

Equity Primary Markets and Trading Report

European market data update

Q4: 2016

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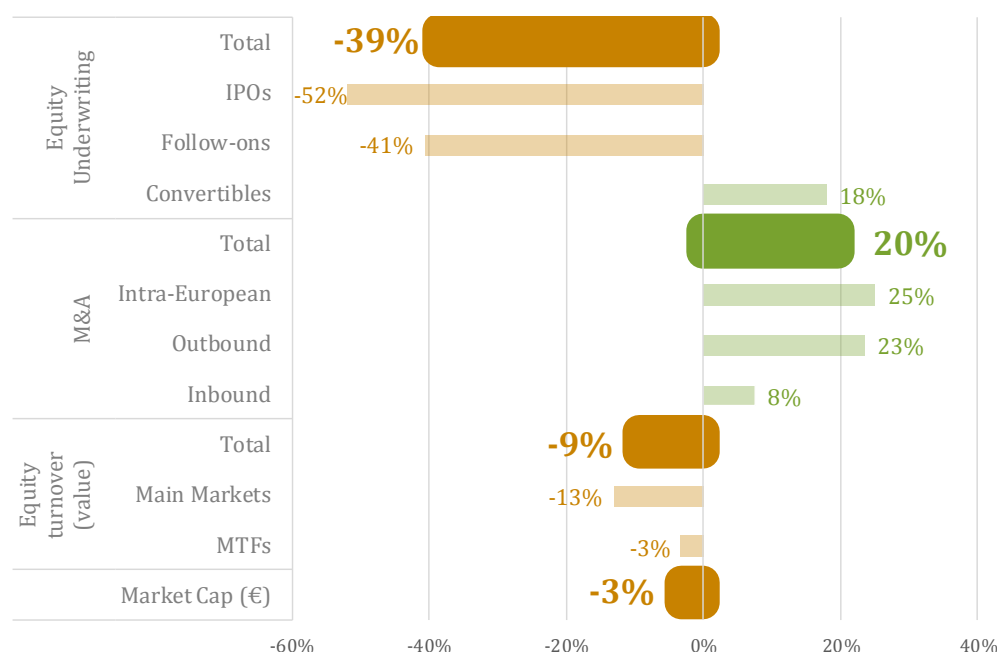
Highlights

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 €146.8bn in proceeds in 2016, a 39% decrease from the value originated in 2015 (€239.2 bn). Equity underwriting encompasses Initial Public Offerings (IPOs), convertible securities and follow-on offerings.
- **Completed Mergers and Acquisitions (M&A) of European companies¹** totalled €1,013 bn in 2016, an increase of 19.6% from the value observed in 2015 (€ 847 bn).
The increase was largely supported by two large mega-deals², which represented 18% of the 2016 activity in deal value.
- **Equity trading activity** on European main markets and MTFs generated a total of €11.8 tn in turnover value in 2016, a decrease of 9.4% from the value traded in 2015 (€ 13.1 tn).
- **Market capitalisation** of European listed shares³ stood at € 11.7 tn at the end of 2016, a decrease of 3.3% from the market value at the end of 2015 (€12.1 tn).

Year-on-year 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 CEESEG - Prague

Underwriting and M&A data retrieved for this report on 12 January 2016

¹ Completed M&A between European firms as acquiring or target companies

² Acquisition of BG Group plc by Royal Dutch Shell plc (€61bn) and Acquisition of SAB Miller plc by Anheuser-Busch InBev SA/NV (€119bn)

³ Domestic market capitalisation of listed shares on European exchanges (EU28 member states and Switzerland).

European Equity activity (EU 28 and Switzerland)

	1Q 16	2Q 16	3Q 16	4Q 16	2016 FY	1Q 15	2Q 15	3Q 15	4Q 15	2015 FY	% Change YoY	% Change 4Q16 QoQ
Equity underwriting (€ bn)	28.7	50.9	26.9	40.3	146.8	75.8	62.1	31.2	70.1	239.2	-38.6%	49.6%
IPOs	3.7	11.6	4.0	9.8	29.0	18.1	15.9	4.8	21.7	60.5	-52.0%	142.8%
Follow-on offerings	17.3	33.6	19.2	24.2	94.3	52.4	39.4	23.8	43.3	158.9	-40.6%	26.4%
Convertible securities	7.7	5.7	3.8	6.3	23.5	5.4	6.8	2.6	5.1	19.9	17.9%	68.1%
Mergers and Acquisitions (€ bn)	284.9	232.1	192.8	303.7	1,013.5	211.1	232.3	189.2	214.6	847.2	19.6%	57.5%
European firms acquiring non-European firms	52.0	94.0	31.1	41.0	218.1	27.1	60.2	19.8	69.6	176.6	23.5%	32.1%
Non-European firms acquiring European firms	64.5	68.7	73.0	58.1	264.3	63.2	62.9	59.8	59.8	245.7	7.6%	-20.3%
Intra European deals	168.4	69.4	88.8	204.5	531.1	120.9	109.2	109.6	85.2	424.9	25.0%	130.4%
Equity turnover value (€ tn)	3.3	3.0	2.6	2.9	11.8	3.4	3.3	3.3	3.0	13.1	-9.4%	8.7%
Main Markets	1.98	1.80	1.54	1.74	7.1	2.16	2.08	2.06	1.83	8.1	-13.1%	13.0%
MTFs	1.35	1.23	1.08	1.11	4.8	1.28	1.25	1.22	1.18	4.9	-3.3%	2.6%
Market Capitalisation of domestic listed shares (€ tn)												
European (EU28 and Switzerland)	11.4	11.1	11.6	11.7	11.7	12.8	12.4	11.4	12.1	12.1	-3.3%	1.2%
EU 28	10.1	9.8	10.3	10.4	10.4	11.3	11.0	10.1	10.8	10.8	-3.2%	1.1%
Euro Zone	6.4	6.2	6.6	6.6	6.6	7.1	6.9	6.3	6.7	6.7	-1.5%	0.8%

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

Issuance: equity underwriting and IPOs

Equity underwriting on European exchanges fell by 39% YoY in 2016.

Initial Public Offerings (IPOs) led the decrease by -52% YoY, followed by secondary offerings (-41%), only partially offset by an increase in issuance of convertible securities (18%).

Fewer IPOs⁴ during 2016 and decrease in number of listed companies: in 2016 a total of 206 companies raised capital through IPOs on European exchanges, a decrease from 291 deals in 2015.

The total number of listed companies on European exchanges companies fell during 2016, with delistings surpassing the number of new companies listed. At the end of 2016 there were a total of 11,295 companies listed on European exchanges, a decrease from 11,537 in 2015.

NASDAQ OMX led IPO activity: By exchanges, IPO activity was led by listings on NASDAQ OMX⁵, with a total of €8.5 bn in equity raising in 2016. London exchanges⁶ led by number of IPOs with 65 deals, followed by NASDAQ OMX⁷ (62 deals) and EURONEXT (21 deals).

Strong SME originations in AIM and First North: IPOs on junior markets (markets directed towards small- and mid-caps) increased by 25% during the year with a total of €2.3bn in capital raised (€1.8bn in 2015). The increase was led by issuance on LSE AIM (64%YoY with 38 IPOs) and NASDAQ First North (35%YoY with 42 IPOs). Equity proceeds fell against 2015 in other European junior markets. See further detail in chart 1.14 in the report.

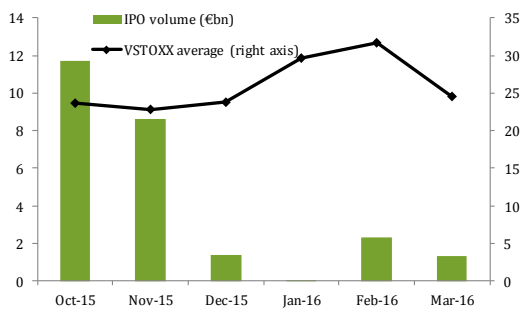
Challenging market volatility, policy uncertainty and macroeconomy environment: Several concurrent factors may have prevented a more dynamic year in equity origination. These include the abnormal market volatility in the first quarter of the year, the policy uncertainty environment (e.g. UK referendum), or more widely the macroeconomic circumstances (ultra-low interest rates)⁸.

During 1Q16, market volatility as measured by VSTOXX increased by c10bps, making market conditions unfavourable for equity raising. IPO volume in 1Q16 fell by 79% YoY-- the lowest volume recorded since 2013.

The policy/political environment was also challenging in 2016. The index of economic policy uncertainty (Baker, Bloom and Davis⁹) stood at the highest level observed in Europe since 1987. Although market volatility was not

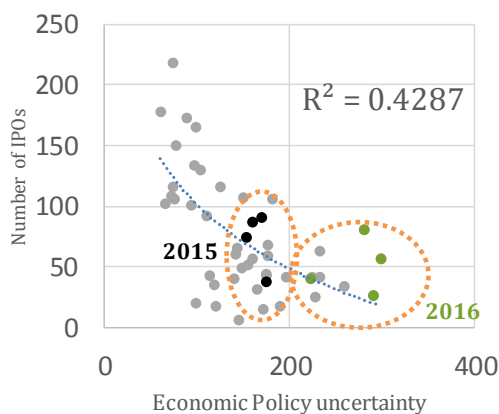
“Equity underwriting on European exchanges fell by 38.6% YoY in 2016”

IPO proceeds and market volatility



Source: Dealogic and STOXX

Number of IPOs and economic policy uncertainty (2005-2016)



Source: Dealogic and Baker, Bloom and Davis

⁴ Excludes readmissions and introductions (listings unaccompanied by a sale of securities).

⁵ Includes main market and First North. See further detail in table 1.19.

⁶ LSE main market and AIM. See further detail in table 1.19.

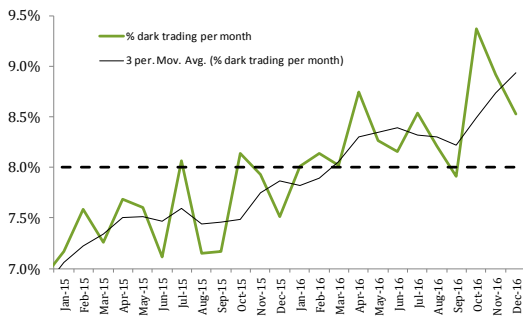
⁷ Paris and Amsterdam. Main market and Alternext. See further detail in table 1.19.

⁸ See evidence in

⁹ Baker, Bloom and Davis' uncertainty index. See:

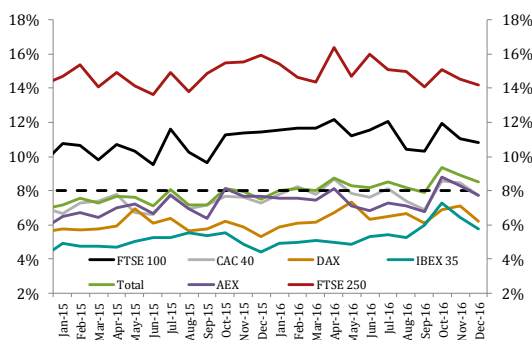
<http://www.policyuncertainty.com/about.html>

Daily equity turnover on European venues (€bn)



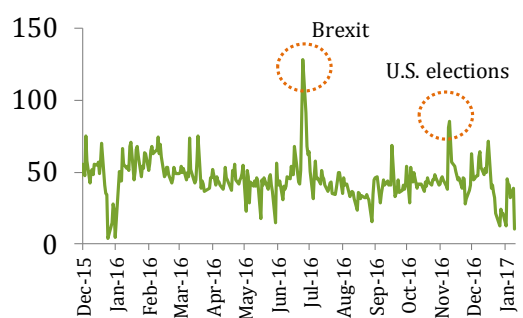
Source: BATS Chi-X

Percentage of dark trading on MTFs and exchanges of companies listed on selected markets (% tot. turnover)



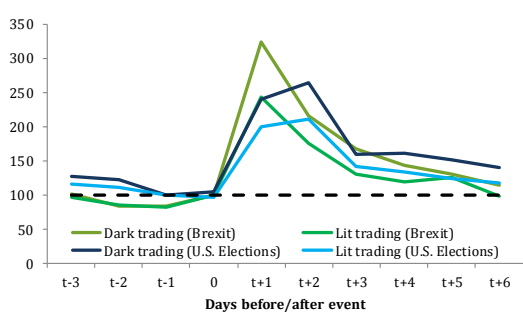
Source: BATS Chi-X

Daily equity turnover on European venues (€bn)



Source: BATS Chi-X

Daily equity turnover on European venues (€bn)



Source: BATS Chi-X

particularly high in the last three quarters of 2016, policy uncertainty during the period may have made companies delay financing decisions through equity markets, waiting for further clarity regarding the policy environment (see chart on left panel in previous page).

Likewise, the macro environment and ultra-low interest rates may have favoured fixed income financing, as companies substitute equity origination for other forms of financing. For example, long-term debt securities issued by non-financial corporate in the euro area increased by c6.5% in 2016 (source: ECB).

European equity trading

A total of €11.7tn in equity shares were traded on European venues in 2016, a decrease of 9% from €13.1tn in 2015.

Trading by type of order book: Dark trading represented 8.9% of total equity turnover on main markets and MTFs in 4Q16. This proportion grew during the year, from 7.9% of total equity turnover at the end of 2015 (see graph on left panel).

The growing trend partially stabilised during the second and third quarters of 2016, only interrupted by an increase in October and November driven by growing dark trading activity of IBEX35 and AEX listed shares. In other markets, such as FTSE250 or FTSE100, the proportion of dark trading stabilised throughout the year at c14.5% and c11% respectively (see graph on left panel).

Policy-driven equity trading: Policy-driven events such as the UK referendum and the US elections caused the largest daily increase in equity trading of the year. Equity trading increased by 2.5x in the immediate aftermath of the UK referendum, while more recently, trading activity increased by 2x on November 10th after the U.S. elections.

During both policy-driven events, equity trading increased the most on dark trading order books growing by 3.2x in the immediate aftermath of the UK referendum (vs. 2.5x total) and by 2.5x after the U.S. elections (vs. 2.0x total). See graph on left panel.

Mergers and Acquisitions (M&A) in Europe

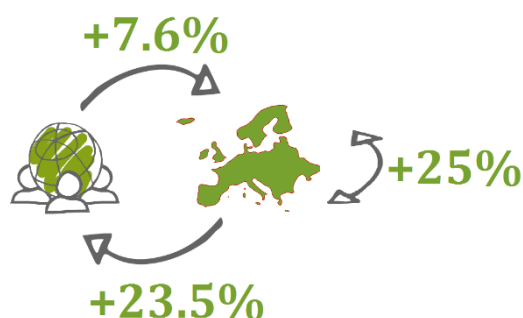
In 2016, a total of 11,242 M&A deals were completed where either the target *or* the acquiring company were located in Europe. The volume represented a total of €1,013bn in deal value¹⁰, an increase of 19.6% from 2015 (€847.2 bn).

Two Mega-deals largely contributed to the annual increase in M&A. More specifically, the acquisition of BG Group plc by Royal Dutch Shell plc (€61bn) and the acquisition of SAB Miller plc by Anheuser-Busch InBev SA/NV (€119bn) represented 18% of the M&A annual volume.

¹⁰ Including debt.

“Intra-European (between European countries) deals led M&A transactions”

Cross-border and intra-European M&A transactions (year-to-date % increase in deal value)



Source: Dealogic

Intra-European (between European countries) deals led M&A transactions with an increase of 25% YoY, compared with 23% of outbound cross-border transactions and 8% of inbound cross-border deals.

The growth in intra-European M&A was driven by an annual increase of 63% of deals of size above €1bn. M&A of smaller transaction sizes fell by 20% YoY (see table 2.19 in the report).

Subdued announced volume in 2016. Going forward, the volume of announced transactions in Europe fell by 38% in 2016 compared to 2015, with only a small increase of 5% in 2016 of withdrawn deals against last year¹¹.

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

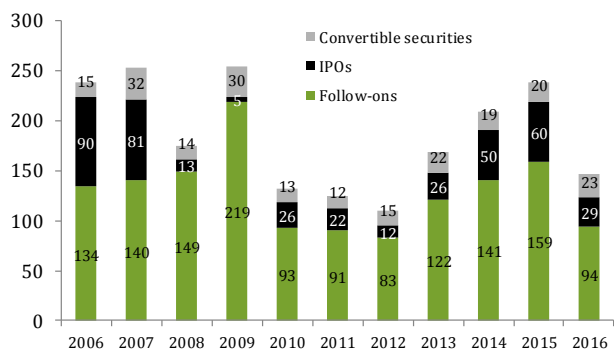
AFME and its members are actively contributing on all of these and other regulatory changes.

¹¹ Announced but subsequently withdrawn, not pursued, rejected or spired.

1 Issuance

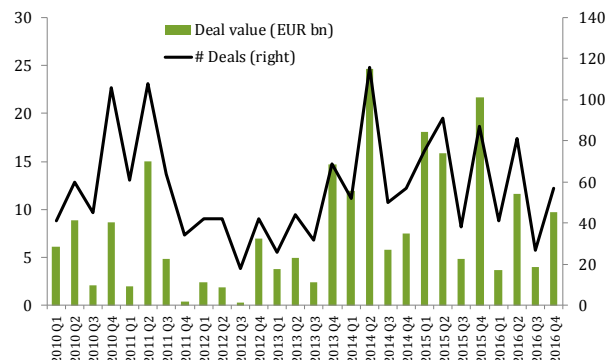
Equity instruments issuance on European exchanges

1.1 Equity underwriting (€bn)



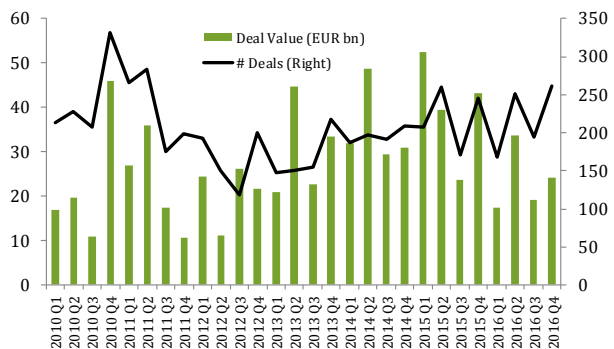
Source: Dealogic

1.2 IPOs (€bn)¹²



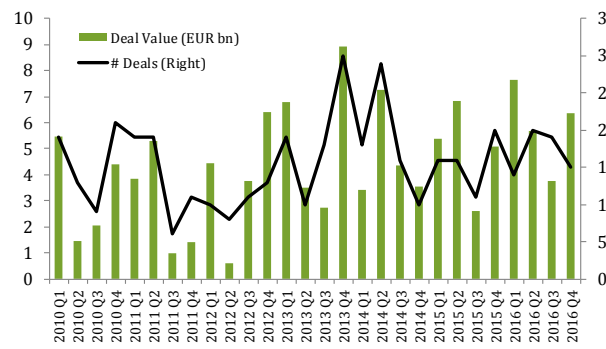
Source: Dealogic

1.3 Follow-on offerings (€bn)



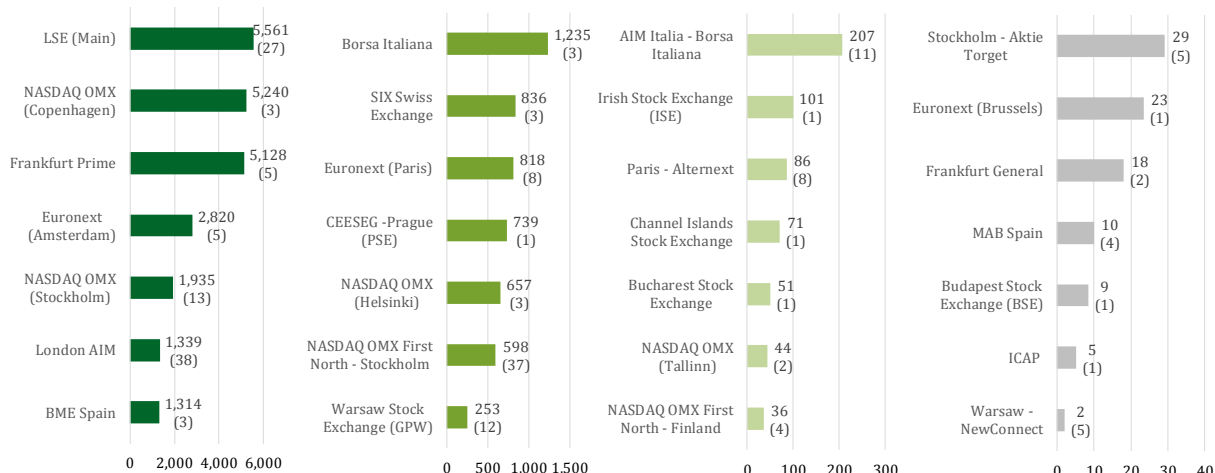
Source: Dealogic

1.4 Convertible securities (€bn)



Source: Dealogic

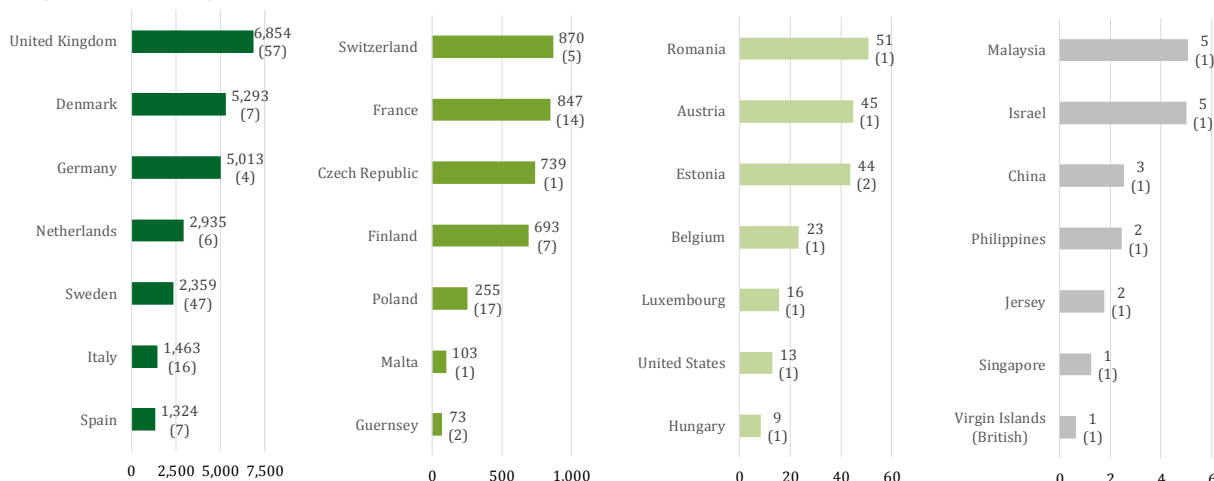
1.5 IPO proceeds by exchange: 2016FY (€ mn and number of IPOs in parenthesis)



Source: Dealogic

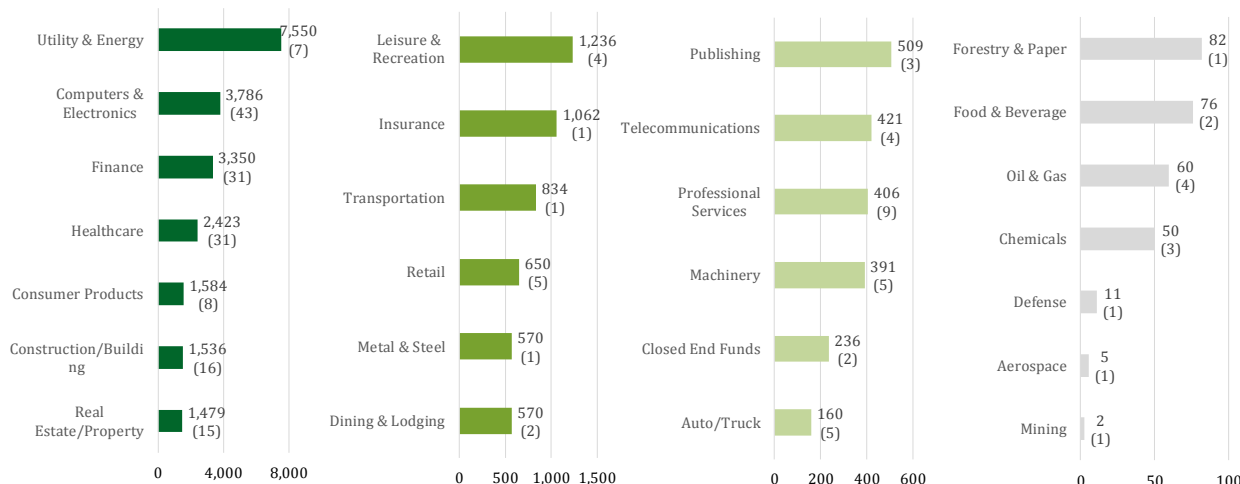
¹² Excludes introductions and re-admissions.

1.6 IPO proceeds by nationality of issuer: 2016FY (€mn and number of IPOs in parenthesis)



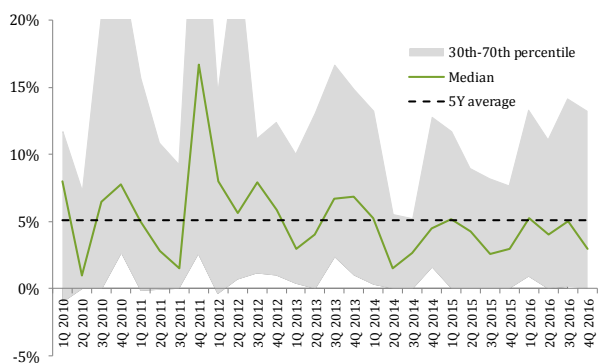
Source: Dealogic

1.7 IPO proceeds by industry of issuer: 2016FY (€ mn and number of IPOs in parenthesis)



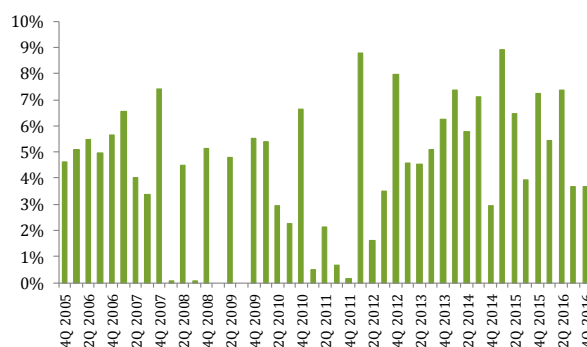
Source: Dealogic

1.8 Median difference between offer price and 1-Day closing price of IPOs (%)



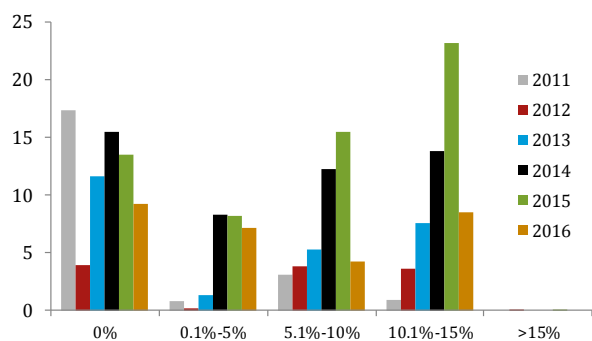
Source: Dealogic

1.9 Overallotment as proportion of quarterly IPO proceeds



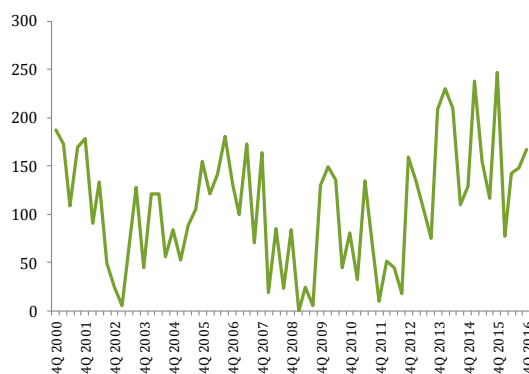
Source: Dealogic

1.10 IPOs by proportion of exercised overallotment (€ bn)



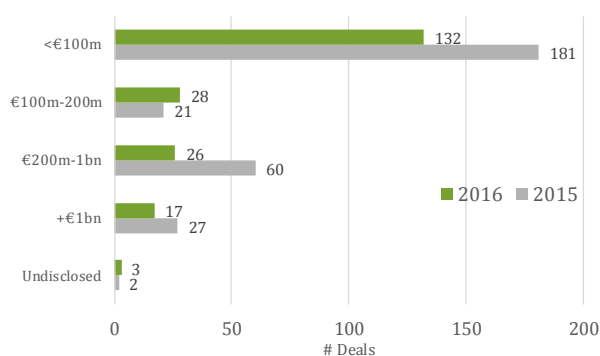
Source: Dealogic

1.11 Average proceeds per IPO (€mn)



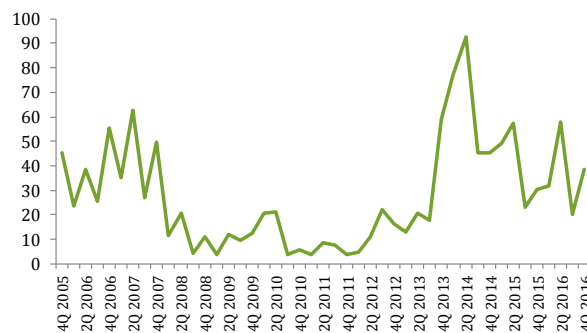
Source: Dealogic

1.12 Number of IPOs by market value of issuing firm (pre-deal market value)



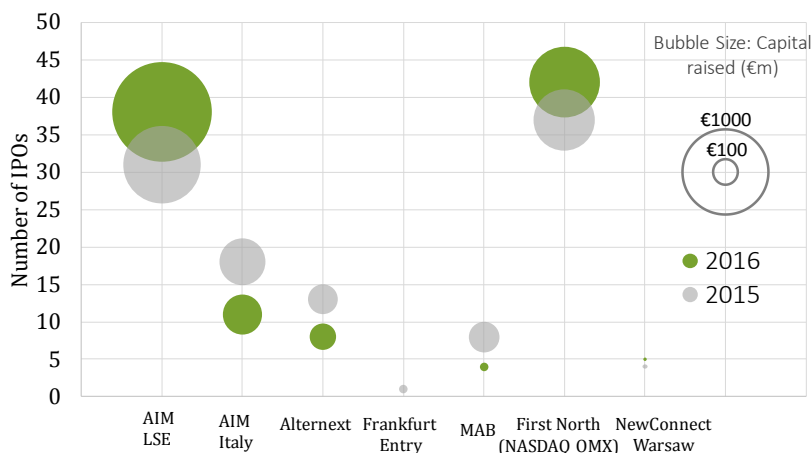
Source: Dealogic

1.13 Median market value of IPO issuing firms (€ mn, pre-deal market value)



Source: Dealogic

1.14 IPOs on Jr markets (number of deals and capital raised, €m)



Source: Dealogic

1.15 IPOs by listing venue (€ mn)¹³

	1Q 16	2Q 16	3Q 16	4Q 16	1Q 15	2Q 15	3Q 15	4Q 15	2016	2015
AIM	301	647	60	231	178	342	64	152	1,238	736
LSE	2,179	397	218	2,768	5,157	4,527	686	6,570	5,561	16,940
AIM Italia	28	59	16	103	23	72	76	110	207	280
Borsa Italiana	0	402	834	0	500	1,171	370	3,150	1,235	5,191
Euronext	0	3,166	423	49	2,829	2,413	679	6,359	3,638	12,279
Euronext-Alternext	3	36	35	12	52	18	19	27	86	116
Irish Stock Exchange	0	0	0	0	302	0	0	0	0	302
Irish Stock Exchange and AIM	0	101	0	0	0	92	0	0	101	92
Irish Stock Exchange and LSE	0	0	0	0	0	0	0	184	0	184
Frankfurt	288	18	83	4,756	621	802	2,635	2,964	5,146	7,021
Frankfurt Entry	0	0	0	0	0	0	0	9	0	9
ICAP	0	5	0	0	0	0	0	0	5	0
BME	0	1,314	0	0	4,709	3,628	0	0	1,314	8,337
MAB	3	0	5	2	0	99	14	9	10	122
Börse München	0	0	0	0	0	0	0	1	0	1
NASDAQ OMX	612	3,685	2,175	1,403	1,295	2,229	26	1,988	7,875	5,538
NASDAQ OMX-First North	246	184	40	163	215	177	20	77	633	489
Bucharest Stock Exchange	0	0	0	51	0	0	0	0	51	0
Budapest Stock Exchange	0	0	0	9	0	0	0	0	9	0
CEESEG-Prague	0	739	0	0	0	0	0	0	739	0
CEESEG-Prague and Warsaw	0	0	0	0	0	0	0	28	0	28
SIX Swiss Exchange	0	721	0	115	2,148	0	169	0	836	2,317
Bulgarian Stock Exchange	0	0	0	0	0	0	0	6	0	6
Stockholm - Aktie Torget	5	24	0	0	2	14	7	5	29	27
Warsaw	17	90	57	89	11	315	43	58	253	427
Warsaw - NewConnect	1	1	0	0	1	0	0	1	2	3
Zagreb Stock Exchange	0	0	0	0	26	0	0	0	0	26
Channel Islands Stock Exchange	0	0	71	0	0	0	0	0	71	0
Total	3,683	11,589	4,015	9,752	18,069	15,899	4,805	21,699	29,039	60,473

Source: Dealogic

1.16 Number of IPOs by listing venue¹⁴

	1Q 16	2Q 16	3Q 16	4Q 16	1Q 15	2Q 15	3Q 15	4Q 15	2016	2015
AIM	9	13	5	10	11	9	4	6	37	30
LSE	9	6	4	8	18	15	5	20	27	58
AIM Italia	2	3	4	2	4	5	4	5	11	18
Borsa Italiana	0	2	1	0	2	3	2	2	3	9
Euronext	0	9	2	2	9	8	4	6	13	27
Euronext-Alternext	1	3	2	2	4	2	2	4	8	12
Irish Stock Exchange	0	0	0	0	1	0	0	0	0	1
Irish Stock Exchange and AIM	0	1	0	0	0	1	0	0	1	1
Irish Stock Exchange and LSE	0	0	0	0	0	0	0	1	0	1
Frankfurt	2	2	1	2	2	3	4	6	7	15
Frankfurt Entry	0	0	0	0	0	0	0	1	0	1
ICAP	0	1	0	0	0	0	0	0	1	0
BME	0	3	0	0	3	4	0	0	3	7
MAB	2	0	1	1	0	2	3	3	4	8
Börse München	0	0	0	0	0	0	0	1	0	1
NASDAQ OMX	3	10	2	6	6	9	1	8	21	24
NASDAQ OMX-First North	5	17	3	16	8	14	2	12	41	36
Bucharest Stock Exchange	0	0	0	1	0	0	0	0	1	0
Budapest Stock Exchange	0	0	0	1	0	0	0	0	1	0
CEESEG-Prague	0	1	0	0	0	0	0	0	1	0
CEESEG-Prague and Warsaw	0	0	0	0	0	0	0	1	0	1
SIX Swiss Exchange	0	2	0	1	1	0	1	0	3	2
Bulgarian Stock Exchange	0	0	0	0	0	0	0	1	0	1
Stockholm - Aktie Torget	4	1	0	0	2	11	3	4	5	20
Warsaw	1	5	1	5	1	5	2	5	12	13
Warsaw - NewConnect	3	2	0	0	2	0	1	1	5	4
Zagreb Stock Exchange	0	0	0	0	1	0	0	0	0	1
Channel Islands Stock Exchange	0	0	1	0	0	0	0	0	1	0
Total	41	81	27	57	75	91	38	87	206	291

Source: Dealogic

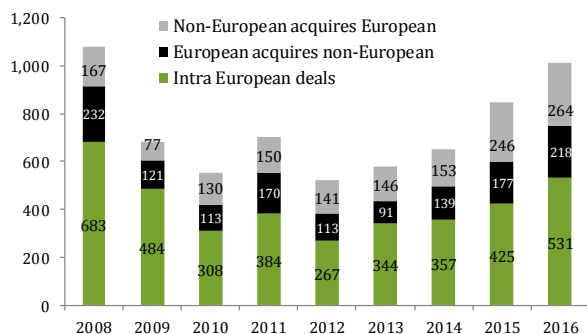
¹³ Multiple exchanges relate to dual listings¹⁴ Multiple exchanges relate to dual listings

2 Mergers and Acquisitions

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

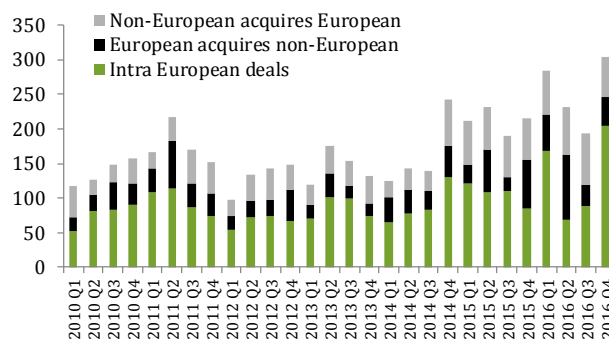
€ BILLIONS

2.1 Completed M&A by acquiring party: full-year and YtD¹⁵



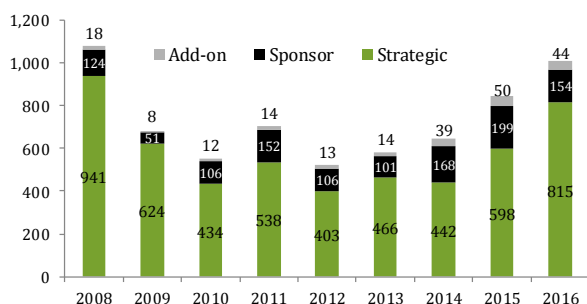
Source: Dealogic

2.2 Completed M&A by acquiring party: quarterly



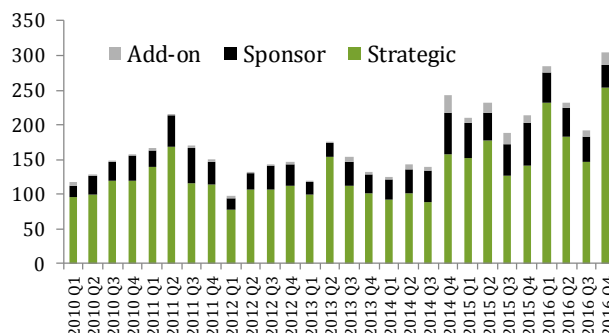
Source: Dealogic

2.3 Completed M&A by type of deal: full-year and YtD¹⁶



Source: Dealogic

2.4 Completed M&A by type of deal: quarterly



Source: Dealogic

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

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	Q1 2015	Q2 2015	Q3 2015	Q4 2015	2015	QoQ growth (%)	FY growth (%)
Strategic	231.2	183.9	146.3	253.8	815.2	152.1	177.6	127.1	141.4	598.3	73.4%	22.9%
Sponsor	45.2	41.1	36.2	31.9	154.3	51.1	40.6	45.7	61.3	198.7	-11.8%	-10.9%
Add-on	8.6	7.1	10.3	18.0	43.9	7.8	14.1	16.4	11.9	50.2	75.1%	-32.4%
TOTAL	284.9	232.1	192.8	303.7	1,013.5	211.1	232.3	189.2	214.6	847.2	57.5%	12.2%
European firms acquiring non-European firms	52.0	94.0	31.1	41.0	218.1	27.1	60.2	19.8	69.6	176.6	32.1%	65.4%
Non-European firms acquiring European firms	64.5	68.7	73.0	58.1	264.3	63.2	62.9	59.8	59.8	245.7	-20.3%	10.9%
Intra Europe deals	168.4	69.4	88.8	204.5	531.1	120.9	109.2	109.6	85.2	424.9	130.4%	-3.8%
TOTAL	284.9	232.1	192.8	303.7	1,013.5	211.1	232.3	189.2	214.6	847.2	57.5%	12.2%

Source: Dealogic

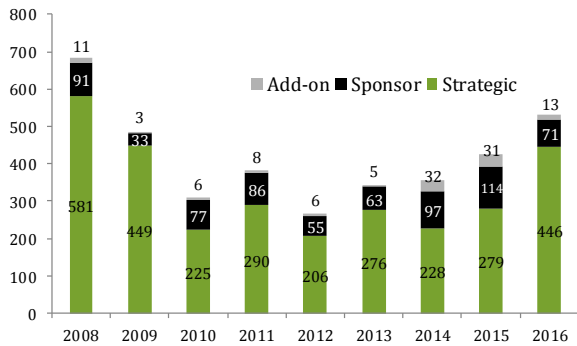
¹⁵ Sponsor deals refer to M&A deals where the acquirer or the seller company is a private equity firm. Add-on transactions are deals where acquirer or the seller company is a portfolio company of a private equity firm. Strategic deals are between two non private equity firms.

¹⁶ Intra-European deals refer to completed deals where both the acquiring and target companies are located in Europe. "Non-European acquires European" are deals 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

Intra-European deals (target and acquiring companies located in Europe)

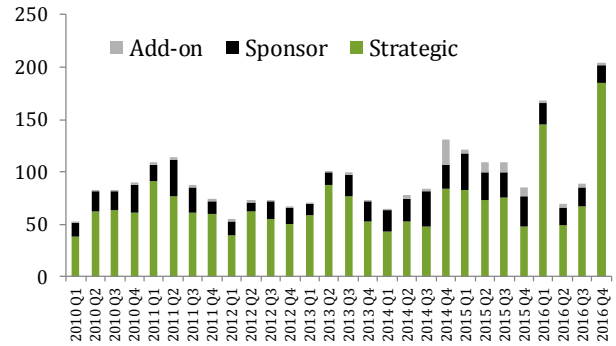
€ BILLIONS

2.6 Completed M&A by type of deal: annual¹⁷



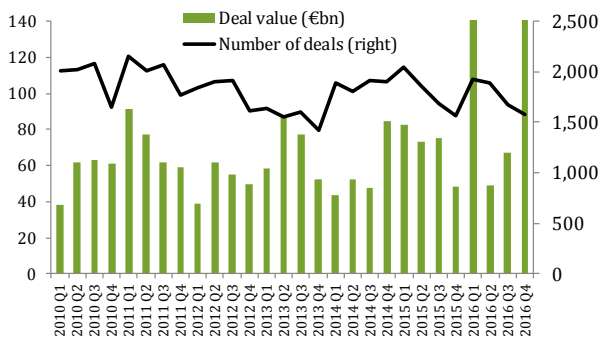
Source: Dealogic

2.7 Completed M&A by type of deal: quarterly¹⁸



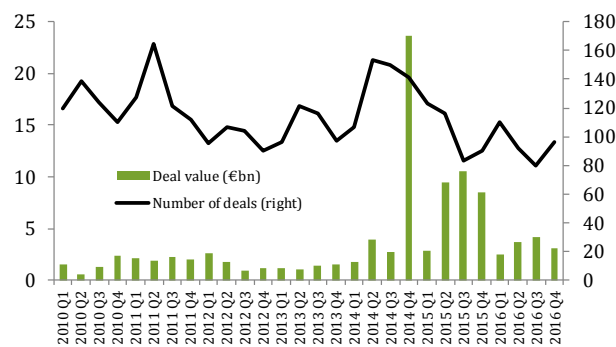
Source: Dealogic

2.8 Completed strategic M&A



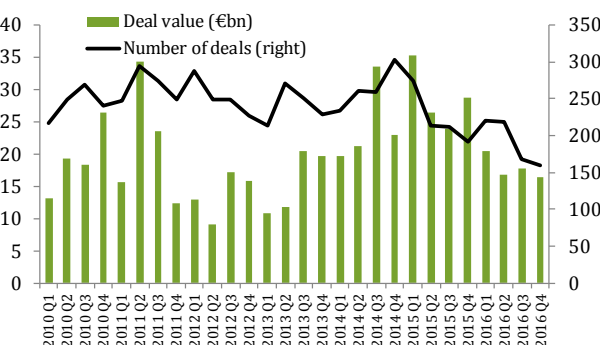
Source: Dealogic

2.9 Completed add-on M&A



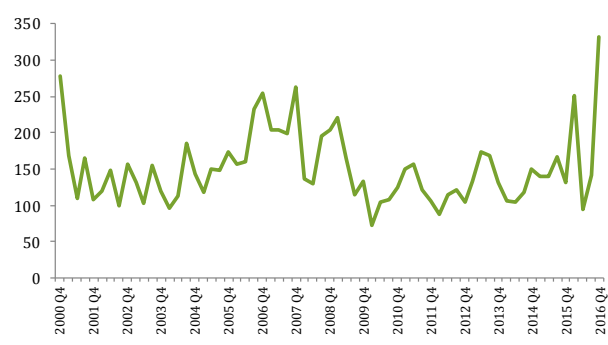
Source: Dealogic

2.10 Sponsor M&A



Source: Dealogic

2.11 Average value of completed M&A



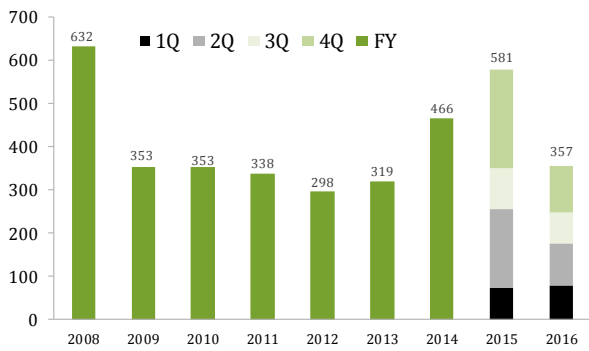
Source: Dealogic

¹⁷ Sponsor deals refer to M&A deals where the acquirer or the seller company is a private equity firm. Add-on transactions are deals where acquirer or the seller company is a portfolio company of a private equity firm. Strategic deals are between two non private equity firms.

¹⁸ Sponsor deals refer to M&A deals where the acquirer or the seller company is a private equity firm. Add-on transactions are deals where acquirer or the seller company is a portfolio company of a private equity firm. Strategic deals are between two non private equity firms.

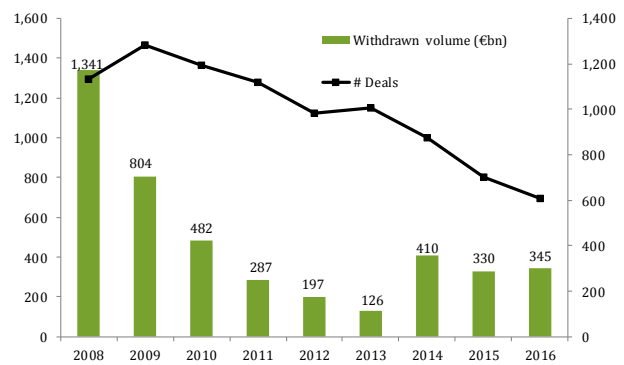
€ BILLIONS

2.12 Announced M&A¹⁹



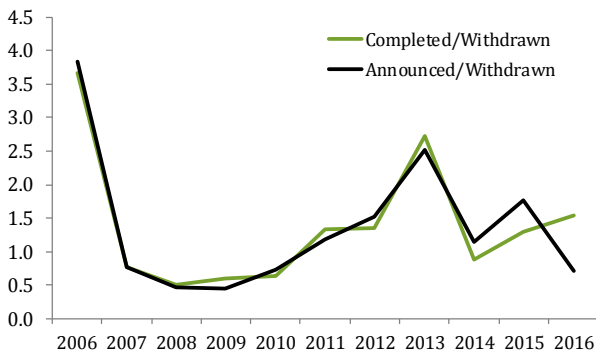
Source: Dealogic

2.13 Withdrawn M&A²⁰



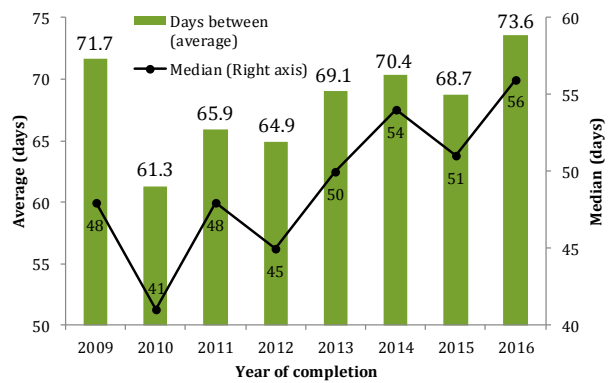
Source: Dealogic

2.14 Index: Completed and Announced M&A relative to Withdrawn volume



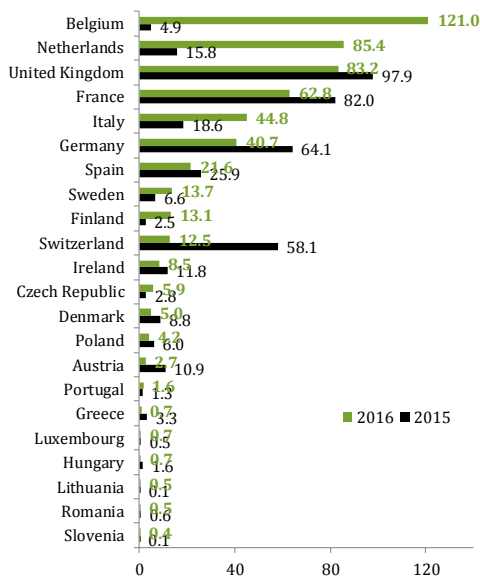
Source: Dealogic

2.15 Average days to complete



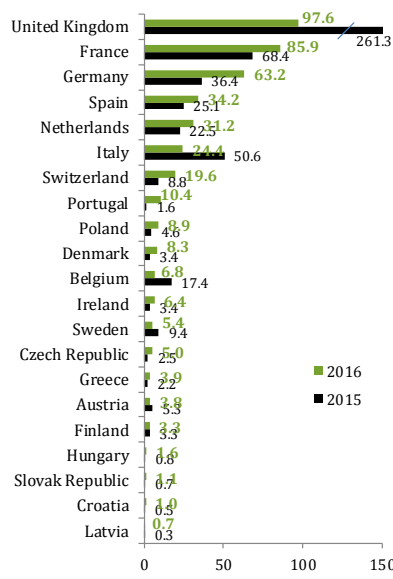
Source: Dealogic

2.16 Completed M&A by nationality of acquirer (selected countries)



Source: Dealogic

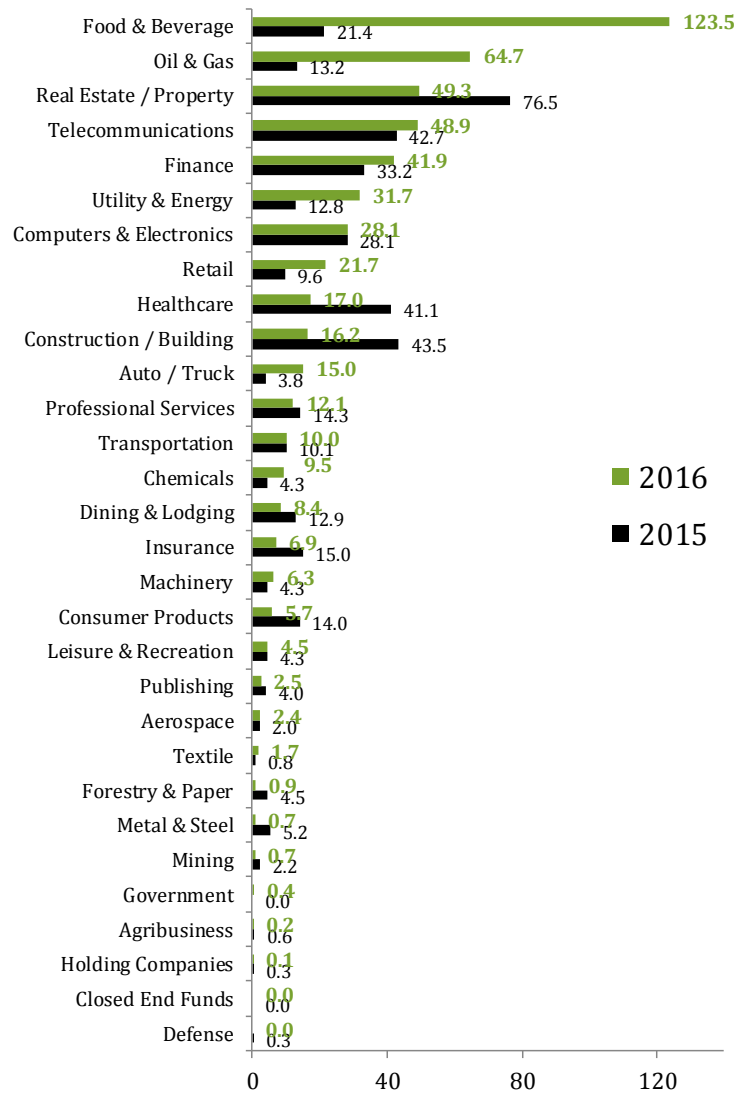
2.17 Completed M&A by nationality of target firm (selected countries)



Source: Dealogic

¹⁹ Announced deals include completed, pending completion or partially completed transactions. Values are presented at date of announcement.
²⁰ Bids which were officially announced and subsequently withdrawn, not pursued, rejected or expired.

2.18 Completed M&A by industry of target firm (€ bn)



Source: Dealogic

2.19 Completed intra-European M&A transactions by size of deal (€ bn)

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	2016	Q1 2015	Q2 2015	Q3 2015	Q4 2015	2015	YoY change
> €1bn	124.8	24.3	45.3	162.2	356.6	70.0	54.3	66.1	28.5	219.0	63%
€ 500m to € 1bn	16.4	12.2	14.0	10.3	53.0	16.1	16.5	16.9	23.5	73.1	-28%
€ 250m to € 500m	10.0	12.7	10.6	14.5	47.9	12.8	16.7	6.5	14.5	50.6	-5%
€ 100m to € 250m	9.4	10.6	10.1	10.2	40.3	12.7	12.4	10.7	9.7	45.5	-11%
€ 50m to € 100m	3.2	3.9	4.0	3.0	14.0	3.6	3.9	4.4	3.9	15.7	-11%
€ 25m to € 50m	2.0	2.6	2.1	2.1	8.8	2.9	2.7	2.3	2.4	10.3	-15%
€ 10m to € 25m	1.5	2.0	1.7	1.3	6.5	1.4	1.8	1.6	1.9	6.7	-2%
< € 10m	1.1	1.0	0.9	1.0	4.0	1.3	1.0	1.0	0.8	4.1	-4%
Total	168.4	69.4	88.8	204.5	531.1	120.9	109.2	109.6	85.2	424.9	25%

Source: Dealogic

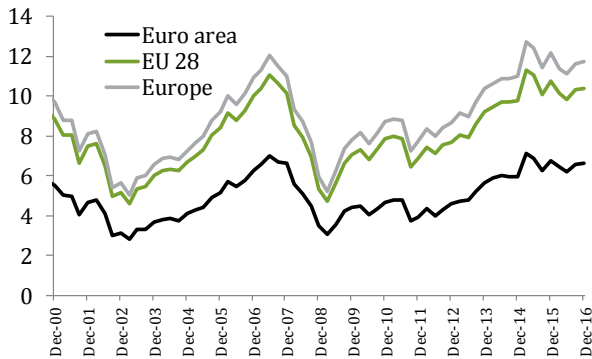
2.20 Completed intra-European M&A transactions by location of acquiring and target company (2016FY, € mn)

Acquiror Nationality	Target Nationality																										Grand Total			
	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	CH	UK
Austria	1,356					163				535	262		175						63				7						141	2,702
Belgium	38	1,362								94	7									4		198				299			118,971	120,972
Bulgaria			39								11																			49
Croatia				70																	22				2					94
Cyprus					18																								11	28
Czech Republic						848					3,420									1,267	6		22	375					5,938	
Denmark							2,993	12			1,066															897			36	5,005
Estonia								218							75														2	294
Finland						28	15	2	2,614	9,952											110						278		103	13,102
France	106	1,091		10		98	23			50,597	4,397		28	26	2,452					557	24	51	92			1,461	39	40	1,746	62,836
Germany	3,619	823	11	50		27	2		2	85	22,535	1,414		925	6,196	52				1,326	100		76	175		1,496	19	774	990	40,698
Greece												745																		745
Hungary													519															175		695
Ireland											126			2,215	20											1			6,114	8,477
Italy		312		48			103			3,232	228				39,571						109	75				99		46	986	44,809
Latvia						16									84								69						33	202
Lithuania								3							7	463														473
Luxembourg			330							3	19				68	115		54									92		20	701
Malta																							61				3			64
Netherlands	1	12,384		54			89			1,344	621				106					7,623	11				470	764	187		61,709	85,361
Poland											63		0		75					80	3,965				3				7	4,192
Portugal																				595		803				210				1,608
Romania				238		83																	149							469
Slovak Republic				8																				100	18					126
Slovenia																									390					390
Spain										238	460			92	1,042					109		277				19,031			393	21,642
Sweden		118				1,164	111	48	670	272	1,791		62	4	117		6		80	18	1				86	8,638	47	490	13,723	
Switzerland	2									126	486				321				78	830	2	53			176	120	7,672	2,655	12,521	
United Kingdom	140	1,325	0	7	157	24	50		7	1,967	876			164	588		16		10,082	217	113	13		1	507	71		66,888	83,215	
Grand Total	5,261	17,414	380	485	175	2,451	3,386	283	3,292	68,445	36,367	2,160	784	3,427	50,557	333	469	148	143	22,490	4,567	1,569	488	650	883	25,118	9,355	8,755	261,295	531,129

Source: Dealogic

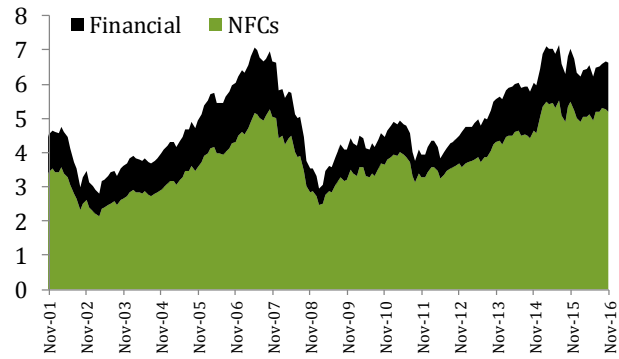
3 Market capitalisation and trading

3.1 Domestic market capitalisation of listed shares (€ Tn)



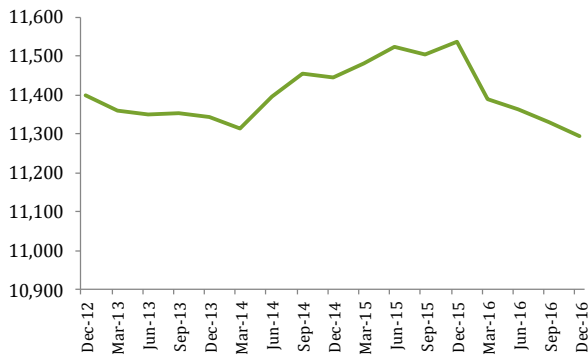
Source: ECB, Datastream, FESE, NASDAQ Nordic, LSEG, World Federation of Exchanges, Bucharest Stock Exchange and CEESEG – Prague

3.2 Market cap Euro area (€ Tn)



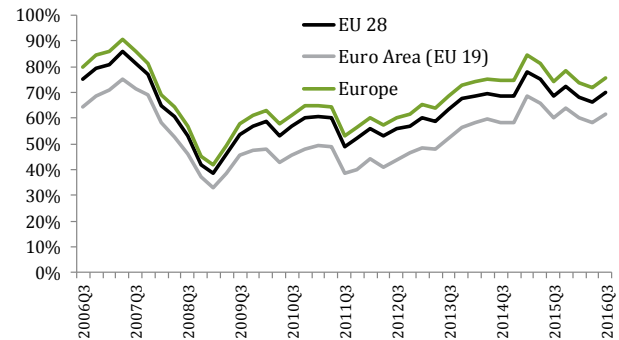
Source: ECB

3.3 Number of companies listed on European exchanges



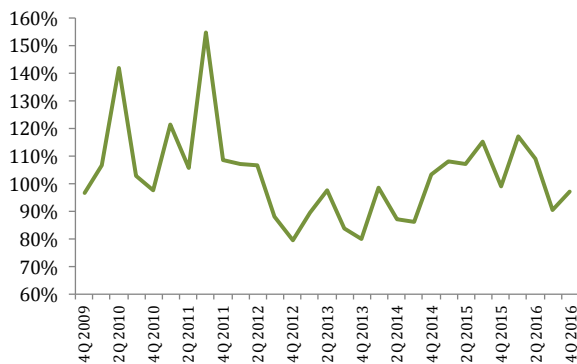
Source: ECB, Datastream, FESE, NASDAQ Nordic, LSEG, WFE, Bucharest Stock Exchange and CEESEG – Prague, Zagreb Stock Exchange

3.4 Domestic market capitalisation of listed shares relative to GDP (%)²¹



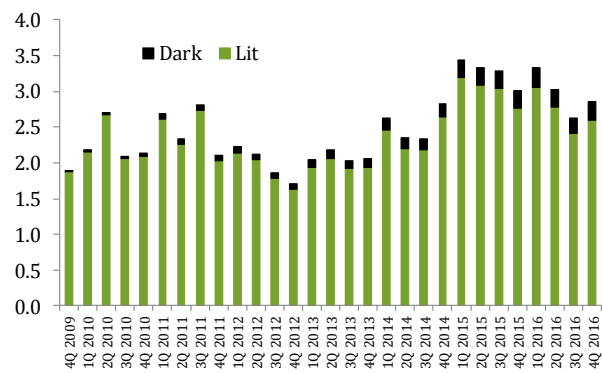
Source: ECB, Datastream, FESE, NASDAQ Nordic, LSEG, WFE, Bucharest Stock Exchange, CEESEG – Prague, Swiss Federal Statistical Office and Eurostat

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



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

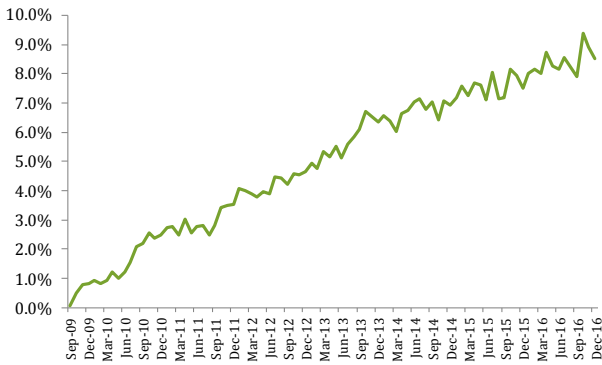
3.6 Quarterly turnover on European Exchanges and MTFs (€ tn)



Source: BATS CHI-X

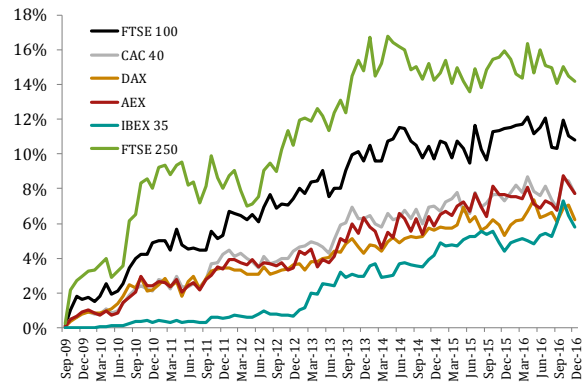
²¹ GDP available only as of 3Q16. Europe refers to EU28 member states and Switzerland.

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



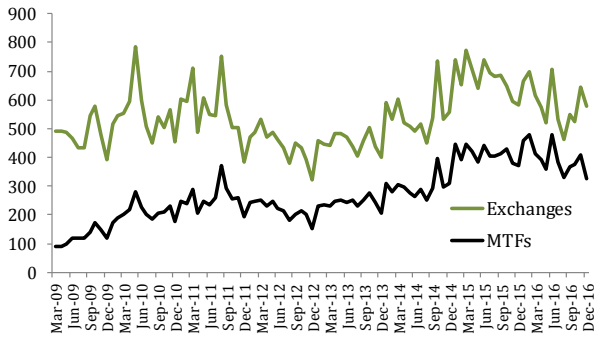
Source: BATS CHI-X

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



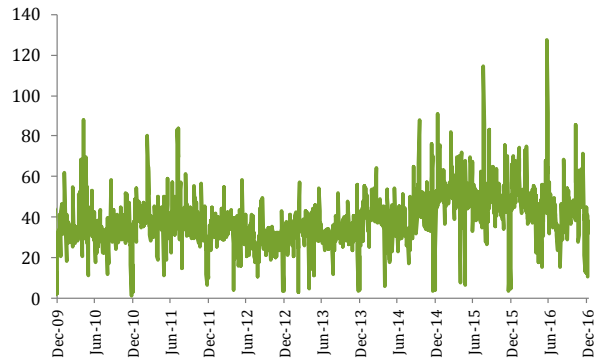
Source: BATS CHI-X

3.9 Monthly turnover value on European exchanges and MTFs (€ bn)²²



Source: BATS CHI-X

3.10 Daily turnover value on European exchanges and MTFs (€ bn)²³

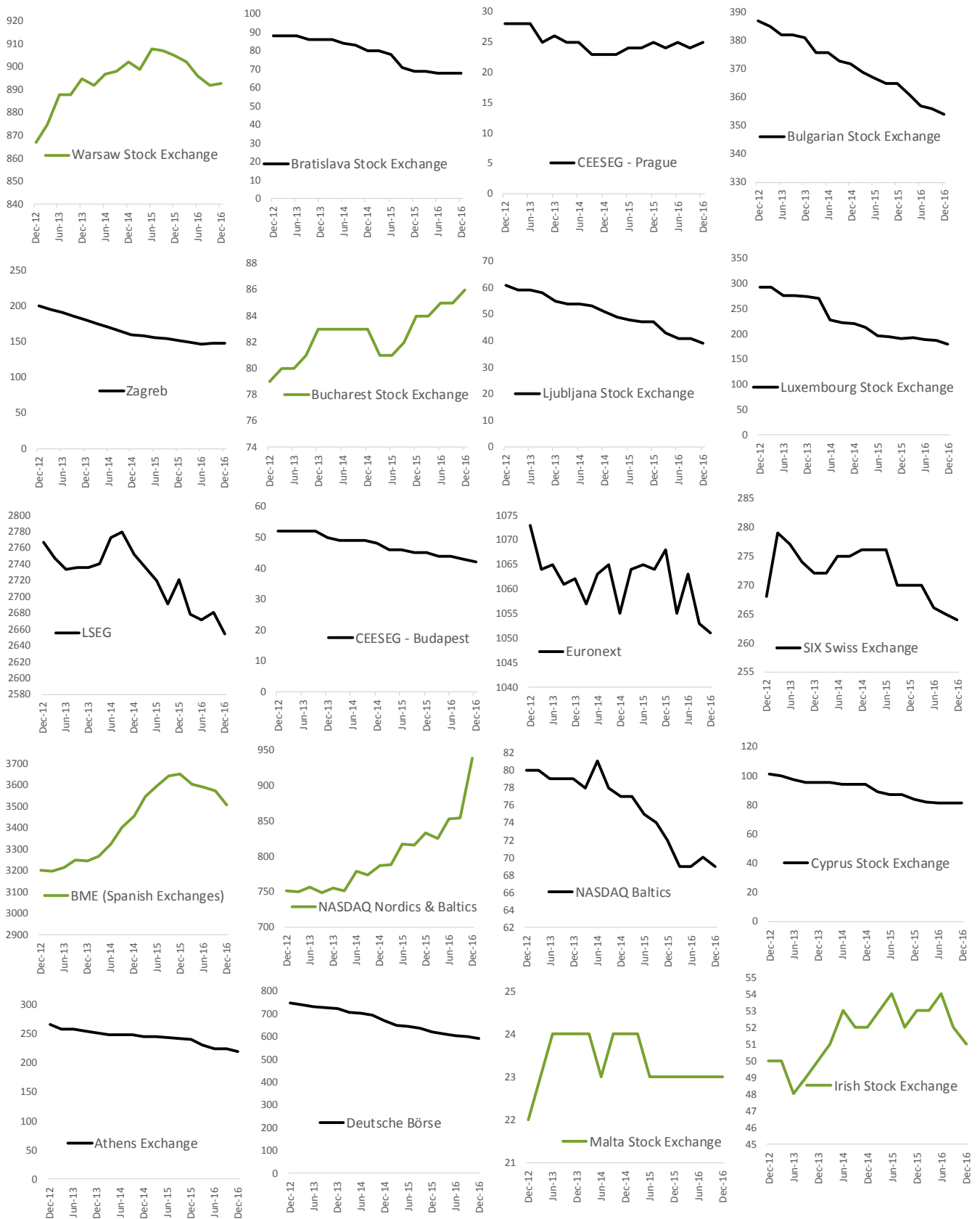


Source: BATS CHI-X

²² Under MTFs, the following are aggregated: 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.

²³ Under MTFs, the following are aggregated: 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.

3.11 Number of companies listed on European exchanges²⁴

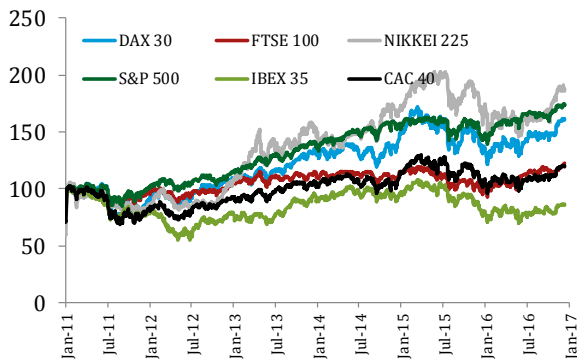


Source: FESE, NASDAQ Nordic, LSEG, WFE, Bucharest Stock Exchange and CEESEG – Prague, Zagreb Stock Exchange

²⁴ In Spain, includes open-end investment companies (3,298). As of Dec 2016, there were 130 listed companies in the Electronic Order Book (SIBE) and 39 on MAB.

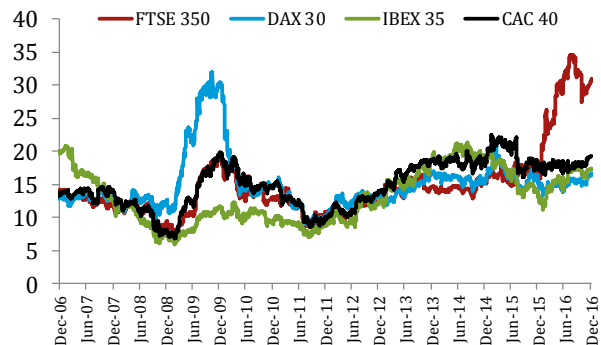
4 Valuation indices and ratios

4.1 Price indices of selected stock exchanges (Jan 2011 = 100)



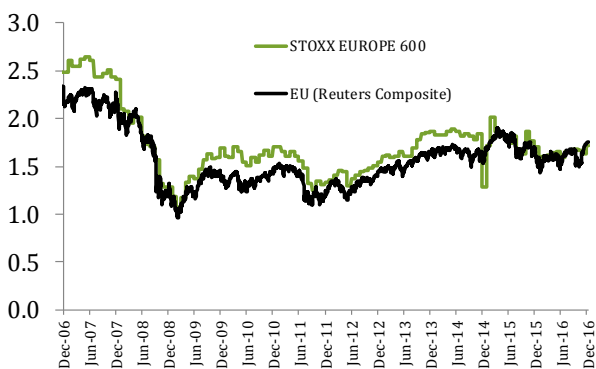
Source: Datastream

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



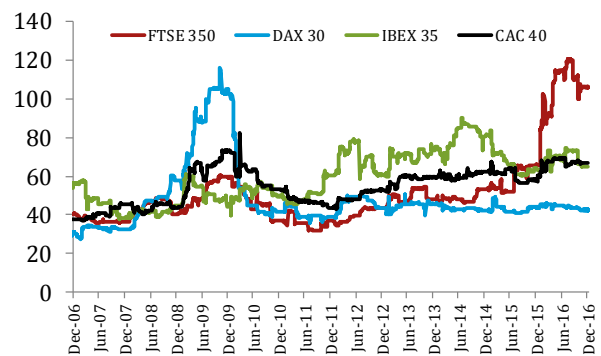
Source: Datastream

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



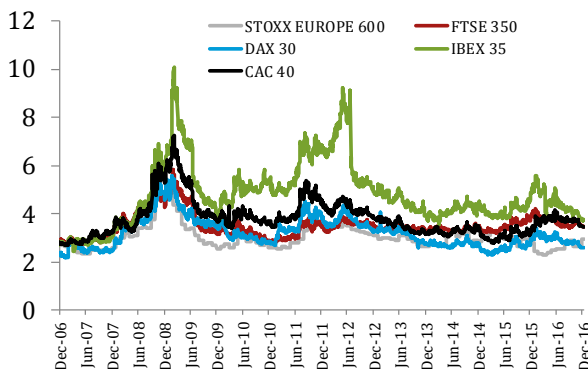
Source: Datastream

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



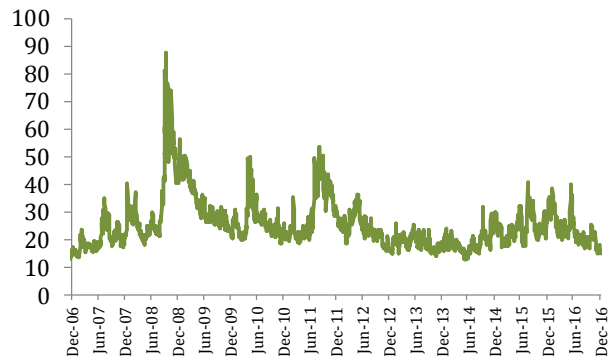
Source: Datastream

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



Source: Datastream

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



Source: Stoxx

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 overallotment 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 – 1.7 and 1.15-1.16 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 nationality of the exchange (charts 1.5-1.6 and 1.16), nationality of the issuing company (charts 1.7.-1.8.) and industry of the issuing company (charts 1.9- 1.10).

The aggregated values include overallotment proceeds (greenshoe).

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

1.8. Difference between offer price and 1-day market price

The chart illustrates the quarterly median of the difference between offer price and closing price one day after the IPO was issued.

The deals taken into consideration are all the carried out in European exchanges during the quarter.

Deals where the 1-day closing price or the offer prices are not available were not included in the calculation.

1.9. – 1.10 Overallotment proceeds

The graph illustrates 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 overallotment was not disclosed or if it was nil in a given deal.

Chart 1.13 aggregates IPO proceeds by proportion of exercised overallotment of each deal. Deals with undisclosed or nil overallotment are aggregated under 0% category.

1.11 Average proceeds per IPO

The graph shows the average amount of proceeds (including overallotment) per IPO during the quarter.

1.12 -1.13 IPO by market value of issuing firm

Graph 1.16 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”.

Graph 1.16 shows the median pre-deal market value of IPO issuing firms.

Data are sourced from Dealogic.

1.14 IPO on junior markets

Number and total proceeds (including overallotment) of 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

2.1-2.5 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.

Charts 2.1-2.2 disaggregate 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.

Charts 2.3-2.4 aggregate 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).

2.5-2.10 and 2.20 Completed M&A deals between European companies

The charts show the quarterly deal values of completed Mergers and Acquisitions (including debt) where the target and acquiring companies are domiciled in Europe (EU 28 + Switzerland).

Deal values are denominated in EUR billions.

Sponsor, strategic and add-on deals are defined as explained in charts 2.1-2.5.

The figures are aggregated by quarter when the deals were completed.

Value and volume data are sourced from Dealogic and comply with Dealogic’s rank eligibility criteria.

2.11. Average deal value

This graph illustrates the average deal value of by quarter of completed M&A deals where the target and acquiring companies are located in Europe.

The average is calculated as the ratio of deal values in a quarter as proportion of number of deals that reported non-null deal values. Due to reporting limitations, the ratio is different from dividing total deal values by total number of deals given that several deals do not report deal value or the data are missing.

2.12. 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.

2.13. 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.

2.14. Index: completed and announced deals relative to withdrawn

Index calculated as the total amount of completed M&A deals between European countries (i.e. intra-European deals) in a year calendar and year-to-date, relative to withdrawn volumes during the same period.

Additional index calculated as the ratio of announced to withdrawn volumes of M&A transactions during the year.

2.15. 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.

2.16. - 2.18. 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 (charts 2.8.), nationality of acquiring firm (chart 2.9.) and industry 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.

2.19. Completed M&A by deal size

The table aggregates the value and number of completed M&A deals by completed deal size (including debt) in nominal Euros. M&A deals where the target company is located in Europe are aggregated.

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

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