



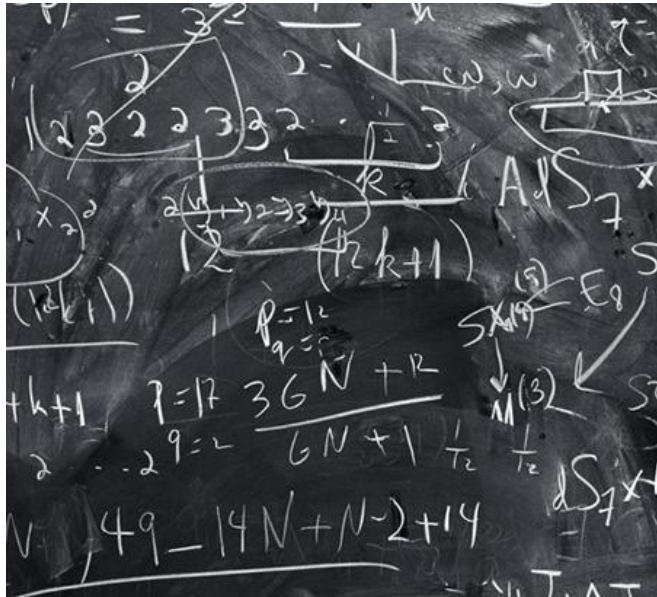
**Q4** 2016  
ASTELLON  
NOTES No. 23

# ASTELLON

CAPITAL PARTNERS

**Bubble trouble**

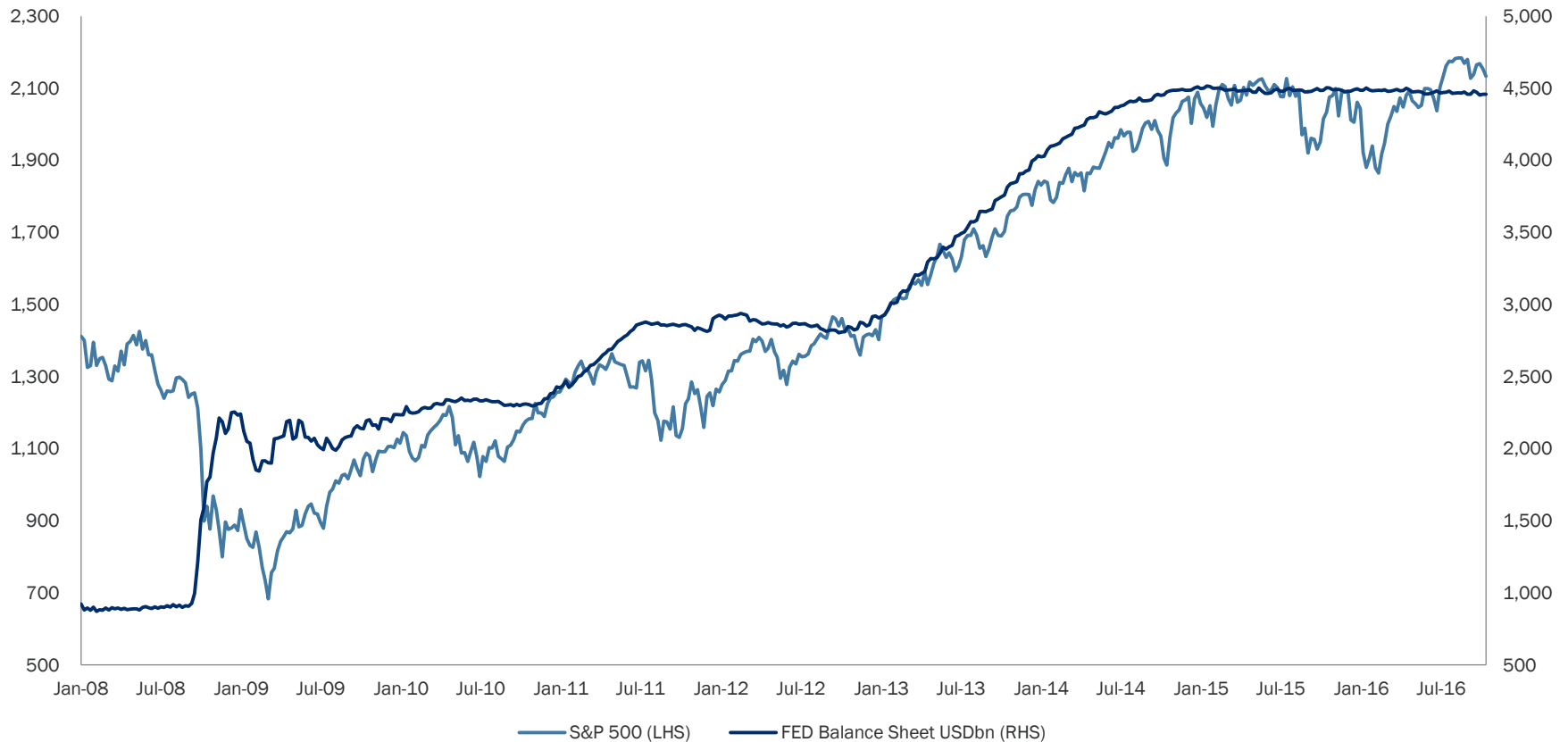
**Market environment update**



## 1. Impact of central bank policies on markets

# QE ACHIEVED ITS PRIMARY OBJECTIVE – DRIVING UP ASSET PRICES

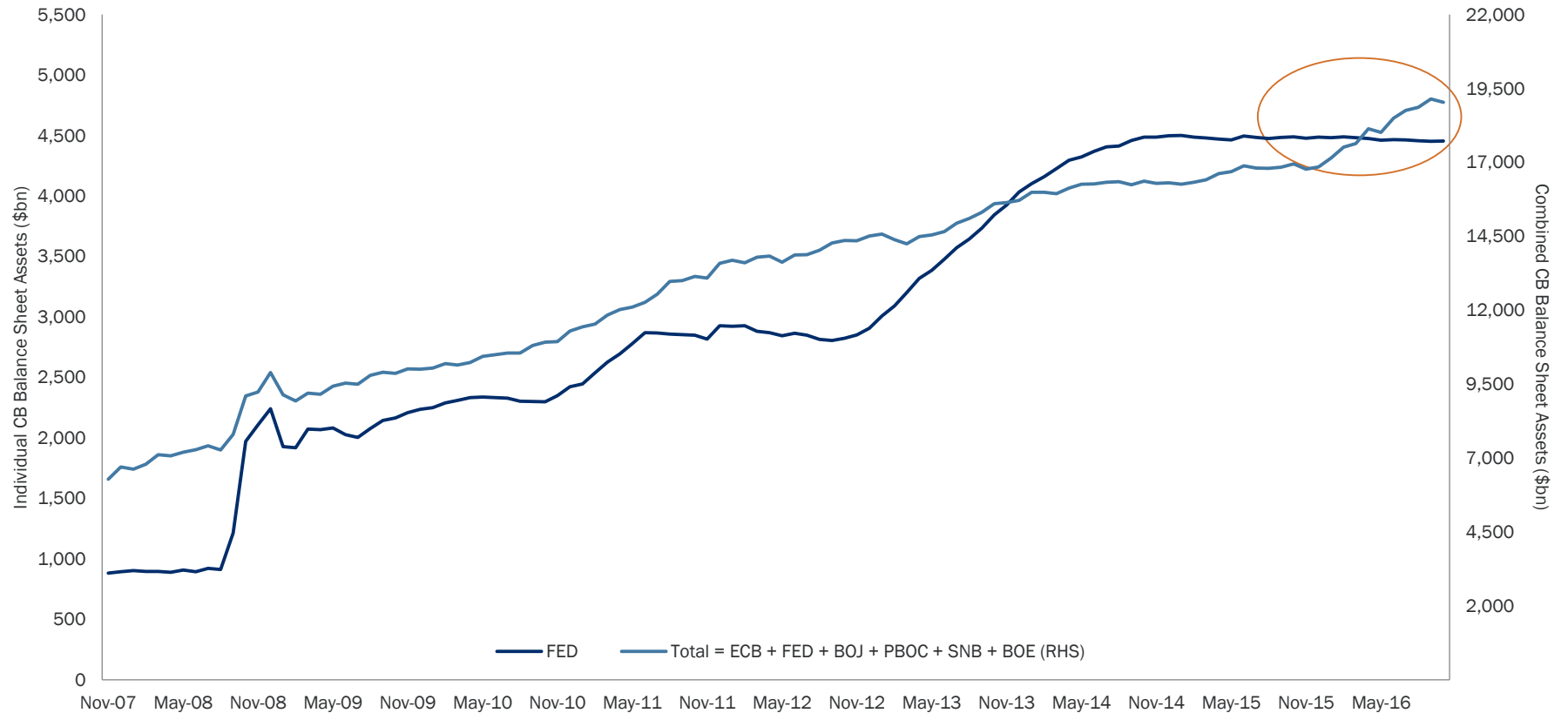
## Example: Fed balance sheet expansion vs S&P 500



Source: Bloomberg, Astellon calculations

# CB BALANCE SHEETS ARE FUNGIBLE: BIG 6 UP US\$2.2TRN Y-O-Y

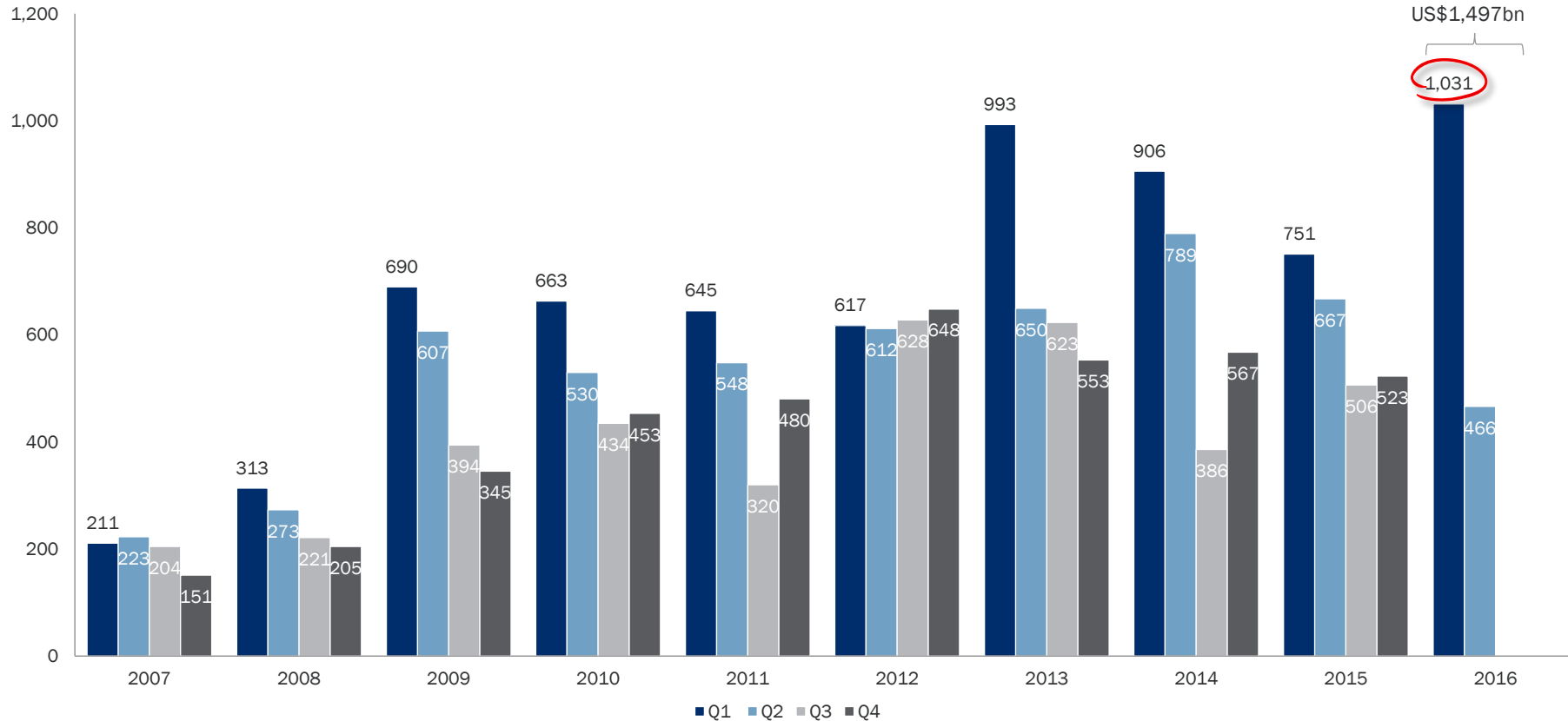
Fed balance sheet in US\$bn (LHS) flat-lined but combined b/s of top 6 CBs (RHS) continue to increase to now US\$19.1trn



Source: Bloomberg, Astellon calculations

# US\$1TRN IN CREDIT CREATION IN Q1 ALONE TRUMPED ALL CONCERNS

Flow of TSF (US\$bn) largely in line with 2013 and 2014 TSF growth on a YTD basis<sup>1,2,3</sup>



Source: CEIC, Morgan Stanley, Astellon calculations, Bloomberg

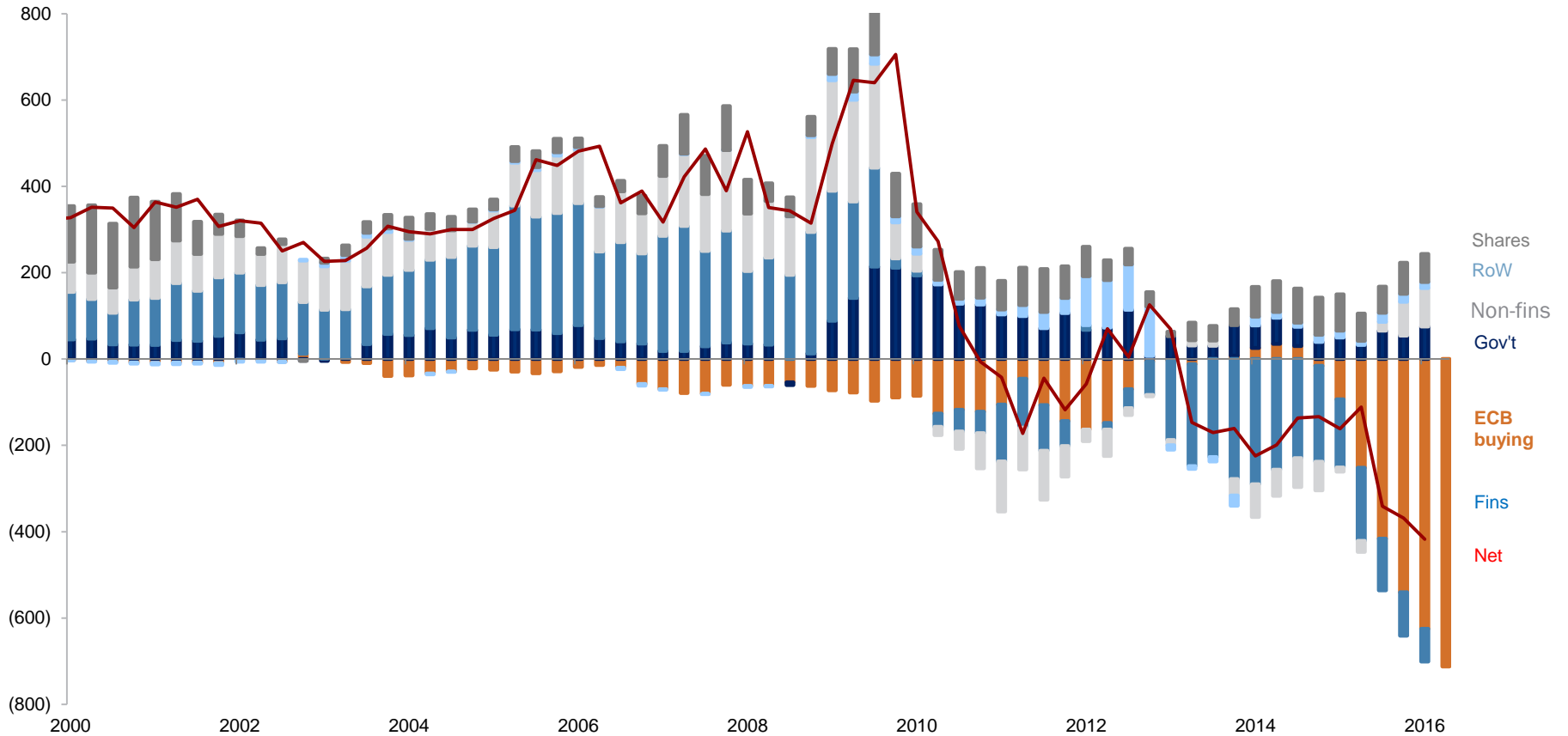
(1) PBOC data updated as of 1 Jul 2016

(2) Total TSF flow data for each quarter consists of the sum of the monthly TSF flow data for each quarter (for instance Q1 consists of Jan to Mar data, Q2 consists of Apr to Jun data)

(3) Exchange rate USDCNY as of end of each quarter used to convert the quarterly data in RMB to USD

# SIDE-EFFECTS EVER MORE VISIBLE AS CROWDING OUT TAKES HOLD

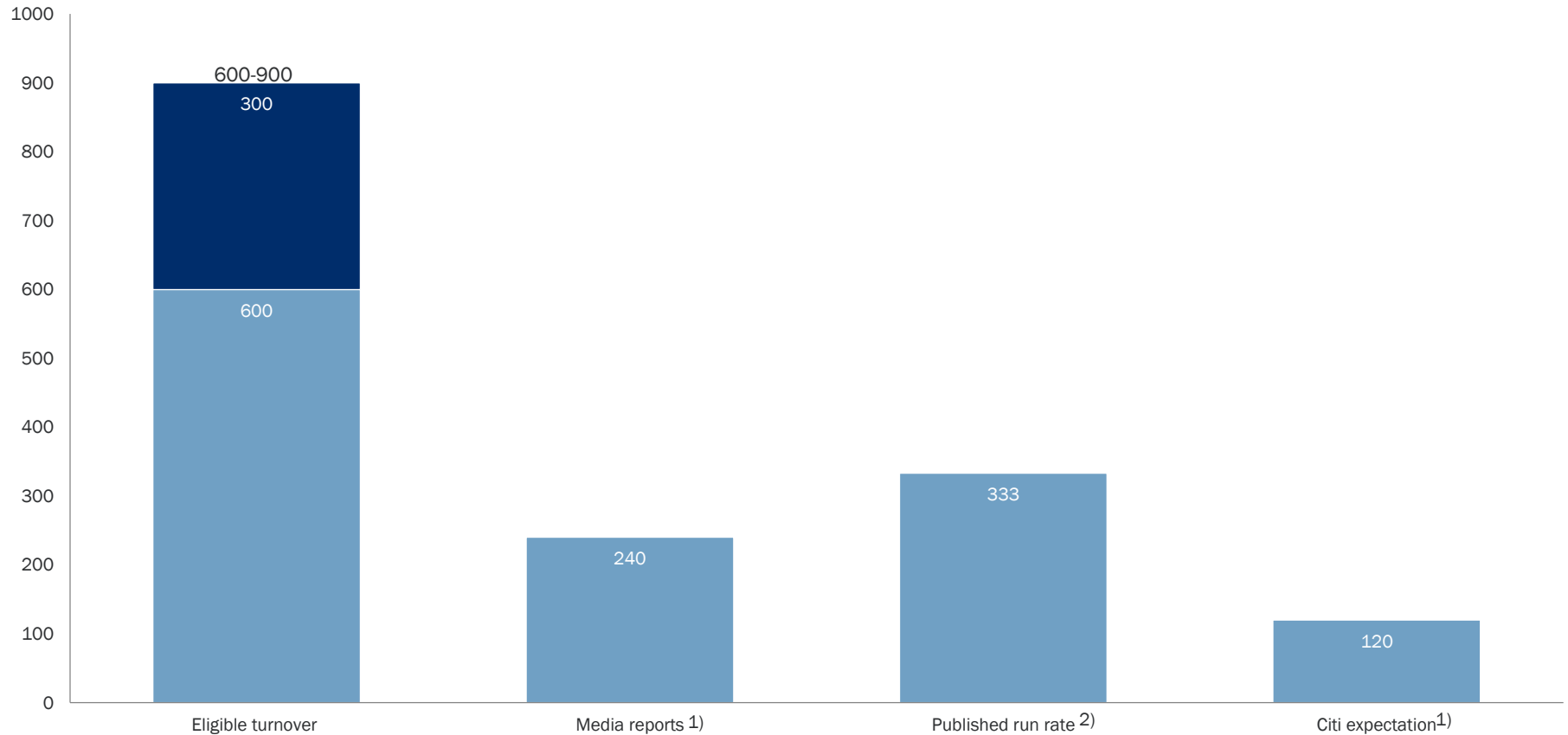
Eurozone net supply of securities + ECB QE and ECB LTRO, 4q rolling in €bn



Source: Citibank

# CENTRAL BANKS ARE THE DOMINANT PLAYERS AND DE-FACTO PRICE SETTERS

Estimated CSPP buying by ECB accounts for approx. >30% of daily turnover in eligible bonds in secondary markets in €m



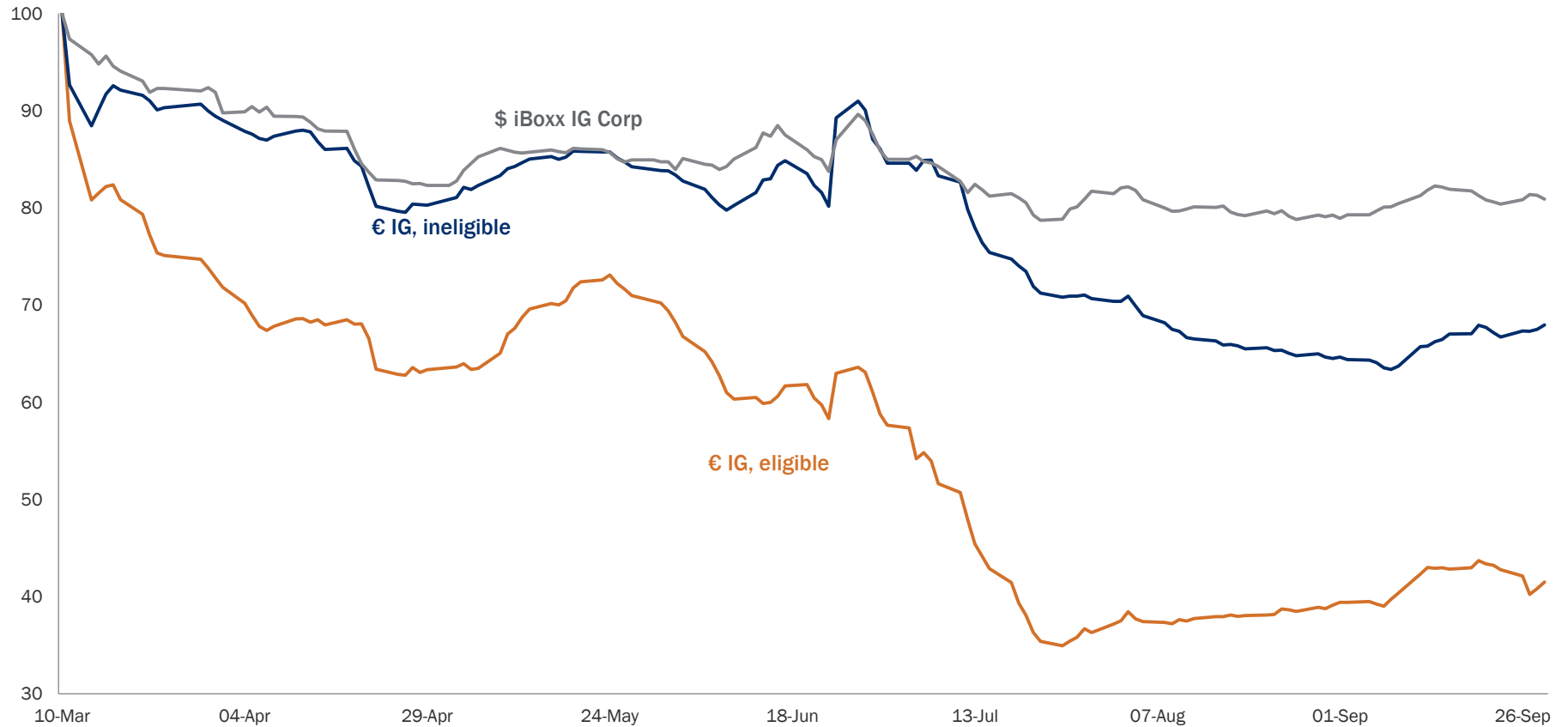
Source: Citibank

1) Assuming a 50:50 split between primary and secondary market purchases

2) Published run rate as at June 13, 2016

# FRONT-RUNNING THE ECB WORKED

Eligible bond<sup>1</sup> spreads 65% tighter since March, bond spread changes indexed to March 10, 2016 =100



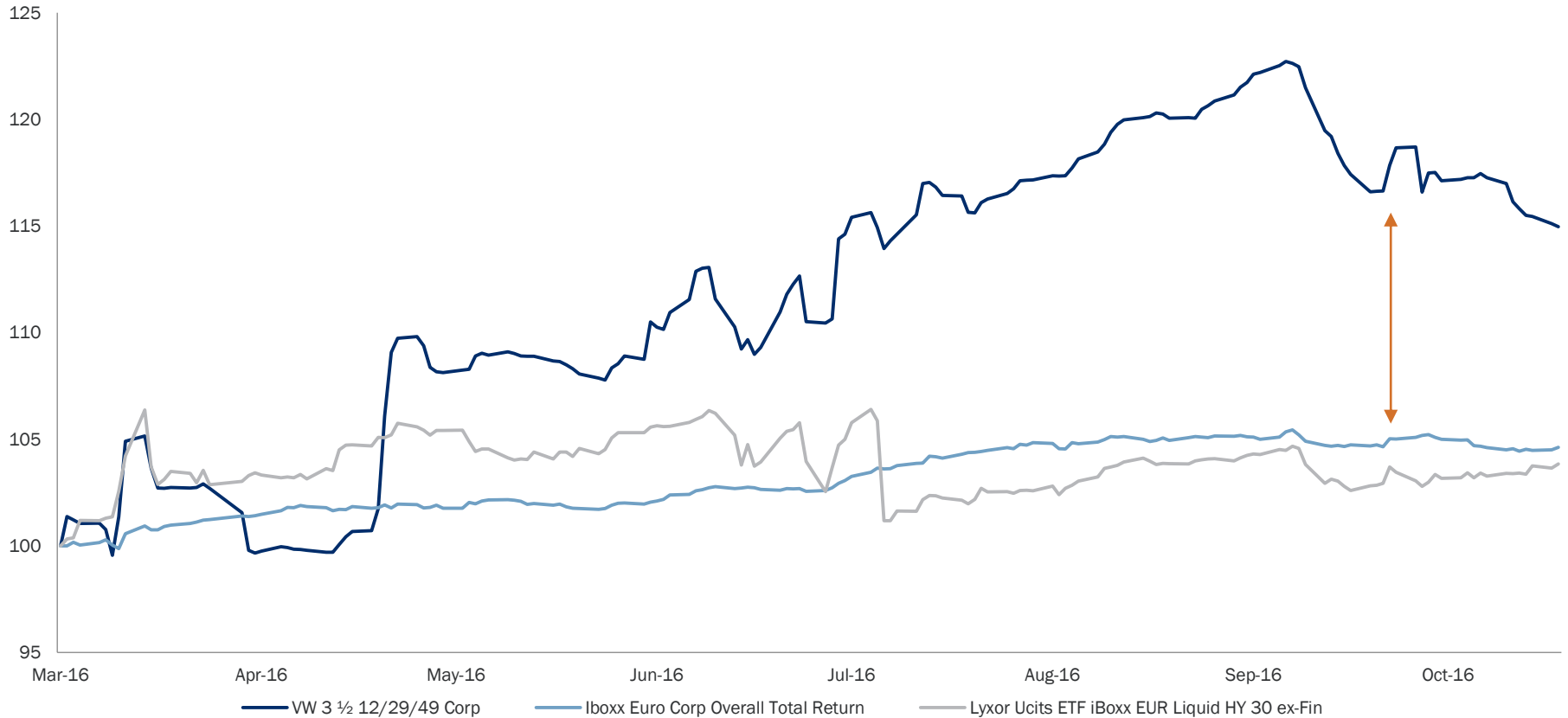
Source: Citibank, Bloomberg

1) ECB announced its decision to add corporate sector purchase programme (CSPP) to the asset purchase programme (APP)

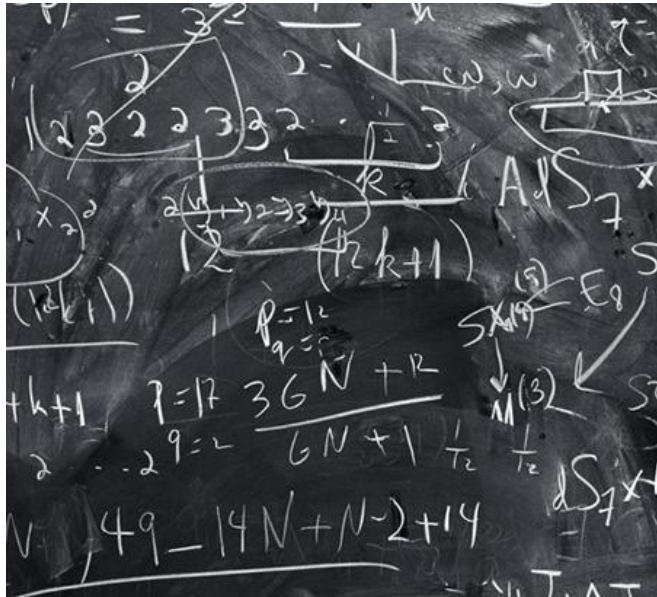


# CASE STUDY VOLKSWAGEN BONDS: ELIGIBLE FOR ECB CSPP

Relative performance of VW 3.5% 2049 bonds vs Iboxx Corporate bonds index and Lyxor HY EUR ETF



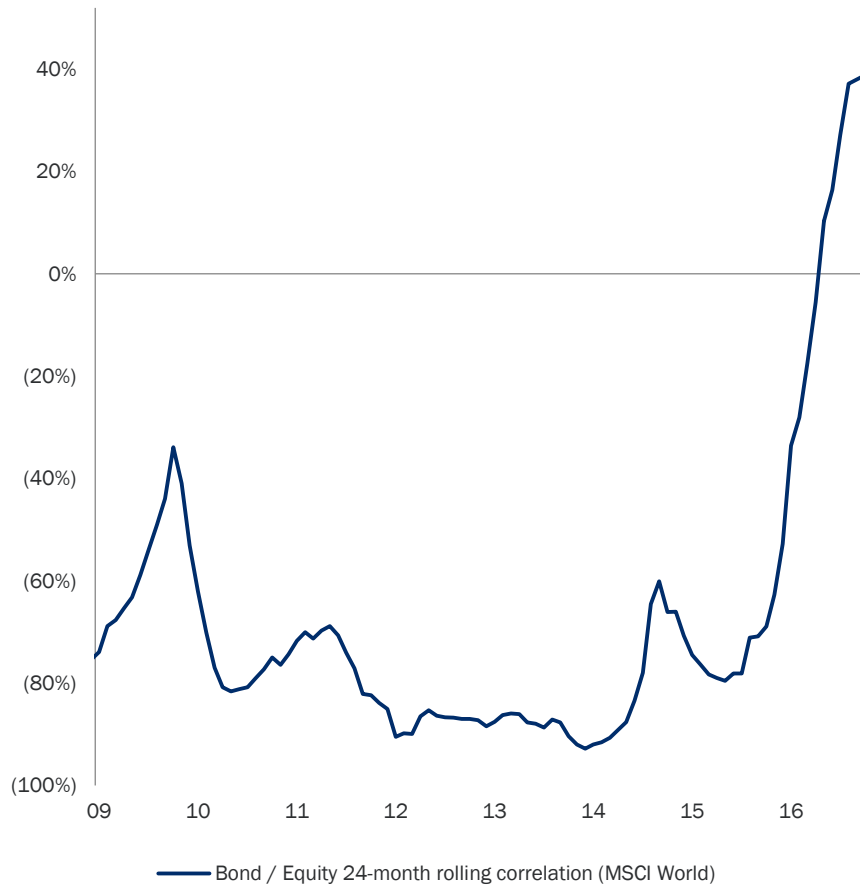
Source: Bloomberg, Astellon calculations



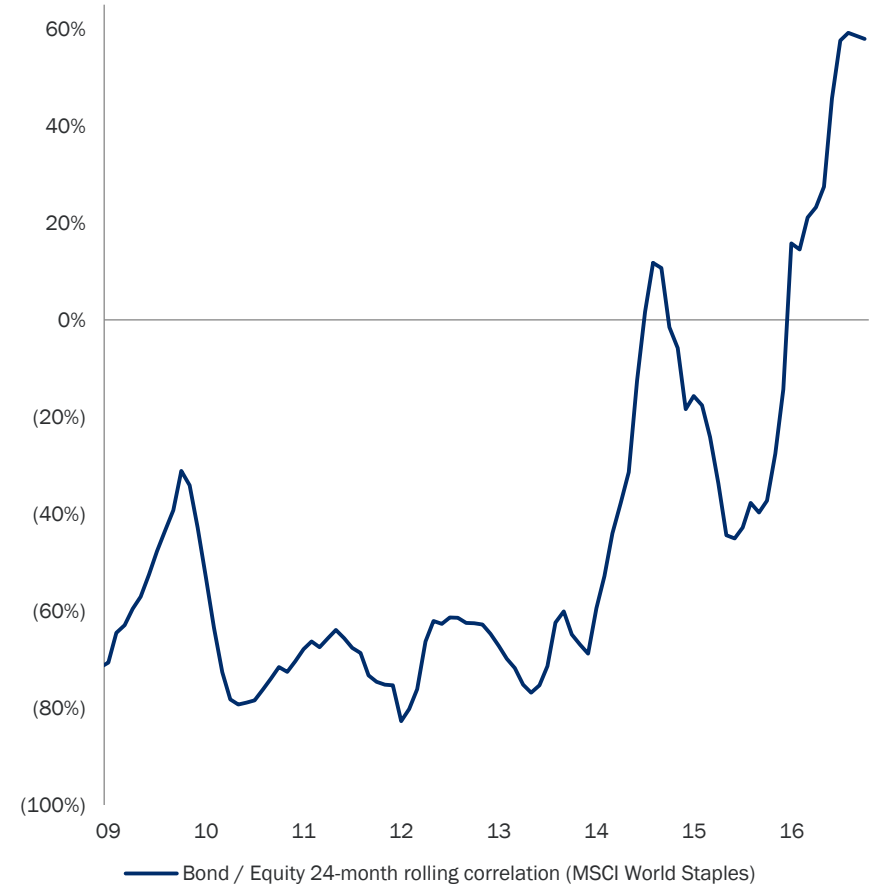
## 2. Bubble fuel: record low bond yields drive equities

# EQUITIES ARE NOW A DERIVATIVE OF BONDS

## Correlation of equity markets and gov't bonds



## Staples: in 2016 correlation spiked from negative to +60%



Source: Bloomberg, JP Morgan, Astellon calculations

# LOW VOL & LONG DURATION STOCKS ARE DRIVEN BY YIELDS

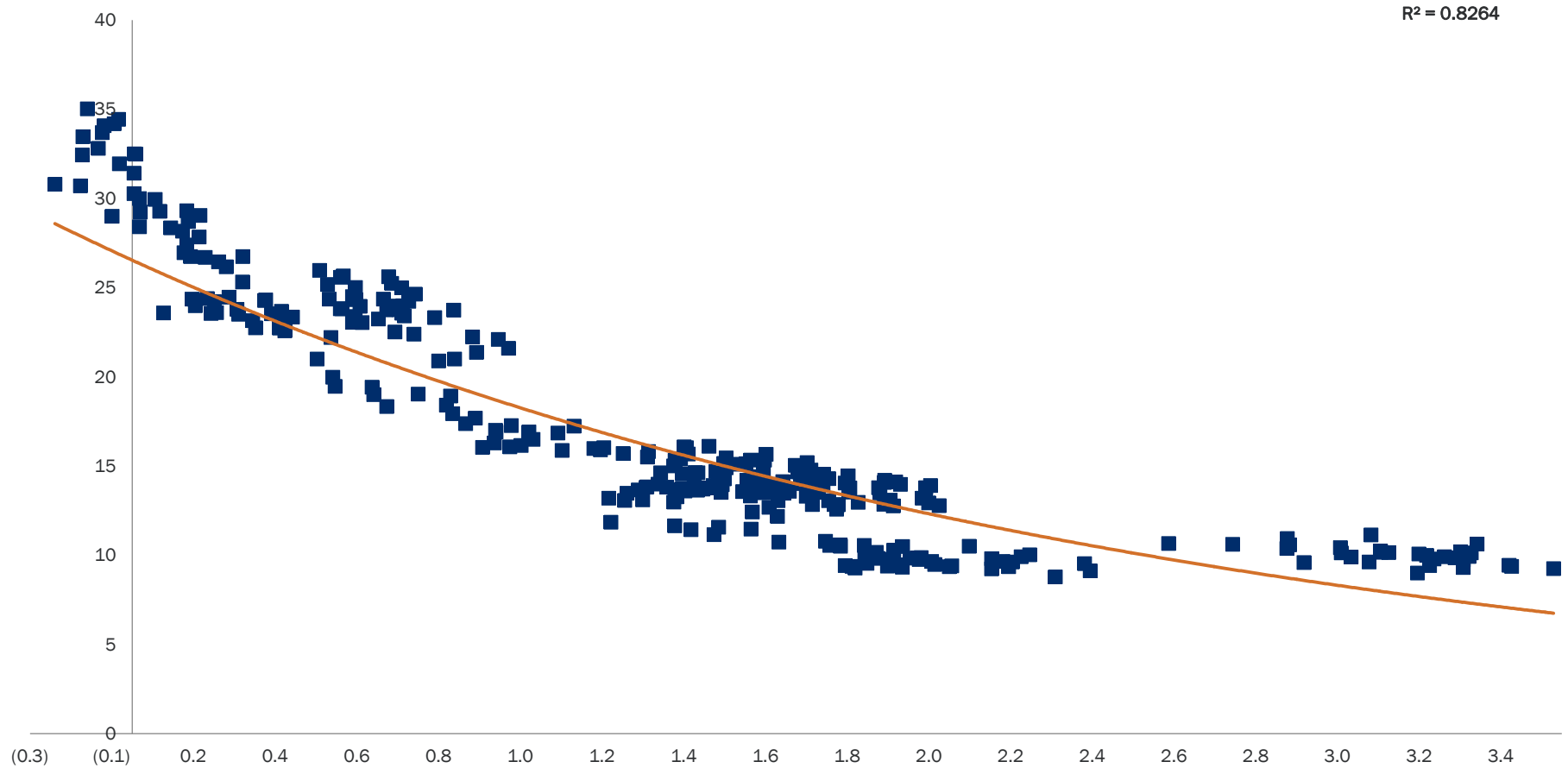
MSCI Europe Low Vol Index vs SXXP outperformance (LHS) driven by decreasing German bund yields (RHS, inverted)



Source: Bloomberg, Astellon calculations

# CASE STUDY 'GERMAN RE': NOT SURPRISINGLY IT TRADES AS A BOND PROXY

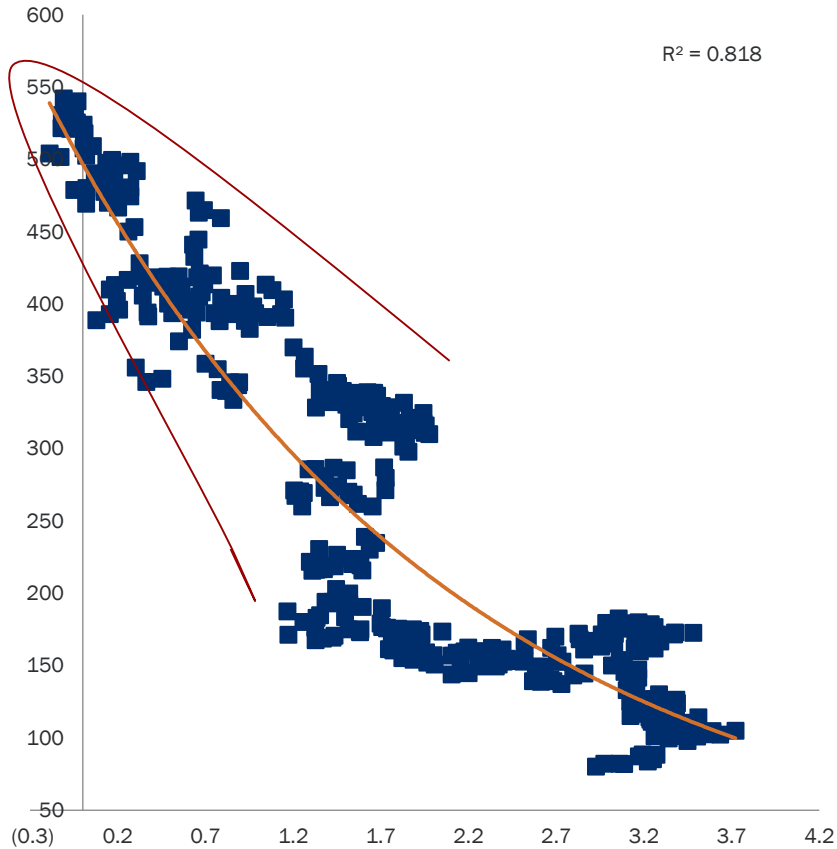
Regression analysis of Deutsche Wohnen share price (y-axis) vs 10yr Bund (x-axis); L5yrs (weekly data)



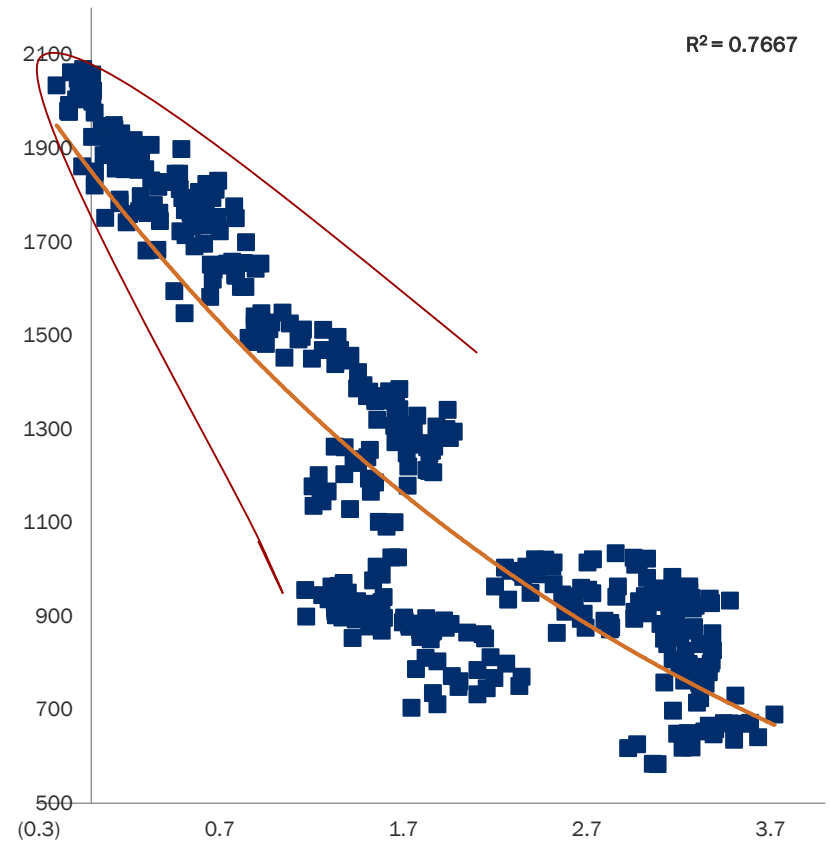
Source: Bloomberg, Astellon calculations

# CASE STUDY 'SWISS CYCLICAL GROWTH STOCKS': TRADE AS BOND PROXIES

Case Study 'EMS Chemie' (y) vs 10yr Bund (x); since 2009



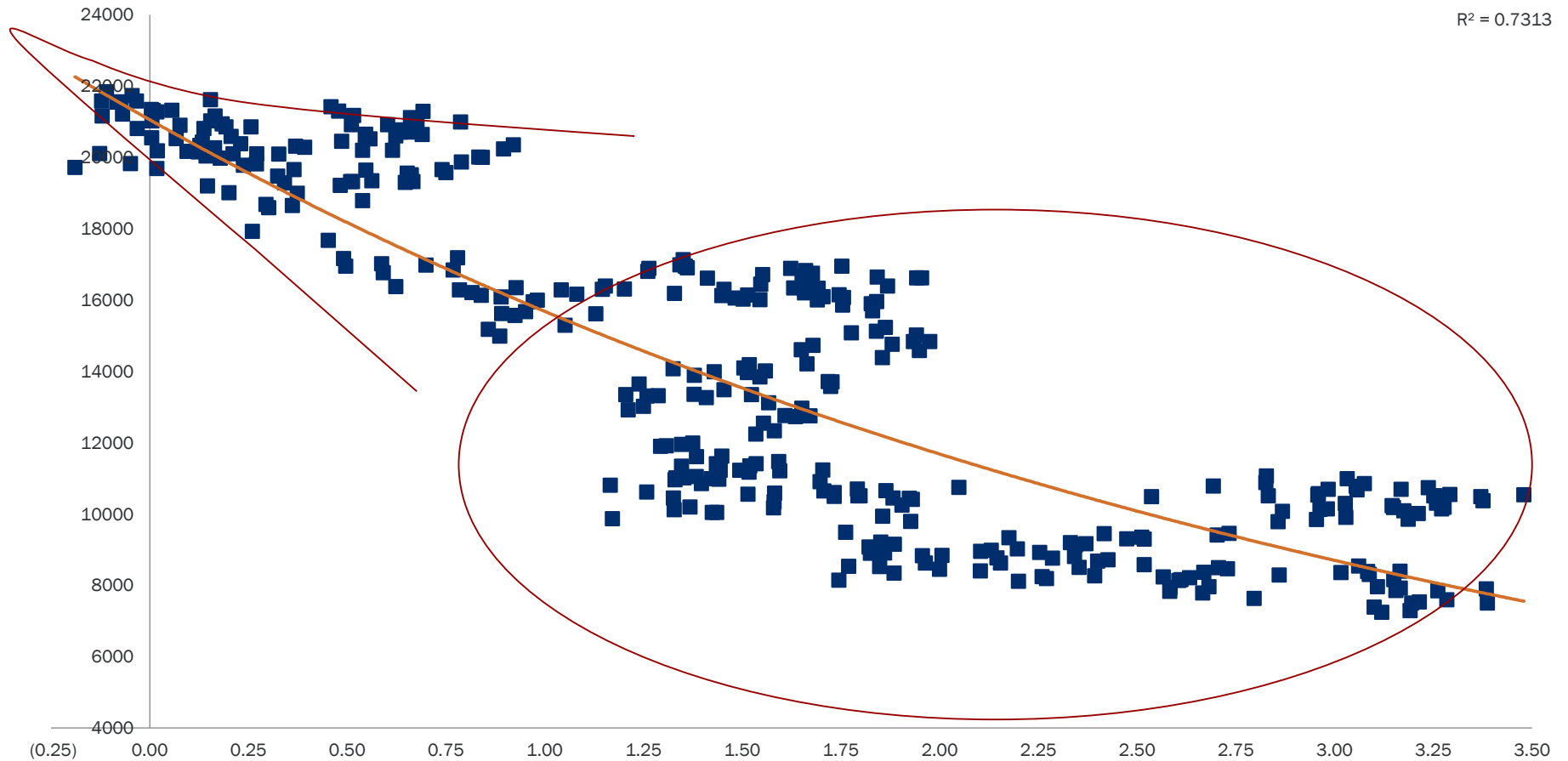
Case Study 'Givaudan' (y) vs 10yr Bund (x); since 2009



Source: Bloomberg, Astellon calculations

# CASE STUDY 'MDAX': INCREASINGLY ENTIRE INDICES ARE RATE-DRIVEN

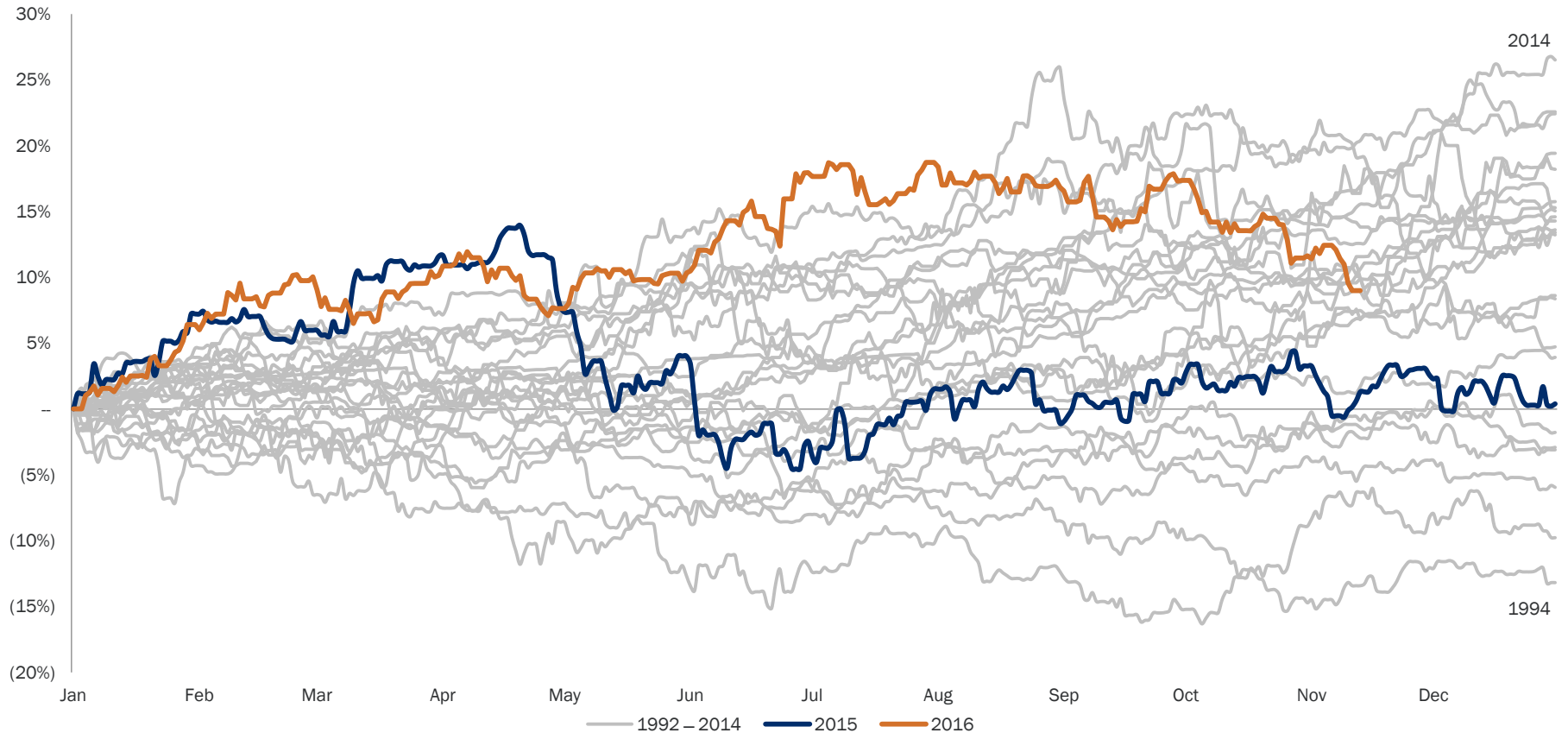
Regression analysis of MDAX index level (y-axis) vs 10yr Bund (x-axis); since 2010



Source: Bloomberg, Astellon calculations

# BUNDS HAD THE BEST H1 SINCE 1992 BEFORE THROWING A TANTRUM AGAIN

German 10yr TR performance per year since 1992



Source: Bloomberg, Astellon calculations



# THE BOND MARKET IS IN A BUBBLE: BIGGER FOOLS ARE NOW REQUIRED

## Profit and loss of the German 30yr bond (generic) at various yields

Yield	Price	Profit or loss in % of capital	Loss absolute	Loss in yrs of running income
(0.50%)	198	22%		
(0.40%)	193	19%		
(0.30%)	188	16%		
(0.20%)	184	14%		
(0.10%)	182	12%		
0.00%	175	8%		
0.10%	171	6%		
0.20%	167	3%		
<b>0.34%</b>	<b>162</b>	<b>0%</b>		
0.40%	159	(1%)	(2.2)	4.1
0.50%	156	(4%)	(5.9)	10.8
0.60%	152	(6%)	(9.5)	17.3
0.70%	149	(8%)	(13.0)	23.6
0.80%	145	(10%)	(16.4)	29.7
<b>0.90%</b>	<b>142</b>	<b>(12%)</b>	<b>(19.7)</b>	<b>35.7</b>
1.00%	139	(14%)	(22.9)	41.5
1.10%	136	(16%)	(26.0)	47.2
1.20%	133	(18%)	(29.0)	52.7
1.30%	130	(20%)	(32.0)	58.1
1.40%	127	(22%)	(34.8)	63.3
1.50%	124	(23%)	(37.6)	68.3

**Loss-making for the average investor**  
Considering fees, taxes, transaction costs over the total life time of the bond

Low on July 5, 2016

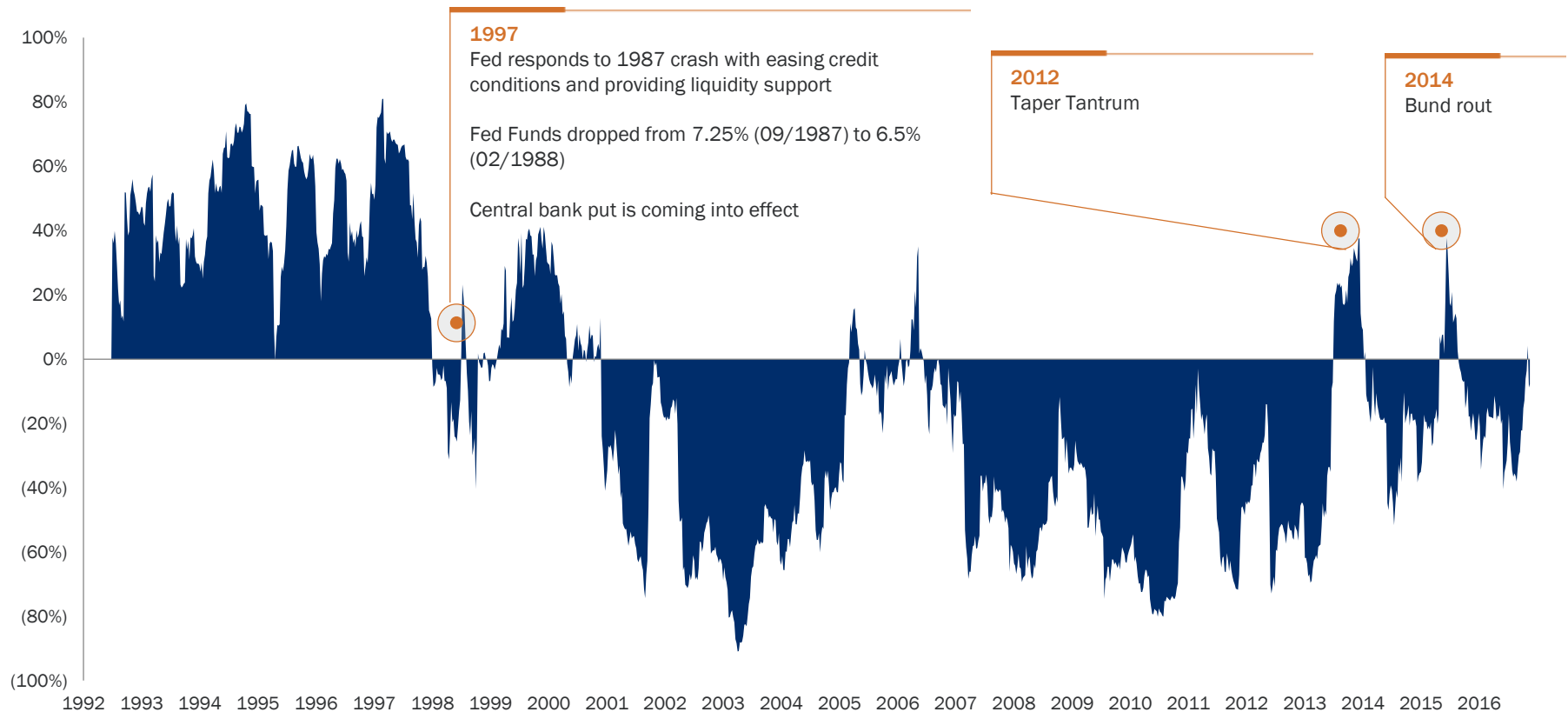
**Current levels**  
Back up of yields from YTD lows erased 36 yrs of running income

NB: Yield on Jan 1, 2016: 1.483%

Source: Bloomberg, Astellon calculations

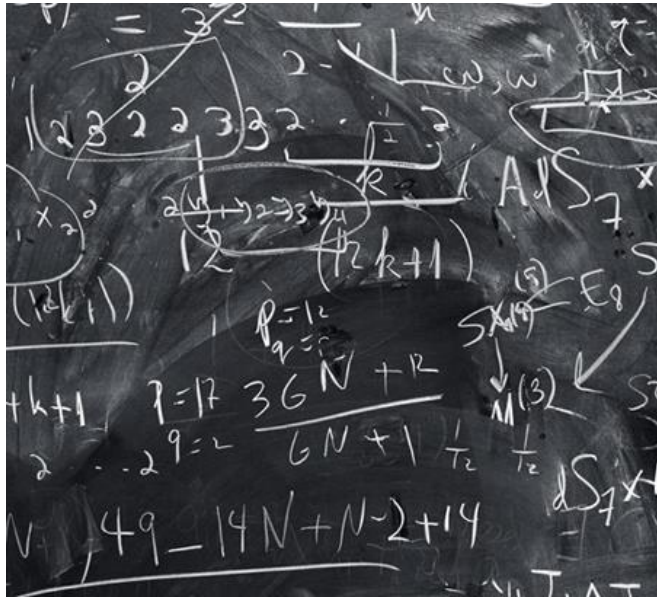
# PARADIGM SHIFT: ARE 20 YEARS OF -VE EQUITY-BOND CORRELATIONS ENDING?

Equity bond return correlations<sup>1</sup> have been negative since 1997 except for periods of stress (e.g. taper tantrum, Bund rout)



Source: Bloomberg, Astellon calculations

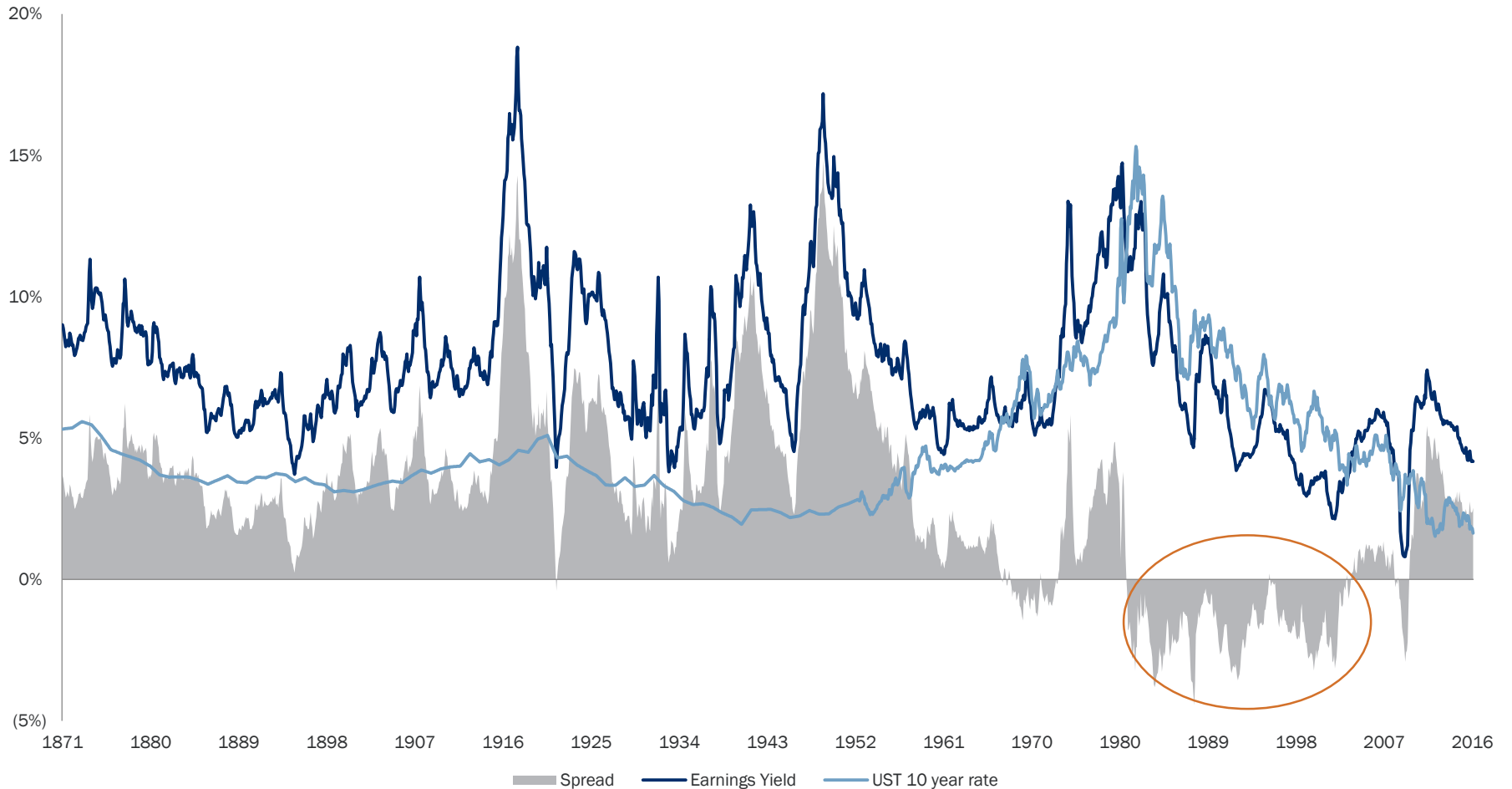
1) 26 week rolling correlation of SXXP vs Bloomberg/EFFAS Bond Indices Germany Govt 7-10 yr TR



### 3. TINA is a myth – the rise of factor risk and volatility

# EVERYTHING CAN LOOK CHEAP RELATIVE TO EVEN MORE EXPENSIVE ASSETS

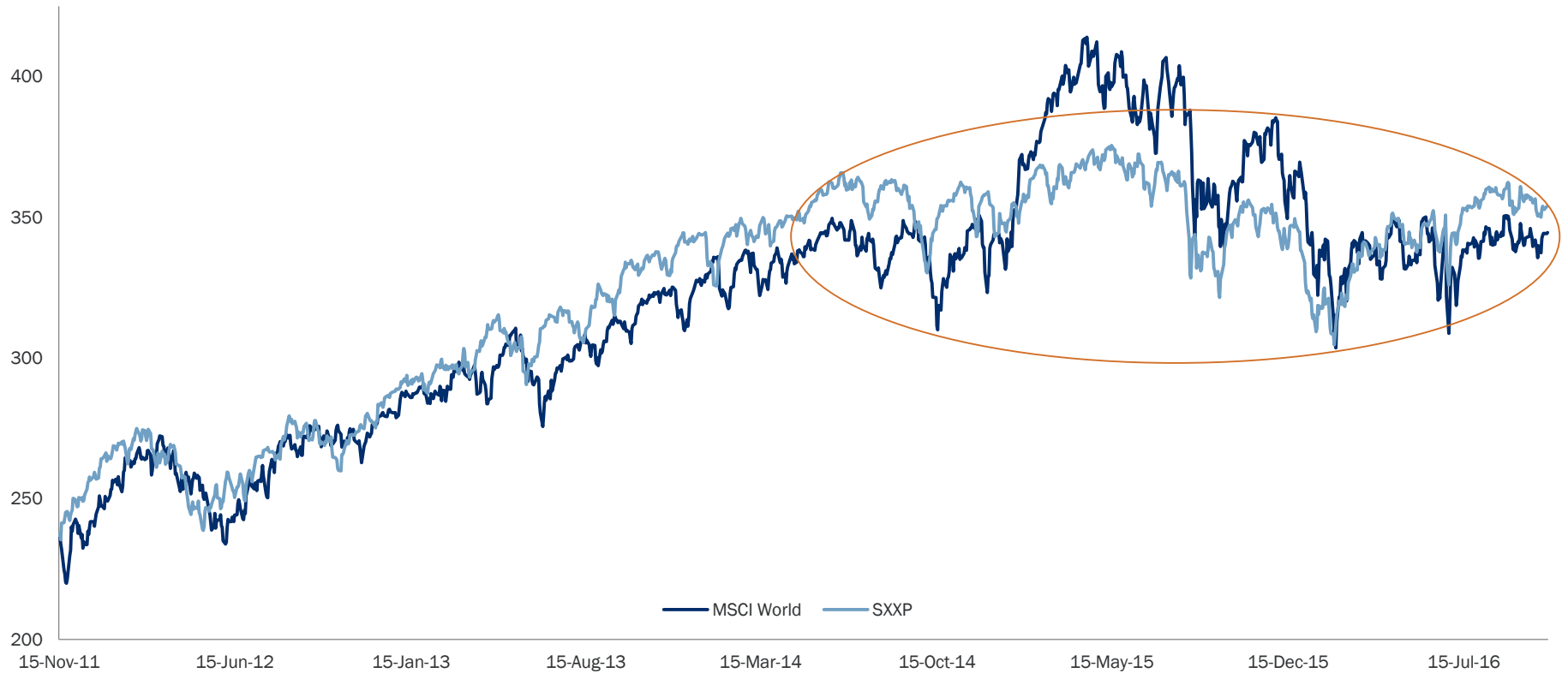
S&P 500 earnings yield vs. 10 year US treasury yield 1871 - 2016



Source: Bloomberg, Astellon calculations

# HOWEVER, EQUITIES HAVE BEEN STUCK IN A VOLATILE RANGE SINCE 2014

MSCI World rebased to Eurostoxx 600 since Dec 15, 2011



Source: Bloomberg, Astellon calculations

# TINA ANYONE? UNLESS YOU RIDE THE VOLATILITY THERE IS NO RETURN

## Price and total return performance of selected key indices (as of November 17, 2016)

Index		L5YR	L3YR	Since Jan 2014	Jan 2014 to Brexit (30 Months)	Brexit to Today	YTD
<b>Price Indices</b>							
Eurostoxx 600	SXXP Index	42.6%	5.4%	3.6%	(5.9%)	10.1%	(7.1%)
DAX	DAXK Index	53.7%	7.8%	3.3%	(10.7%)	15.6%	(3.2%)
MDAX	MKDX Index	102.1%	19.5%	15.9%	6.7%	8.7%	(3.2%)
SMI	SMI Index	40.1%	(4.5%)	(3.3%)	(7.4%)	4.5%	(10.0%)
S&P 500	SPX Index	74.7%	22.1%	18.3%	8.2%	9.3%	7.0%
Dow Jones	INDU Index	56.5%	19.1%	14.0%	3.4%	10.3%	8.5%
Russell 2000	RTY Index	78.7%	17.8%	12.5%	(6.4%)	20.2%	15.3%
<b>Median</b>		<b>56.5%</b>	<b>17.8%</b>	<b>12.5%</b>	<b>(5.9%)</b>	<b>10.1%</b>	<b>(3.2%)</b>
<b>Performance indices</b>							
Eurostoxx 600	SXXR Index	64.7%	14.5%	12.3%	1.3%	10.9%	(4.4%)
DAX	DAX Index	79.1%	17.2%	12.2%	(3.0%)	15.7%	(0.2%)
MDAX	MDAX Index	128.2%	28.1%	24.3%	14.2%	8.9%	(0.8%)
SMI	SMIC Index	64.8%	5.2%	6.5%	1.7%	4.7%	(6.8%)
S&P 500	SPXT Index	94.7%	30.2%	25.8%	14.0%	10.3%	9.1%
Dow Jones	DJITR Index	77.9%	28.3%	22.6%	10.0%	11.5%	11.2%
Russell 2000	RU20INTR Index	91.7%	22.8%	17.1%	(3.1%)	20.9%	16.8%
<b>Median</b>		<b>85.4%</b>	<b>25.5%</b>	<b>19.8%</b>	<b>5.8%</b>	<b>10.9%</b>	<b>4.5%</b>

Source: Bloomberg, Astellon calculations

# FACTOR VOLATILITY HAS BECOME A REALITY POST 2013 'TAPER TANTRUM'

## Market risk dominated 2009-2014



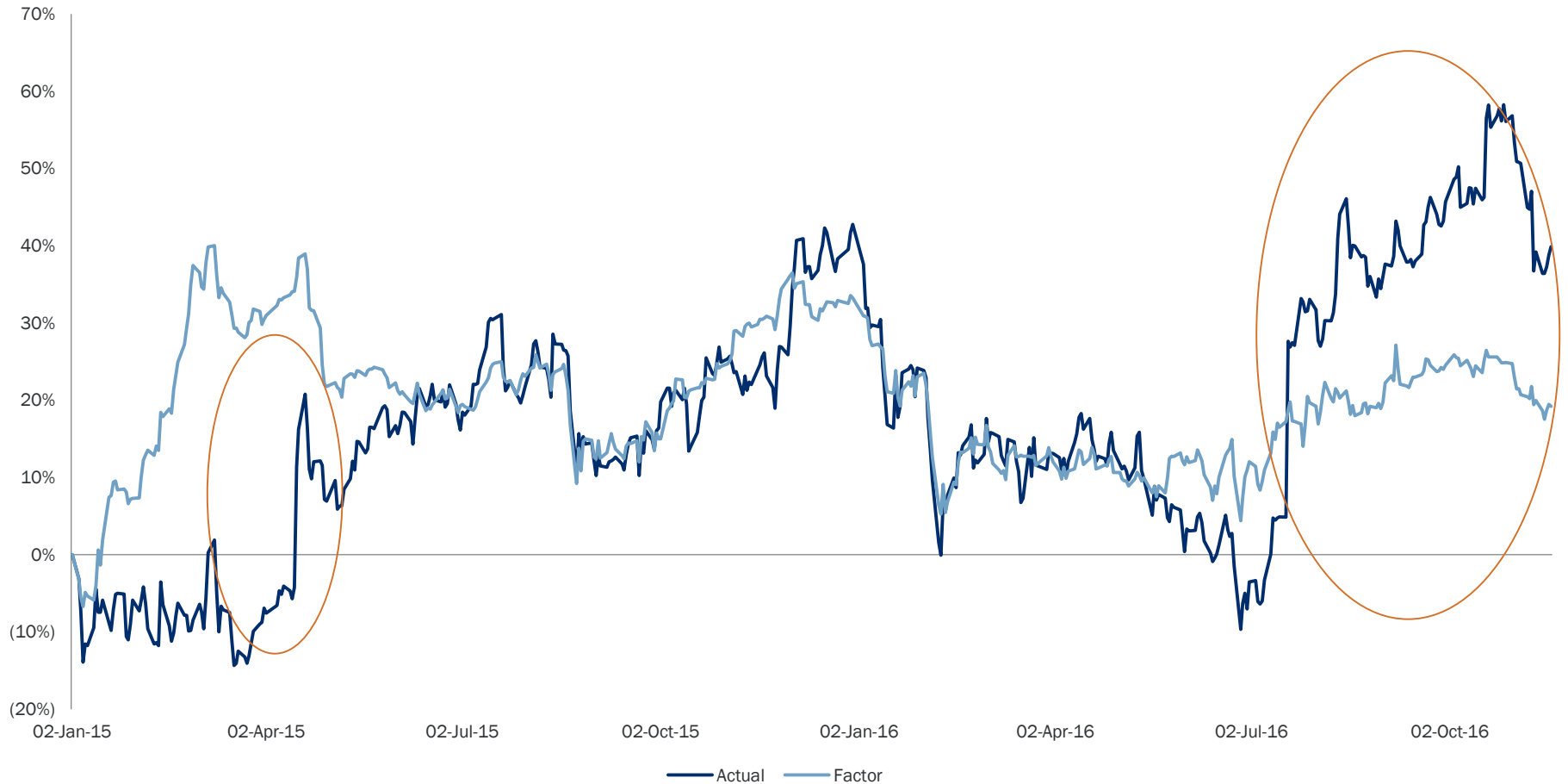
## Since 2014: momentum leads, value lags, constant changes



Source: Bloomberg, Astellon calculations

# CASE STUDY 'ZALANDO': UP UNTIL RECENTLY DOMINATED BY FACTOR RISKS

Actual vs cumulative factor returns since IPO of Zalando



Source: Bloomberg, Astellon calculations

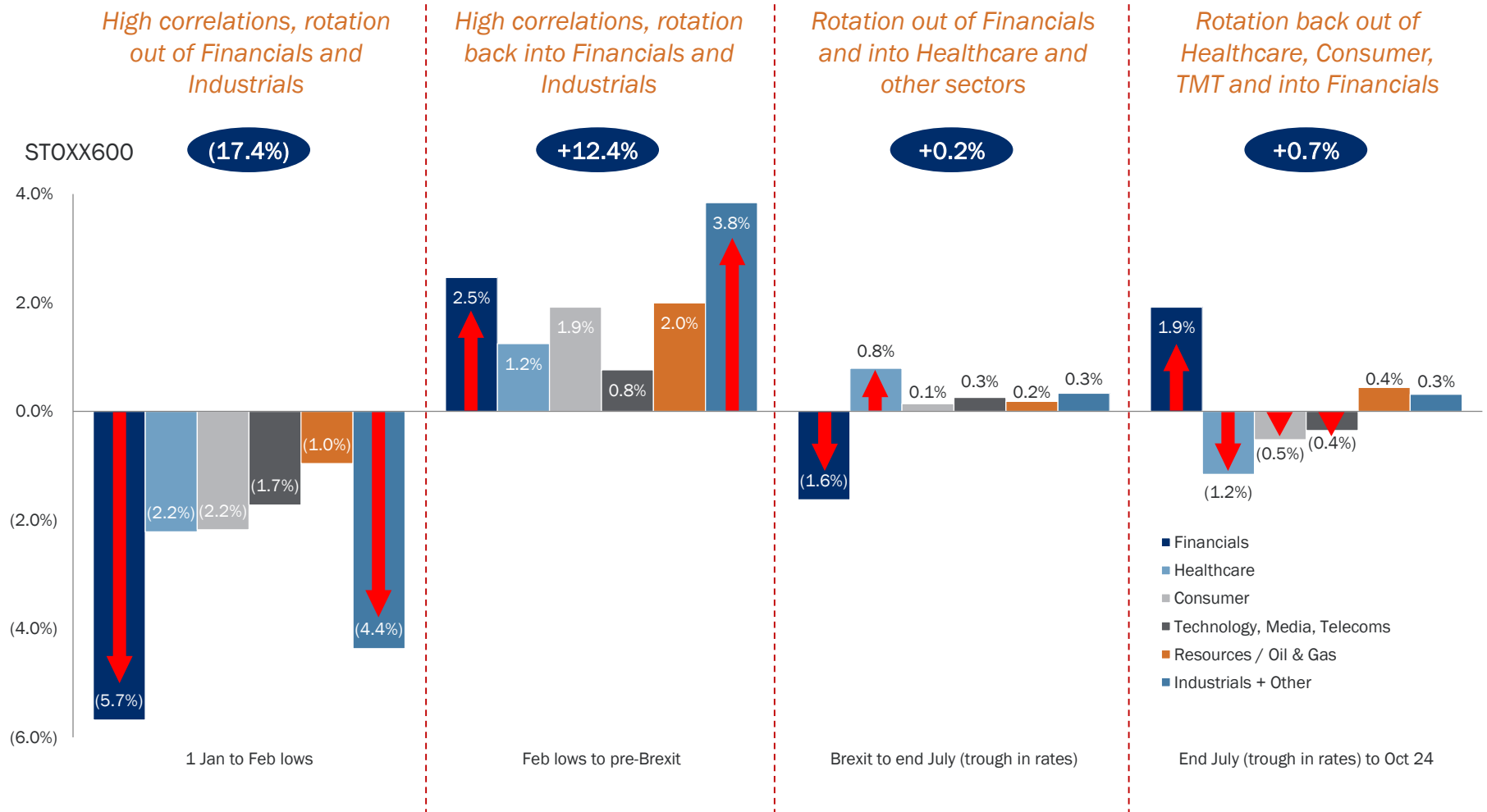
1) Difference between actual and factor performance = alpha; factor performance = 9 different factors

2) Look back period 20 days rolling, factors include beta, duration, quality, low vol, value, earnings growth, earnings momentum, price momentum, size



# CONSTANT ROTATIONS: THE REAL ACTION IS UNDERNEATH THE SURFACE

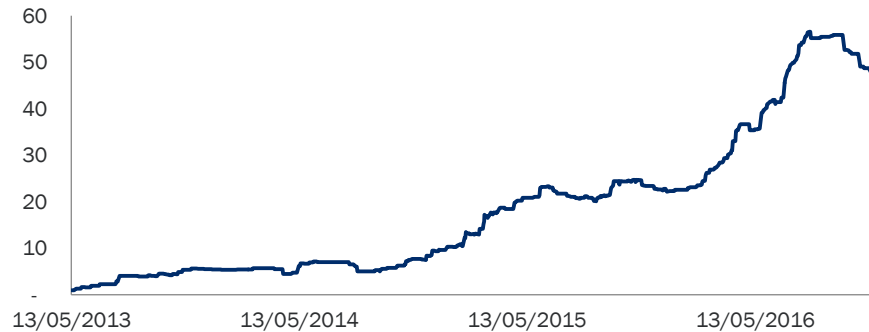
## STOXX600 contribution by industry during 2016



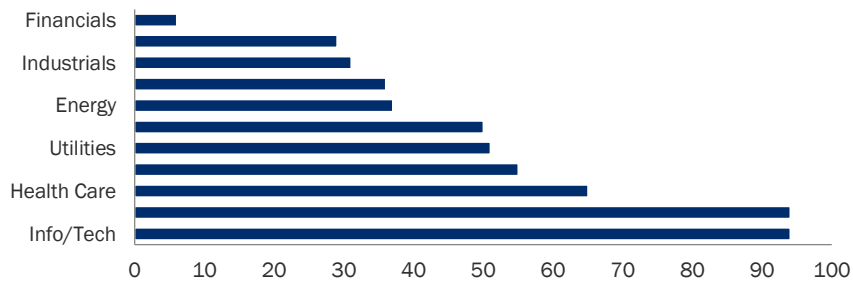
Source: Bloomberg, Astellon calculations

# HOWEVER, POSITIONING REMAINS EXTREME EVEN AFTER RECENT ROTATION

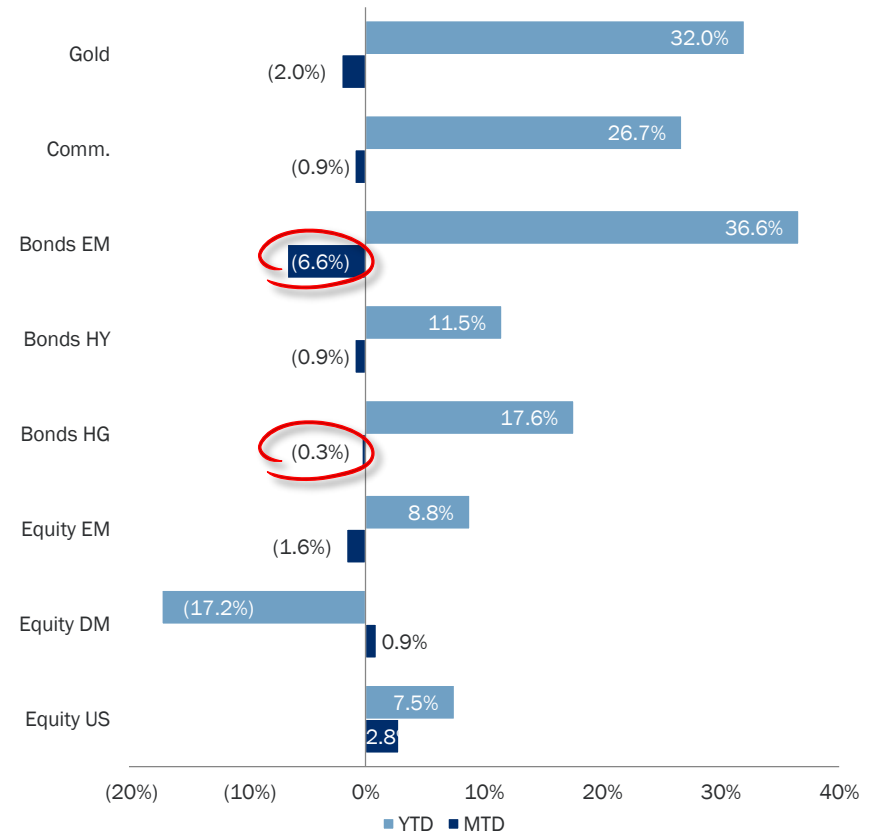
Number of shares of iShares Low Vol ETD/SXXP ETF



%-tile net exposure of US HFs since 2010 as of 11/2016



ETF flows in % of AUM MTD and YTD

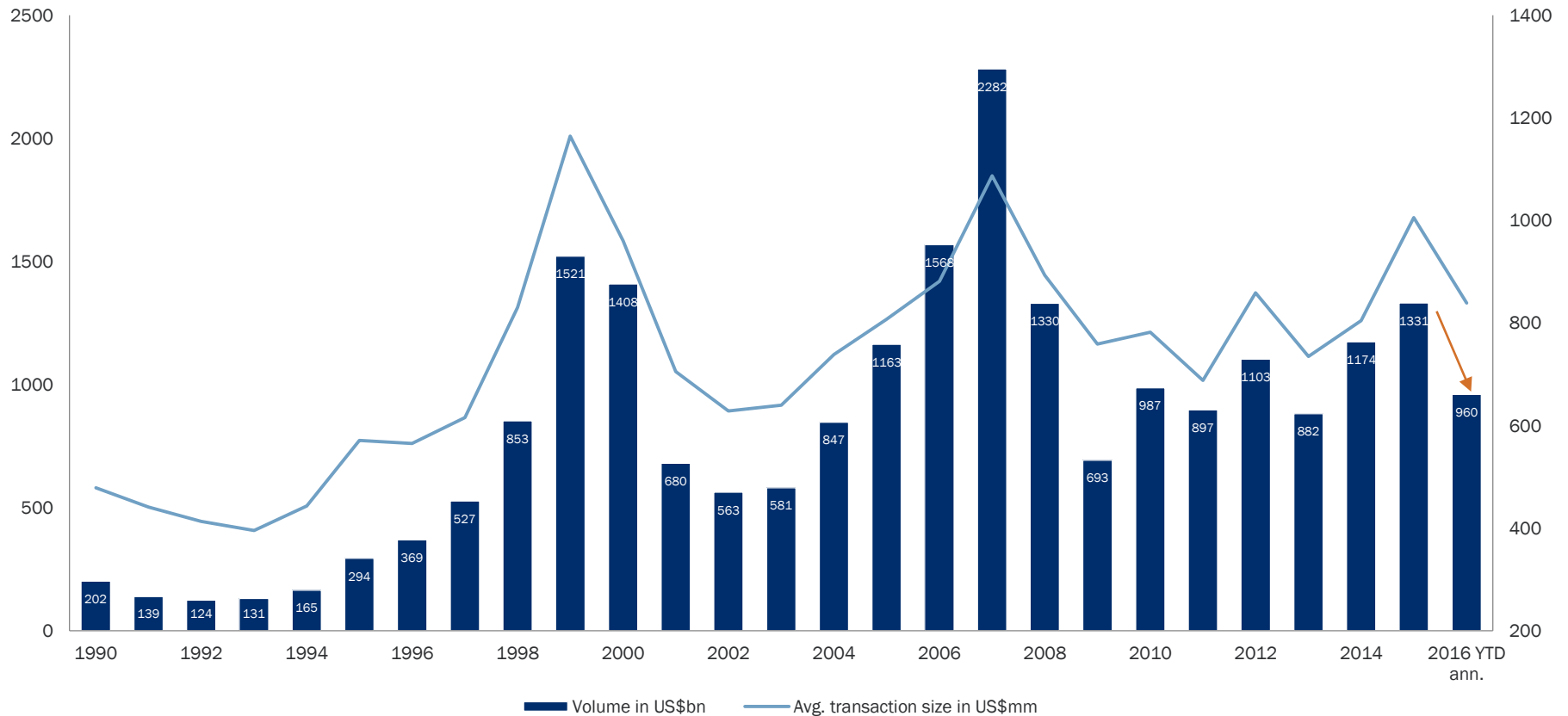


Source: Bloomberg, JP Morgan, Morgan Stanley, Astellon calculations



# EMEA M&A VOLUMES DOWN (28%) 2016 YTD

US\$ bn deal volume (LHS)<sup>1</sup> and avg. transaction size in US\$m (RHS) as per 9M 2016 (ann.)

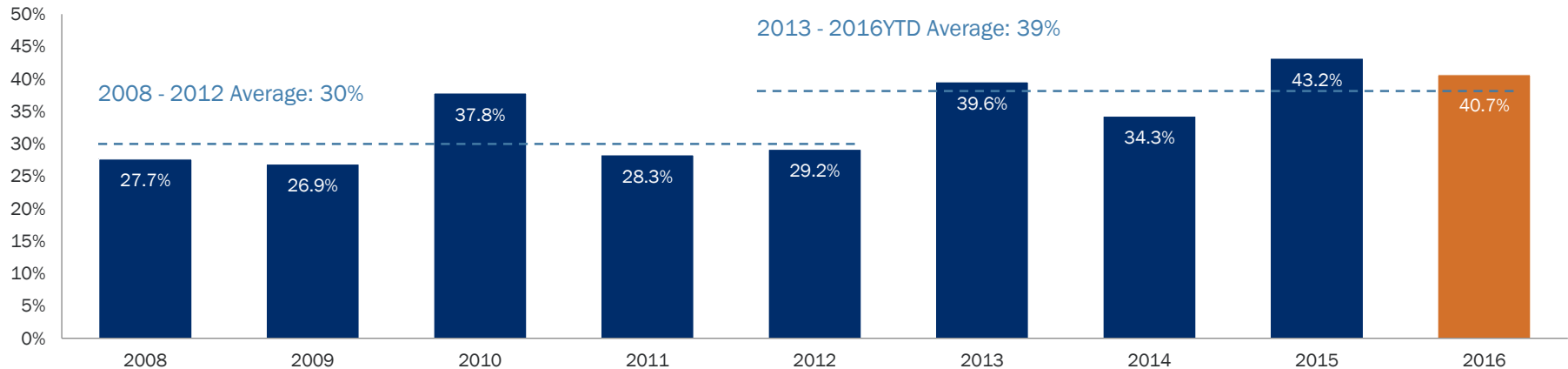


Source: Morgan Stanley, Astellon calculations

Note: 1) Includes announced transactions with an aggregate value of >US\$100m as well as terminated transactions and only highest value in case of competing bid situations

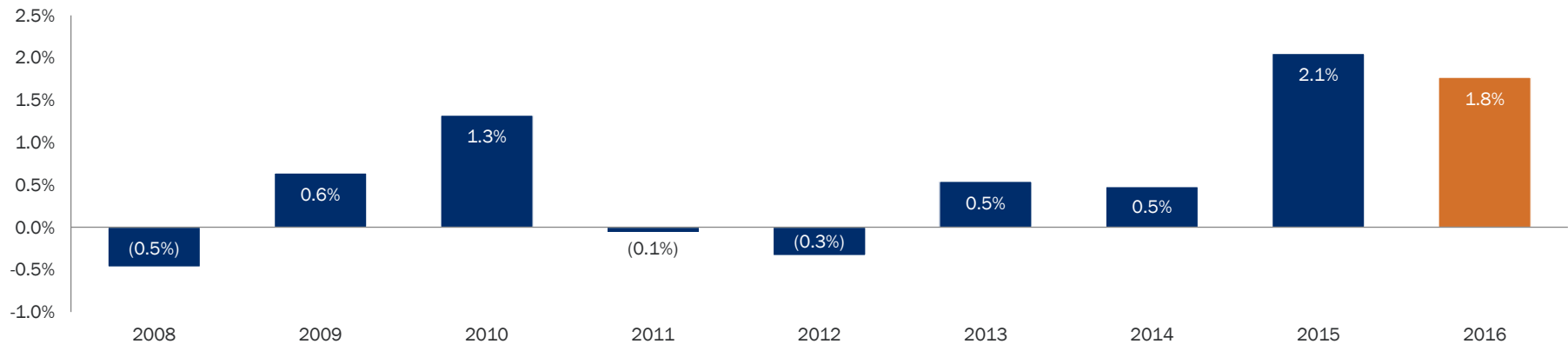
# INVESTOR RECEPTION TO M&A DEALS REMAINS POSITIVE

## Proportion of deals with positive 1-day acquirer stock price reaction



Note: "positive reaction" deals included those with 1-day change more than 100bps

## Average acquirer 1-day stock price reaction vs EURO STOXX 600

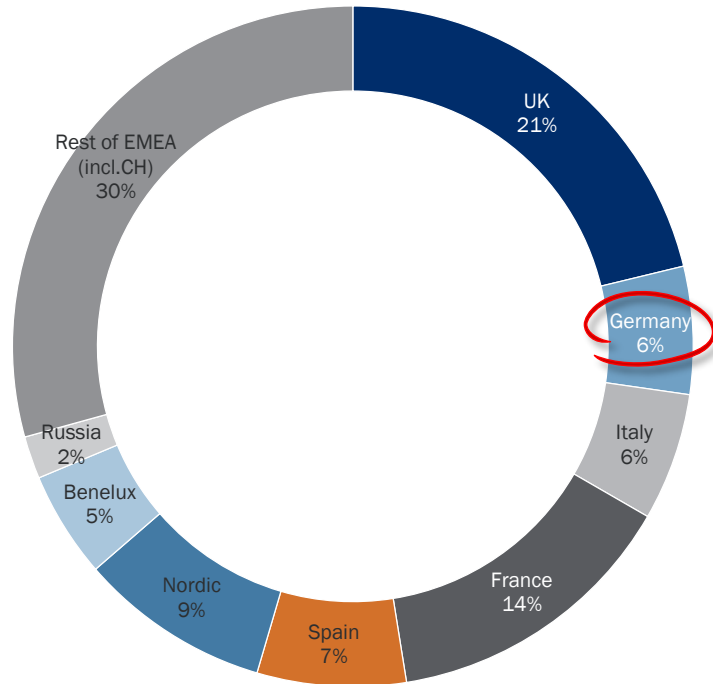


Source: Bloomberg as of 16 Nov 2016 (Criteria: deal value >\$1bn involving a single European acquirer)

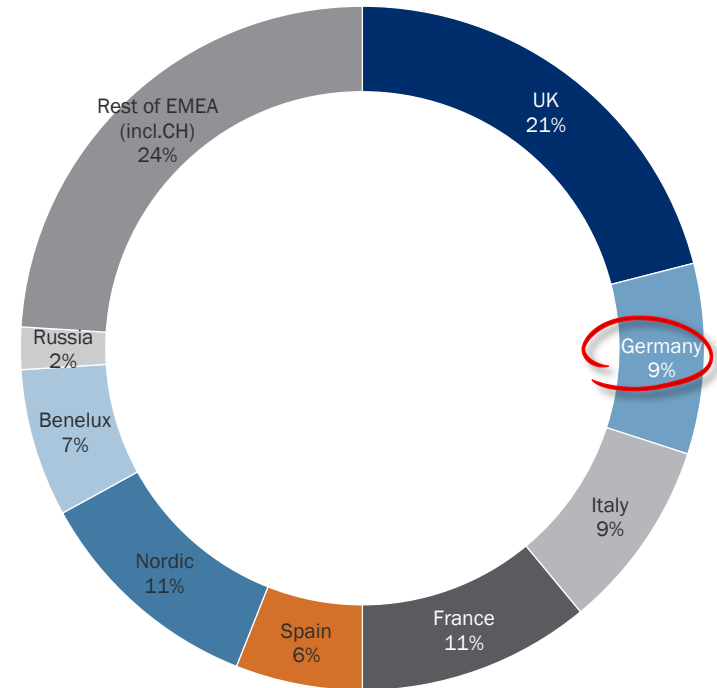
Note: percentage calculated as acquirer stock price change in percentage within one day upon announcement, minus STOXX600 index change in percentage on the same date

# GERMAN IN-BOUND M&A VOLUME DOWN TO APPROX. 1/3 OF FAIR SHARE

EMEA targets by volume



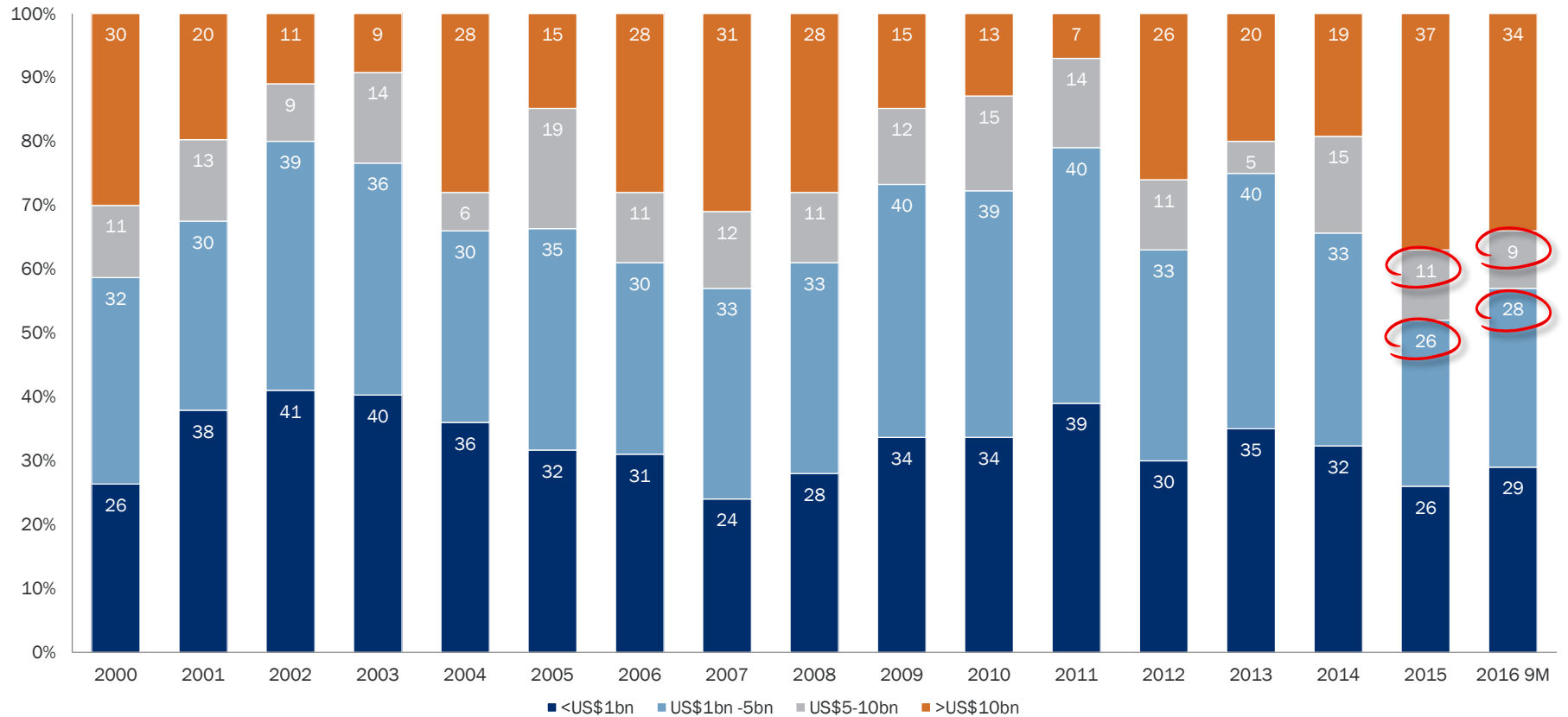
EMEA targets by # of deals



Source: Morgan Stanley, Astellon calculations

# ELEPHANT DEALS DOMINATE, SHARE OF MID-MARKET LOWEST SINCE 2000

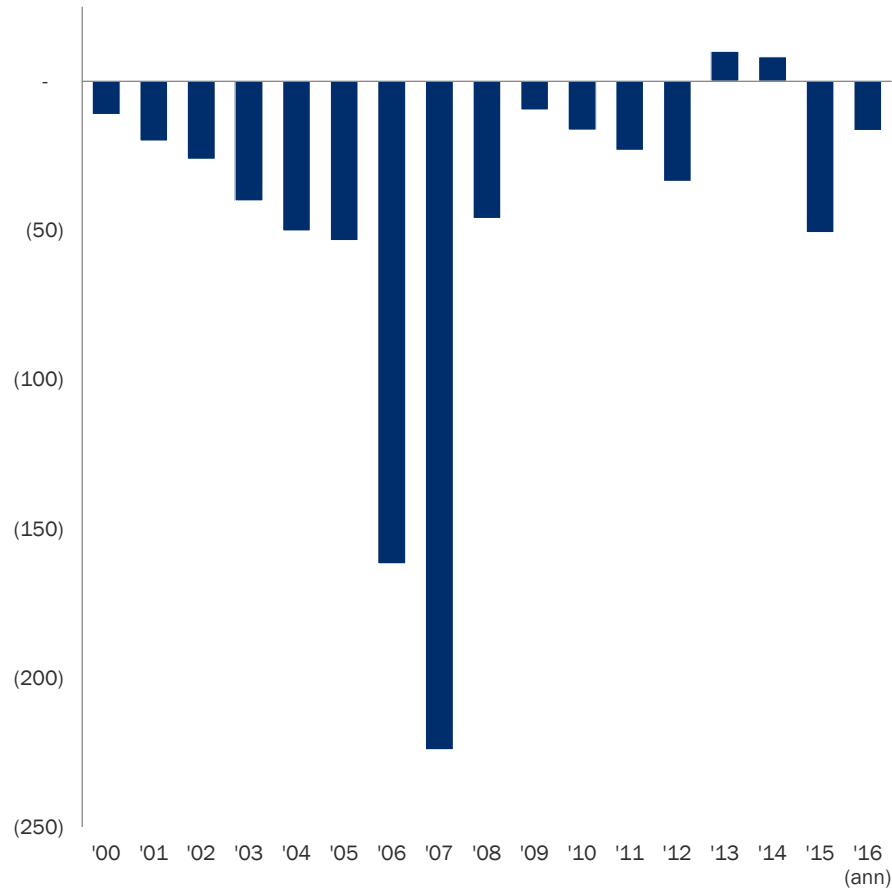
Distribution of M&A deals by US\$ volume brackets



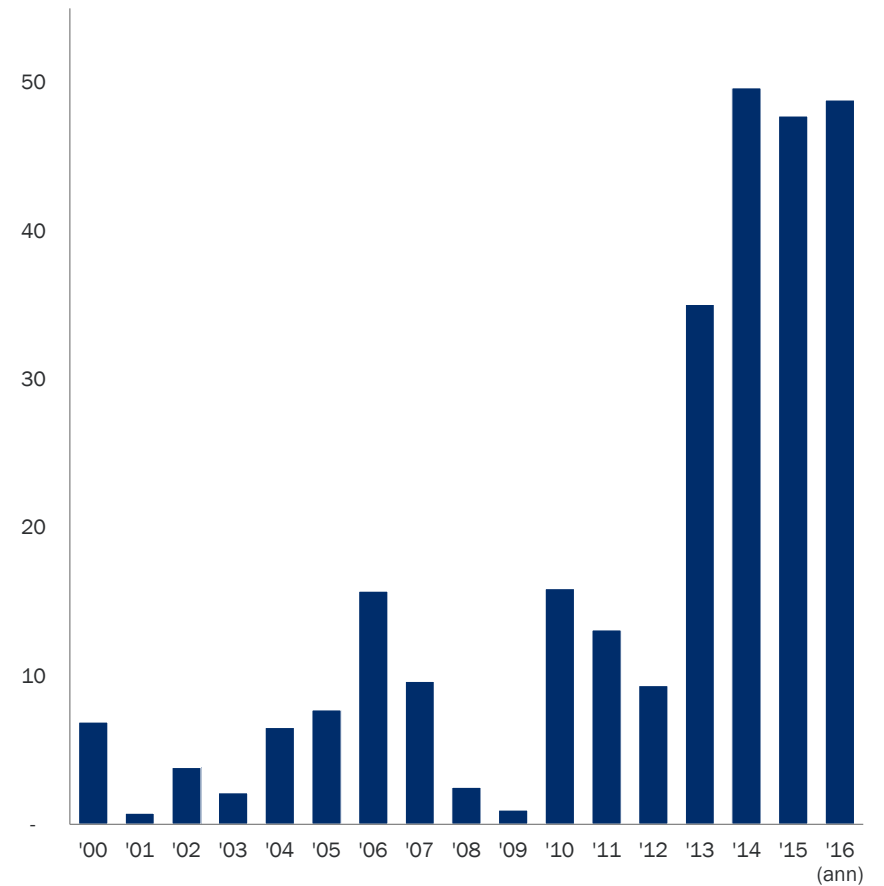
Source: Morgan Stanley, Astellon calculations

# PE CONTINUES TO EXIT INTO THE IPO MARKET DESPITE RECORD DRY POWDER

Private Equity net cash flows in Europe<sup>1</sup>



Private Equity backed IPOs in Europe<sup>2</sup>



Source: Bloomberg, Astellon calculations

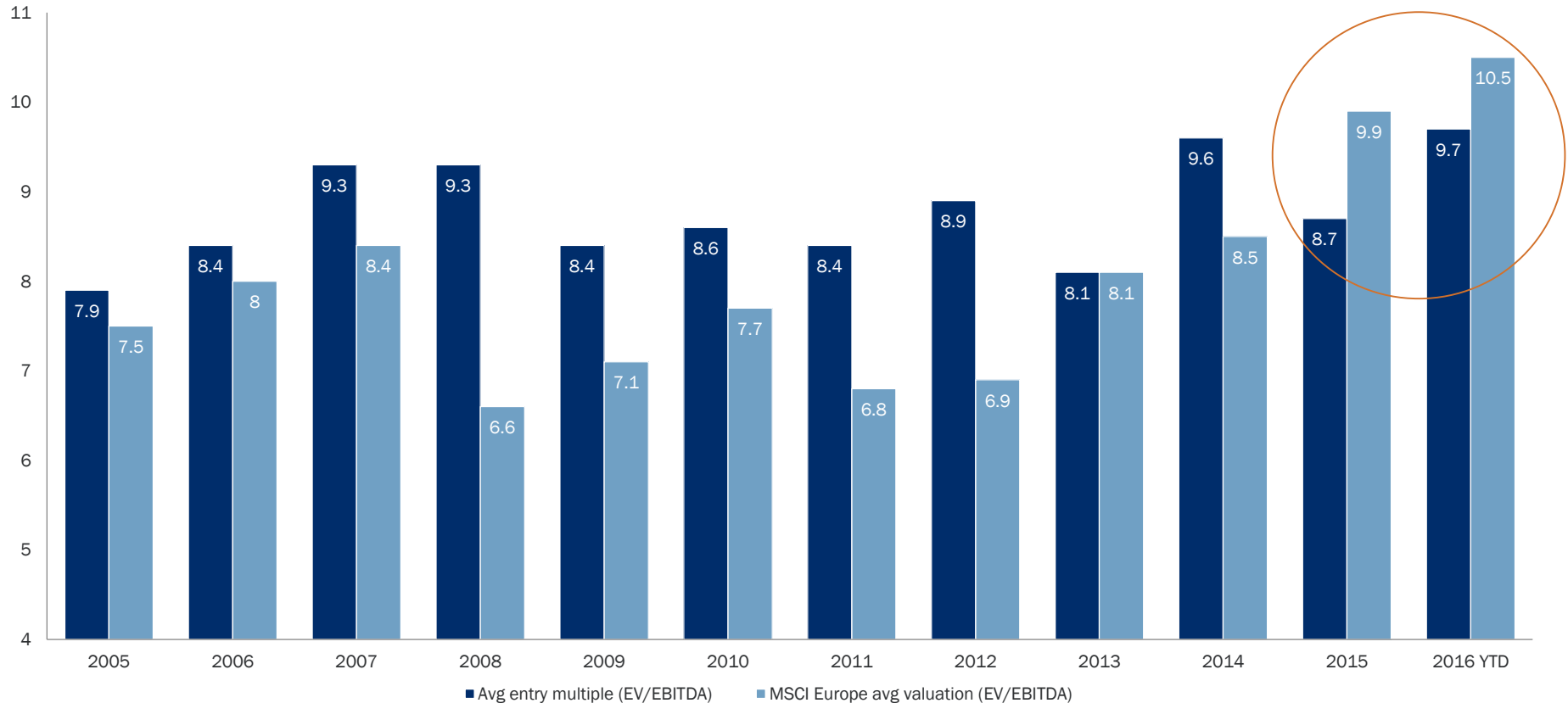
Note: 1) Defined as sum of all IPOs and sales minus acquisitions of new businesses, includes all deals >\$100MM. As of 11 May 2016.

2) Includes all deals >\$100MM. As of 11 May 2016.



# PE SHOPS GETTING PRICED OUT BY EQUITY MARKETS

European LBO average annual entry multiple vs MSCI Europe average annual valuation multiple



Source: Morgan Stanley, Astellon calculations

1) Avg. entry multiple throughout the 2005 – 2016 cycle for PE was 8.8x or a 10% premium (0.8x multiple turns vs the equity market)

# IPO AFTER-MARKET PERFORMANCE REMAINS UNDERWHELMING

EU IPO Index<sup>1</sup> vs SXXP since Mar-09 rebased to 100

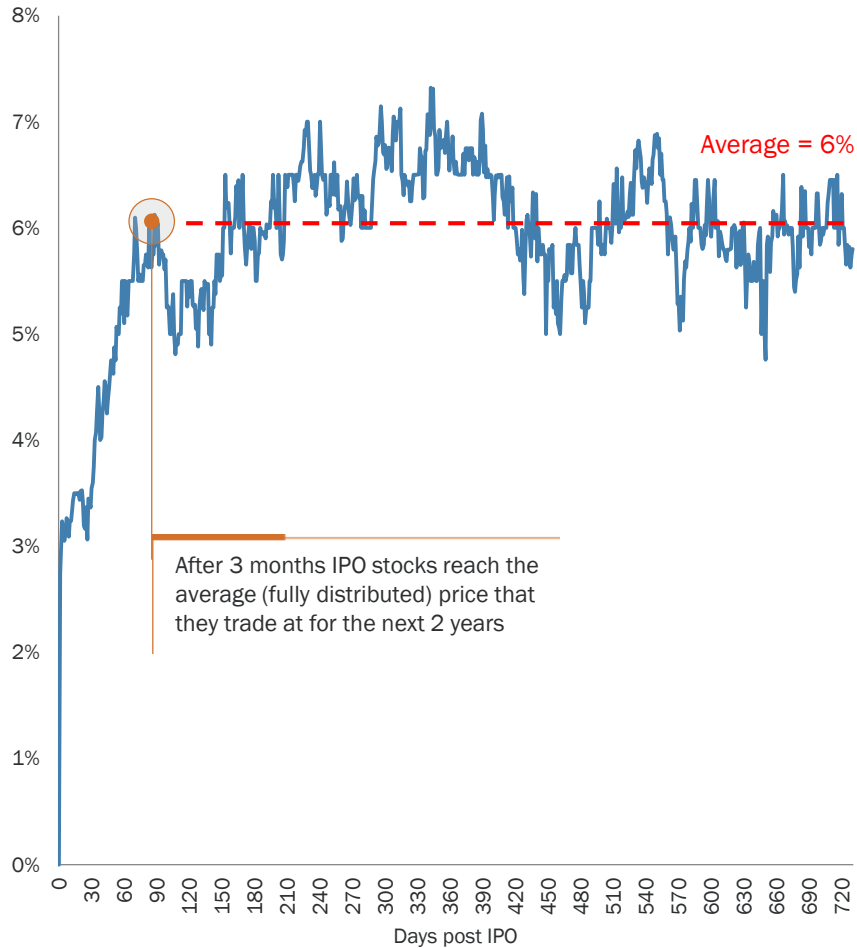


Source: Bloomberg, Astellon calculations

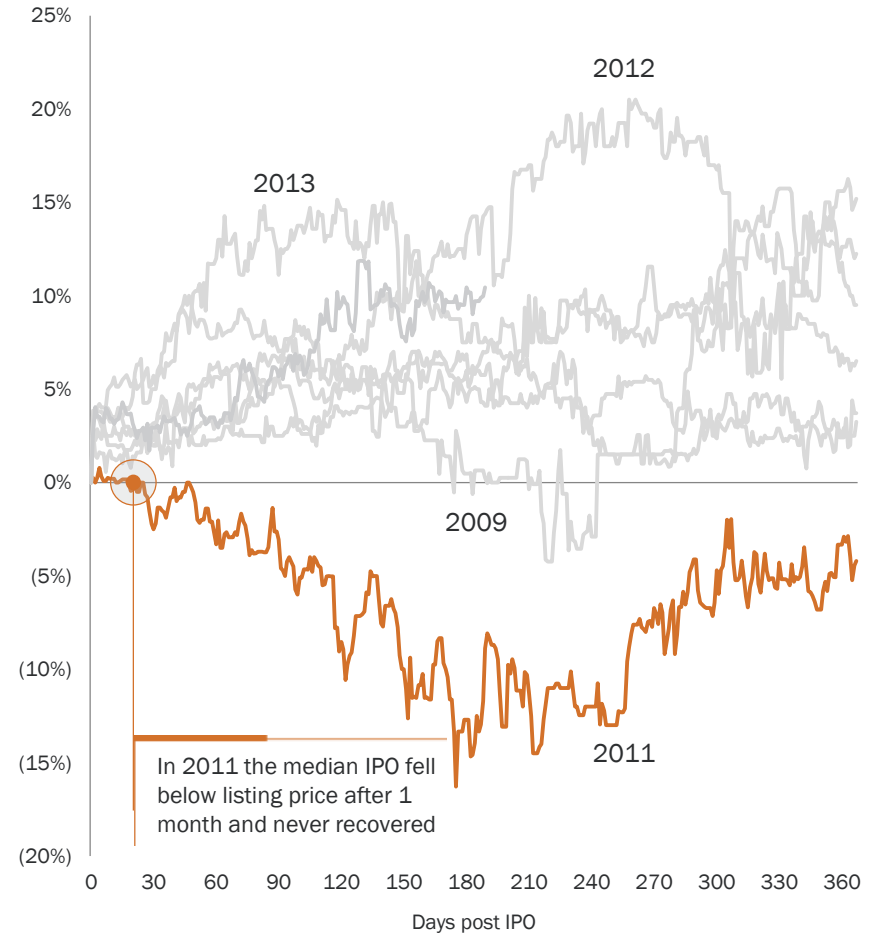
1) The Bloomberg European IPO Index is a capitalization-weighted index of companies with a market value of at least €50mm at the time of IPO. It measures these companies' performance during their first publicly traded year

# EUROPEAN IPO STOCKS STOP PERFORMING AFTER JUST 3 MONTHS

Median W. European IPO performance 2009 – 2016



Median W. European IPO performance by vintage year



Source: Bloomberg (as of 17 Nov 2016), Astellon calculations

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For more information:

**Astellon Capital Partners, LLP**

Investor Relations

[InvestorRelations@astelloncapital.com](mailto:InvestorRelations@astelloncapital.com)



**ASTELLON**  
CAPITAL PARTNERS

Astellon Capital Partners LLP | 100 Brompton Road, 5th Floor | London | SW3 1ER  
T: +44 (0)203 140 8180  
[www.astelloncapital.com](http://www.astelloncapital.com)

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