

# Euro Rates Update

Nordea Research, 05 April 2016

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US Treasury Yields				
	2Y	5Y	10Y	30Y
	0.76	1.23	1.79	2.63
Δ 1D	-2.0	-2.5	-1.6	-1.0
Δ 1W	-9.8	-13.2	-11.4	-8.0

German Benchmark Yields				
	2Y	5Y	10Y	30Y
	-0.48	-0.32	0.14	0.77
Δ 1D	0.6	0.5	0.1	-2.1
Δ 1W	0.3	-2.5	-7.1	-14.2

German Curve Slopes				
	2-5Y	5-10Y	2-10Y	10-30Y
	-15.1	-46.8	-61.9	-63.0
Δ 1D	-0.2	-0.4	-0.6	-2.1
Δ 1W	-2.8	-4.7	-7.5	-7.0

EUR Swap Curve Slopes				
	2-5Y	5-10Y	2-10Y	10-30Y
	-17.5	-50.5	-68.0	-47.1
Δ 1D	-0.6	-0.2	-0.8	-0.7
Δ 1W	-2.4	-1.4	-3.8	-3.0

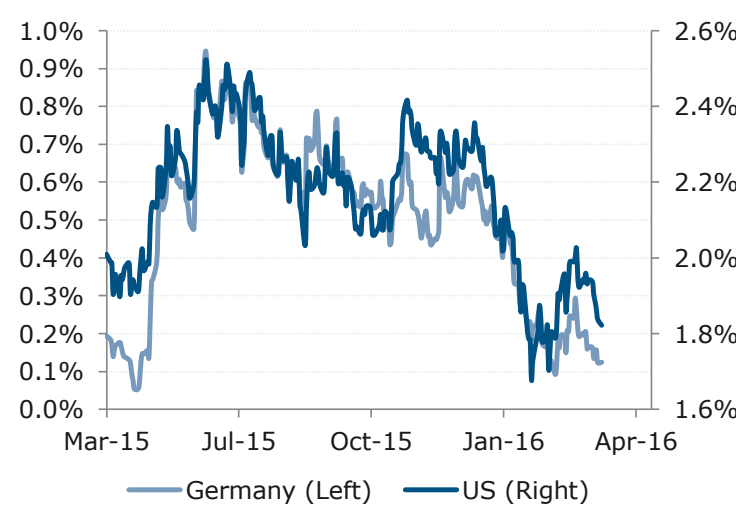
German Asset Swap Levels				
	2Y	5Y	10Y	30Y
	-32.6	-35.1	-37.1	-20.7
Δ 1D	0.2	0.3	0.3	-1.2
Δ 1W	-32.6	-35.1	-37.1	-20.7

10Y Benchmark Yields				
	Yield	Δ 1D	Spread	Δ 1D
GER	0.143	0.1	-	-
FRA	0.393	0.7	27.6	0.7
ITA	1.252	3.9	113.3	3.9
ESP	1.475	3.9	131.3	3.9
BEL	0.377	0.3	31.0	0.2
HOL	0.222	0.5	14.8	0.4
AUT	0.339	0.1	23.3	0.1
GRE	8.128	28.7	810.0	28.6
POR	2.757	3.2	265.3	3.2
FIN	0.396	-1.3	23.6	-1.2
IRL	0.730	0.2	56.5	0.3

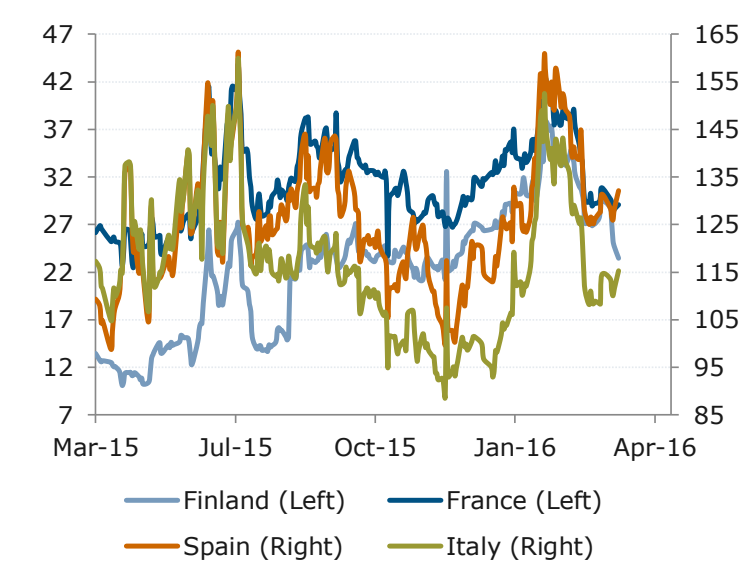
Spread = Maturity interpolated spread to German government par yield curve

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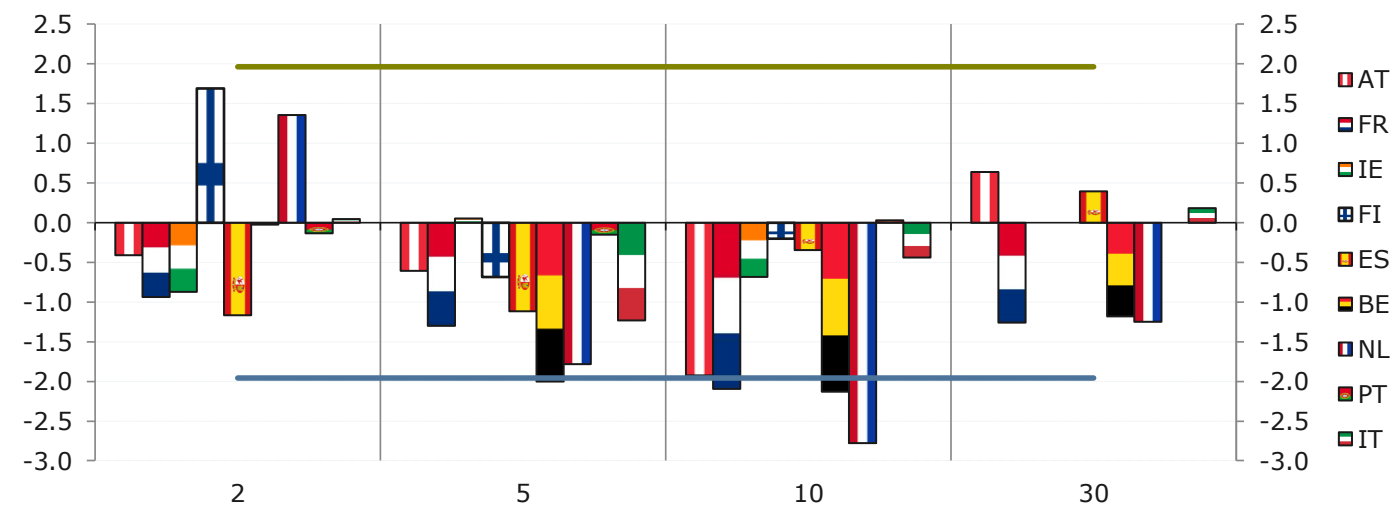
German & US 10-year benchmark yields, %



10 year spreads against Germany, bp



Z-scores of benchmark vs. Germany



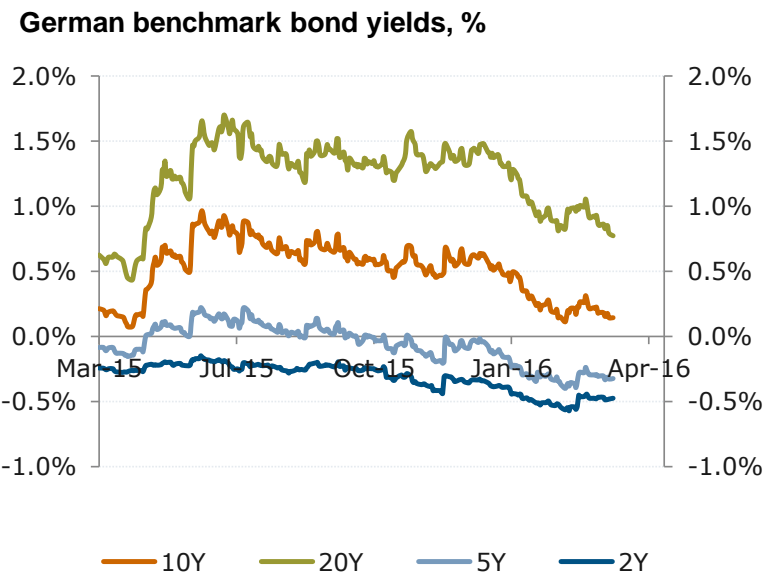
Upcoming Issuance (source: Bloomberg)						
Date	Country	Coupon	Maturity	Amount (EURbn)		
05 Apr	AS					
06 Apr	GE	0.00%	2018	4.00		
07 Apr	SP					
11 Apr	LN	2.10%	2021	3.00		

All bond quotes are taken at 16:15 CET.

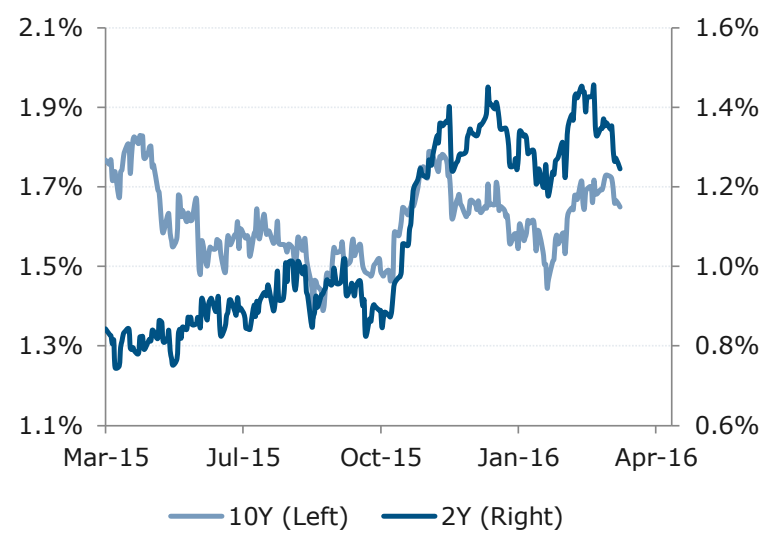
## Bond Yields & Curves

### Yield Levels

German & US benchmark bonds on-the-run Nordea Analytics benchmarks.

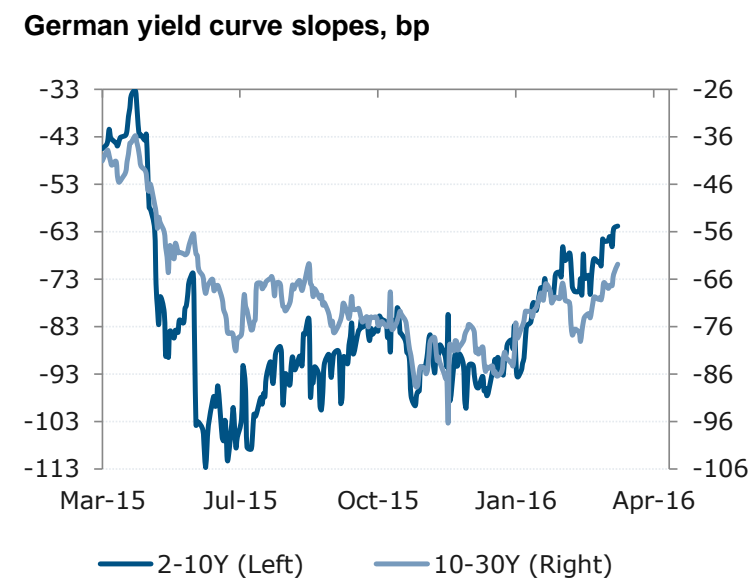


### USA-Germany spreads, annualized yields, %



### Bond Curve Shape

German curve slopes are yield spreads between Nordea Analytics benchmark bonds.

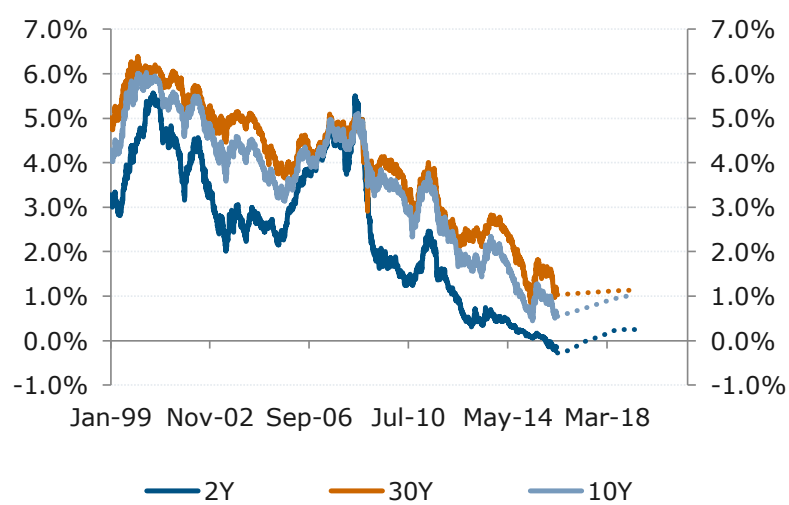


### Bonds vs. equities



## Swaps and Forwards

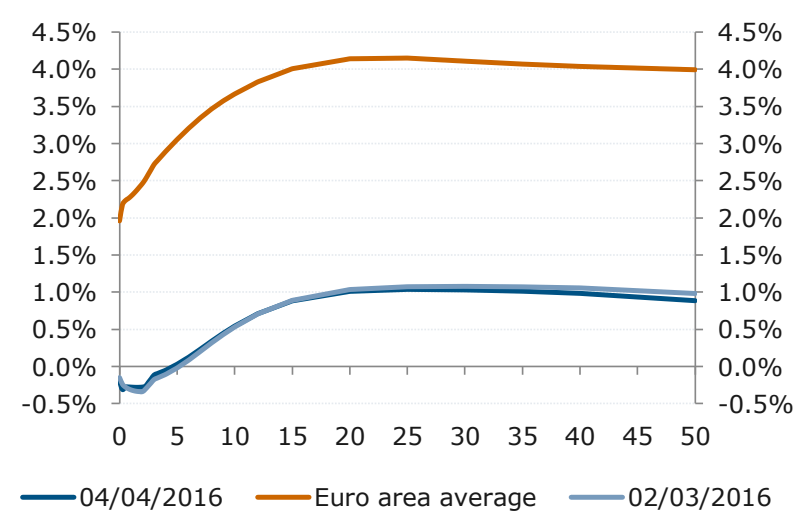
### EUR swap rates and implied forwards, %



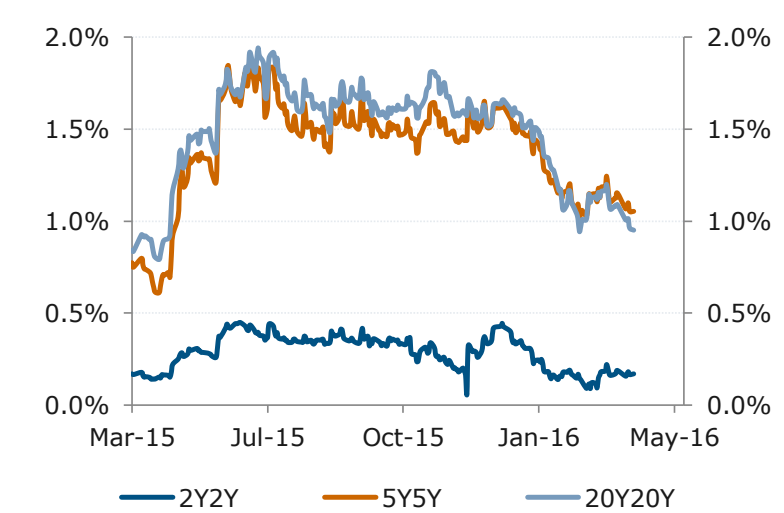
### EUR-USD spreads and implied forwards, %



### EUR swap curve shape vs. historical

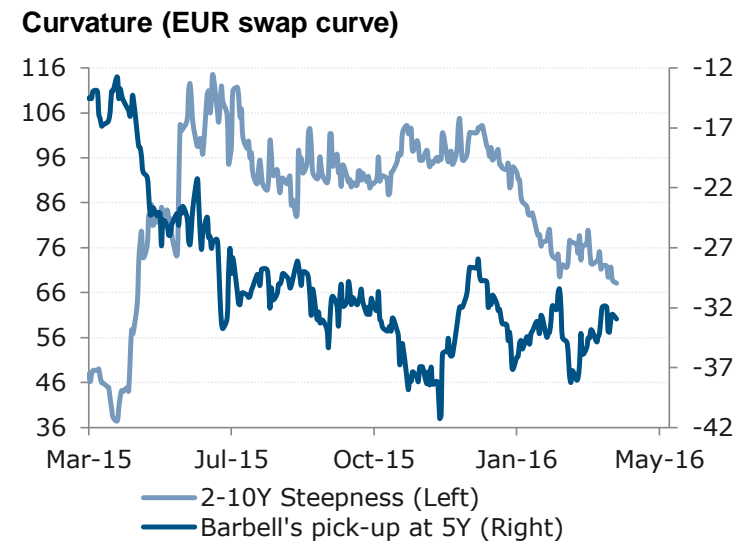


### Historical forward rates, %



E.g. 2Y2Y swap rate illustrates the rate of a 2-year swap with a 2-year forward start.

5Y pick-up over a duration and cash neutral 2-10Y EUR swap barbell.

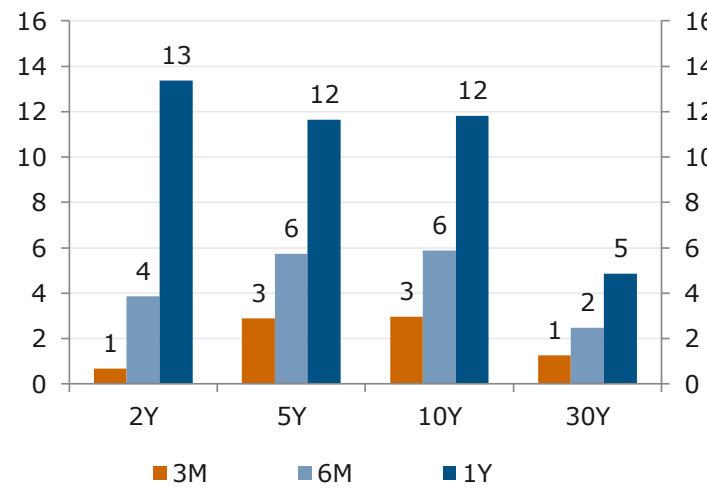


**Carry**

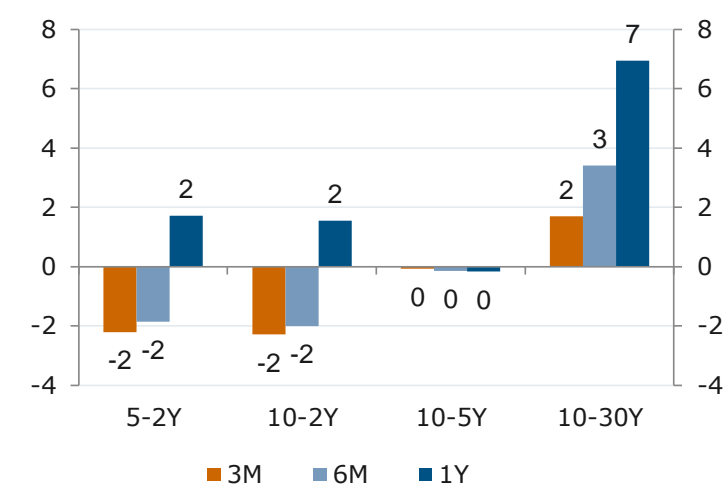
The carry on the given horizon illustrates how much the spot swap rate may rise for a receiver swap position in a forward-starting swap to result in zero profit.

Yield buffers for steepeners tell how much the curve may flatten in order to result in a zero-profit in a forward starting steepener position.

**Yield buffers for forward-starting swaps, bp**

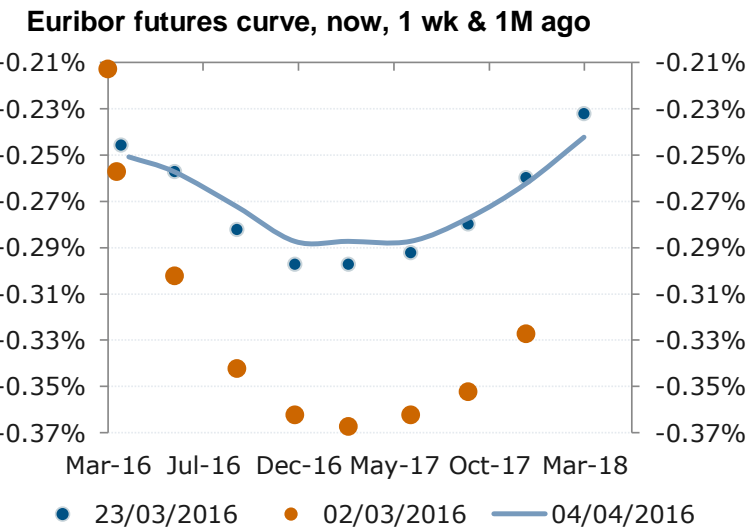
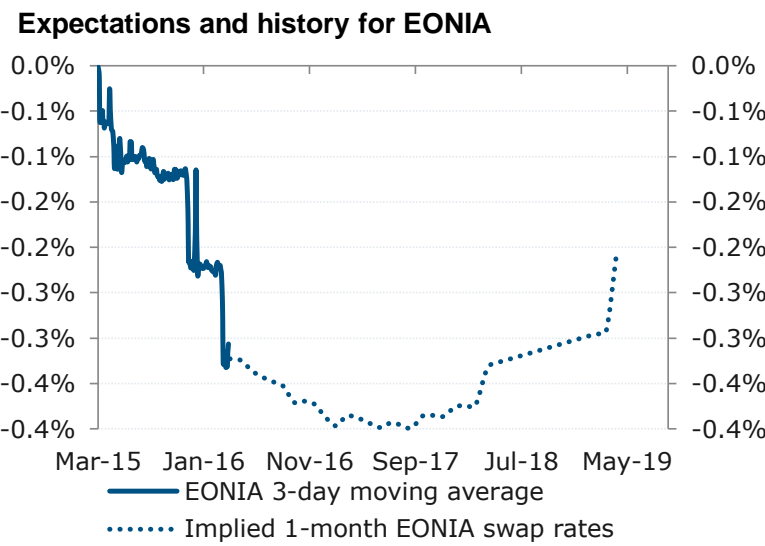


**Yield buffers for duration-neutral steepeners, bp**



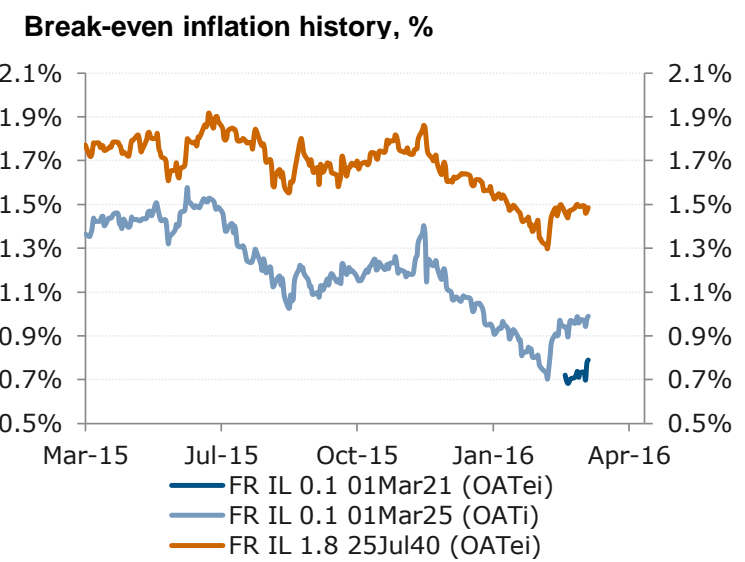
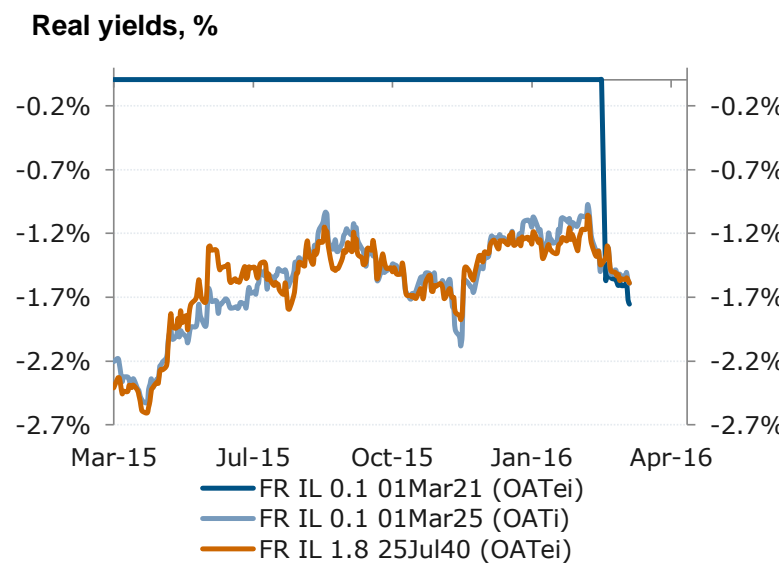
**Money Market Rates**

The EONIA (Euro Overnight Index - Average) rate is the effective overnight reference rate for the euro.



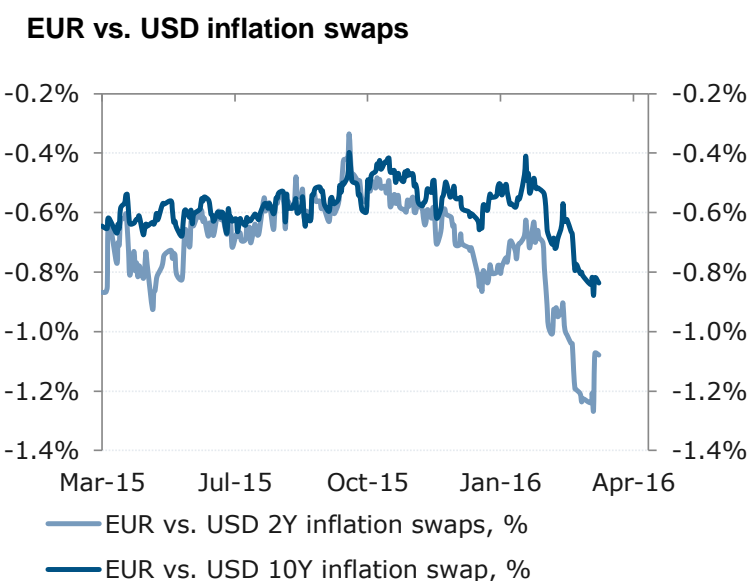
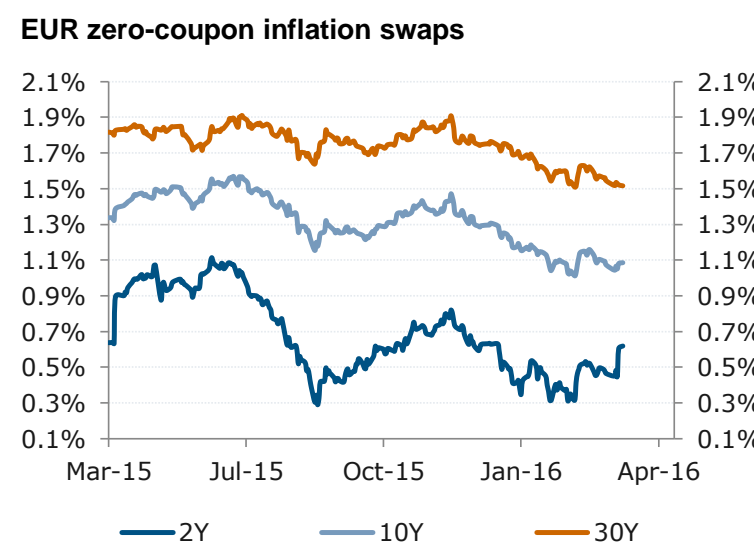
**Inflation-linked Bonds**

Break-even inflation calculated as a yield spread to a nominal comparable bond.



**Inflation Swaps**

A zero-coupon inflation swap is a derivative contract, in which one party pays a fixed rate (the break-even inflation rate) and the other party pays a floating rate based on realized inflation. The zero-coupon inflation swap illustrates the average expected inflation rate during the life of the swap.



## Credit & Money Market Spreads

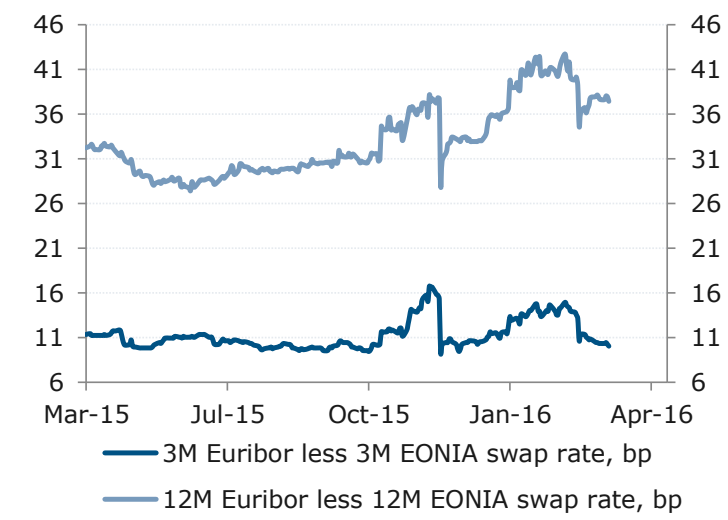
Credit default swap indices illustrate the annual cost of buying protection against a credit event of a company. iTraxx® Europe is comprised of the 125 most liquid CDS contracts referencing European investment grade credits, iTraxx® Crossover of 50 sub-investment grade credits.

The spread between Euribor and EONIA swap rate illustrates the money market credit risk premium, i.e. the difference between Euribor rates and the expected future ECB minimum bid rate.

**iTraxx® credit default swap spreads**



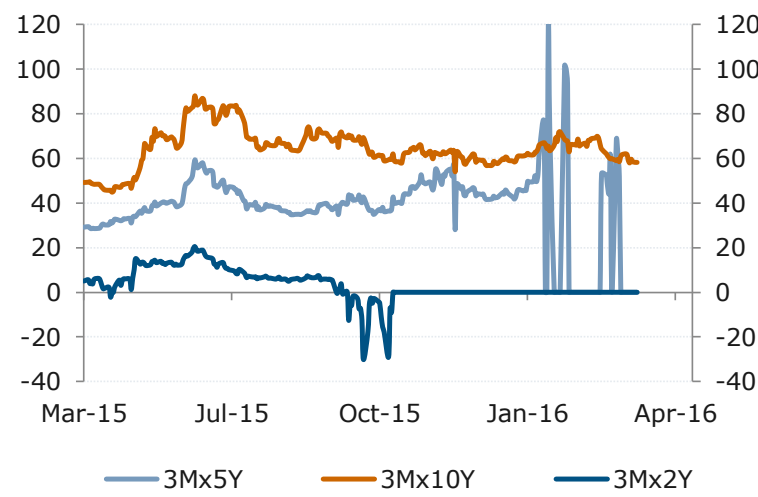
**Money market rates vs. EONIA swap rates**



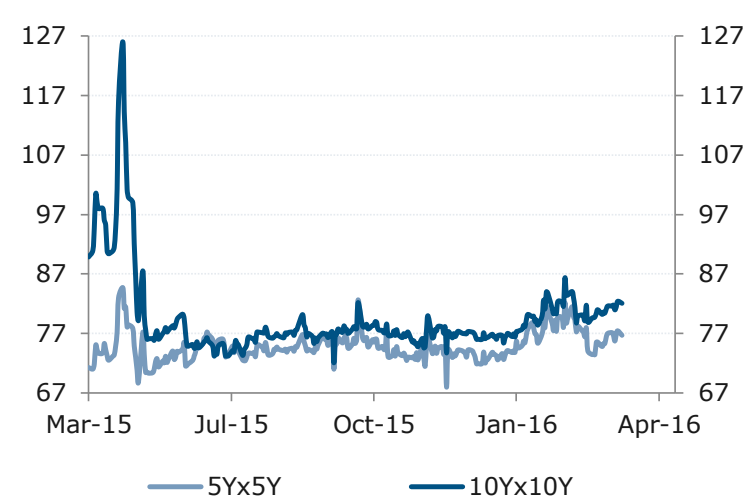
## Swaption Volatilities

ATMF (At The Money Forward) swaption bp vol measures the normalized volatility, i.e. the absolute changes in the forward rate in basis points.

**Short-dated ATMF swaption bp vol**



**Long-dated ATMF swaption bp vol**



## Swap & Cross-country Spreads

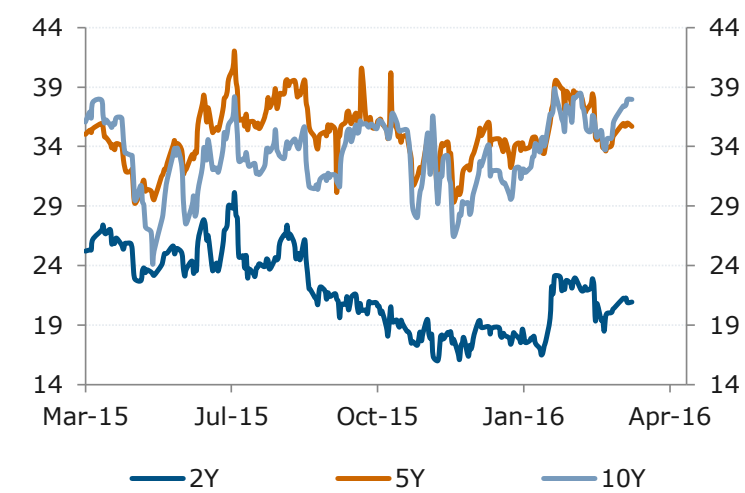
Swap spread: Benchmark bond's spread to EUR swap curve.

10Y country spreads are maturity interpolated spreads against the German government curve.

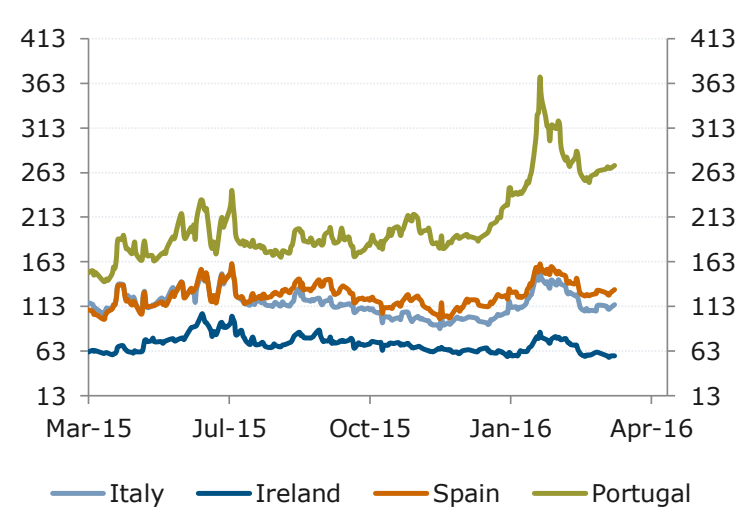
1Y break-even spread changes indicate how much a bond's spread against an equivalent bond trading on the German curve may widen in order to give the same return in one year.

The break-even spread change is based on the spread against the following two German benchmark bonds:  
DE TB 16Mar18  
DE 0.5 15Feb26

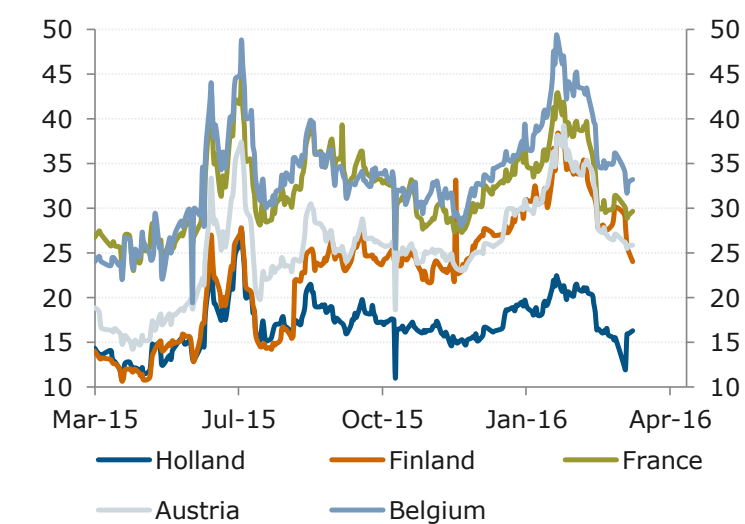
**German swap spreads, bp**



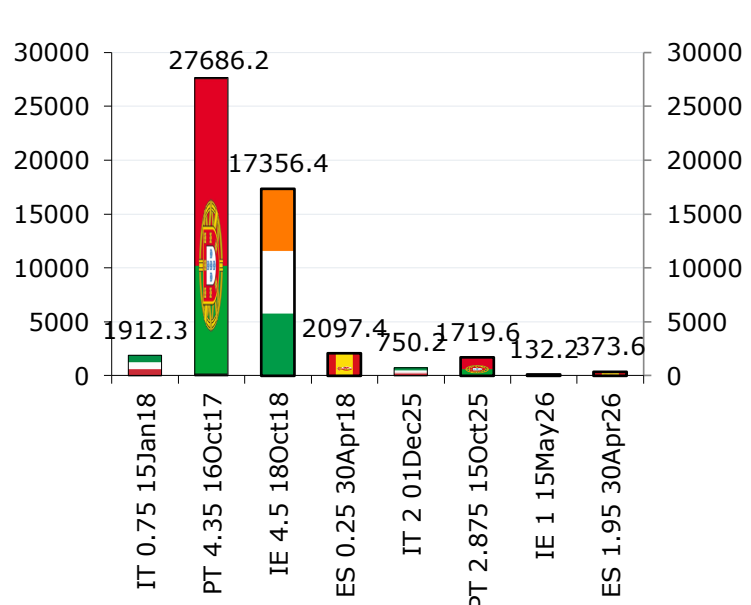
**10Y non-AAA spreads against Germany, bp**



**10Y AAA/AA+ spreads to Germany, bp**



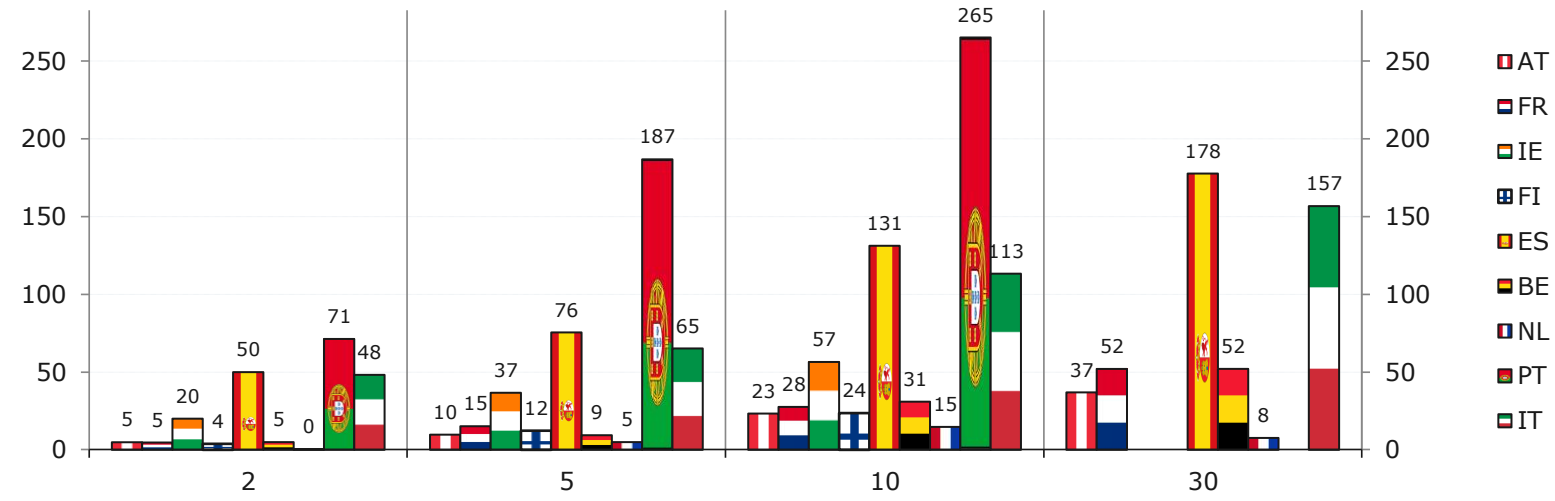
**1Y B/E spread changes against Germany, bp**



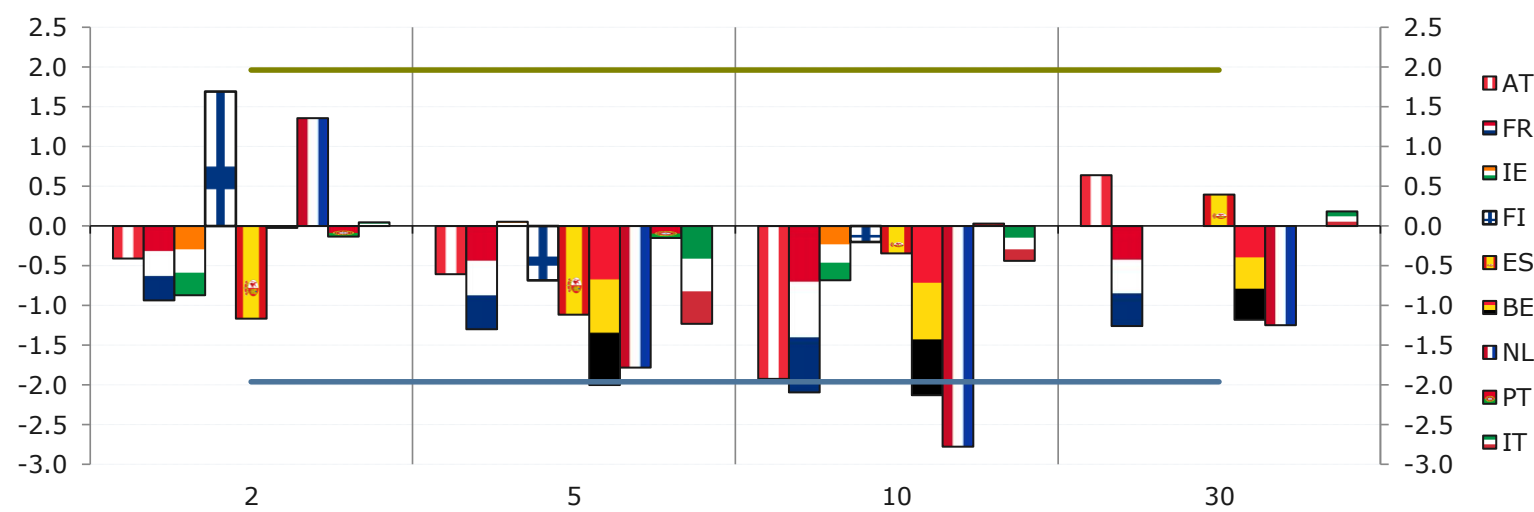


## Country Relative Value

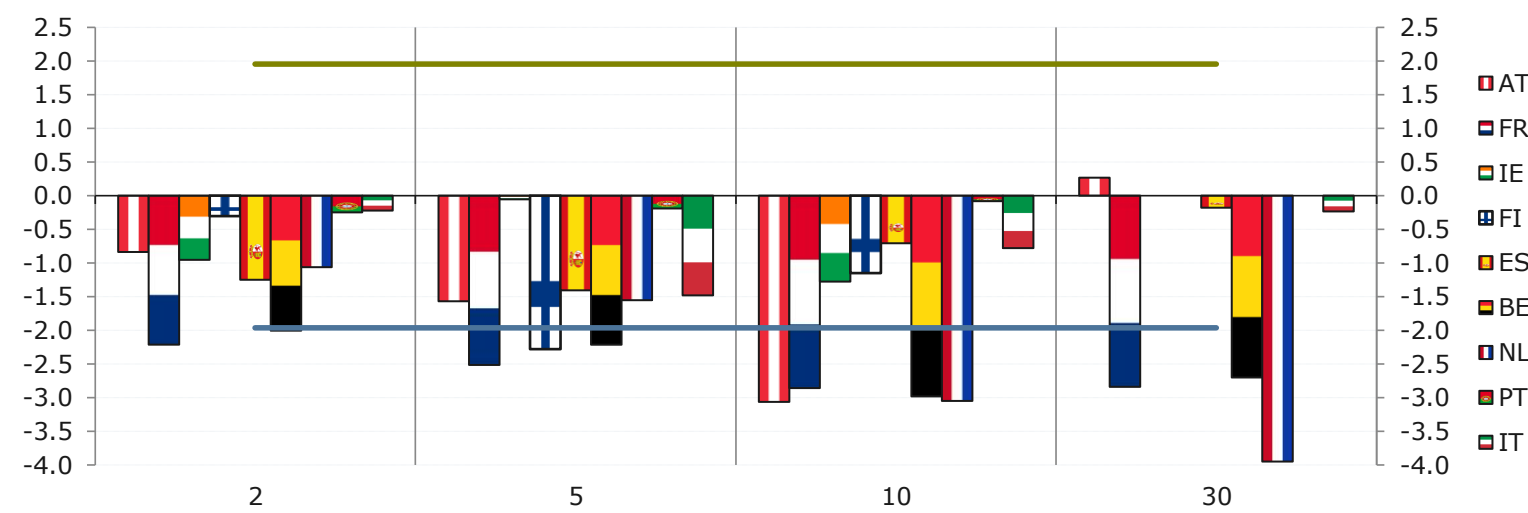
Benchmark spreads over the maturity-interpolated German par curve, bp



Z-scores of benchmark vs. Germany



Z-scores of benchmark vs. swap curve



To exploit the historical cheapness/richness of bonds, we calculate 60-day z-scores:

$$\frac{\text{Current spread} - 60\text{-day average}}{\text{standard deviation}}$$

Bond is

- rich if z-score < -1.96
- cheap if z-score > 1.96

The richest and cheapest benchmark bonds against Germany and the swap curve by sectors:

	Against German Curve					Against Swap Curve				
	Issue	Maturity	Coupon	Spread	Z-score	Issue	Maturity	Coupon	Spread	Z-score
2Y: Rich	BE	28 Sep 19	3.000	9.4	-2.05	FI	04 Jul 19	4.375	-26.4	-3.73
	Cheap	DE	16 Mar 18	0.000	-5.6	1.71	DE	16 Mar 18	0.000	-32.6
5Y: Rich	NL	15 Jul 21	3.250	5.8	-2.44	FI	15 Apr 20	3.375	-24.0	-2.71
	Cheap	DE	11 Oct 19	0.250	-14.6	1.74	DE	09 Apr 21	0.000	-35.1
7Y: Rich	BE	22 Jun 23	2.250	19.8	-2.13	FI	15 Apr 24	2.000	-16.2	-3.89
	Cheap	DE	15 Aug 23	2.000	-25.7	1.96	PT	15 Feb 24	5.650	265.1
10Y: Rich	FI	15 Apr 26	0.500	23.6	-2.96	FI	04 Jul 28	2.750	-10.3	-3.66
	Cheap	DE	15 Feb 25	0.500	-26.2	1.87	PT	15 Oct 25	2.875	224.8
15Y: Rich	NL	15 Jan 37	0.000	8.0	-2.60	NL	15 Jan 37	0.000	-22.3	-4.56
	Cheap	KfW	31 Jul 35	1.375	23.6	2.56	KfW	23 Apr 30	0.375	-8.1
20Y: Rich	FR	25 May 45	3.250	52.0	-1.24	NL	15 Jan 47	2.750	-4.9	-3.40
	Cheap	EIB	15 Sep 45	1.750	30.8	1.91	GR	24 Feb 42	3.000	381.1

We evaluate bonds included in the country specific tables below. Bonds are ranked by z-scores.