

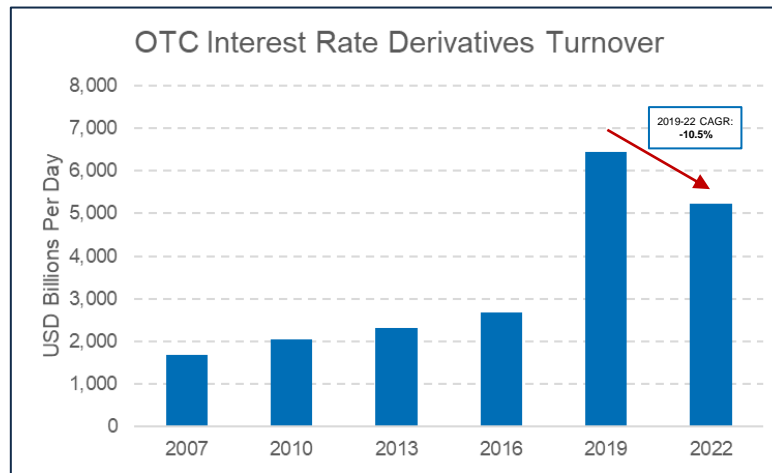
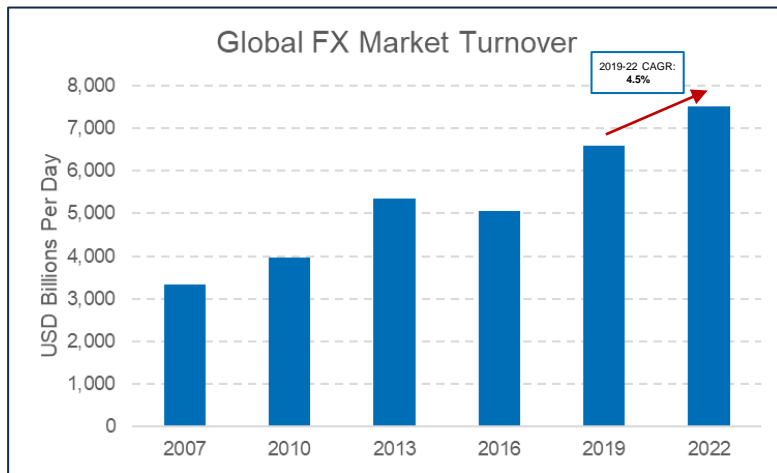
BIS 2022 Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Markets

November 15, 2022

BIS Triennial Central Bank Survey

- The BIS Triennial Central Bank Survey is the most comprehensive source of information on the size and structure of global over-the-counter (OTC) markets in foreign exchange (FX) and interest rate derivatives.
- The Survey aims to increase the transparency of OTC markets, helping central banks and market participants monitor global financial markets, and to inform discussions on reforms to OTC markets.
- BIS survey has been published triennially since 1986, it is a single month snapshot done every April; 2022 included 52 jurisdictions across 1,200 banks.
- Turnover data are reported by the sales desks of reporting dealers, regardless of where a trade is executed, and on an unconsolidated basis, including trades between related entities that are part of the same group i.e. back to back trades.
- The data is subject to revision.
- A separate survey on outstanding amounts as of June 2022 will be published in November 2022.

Headline OTC Market Turnover

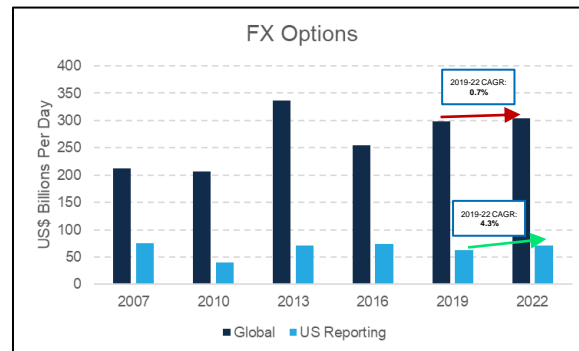
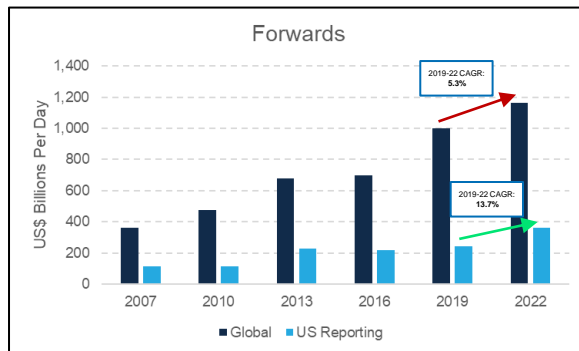
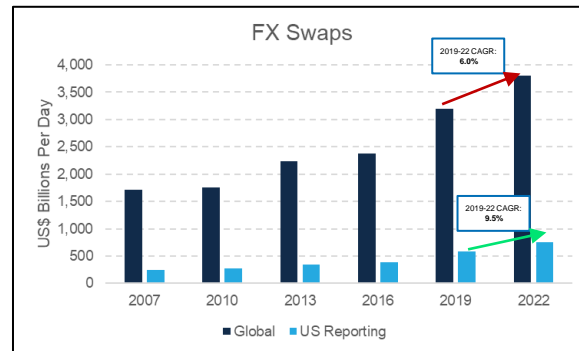
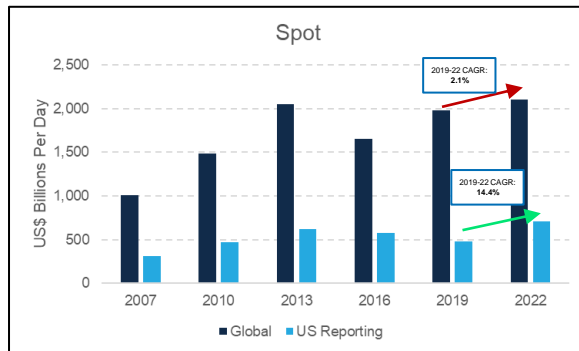


- FX Turnover reaches record level of US\$ 7.5 trillion per day
 - Growth in FX over past 3 years: 4.5% per annum
 - Slightly slower than long term trend growth (5.6%pa 2007-2022)
- Interest rate derivatives turnover falls to US\$ 5.2 trillion per day
 - Decline equal to -10.5% per annum
 - Driven by US dollar marketplace transition from LIBOR to risk free rates reducing FRA volumes

Data Source: BIS Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets.

FX Turnover by Instrument Type

- Spot market \$2.1tn/day in 2022;
 - CAGR up by 2.1% since 2019;
 - Up 0.3% since 2013
- FX Swaps \$3.8tn/day in 2022;
 - CAGR up by 6.0% since 2019;
 - Up 6.1% since 2013
- FX Forwards \$1.1tn/day in 2022;
 - CAGR up by 5.3% since 2019;
 - Up 6.2% since 2013
- FX Options \$0.3tn/day in 2022;
 - CAGR up by 0.7% since 2019;
 - Down 1.1% since 2013

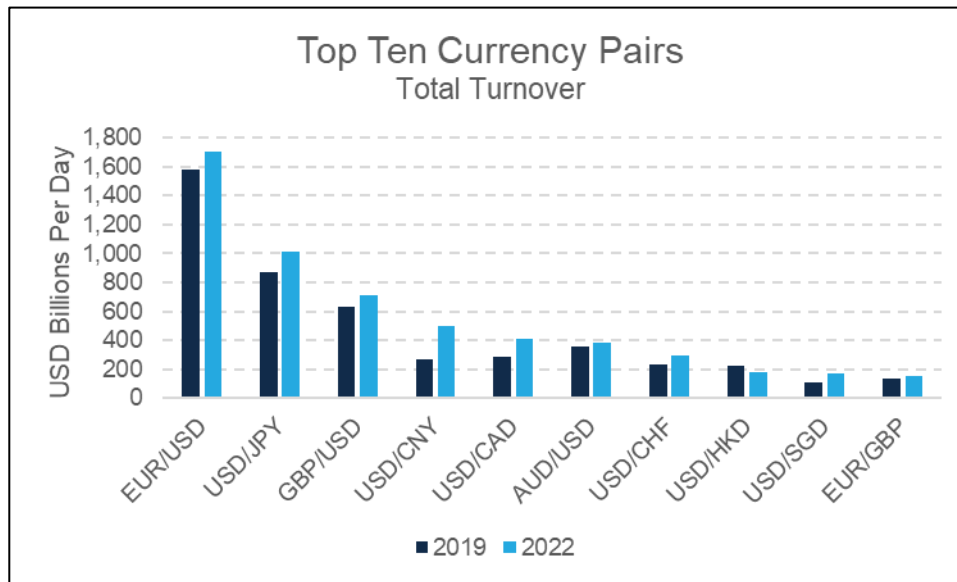


Global data is net-net basis, US data is net-gross basis

Data Source: BIS Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets.

Top Ten Currency Pairs

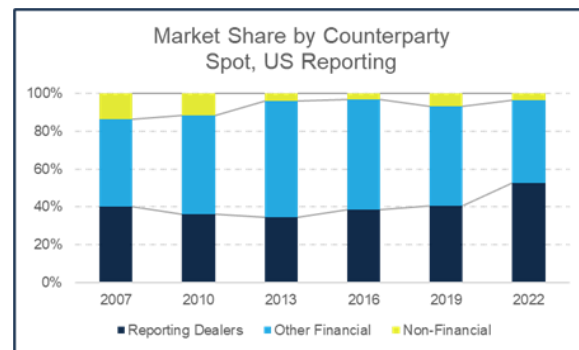
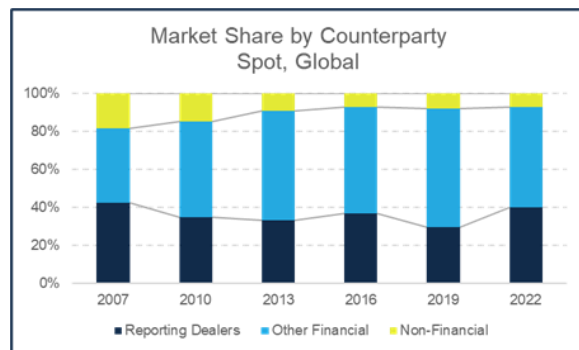
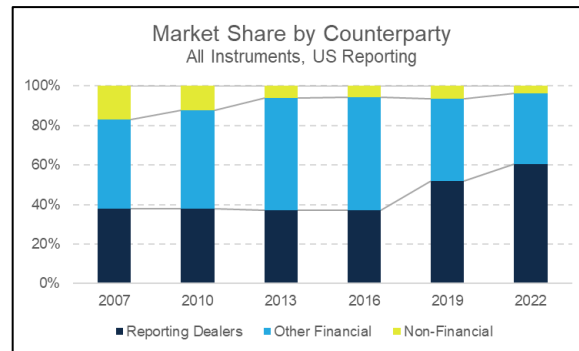
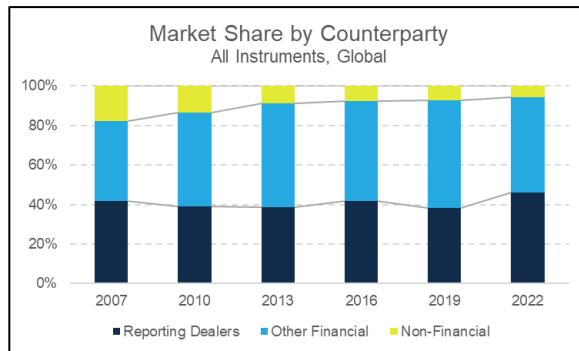
- USD is a component of 88.5% of FX trading
 - vs 87% in 2013 and 88.3% in 2019
- EUR/USD remains the largest currency pair
 - 22.7% overall market share
 - vs 24.1% in 2013 and 24.0% in 2019
- USD/CNY now 4th largest currency pair
 - 6.6% overall market share
 - vs 2.1% in 2013 and 4.1% in 2019
 - Overtakes USD/CAD and AUD/USD
- Largest overall declines since 2019*
 - USD/RUB: -41.3% CAGR
 - USD/TRY: -27.6% CAGR(*of 39 currency pairs published)



Data Source: BIS Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets.

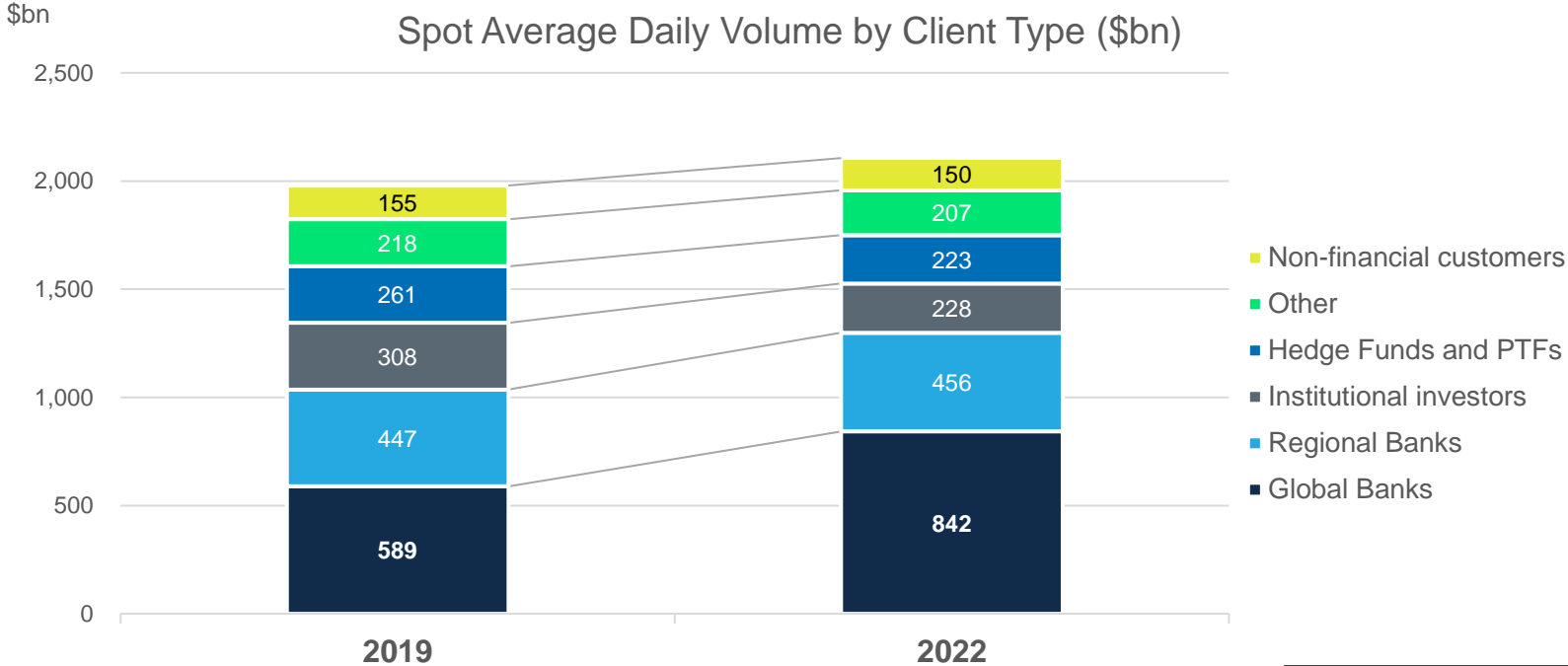
FX Turnover by Counterparty by Global and US reporting

- Growth in FX turnover focussed on growth of trading between reporting dealers
 - Reporting dealers 11.2% CAGR
 - Other Financial: 0.3% CAGR
 - Non-Financial: -3.3% CAGR
- In US, reporting dealers have 60% market share
 - 72.6% in FX swaps
 - 52.5% in Spot
- Activity by non-financial customers falling globally, but more quickly in US
 - -7.2% CAGR in US across all instruments



Data Source: BIS Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets.

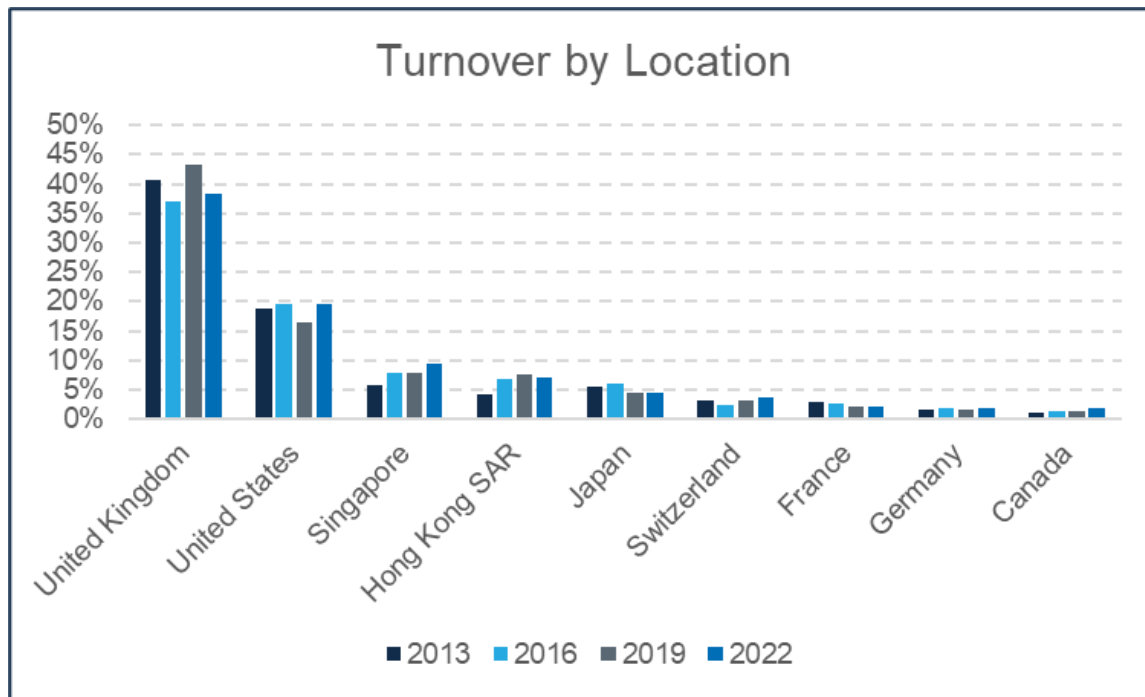
Total BIS Spot change in client mix from 2019 to 2022: Bank trading up 25%; non-bank down 14%



Data Source: BIS Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets.

FX Turnover by Location

Growth Rate CAGR	2022 vs 2019
United Kingdom	2%
United States	12%
Singapore	13%
Hong Kong SAR	3%
Japan	5%
Switzerland	10%
France	9%
Germany	14%
Canada	16%
China	4%
TOTAL	4.5%





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