EQUITY GPS

Views on Asset Allocation for Equities

December 7, 2016

INDEPENDENT GLOBAL EQUITY RESEARCH

FUNDAMENTAL EXPERT SYSTEM – DECISION SUPPORT SERVICE

Content

Assessing equities future potential expected returns from now on[1]
- By region, sector, individual stocks

Drivers of possible further rises in government bond rates

Estimating impact of possible further rises in government bond rates
- On EQUITY GPS ratings by region, sector, individual stock

Improving long term return-to-risk in equity portfolios
- Companies based in AAA/stable countries vs riskier countries
- Companies based in most innovating vs less advanced countries

[1] Assessments as at Nov 29th, 2016

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EQUITY GPS global aggregate rating: 4.3/10

Bottom-up built

- 5 600 stocks, ow 1/3 Americas, 1/3 Europe, 1/3 Asia & RoW
- Rating recently lowered by rising equity prices and higher government bonds rates
- Historically, an aggregate rating between 2.5 and 5/10 was nonetheless followed by an average +11% subsequent annualized performance over the following 3 months:
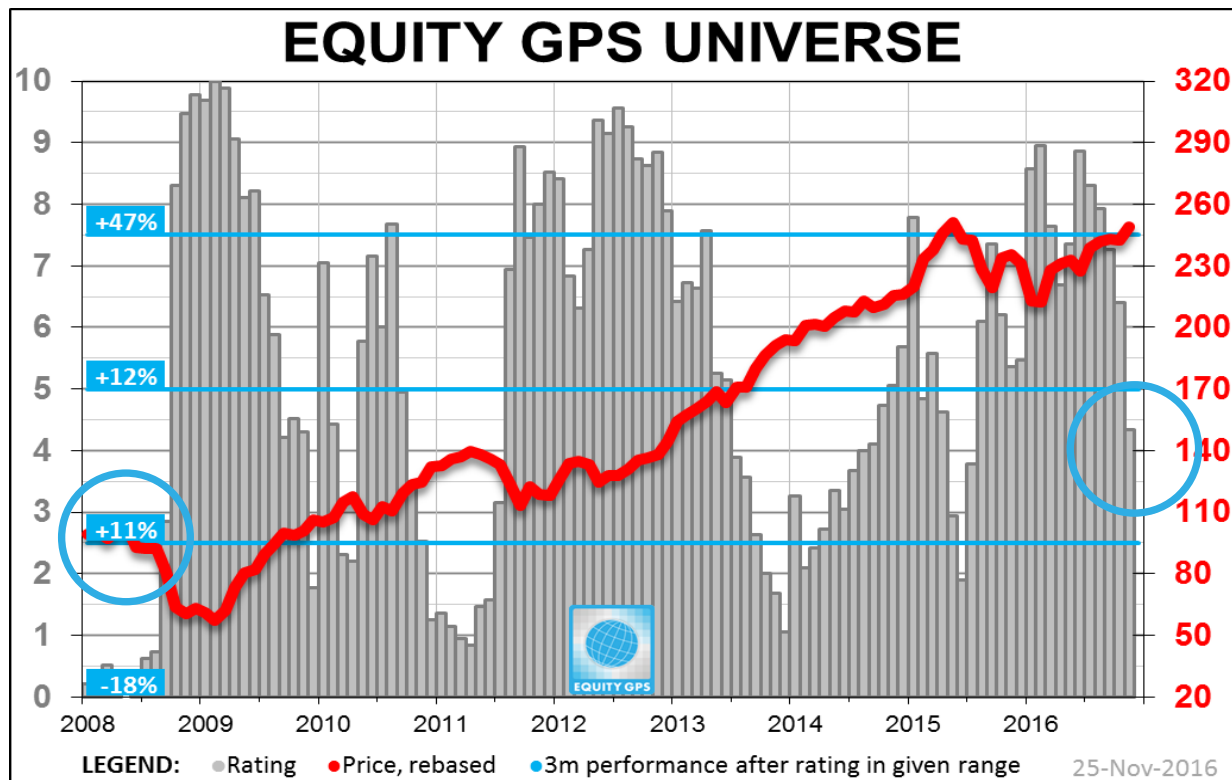
Assessment by industry & region

Growth-sensitive industries show higher ratings

Industry	EQUITY GPS RATING
MATERIALS	7,4
ENERGY	6,2
FINANCIALS	5,4
TELECOMMUNICATION	5,0
UTILITIES	4,8
CONS DISCRETIONARY	4,7
WORLD	4,3
IT	3,6
CONSUMER STAPLES	3,4
INDUSTRIALS	2,9
HEALTH CARE	2,7

| Geography	EQUITY GPS RATING
ASIA PACIFIC	7,1
EUROPE NON-EURO	6,0
EUROPE MEA	5,6
BRICS	5,5
EURO	5,5
WORLD	4,3
NORDICS	2,8
AMERICAS	1,8

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US: vigilence required

Higher equity prices + higher LT bonds = low EQUITY GPS rating

But US may show the way to Europe for future economic policy mix
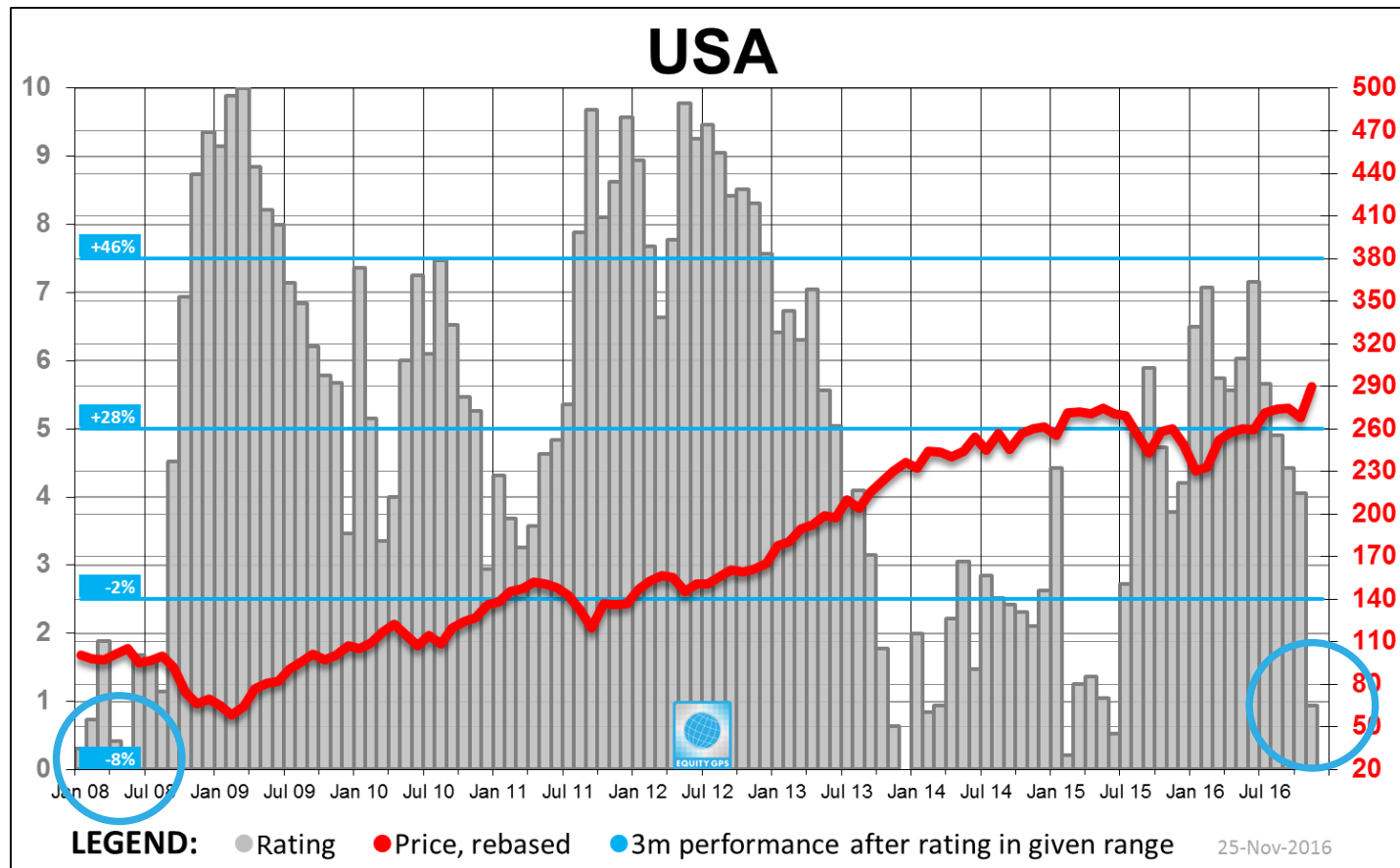
Eurozone: still in double-digit expected return[1] territory

Much lower performance than the rest of the world

With time, visibility will start to improve on political and monetary fronts

LEGEND: ● Rating ● Price, rebased ● 3m performance after rating in given range   25-Nov-2016
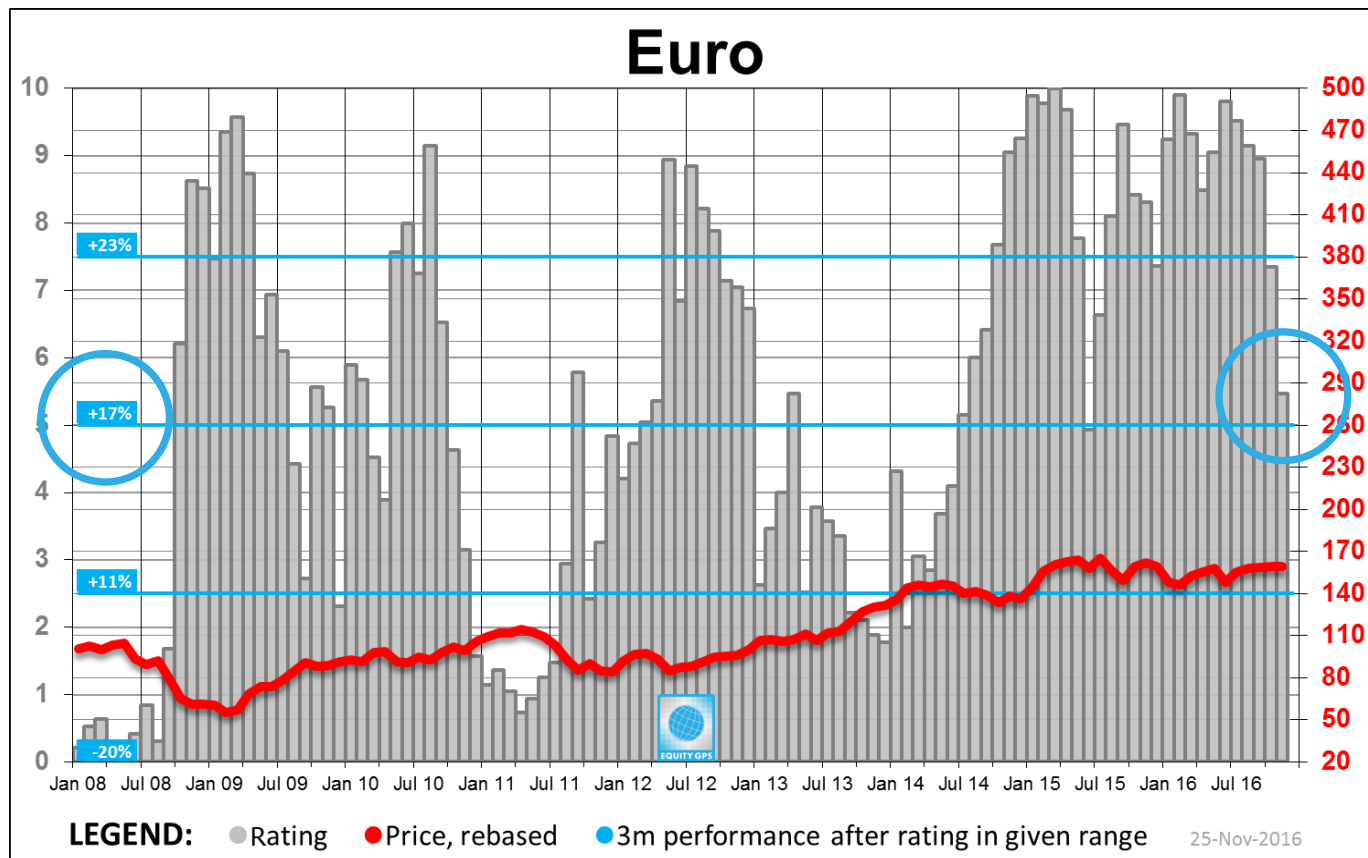
[1] Calculated as the historical subsequent 3 months annualized performance observed after rating within a specific range. In this case +17%

Extreme rated sectors in Europe
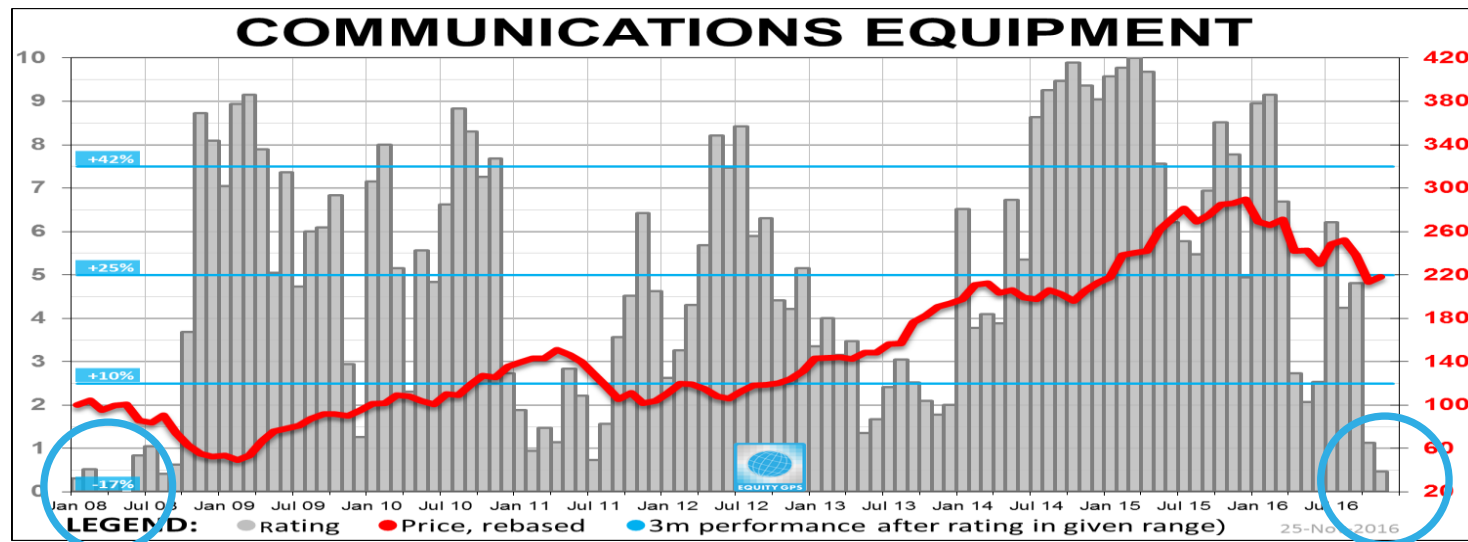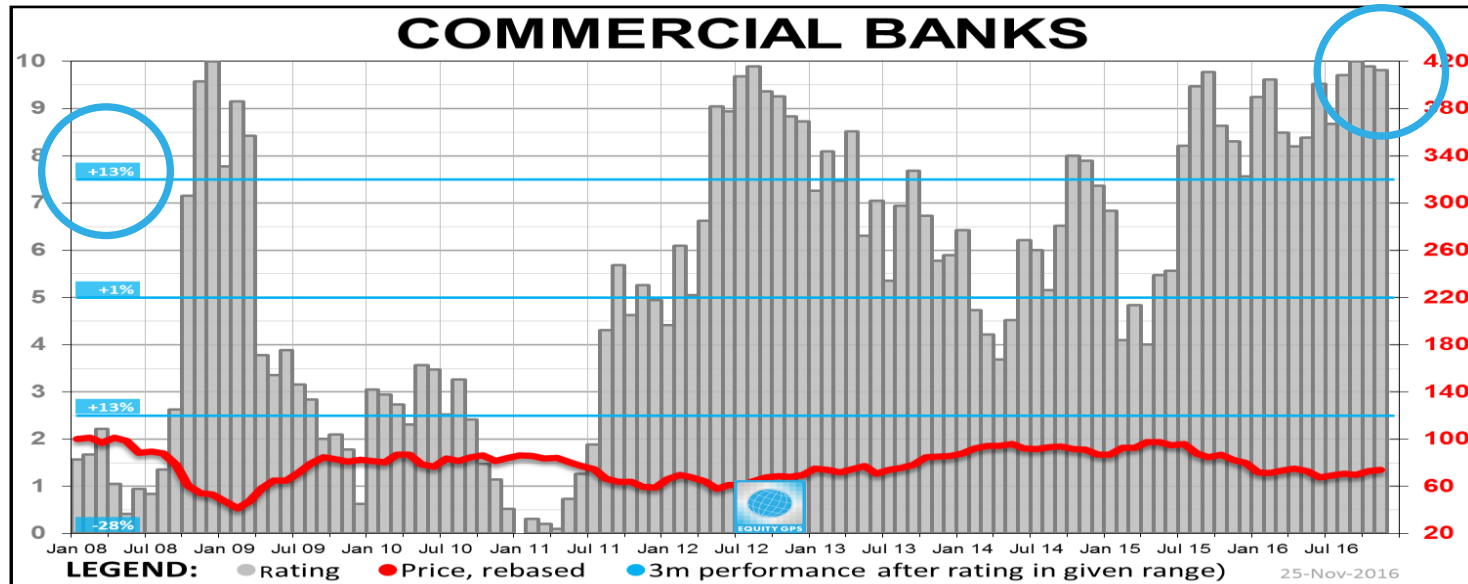
Examples of attractive/unattractive European stocks:

8 highly rated stocks	Rating	Clean Techs	Digit. Revol.	AAA Sovereign Rating	Country in top 10 innovators
Vontobel	9.4		■	■	■
STMicroelectronics	9.3	■	■	■	■
Randstad	9.2		■	■	■
WPP	9.1		■		■
Petrofac	9.0				■
Société Générale	8.7		■		
Wienerberger	8.7	■			
G4S	8.6		■		■
Avg EQUITY GPS rating	8.5				
Avg Annualized 3 months Expected Return[1]	+17%				

8 lowly rated stocks	Rating
Old Mutual	2.1
ThyssenKrupp	2.4
Essilor	2.4
Royal Bank of Scotland	3.0
Vinci	3.2
Gecina	3.4
Heineken	3.4
Coloplast	3.7
Avg EQUITY GPS rating	2,9
Avg Annualized 3 months Expected Return[1]	-10%

[1] Calculated as the average 3 months, annualized performance observed since 2008 after the stock's EQUITY GPS rating was in same range as now

Concentration of elections by end-2017: towards fiscal stimulus?

In a context of widespread rising public discontent

Country	Elections	Date	Topical issues	% of world cap	Percentage of zone's market capitalisation where elections will be held before the end of 2017			
					World	Developed world	Euro zone	Countries rated AAA-stable
Total				**99,70%**	**65,70%**	**83,80%**	**91,40%**	**36,40%**
US	Presidential	Nov 2017	"Americanism", circulation of persons	43,90%	43,90%	43,90%		
CN	People Congress	2017		7,50%	7,50%			
JP	Higher House	July 2016	Proposed change on role of military	7,20%				
UK	Brexit referendum	June 2016	Brexit, free movement of persons	5,50%				
UK	Snap elections ?	Autumn 16?	Will T May consolidate power?					
FR	Presidential	May 2017	Free movement of persons,	3,20%	3,20%	3,20%	3,20%	
FR	General	June 2017	Europe, euro…					
DE AAA	General	sept-17	Will/Can Merkel run a 4th time?	2,80%	2,80%	2,80%	2,80%	2,80%
CA AAA		October 2019		2,80%				
CH AAA		October 2019		2,50%				
HK	General	sept-16	China-controlled Electoral Commission recently required candidates to accept HK part of China	2,30%	2,30%	2,30%		
IN		May 2019		2,10%				
AU		July 2019		2,00%				
KR	Presidential	Dec 2017	Public discontent : housing, unemploy.	1,60%	1,60%	1,60%		
NL AAA		March 2017	Free circulation of persons	1,30%	1,30%	1,30%	1,30%	1,30%
SE AAA		sept-18		1,10%				
BR		October 2018		1,10%				
ES	Rajoy to seek investiture	August 3 2016	If Rajoy does not get it, another general election would be held	1,10%	1,10%	1,10%	1,10%	
TW		January 2020		1,00%				
RU		March 2018		0,90%				
IT	Referendum	October 2016	Renzi to resign if proposals rejected	0,80%	0,80%	0,80%	0,80%	
SG AAA	Gen.elections	2020		0,80%				
MX	Gen.elections	July 2018		0,70%				
DK AAA	Gen.elections	June 2019		0,70%				
ZA	Gen.elections	April 2019		0,60%				
SA			No general elections	0,50%				
TH	Referendum on new constitution	August 7 2016	Proposed broad Army powers over future elected governments	0,50%				
MY	Gen. elections	August 2018		0,50%				
ID	Gen. elections	2019		0,50%				
IE	Gen. elections	April 2021		0,50%				
PH	Gen. elections	May 2021		0,40%				

Commodity prices free-fall is stabilizing

Powerful past disinflationary effect is fading away

- "Oil tax" now represents only 2% of world GDP vs 3.6% long term historical average, and 6.5% pre-2008
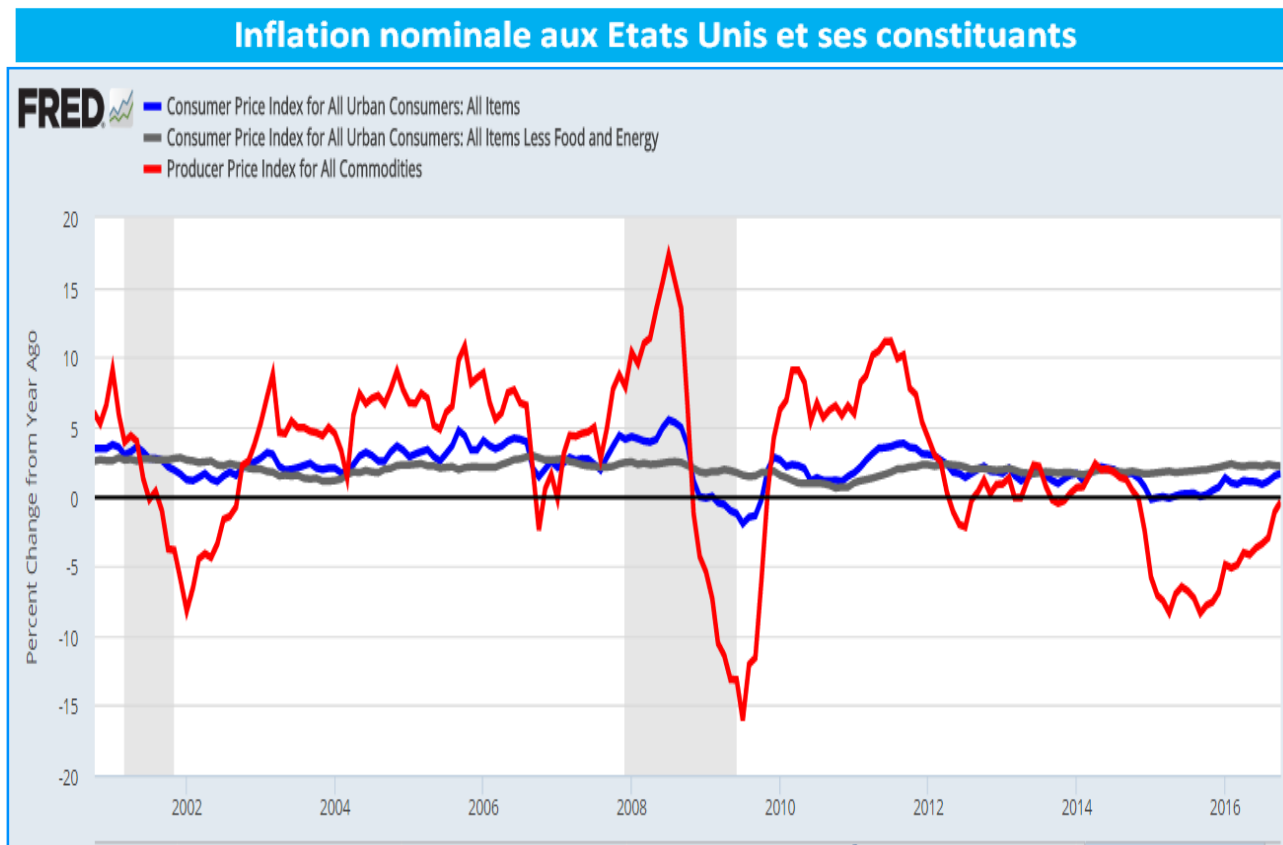

CRB Commodities Index from 1995 to 2016

Sources : Thomson Reuters, Investing.com

US CPI to increase, a harbinger of Fed gentle tightening

US nominal inflation inches up in wake of now stable yoy commodity prices

- Taylor principle[1]: *"For each 1% increase in inflation, the central bank should raise by more than 1%"*

Sources : Federal Reserve Bank of St Louis, EQUITY GPS

[1] J. Taylor, Stanford professor, former member of the Council of Economic Advisors and under secretary of the US Treasury

ECB will necessarily start soon to signal path to QE tapering

ECB's colossal QE questioned

- ECB QE's will have engulfed 3.3x the eurozone's cumulated budget deficits, vs 55% in the US
- Perverse effects: pension funds, insurance companies ALMs, banks' profitability, consumption vs savings behavior
- Indirect political effects …

Assessing how "kolossal" the ECB's QE really is

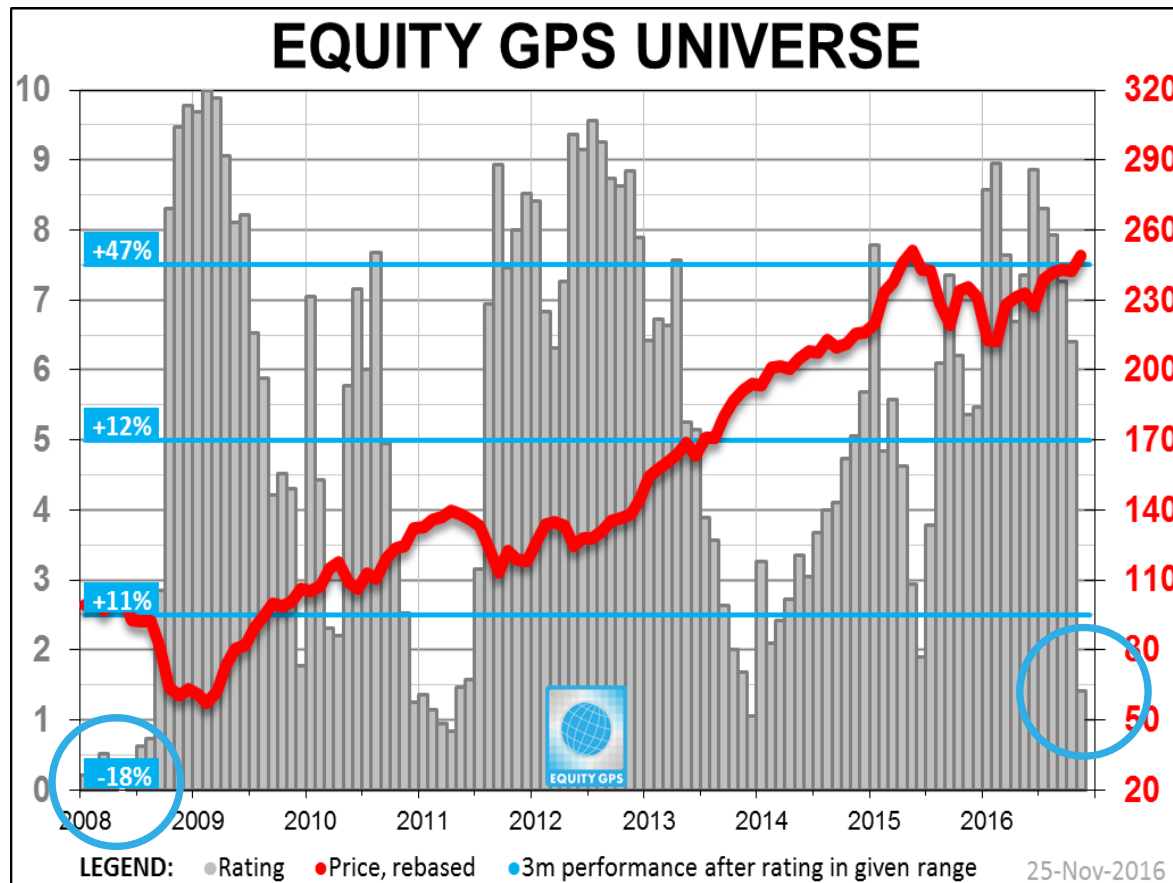|	2014	2015	2016(e)	2017(e)	2018(e)
PNB zone euro	9 800	9 950	10 100	10 400	10 800
Cumul des déficits budgétaires one euro, en % du PNB	-2.6%	-2.1%[1]	-1.9%	-1.4%	-1.4%
Soldes budgétaires euro, MdEUR	-260	-215[1]	-190	-150	-150
Programme d'achat de la BCE entre mars 15 et mars 17	0	600	960	240	0
Achats BCE relatif aux déficits budgétaires zone euro	**0%**	**1,9x**	**5,1x**	**1,6x**	**0%**

Sources :EUROSTAT, European Commission, ECB, estimations EQUITY GPS
(1) Sur les 19 pays de la zone euro, 4 (France, Espagne, Portugal, Grèce) représentent 60% du déficit pour seulement 35% du PNB

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Assessing impact of further rise in govt bond rates of +50bps

World equities overall aggregate rating would fall to 1.4/10, ceteris paribus

- But some European sectors' ratings would resist (below, right)

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LEGEND: ●Rating ●Price, rebased ●3m performance after rating in given range

25-Nov-2016

| Top sectors (out of 68)	RATING under hypothesis of +50 bps
MULTI-UTILITIES	8,7
COMMERCIAL BANKS	8,3
METALS & MINING	7,4
ELECTRIC UTILITIES	7,3
AUTOMOBILES	7,3
CONSTRUCTION MATERIALS	7,1
TRANSPORTATION INFRA	6,5
OIL GAS & CONS FUELS	6,1
IND. POWER PRODUCERS	5,9
WIRELESS TELECOM	5,5
HOUSEHOLD DURABLES	5,4
SPECIALTY RETAIL	5,0
CAPITAL MARKETS	4,9
LEISURE EQUIP & PRODUCTS	4,8
…	…

2008-2016 migration of country sovereign ratings in the world

Sharp divergences, particularly in the euro zone

- WW biggest drops in sovereign ratings: Greece, Portugal, Spain, Italy, Ireland
- Whilst Germany and Netherlands maintained best possible sovereign ratings
- Exemplifies tensions within the Eurozone

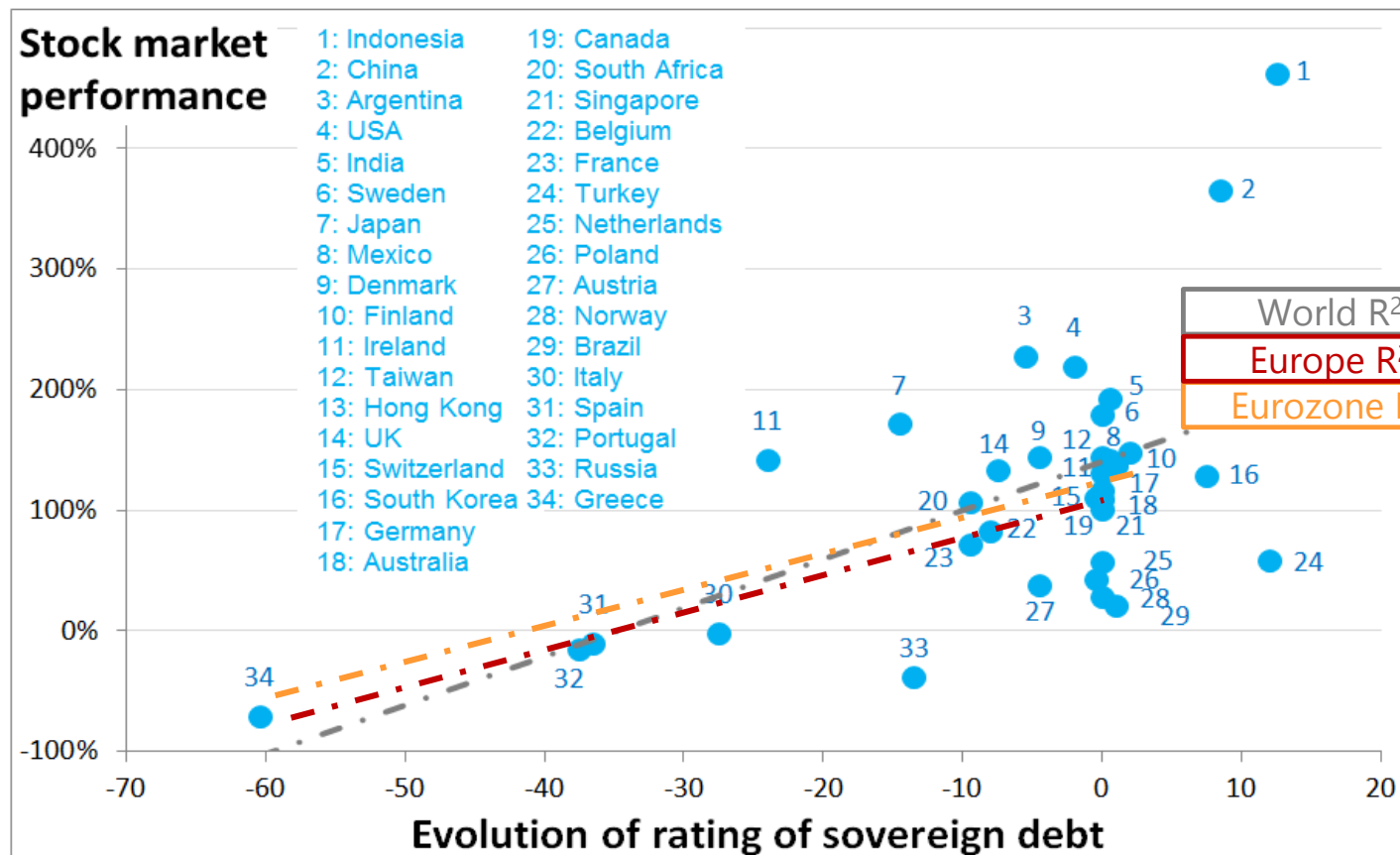**2008-2016 sovereign ratings migration by country (S&P and Moody's avg rebased 100)**
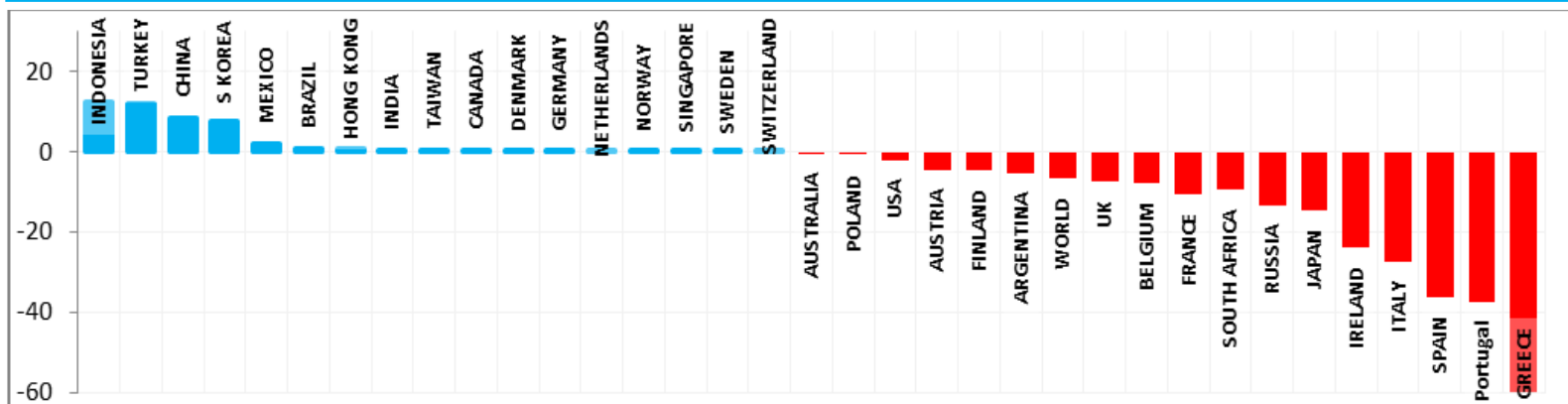
Sources : S&P, Moody's, EQUITY GPS

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Best sovereign ratings countries' companies tend to outperform

2008-2016 sovereign ratings migration and stock market performance by country

Stock market performance

1: Indonesia
2: China
3: Argentina
4: USA
5: India
6: Sweden
7: Japan
8: Mexico
9: Denmark
10: Finland
11: Ireland
12: Taiwan
13: Hong Kong
14: UK
15: Switzerland
16: South Korea
17: Germany
18: Australia
19: Canada
20: South Africa
21: Singapore
22: Belgium
23: France
24: Turkey
25: Netherlands
26: Poland
27: Austria
28: Norway
29: Brazil
30: Italy
31: Spain
32: Portugal
33: Russia
34: Greece

World R^2 = 0.33
Europe R^2 = 0.45
Eurozone R^2 = 0.58

Evolution of rating of sovereign debt

Sources : S&P, Moody's, EQUITY GPS

Most innovative nations nurture outperforming companies

Correlation between innovation and subsequent stock performance

- Top 10 most innovative countries[1] in 2008: USA, Ger., Swe., UK, Sing., Switz., S Korea, Denm., Jap, Nether.

2008 innovation rank[1] vs 08-16 stock market performance by country

Performance boursière
2008-2016, en EUR

$R^2 = 71\%$

Indice d'innovation 2008 par pays
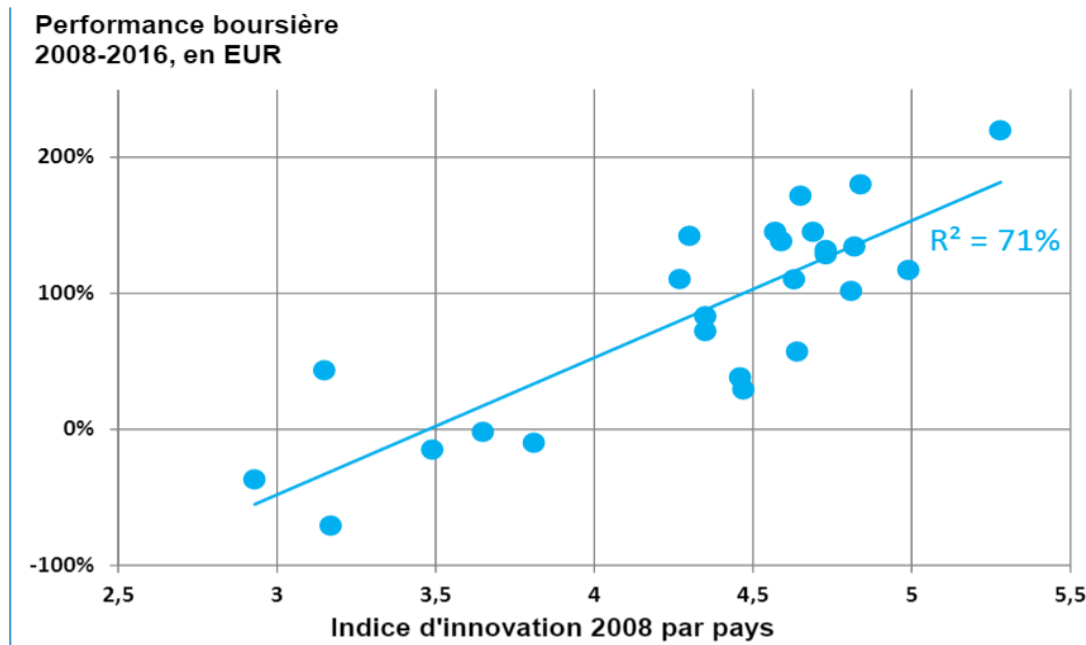
Sources : OMPI, EQUITY GPS

- <u>Top 10 in 2016</u>: Switz., Swe., UK, USA, Finland, Sing., Ire., Denm., Nether., Ger.

[1] : source : WIPO (World Intellectual Property Organisation, OMPI), releases every year its Global Innovation Index survey

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Conclusion

Global equities still generally in positive future potential expected returns
- But dispersed picture by region, sector, individual stocks

Possible further rises in government bond rates
- Would weigh on EQUITY GPS ratings
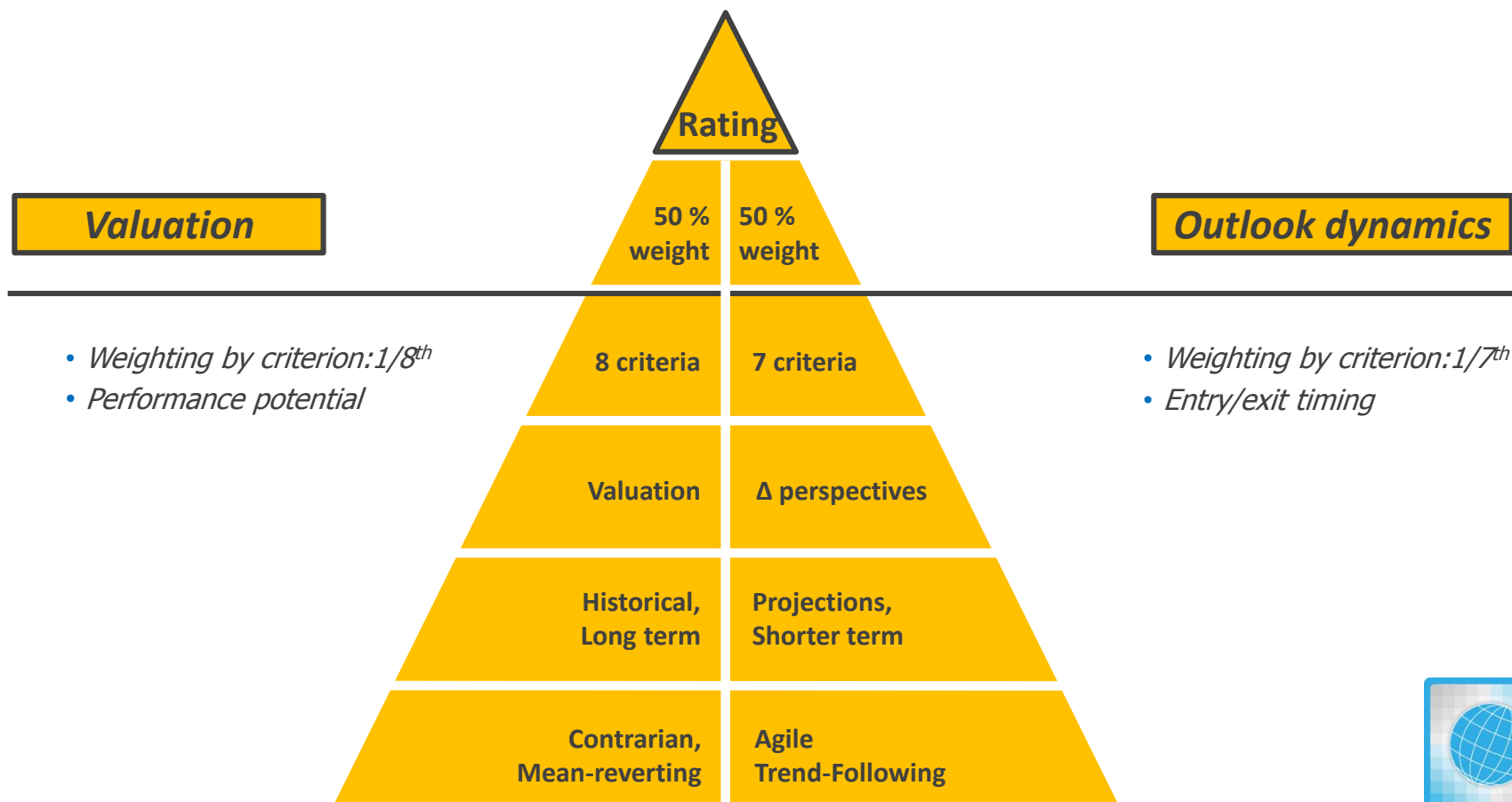- Different sensitivities by sector, region, individual stock

Reducing risks in equity portfolios by considering companies based in
- AAA/stable countries vs riskier countries
- Most innovating vs less advanced countries

EQUITY GPS

EQUITY GPS systematic and objective expert-system

Daily calculations of ratings for 5600 stocks - Aggregate ratings for world, by industries, sectors, regions, countries - 85% of global market cap, 90% of MSCI world index's

Rating

50 % weight	50 % weight
8 criteria	7 criteria
Valuation	Δ perspectives
Historical, Long term	Projections, Shorter term
Contrarian, Mean-reverting	Agile Trend-Following

Valuation

- *Weighting by criterion: 1/8th*
- *Performance potential*

Outlook dynamics

- *Weighting by criterion: 1/7th*
- *Entry/exit timing*

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EQUITY GPS signals subsequent average performance

12-month subsequent average performance by rating decile

- Universe 5 600 stocks, monthly observations, backtest period 2008-Aug 2016, local curr., excl div
- Excluding transaction costs, fees
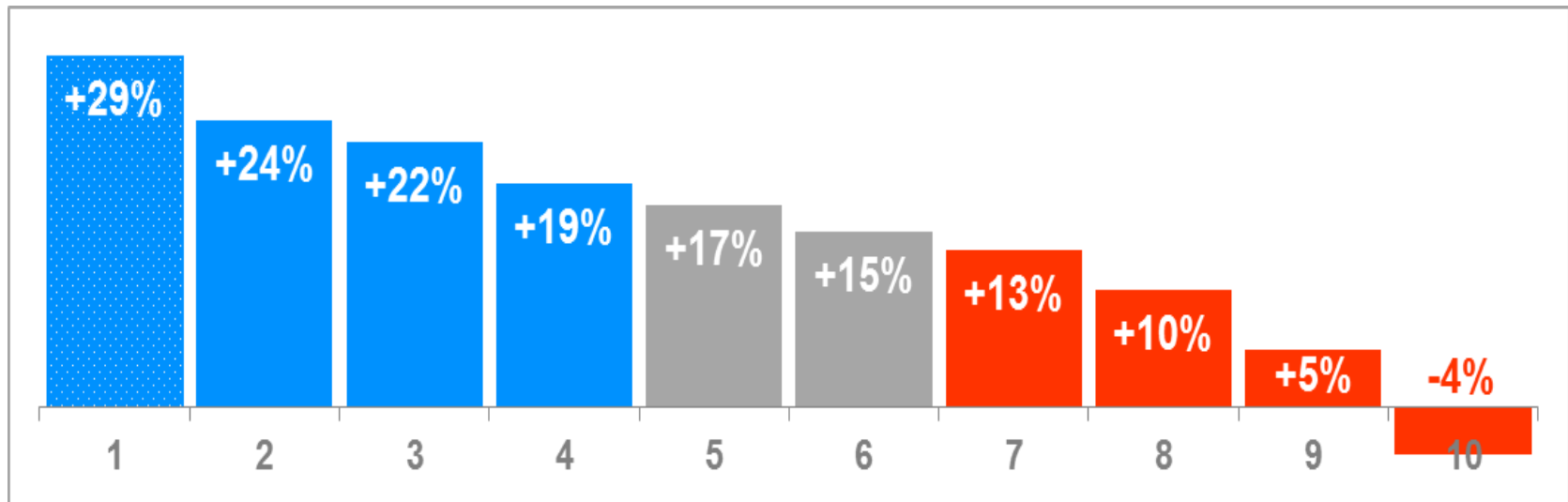
IDENTIFYING MARKET INEFFICIENCIES

EQUITY GPS

Views on Asset Allocation for Equities

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