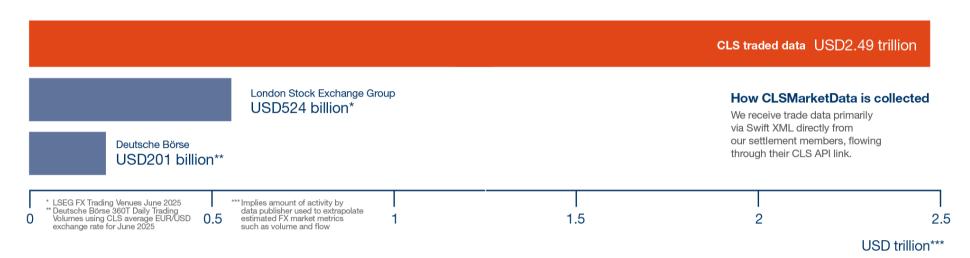


CLSMarketData

As the largest single source of FX executed data available to the market, our datasets include data based on over 3 billion trades executed since 2011. We leverage the power of this information to help market participants understand market dynamics and improve decision making.

Average daily volume by source June 2025



- * LSEG FX Trading Venues June 2025.
- ** Deutsche Börse 360T Daily Trading Volumes June 2025.
- *** Implies amount of activity by data publisher used to extrapolate estimated FX market metrics such as volume and flow.

2.15+ USD trillion average daily traded volume in 2024 40 major currency pairs 18 of the most actively traded currencies globally 1 Australian dollar, Canadian dollar, Danish krone, euro, Hong Kong dollar, Hungarian forint, Israeli shekel, Japanese yen, Korean won, Mexican peso, New Zealand dollar, Norwegian krone, Singapore dollar, South African rand, Swedish krona, Swiss franc, UK pound sterling and US dollar

Data quality recognition:

 Foreign Exchange Volume by Giovanni Cespa, Antonio Gargano, Steven Riddiough and Lucio Sarno, 2022 Review of Financial Studies



CLSMarketData can add value throughout the buy-side community

	Seeking alpha*	Trade execution	Risk management	Transaction cost analysis		
	trading models execution models into risk manage		Additional insights into risk managementBetter understand your risk	Enhance existing trade cost analysisBetter estimate and track FX cost		
FX Volume	Develop uncorrelated models	Optimize and time your trading	Measure liquidity risk Measure volatility better	Measure market impact		
FX Flow FX Outstanding	Calibrate models effectively Quickly identify shifts in market trends	Fine tune trading strategies	Manage risk with insights into market behaviour	Improve best execution monitoring Reduce transaction costs		
FX Pricing		Optimize VWAP / TWAP execution models		Benchmark against WWAP / TWAP		
	Quantitative analystsHeads of researchPortfolio managers	• Execution traders	Risk managersPortfolio managers	Performance analysts		

CLSMarketData can add value throughout the sell-side community

Sales tools Trade Risk and Business development* compliance execution • Enhance client and • Enhance reporting Access comprehensive Optimize market share analysis independent data to execution models and monitoring support sales activity • Enhance intraday visibility of market activity across FX instruments Add volume depth to Measure regional market Provide an independent Identify abnormal activity trading analysis and build FX Volume share activity to identify view of traded activity Measure liquidity risk a comprehensive view gaps and opportunities by tenor of volumes by tenor Provides independent Identify synergies and **FX Flow** market colour on traded areas for growth Provides informed Augment volatility flow by sector and risk modelling volume depth by sector Enhance visibility across Provide holistic view Outstanding forwards and swaps of net traded flows Benchmark execution by Reference market traded Identify abnormal pricing **FX Pricing** providing independent VWAP/TWAP rates activity using market VWAP/ TWAP rates traded average rates Heads of FX trading • Spot and eFX traders • Risk managers FX and eFX sales and sales • STIR traders Compliance officers Client development • Quantitative analysts Risk analysts COO and business managers

FX Volume

Quality, executed trade volume data to enhance your trading models, support post-trade analysis and reporting and strengthen investment and research analysis.

Data highlight

FX Volume provides intraday hourly or daily executed FX spot trade volume data in 40 currency pairs. Trade volumes are aggregated by

FX Pricing

Volume and time-weighted executed trade spot pricing data provides a comprehensive view of market activity to help improve your analysis of pricing trends, measure the quality of your business decisions and enhance data-driven trading algorithms.

Data highlight

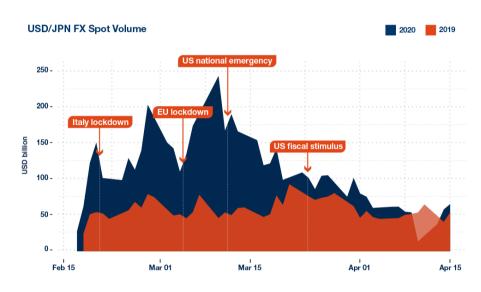
^{*}The data sets described here do not constitute investment or financial advice. Past performance is no guarantee of future results.

currency pairs, region, trade size, number of trades and total value in USD equivalent.

Executed FX outright swaps and forwards volume data with detailed tenors and tranches can be delivered hourly and end-of-day to help meet your requirements.

Benefits

- Improve your understanding of the changing nature of global currency markets and trading performance by researching historical trends
- Strengthen your liquidity strategies and support trend analysis over different tenors.
- Enhance your trading models and strategies and support post-trade analysis and reporting by incorporating liquidity at each tenor.
- Evaluate performance, achieve greater. insight into market dynamics and support your business and trading models by developing new forwards and swaps market analytics.
- Reduce trading risk quickly and accurately by analyzing trends over time.



Price data values are created using market standard VWAP/TWAP conventions and broken down by five-minute intervals, updated hourly and daily

Benefits

- Improve capital and operational efficiencies through daily pricing trend analysis.
- Enhance your trading algorithms and minimize market impact.
- Strengthen financial and risk control around valuations and mark-tomarket assessments.
- Drive a better outcome for best execution and transaction cost analysis.

"Volume helps predict next day currency returns and is economically valuable for currency investors."

Review of Financial Studies / Foreign Exchange Volume by Giovanni Cespa, Antonio Gargano, Steven Riddiough and Lucio Sarno 2022

FX Flow

FX flow data helps inform your directional trading strategy by enabling you to track the flow and volume of market participants to detect and/or generate trading signals.

Data highlight

Provides data illustrating aggregate flow between certain counterparty types: market makers and price takers; non-bank financial institutions and banks; funds and banks; and corporates and banks. The data includes built-in parameters to capture volume purchased and sold, as well as number of trades executed across the market. Data is predominantly updated daily and aggregated in hourly intervals but is also available in a dynamic delivery window every ten minutes.*

Benefits

- Achieve an improved understanding of trading flows by calibrating your trading models more effectively and structure your positions according to likely increases in flow.
- Manage your risk and liquidity through in-depth insight into market participant behaviors to incorporate liquidity at each tenor.
- Improve accuracy of trading rules and strategies with enhanced transparency of the forward-looking net positions across various market participant segments.



- * The average delivery can be between 15-30 mins and slightly longer delays can occur.
- ** The data used in the above chart is for illustrative purposes only.

FX Outstanding

FX outstanding data offers insights into forward-looking net positions by capturing outstanding forward and swap trades across market participants to provide insights into market dynamics.

Data highlight

This end-of-day report provides daily insights into outstanding forward and swaps positions across the FX market. Offering further transparency across short and long term tenors by market participant type including corporate, fund, non-bank financial institutions and bank segments.

Benefits

- Enhance your visibility of market activity and trading flows across short- and long-term forward and swap tenors.
- Augment volatility modelling of asset and derivative prices for greater market transparency
- Improve accuracy of trading rules and strategies with enhanced transparency of the forward-looking net positions across various market participant segments.

Our data history aids analysis to predict future events, supports market research and helps in understanding past evolution patterns.

Data History

CLSMarketData products (Earliest available)	Daily Daily	Hourly Daily	5-Minute Daily	Hourly Hourly	5-Minute Hourly	Dynamic 5-Minute
FX Spot Volume	31 Oct 2011	31 Oct 2011	31 Oct 2011	03 Jul 2017	27 Feb 2019	-
FX Forward Swap Volume	31 Oct 2011	31 Oct 2011	-	30 Sep 2021	-	-
FX Spot Flow	03 Sep 2012	03 Sep 2012	03 Sep 2012	27 Oct 2017	-	10 Jul 2022
FX Forward Swap Flow	03 Sep 2012	03 Sep 2012	-	30 Sep 2021	-	-
FX Spot Pricing	-	-	01 Sep 2015	-	22 Aug 2017	-
FX Forward Swap Outstanding	03 Sep 2012	-	-	-	-	-

Methodology

The underlying data is adjusted to follow the reporting convention used by the Bank for International Settlements (BIS) and the local semi-annual foreign exchange committee market reports. These surveys only report the bought currency values, or one leg of the trade, to avoid double counting the total amount of trades.

Accessing CLSMarketData

CLSMarketData is available via a REST API or downloadable in .csv format from the CLS Direct portal.

For more information please email enquiries@cls-group.com

Trusted by thousands of counterparties within the global FX ecosystem, CLS makes FX safer, smoother and more cost effective. Trillions of dollars' worth of currency flows through our systems each day

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