

4Q 2018

Equity Primary Markets and Trading Report

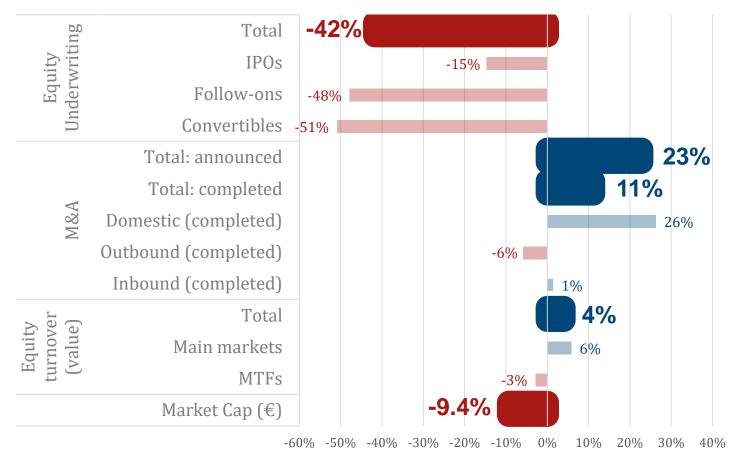
European market data update



afme/ Key highlights

2018FY annual variation of European Equity activity

EU28 member countries and Switzerland



Equity underwriting on European exchanges accumulated a total of €123.2 bn in proceeds in 2018, a 42% decrease from the value originated in 2017 (€211.6 bn).

IPO issuance in 2018 decreased 15% against the amount issued in 2017.

Completed Mergers and Acquisitions (M&A) of European companies totalled €1,042 bn in 2018, an increase of 11% from the amount completed in 2017 (€937.6 bn).

The amount of announced M&A deals totalled €1,078.7 bn in 2018, a 23% increase from 2017.

Equity trading activity on **European main markets and MTFs** generated a total of €11.9 tn in turnover value in 2018, an increase of 4% from 2017 (€11.4 tn)

Domestic market capitalisation of European listed shares stood at € 12.1 tn at the end of 2018, a decrease of 9% from the market value at the end of 2017 (€13.4 tn)

afme/ Contents Finance for Europe

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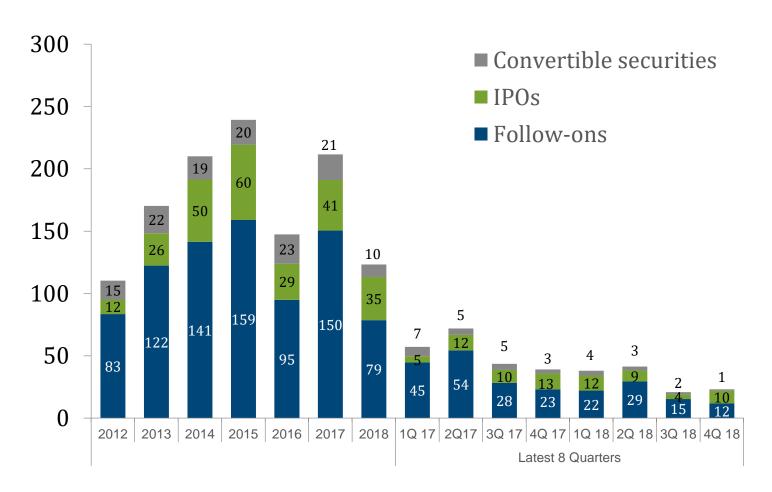


Equity issuance



Lowest amount of Equity issuance since 2012

Equity Issuance on European exchanges (EUR bn)



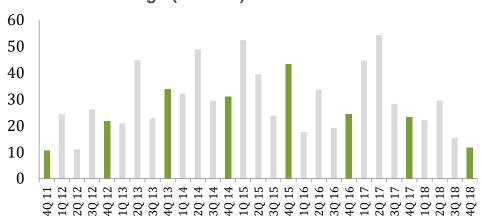
The significant decline in equity underwriting (-42%) was largely driven by a 48% decrease in follow-on offerings

IPO proceeds decreased 15% from the value raised in 2017 with fewer deals—253 IPOs in 2018 and 295 in 2017

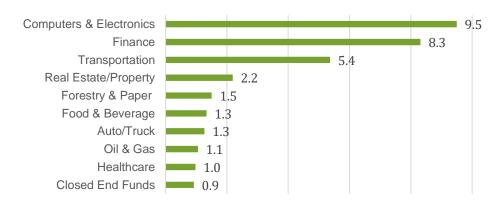
The decline in primary equity activity was in part due to the significant correction in the ultra-low market volatility (see page 31 of this report) and the continued political uncertainty in some European countries





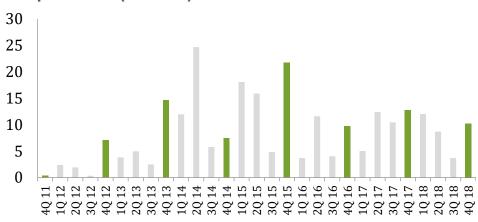


IPO proceeds by industry (Top 10, EUR bn): 2018FY

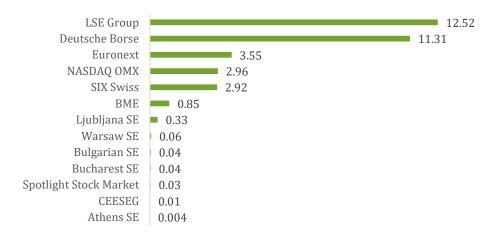


Source: Dealogic *Finance includes SPVs

IPO proceeds (EUR bn)



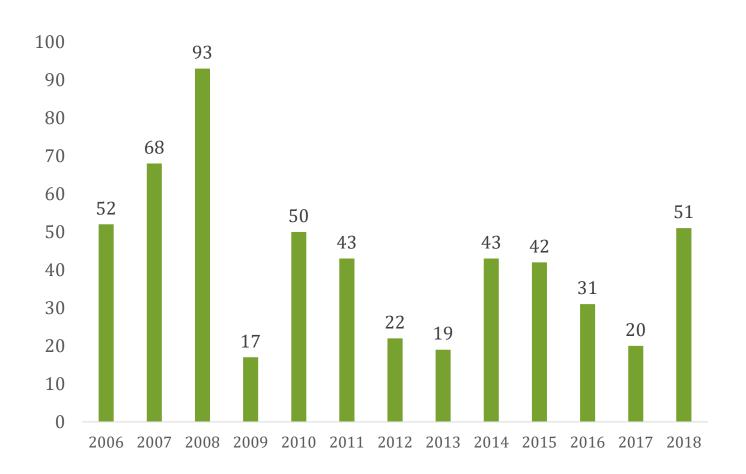
IPO proceeds by listing market (EUR bn): 2018FY





afme/ Increase in IPOs withdrawn or postponed

Number of IPOs withdrawn or postponed

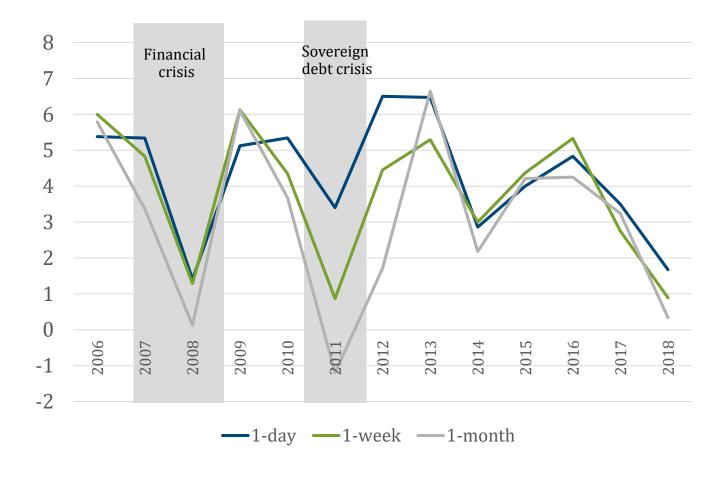


The 2018 market uncertainty generated a sharp increase in the number of European IPO deals withdrawn or postponed

A total of 51 IPO deals were withdrawn or delayed in 2018, an increase from 20 in 2017— also the highest number since 2008

afme/ Post IPO price performance

Median post-IPO share price variation (% offer price)



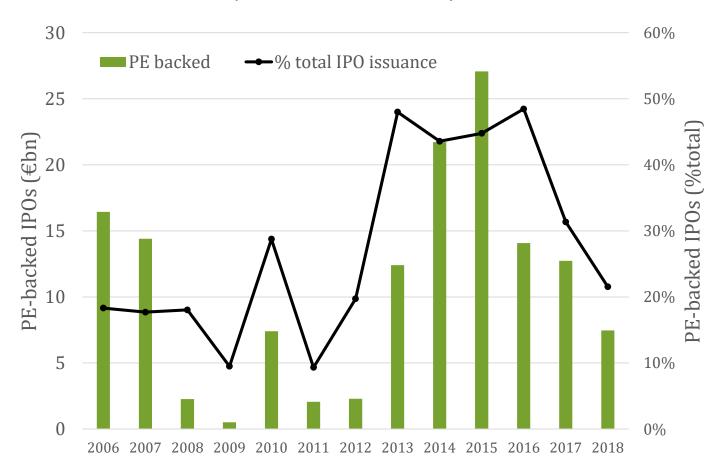
The returns from companies that recently go through the IPO process are usually positive over the short-term, reflecting investor demand for fresh growing companies fresh growing companies.

IPO companies typically return an average of c4% 1-day after IPO. However, in 2018, wider market uncertainty generated a decline in post IPO price performance when evaluated 1 day, 1 week and 1 month after issuance



Further decline in PE-backed IPO

PE-backed IPO issuance (EURbn and % of total IPO)



Private Equity backed IPO continued to decline in 2018

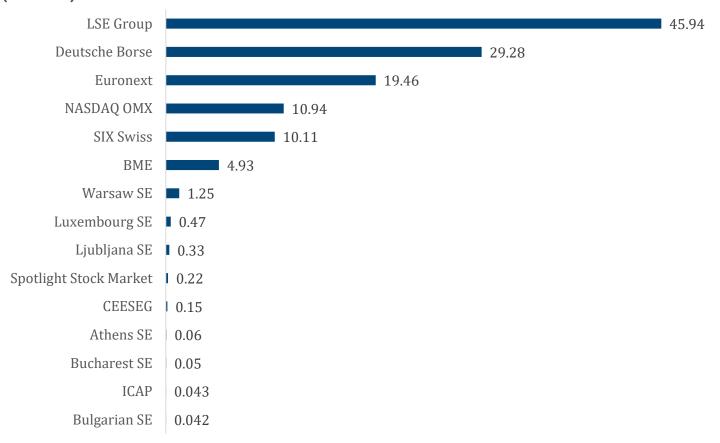
The percentage of PE backed IPOs as a total of European IPOs has declined since 2016 from 48% to 22% in 2018.

The decline may reflect preference to exit investments through other vehicles such as selling to other PE companies on private markets. As noted in page 15 of this report, the amount of PE-backed M&A activity has increased 22% over the last two years



Equity issuance by exchange during the year

Equity underwriting on European exchanges: IPO, follow-ons and convertibles (EUR bn): 2018FY

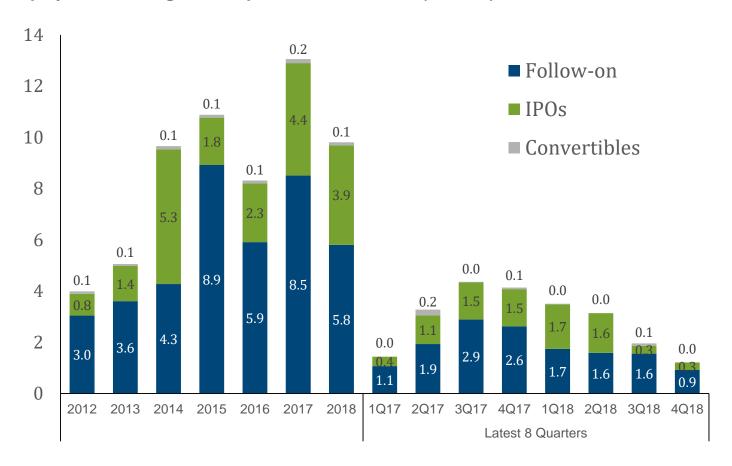


LSE Group exchanges (main market, AIM and Borsa Italiana) led by total equity underwriting accumulating a total of €45.9bn, followed by the Deutsche Börse and Euronext exchanges



Equity issuance on Junior markets

Equity underwriting on European Junior markets (EUR bn)



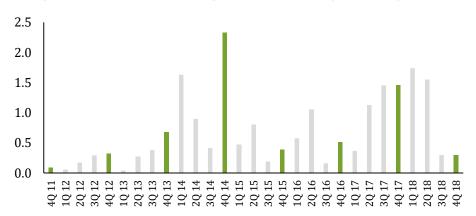
Equity issuance on Jr exchanges fell 26% compared to 2017, accumulating a total of €9.8bn in proceeds

IPOs on Junior markets totalled €0.3 bn in proceeds in 4Q18, the lowest quarterly amount since 3Q16.

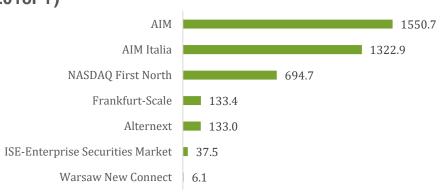


Sharp decline in IPO issuance on Jr markets during the last two quarters

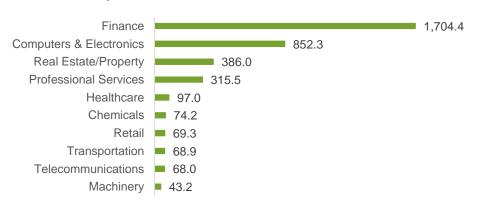
IPO proceeds on Jr European markets (EUR bn)



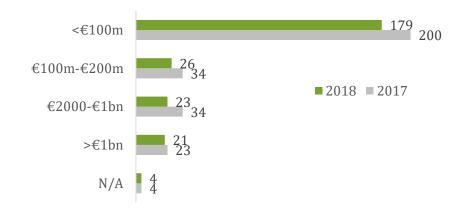
IPO proceeds on Jr markets by exchange (EUR mm, 2018FY)



IPO proceeds on Jr markets by industry (Top 10, EUR mm, 2018FY)



Number of IPOs on European exchanges by market value of issuer (pre-deal value, 2018FY)



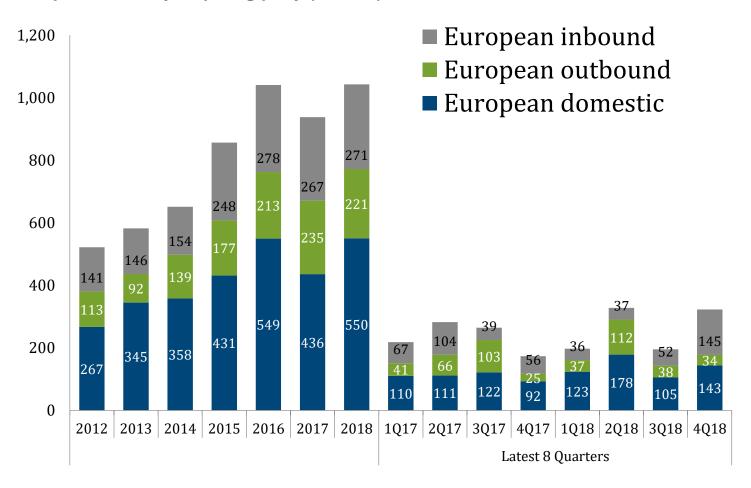
Source: Dealogic *Finance includes SPVs



Mergers and Acquisitions (M&A)

afme/ M&A by acquiring party

Completed M&A by acquiring party (EUR bn)



European M&A activity increased 11% against 2017, largely driven by a 23% increase in domestic deals (i.e. between European firms*)

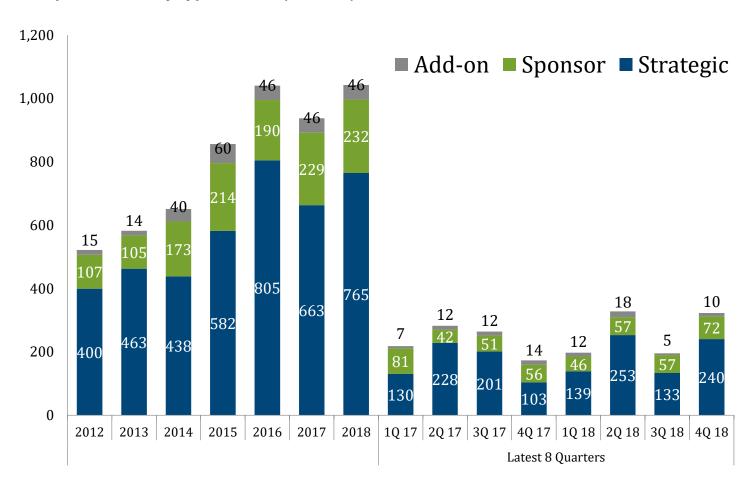
Inbound M&A deal value stood almost unchanged compared with 2017, with an annual growth of 1%. APAC firms represented 28% of the inbound deal value, a sharp decline compared to 47% of the 2017 inbound deal value

Outbound M&A (i.e. European firms that acquired non-European firms) decreased 6% against 2017. American-targeted firms represented 80% of the outbound deal value. See geographic breakdown on pages 18 and 19.

*EU28 and Switzerland

afme/ M&A by type of deal

Completed M&A by type of deal (EUR bn)



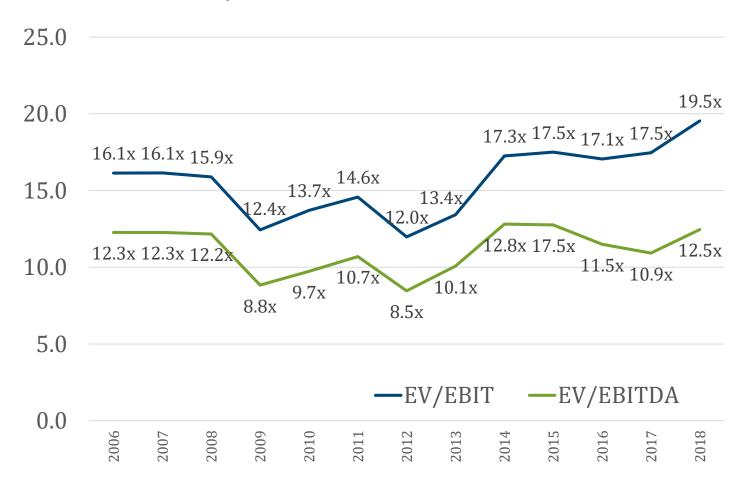
By type of deals, transactions between non-PE companies (i.e. "Strategic") represented 73% of the total deal value in 2018 (70% in 2017)

Private Equity-backed M&A activity ("Sponsor" deals) rose 2% during the year, which contrasts with a more significant increase of 20% in 2017



Valuation multiples of European-targeted firms

Median transaction multiples: EV/EBIT and EV/EBITDA



Valuation multiples stood roughly above 2006-17 averages.

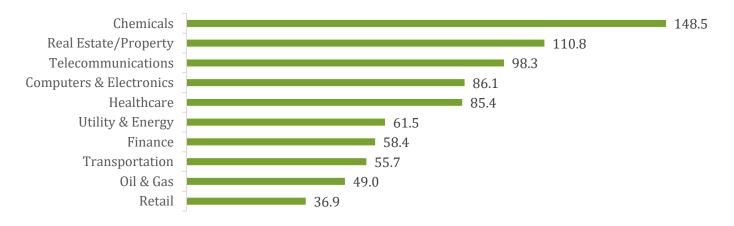
The median Enterprise Value to EBITDA ratio (EV/EBITDA) of targeted firms stood at 12.5x in 2018, compared to an annual average of 11.2x in 2006-18.

EV/EBIT median multiple was the highest observed in sample since 2006.

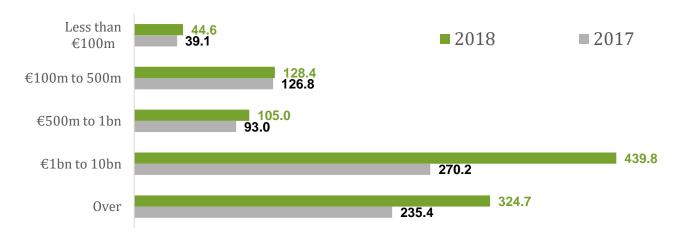


Chemicals lead by deal value 16 "megadeals" (12 in 2017)

Top 10 industries for completed M&A (2018FY, EUR bn)



Completed M&A transactions by deal value (EURbn)



Source: Dealogic

16 "megadeals" (deal value above €10bn) were completed during 2018, which included one split:

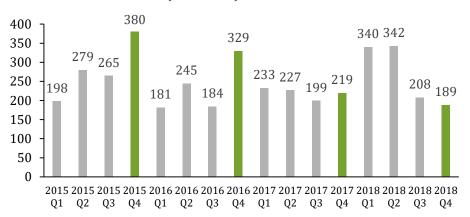
- Bayer-Monsanto
- Atlantia-Abertis infraestructuras
- Unibail/Rodamco-Westfield
- Worldpay Group plc-Vantiv
- GlaxoSmithKline-Novartis
- Melrose Industries-GKN
- Sanofi- Bioverativ Inc
- TDC A/S by a group of pension funds
- XL Group-AXA
- Wind Tre CK Hutchison
- Praxair Inc Linde
- Essilor Intl Luxottica Group
- Comcast Sky plc
- Carlyle Akzo Nobel (Chemicals business)
- BP Petrohawk Energy
- Atlas Copco AB split into Epiroc AB with full control to existing shareholders

These deals represented €324.7bn, or 31% of the amount of completed M&A transactions in 2018

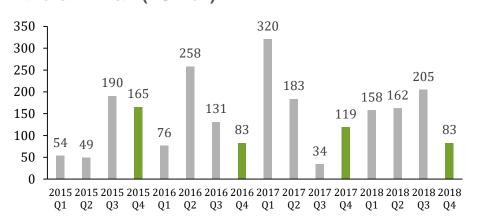


American firms represented the largest proportion of **European inbound and outbound M&A activity**

Announced M&A (EUR bn)



Withdrawn M&A (EUR bn)



Completed inbound M&A by acquiring region (EUR bn, 2018FY)

Americas: 172.1 EU+ Switzerland: 271.2 APAC: 75.5

IEMEA (Ex-EU & Switz): 23.6

Completed outbound M&A by target region (EUR bn, 2018FY)

Americas: 176.8 EU+ Switzerland: 221.1 APAC: 30.0

EMEA (Ex-EU & Switz.): 14.3

Source: Dealogic



afme/ European integration: M&A between European firms

Completed intra-European M&A activity (2018FY, EUR bn) **Target Nationality**

		AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	п	LV	LT	LU	мт	NL	PL	PT	RO	SK	SI	ES	SE	CHE	UK	Total
А	ustria	4,081		0	27		89			0	10	3,133	0	0	0	151	0				0	402		144		207	989	91	0	1,721	11,044
	elgium	0	3,522								1,888	1,180		0	0	0			0		18	0	0	0			21	0	0	413	7,042
	ulgaria			26																											26
С	roatia	0			135		0							0																	135
С	yprus					81	71					0			28			13				39		0						0	232
C	zech Republic	0			0		2,010				0	0		2,800										9	0		2				4,821
D	enmark	36	0					21,271		33	124	368	2		23	0	0	4			905	132	0	0	0		1,500	46	17	1,400	25,862
E	stonia			0				0	527	0								62													589
۩ ک	nland	0		0				278	0	9,571	38	4,042			232	0	0	0			21	0					0	642	0	120	14,945
□ Fr	ance	0	4,588				0	6,623		0	42,936	2,459		0	4,020	26,438		0	355		0	778	273	0	0	0	556	1,277	7,154	8,382	105,838
. で G	ermany	8,312	112	0	0		570	0	151	190	3,910	36,423	516	0	148	365	7	0	0		425	159	164	3	0	0	1,164	1,705	1,535	1,069	56,927
二 G	reece			2		0							1,405											4	9						1,420
<u>□</u>	ungary			0										640								1		0							641
-	eland	50	0								0	0			1,816	0					460	0	19				0	8		2,681	5,034
υ <u>σ</u> .	aly		0					0	8		1,800	2,619	1,002			22,463			40		0	88	0	0		8	27,173		0	226	55,426
4	atvia								0		0						1								18					4	23
_ ⊑	thuania						0	0	0								0	0				295						171			467
o 🍱	uxem bourg		36	1					288		30	1,095				2,025			14		188	4		1			0	12		26	3,720
M	alta											4				22				14										29	68
ರ №	etherlands		475	0			0	0		0	158	83		0	158	0			0		21,579	58	0	0			0	122	0	823	23,456
J 📰	oland			90		82	1,082		0		250	227			40	10		9				3,300		54			48		27	29	5,249
_	ortugal						0				3	20										8	1,102				0	6		0	1,139
~ -	omania													396				125			0	139		537	122						1,318
	ovak Republic						3					0													0		485				488
	ovenia		-		230					_															_	0					230
	pain		0		_		93			0	719	277		_	11	91		_				605	748		0	0	44,475			1,415	48,432
	weden	0	0		0		-	1,316	0	76	1,384	664		0	14	3,268	397	0		11	330	1	0	23		4.0	670	25,749	25	443	34,371
	witzerland	9	0	0	22	10	0	70	0	4	4,989	500	220	0	70	3,099	0		28		0	0	0	0		10	12	0	5,094	4,280	18,164
	nited Kingdom	54	4	0	22	10	2	76	075	379	5,343	1,448	228	0	5,569	489	0	242	149	0	1,761	5	46	209	1.10	64	937	202	19	106,250	123,264
T	otal	12,543	8,736	119	414	173	3,920	29,634	975	10,253	63,581	54,541	3,153	3,836	12,129	58,420	405	213	585	25	25,688	6,014	2,351	984	149	290	78,034	30,030	13,870	129,310	550,372

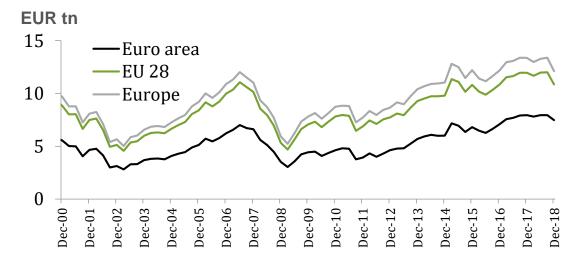
Source: Dealogic. Cross-national activity above €1bn highlighted in dark green

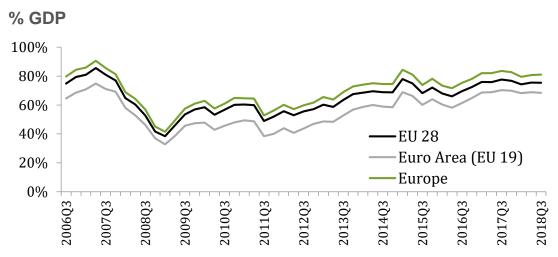


Secondary markets



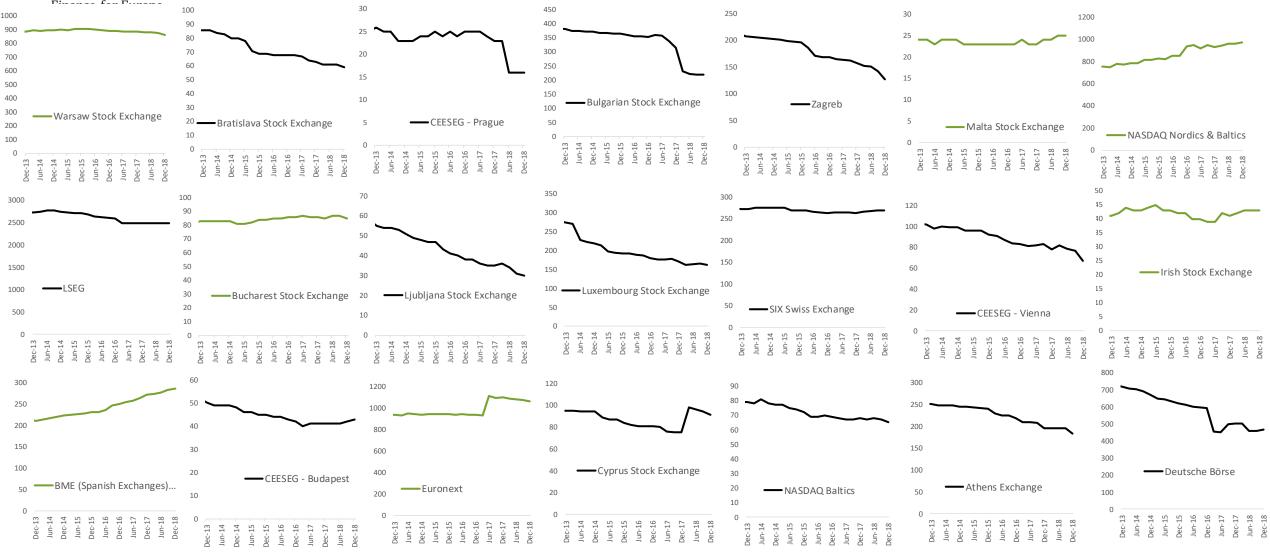
Market capitalisation of domestic listed shares





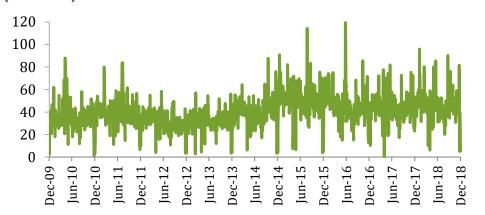
The European market capitalisation of listed shares finalised 2018 at €12.1tn, 9% below the endof-year level in 2017 (€13.4bn) due the market uncertainty episode at the end of 2018 and fewer listed companies compared to a year ago

afme/ Number of listed companies on European exchanges

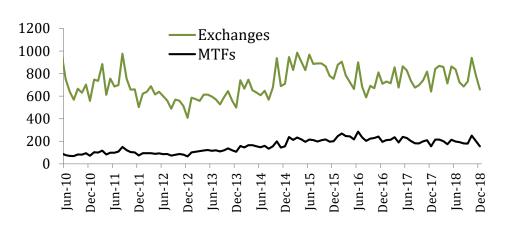




Daily turnover value on European exchanges and MTFs (EUR bn)*



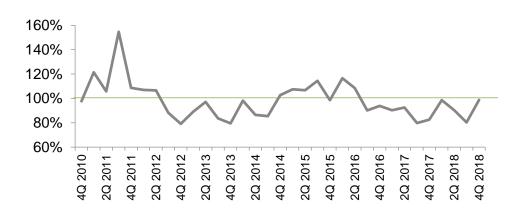
Monthly turnover value on exchanges and MTFs (EUR bn)*



Number of listed companies on European exchanges



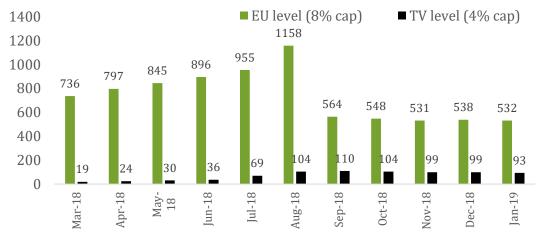
Turnover ratio (annualised turnover value/ market cap)



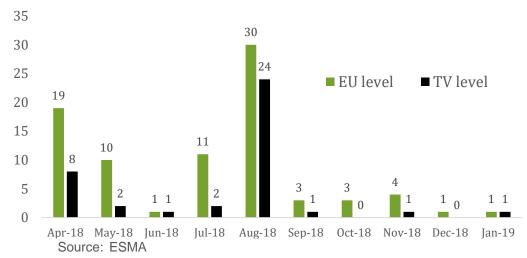


me/ MiFID dark trading caps

Number of equity-like instruments suspended from dark trading at the EU or venue level



Number of equity-like instruments whose DVC suspensions were revoked at the EU or venue level



In March 2018, ESMA published the double volume cap (DVC) data files specifying the securities that surpassed the MiFID II limits of total dark trading on EU venues

From a Universe of 26,750 equity-like securities traded in the EU, 625 are currently suspended (as of January 2019) from dark trading either on specific EU venues (93 securities) or on all EU venues (532) after surpassing the MiFID II dark trading thresholds (4% dark traded in a given trading venue and 8% for triggering suspension at EU level).

The number of banned instruments has decreased during the year from 755 in March 2018 and from 1,262 in August 2018 after c700 instruments completed its 6-month suspension period started in March



afme/ MiFID dark trading caps

Number of equity-like instruments in the ESMA DVC files by ISIN location:

Dec-18

Country ISIN	Universe	Suspended EU level	Suspended TV level	Suspended (% Universe)
AT	83	3	1	5%
BE	403	1	0	0%
BG	357	0	0	0%
CY	121	0	1	1%
CZ	26	0	0	0%
DE	1130	11	2	1%
DK	556	22	9	6%
EE	21	0	0	0%
ES	301	5	3	3%
FI	183	5	0	3%
FR	1280	44	15	5%
GB	2001	113	23	7%
GR	229	0	0	0%
HR	131	0	0	0%
HU	48	0	0	0%
IE	1047	3	0	0%
IT	438	10	3	3%
LT	33	0	0	0%
LU	950	9	2	1%
LV	27	0	0	0%
MT	35	0	0	0%
NL	218	15	1	7%
PL	44	0	0	0%
PT	65	0	0	0%
RO	372	0	0	0%
SE	1278	11	4	1%
SI	127	0	0	0%
SK	53	0	0	0%
Non-EU	15193	280	29	2%
Total	26750	532	93	2%

The 625 instruments currently suspended from dark trading at the EU or trading venue level represent 2% of the Universe of equity-like instruments on ESMA's December DVC files (26,750)

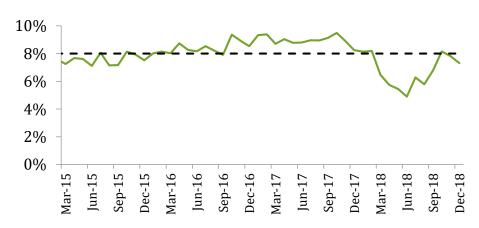
By countries, 136 of the 652 suspended instruments have UK ISINs (i.e. UK as the issuing country), which represents 7% of the 2001 UK ISINs registered in the ESMA DVC files

309 of the suspended instruments have non-EU ISINs, or 43% of all suspended instruments at the EU and trading venue.

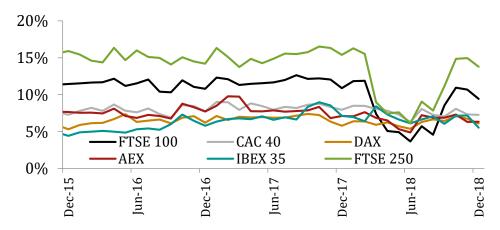


Growth in dark trading after c700 DVC shares completed 6-month suspension period

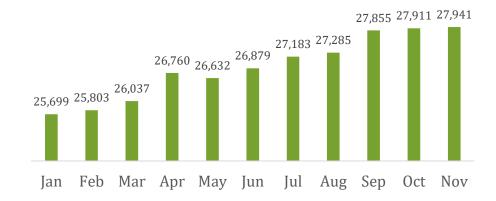
Dark trading as % of total turnover*



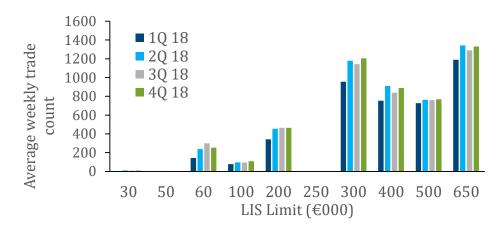
% of dark trading by indices*



Number of equity-like instruments (ISINs) registered on ESMA's DVC files

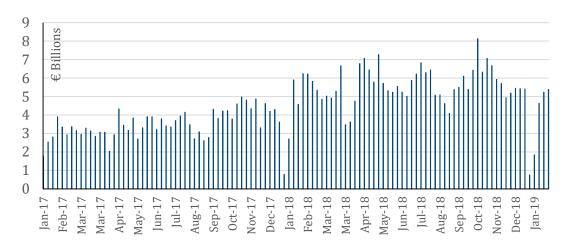


Block trades: weekly trade count by large-in-scale (LIS) limit

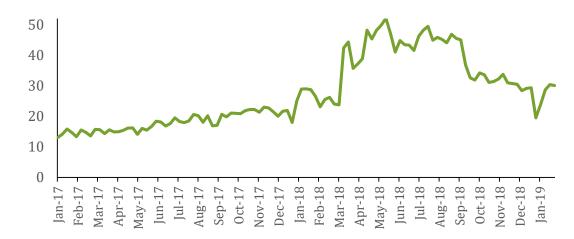




Block trades: weekly turnover on European selected venues



Proportion of dark traded as LIS blocks (%)



Source: Fidessa

The average weekly turnover in the form of block trades on selected European venues* has increased from €3.0 bn in 1Q17 to €5.6 bn on average during 4Q18 and €5.0 in the first weeks of January 2019

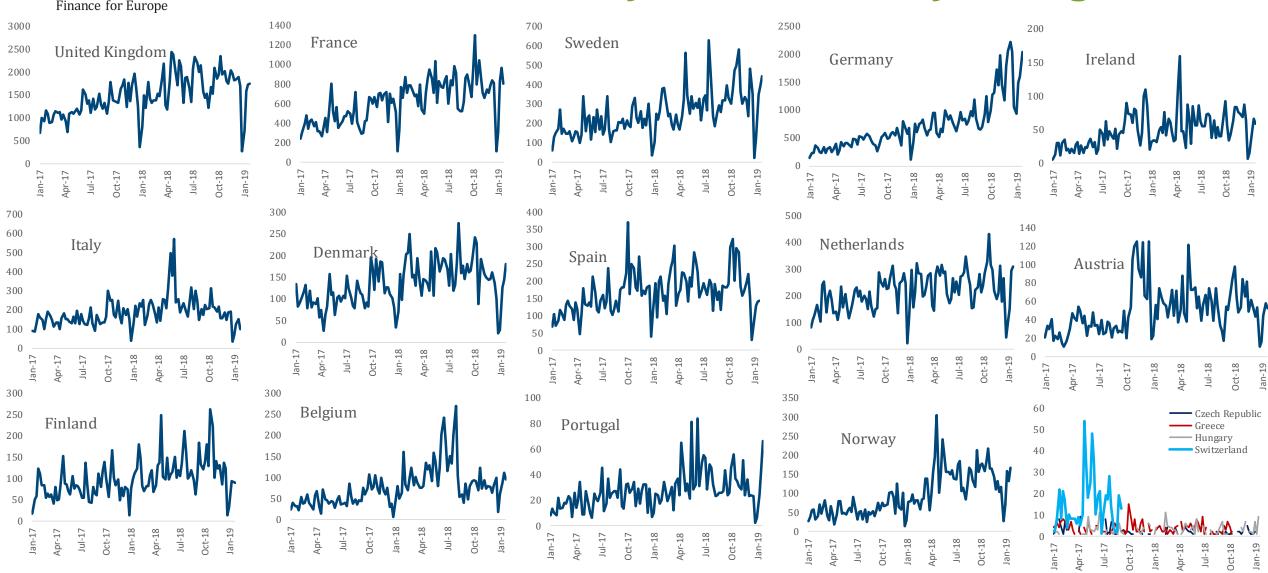
According to Fidessa data, the percentage of dark traded as large-in-scale (LIS) blocks on selected venues* declined from c50% in 2Q18 to 32% in 4Q18.

The recent decline in dark traded as LIS blocks could be attributed to the completion of the 6-month DVC suspension for c700 instruments as noted in page 24.

* Venues include CBOE dark, CBOE BXE, CBOE LIS, Liquidnet, Posit, Turquoise Plato, and UBS MTF

afme/

Block trades: weekly trade count by listing market



Source: Fidessa with data from Cboe BXE and CXE Dark Order Books, Cboe LIS service, Turquoise Plato™, Liquidnet, Posit and UBS MTF

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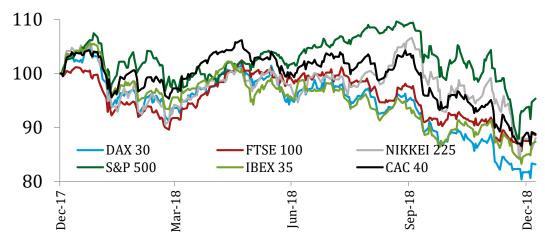


Valuations

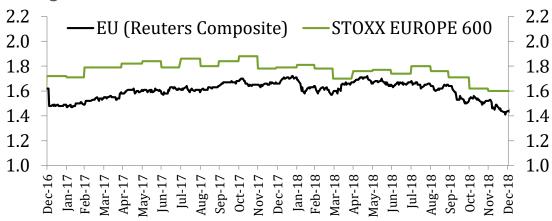


Price indices and valuation multiples

Price indices of selected stock exchanges (31 Dec 2017 = 100)



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

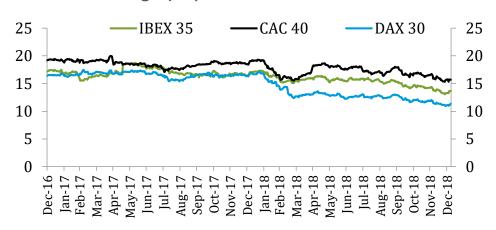


The average European priceto-book ratio (for STOXX Europe 600 indexed shares) finalised the year at 1.6x, 19bps below the level at the end of 4Q17 (1.79x)

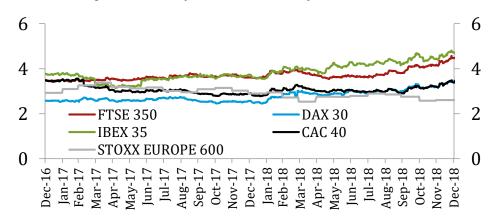


Valuation ratios and implied volatility

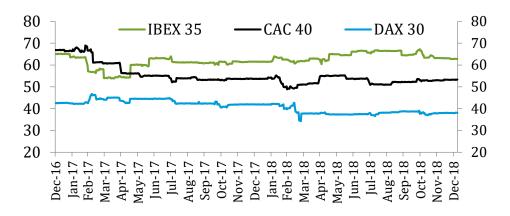
Price-to-earnings (PE) ratio



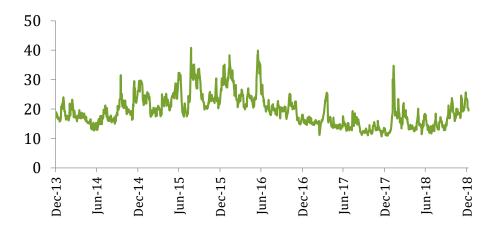
Dividend yield ratio (Dividend/Price)



Dividend payout ratio (Dividends/ Earnings per share)



Implied volatility of Euro Stoxx 50 constituent shares (VSTOXX)





	1Q 18	2Q 18	3Q 18	4Q 18	2018 FY	1Q 17	2Q 17	3Q 17	4Q 17	2017 FY	%Change YoY	%Change FY
Equity underwriting (€ bn)	38.0	41.3	20.9	23.1	123.2	57.1	72.0	43.5	39.1	211.6	-41%	-42%
IPOs	12.0	8.7	3.7	10.2	34.6	5.0	12.4	10.4	12.7	40.6	-20%	-15%
Follow-on offerings	22.1	29.4	15.3	11.6	78.5	44.7	54.3	28.3	23.1	150.4	-50%	-48%
Convertible securities	3.9	3.2	1.8	1.2	10.1	7.4	5.2	4.8	3.2	20.6	-62%	-51%
Mergers and Acquisitions (€ bn): completed	197.2	327.6	195.3	322.5	1,042.6	218.1	282.1	264.3	173.1	937.6	86%	11%
European outbound	37.4	111.7	38.2	34.1	221.4	40.6	66.3	103.1	25.1	235.2	36%	-6%
European inbound	36.3	37.4	52.2	144.9	270.8	67.2	104.4	39.5	55.7	266.8	160%	1%
Intra European	123.5	178.5	105.0	143.5	550.4	110.2	111.3	121.8	92.3	435.6	55%	26%
Mergers and Acquisitions (€ bn): announced	339.9	342.4	207.9	188.5	1,078.7	232.5	226.8	199.3	219.5	878.1	-14%	23%
Equity turnover value (€ tn)	3.20	3.00	2.69	2.99	11.9	2.96	3.03	2.67	2.76	11.4	8%	4%
Main Markets	2.57	2.41	2.14	2.38	9.5	2.30	2.37	2.11	2.20	9.0	8%	6%
MTFs	0.63	0.58	0.55	0.61	2.4	0.66	0.66	0.56	0.56	2.4	8%	-3%
Market Capitalisation of domestic listed shares	s (€ tn)											
European (EU28 and Switzerland)	13.0	13.3	13.4	12.1	12.1	13.0	13.1	13.4	13.4	13.4	-9%	-9%
EU 28	11.7	12.0	12.0	10.9	10.9	11.5	11.6	12.0	12.0	12.0	-9%	-9%
Euro Zone	7.8	8.0	8.0	7.5	7.5	7.6	7.7	7.9	8.0	8.0	-6%	-6%

Source: Dealogic, ECB, FESE, WFE, Cboe Global Markets and local exchanges

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