

# Equity Primary Markets and Trading Report

European market data update

1H: 2017



# Table of Contents

<b>Detailed findings and commentary</b> .....	<b>5</b>
Year-to-date variation of European Equity activity (EU 28 member countries and Switzerland).....	3
European Equity activity .....	4
European follow-on issuance: 1H (EURbn).....	5
Number of European IPOs filed.....	5
% of IPOs withdrawn or postponed relative to deals filed: 1H .....	5
Daily European equity turnover and market-implied volatility (VSTOXX) .....	6
% of dark trading of selected equity indices.....	6
Leveraged and unleveraged M&A (EURbn).....	6
Inbound M&A (EURbn).....	6
EURbn deal value of European M&A “megadeals” (>\$10bn): 1H.....	7
Valuation multiples of European M&A: Enterprise value/sales and Price-to-earnings ratio.....	7
<b>Major upcoming regulatory, legislative and policy initiatives</b> .....	<b>7</b>
<b>1 Issuance</b> .....	<b>8</b>
1.1 Equity issuance on European exchanges (EUR bn): 1H.....	8
1.2 Equity issuance by listing market: 1H 2017 (EUR bn) .....	8
1.3 Follow on proceeds and number of deals (EUR bn).....	9
1.4 IPOs proceeds and number of deals (EUR bn).....	9
1.5 IPO proceeds by industry of issuer: 1H 2017 (EUR mn) .....	9
1.6 IPO proceeds by listing market (EUR mn): 1H17.....	9
1.7 IPO proceeds by proportion of exercised overallocation (EUR bn): 1H17. # of IPOs on brackets.....	9
1.8 Number of IPOs by market value of issuer (pre-deal market value): 1H17 .....	10
1.9 Equity issuance on European Jr markets: 1H17 (EUR mn) .....	10
1.10 Equity issuance on Jr markets (EUR mn): 1H .....	10
1.11 Number of IPOs on Jr markets by market value of issuing firm (pre-deal market value): 1H17 .....	10
1.12 IPOs on Jr markets by industry of issuer (EUR mn): 1H17.....	10
<b>2 Mergers and Acquisitions</b> .....	<b>11</b>
2.1 Completed M&A by acquiring party: 1H.....	11
2.2 Completed M&A by type of deal: 1H.....	11
2.3 Deal value of completed European M&A deals (€ bn).....	11
2.4 Announced M&A: 1H .....	12
2.5 Withdrawn M&A: 1H .....	12
2.6 Inbound European M&A by acquirer region (EURbn): 1H17.....	12
2.7 Outbound European M&A by target region (EURbn): 2Q17 .....	12
2.8 Average days to complete M&A.....	13
2.9 Index: Withdrawn relative to completed M&A: 1H .....	13
2.10 Completed M&A by industry of target firm (EUR bn): 2Q 2017 .....	13
2.11 Completed intra-European M&A transactions by location of acquiring and target company (1H 2017, EUR mn) .....	14
2.12 Value of completed M&A transactions by size of deal (EUR bn) .....	14
<b>3 Market capitalisation and trading</b> .....	<b>15</b>
3.1 Domestic market capitalisation of listed shares (EUR Tn) .....	15
3.2 Euro area market capitalisation of listed shares (EUR Tn).....	15
3.3 Number of companies listed on European exchanges.....	15
3.4 Domestic market capitalisation of listed shares relative to GDP (%) .....	15
3.5 Turnover ratio of European shares: Dark and Lit (Annualised turnover value/Market capitalisation) .....	15
3.6 Quarterly turnover on European Exchanges and MTFs (EUR tn).....	15
3.7 Dark trading relative to total turnover on Exchanges and MTFs (%).....	16
3.8 Dark trading of indexed shares as proportion of total turnover (dark and lit)- selected indices .....	16
3.9 Monthly turnover value on European exchanges and MTFs (EUR bn).....	16
3.10 Daily turnover value on European exchanges and MTFs (EUR bn) .....	16
3.11 Number of companies listed on European exchanges.....	17
<b>4 Valuation indices and ratios</b> .....	<b>18</b>
4.1 Price indices of selected stock exchanges (Dec 2016 = 100).....	18
4.2 Price per earnings ratio (PE ratio) of shares listed on selected exchanges .....	18
4.3 Price-to-book ratio of Stoxx 600 constituent shares and EU average.....	18
4.4 Dividend payout ratio of shares listed on selected exchanges (Dividends/Earnings per share).....	18
4.5 Dividend yield ratio of shares listed on selected exchanges (Dividend/Price) .....	18
4.6 Implied volatility of Euro Stoxx 50 constituent shares (VSTOXX).....	18
<b>Summary of the Methodologies Adopted for this Report</b> .....	<b>19</b>
<b>Annex</b> .....	<b>23</b>

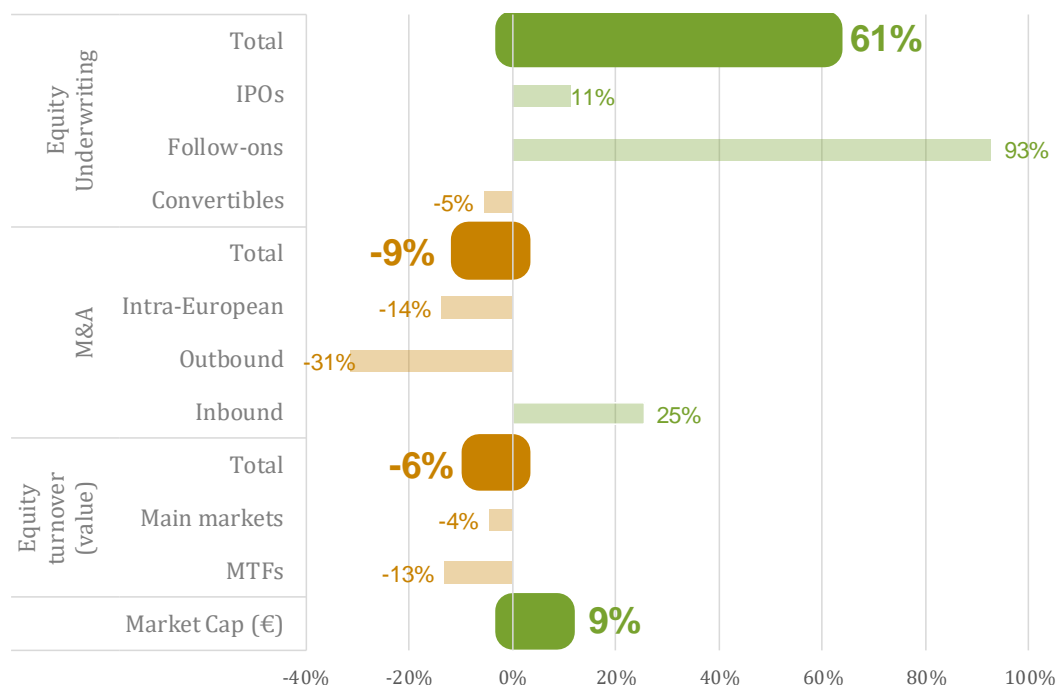
## Highlights

## Updated statistics on equity primary markets and trading in Europe (EU 28 member countries and Switzerland)

### Main findings:

- **Equity underwriting** on European exchanges accumulated a total of €127.9 bn in proceeds in the first half of 2017, a 61% increase from the value originated in 1H 2016 (€79.7 bn). Equity underwriting encompasses Initial Public Offerings (IPOs), convertible securities and follow-on offerings.
- **Completed Mergers and Acquisitions (M&A) of European companies<sup>1</sup>** totalled €476.9 bn in 1H 2017, a decrease of 9% from the value completed in 1H 2016 (€ 521.5 bn).
- **Equity trading activity** on European main markets and MTFs generated a total of €6.0 tn in turnover value in 1H 2017, a decrease of 6% from the value traded in 1H 2016 (€ 6.3 tn).
- **Market capitalisation** of European listed shares<sup>2</sup> stood at € 13.2 tn at the end of 1H 2017, an increase of 9% from the market value at the end of 2016 (€12.1 tn).

### Year-to-date variation of European Equity activity (EU 28 member countries and Switzerland)



Source: Dealogic, Bats Chi-X, FESE, World Federation of Exchanges, LSEG, ECB, NASDAQ Nordic, Bucharest Stock Exchange and CESEEG - Prague

**Underwriting and M&A data retrieved for this report on 10 July 2017**

<sup>1</sup> Completed M&A between European firms as acquiring or target companies

<sup>2</sup> Domestic market capitalisation of listed shares on European exchanges (EU28 member states and Switzerland).

## European Equity activity (EU 28 and Switzerland)

	1Q 17	2Q 17	3Q 17	4Q 17	2017 FY	1Q 16	2Q 16	3Q 16	4Q 16	2016 FY	% Change YoY	% Change QoQ
<b>Equity underwriting (€ bn)</b>	<b>57.1</b>	<b>70.8</b>			<b>127.9</b>	<b>28.7</b>	<b>51.0</b>	<b>27.0</b>	<b>40.4</b>	<b>147.0</b>	<b>39%</b>	<b>24%</b>
IPOs	5.0	12.0			17.0	3.7	11.6	4.0	9.8	29.0	3%	140%
Follow-on offerings	44.7	53.6			98.3	17.3	33.7	19.2	24.3	94.5	59%	20%
Convertible securities	7.4	5.2			12.6	7.7	5.7	3.8	6.3	23.5	-8%	-29%
<b>Mergers and Acquisitions (€ bn)</b>	<b>209.1</b>	<b>267.8</b>			<b>476.9</b>	<b>287.4</b>	<b>234.1</b>	<b>201.7</b>	<b>306.2</b>	<b>1,029.4</b>	<b>14%</b>	<b>28%</b>
European outbound	39.3	62.1			101.3	52.9	94.7	31.3	31.7	210.6	-34%	58%
European inbound	64.7	103.4			168.1	64.4	69.7	79.7	62.1	275.8	48%	60%
Intra European	105.1	102.3			207.4	170.2	69.7	90.8	212.3	543.0	47%	-3%
<b>Equity turnover value (€ tn)</b>	<b>2.93</b>	<b>3.03</b>			<b>6.0</b>	<b>3.3</b>	<b>3.0</b>	<b>2.6</b>	<b>2.85</b>	<b>11.8</b>	<b>0%</b>	<b>3%</b>
Main Markets	2.27	2.37			4.6	2.57	2.29	1.96	2.19	9.0	4%	4%
MTFs	0.65	0.66			1.3	0.76	0.75	0.66	0.66	2.8	-12%	1%
<b>Market Capitalisation of domestic listed shares (€ tn)</b>												
European (EU28 and Switzerland)	12.9	13.2			13.2	11.4	11.1	11.6	12.1	12.1	19%	2%
EU 28	11.5	11.7			11.7	10.1	9.8	10.3	10.8	10.8	19%	2%
Euro Zone	7.5	7.8			7.8	6.4	6.2	6.6	7.0	7.0	25%	4%

Source: Dealogic, Bats Chi-X, FESE, World Federation of Exchanges, LSEG, ECB, NASDAQ Nordic and Baltic, Bucharest Stock Exchange and CEESEG-Prague

## Detailed findings and commentary

### Detailed findings

#### Equity issuance: return to normal

Equity underwriting on European exchanges totalled €127.9bn in proceeds in the first half of 2017, an increase of 61% compared to the volume issued in 1H 2016.

The increase, supported by all-time low market volatility conditions<sup>3</sup>, was led by a 93% year-to-date (YtD) growth in secondary (follow-on) offerings and an increase of 11% YtD in proceeds from primary offerings (IPOs). Convertible securities declined 5% on a year-to-date basis.

The YtD volume of secondary offerings was the highest observed since 2009, continuing the gradual recovery since the financial crisis only momentarily interrupted by the abnormal market conditions of the first half of last year (i.e. bank volatility episode in 1Q16 and Brexit in 2Q16). See chart on left panel.

IPO activity also contributed to the increased volume in equity origination, with a growing number of IPO deals filed over the last 12 months— from 40 deals during 3Q16 to 94 in 2Q17 (see chart on left panel).

The proportion of primary offerings filed but withdrawn or postponed also declined compared to last year, illustrating the favourable conditions for equity raising and contributing to the pipeline of upcoming equity raising for the second half of the year. See chart on bottom left panel.

By exchanges, the LSE (main market and AIM) led by total issuance activity with €27.8bn in equity raised during 1H 2017, closely followed by Euronext (€27.7bn) and the Deutsche Börse (€21.6bn).

SMEs also seized the opportunity of the favourable market conditions to increase equity capital on Jr markets (i.e. markets with less onerous listing requirements for SME companies). Equity issuance on Jr markets totalled €6.6bn in 1H 2017, an increase of 33.6% from the volume issued in the first half of 2016, with London AIM (€3.7bn) and NASDAQ OMX (€1.5bn) the most active markets for SMEs during the period. See charts 1.8-1.12 in the report.

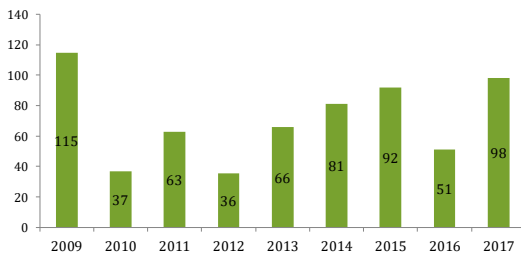
#### Decline in European equity trading amid low market volatility

A total of €6.0tn in equity shares were traded on European venues in the first half of 2017, a decrease of 6% from €6.3tn traded in 1H 2016.

The decline can be in part attributed to the more stable market conditions during the first half of the year for European equity markets. This contrasts with the same

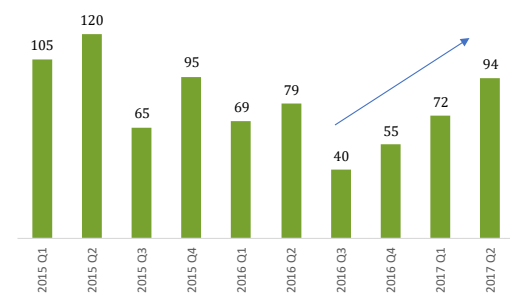
*“Equity underwriting on European exchanges totalled €127.9bn in proceeds in the first half of 2017, an increase of 61% YtD”*

#### European follow-on issuance: 1H (EURbn)



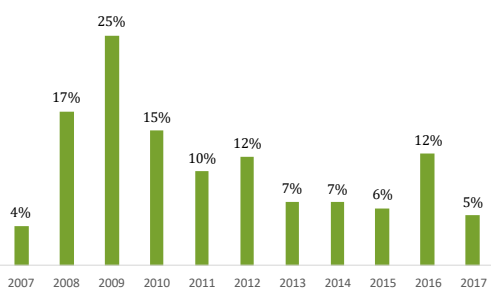
Source: Dealogic

#### Number of European IPOs filed



Source: Dealogic

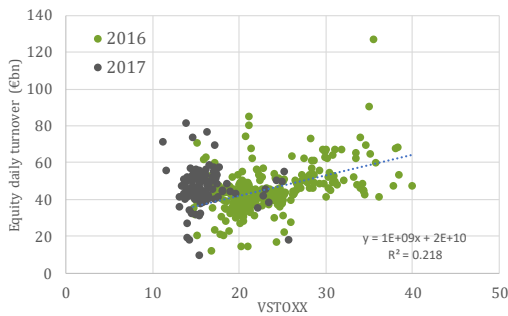
#### % of IPOs withdrawn or postponed relative to deals filed: 1H



Source: Dealogic

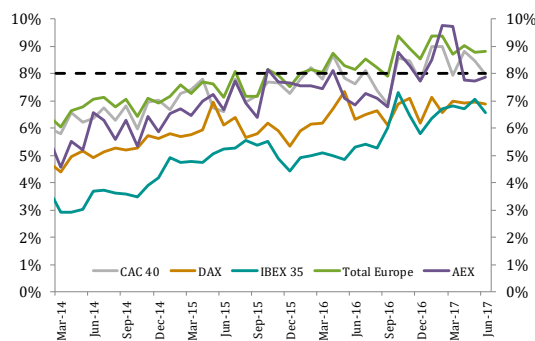
<sup>3</sup> Market-implied volatility (VSTOXX) reached a record-low level of 11.167 in March 2017

### Daily European equity turnover and market-implied volatility (VSTOXX)



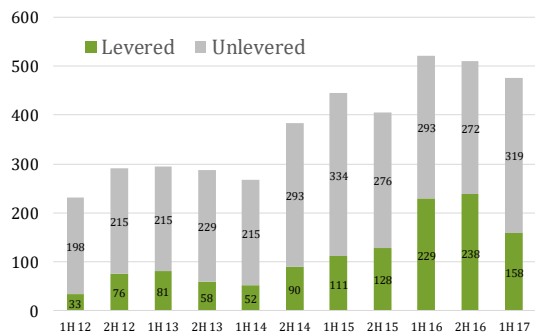
Source: STOXX and BATS Global markets

### % of dark trading of selected equity indices



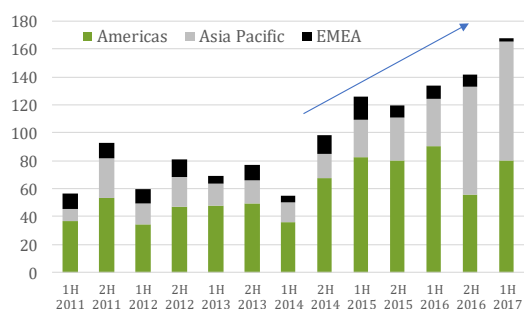
Source: BATS Global Markets

### Leveraged and unleveraged M&A (EURbn)



Source: Dealogic

### Inbound M&A (EURbn)



Source: Dealogic

period of last year when trading volumes were associated with equity market volatility after the unfounded concerns on the CoCo market in 1Q16 and the Brexit vote in 2Q16. Market-implied volatility indices stood at 27.1 on average in 1H 2016 and 15.8 in 1H 2017. See chart on top left panel.

**Trading by type of order book:** Dark trading represented 9% of total equity turnover on main markets and MTFs.

By markets, the proportion of dark trading of FTSE 250 and FTSE 100 indexed companies has stabilised at c15% and c11% respectively since 2014 (see section 3 of the report). In other markets such as for companies indexed on AEX, DAX, CAC40 or IBEX35, the proportion of dark trading relative to total turnover has grown since 2014, although with signs of stabilising over the last 10 months at proportions between 7-8%. See graph on left panel.

### Lower M&A activity, notwithstanding growing inbound transactions and ‘megadeals’

**In 1H 2017, 5,943 M&A deals were completed in Europe<sup>4</sup>. The volume represented a total of €476.9bn in deal value<sup>5</sup>, a decrease of 9% from 1H 2016 (€521.5bn).**

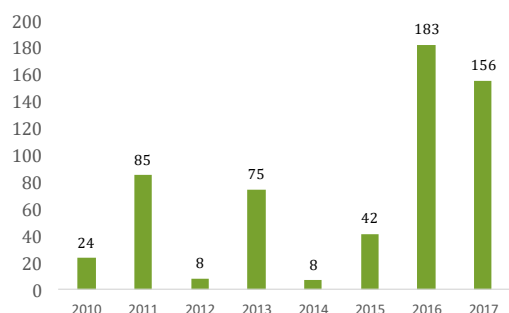
**The decline was driven by fewer leveraged M&A transactions** which in 1H 2017 accumulated €158bn in deal value, 31% below the volume of 1H 2016 (€229bn). The decline occurs in the context of markets anticipating monetary normalisation and long-term benchmark yields rising above the ultra-low levels of 2016. See graph on left panel.

**The decrease in M&A activity was notwithstanding the growing participation of inbound M&A transactions,** which accumulated a total of €168.1bn in 1H 2017, 25.4% above the volume observed in 1H 2016 (€134bn) and 205% above 1H 2014 (€55bn). The growth of inbound M&A has been driven by acquisitions from Asia-Pacific (APAC) firms, which have grown by 222% over the last three years (€26.4bn in 1H 2014 to €86.0bn in 1H 2017). Acquisitions by Chinese firms represented 33% of total inbound M&A in 1H 2017, compared to 7% in 1H 2014. See chart on left panel.

**‘Megadeals’ (completed deal value above \$10bn) have increasingly contributed to M&A activity over the last two years.** The completion of eight ‘megadeals’ in 1H 2017 represented 33% of total M&A activity during the first half of the year. This volume, however, was below that of 1H 2016 (€183bn or 35% of total volume) but significantly above the volume of previous years (€42bn in 1H 2015 and €8bn in 1H 2014). See chart on left panel in next page.

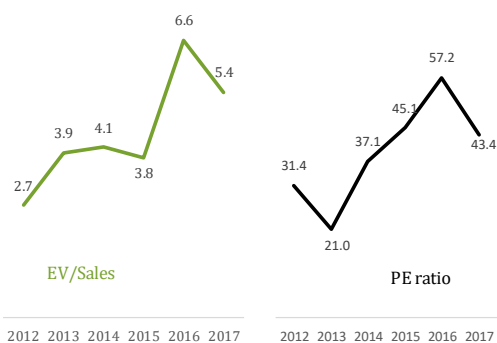
<sup>4</sup> Where either the target or the acquiring company were located in Europe  
<sup>5</sup> Including debt.

### EURbn deal value of European M&A “megadeals” (>\$10bn): 1H



Source: Dealogic

### Valuation multiples of European M&A: Enterprise value/sales and Price-to-earnings ratio



Source: Dealogic

**The 1H 2017 decline in M&A activity was coupled with lower valuation multiples of completed deals.** The ratio of Enterprise value to sales for completed European M&A deals peaked in 2016 at an average of 6.6x, compared with 5.4x for completed deals in the first half of 2017. Price-to-earnings ratios also declined from 57.2x for deals completed in 1H 2016 to 43.4x in 2017. See graph on bottom left panel.

**The volume of announced M&A deals decreased to €214bn during 1H 2017, compared with €361bn in deal volume announced in the same period of 2016.** The decline could suggest a further moderation in the volume of completed deals for upcoming quarters.

## Major upcoming regulatory, legislative and policy initiatives

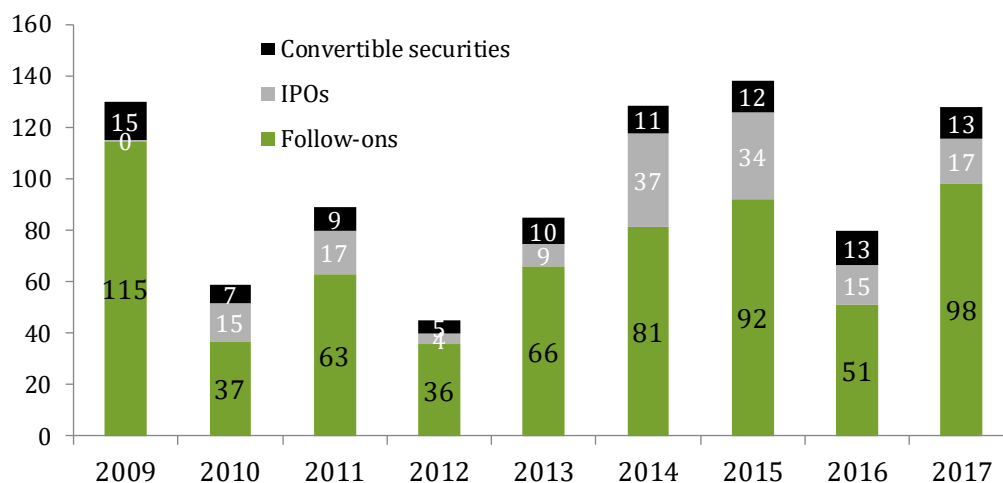
There are several regulatory changes that are currently being considered or implemented at the European and national level with expected impact on the equities trading and capital markets performance. Key developments include:

- MiFID II/R
- Market Abuse Directive/Regulation (MAD/MAR)
- FCA’s Wholesale competition review
- Basel III
- CSDR
- Prospectus Regulation
- Brexit

AFME and its members are actively contributing on all of these and other regulatory changes.

# 1 Issuance

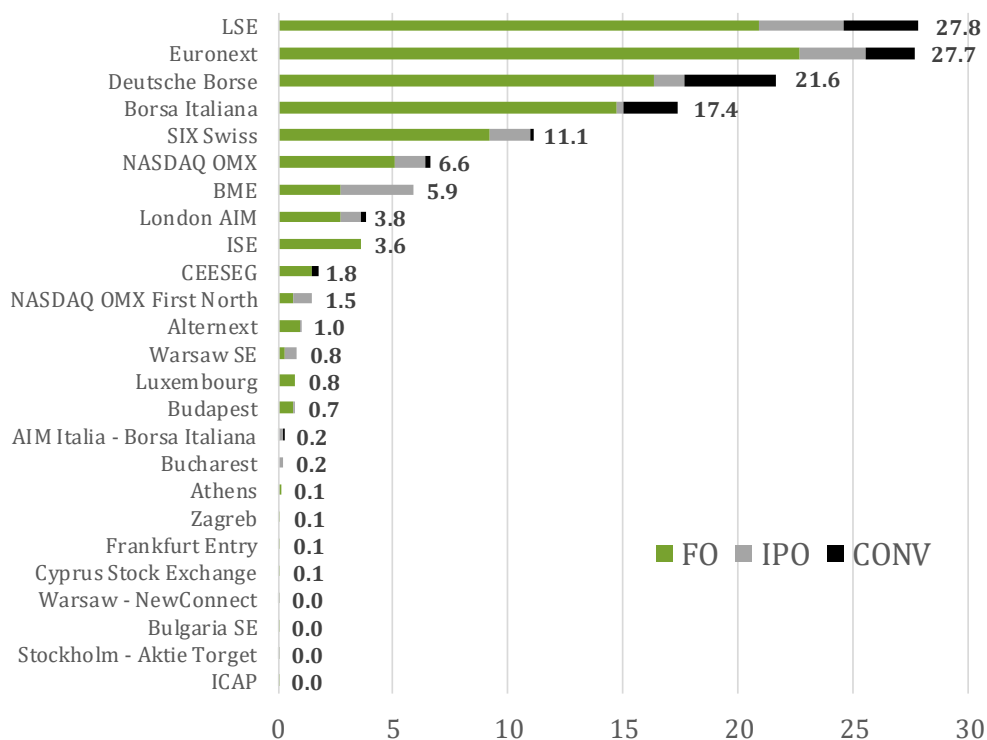
## 1.1 Equity issuance on European exchanges (EUR bn): 1H



Source: Dealogic

*The 61% YtD increase in equity issuance was largely driven by a 93% YtD growth in follow-on offerings*

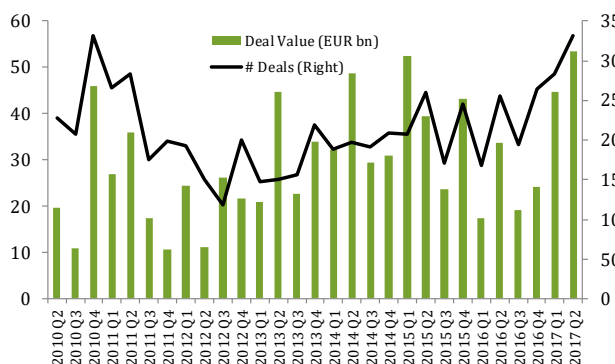
## 1.2 Equity issuance by listing market: 1H 2017 (EUR bn)



Source: Dealogic

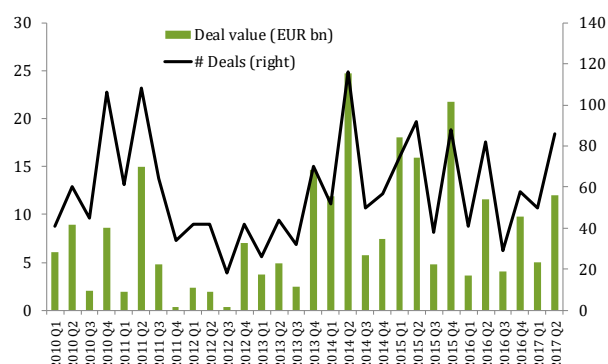


### 1.3 Follow on proceeds and number of deals (EUR bn)



Source: Dealogic

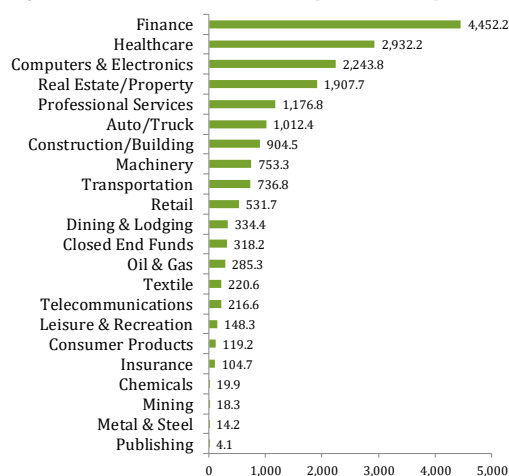
### 1.4 IPOs proceeds and number of deals (EUR bn)



Source: Dealogic

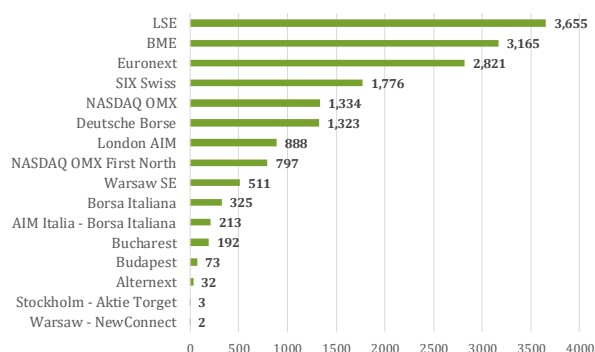
The LSE main market led by IPO proceeds in 1H17 with a total of €3.6bn in raised capital, followed by BME (€3.2bn)

### 1.5 IPO proceeds by industry of issuer: 1H 2017 (EUR mn)



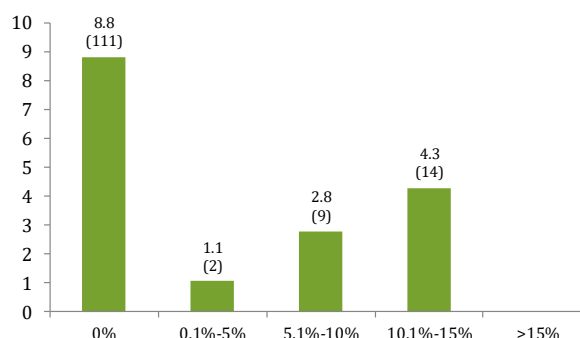
Source: Dealogic

### 1.6 IPO proceeds by listing market (EUR mn): 1H17



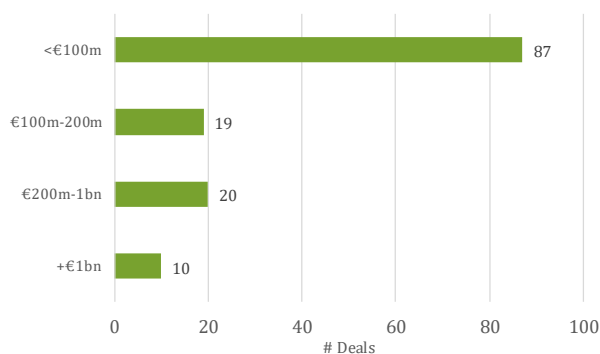
Source: Dealogic

### 1.7 IPO proceeds by proportion of exercised overallotment (EUR bn): 1H17. # of IPOs on brackets



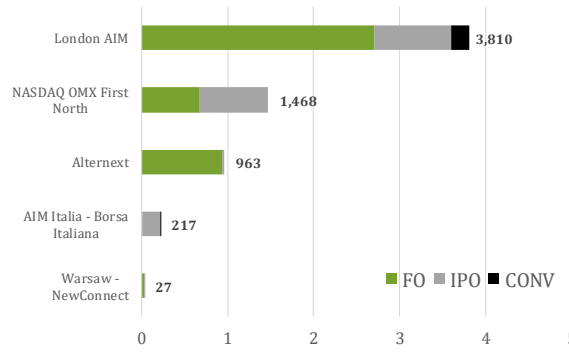
Source: Dealogic

### 1.8 Number of IPOs by market value of issuer (pre-deal market value): 1H17



Source: Dealogic

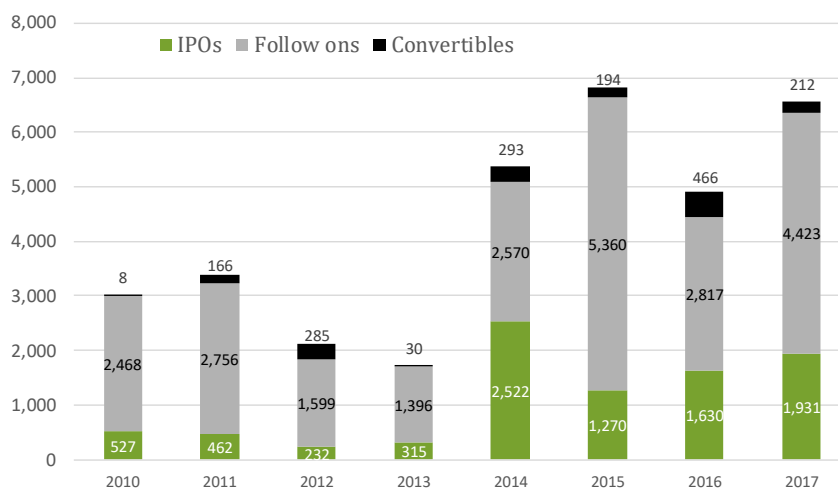
### 1.9 Equity issuance on European Jr markets: 1H17 (EUR mn)



Source: Dealogic

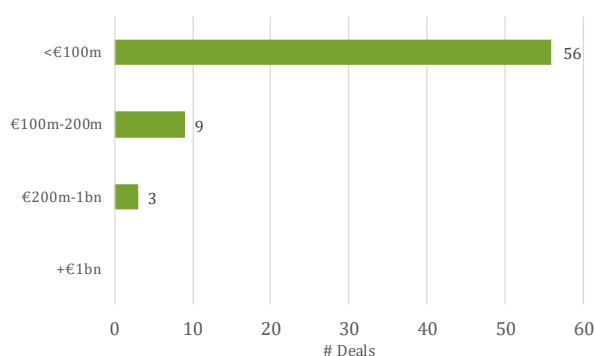
*Equity raised on junior markets totalled €6.6bn in 1H17, an increase of 33.6% from the volume issued in 1H16*

### 1.10 Equity issuance on Jr markets (EUR mn): 1H



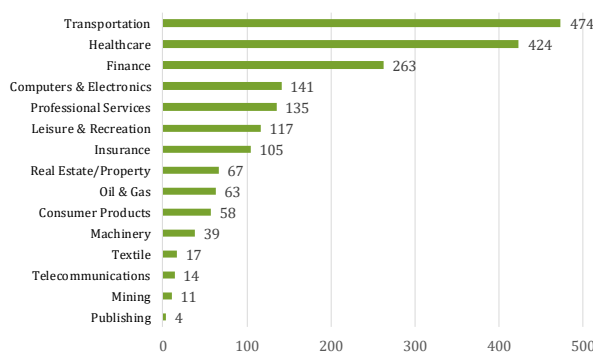
Source: Dealogic

### 1.11 Number of IPOs on Jr markets by market value of issuing firm (pre-deal market value): 1H17



Source: Dealogic

### 1.12 IPOs on Jr markets by industry of issuer (EUR mn): 1H17



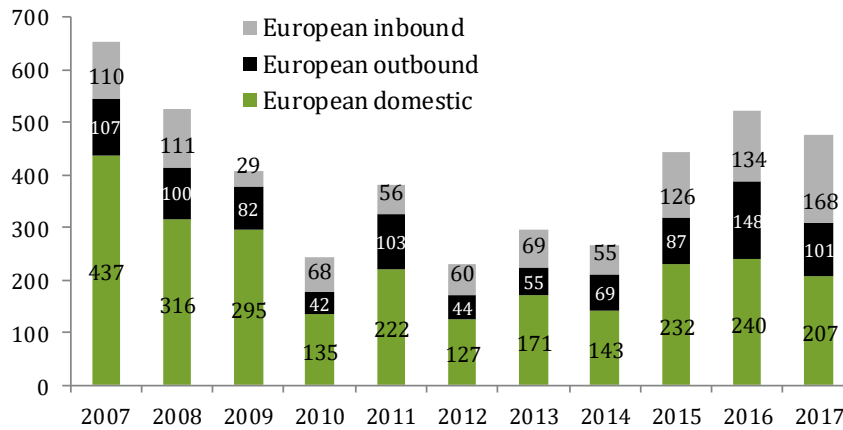
Source: Dealogic

## 2 Mergers and Acquisitions

### Deals where the target or the acquiring company is located in Europe

€ BILLIONS

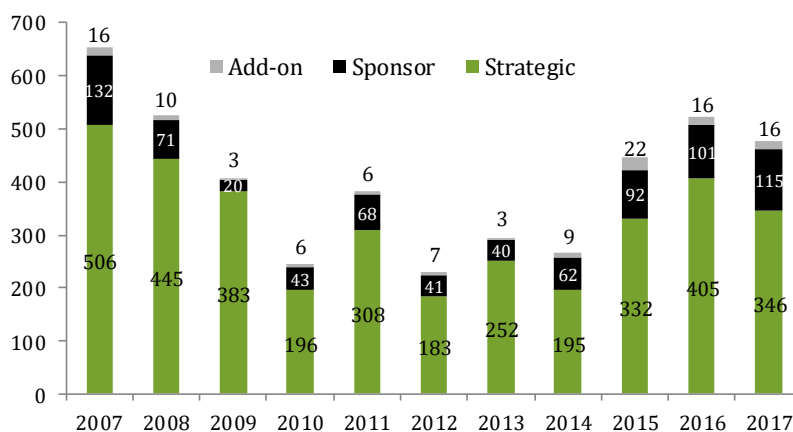
#### 2.1 Completed M&A by acquiring party: 1H



Source: Dealogic

*M&A decreased 9% YtD due to fewer outbound deals partially offset by a 25% growth of inbound M&A*

#### 2.2 Completed M&A by type of deal: 1H



Source: Dealogic

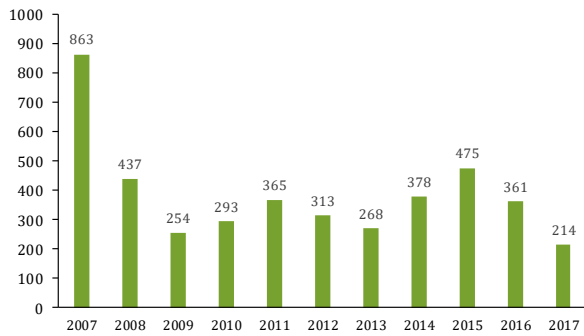
#### 2.3 Deal value of completed European M&A deals (€ bn)

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	2017	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	QoQ growth (%)	YoY growth (%)
Strategic	124.6	221.3			346.0	219.9	185.4	153.4	252.9	811.7	19%	19%
Sponsor	78.3	36.9			115.2	59.0	41.6	38.3	35.0	173.9	-53%	-11%
Add-on	6.2	9.6			15.7	8.5	7.1	10.0	18.3	43.8	55%	35%
<b>TOTAL</b>	<b>209.1</b>	<b>267.8</b>			<b>476.9</b>	<b>287.4</b>	<b>234.1</b>	<b>201.7</b>	<b>306.2</b>	<b>1,029.4</b>	<b>28%</b>	<b>14%</b>
European outbound	39.3	62.1			101.3	52.9	94.7	31.3	31.7	210.6	58.1%	-34%
European inbound	64.7	103.4			168.1	64.4	69.7	79.7	62.1	275.8	59.7%	48%
European domestic	105.1	102.3			207.4	170.2	69.7	90.8	212.3	543.0	-2.6%	47%
<b>TOTAL</b>	<b>209.1</b>	<b>267.8</b>			<b>476.9</b>	<b>287.4</b>	<b>234.1</b>	<b>201.7</b>	<b>306.2</b>	<b>1,029.4</b>	<b>28.1%</b>	<b>14%</b>

Source: Dealogic

€ BILLIONS

2.4 Announced M&A: 1H<sup>6</sup>



Source: Dealogic

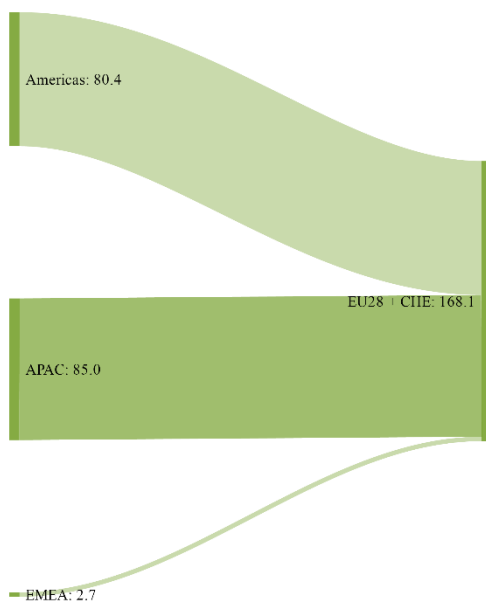
2.5 Withdrawn M&A: 1H<sup>7</sup>



Source: Dealogic

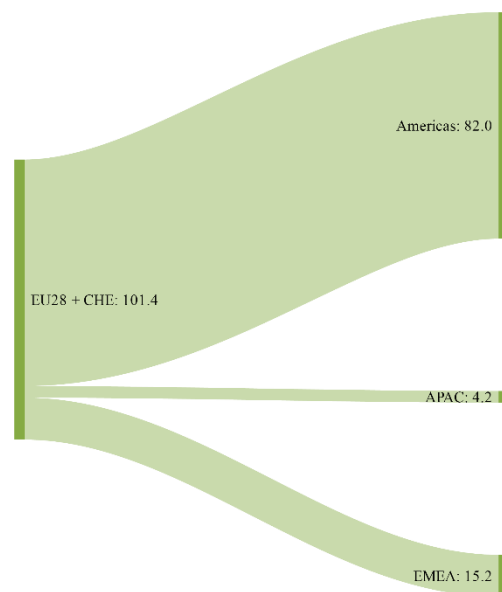
*51% of the inbound acquisitions of European firms were done by APAC firms. This contrasts with only 4% of outbound transactions of APAC companies by European firms*

2.6 Inbound European M&A by acquiror region (EURbn): 1H17



Source: Dealogic

2.7 Outbound European M&A by target region (EURbn): 2Q17



Source: Dealogic

<sup>6</sup> Announced deals include completed, pending completion or partially completed transactions. Values are presented at date of announcement.

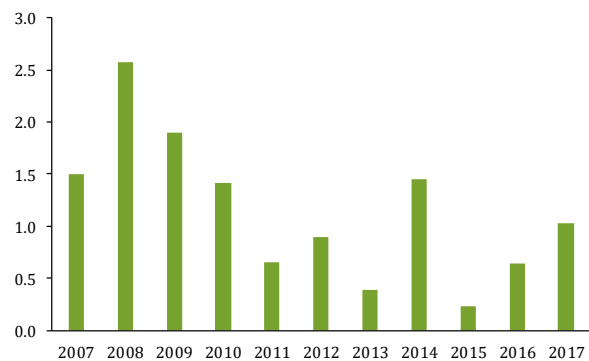
<sup>7</sup> Bids which were officially announced and subsequently withdrawn, not pursued, rejected or expired.

2.8 Average days to complete M&A



Source: Dealogic

2.9 Index: Withdrawn relative to completed M&A: 1H



Source: Dealogic

*For the M&A deals completed in 1H17, it took an average of 102 days to complete since the date of announcement*

2.10 Completed M&A by industry of target firm (EUR bn): 2Q 2017



Source: Dealogic

## 2.11 Completed intra-European M&amp;A transactions by location of acquiring and target company (1H 2017, EUR mn)

Acquirer Nationality	Target Nationality																														
	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	HE	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	CHE	UK	Total	
Austria	425	0	0	0					0	0	60		26		50					0			0		0			0	0	561	
Belgium	0	1,550	722						0	0	193				515					12					0	208			309	3,510	
Bulgaria			12								0																		0	12	
Croatia				43																					0					43	
Cyprus					0							40														0				40	
Czech Republic	0					4,544					0			135							11			0						4,691	
Denmark							593	0	6	0	0				0	0											9	836	0	1,444	
Estonia								6																							6
Finland								151	704	0	0																			909	
France	0	0				0	0		15	25,458	1,842		110	82	725			0		574	0	3	0				1,164	0	213	1,239	31,424
Germany	337	520		7		382	3		0	116	18,524	2,150	650	0	120	0		0	0	13	0	99	250			5,860	189	17	2,318	31,554	
Greece					10						0	349																			359
Hungary				425									605			0															1,030
Ireland							0			0	30			1,004	0					0		0						0	18	1,051	
Italy		0	0		0		0			80	41	0			5,961			0		5	4	16	401			116	0	27	90	6,741	
Latvia									0		0					0						1						0	0	1	
Lithuania							0	0			2						0					0									2
Luxembourg		0				0					12	125				11										115			0	431	
Malta										0	6												0						0	14	20
Netherlands		0					0		75	285	23									4,904	167	0	0				25	0	0	670	6,467
Poland						0				0	0						0					7,780				0					7,780
Portugal			1							0													458				69				528
Romania			0							0																		700			700
Slovak Republic				8									11																		19
Slovenia				0																											110
Spain										2,408	788	0		3	202					0	37	670					18,346	0	96	22,549	
Sweden	7	45				65	57	0	757	0	2,961		0	57				200	2	0	0	13				3	27,252	0	334	31,753	
Switzerland	0	1					0	0	0	103	17				0					269		0	0	0		34	0	3,916	318	4,658	
United Kingdom	0	90		0	301	2	8			104	1,961		57	216	26			0	0				10			784	258	224	44,316	49,561	
Total	768	2,206	735	483	311	4,992	661	157	1,556	28,565	26,573	2,539	1,460	1,439	7,967	18	0	169	200	6,984	8,000	1,247	1,375	0	110	26,724	27,710	5,233	49,772	207,426	

Source: Dealogic

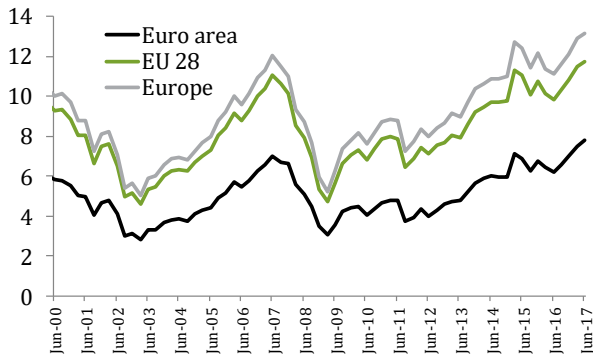
## 2.12 Value of completed M&amp;A transactions by size of deal (EUR bn)

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	2017	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	QoQ change	YoY change
Over	24.9	131.0			156.0	90.7	92.0	40.9	140.7	364.4	425%	42%
1bn to 10bn	95.4	72.4			167.8	117.0	61.5	86.1	85.3	349.8	-24%	18%
500m to 1bn	34.6	19.0			53.6	32.8	24.2	26.3	24.5	107.8	-45%	-22%
100m to 500m	41.1	34.7			75.8	35.4	42.4	36.5	42.8	157.0	-16%	-18%
Less than 100m	13.0	10.6			23.7	11.5	14.0	12.0	12.8	50.4	-18%	-24%
Total	209.1	267.8			476.9	287.4	234.1	201.7	306.2	1,029.4	28%	14%

Source: Dealogic

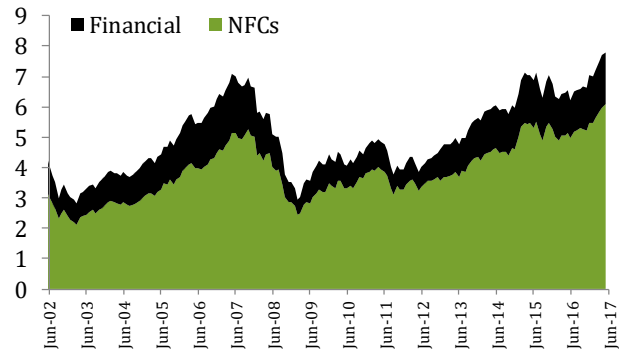
### 3 Market capitalisation and trading

#### 3.1 Domestic market capitalisation of listed shares (EUR Tn)



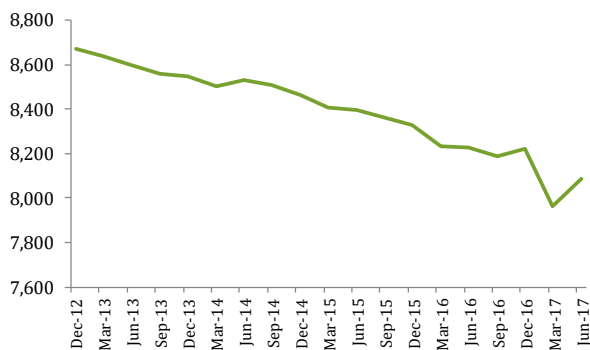
Source: ECB, Datastream, FESE, NASDAQ Nordic, LSEG, World Federation of Exchanges, Bucharest Stock Exchange and CEESEG – Prague

#### 3.2 Euro area market capitalisation of listed shares (EUR Tn)



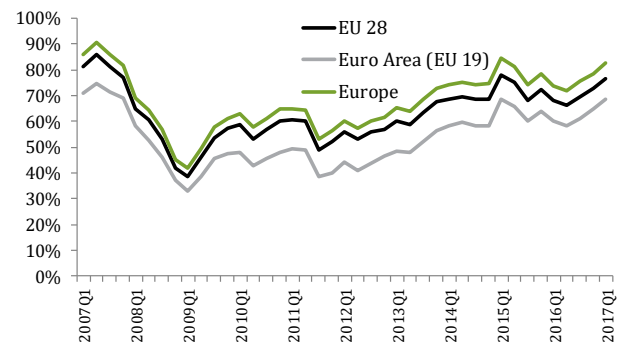
Source: ECB

#### 3.3 Number of companies listed on European exchanges<sup>8</sup>



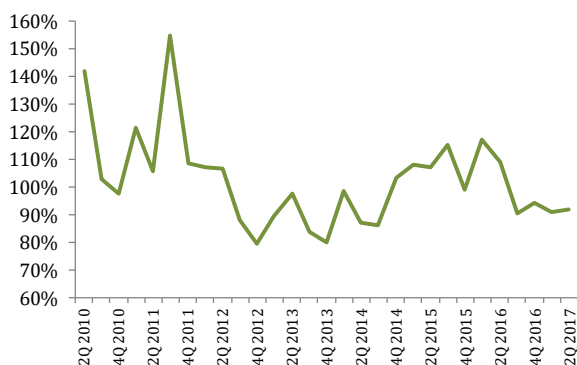
Source: ECB, Datastream, FESE, NASDAQ Nordic, LSEG, WFE, Bucharest Stock Exchange and CEESEG – Prague, Zagreb Stock Exchange

#### 3.4 Domestic market capitalisation of listed shares relative to GDP (%)<sup>9</sup>



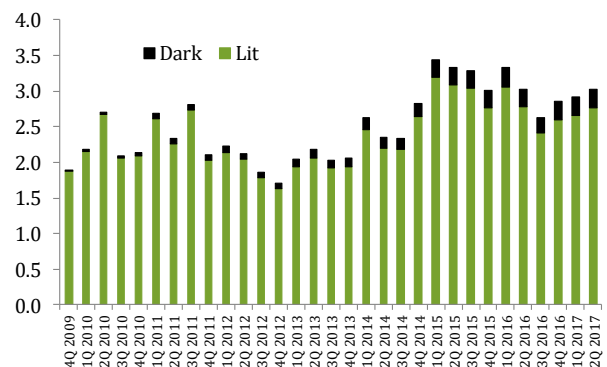
Source: ECB, Datastream, FESE, NASDAQ Nordic, LSEG, WFE, Bucharest Stock Exchange, CEESEG – Prague, Swiss Federal Statistical Office and Eurostat

#### 3.5 Turnover ratio of European shares: Dark and Lit (Annualised turnover value/Market capitalisation)



Source: BATS Global Markets, ECB, Datastream, FESE, NASDAQ Nordic, LSEG, WFE, Bucharest Stock Exchange and CEESEG - Prague

#### 3.6 Quarterly turnover on European Exchanges and MTFs (EUR tn)



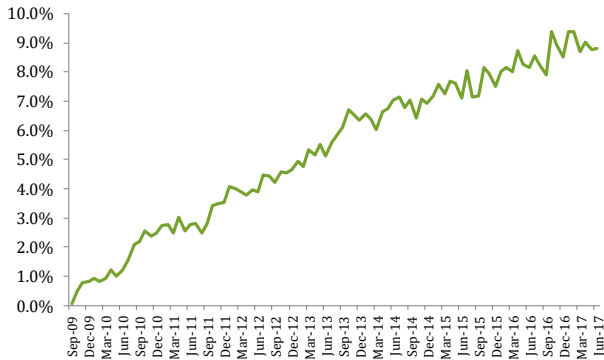
Source: Bats Global Markets

*Market cap finalised 1H 2017 above pre-crisis levels*

<sup>8</sup> Excludes ES Collective Investment Instruments (SIVACS). Includes Global markets segment in Vienna since 2Q2017.

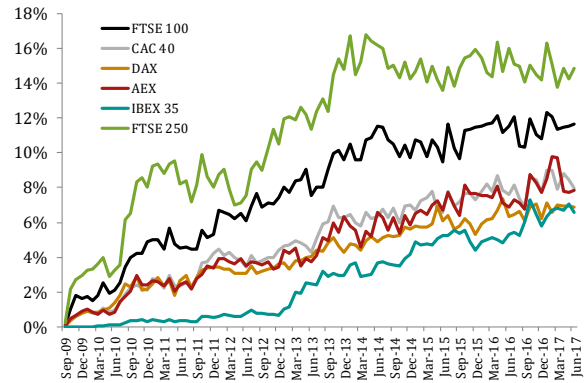
<sup>9</sup> GDP available only as of 1Q17. Europe refers to EU28 member states and Switzerland.

**3.7 Dark trading relative to total turnover on Exchanges and MTFs (%)**



Source: Bats Global Markets

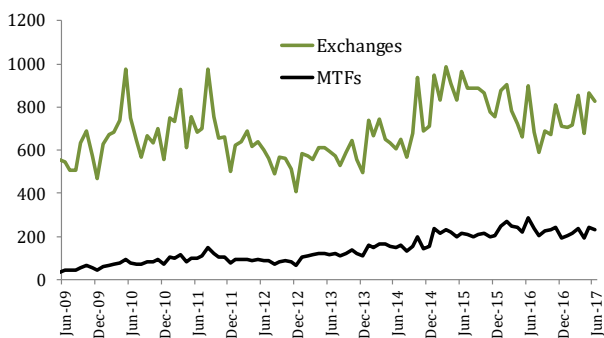
**3.8 Dark trading of indexed shares as proportion of total turnover (dark and lit)- selected indices**



Source: Bats Global Markets

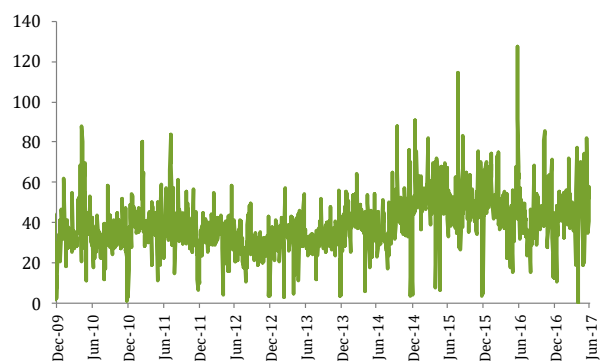
*The proportion of dark trading of European listed companies has stabilised since 2014 for FTSE-indexed companies*

**3.9 Monthly turnover value on European exchanges and MTFs (EUR bn)<sup>10</sup>**



Source: Bats Global Markets

**3.10 Daily turnover value on European exchanges and MTFs (EUR bn)<sup>11</sup>**



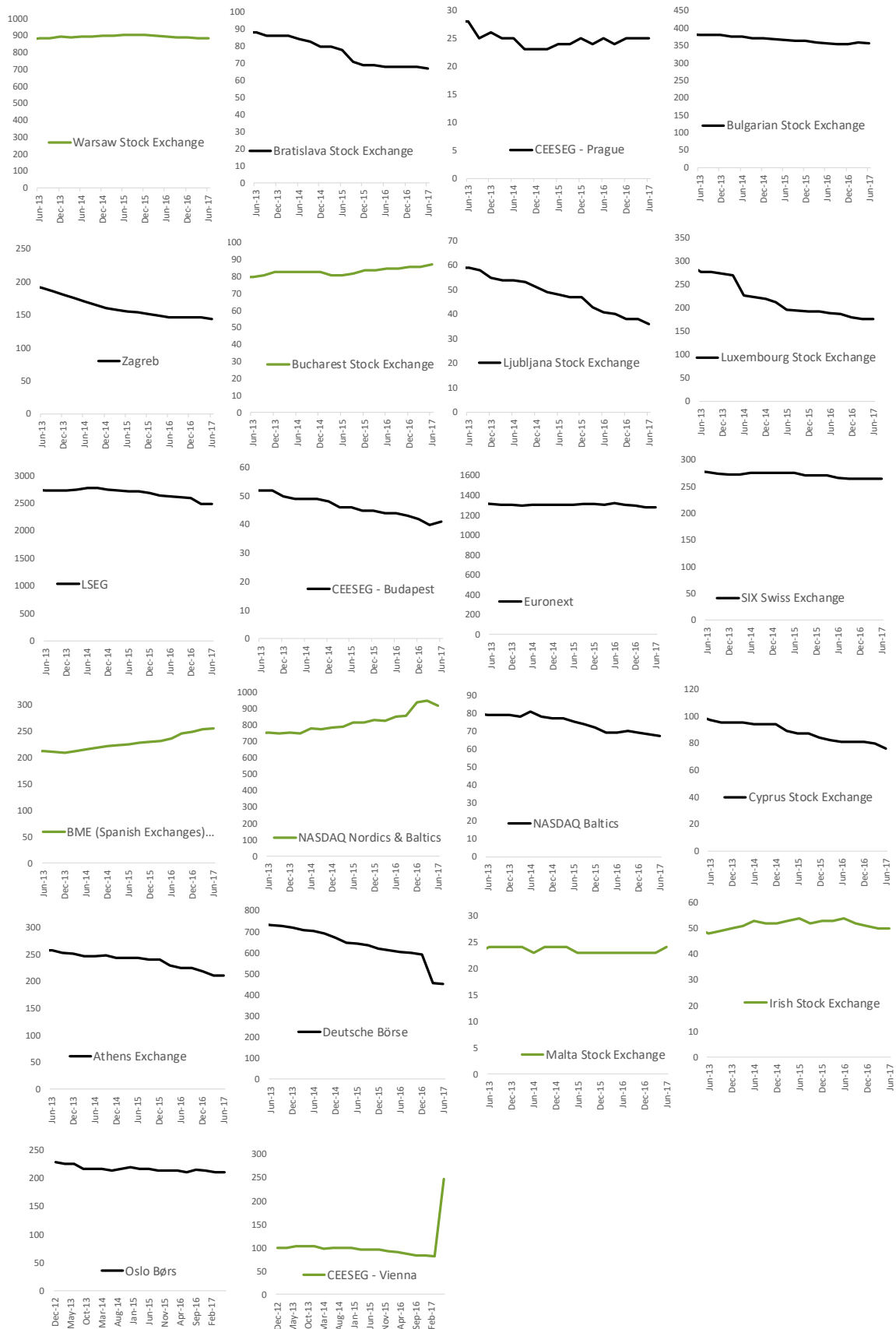
Source: Bats Global Markets

<sup>10</sup> Under MTFs, the following are aggregated: Aquis, BLINK MTF, Burgundy, Equiduct, ICAP BlockCross, Instinet Blockmatch, ITG Posit, Liquidnet, NEURO, Nomura NX, NYSE Arca, Pipeline, Quote MTF, SIGMA X MTF, SLS, Smartpool, TOM MTF, Turquoise and UBS MTF.

<sup>11</sup> Under MTFs, the following are aggregated: Aquis, BLINK MTF, Burgundy, Equiduct, ICAP BlockCross, Instinet Blockmatch, ITG Posit, Liquidnet, NEURO, Nomura NX, NYSE Arca, Pipeline, Quote MTF, SIGMA X MTF, SLS, Smartpool, TOM MTF, Turquoise and UBS MTF.



### 3.11 Number of companies listed on European exchanges<sup>12</sup>

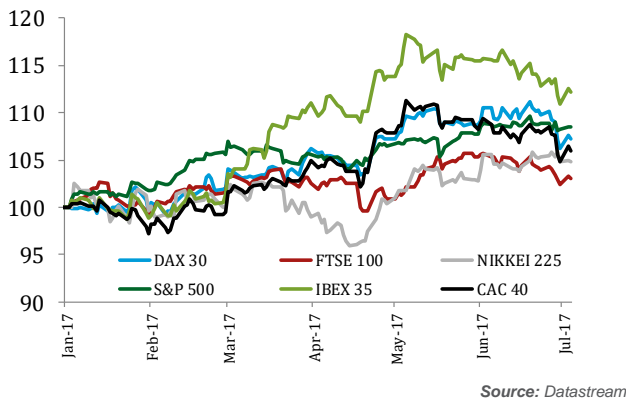


Source: FESE, NASDAQ Nordic, Nasdaq Baltic, LSEG, WFE, Euronext, Bucharest Stock Exchange and CEESeg – Prague, Zagreb Stock Exchange, BME

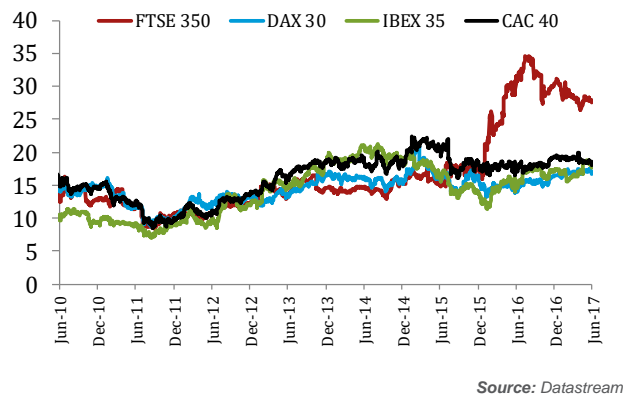
<sup>12</sup> In Spain, excludes open-end investment companies (3,045). Abrupt increase in number of listed companies of the Vienna stock exchange due to addition of Global markets segment to reported statistics.

## 4 Valuation indices and ratios

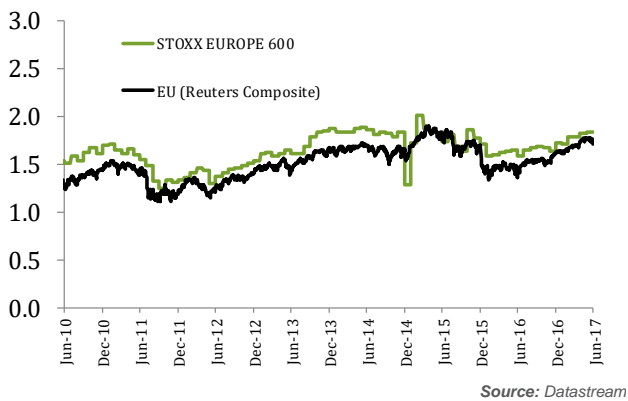
### 4.1 Price indices of selected stock exchanges (Dec 2016 = 100)



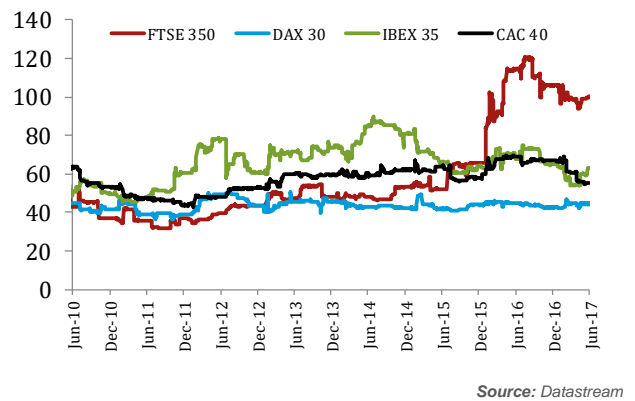
### 4.2 Price per earnings ratio (PE ratio) of shares listed on selected exchanges



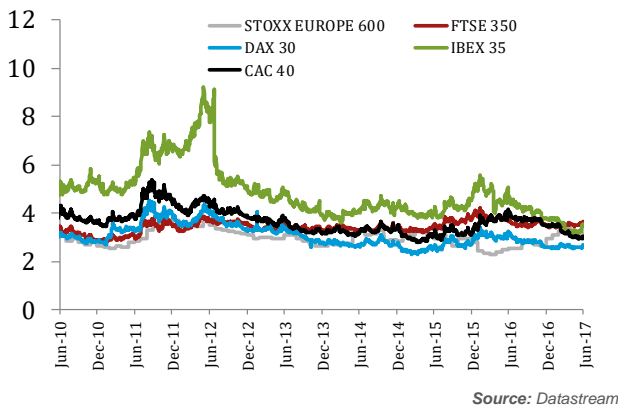
### 4.3 Price-to-book ratio of Stoxx 600 constituent shares and EU average



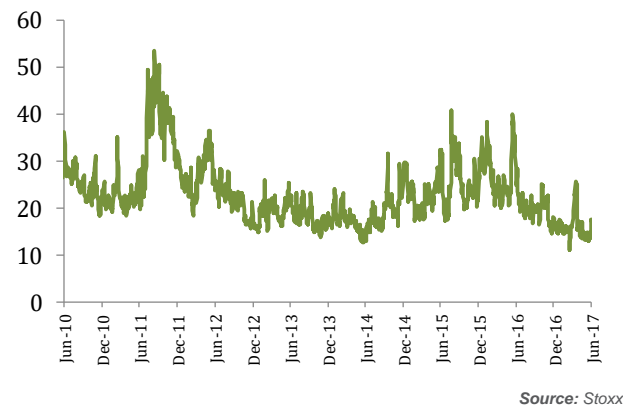
### 4.4 Dividend payout ratio of shares listed on selected exchanges (Dividends/Earnings per share)



### 4.5 Dividend yield ratio of shares listed on selected exchanges (Dividend/Price)



### 4.6 Implied volatility of Euro Stoxx 50 constituent shares (VSTOXX)



## Summary of the Methodologies Adopted for this Report

### 1. Issuance

#### 1.1. – 1.4. Equity underwriting

The graphs covering historical issuance in Europe are denominated in EUR billions.

Historical equity underwriting volumes are calculated by adding the proceeds from Initial Public Offerings (IPOs), Follow-On offerings and Convertible securities issued in exchanges located in the European Union (EU 28) + Switzerland.

The member countries of the European Union + Switzerland are maintained during the sample period. The group of countries include: Austria, Belgium, Bulgaria, Croatia, Republic of Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden the UK and Switzerland.

IPOs proceeds include over-allotment proceeds (greenshoe), although the value of proceeds is disaggregated in the supporting data file.

IPOs exclude “introductions” (listings unaccompanied by a sale of securities) and re-admissions.

Value and volume data are sourced from Dealogic. All figures comply with Dealogic’s standards of rank eligibility.

#### 1.5. -1.6, IPOs by exchange, nationality of the issuing company and industry of issuing company

Issuance values are denominated in nominal EUR billion. The figures illustrate the value of proceeds and number of deals of IPOs issued in European exchanges, aggregating by exchange, and industry of the issuing company.

The aggregated values include over-allotment proceeds (greenshoe).

Data are sourced from Dealogic comply with Dealogic’s standards of rank eligibility.

#### 1.7 Overallotment proceeds

The graph shows the value of greenshoe investment in IPOs as proportion of aggregate proceeds in a given quarter. The proportion is aggregated on a weighted average basis.

All IPOs are taken into consideration for purposes of the chart, even the value of over-allotment was not disclosed or if it was nil in a given deal.

Deals with undisclosed or nil over-allotment are aggregated under 0% category.

#### 1.8 IPO by market value of issuing firm

The graph shows the number of IPO deals by the pre-deal market value of the issuing firm. In few instances the market value was not disclosed or was not available; these cases were classified as “undisclosed”.

#### 1.9-1.12 Equity raised on junior markets

Number and total proceeds (including over-allotment) of equity raised, including IPOs, on European junior markets. The exchanges aggregated include all where capital has been raised during the year (according to Dealogic data).

### 2. Mergers and Acquisitions (M&A) and Private Equity

#### 2.1-2.3 Deals where the target or acquiring companies are located in Europe

The charts aggregate deal values of M&A transactions where European companies are either target or acquiring parties in the transaction.

Chart 2.1, 2.6-2.7. aggregates deal values by the location of the acquiring and target parties. Intra-European deals refer to completed deals where both the acquiring and target companies are located in Europe. “Non-European acquires European” aggregates M&A completed transactions where a company located outside Europe acquires a company located in Europe. “European acquires non-European firm” are M&A completed transactions where the acquiring party is European and the target company is located outside Europe.

Europe is defined as in section 1 (EU 28 + Switzerland).

Chart 2.2. aggregates deal values by type of deal: Sponsor, strategic and add-ons.

Sponsor deals represent M&A transactions where the acquisition or sale is carried out by a Private Equity (PE), but not by a portfolio company of a PE firm. Strategic mergers are deals where both the target and the acquired company are not PE firms. Add-on deals are transactions where either the acquirer or seller companies are portfolio companies of a PE firm. M&A include both financial and trade sales.

#### 2.4. Announced M&A

This graph shows announced deal values (including debt) of completed, pending completion or partially completed deals, where the target

company is located in Europe (EU 28 + Switzerland).

The announced values are aggregated by sponsor, add-on and strategic deals, as described in previous section.

Announced values are aggregated on the basis of the announcement date of deals.

### 2.5. Withdrawn M&A

This graph shows withdrawn volumes of M&A deals, defined as bids which were officially announced and subsequently withdraw, not pursued, rejected or expired.

Withdrawn volumes are aggregated on the basis of the withdrawn date.

### 2.8. Average days to complete

Average days between date of announcement and completion date of intra-European deals.

Completed deals with zero days between dates are excluded.

### 2.9. Index: completed relative to withdrawn

Index calculated as the total amount of completed M&A deals in a year calendar and year-to-date, relative to withdrawn volumes during the same period.

### 2.10. - 2.11. Completed M&A by nationality and industry

The figures represent the most recent quarter's value of completed M&A deals of European target firms, aggregating by nationality of target firm (chart 2.10.).

Deal values are denominated in nominal EUR billion. Data are sourced from Dealogic and comply with rank eligibility criteria.

## 3. Outstanding

### 3.1. and 3.4. Market capitalisation

Graph 3.1 shows the EUR trillion amount of domestic market capitalisation of European (EU 28+ Switzerland), EU 28 and Euro zone (EU 19) exchanges. The composition of EU 28 and EU 19 countries remains constant throughout the sample period.

The domestic market capitalisation of euro zone exchanges is sourced from the ECB ("Listed shares issued by euro area residents"). The following non-eurozone exchanges were also aggregated: Zagreb Stock Exchange, Bucharest Stock Exchange, Bulgarian Stock Exchange, CEESEG – Budapest, CEESEG – Prague, NASDAQ Nordic – Copenhagen,

NASDAQ Nordic – Stockholm, Warsaw Stock Exchange, London Stock Exchange and SIX Swiss Exchange.

Market capitalisation figures for non-eurozone countries are sourced from FESE, except for LSE, and NASDAQ OMX which were sourced directly from the exchanges' websites, and for the Zagreb Stock Exchange which was sourced from Reuters Datastream.

Graph 3.4 shows the market capitalisation of listed shares on European, EU 28 and EU 19 exchanges as proportion of nominal GDP. GDP is sourced from Eurostat in its quarterly form. For purposes of this chart, the denominator is calculated as the sum of the past four quarters nominal seasonal adjusted GDP values.

### 3.2 Euro-denominated listed shares

This graph illustrates the outstanding amounts of euro-denominated quoted shares issued by euro area residents, by sector of issuer. The figures are denominated in EUR nominal trillions.

Quoted shares include all shares with prices quoted on a recognised stock exchange or other form of regulated market. Quoted shares comprise all financial assets which represent property rights in corporations or quasi-corporations. These financial assets generally entitle the holder to a share in the profits of the corporations or quasi-corporations and to a share in their net assets in the event of liquidation. Quoted shares are valued and reported at market values.

The data are sourced from the ECB.

### 3.3. and 3.11 Number of listed companies

This chart aggregates the number of listed companies on European exchanges (Domestic and Foreign). The data is sourced from FESE, the World Federation of Exchanges, and LSEG and other European exchanges.

### 3.5. Turnover ratio

The chart illustrates the quarterly turnover ratio of EU 28 stock exchanges and selected MTFs calculated as the ratio of four times the quarterly turnover value as proportion of the market capitalisation at the end of the quarter.

The following MTFs were selected as representative of the off-exchange market: Aquis, BLINK MTF, Burgundy, BXE Book, CXE Book, Equiduct, ICAP BlockCross, Instinet, Blockmatch, ITG Posit, Liquidnet, NEURO, Nomura NX, NYSE Arca, Pipeline, Quote MTF, SIGMA X MTF, SLS, Smartpool, TOM MTF, Turquoise, UBS MTF, Xetra, and Xetra International.

OTC transactions are not included due to potential double counting between TRFs.

### **3.6., 3.9 and 3.10 Quarterly, monthly and daily turnover on European Exchanges and MTFs**

Average value of equity turnover by type of order book (3.6) and by type of venue (3.9). Data are sourced from BATS Chi-X for the following exchanges and MTFs:

Aquis, BLINK MTF, Burgundy, BXE Book, CXE Book, Equiduct, ICAP BlockCross, Instinet, Blockmatch, ITG Posit, Liquidnet, NEURO, Nomura NX, NYSE Arca, Pipeline, Quote MTF, SIGMA X MTF, SLS, Smartpool, TOM MTF, Turquoise, UBS MTF, Xetra, Xetra International, Euronext Amsterdam, Bolsa de Madrid, Euronext Brussels, NASDAQ OMX Copenhagen, NASDAQ OMX Helsinki, Euronext Lisbon, LSE, Borsa Italiana (Milan), Oslo Bors, Euronext Paris, SIX Swiss Exchange, NASDAQ OMX Stockholm and Wiener Borse.

### **3.6. - 3.8. Equity turnover by type of book**

Chart 3.6 shows the quarterly turnover value on European main markets and MTFs by type of order book.

Chart 3.7 shows the monthly value traded in dark pools as proportion of turnover in Exchanges and MTFs (Dark and Lit). For dark pool trading, the same MTFs selected for chart 3.5 were taken into consideration.

Chart 3.8 illustrates the aggregate proportion of dark pool trading of the constituent shares of the selected indices.

Data are sourced from BATS Chi-X.

### **3.9. Equity turnover by type of venue (main market and MTF)**

The chart illustrates the quarterly turnover in EUR value in selected MTFs where data was available: Aquis, BLINK MTF, Burgundy, BXE Book, CXE Book, Equiduct, ICAP BlockCross, Instinet, Blockmatch, ITG Posit, Liquidnet, NEURO, Nomura NX, NYSE Arca, Pipeline, Quote MTF, SIGMA X MTF, SLS, Smartpool, TOM MTF, Turquoise and UBS MTF.

### **3.10. Daily Equity turnover**

The chart shows daily turnover in EUR value in selected main markets and MTFs where data was available. The list of MTFs is the same as in previous charts. Data are sourced from Bats Chi-X.

## **4. Valuation**

### **4.1. Price indices of listed shares**

This graph represents price data for selected European exchanges selected as benchmarks in the

respective jurisdictions. The price calculations are provided by Datastream, which for purposes of comparability are converted into a price index with January 2008 as base (Jan-08 = 100).

### **4.2. - 4.6. Valuation ratios**

These graphs illustrate several valuation ratios of selected price indices of European shares.

PE ratios are calculated as the ratio of market prices as proportion of market-expected annual earnings. The ratios are sourced from Datastream.

Price-to-book ratio represents the average ratio of share market prices as proportion of book prices of Stoxx 600 listed companies and a PanEuropean index of European shares compiled by Thomson Reuters Datastream.

VSTOXX 50 index is the market-implied volatility of STOXX 50 listed shares, sourced from Stoxx.



## Annex

---

### **Disclaimer**

Your receipt of this document is subject to paragraphs 3, 4, 5, 9, 10, 11 and 13 of the Terms of Use which are applicable to AFME's website (available at <http://www.afme.eu/Legal/Terms-of-Use.aspx>) and, for the purposes of such Terms of Use, this document shall be considered a "Material" (regardless of whether you have received or accessed it via AFME's website or otherwise).

**London Office**

39th Floor  
25 Canada Square  
London E14 5LQ  
United Kingdom

Switchboard:

+44 (0)20 3828 2700

**Brussels Office**

Rue de la Loi, 82  
1040 Brussels  
Belgium

Switchboard:

+32 (0) 2 788 3971

**Frankfurt Office**

Skyper Villa  
Taunusanlage 1  
60329 Frankfurt am Main  
Germany

Switchboard:

+49 (0) 69 5050 60 590

**AFME**

**Julio Suarez** – Manager, Research

**April Day** – Managing Director, Equities Trading

**Andrew Brooke** – Director, ECM and Corporate Finance

**Sean Barwick** – Manager, Equities

[www.afme.eu](http://www.afme.eu)

**Follow AFME on Twitter**

@News\_from\_AFME

AFME is registered on the EU Transparency Register, registration number 65110063986-76