



Mature Economies

# Quantitative Market Alert

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MarketQuant Research

Quarterly - 2017 Q2

*Extracts from the original document*

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This document provides the outputs of highly complex and extraordinarily powerful data-mining and artificial intelligence tools applied to macroeconomic, financial and market variables.

These outputs are:

- Early Warning Signals (EWS) on large reversal in market prices (upwards as well as downwards) over a short-term horizon (from 1 to 6 months ahead).
- Outlook Signals over a short-term period (3 month and 6 month ahead), which represents the market level for each period (3 month and 6 month ahead) compared to the current market level.

The tools include an estimation of cyclically-influenced Fair Values (i.e. market prices that would be fully consistent with the traditional set of economic and cyclical determinants of fair values).

*Results presented here are directly the outputs of the quantitative models and we do not tamper with them.*

**Written on April 5, 2017 with data up to March 31, 2017.**

## Key messages – April 2017

### More volatility

But clearer trend  
inside each asset  
class

- The one-month-ahead QMA provided in March 2017 had good predictive performances with 10 out of the 12 signals correct.

- After 5 months of rising equity markets, the April QMA suggests a higher probability of substantial shocks on equity markets, except for the S&P500 and the Nikkei in the short term. In parallel, *deterioration* signals on government bond yields confirm the transmission of tightening/less accommodative monetary policy to sovereign bond yield. Corporate spreads signals still demonstrate the narrowing pressures (until June 2017) related to the current strong corporate debt issuance, ECB Corporate Sector Purchase Programme and corporate strength.

### Less directional equity trend

Higher volatility in  
the coming months

- For the S&P 500, the outlook for the next 3 and 6 months are positive (higher level compared to the current one), but with more volatility during the summer. Temporary divergences are anticipated on European equity markets (*deterioration* of DAX 30 in 2017Q2, *deterioration* signal followed by an *improvement* signal on CAC40 in May and June). In fact, short-term signals seem to indicate that the upcoming political elements may take the lead for the next few months but that markets remain however oriented on a positive trend.

### Govies differentiation

Continuous US  
yield pressures,  
Adjustment in EZ  
bond markets

- Signals on government bond yields demonstrate that the Fed tightening cycle and ECB “neutral” stance will translate into higher yields on sovereign bond markets (with also higher volatility among them). However, our short-term signals on 10-year US bond yields suggest smooth yield curve flattening, proving the Fed strategy successful in managing market expectations. Medium term signal on European bond markets (OAT yield declining trend/Bund yield increasing trend on a 6-month outlook) suggest a convergence among European bond yields, thus indicating that the current market’s political risk expectations may be overpriced. UK Gilt *double* signals raise concerns over potential disruptions linked to the Brexit negotiations process.

### Short term corp. spreads resilience

Before gradual  
narrowing

- Outlook on corporate spreads indicates that substantial shocks are unlikely in the short term, except on Euro spreads in May 2017. Furthermore, the indication of the 3-month outlook (lower level in June compared to the actual level) suggests that the combination of corporate strength, high corporate debt issuance and ECB assets buying will continue to support the spread narrowing until June despite tightening credit conditions. This trend is likely to reverse in 2017Q3, consistent with the ECB tapering announcement and the US tightening conditions. Given the positive 6-month outlook on equity markets, the corporate spread narrowing may prove gradual.

## Summary of Early Warning Signals

	Market Level (Last value)	Apr. 2017	May 2017	June 2017	3-month outlook	July 2017	Aug. 2017	Sept. 2017	6-month outlook
<b>Equity Indices</b>									
S&P 500	2 363				↗	Strong improvement	Strong deterioration		↗
CAC 40	5 123		Strong deterioration	Strong improvement	↗	Strong improvement	Double signal		↗
DAX 30	12 313	Strong deterioration	Strong deterioration	Strong deterioration	↗	Double signal	Strong deterioration	Strong deterioration	↗
FTSE 100	7 323	Double signal	Strong improvement	Strong improvement	↗	Double signal	Double signal	Double signal	↗
Nikkei 225	18 909				↗		Strong deterioration	Strong deterioration	↘
<b>10-Year Government Benchmarks</b>									
US Treasury 10 Year Yield	2.40%	Double signal	Double signal	Double signal	↘	Double signal	Double signal	Double signal	↘
French OAT 10 Year Yield	0.96%				↗		Strong improvement	Double signal	↘
German Bund 10 Year Yield	0.33%	Strong deterioration	Strong deterioration	Strong deterioration	↗	Double signal	Strong improvement	Strong improvement	↗
UK Gilt 10 Year Yield	1.14%	Double signal	Double signal	Double signal	↘	Double signal	Double signal	Double signal	↗
Japan JGB 10 Year Yield	0.07%	Strong deterioration		Strong improvement	↗	Strong improvement		Strong deterioration	↗
<b>Corporate Spreads</b>									
Euro 5-7 Year A	42 bp		Strong deterioration		↘	Strong deterioration		Double signal	↗
US 5-Year A	88 bp				↘			Double signal	↗

Source: TAC ECONOMICS

**Legend:**



↗↘ Medium term outlook compared to the current market level (first column)

## Summary on Market Fair Values

The following table summarizes the estimated fair value for each market. The comparison with the market level during the same month allows evaluating the expected short-term direction assuming that market level oscillates around fair-value.

	Market Level (Last value)	Fair Value Feb. 17	Gap to Fair Value	Expected short-term direction	Evolution between Feb.17 and Mar.17
<b>Equity Indices</b>					
S&P 500	2 363	2 131	232	Decrease	Increase
CAC 40	5 123	4 566	557	Decrease	Increase
DAX 30	12 313	10 421	1892	Decrease	Increase
FTSE 100	7 323	6 584	739	Decrease	Increase
Nikkei 225	18 909	17 941	968	Increase	Increase
<b>10-Year Government Benchmarks</b>					
US Treasury 10 Year Yield	2.40%	2.12%	+28 bp	Decrease	Decrease
French OAT 10 Year Yield	0.96%	2.01%	-104 bp	Increase	Increase
German Bund 10 Year Yield	0.33%	1.40%	-107 bp	Increase	Decrease
UK Gilt 10 Year Yield	1.14%	2.27%	-113 bp	Increase	Decrease
Japan JGB 10 Year Yield	0.07%	-0.05%	+12 bp	Stable	Increase
<b>Corporate Spreads</b>					
Euro 5-7 Year A	42 bp	56 bp	-14 bp	Increase	Decrease
US 5-Year A	88 bp	93 bp	-5 bp	Stable	Decrease

Source: TAC ECONOMICS

## Medium-term economic outlook

This section summarizes our global macroeconomic scenarios for 2016 and 2017, provided in our Quarterly Cyclical Outlook.

### Critical time sequencing led by the US economic outlook

Cyclical timing issues are critical in our analytical approach. Our models suggest 3 sequential periods, stimulated by the US fiscal plan implementation around 2017H2.

- In 2017H1, our models suggest an economic resilience in G4 economies, with GDP growth close to 2% in US, EUZ and UK and slightly lower in Japan (1.0%-1.5%). Confidence and improving labor conditions support robust consumption in US and EUZ while Japan and UK are driven by investment and net exports (through currency depreciation).
- From 2017H2 to 2018H1, supportive fiscal policy implementation will boost US GDP growth around 2.5%-3.0%. The expected fiscal boost and tax cuts will create a virtuous cycle supporting confidence, demand, corporate earnings and equity markets. The transmission of higher US GDP growth, via trade dynamics, will sustain the Eurozone and Japan recovery and the positive momentum in emerging markets, despite threats of protectionism. In addition, political / systemic uncertainties should not induce major economic disruptions in EUZ as growth remains strong and the ECB fully alert. Positive post-Brexit economic development will progressively give way to more subdued GDP growth from 2017H2 as a result of rising inflationary pressures and a stronger wait-and-see investor behavior, though average GDP growth is revised upward given the positive global outlook.
- In 2018H2, the US will get into higher wage and price pressures (given the expected tightness in labor market conditions), and into progressively “biting” credit conditions (given the Fed gradual tightening and implications on bond yields), which will by then have cancelled the initial benefits of lower taxes / higher corporate profits and therefore create conditions for a cyclical reversal in the US. The size of the adjustment will depend on both equity valuations (the stronger the ex-ante euphoria, the strongest the reversal) and available policy room-to maneuver. Transmission of US cyclical reversal, reverting financial conditions with the end of ultra-loose monetary policies in G4 and higher inflation will progressively spread to mature economies, thus reducing the initial boost provided by the US GDP growth acceleration.
- Overall, G4 GDP growth should be at 2.0%-2.5% on average in 2017 (2.6% in the US, 2.0% in EZ, 1.7% in UK and 1.0%-1.5% in Japan) and between 1.5% and 2.0% in 2018 (2.2% in the US, 2.0% in EZ, 1.5% in UK and 1.5%-2.0% in Japan).

### End of deflation risk and upward inflationary pressures

- Deflationary pressures are coming to an end in 2017 while inflation cycle will become a concern in 2018. Recently, inflationary pressures were pulled by energy-based effects on headline inflation; this should stabilize over the next few months, with our oil price models suggesting irregular oscillations around 55 \$/bl (Brent price). During 2017, remaining slack in labor market will limit price acceleration through wages pressures.

However, in 2018, the combination of trade protectionism, exhaustion of labor availability (particularly in the US) and higher producer prices in emerging markets will gradually raise concerns over higher inflation environment.

- Our inflation forecasts indicate a gradual increase in US headline inflation in 2017, between 2.5% and 3.0% end 2017, and a stabilization around 3.0% on average in 2018. UK inflation should continue to increase close to 3% in 2017 and 2018. Eurozone headline inflation would register a more limited upward move compared to other mature economies (1.6% end 2017 and moderate recovery through end 2018) as the high unemployment rate remains too elevated to translate into inflationary wage pressures in 2017/2018.

### Reducing divergence between monetary policies

- Despite monetary policy divergence in 2017H1 (Fed tightening while ECB, BoE and BoJ remaining fully accommodative policy), the ECB April asset purchases reduction and further tapering announcement, along with potential changes in the BoJ 10-year yield target will reduce this divergence. Albeit differentiated, the implementation of exit strategies among major central banks creates a turning point toward global increase in bond yields. The adjustments in monetary policies will be conducted with a close attention to markets' expectations and will remain very progressive to prevent any massive rise in bond yields. Potential financial disruptions (high valuation in US markets, sovereign risks in the Eurozone markets, uncertainties related to Brexit consequences...) remain the key constraints on stronger monetary tightening.
- Fed modest expected monetary tightening (+50 bp in 2017, +75 bp in 2018 for Fed Fund rates) will push US 10-year Treasury yield toward 3.0% end-2017 and 3.5% on average in 2018. Transmission to Eurozone bond markets will be ambivalent, with Germany's "specific strengths" keeping 10-year German bond yield around 0.5% end 2017 and 0.6% on average in 2018, while other sovereigns oscillate between re-pricing pressures and ECB buying. UK government bond yields are more likely to increase given inflationary pressures, with 10-year bond yield around 1.8% on average in 2018. Only 10-year Japanese bond yield remained anchored as a result of the BoJ policy of unlimited direct interventions in markets and yield curve targeting.
- In this context, the interest rate differentials (short- and long-term) remain the main drivers of exchange rates projections, with EUR/USD in a range 1.05-1.10 in 2017, moving progressively to 1.10-1.15 in 2018. After stabilizing in 2017H1, the GBP is expected to depreciate against EUR towards 1.15 in 2018, with likely volatile movements. The JPY appears less vulnerable according to our scenario of economic growth improvement in 2018, suggesting an equilibrium level at 115 against USD in 2017 and 2018.



## Medium-term financial market outlook

While our macroeconomic outlook is based upon a critical time sequencing lead by the US economy and a gradual monetary policy tightening (US Fed tightening, ECB/BoE/BoJ more neutral stance), the acute dose of uncertainties in a context of strong markets valuations make the analysis of Early Warnings Signals (EWS) important to prevent potential medium-term risk on major financial markets.

Our medium-term financial market outlook based on our macroeconomic scenarios and the EWS analysis convey the following three key messages:

### Positive trends but more volatile equity markets

After 5 months of continuous improvement signals on equity markets, our models provide a more shifting view, with sequence of improvement and deterioration signals on equity markets up to September 2017, and more countries specific.

After an initial period of no sudden change on S&P500 until June, the signals for 2017Q3 suggest higher volatility on US equity market in the summer. During this period, the US economic activity will remain solid but concerns over Trump's fiscal plan implementation may create periodic bouts of volatility (highlighted by changing signals from July 2017 to September 2017 after the stable trend from April to June 2017). The outlook signals<sup>1</sup> emphasizes an overall appreciation trend up to September 2017. It indicates that the current equity valuation is supported by the economic cycle and the expected corporate tax cuts.

Compared to the short-term signals (April-June 2017) observed on US equities, European markets signals already indicated diverging signals from one month to another. It suggests that transmission of higher US equity markets is more limited and countries differentiation appeared (likely associated with European political risks, as illustrated by CAC40 degradation signals in May, DAX30 degradation signal in September). As observed in US equities, the outlook signal associated also indicate that those adverse shocks over the next 6 months may not create a decline on the European equity markets compared to the current level.

### Readjustment of the sovereign bond market

Overall, government bonds signals indicated deterioration movements on sovereign bond yields. Those signals are consistent with the reducing divergence in monetary policy, especially the Fed tightening cycle, the end of the ultra-loose monetary policy in the Euro Zone, along with our assessment that the political risk in the Eurozone is overestimated by financial investors.

Treasuries bond yield signals reinforce our view that the Fed tightening will be conducted with a close attention to markets' expectations and will remain very progressive to prevent any massive rise in bond yields. The combination of our 3-month outlook and 6-month outlook on

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<sup>1</sup> Our outlook signals (indicated by a down/up arrow) indicate in which direction each market level will be in 3 months and 6 months, compared to the actual level. For example, S&P500 level will be higher on June 5 and September 5 compared to the level observed on April 5.

10-year US bond yield confirm our Fed monetary policy projections of gradual tightening, proving the Fed strategy successful in managing market expectations.

European bond yield signals indicated divergence among countries, especially France government bond yields (stable and improvement signals) and German bond yield (deterioration signals). It corresponds to our assessment that political risk is currently overestimated. Reappraisal of political risks (no materialization of Frexit scenario, and no major political disruptions in Germany) will cause sovereign bond yields to converge over the medium term. This is consistent with our outlook signals, which indicated higher level of German bond yield, lower level on French bond yield in September 2017 (compared to the current level).

The outlook signal on JGB 10-year yield confirms our view that the BoJ is likely to adjust its targets for 10 year JGB yields. Regarding Gilt signals, the succession of several double signals highlighted higher volatility in the coming quarters, probably linked to the Brexit negotiation process.

### **Gradual corporate spreads widening**

Notwithstanding neutral signals on corporate spreads (9 out of 12 signals), the 3 and 6 months' outlooks suggest a time sequence in corporate bond markets: In 2017Q2, combination of the record amount of debt issuance and the ECB CSPP (exacerbating the lack of supply) still support the corporate spread narrowing. In 2017Q3, the tightening of US credit conditions (induced by the Fed monetary tightening) and the ECB tapering announcement (with temporary disruptions in corporate spreads, as pointed out in Euro 5-7 A deterioration signals) may lead to a gradual increase in corporate bond markets.

The materialization of corporate spread widening in our signals indicate a transmission of monetary policy on financial costs and stronger financial constraints. As a key driver of our global outlook scenario (higher financial costs will cancel the initial boost in corporate profits), any disruption in corporate spreads is crucial to assess the sequence preceding the US cyclical reversal (expected in 2018H2 in our global scenario). Whether this corporate spread widening is an early sign of a potential disruption in corporate markets is linked to the equity markets outlook<sup>2</sup>. So far, the combination of corporate spread widening, corporate strength (given our macroeconomic scenario), positive equity outlook up to 2017H1 suggest that overvaluation remains consistent with the economic cycle and expected corporate tax cuts.

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<sup>2</sup> Further details are included in the 2017Q2 Quarterly Cyclical Outlook « Gradual bond yield increase and equity valuation supported by the cycle and corporate tax cuts », published April 4,2017

# S&P 500

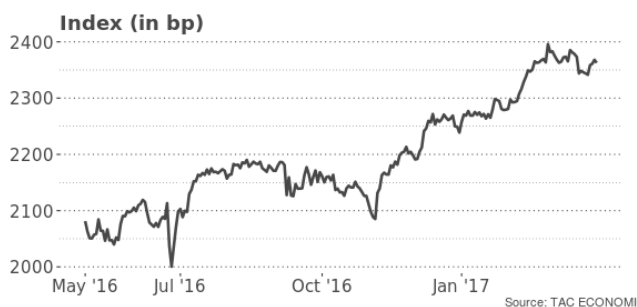
## Early Warning Signals

(red=strong deterioration, blue=strong improvement, grey= double signal and white=no major change)

	Apr.2017	May.2017	Jun.2017	3-month outlook	Jul.2017	Aug.2017	Sep.2017	6-month outlook
Signals				↗	█	█		↗
Confidence	**	**	*		*	*	*	

Source : TAC ECONOMICS

## Evolution of S&P 500



## Comparison of Actual vs. Fair Value

<b>Fair Value (February 17)</b>	<b>2 131</b>
Market Level	2 363
Gap to Fair Value	232
Expected short-term direction	Decrease
Market evolution between Feb. and Mar. 2017	Increase

Source : TAC ECONOMICS

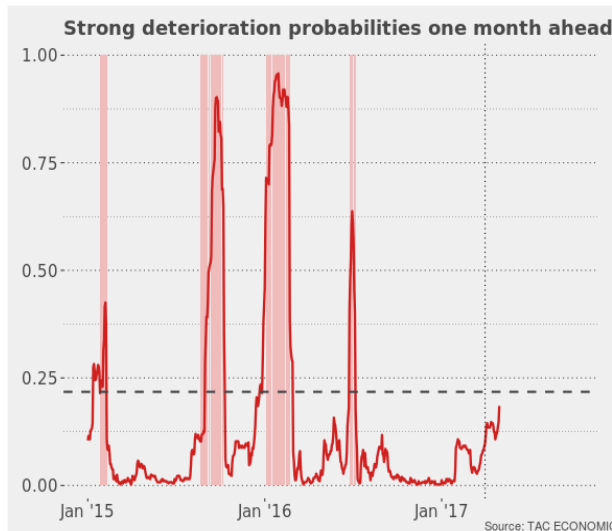
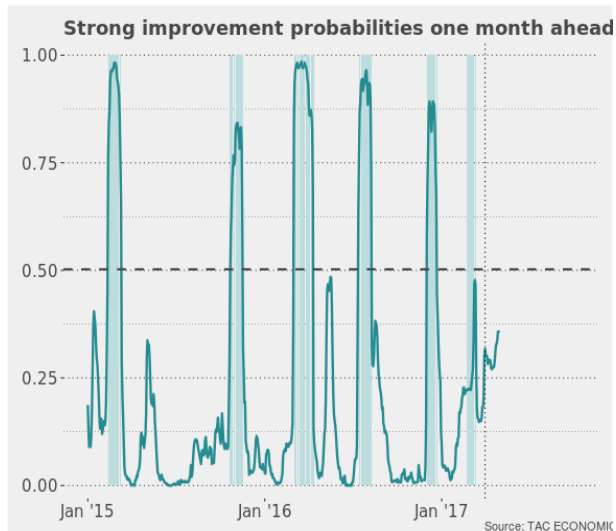
## Monthly change (in %)



## Fundamental variables (%)



## S&P 500 Early Warning Signals (EWS)

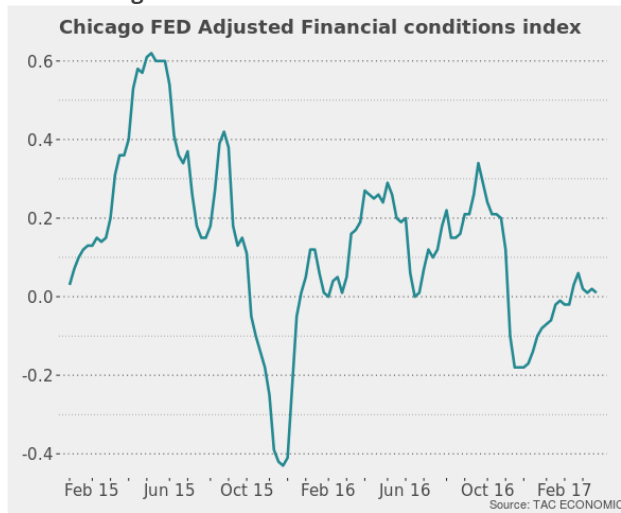


The red/blue line represents the deterioration/improvement probability of a major shock, bars in red/blue the observed signals and the dotted line the EWS threshold

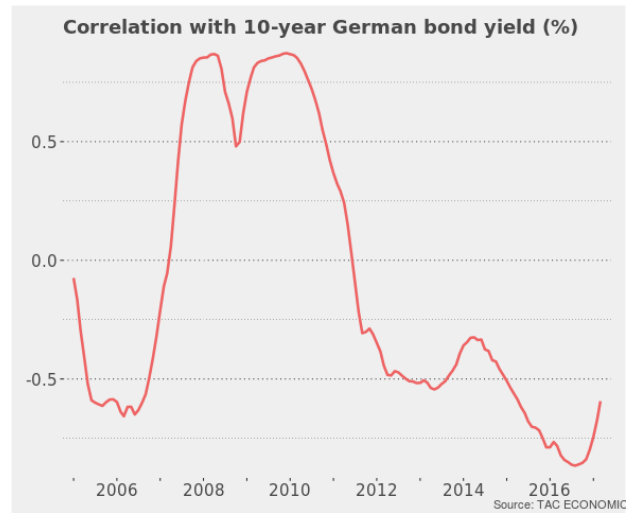
**Main drivers for S&P 500 EWS prediction**

The following graphs describe the main archetypal determinants to predict strong changes for the next six months. We distinguish macroeconomic indicators (in blue), financial market indicators (in red) from technical market analysis (in brown).

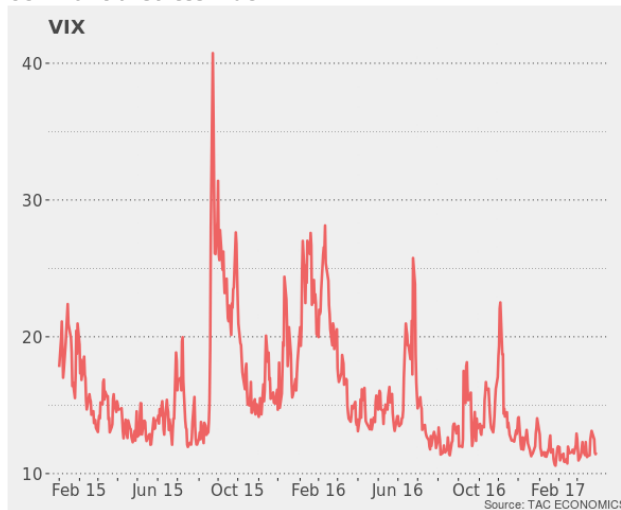
**US Financing conditions**



**Market correlations**



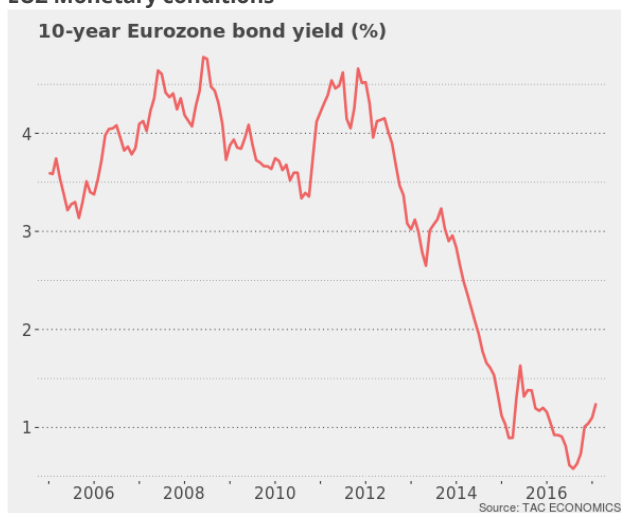
**US Financial stress index**



**US Corporate spread 5-year A**



**EUZ Monetary conditions**



**Market analysis**

