

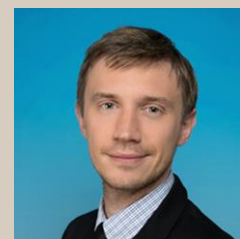
French Presidential Election

OAT/Bund Spread : Recent Trends, Equilibrium Value and Perspectives

Finalised on 8 May 2017

France 2017

#10



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*Strategy and Economic
Research*

Interest rate differentials between France and Germany rose sharply in the months leading up to the French presidential elections and even reached levels never seen since 2011. But after the election of Emmanuel Macron (and even a little before, to tell the truth), these spreads have narrowed markedly, proof of the fall of the specific risk on France.

Although political factors have recently guided the spreads, others will influence sovereign spreads in the euro area over the coming quarters: debates over negative interest rates, robustness of GDP growth, timetable for the end of the ECB's Quantitative Easing (and therefore its public asset purchasing programme, the PSPP) are all decisive factors.

To better understand the underlying situation, it is necessary to take a step back and analyse the movements of spreads over the last two decades, but also to draw lessons from academic research on the subject, in order to estimate equilibrium values.

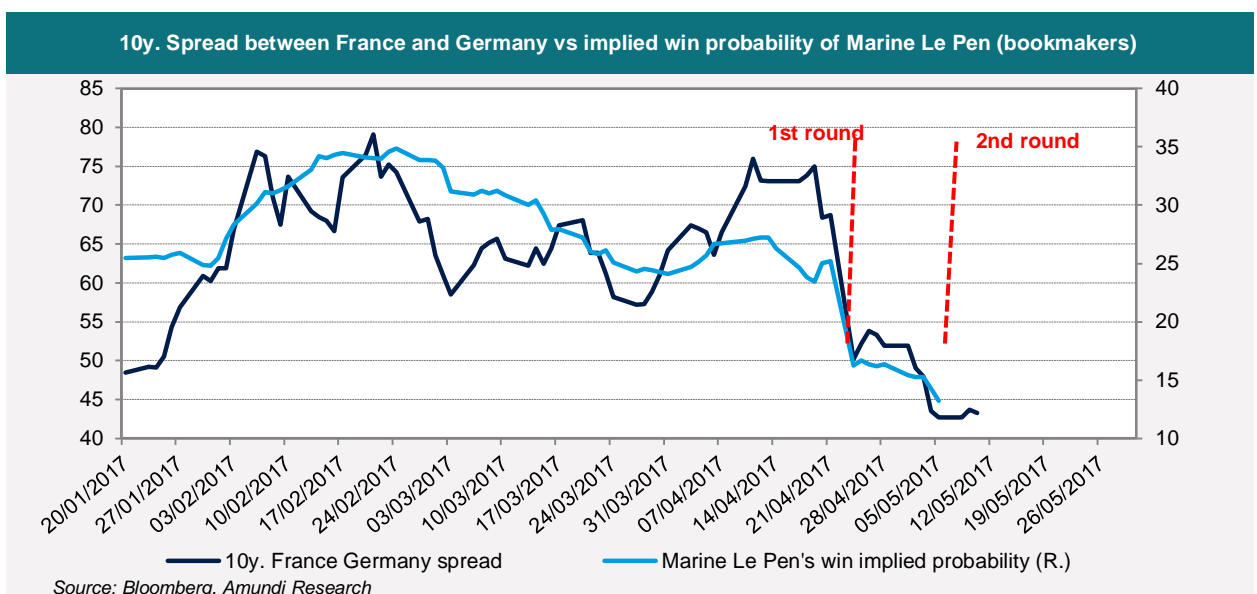
This note (the 10th in our series) has the ambition to present the factors that will change sovereign spreads in the coming quarters.

We wish you all a good reading.

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The Eurozone sovereign spreads, and in particular the yield spread between France and Germany, have fluctuated depending on electoral and political events over the last six months (Italian constitutional referendum, Matteo Renzi's resignation, French presidential elections). After having widened sharply in the months preceding the elections and having reached levels unseen since 2011, the 10 year spread between France and Germany tightened after Emmanuel Macron's victory. Over the months that preceded the election, we noticed a strong correlation between the France-Germany yield spread and the performances of Marine Le Pen in opinion polls. One of the key ideas of Marine Le Pen's program was the exit of the Eurozone. All other things being equal, the rise of the probability of the public debt's redenomination made the French spreads wider.



However, electoral events are not the only factors that will influence Eurozone sovereign spreads in the coming quarters as the prospect of a phase-out of the ECB's quantitative easing programme (and hence its Public Sector Purchase Programme, the PSPP) will also play a crucial role. To understand the issue more clearly, it is worth taking a step back to analyse spread movements over the last two decades and to start drawing lessons from academic research on this subject, in order to estimate fair values.

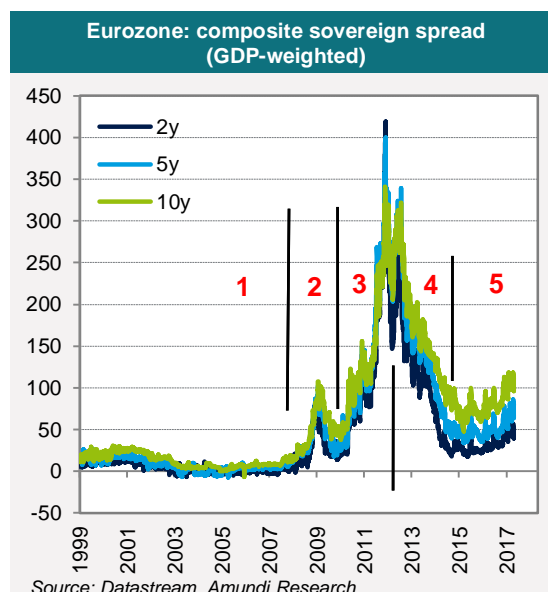
I. What have been the most significant spread movements since the creation of the Eurozone?

Roughly speaking, spread movements since the creation of the Eurozone have gone through five major phases:

- **Phase 1: Dead calm between 1999 and 2007.** Between the creation of the Eurozone and the Great Recession of 2008, 10-year yield spreads between the different Eurozone countries and Germany remained close to zero. This prompted several observers to say that this was an anomaly and that the markets were underestimating the credit risk

premia of eurozone countries. As we will see, for some countries this claim has been undoubtedly verified (such as Italy) but less so for others (France and Spain).

- **Phase 2: The Great Recession of 2008/2009.** During the Great Recession of 2008/2009, budget deficits increased significantly across Europe (however, to a lesser extent in Germany than elsewhere in the Eurozone). Combined with peaking risk aversion worldwide, this led to an initial upward shift in sovereign spreads in 2008. However, the movement was limited in size and spreads subsequently narrowed throughout 2009 with the rebound of the financial markets.
- **Phase 3: The Eurozone crisis (2010-July 2012).** Sovereign spreads widened sharply in 2010, 2011 and for a part of 2012. The sharper-than-expected deterioration of fiscal data in Greece and then in Ireland and Portugal led to widening spreads in these countries first. **Generally, the deterioration of the fundamentals of European countries relative to Germany led to very clear discrimination between countries. The question of the survival of the euro was raised by the markets during the so-called 'Eurozone crisis'.** The upward movement in sovereign spreads stopped in July 2012 and when Mario Draghi famously declared, *"Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough."*, this not only calmed fears about the breakup of the Eurozone but tempered the concerns of the markets. Sovereign spread levels were then very high for some countries. 10-year yield spreads over Germany peaked at nearly 190 bp for France (November 2011), 550 bp for Italy (November 2011) and 635 bp for Spain (July 2012).
- **Phase 4: The beginning of Mario Draghi's term of office until the announcement of unconventional measures by the ECB (July 2012 to mid-2014).** Spreads sharply tightened following the summer of 2012 and continued to do so for about two years. European banks bought sovereign bonds on a massive scale.
- **Phase 5: Relative stability with massive support from the ECB (mid-2014 to?).** Initially, sovereign spreads remained relatively stable, guided by political events. However, a slow and steady widening trend began in the summer of 2016.



II. What are the theoretical fundamental factors in sovereign spreads movements?

Recent academic literature has generally come to the conclusion that fiscal variables (fiscal deficit and the debt-to-GDP ratio) play a determining role in the movement of sovereign spreads in the Eurozone: the higher the debt and the higher the deficit, the higher the credit risk premium. Some studies have shown a non-linear relationship between the level of debt and the credit risk premium: beyond a certain threshold, the risk premium is even more sensitive to fiscal variables. A number of studies concur that fiscal variables played a far greater role in euro sovereign spread movements beginning in 2010. However, the relationship between these variables and sovereign spreads depends on the group of countries being considered.

Political risk also plays an important role in sovereign spread movements. Academic literature focuses its main attention on this relationship where emerging countries are concerned (See *“Is it (Still) Mostly Fiscal? Determinants of Sovereign Spreads in Emerging Markets”*, IMF Working Paper, 2008). The higher the political risk, the more sovereign spreads widen. However, it is wise to be cautious when using the term “political risk” because it covers a number of very different meanings: it is used to refer to the risks of political violence, the risks of expropriation, the deterioration of some institutional factors and the uncertainty linked to elections or to cabinet reshuffles. In the case of the Eurozone, when political risk is used, it usually means the potential coming to power of a government advocating withdrawal from the Eurozone, more than anything else.

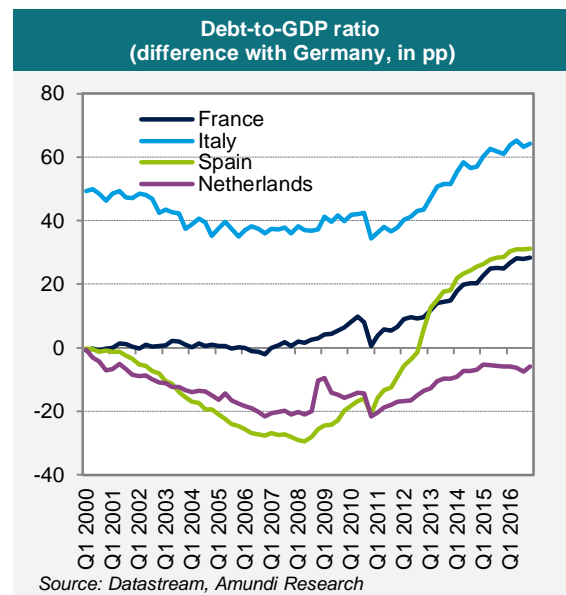
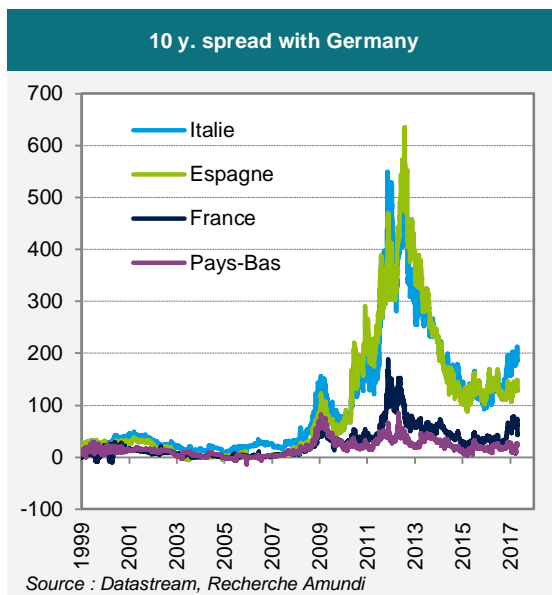
The ECB’s unconventional measures also had an impact on sovereign spreads. Since March 2015, the Eurosystem has been involved in a large-scale asset purchase programme, which has had a major impact on the supply-demand balance of sovereign bonds. The rare academic studies having focused on this topic have generally shown that announcements linked to the ECB’s unconventional programmes have caused sovereign spreads in the Eurozone to fall. Falagiarda and Reitz argue that communications about the SMP and OMT programmes have substantially reduced government bond yield spreads (2015, *“Announcements of ECB unconventional programs: Implications for the sovereign spreads of stressed euro area countries”*). One of the ECB’s own working papers argues that the announcement of the PSPP resulted in 10-year yields declining by 30 to 50 basis points (depending on the approach) for the core countries of the eurozone and by roughly twice as much in countries such as Italy and Spain (2015, *“Asset purchase programmes and financial markets: lessons from the euro area”*). However, almost only event studies have been carried out.

III. Germany’s relative position in the Eurozone has changed

The implications of the fact that Germany serves as the market benchmark

Since the creation of the Eurozone, the bond markets have always considered and continue to consider Germany as a point of reference when it comes to being serious about public finances (the markets require a risk premium for other countries relative to Germany). **One aspect that**

is often neglected in such analyses is that Germany was for many years the “sick man” of Europe as German growth was either equal to or lower than that of other countries in the first 10 years of the Eurozone’s existence. On the other hand, much was written about the “economic miracle” in Spain during the same period. If we assume that risk premia are a function of economic fundamentals, it makes sense that the sovereign spreads of a large number of countries would be close to zero since only Belgium and Italy had a debt-to-GDP ratio far higher than that of Germany until 2008. As a result, with the exception of Belgium and Italy, it is not at all unusual that sovereign spreads were very low between 1999 and 2008.



Germany: from sick man of Europe to the economic bellwether of the Eurozone

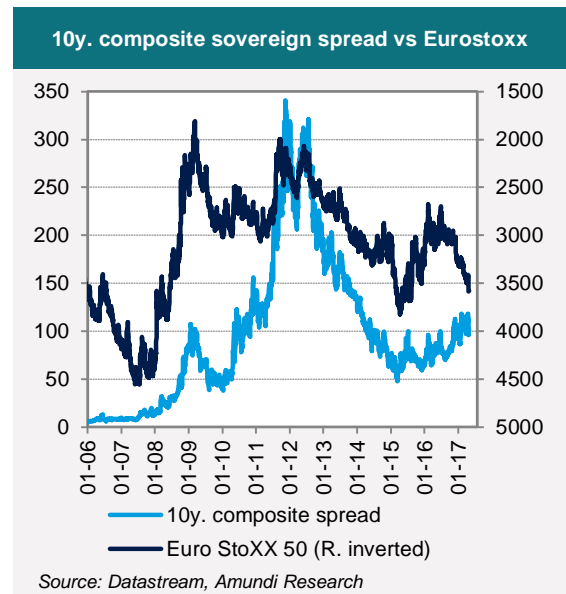
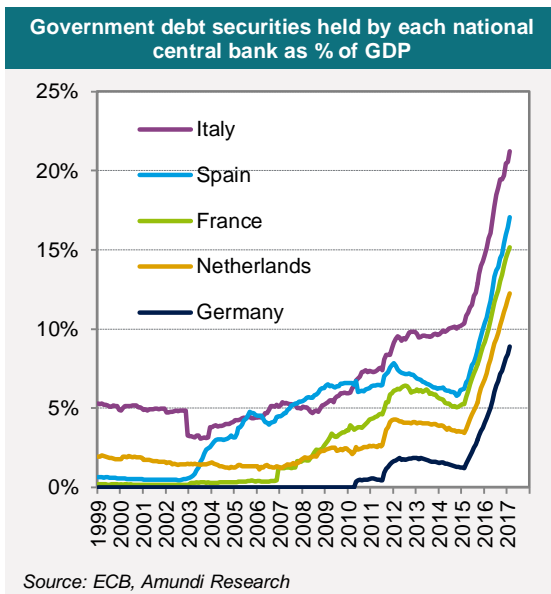
When the Great Recession of 2008/2009 struck, the hierarchy of Eurozone-country economic fundamentals was shattered. **The financial crisis notably revealed that the economic models of some eurozone countries had feet of clay, unlike Germany.** To varying degrees, German economic growth was far stronger than that of other countries after 2009. As a result, Germany accumulated a primary surplus while quite a few countries had very substantial primary deficits. **This naturally led investors to demand a higher risk premium than in the past.**

IV. The ECB’s QE weighed on sovereign spreads but this remains hard to quantify

It is important to remind some points about the ECB’s PSPP:

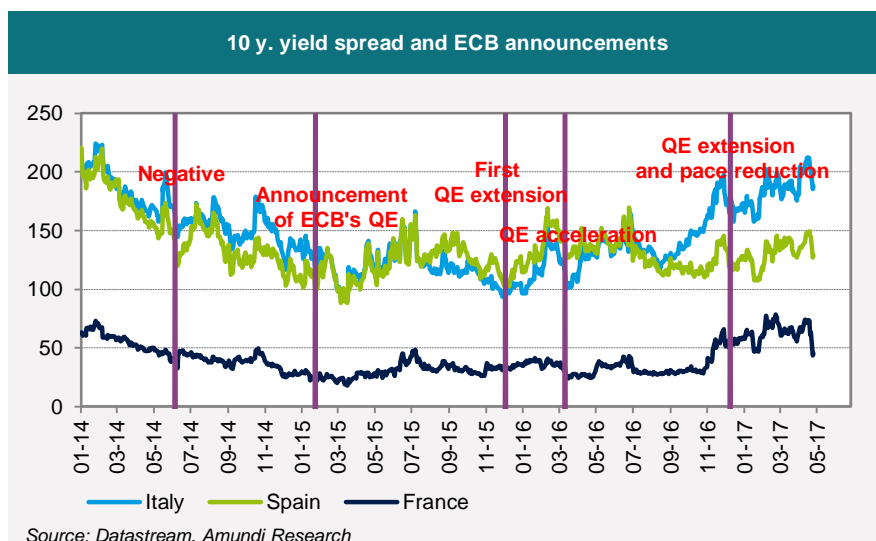
- **The Eurosystem buys sovereign bonds according to the capital key’s rule -> therefore, the purchases as % of GDP are approximately the same for each country.** As a consequence, the purchases as % of the total public debt is higher for countries with a relatively lower debt (Germany) than for countries with high debt (France, Spain and above all Italy). From a theoretical point of view, this is not straightforward at all that the PSPP should lead to a compression of sovereign spreads.

- **The PSPP includes issue and an issuer share limits**, as the Eurosystem should not hold more than 33% of the market debt of a country. This limit is close for Portugal and Ireland (for which the Eurosystem still holds securities purchased under the SMP). Approaching this limit make the Portuguese spread rise since the beginning of the year 2016.



The PSPP seems to have played a significant role on sovereign spreads for countries for which the investor base was relatively less strong but the quantification of this impact is very complicated for the reasons mentioned above but also as the Quantitative Easing programmes have generally been anticipated by the markets even before their announcements, or at least before their effective implementation.

However, we must note that the PSPP period has coincided with very low sovereign spreads in general, probably below fair values. Sovereign spreads tightened spectacularly during the period preceding the PSPP announcement in January 2015.



Besides, the PSPP helped to contain a new rise of sovereign spreads in early-2016 when equity markets fell heavily: the sovereign spreads started to widen to reach a peak in mid-February 2016. The return of risk appetite and the perspective of the QE acceleration in March (from €60 to 80 bn of monthly purchases) led to a significant tightening of sovereign spreads (by 50 bps for Italy between mid-February and mid-March).

To a certain extent, one can argue that the rise of sovereign spreads linked to the Brexit referendum has been contained thanks to the PSPP.

V. What is the fair value?

While there are plenty of academic studies having focused on the determinants of Eurozone sovereign spreads, few focused on the estimation of a fair value. A Bank of Italy working paper (« *Recent Estimates of Sovereign Risk Premia for Euro Area Countries* », 2012) details several of them, from the simplest to the most complex. Several remarks are worth mentioning:

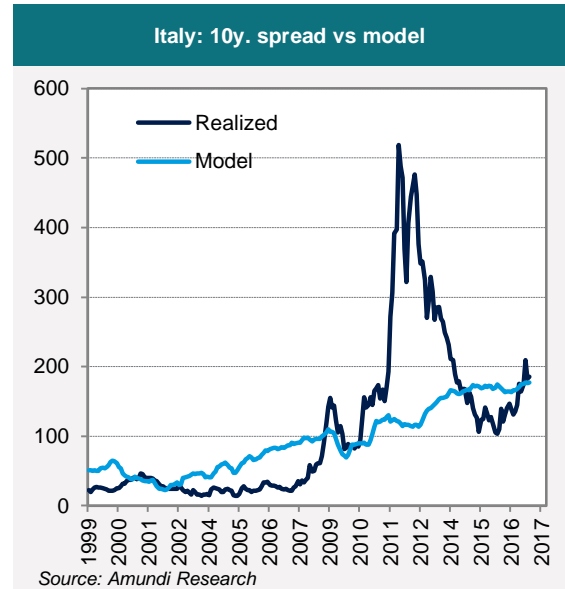
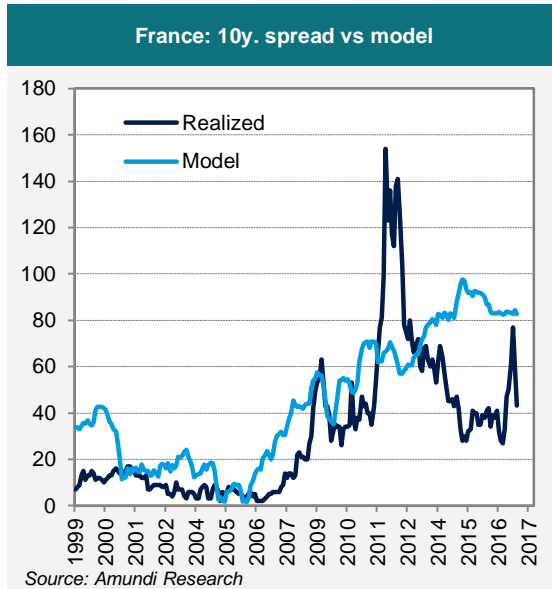
- The simplest methodology consisting in regressing the sovereign spread on the debt-to-GDP ratio. Some models take into account non-linearity issues by regressing the sovereign spreads on the debt-to-GDP ratio and on its squared value.
- Virtually all sovereign spread models are panel data models.
- Many models use forecasts of the fundamental explanatory variables, like the 1 year ahead forecast of the debt-to-GDP ratio or the 1 year ahead forecast of the fiscal balance.
- Many models use fundamental explanatory variables (debt-to-GDP ratio, fiscal balance) in difference with Germany.

On this basis, we developed a Eurozone sovereign spread model with the following characteristics :

- **Panel data regression** at a monthly frequency since January 1999
- **Explanatory variables:** debt-to-GDP ratio, fiscal balance as % of GDP, potential GDP growth and share of the public debt as % of the total Eurozone public debt.
- **Variables take in difference with Germany:** we take the difference between a given country's variable and the equivalent figure for Germany (except for the relative size of the public debt).
- **Expectations for the fiscal variables:** we take the 1 year ahead expectation for the debt-to-GDP ratio and for the fiscal balance (data from the European Commission economic forecasts).

One of the most difficult choice in the modelling of sovereign spreads is the choice to include or not country fixed effects. For instance, the French sovereign spread has long been lower than indicated by fundamentals because there are only two big Eurozone countries with an excellent credit rating (Germany and France), which led international investors to prefer French debt, as it offers a better yield for an virtually equivalent quality. But we cannot be certain that French debt will retain this status eternally. Other example: Portugal lost access to capital markets for some time, what legitimates the inclusion of a dummy for this country. However, this situation was not in place before the Eurozone crisis and will not last forever. **For these reasons, we**

chose to run the model with and without country fixed effects, and to compute the average of the two fair values.



By doing so, the fair values of 10 year sovereign spreads would be:

- 80 bps for France,
- 180 bps for Italy,
- 150 bps for Spain,
- 200 bps for Portugal,
- 120 bps for Belgium.

Conclusion

The Eurozone sovereign spreads have fluctuated depending on electoral and political events over the last six months but we have to keep in mind that expectations of the end of the ECB's QE (and hence its Public Sector Purchase Programme, the PSPP) will also play a crucial role. It is hard to quantify by how much exactly sovereign spreads dropped thanks to the PSPP but it is clear that the massive ECB asset purchases avoided a significant rise of spreads during several stress episodes (fall of equity markets early-2016, shock linked to the Brexit referendum). For several countries, the current sovereign spread is clearly below fair values. As a consequence, it is very likely that we will enter an era of higher Eurozone sovereign spreads. The recent upward trend of sovereign spreads at a time of good equity performances tend to prove it.

France - Financial markets in a nutshell

	11/05/2017	Change over the week	Ytd
2y. bond yield			
United States	1.35	4	16
Germany	-0.65	3	12
France	-0.42	2	23
10y. bond yield			
United States	2.39	4	-5
Germany	0.44	5	23
France	0.86	4	18
2y. bond yield spread			
France	23	-1	12
Italy	49	-8	-9
Spain	37	-2	-12
10y. bond yield spread			
France	42	-1	-5
Italy	184	-2	23
Spain	119	-2	1
Sovereign CDS 5y.			
France	30	-2	-9
Italy	159	-3	2
Spain	66	0	-10
Equity markets			
EurostoXX 50	3640.0	0.33	10.62
DAX 30	12763.5	0.92	11.17
CAC 40	5404.0	0.59	11.14
MIB 30	21632.7	2.19	12.47
IBEX 35	10956.6	-0.51	17.16
Credit markets			
ItraXX main	62	-3	-10
ItraXX XO	252	-6	-37
ItraXX Financials sen.	66	-4	-28
ItraXX Financials sub.	142	-10	-79
Exchange rates			
EURUSD	1.09	-1.05	3.36
EURGBP	0.84	-1.04	-1.46
EURCHF	1.10	1.14	2.21
1m. implied volatility			
VIX	10.4	-0.2	-3.6
VDAX	12.8	-2.3	-5.0
EURUSD	7.1	-0.4	-3.2

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(already published);
- **#2 - An overview of the French economy** (already published);
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(already published);
- **#4 - The candidates and budgetary / fiscal policies policies: what is at stake**
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- **#5 - French public debt: liquid and safe** (already published);
- **#6 - The candidates and Europe: Loyalty, Protest or Exit?**
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- **#7 - First round of presidential election: Extreme risk scenarios disappear and uncertainty dissipates** (already published)
- **#8 - Macron vs. Le Pen: what is at stake next Sunday** (already published)
- **#9 - Macron President: risks disappear... back to fundamentals**
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- **#10 - OAT/Bund Spread : Recent Trends, Equilibrium Value and Perspectives**
 - A new President, new reforms (*forthcoming*);
 - Public debt: reduction, pooling, monetisation, or something else? (*forthcoming*).