September 2023

MICROSTRUCTURE OBSERVATIONS

- In September 2023, the average daily volume in EMEA equities increased to €36.9B, 12% higher than the previous month, and 15% below September 2022 volume.
- The median quote size at the European Best Bid and Offer (EBBO) in September 2023 decreased for STOXX 50 by 9% and increased for STOXX 600 by 1% during the intraday trading period (08:30 to 16:00 GMT) compared to the previous month.
- Median quoted spreads at the EBBO in STOXX50 decreased 3% MoM and STOXX 600 symbol spreads decreased 2% MoM, during the intraday trading period.
- Volatility levels decreased in September 2023 compared to the previous month, with STOXX 50 decreasing 2% MoM and STOXX 600 volatility increasing 2% MoM, during intraday trading.
- The market share distribution between venue types changed slightly in September 2023 compared to the previous month. Primary lit volume decreased by 2.3% while Primary Auctions increased 2.6% MoM due to Triple Witching last month. Dark venues' market share increased by 0.7% to 10.3%, Lit MTF market share decreased by 0.9%.
- Dark market share between venues changed slightly in September 2023 compared to the prior month, with Cboe gained 2% while Aguis and SigmaX lost 1% each while other dark venues maintained their market share.
- Block market share distribution fluctuated in September 2023 compared to previous month; Cboe gained 1% while Liquidnet and POSIT lost 1%.
- In September 2023, closing auction volume as a percent of total daily volume increased slightly relative to the prior month; STOXX50 closing auction volume was up 3.8% to 31.5% and STOXX600 was up 1.7% to 34.5%.

EMEA MARKET STRUCTURE NEWS

Aguis Rule Book Change to Allow Marketable Orders from Liquidity Providers

Aquis Exchange announced last month that it will be changing the proprietary trading rules on its UK and EU trading platforms. The 8 year old rule did not allow marketable orders from proprietary trading firms whom, until now were only able to provide liquidity on Aquis Exchange. From the 30th of October proprietary trading firms will be able to access liquidity on both UK and EU books with the additional option to flag their passive liquidity as not available for other proprietary firms.

European Supervisory Authorities Publish Their Autumn Report on Risk and Vulnerabilities

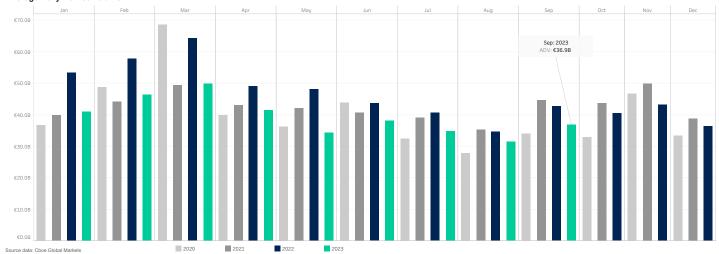
The report by three European Supervisory Authorities (EBA, EIOPA and ESMA – or ESAs) underlines the continued high economic uncertainty and calls for vigilance from all financial market participants. The report highlighted Russian aggression against Ukraine, the energy crisis, and the US mid-sized banks turmoil in March 2023 as a series of adverse events which, along with high inflation and high interest rates, contributed to material financial stability risks.

The ESAs advise national competent authorities, financial institutions, and market participants to take a number of policy actions which are outlined in the report.

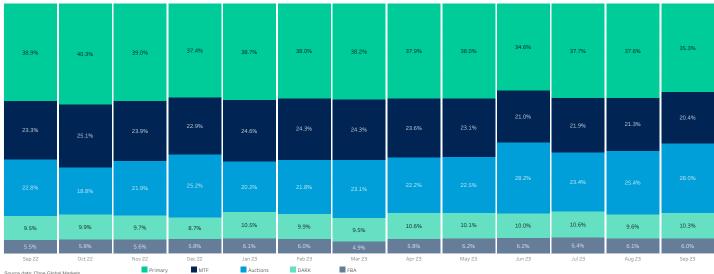
Coalition Greenwich Published A Study on Al Importance for Asset Managers

Last month, Coalition Greenwich conducted a study with 99 large asset managers globally that reveals how AI is changing the landscape. Of respondents, 46% of are considering investing in AI, though they haven't yet fully committed; 28% of asset managers have already embraced AI in various aspects of their business; 17% are actively developing AI applications, showing that they recognize the potential and are actively working on harnessing it and 9% have not seriously considered AI.

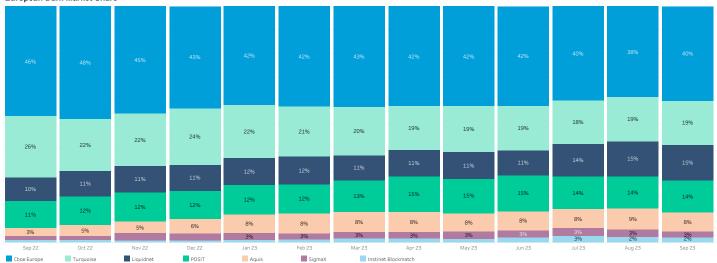




Venue Type Market Share



European Dark Market Share



Source data: Cboe Global Markets

European Block Market Share



Large In Scale values as per defined per symbol by ESMA; Source data: Virtu Financial

Quotoo	ize in Notic	3Q 22		4Q 22			1Q 23			2Q 23			3Q 23	
		Sep 22	Oct 22	Nov 22	Dec 22	Jan 23	Feb 23	Mar 23	Apr 23	May 23	Jun 23	Jul 23	Aug 23	Sep 23
8:00 -	Stoxx50	18.3K	18.0K	23.6K	25.9K	29.8K	32.1K	27.7K	31.3K	29.3K	25.8K	27.9K	28.0K	25.1K
8:30	Stoxx600	11.1K	9.9K	10.8K	12.3K	13.7K	14.1K	14.5K	15.2K	14.3K	13.5K		12.4K	12.1K
8:30 - 16:00	Stoxx50	25.8K	25.1K	34.3K	35.4K	40.6K	44.2K	38.5K	42.1K	39.4K	34.2K	39.0K	39.9K	36.5K
	Stoxx600	13.4K	11.5K	13.0K	14.9K	16.7K	17.4K	18.1K	19.1K	18.0K	17.6K	17.1K	16.2K	16.1K
16:00 - 16:30	Stoxx50	29.0K	28.8K	40.9K	42.2K	49.1K	47.8K	45.3K	49.5K	47.3K	41.8K	48.1K	51.5K	51.6K
	Stoxx600	15.0K	13.8K	16.6K	18.6K	20.2K	21.3K	22.4K	24.1K	23.4K	23.3K	22.9K		22.7K
Spread	Bps													
8:00 - 8:30	Stoxx50	5.2	5.2	4.7	4.7	4.7	4.5	5.0	5.4	5.5	5.3	5.2	4.8	4.7
	Stoxx600	9.4	9.8	9.0	8.7		7.7	8.4	8.3	8.4	8.0	8.1	8.1	7.9
8:30 - 16:00	Stoxx50	3.5	3.4	3.1	3.1	3.2	3.0	3.3	3.4	3.4	3.3	3.4	3.3	3.2
	Stoxx600	5.9	6.0	5.3		4.9	4.9	5.4	5.1	5.1	5.0	5.1	5.1	5.0
16:00 - 16:30	Stoxx50	2.9	2.8	2.6	2.8	2.8	2.6	2.9	3.1	3.1	3.1	3.1	3.0	2.7
	Stoxx600	4.8	4.9	4.3	4.4	4.1	4.2	4.6	4.5	4.4	4.5		4.6	4.4
One Mi	nute Volati													
8:00 -	Stoxx50	17.1	16.9	13.4	11.5	11.6	12.4	14.1	12.3	12.4	11.4	11.4	10.4	10.2
8:30	Stoxx600	16.9	17.4	14.8	12.2	12.0	11.4	12.8		11.1	10.2	10.4	9.6	9.4
8:30 - 16:00	Stoxx50	8.7	8.1	5.9	5.0	5.4	5.5	6.9	5.5	5.1	5.1	5.0	5.3	5.2
	Stoxx600	7.4	7.6	6.0	5.0	4.9	4.9	6.0	4.8	4.6	4.5	4.5	4.5	4.6
16:00 - 16:30	Stoxx50	8.5	8.5	6.0	5.5	5.6	5.7	6.6	5.9	5.7	5.8	5.1	5.4	4.8
	Stoxx600	6.8	7.0	5.4	4.8		4.7	5.1	4.5	4.5	4.4	4.2	4.3	4.2
Percent	t ADV by T	ime of Day												
Open	Stoxx50	0.7%	0.7%	0.8%	0.9%	1.1%	1.0%	1.0%	1.0%	1.0%	1.1%	1.1%	1.0%	1.0%
	Stoxx600	0.4%	0.3%	0.4%	0.4%	0.6%	0.6%	0.6%		0.6%	0.6%	0.6%	0.5%	0.5%
8:00 - 8:30	Stoxx50	11.5%	11.6%	10.1%	7.1%	6.4%	5.9%	4.8%	2.9%	3.4%	3.0%	4.1%	6.4%	7.3%
	Stoxx600	7.9%	7.8%	7.4%		8.8%	8.3%	6.3%	6.5%	6.6%	5.7%	5.7%	5.7%	5.1%
16:00 - 16:30	Stoxx50	11.0%	12.2%	10.2%	6.9%	5.5%	3.3%	4.2%	2.0%	2.8%	2.9%	4.4%	8.4%	11.2%
	Stoxx600	12.9%	12.2%	11.8%	11.0%	13.1%		13.2%	13.3%	13.9%	13.6%	14.4%	15.8%	16.1%
Close	Stoxx50	20.4%	18.0%	19.4%	23.5%	23.1%	25.7%	27.4%	26.6%	29.3%	32.7%	29.5%	27.7%	31.5%
	Stoxx600	20.4%	18.3%	18.6%	21.5%	25.8%	26.8%		29.8%	30.6%	34.9%	32.4%	32.8%	34.5%

Median used for all metrics One minute volatility is calculated using the difference between the high and low price within a one minute time bin, divided by that bin's VWAP Source data: Virtu Francial

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