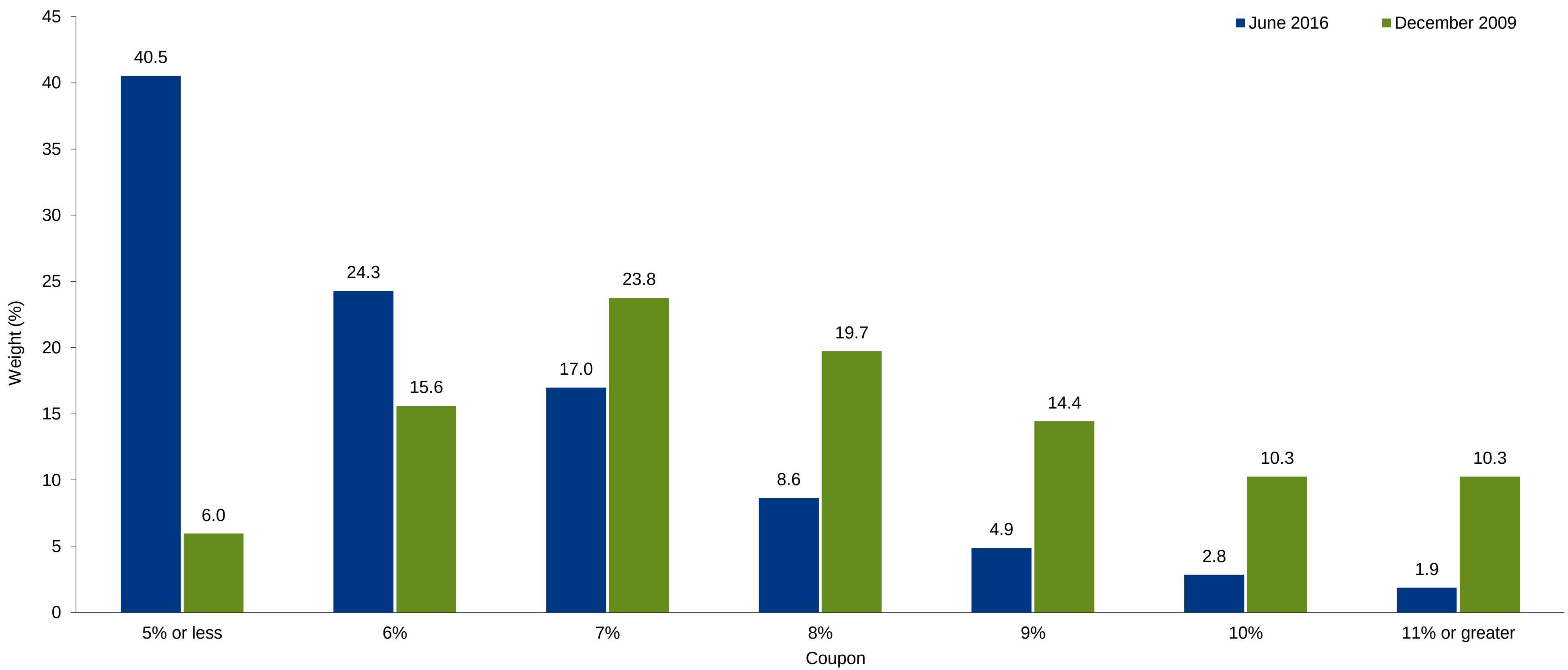
US equities are trading at multi-decade highs versus European stocks

Time for a change in leadership…….



- Source: Berenberg

High yield universe: Weight by coupon



- Based on the BofA Merrill Lynch US High Yield Master II Index. Source: BofA Merrill Lynch. As of June 30, 2016

Medical Devices: Eyeing the Artificial Pancreas

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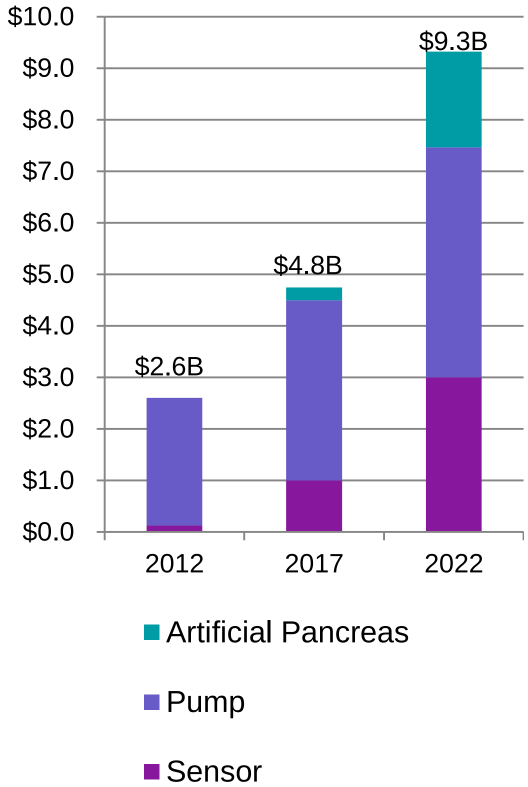

- The FDA approval of Medtronic's 670G in late 2016 brings the medical device field one major step forward to one of its holiest of grails: the "artificial pancreas" (AP).
- The medical device industry aims to replaces nearly all the functionality of the native human pancreas with a system that incorporates the latest communication, battery, and software technology, coupled to the most accurate glucose monitor and the user-friendliest insulin pump.
- The US and Europe markets for a true AP is significant: at an annual price of $10,000, and 4M Type 1 diabetics, the potential revenue stream is $40B. Currently, the pump and sensor industries adds up to $4B. Only 20% of Type 1 diabetics in Europe and US wear a pump, and only 5% glucose monitor. Only those in clinical trials have worn the first AP device iterations.
- For the $40B potential AP market to be realized, the componentry must be down-sized further, patient experience improved, and software perfected.
- The healthy pancreas adapts to its host through cellular modification to effect infinitesimal adjustments. The same demands will be placed on the artificial pancreas if that moniker is to be truly deserved.
- Artificial intelligence will take on an increasing role in refining the AP algorithms because every diabetes patient is unique, and every patient's body and habits change over time. A treatment algorithm cannot be static nor uniform.
- The medtech industry will partner – closer than ever before - with the technology industry. Medtronic for example, has partnered with IBM, and more recently, Dexcom with Alphabet.
- Over the next two years, several more companies will emerge with AP-systems, which will accelerate the category growth from the current 12% to 20% in 2019, taking the industry from $4B sales now to an estimated $9.3B in 2022.

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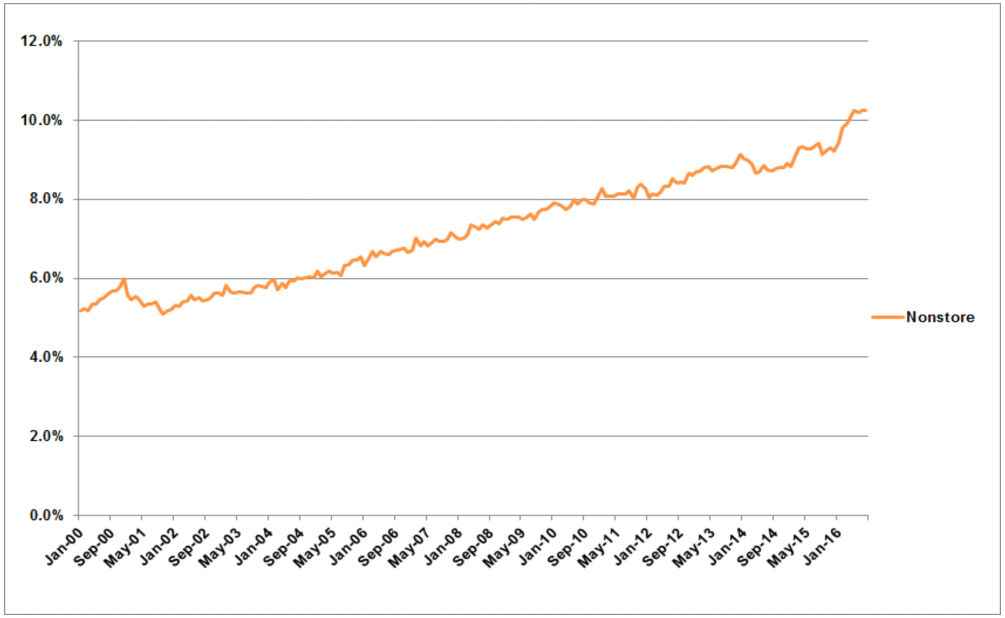
Consumers Are Moving Their Consumption Habits Online

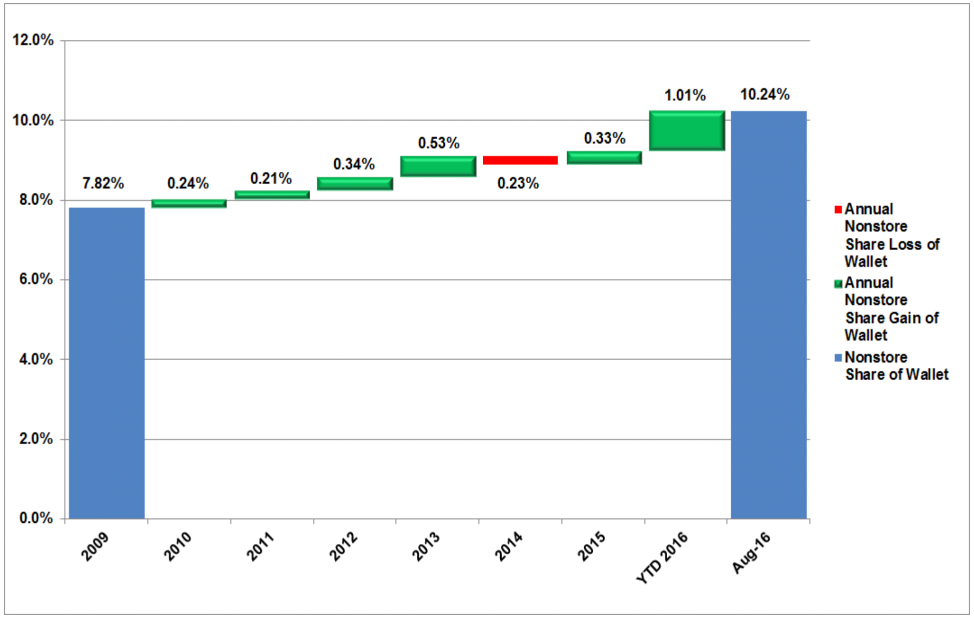
Consumers are increasing their use of the internet for their consumption needs. Traditional brick and mortar stores are having a difficult time competing with the convenience of concepts such as "Amazon Prime".

"Nonstore" Category % Share of US Spend



Source: US Census Retail Data; data as of August 31, 2016

"Nonstore" Annual % Share Gains of US Spend



Source: US Census Retail Data; data as of August 31, 2016

Beneficiaries of this theme include:

- Pure play online retailers (examples: Amazon, Asos, Zalando and Alibaba).
- Online travel booking websites (examples: Expedia, Priceline, Ctrip and Tripadvisor).
- Restaurants that embrace technology by introducing concepts such as online ordering (examples: Starbucks, Panera, Just Eat and Dominos).
- Advertising companies with a strong digital capability (examples: WPP and Bluefocus).
- Media companies that net benefit from users going online for their entertainment (examples: Netflix, CBS and Huace).
- Video Games, since selling games via digital download directly to consumers is higher margin (examples: Activision and Electronic Arts).
- Apparel companies that own their brand, potentially allowing them to grow with pure play online retailers (examples: Under Armour and PVH

Growth of the Sharing Economy

- The “sharing economy” refers to people trading their underutilized assets and/or services with paying consumers.
- Drivers of the sharing economy include the global proliferation of smart phones, the challenging economic environment and the change in attitudes towards employment, spending, ownership and sustainability, particularly among Millennials.
- There is an estimated $3.5 trillion of idle assets (e.g., homes, cars) available globally for greater utilization. Studies show nearly 70% of adults are willing to share their assets for money.
- The largest verticals in the sharing economy are Accommodations (e.g., Airbnb, VRBO), Transportation (e.g., Uber, Lyft), Finance (e.g., Lending Club, Kickstarter) and On Demand Services (e.g., Instacart, TaskRabbit).
- In 2014, PwC estimated the global size of the sharing economy at $15 billion, with 5% penetration of the established industries. They estimate it could increase to 50% penetration by 2025, which would enable the market to grow at a 33% CAGR to $335 billion.

Exhibit 40: Sharing economy drivers

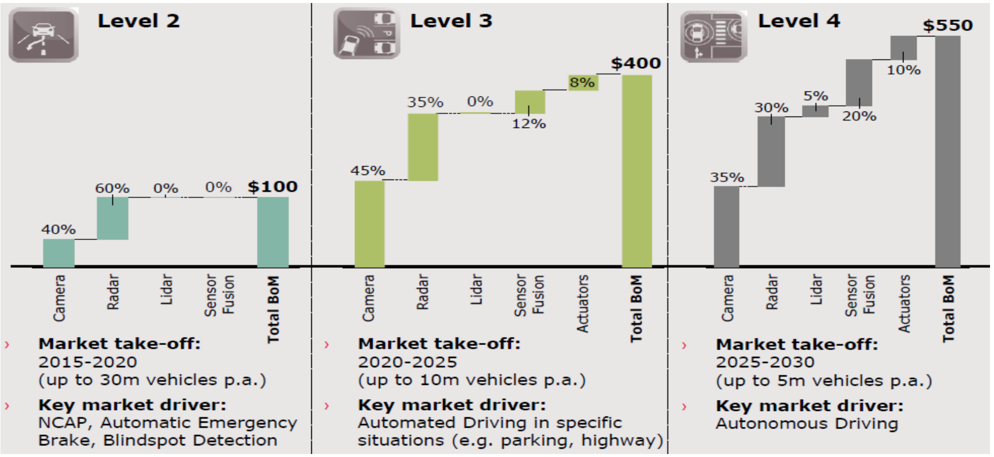
Source: Euromonitor

Exhibit 42: “Sharing economy” ecosystem

Source: BofA Merrill Lynch Global Research

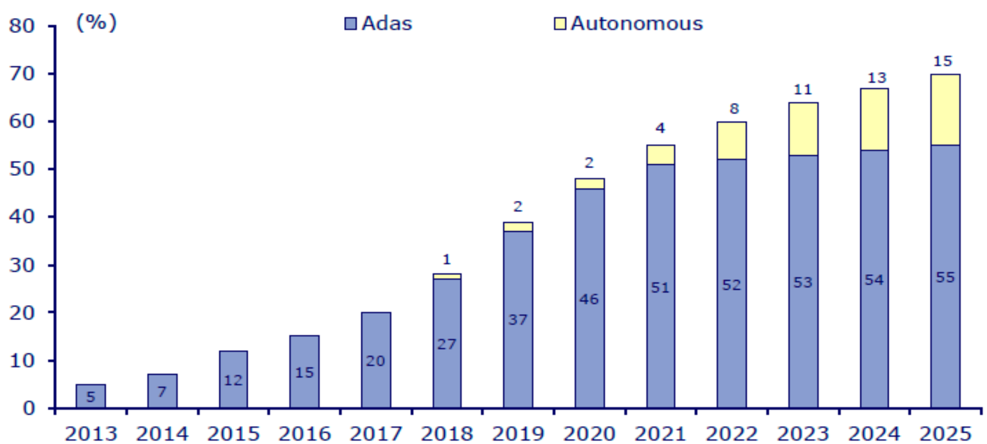
Growing Content Per Vehicle: ADAS

Average ADAS semi content per automation level



Source: Infineon Investor Presentation (Sept 2016)

Global ADAS penetration rates



Source: CLSA (Sept 2016)

- Advanced Driver Assistance Systems (ADAS) expected to grow ~40%+ annually through 2020 driven by regulatory mandates and consumer demand
- Automotive supply chain is creating more value content in vehicles than ever before with need for sensors, cameras, radar, and lidar
- NXP estimates semi content increases from ~$100 at Level 2 to ~$550 at Level 4 while Delphi estimates ~$ 5,000 of content for a Level 4/5 vehicle

Investment implications:

- Tier 1 suppliers: e.g. Delphi, Autoliv, Bosch, Continental
- Components: e.g. NXP Semiconductors, NVIDIA, Mobileye

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Accelerating Shift to Cloud

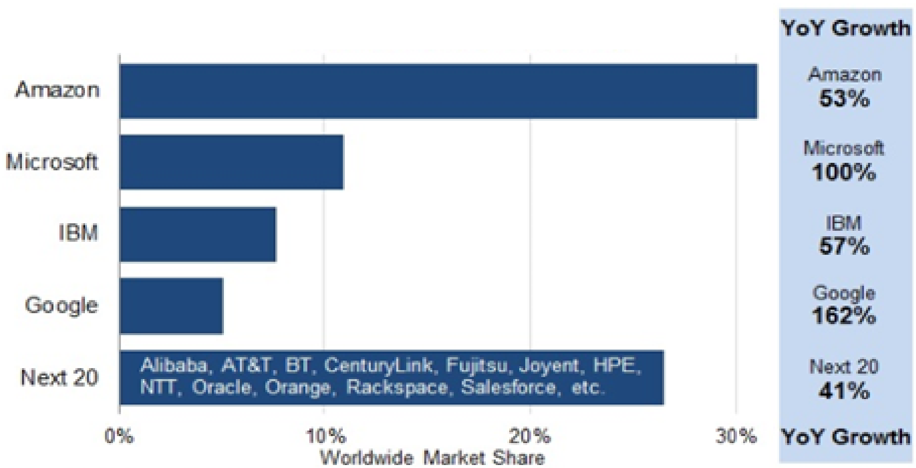
Cloud Shift by Market Segment

Legacy Segment	Cloud Segment	Total Market Size in 2016	Total Cloud Shift in 2016	Total Cloud Shift in 2020	'16-'20 CAGR
Business Process Outsourcing	BPaaS	$119B	$42B	$59B	9.0%
Application Software	SaaS	$144B	$38B	$73B	17.9%
Application Infrastructure Software	PaaS	$177B	$11B	$21B	17.8%
System Infrastructure	IaaS	$294B	$22B	$64B	30.5%
	Total	**$734B**	**$113B**	**$218B**	**17.8%**

Source: Gartner (July 2016)

Cloud Infrastructure Services

Market Share & Revenue Growth (*IaaS, PaaS, Hosted Private Cloud*)



Source: Synergy Research Group (Q2'16)

- Aggregate amount of cloud shift in 2016 is estimated to reach ~$113B, doubling to ~$218B by 2020
- Amazon, Microsoft, IBM and Google combined control more than half of the global cloud infrastructure market and continue to grow much faster than smaller competitors
- A recent McKinsey global survey of ~800 CIOs and IT executives showed the shift to cloud is accelerating, driven primarily by large enterprises

Investment implications:

- Cloud Infrastructure: e.g. Amazon (AWS), Microsoft (Azure), Equinix, Akamai
- Cloud Services: e.g. Salesforce, Workday, ServiceNow

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3

75 Years of Saigon

ASIAN Ideas

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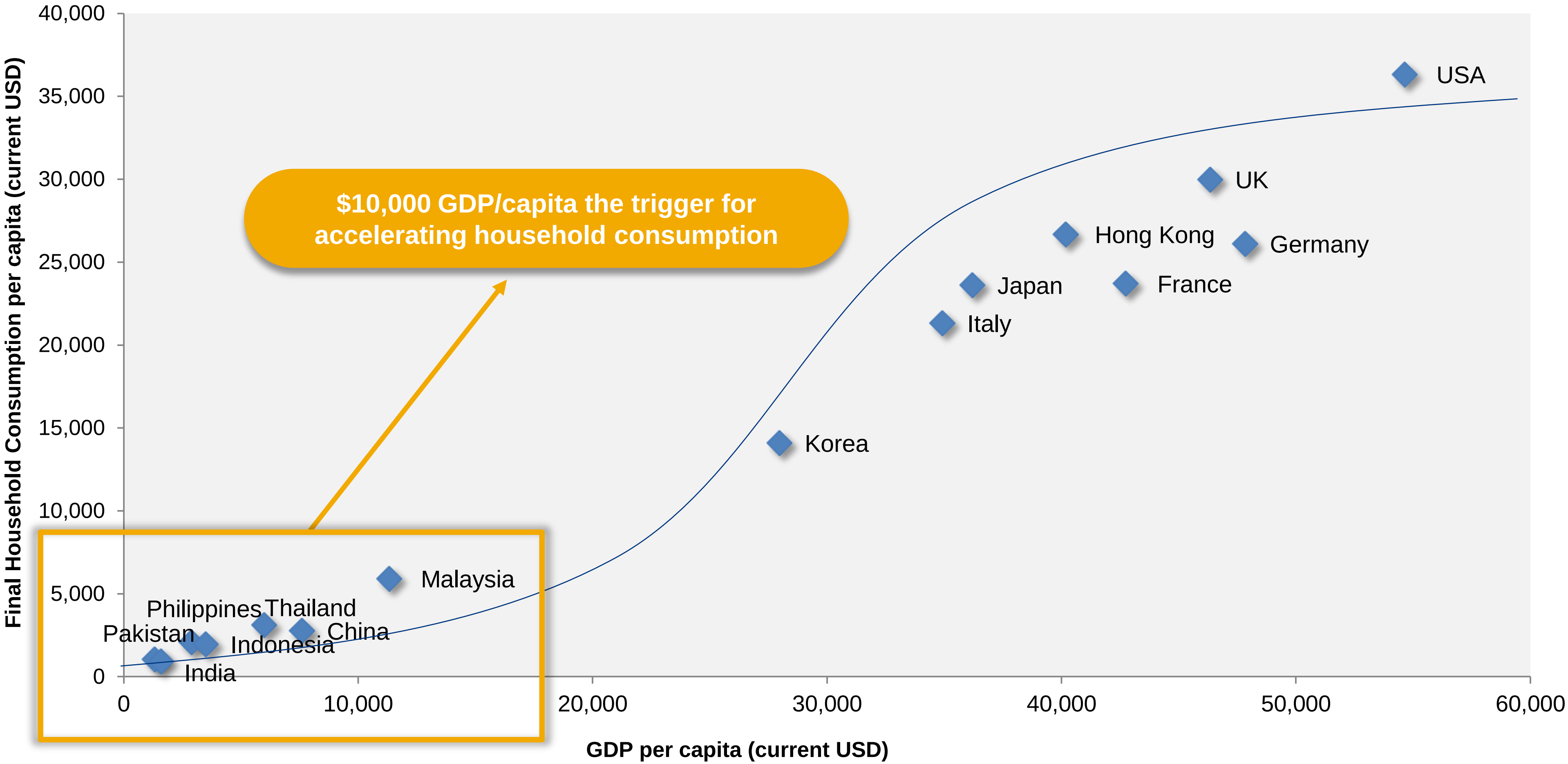
Household consumption in Emerging Asia set to grow strongly

Household consumption vs GDP per capita



Source: World Bank, Allianz GI, 2014. GDP and household consumption data are as at end of 2014, quoted in current USD. Japan and USA household consumption are 2013 data.

Rising consumer affluence: different stages of evolution across Asia

Shopping mall in Philippines

Investment opportunities:

Shopping mall developer

7-11 in Thailand

Investment opportunities:

Convenience store chain

Online in China

天猫 TMALL.COM

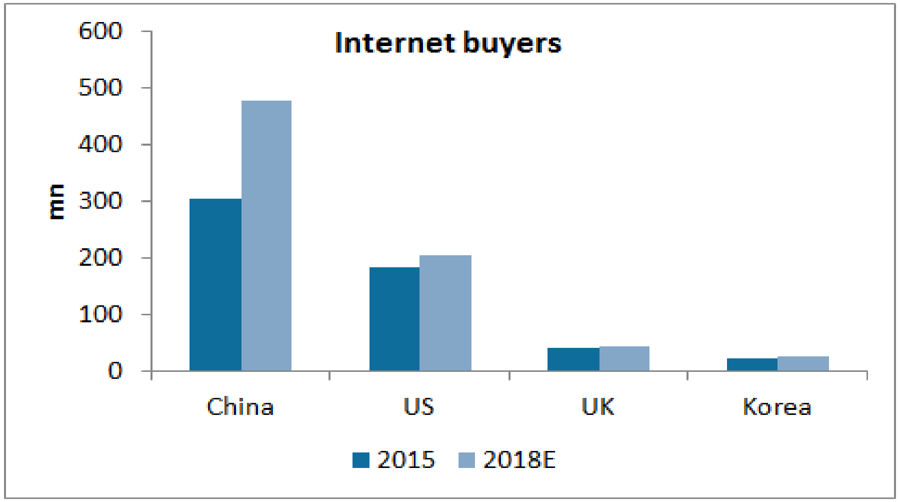
淘宝网 Taobao.com

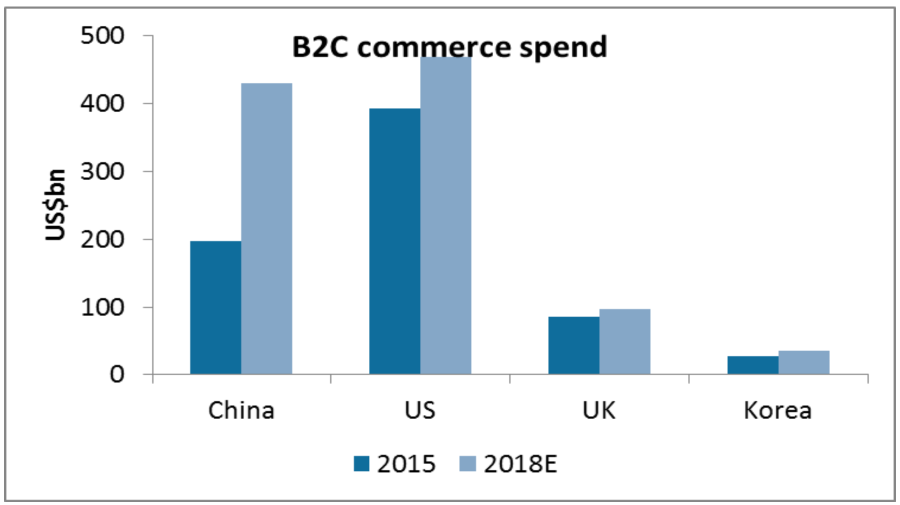
Investment opportunities:

E-commerce

Source: Allianz Global Investors, as of August 2015. Photo source: https://en.wikipedia.org/wiki/List_of_shopping_malls_in_Metro_Manila; https://c2.staticflickr.com/6/5162/5363372828_4d46b4251f_b.jpg; https://commons.wikimedia.org/wiki/File:Taobao_Marketplace_Logo.jpg; https://commons.wikimedia.org/wiki/File:Tmall.com_Logo.jpg

Shift in the way consumers a spending





Facts:

- Online and mobile shopping has been increasing exponentially
- On 'Singles Day' 11 Nov 2015, Chinese spent US$14.3bn (+60% yoy) on Alibaba. Mobile was 69% of total GMV.
- On Cyber Monday a few weeks later Americans spent US$3.1bn online.
- China's 5th year plan targets online sales to reach 20% of retail sales or US$1.4trn by 2020.

Portfolio positioning:

Internet platform operators
e.g. Tencent

Online/Mobile shopping platforms
e.g. Alibaba, JD.com, Vipshop

Online commerce incumbent / first mover advantage = economies of scale and barriers to entry

Source: International Data Corporation (IDC), 2015

Drive to self-sufficiency – going private for healthcare, insurance and education

2016 Survey - Biggest Concerns of Chinese Middle Class Families

Facts:

- Medical tourism – A US$100 billion industry. And growing rapidly.[1]
- 4 out of top 5 medical tourist destinations are in Asia, with Thailand being #1[2]
- Avg. healthcare expenditure per capita in Asia ex Japan is less than 1/10 vs. US[3]

Portfolio positioning:

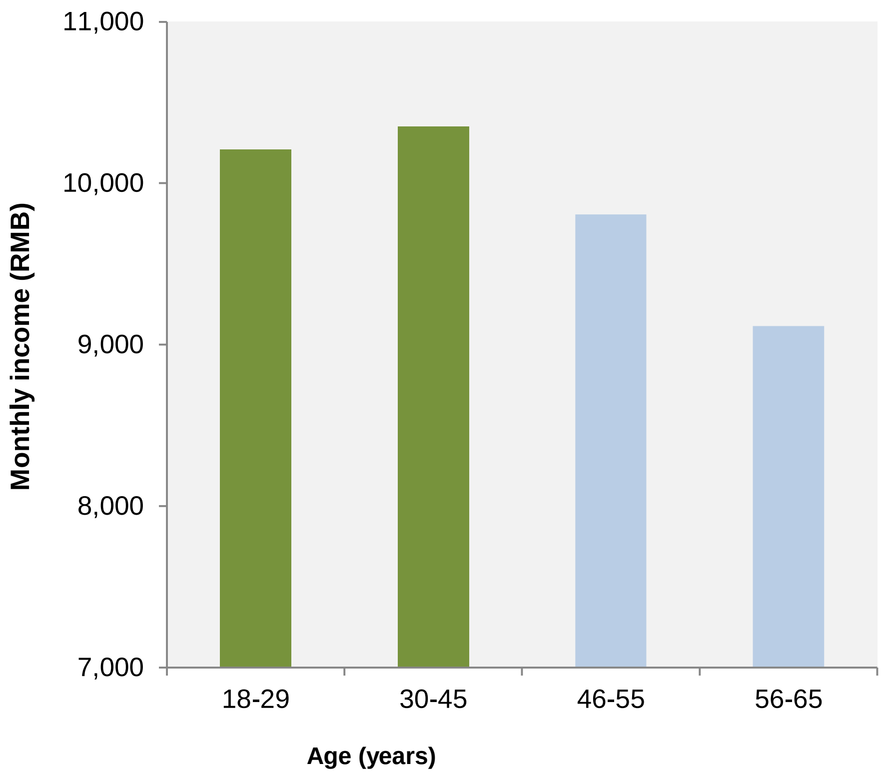
- Regional hospitals
- Pharmaceutical companies
- Life Insurance

Source of survey: CLSA, China Reality Research "Mr & Mrs China", as at February 2016. The survey is sampled via 1208 families in 58 major cities (Tier 1,2 and 3). These families are considered mid to high income groups with per capita disposable income of at least 30% above local city average.

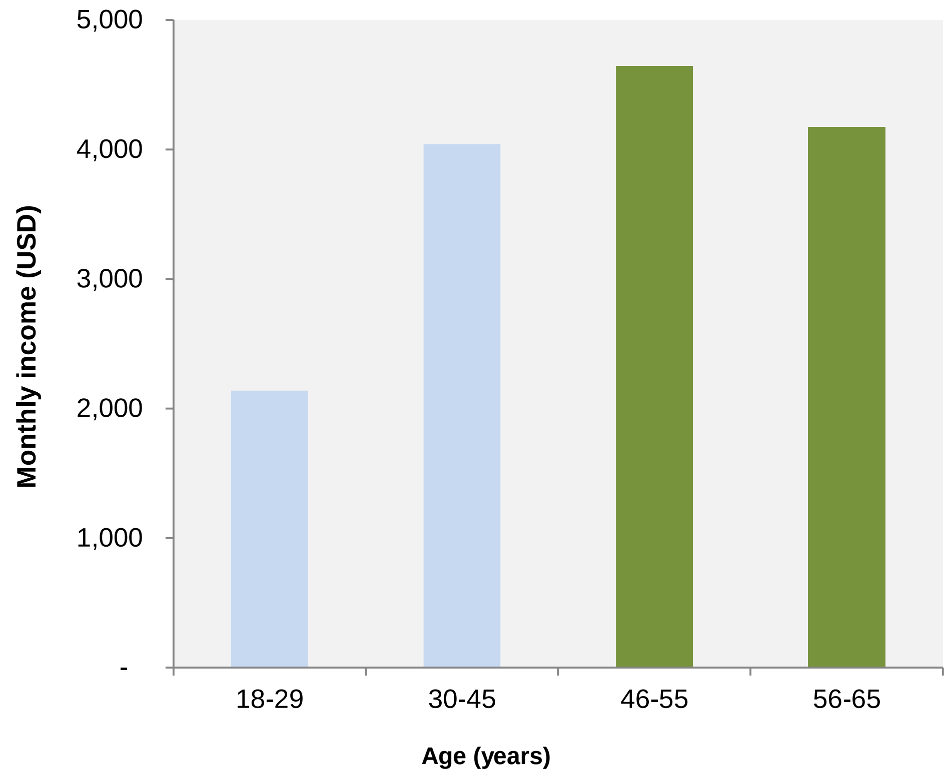
1&2. Source: Forbes, SCMP, AllianzGI, Dec 2014; 3. Source: World Bank Data Base, latest data in 2013 was used. Photo source: Wikipedia,

China: Where the young are wealthy

Income by age - China



Income by age - US



Source: Credit Suisse Emerging Consumer Survey 2016. Income data is based on 2015 full year income. China income level is based on 2625 respondents from 10 different locations in China, among which 68% are from urban areas, rest from rural areas.

Let me entertain you!

Chinese Version “Top Gear”!

Facts:

- China has its own Top Gear, X Factor, The Apprentice, You’ve Got Talent
- Almost 40% of Chinese do online gaming, huge monetization potential[1]
- ASEAN consumers make up the world’s 2nd largest community of Facebook users[2]

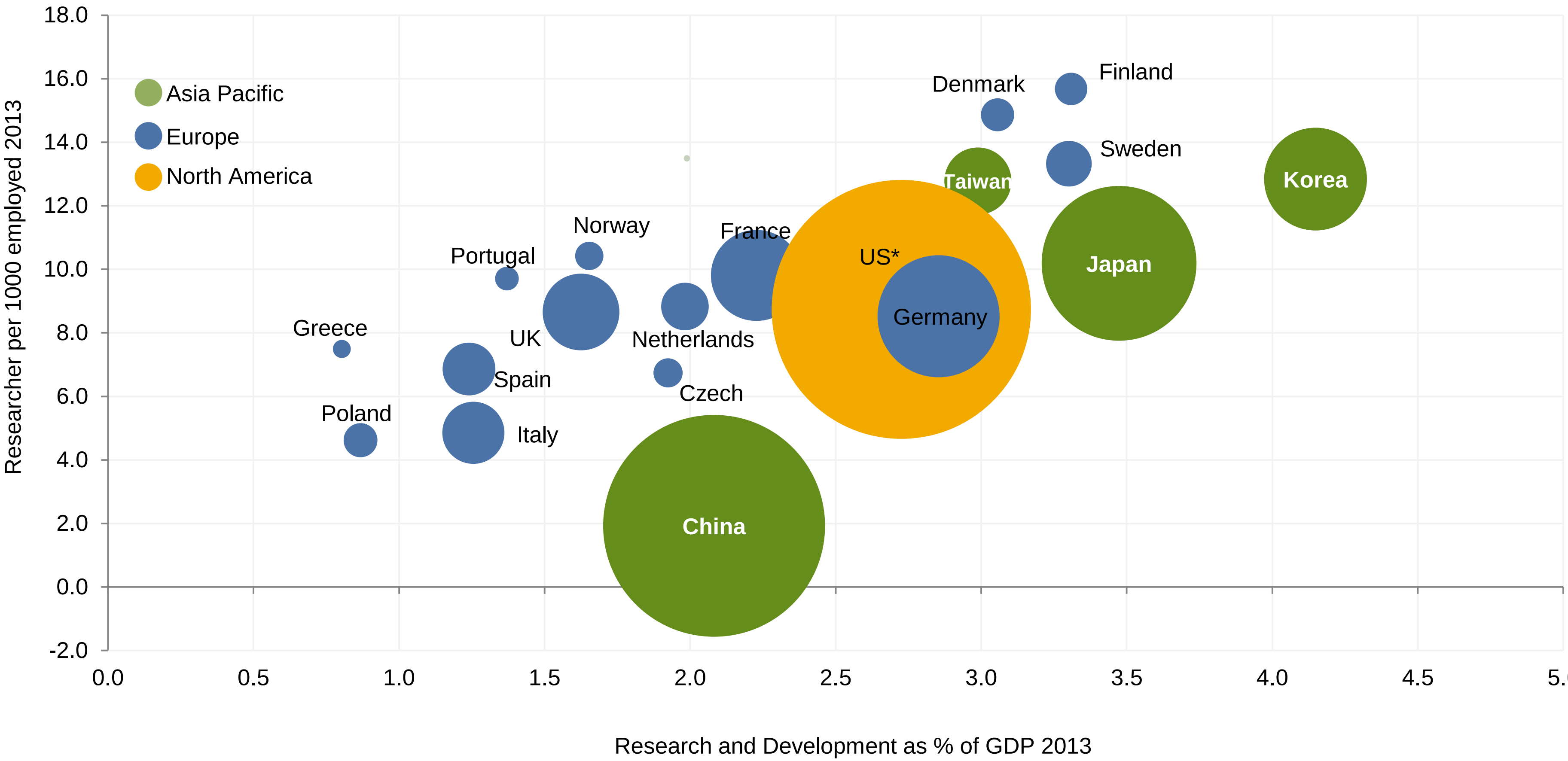
Portfolio positioning:

- On line - gaming
- Telecoms - demand for data
- Airports – continued tourism growth
- (No football clubs)

1. Source: China Internet Watch, National Bureau of Statistics of China, as at December 28, 2015.
2. Source: MicKinsey, Understanding ASEAN: Seven things you need to know
Photo source: tv.sohu.com.

Increasing amounts spent on R&D in Asia

Global R&D and Scientific Intensity



Source: Nomura, Allianz Global Investors, data as at December 2013. * US, Canada and Israel data were as at December 2012. Size of the circle reflects the relative amount of annual R&D spending by the indicated country

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Higher tech manufacturing = higher growth opportunities

Source: Wikipedia, www.ippok.com, www.etsy.com, www.flicker.com

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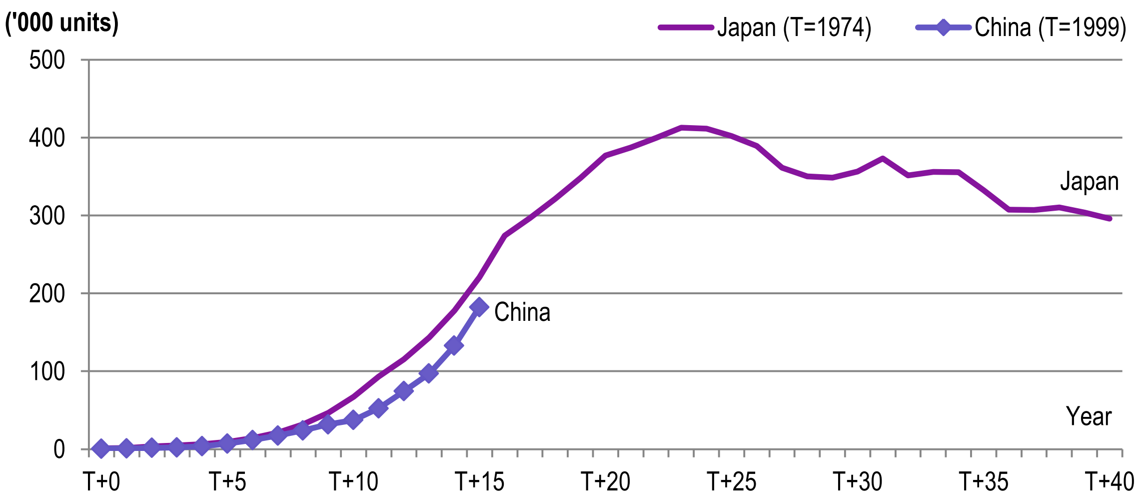
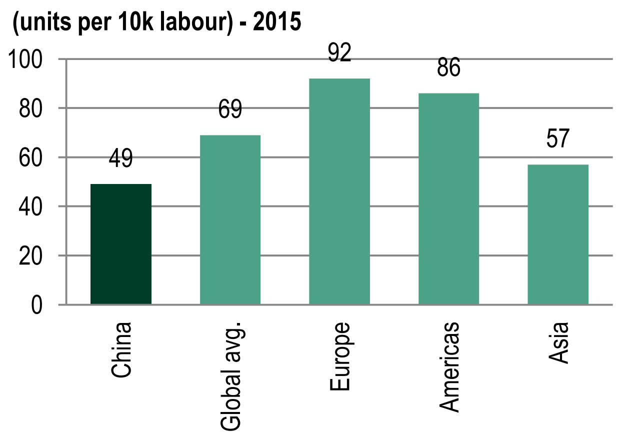
China automation/robotics – growth potential on the low-end component market

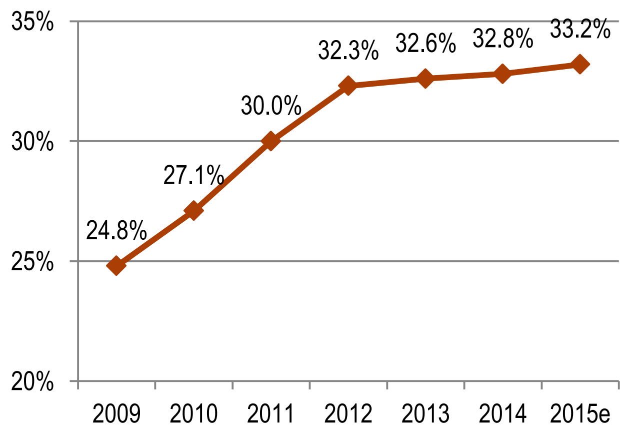
Industry robot ownership in China is similar to Japan's level in 1990



China's industrial robot density is far below avg.



Rising market share of China's domestic players



Facts:

- China's robot ownership is similar to the Japan's level in 1990. Robot density is also far below global and Asia averages
- If it follows Japan's pattern, there will still be c90% growth potential in the coming 8-10 years before the market peaks out
- Government's policies support import substitution, which is more likely to happen in the lower-end products (e.g. inverter/servo systems)

Portfolio positioning:

Domestic leader in inverter/servo systems:

e.g. Inovance

Emerging player in automation:

e.g. Han's Laser

LT growth potential for the Chinese producers with market share gain from gradual imports substitution

Source: WIND, IFR, Bernstein as at October 11, 2016

Structural reform happening. Southeast Asia is the bright spot

Prime Minister Narendra Modi

India

- Goods & Services Tax to be harmonised across the country
- New Bankruptcy Code to allow financial sector to speed up process for non-repayment of loans

President Xi Jinping

China

- 13th 5-year plan initiatives
- China continues to open up capital account, likely to see inclusion in MSCI global indices in future

President Joko Widodo

Indonesia

- Opening more industries to foreign ownership
- Increase in infrastructure spending

Source: Allianz Global Investors, as of September 2016.

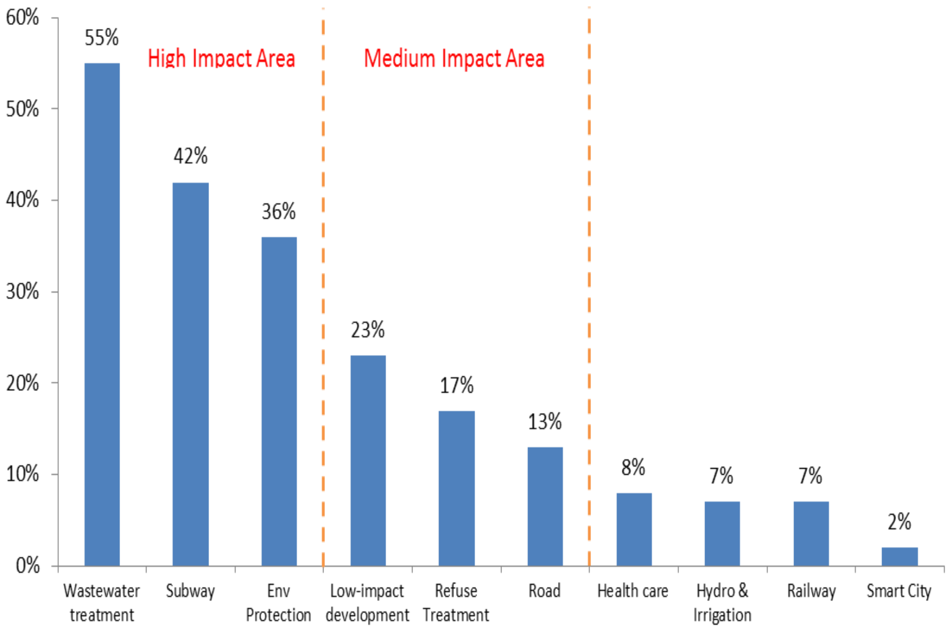
China Reform: Good progress in some areas, slow in others

Reform	Likelihood	Pace	Progress so far
Financial Market Reform			Shenzhen–Hong Kong stock connect expected in 2H 2016
Service Sector Deregulation			Moving along
Fiscal Reform			Early progress in implementation
State-Owned Enterprises (SOE) Reform			Far and few between so far but increasingly likely
Social Reform			Changes defined, work in progress

Source: AllianzGI Research, as at May 2016. This document contains the current opinions of AllianzGI and its employees and such opinions are subject to change without notice. Statements concerning financial market trends are based on current market conditions, which will fluctuate. Forecasts are inherently limited and should not be relied upon as an indicator of future results. This document has been distributed for informational purposes only, does not constitute investment advice and is not a recommendation or offer of any particular security, strategy or investment product. Information contained herein has been obtained from sources believed to be reliable, but AllianzGI cannot guarantee that the information is accurate, current or complete.

Public-Private Partnerships (PPP) to Boost Growth in China

Planned Investment of PPP Projects as % of 2016-2020 Total FAI (Per Industry)



Facts:

- China's Ministry of Finance published a new group of PPP projects with a total investment value of 1.17 trillion yuan (174.6 billion US dollars) on Oct 13
- This is addition to projects worth 658.9 billion yuan announced in 2015 and 180 billion yuan in 2014
- PPP provides investment in local infrastructure without relying on local government debt

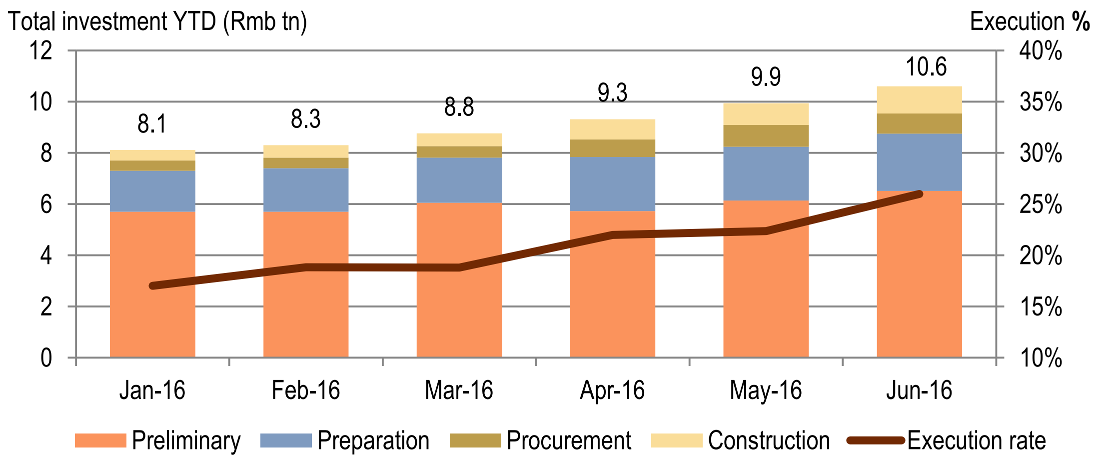
Portfolio positioning:

The 516 newly-announced projects cover energy, transport, water conservation, agriculture and education

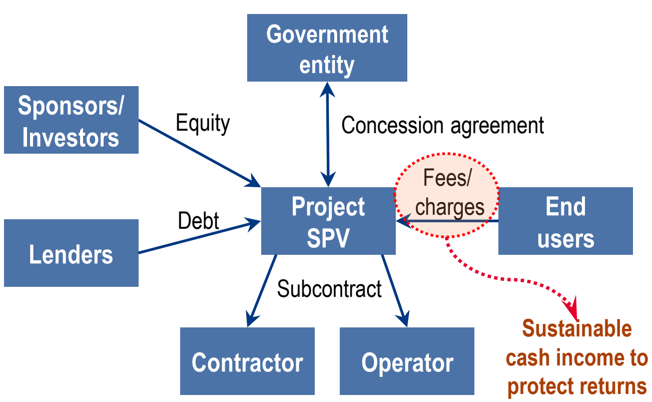
Source: Wind, RBH Research, China Public Private Partnerships Center, AllianzGI, October 2016

Public-Private Partnership (PPP) reshapes the growth outlook of China environmental sector

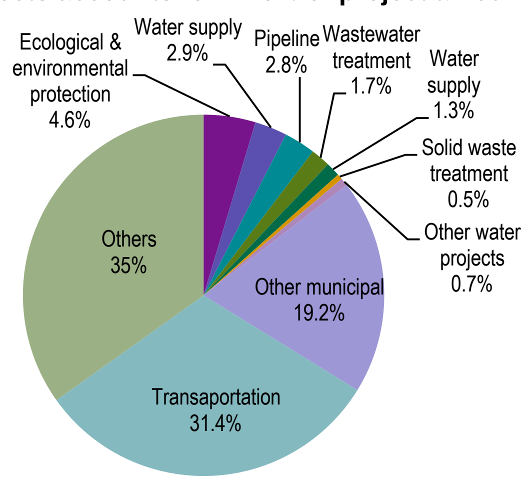
Growing project size with rising execution rate



Funding structure of PPP projects



Env. projects accounts for 14.5% of project amount



Facts:

- PPP model could gradually resolve the government's high leverage problem while supporting economic growth
- The rising project amount and execution rate indicate huge order/revenue potential for the contractor/operators
- Environmental sector (esp. utility type/ water related) is one of the key beneficiaries as it could take up 14.5% of the total project amount

Portfolio positioning:

Wastewater treatment:

e.g. Beijing Enterprise Water

Solid waste treatment:

e.g. China Everbright International

PPP model supports robust order/revenue growth in the environmental sector

Source: MoF, CPPPC, Guosen Securities as at October 7, 2016

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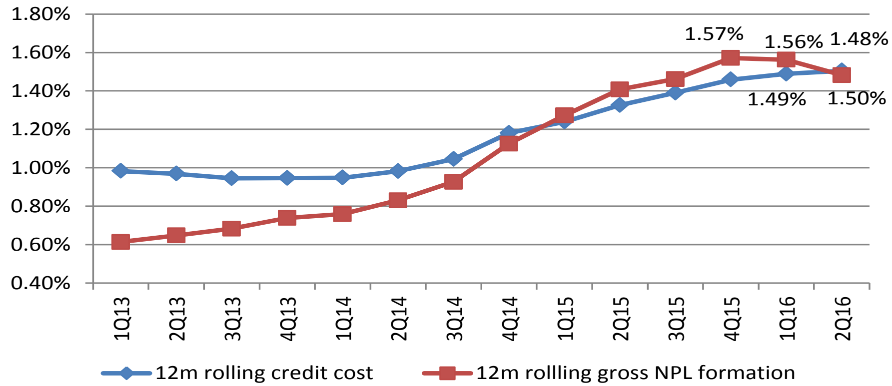
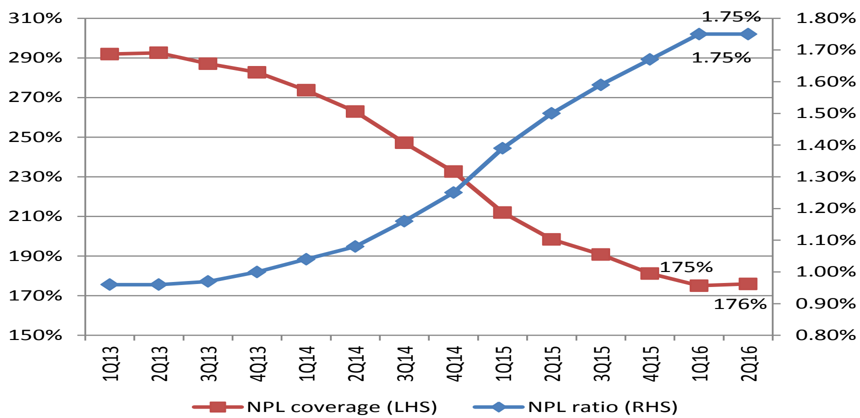
Peaking NPL formation in China

12m rolling NPL formation shows second quarter of decline, highly likely confirming the peak of NPL increase



Reported system NPL ratio was flat qoq in 2Q16 at 1.75%, with NPL coverage surprisingly up by 1ppt, first time increase of coverage since end-2012



Facts:

- Chinese banks have recognized and cleaned up close to 6% of system loans as NPLs since beginning 2013
- Banks and AMCs have generally come to a consensus that private sectors NPLs have peaked particularly in coastal regions
- Lower interest rates, bond market development and active debt restructuring reduce asset quality pressure for banking sector and support economic revival

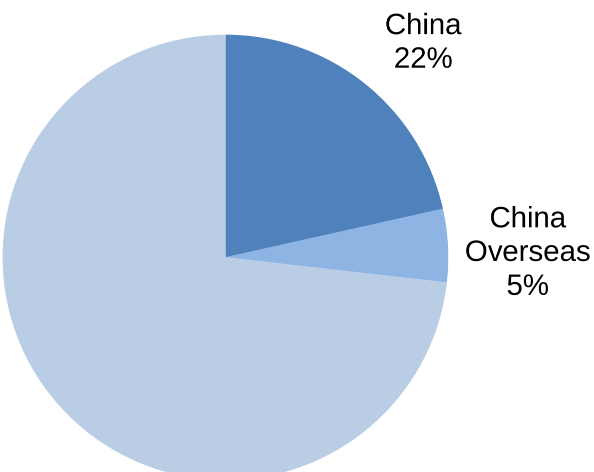
Portfolio positioning:

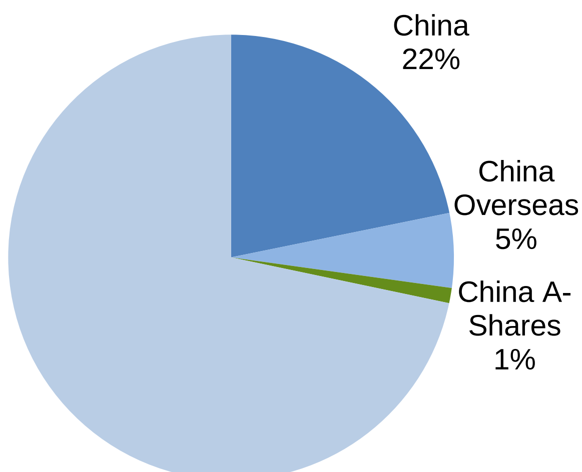
Quality retail bank, and state banks
e.g. China Merchants Bank, China Construction Bank

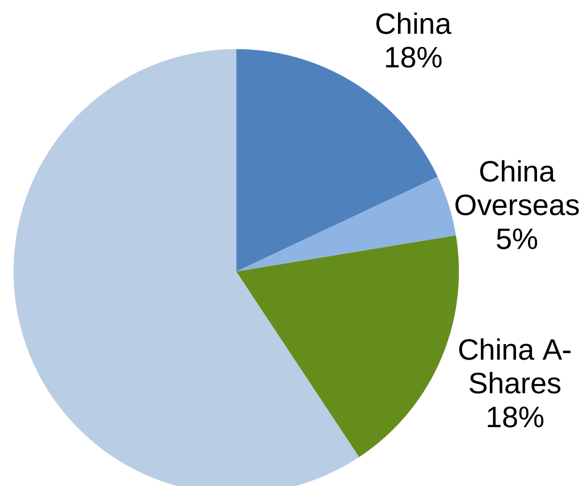
Source: CBRC, AllianzGI, October 2016

MSCI China A Share Inclusion in global indices: will become an ‘active decision’ for global investors

Current Status	Potential Initial Step: Partial Inclusion (5%*)	Potential Full Inclusion
China: 27%	**China: 28%**	**China: 41%**







Source: MSCI, as at March 2016. * The percentage number refers to the Inclusion Factor applied to the free float-adjusted market capitalization of China A share constituents in the pro forma MSCI China Index. China A-share securities are subject to a foreign ownership limit of 30%

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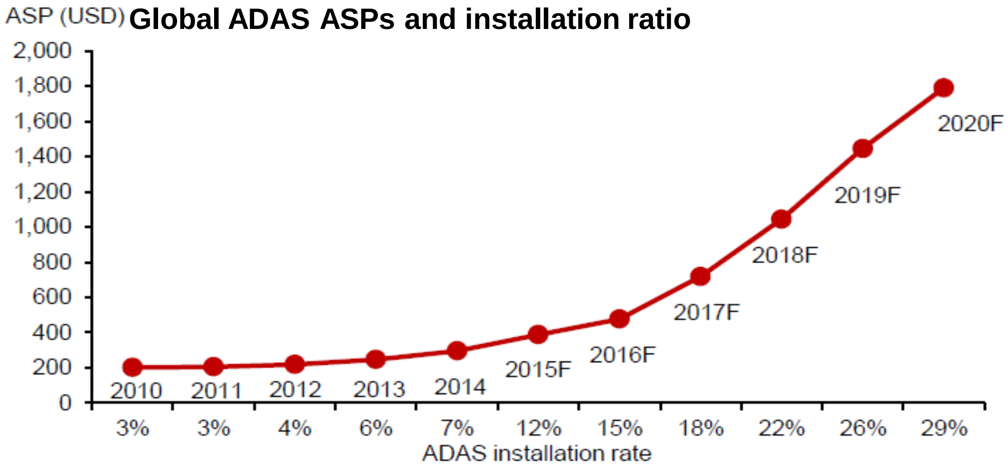
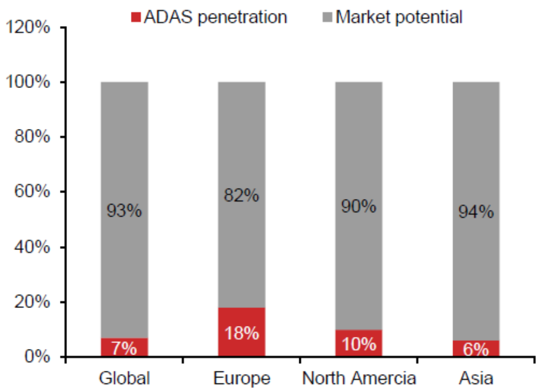
Advanced Driver Assistance Systems (ADAS) – Assisted/Automated Driving

Global ADAS ASPs and installation ratio



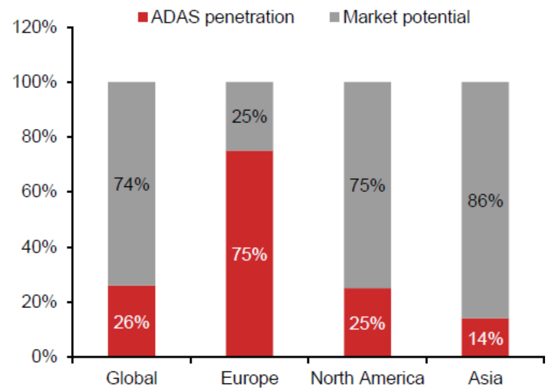
Source: IHS, OICA, Nomura estimates

Global ADAS installation rate 2014



Source: Continental, Nomura research

Global ADAS installation rate 2019



Source: Continental, Nomura research

Facts:

- ADAS typically covers sub-segments like self-driving, active safety, car to car communication, infotainment etc.
- Drivers of ADAS commercialization include worldwide legislation, consumer groups and the insurance industry.
- The sector is expected to post revenue CAGR in excess of 70% over FY16-20. According to Continental, the leading German auto components supplier, global ADAS penetration will jump from 7% in FY14 to 26% in 2019F

Portfolio positioning:

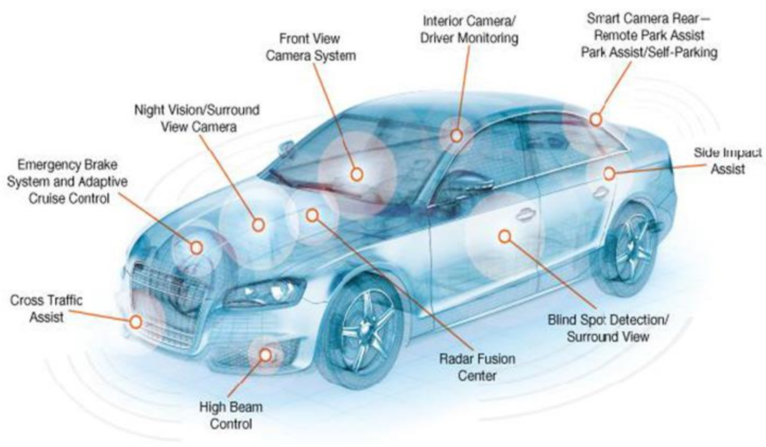
Component parts makers
e.g. Nexteer, Minth, Sunny Optical, Mando

Next-generation ADAS will increasingly leverage wireless network connectivity to offer improved value by using car-to-car and car-to-infrastructure data

Source: Freescale, Macquarie Research, December 2015.

Grassroots[SM] Example – ADAS Adoption Trend in China

Gauge the adoption trend of various ADAS functions & identify potential beneficiaries



- ***"Sensors and lenses are the two most important parts for auto camera production, and both of them have high entry thresholds. Sunny Optical is the No.1 lens provider. Their position won't be challenged in the near future"***

- ***"We are getting the most inquiries about blind spot detection and lane departure warning. They have proven to enhance driving safety greatly, and drivers have a short learning curve to get used to these functions"***

Background:

- ADAS is expected to be a fast growing trend in China's automobile sector. Need to keep track of the industry development to discover investment opportunities/ verify our investment cases.

Why we need Grassroots study?

- Sunny Optical, a leading camera lens producer, is a beneficiary of the ADAS trend. We need to check the demand outlook and competitive landscape in this space.
- Want to identify among the various ADAS functions, which ones would best fit Chinese consumers' needs in the next three years.

Who did we interview?

- 14 automobile manufacturers in China.

What was our finding?

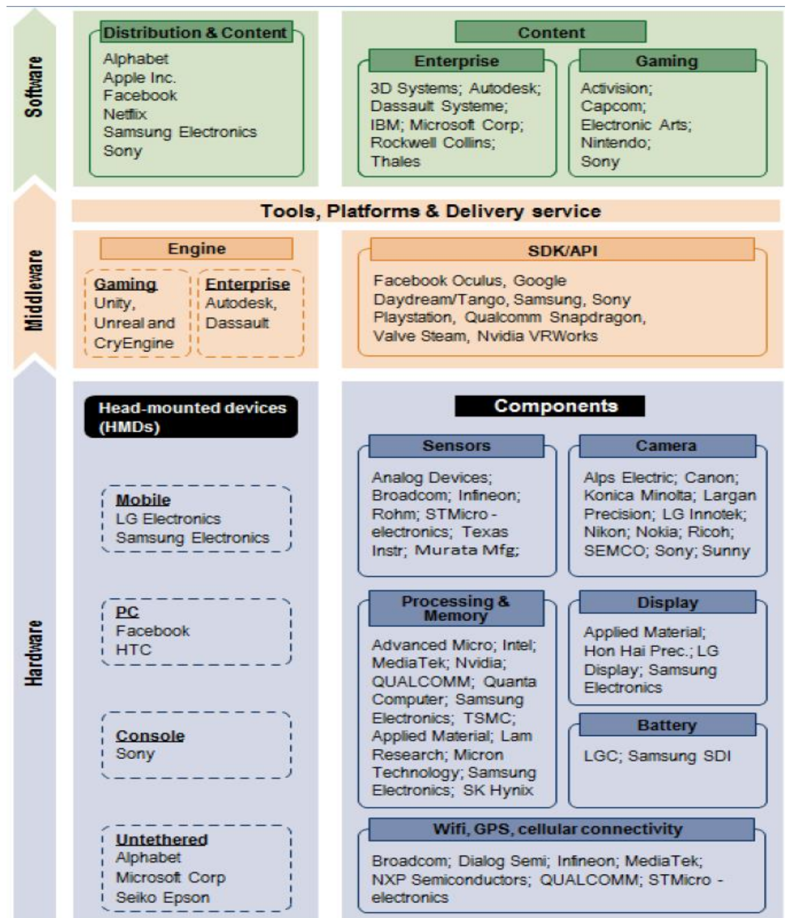
- Auto camera demand is expected to see continuous growth of an average 11% in 2016. Sunny Optical is well-positioned for further market share gain.
- Lane departure system and blind spot detection would best fit Chinese consumers' needs in next 3 years.

Virtual Reality / Augmented Reality

Facts:

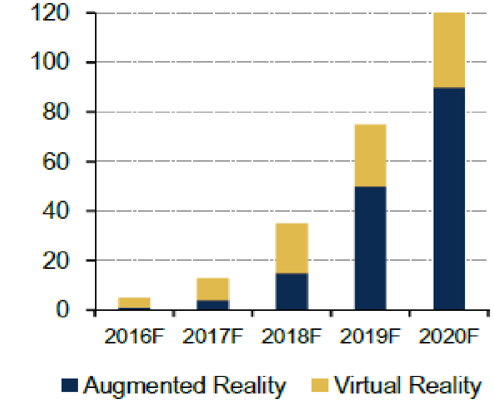
- Enhancing game and video experience with new head-mount displays. It may accelerate more powerful chips such as graphic chips
- AR can be used more widely, not only for personal usage, but for educational, industrial usage for tutorials. It will accelerate new software development, cloud services, and peripheral hardware functions including glass, microphone, sensors, etc.
- PC renaissance inspired by high end gaming PC's; PC and notebook sales do better than expected in 2017.

Positioning:



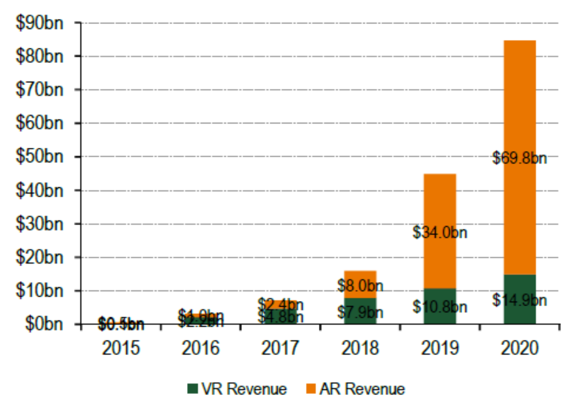
Source: BofA Merrill Lynch Global Research

Augmented/Virtual Reality Revenue Forecast ($bn)



Source: Digi-capital

AR/VR total headset hardware revenue estimates 2015-2020E



Source: IDC

Source: Digi-capital, IDC, BofA Merrill Lynch Global Research 2016

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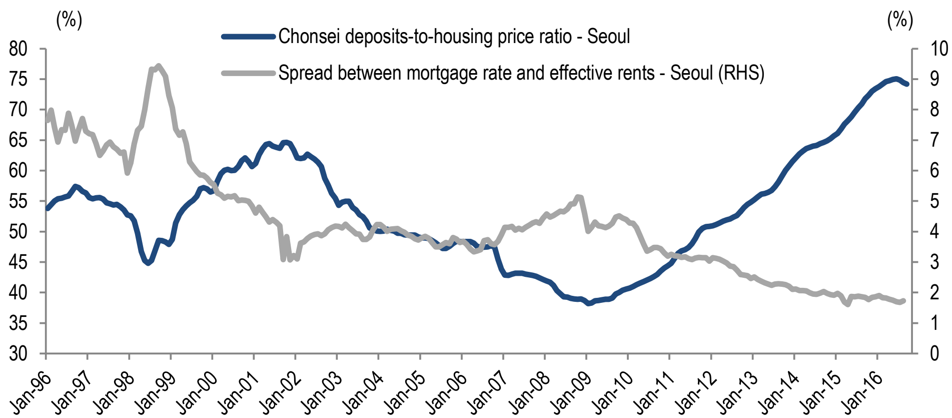
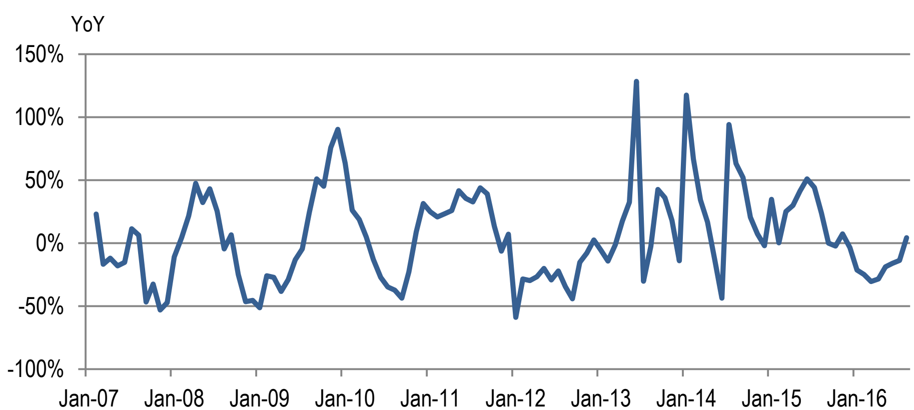
Korea an exception to the Asia property bubble/downtrend

More incentive to buy instead of rent



Nationwide housing transaction growth turned positive in August



Facts:

Prolonged period of very low interest rates amidst rising ratio of key rental deposits (Chonsei) to housing price should lead to improving domestic housing cycle. Sectors that benefit from these structural trends include:

- ✓ Domestic housing construction
- ✓ Home refurbishment

Portfolio positioning:

Domestic Housing:

e.g. Hyundai Development, Hanssem, Hyundai Elevator

Low interest rate environment will continue to incentivize people to buy rather than rent

Source: Kookmin Bank as of ** ***2016

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