January 2024

# ISDA.

## Overview of OTC Equity Derivatives Markets: Use Cases and Recent Developments

This paper examines the benefits and use cases of over-thecounter (OTC) equity derivatives (EQDs). Additionally, it analyzes developments in the OTC EQD market, including the size and changes based on geography, product offerings and maturities of the notional outstanding.

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## **EXECUTIVE SUMMARY**

Institutional investors, asset managers, hedge funds, pension funds, endowments, public and private companies, insurance companies, banks and other market participants use OTC EQDs for a wide range of reasons, including hedging, investment exposure, market access and diversification<sup>1</sup>.

- Hedging: OTC EQDs offer flexibility and the ability to customize investment hedges.
- Investing: OTC EQDs can be structured to provide specific directional exposure and a more efficient means of investing in an underlying equity, index or basket.
- Market access: OTC EQDs can provide access to equity markets and companies that are either unavailable or too illiquid for investment via cash equity or exchange-traded EQD markets.
- Portfolio diversification: OTC EQDs provide an efficient means of diversifying investment portfolios by enabling more precise control of portfolio allocations.

The size of the OTC EQD market has been relatively stable over the past 15 years, ranging between \$6.3 trillion and \$7.6 trillion in notional outstanding (see Chart 1)<sup>2</sup>. It comprises a relatively small percentage – 1-2% – of the overall OTC derivatives market (see Chart 2)<sup>3</sup>.

From a product perspective, the OTC EQD market consist of swaps, forwards, options, contracts for difference (CFDs) and 'other' products (see Table 1).

- Notional outstanding of equity forwards and swaps has grown compared to that of OTC equity options (see Chart 3).
- The US is now the dominant region for OTC EQD total notional outstanding measured by the nationality of the underlying issuer of the reference equity, whereas European developed countries (EDCs) were once the leaders (see Chart 4).
- Most OTC EQDs have a short maturity 63% of notional outstanding has a remaining maturity of one year or less (see Chart 5).

The regulatory framework for these products has evolved in recent years. OTC EQDs have become more regulated and transparent, with trade reporting, margining and other rules now in place. The US Commodity Futures Trading Commission (CFTC), the US Securities and Exchange Commission (SEC), the European Securities and Markets Authority (ESMA) and the UK Financial Conduct Authority (FCA) have fully implemented regulations for OTC derivatives, including EQDs.

<sup>3</sup> Global OTC derivatives market, BIS https://stats.bis.org/statx/srs/table/d5.1?p=20222&c=

<sup>&</sup>lt;sup>1</sup>The term 'equity derivatives' (EQDs) is used throughout this report to describe both OTC and exchange-traded EQDs. Derivatives traded on exchanges are referred to as exchange-traded EQDs, while over-the-counter (OTC) equity derivatives are referred to as OTC EQDs

<sup>&</sup>lt;sup>2</sup> Notional outstanding measures activity; gross market value measures risk. According to the Bank for International Settlements (BIS), gross market value of OTC EQDs was \$504 billion at the end of 2022 https://stats.bis.org/statx/srs/table/d8?p=20222&c=. Netting and collateralization further reduce this risk

**OVERVIEW OF OTC EQD PRODUCTS** 

OTC EQDs are flexible, provide market access, improve diversification and are used by a wide range of market participants

The EQD market includes OTC and exchange-traded EQDs. Some of the key differences include flexibility, liquidity and synthetic exposure to the reference equity<sup>4</sup>.

OTC EQDs are highly customizable, negotiated contracts that allow counterparties the flexibility to negotiate terms relating to underlier, size, tenor, dividend treatment and corporate actions<sup>5</sup>. They enhance and facilitate market access and risk mitigation, improve diversification and optimization, provide price discovery and can generate income for market participants<sup>6</sup>.

OTC EQD transactions are delineated by product type, transaction/reference type and return type.

- Products can be broken down into five categories, including swaps, forwards, options, CFDs, and 'other'<sup>7</sup>.
- There are three reference types based on how OTC EQDs are structured. These include single-name, single-index and basket.
- There are also four primary ways to structure the return of an OTC EQD. They are based on the price return, dividend stream, volatility or variance of the underlier, depending on the product (see Table 1).

	Transaction/Reference Type			Return Types			
Product	Single Name	Single Index	Basket	Price	Dividend	Variance	Volatility
Swaps	1	1	1	1	1	1	1
CFDs	1	1	1	1			
Options	1	1	1	1	1	1	1
Forwards	1	1	1	1			
Other	1	1	1	1	1	1	1

#### Table 1: Categories of OTC Equity Derivatives

Source: CFTC, Depository Trust & Clearing Corporation, SEC, ISDA

#### **Transaction/Reference Types**

Single-name transactions are the most common transaction type

Most OTC EQD transactions measured by traded notional are single-name transactions, while single-index and basket transactions each represent a small percentage<sup>8</sup>.

- Single name: A transaction linked to a single equity underlier.
- Single index: A transaction linked to an equity index.
- Basket: A transaction linked to a collection of equity underliers or equity indices.

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<sup>&</sup>lt;sup>4</sup> Equity Derivatives, Corporate Finance Institute https://corporatefinanceinstitute.com/resources/derivatives/equity-derivatives/

<sup>&</sup>lt;sup>5</sup> Derivative categories, PwC https://viewpoint.pwc.com/dt/us/en/pwc/accounting\_guides/derivatives\_and\_hedg/derivatives\_and\_hedg\_US/chapter\_1\_ introducti\_US/13\_derivative\_catego\_US.html

<sup>&</sup>lt;sup>6</sup> Derivatives markets, products and participants: an overview, BIS www.bis.org/ifc/publ/ifcb35a.pdf

<sup>&</sup>lt;sup>7</sup> 'Other' represents equity structured products, exotics and any other equity derivatives products not represented in other product categories

<sup>&</sup>lt;sup>8</sup> Based on samples of trading data reported to the Depository Trust & Clearing Corporation's (DTCC) swap data repository under US Commodity Futures Trading Commission (CFTC) regulations and the DTCC's security-based swap data repository under US Securities and Exchange Commission (SEC) regulations for the weeks ending March 24, May 19 and August 4, 2023. Data includes only new transactions. Single-name derivatives notional traded accounted for approximately 80% of total traded notional in the US on average

**Return Types** 

Most new OTC EQD transactions are based on price returns

Below are several examples of how to structure the return of an OTC EQD.

**Price return:** Represents the price return or total return. Total return transactions include dividends and other income streams when calculating the amounts to be paid. Price returns do not include these features and are based solely on the price change<sup>9</sup>.

**Dividend:** Provides exposure to a future stream of dividends on an underlying equity, equity index or basket. They are more common outside the US, where future dividend streams are more variable<sup>10</sup>.

**Volatility or variance:** Provide exposure to the volatility or variance of an underlying equity or equity index, not the direction of the asset<sup>11</sup>. For example, a variance swap operates as a direct investment on realized variance, necessitating neither delta hedging nor the ongoing maintenance typical of exchange-traded and OTC equity options<sup>12</sup>.

9 SEF Product Listing: Broad-Market Equity Index Swaps www.tradeweb.com/4a508c/globalassets/our-businesses/market-regulation/dw-sef/dw-seflisting-equity-swaps-reg-40.2a-2.11.15.pdf

<sup>10</sup> ISDA Disclosure Anex for Equity Derivative Transactions www.db.com/files/documents/dodd-frank/ISDA0413-Equity-Annex.pdf

<sup>11</sup> Financial Stability Review, European Central Bank, June 2007 www.ecb.europa.eu/pub/pdf/other/financialstabilityreview200706en. pdf?e4dde762935ac4ca26423d5edd3c739b

<sup>12</sup> The payoff of a variance swap possesses the unique attribute of compounding, driven by its reliance on logarithmic returns rather than arithmetic returns present in volatility-based transactions

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**TYPES OF OTC EQUITY DERIVATIVES** 

Swaps provide synthetic exposure that might be inaccessible with the physical underlying assets OTC EQD products are divided into five categories: swaps, forwards, options, CFDs and 'other'13.

#### Equity/Portfolio Swaps

An equity swap is a contract between two counterparties that involves one party receiving payments linked to the return of a reference equity in exchange for fixed or floating payments, while a portfolio swap involves returns from a group of reference equities. While equity swaps and portfolio swaps are separate product types, their fundamental features are similar and end users sometimes refer to them interchangeably. The major difference is primarily related to documentation. This makes segregation of the product types for data analysis challenging, so they are combined into a single 'equity swap' category for the purposes of this report.

Equity swaps are believed to be the largest OTC EQD product in terms of notional outstanding<sup>14</sup>. They allow market participants like pension funds, mutual funds and sovereign wealth funds to take positions in a way that is operationally and balance-sheet efficient, including the ability to net positions<sup>15</sup>.

Swaps are used to take directional exposure to price movements and to balance overall portfolio risk and manage cash. Swaps also provide market access and exposure to the underlying without having to purchase the actual underlying equity security.

Many equity swaps are non-cleared<sup>16</sup> because of their bespoke nature<sup>17</sup>. However, they are generally still subject to margin and reporting requirements in major jurisdictions<sup>18</sup>. Some swaps have a predetermined maturity date, while others have open-ended maturity dates. Additionally, swaps often contain termination provisions that can end the swap early if agreed conditions are met.

#### **Contracts for Difference**

CFDs are cash settled and allow the participant to receive the difference between the current value of an equity asset and the future – unknown – value without investing in the actual security. This can provide cost savings, as well as the ability to synthetically buy and short securities in some markets that may not be accessible.

Unlike options and equity swaps, CFDs lack expiry dates, proving helpful for investors without a fixed timeline. CFDs are mostly used by retail investors and there are often country-specific laws and rules related to the CFD market. CFDs are not permitted to be traded in certain jurisdictions.

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<sup>&</sup>lt;sup>13</sup> 'Other' represents equity structured products, exotics and any other equity derivatives products not represented in other product categories

<sup>14</sup> Equity-linked derivatives, BIS https://stats.bis.org/statx/srs/table/d8

<sup>&</sup>lt;sup>15</sup> For more information on netting, see https://assets.isda.org/media/db2b424a/4301aea7-pdf/ and www.isda.org/a/USiDE/nettingisdaresearchnotes-1-2010.pdf

<sup>&</sup>lt;sup>16</sup> For more information on clearing, see www.bis.org/publ/othp29.pdf and www.wsj.com/public/resources/documents/ISDApaper05232011.pdf

<sup>&</sup>lt;sup>17</sup> The Quarterly Report on Bank Trading and Derivatives Activities from the Office of the Comptroller of the Currency highlights that approximately 25% of OTC EQDs was cleared in the US at the end of the first quarter of 2023 www.occ.gov/publications-and-resources/publications/quarterly-report-onbank-trading-and-derivatives-activities/files/q1-2023-derivatives-quarterly.html

<sup>&</sup>lt;sup>18</sup> Derivatives Trade Reporting Requirements: The Need for Standardization, DTCC, April 20, 2021 www.dtcc.com/dtcc-connection/articles/2021/april/20/ derivatives-trade-reporting-requirements-the-need-for-standardization

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#### **Equity Forwards**

Customization distinguishes equity forwards from equity exchange-traded futures

Forwards are contracts in which one party agrees to buy or sell an equity underlying, index or basket for a fixed price at a future date.

Equity forwards have maturities that range from one day to several years, but like other OTC EQDs, most equity forwards mature in one year or less<sup>19</sup>. Pricing of equity forwards is largely based on the future value of the spot price of the underlying asset that considers other direct and indirect costs, such as interest rates<sup>20</sup>.

The ability to customize is the main attribute that differentiates forwards from exchange-traded futures, providing flexibility for a more tailored hedge.

#### **Equity Options**

Equity options give an investor the right, but not the obligation, to buy or sell an equity underlying via calls or puts at a given price on or before expiry<sup>21</sup>. OTC equity options are similar in many respects to exchange-traded options but have custom features that are unavailable in the exchange-traded market<sup>22</sup>. Their structure allows flexibility in the choice of strike, tenor, lot size, exercise style and exercise date.

They are useful for achieving precise exposure and to source liquidity that may not be available in the listed market.

#### Other

The 'other' category is broadly defined as OTC EQDs that do not have characteristics that other OTC or exchange-traded EQDs possess<sup>23</sup>. These include structured products, sometimes called exotic OTC EQDs.

Multiple factors usually drive their performance. They are highly customized and tend to be used by sophisticated investors to meet very specific needs. Examples of exotic products include barrier options, accumulators and lookback options. Many other exotic instruments, including one-off bespoke products, also fall into this category.

<sup>19</sup> OTC derivatives by maturity, BIS https://stats.bis.org/statx/srs/table/d9

<sup>20</sup> Information about equity futures and equity forwards, Danske Bank https://danskebank.no/-/media/pdf/danske-bank/no/finansielle-instrumenter/ equity-futures-and-equity-forwards-en.pdf?rev=8223202cf7034482a0a77980de613b29&hash=0629968E7F6F6FA2C9195DE89043E356

<sup>21</sup> American style options can be exercised on or before the expiration date, while European style options can only be exercised at expiration

<sup>22</sup> Flexible exchange-traded contracts (or 'flex options') closely resemble exchange-traded products but market participants can bilaterally negotiate certain terms, such as contract maturity, exercise price and settlement method. Customization is a key feature, unlike standardized listed options. Once the terms are agreed, the contracts are sent to an exchange or central counterparty for confirmation, processing and clearing

<sup>23</sup> Central Clearing in the Equity Derivatives Market, ISDA, June 2014 www.isda.org/a/DSiDE/central-clearing-in-the-eqd-market-final.pdf

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## **USE CASES**

OTC EQDs help mitigate direct and indirect portfolio risks

This section provides examples of how institutional investors, asset managers, pension funds, endowments, hedge funds, public and private companies, insurance companies, banks and other market participants use OTC EQDs to achieve various investment goals, including hedging, investment exposure, market access and diversification.

#### Hedging

OTC EQDs can be customized to hedge specific exposures. Additionally, OTC EQDs can be used to indirectly hedge other market risks without directly offsetting an existing position or portfolio.

**Example:** An institutional investor owns a large position in an equity that it believes will increase in value over time. However, the firm is concerned that the price could fall in the near term and would like to reduce its exposure.

The investor would prefer not to sell the underlying security when reducing its exposure, so can enter into a single-name price return equity swap or forward with short exposure.

In this scenario, the investor enters into an agreement with a counterparty in which they pay a fee. In return, the investor receives synthetic short exposure, effectively offsetting a portion or the entirety of its long equity exposure. By doing so, the firm can mitigate some of the risks associated with holding the equity without selling any shares.

#### Investment Exposure

OTC EQDs provide an opportunity to express directional exposure to equities Market participants frequently make investment decisions based on their expectations of the future value of individual stocks and stock indices. These investments often fall into two categories – directional (where they anticipate the underlying security will move higher or lower) and market neutral or relative value (where they simultaneously buy one asset and sell another).

OTC EQDs are employed to obtain investment exposure to an underlying asset, an index or a basket of assets. This is often a more efficient method of investing in these underlying assets when compared to using exchange-traded EQDs or cash equity securities.

**Example 1:** An institutional investor believes the healthcare sector will outperform the overall stock market in the coming year. It wants to take advantage of the potential rise in healthcare stocks but believes only a specific subset of stocks within the sector will be the primary drivers of this performance.

Instead of buying individual healthcare stocks or investing in healthcare exchange-traded funds (ETFs), the firm chooses to use an equity basket swap. This provides the ability to target exposure to specific healthcare companies rather than investing in broad-based healthcare indices or ETFs.

The investor negotiates the swap terms with a counterparty that agrees to provide returns from the equity portfolio over the next year in exchange for a fixed interest payment. If the equity portfolio outperforms in the coming year, the investor will profit; if it underperforms, the investor will incur losses from the exposure.

**Example 2:** An asset manager holds the stock of a company that is an acquisition target for another business at a higher price than its current value. The asset management firm believes the stock is still undervalued and there might be other potential buyers, but wants to realize its profits while keeping the potential for more gains if another buyer appears.

Exchange-traded options referencing the company are illiquid and the expirations do not align with the expected merger completion date. To monetize current gains while retaining the possibility for further upside, the firm decides to sell the stock and purchase an OTC equity call option.

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In this scenario, the asset manager agrees to pay a premium to a counterparty for a call option struck at the current proposed merger price. This price is different from existing strike prices in the exchange-traded market and the option expires closer to the expected timeline of a new bidder.

This strategy enables the asset manager to lock in its recent gains and retain the potential for additional upside if another buyer emerges. If the existing acquisition deal goes through or is unsuccessful and the stock price drops, the asset manager only loses the premium paid for the call option.

#### **Market Access**

OTC EQDs allow access to regions that may be inaccessible in cash equity markets Certain investors may find it challenging to access specific geographic regions through cash equity markets. Operational difficulties and associated costs can also create barriers to effective portfolio management. OTC EQDs provide a solution to overcome these obstacles.

**Example:** A pension fund would like to increase its overseas equity holdings. Some of its targeted investments are in countries they are unable to access via the local cash equity market.

The pension fund can enter into an equity basket swap to access a group of equity underlyings that would be otherwise inaccessible. After determining the notional amounts of each of the underlying securities, the pension fund receives payments at specific intervals based on the performance of the basket in exchange for a floating amount based on a benchmark<sup>24</sup>.

If the value of the underlying notional amounts increases, the fund receives the cashflow difference. Conversely, if the notional value of the basket falls, the fund pays the counterparty the cashflow difference.

#### **Diversification**

OTC EQDs can improve portfolio diversification

Diversification is a risk management strategy that aims to enhance the safety and performance of an investment portfolio. It achieves this by increasing the variety and quantity of assets within the portfolio to minimize risks specific to individual investments (idiosyncratic risk) and improve the returns relative to the level of risk taken (risk-adjusted returns).

This strategy typically involves spreading investments across different asset classes, industries, geographic regions and companies. The goal is to reduce the degree to which these investments move in unison, thereby decreasing the correlation between their price movements.

OTC EQDs can be used to lower the correlation between assets in a portfolio. They can also assist in reducing the expenses associated with rebalancing diversified portfolios.

**Example:** A relative value hedge fund has a positive outlook on an individual company within a sector but holds a negative outlook on other businesses in the same sector<sup>25</sup>. The fund would like to establish a long exposure to the individual firm and take short positions in the other companies within the sector, but wants to minimize transaction costs from executing multiple transactions.

The fund can establish this exposure with an equity total return portfolio swap that provides long exposure to the individual company and short exposure to all the other businesses in the sector, providing the total returns of the positions, including dividends.

<sup>24</sup> Some equity basket swap transactions include individual swaps for each of the underlying securities, while some contain a single swap for the overall basket. This varies between firms and counterparties, but it does not impact the economics of the transaction in aggregate

<sup>25</sup> HFR Hedge Fund Strategy Definitions – Relative Value, Hedge Fund Research www.hfr.com/hfr-hedge-fund-strategy-definitions-relative-value

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## **MARKET TRENDS**

OTC EQD notional outstanding has been relatively steady over the past 15 years, ranging between \$6.3 trillion and \$7.6 trillion. Gross market value, which measures risk (before netting and collateral) has fallen from \$1.4 trillion to \$504 billion. OTC EQD market turnover, as measured in notional amounts, appears to be much smaller than the exchange-traded EQD market (see Chart 1)<sup>26</sup>.

**Chart 1:** OTC EQD notional outstanding has been steady over the past fifteen years, while gross market value has declined



Source: Bank for International Settlements (BIS)

OTC EQD notional outstanding represented between 0.9% and 1.5% of total OTC derivatives notional outstanding over the past 15 years. At the end of 2022, it accounted for 1.1%, in line with the average between the end of 2008 and the end of 2022 (see Chart 2)<sup>27</sup>. In comparison, the interest rate derivatives market is the largest OTC category, representing nearly 80% of the \$618 trillion OTC derivatives market at the end of 2022<sup>28</sup>.

#### Chart 2: OTC EQD market share of total OTC derivatives notional outstanding remained steady



OTC EQD market size remains steady and represents 1.1% of the broader OTC derivatives market

<sup>26</sup> Global OTC derivatives market, BIS https://stats.bis.org/statx/srs/table/d5.1?p=20222&c=

<sup>27</sup> Global OTC derivatives market, BIS https://stats.bis.org/statx/srs/table/d5.1?p=20222&c=

<sup>&</sup>lt;sup>28</sup> Global OTC derivatives market, BIS https://stats.bis.org/statx/srs/table/d5.1?p=20222&c=

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#### **Product Shifts**

Equity forwards and swaps notional outstanding has grown to represent more than half of the OTC EQD market

The BIS separates the OTC EQD market into two buckets: equity forwards and swaps, and equity options. According to the BIS, equity forwards and swaps have become a much larger portion of the OTC EQD market over the past 15 years, increasing from 25% at the end of 2008 to 50% at the end of 2022 (see Chart 3).

During that time, OTC equity options lost around a third of their notional outstanding (\$5.7 trillion in 2008 to \$3.5 trillion in 2022), while equity forwards and swaps gained 84% (\$1.9 trillion in 2008 to \$3.5 trillion in 2022). This represents an average annual decline of 1.5% for OTC equity options and average annual growth of 2.3% for equity forwards and swaps.

#### Chart 3: Equity forwards and swaps have grown to about half the OTC EQD notional outstanding



Source: BIS

Growth in the equity forwards and swaps markets is likely to be a result of increased globalization, market access and diverse investment strategies that leverage the versatile nature of the products.

#### **OTC Equity Derivatives by Region**

The US is the dominant region for OTC EQD notional outstanding, based on the nationality of the reference equity In recent years, there has been a significant shift in the share of OTC EQD notional outstanding between the US and EDCs, based on the nationality of the reference equities<sup>29</sup>.

EDC underlyings represented 60% of OTC EQD market share at the end of 2008, while US underlyings accounted for 24%. By the end of 2022, these figures had almost reversed, with the US accounting for 51% and EDCs comprising 27% of notional outstanding<sup>30</sup> (see Chart 4).

<sup>29</sup> European developed countries (EDCs) include all European countries except those in eastern Europe that are part of 'all other countries' in the BIS figures
<sup>30</sup> Equity-linked derivatives, BIS https://stats.bis.org/statx/srs/table/d8?p=20222&c=





Source: BIS

Between the end of 2008 and end-2022, notional outstanding in various regions showed mixed growth percentages. EDC notional outstanding fell by 59% (-\$2.7 trillion) and Japan saw a 62% drop (-\$320 billion). The US increased by 96% (\$1.7 trillion), Asian countries<sup>31</sup> grew by 35% (\$94.4 billion) and all other countries<sup>32</sup> rose by 75% (\$281.8 trillion). Latin America notional outstanding grew the most on a percentage basis, at 244% (\$252 billion).

There is a relationship between changes in notional outstanding and GDP growth across the regions. For example, EDC and Japanese GDP growth was much lower than that of the US, Asian countries and Latin America between 2008 and 2022<sup>33</sup>.

The growth of OTC EQD notional outstanding in the US compared to EDCs is also partially related to the outperformance of US equity markets compared to those in EDCs<sup>34</sup>. Between the end of 2008 and end-2022, US equity stock market capitalization increased by more than 400%, while EDC stock market capitalization rose by approximately 80%<sup>35</sup>.

Furthermore, US exchange-traded EQD trading volumes have risen by approximately 160% over the past decade, while European volumes have fallen by 20%. Although this does not necessarily establish a cause-and-effect relationship, the increased demand for US exchange-traded EQDs might be indicative of heightened interest in US OTC EQDs<sup>36</sup>.

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<sup>&</sup>lt;sup>31</sup> All Asian countries except Japan

<sup>&</sup>lt;sup>32</sup> Represents all reporting countries not included in the other categories. For more details on country categorizations, see Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Markets: Reporting guidelines for amounts outstanding at end-June 2022 for non-regular reporting institutions, BIS www.bis.org/statistics/triennialrep/2022survey\_guidelinesoutstanding.pdf

<sup>&</sup>lt;sup>33</sup> Based on annual GDP growth percentages, World Bank https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2022&name\_ desc=false&start=2008

<sup>&</sup>lt;sup>34</sup> The computation of notional outstanding is partially based on the price of the equity underlying, index or basket. Absent any other changes in demand, the outperformance of US equity markets compared to EDC markets would increase the total notional outstanding in the US more than EDCs

<sup>&</sup>lt;sup>35</sup> Based on the Wilshire 5000 Total Market Cap Index and the European Stock Market Index

<sup>&</sup>lt;sup>36</sup> ETD Tracker, FIA www.fia.org/fia/etd-tracker

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#### Maturity

Most OTC EQDs have remaining maturities of one year or less

The majority of OTC EQDs have remaining maturities of one year or less. This percentage has increased from approximately 46% in 2008 to 63% in 2022 (see Chart 5)<sup>37</sup>. These percentages are consistent across product types – OTC EQDs with maturities of one year or less represented 65% of forwards and swaps and 60% of options.



#### Chart 5: Approximately 63% of OTC EQDs have remaining maturities of one year or less

Source: BIS

Shorter-dated OTC EQDs have some benefits, such as less interest rate exposure and regulatory capital, and they require dealers to more frequently hedge their exposure, which can dampen volatility and correlation, improving risk-adjusted returns<sup>38</sup>.

Additionally, total return equity swaps are typically treated much like cash markets and swaps in general tend to roll over more often, shortening average maturities. This is amplified by the overall increase in notional for swaps and forwards versus options.

<sup>37</sup> OTC derivatives by maturity, BIS https://stats.bis.org/statx/srs/table/d9?p=20222&c=

<sup>38</sup> Why More Short-Dated Options Did Not Increase Market Volatility, MSCI, May 4, 2023 www.msci.com/www/blog-posts/why-more-short-datedoptions/03811917065 and Volatility Insights: Evaluating the Market Impact of SPX 0DTE Options, CBOE, September 8, 2023 www.cboe.com/insights/ posts/volatility-insights-evaluating-the-market-impact-of-spx-0-dte-options/

## **OTC EQUITY DERIVATIVES REGULATORY FRAMEWORK**

All OTC EQDs are required to be reported in a number of major jurisdictions

EQDs, like other derivatives markets, are regulated in major jurisdictions, including the US, EU and UK. The dealer institutions that make markets in those regions are also subject to regulations<sup>39</sup>.

In the US, regulation of EQDs is split between the CFTC and the SEC, with additional regulation of capital and margin requirements overseen by US prudential regulators (the Federal Reserve Board, the Office of the Comptroller of the Currency and the Federal Deposit Insurance Corporation).

The CFTC oversees broad-based equity index derivatives – those swaps with 10 or more underlying equities<sup>40</sup>. The SEC oversees most other equity derivatives markets<sup>41</sup>. Its rules were fully implemented in November 2021<sup>42</sup>.

Under US regulations, all swaps trades are required to be reported to swap data repositories, which are fully accessible to regulators. Most equity swaps are not centrally cleared but are subject to initial margin (IM) and variation margin (VM) requirements.

These collateral requirements cover entities with average aggregate notional amount of non-cleared derivatives of more than €8 billion. According to ISDA's most recent margin survey, more than \$1.4 trillion of IM and VM was exchanged between market participants for their non-cleared derivatives trades as of the end of 2022<sup>43</sup>.

In the EU, the EQD market is overseen by ESMA, based on requirements set out in the European Market Infrastructure Regulation (EMIR)<sup>44</sup>, which aims to improve transparency, establish risk mitigation measures and mandate central clearing for certain derivatives contracts. Additionally, the revised Markets in Financial Instruments Directive/Regulation (MIFID II/MIFIR)<sup>45</sup> introduces significant changes to trading, reporting and transparency for derivatives markets.

In the UK, EQDs are regulated by the FCA under EMIR and MIFID II/MIFIR, which were onshored into UK law following Brexit.

<sup>39</sup> The list of countries is not exhaustive and represents several examples of regulatory developments in recent years

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<sup>&</sup>lt;sup>40</sup> CFTC and SEC Adopt Final Rules Defining Swaps, July 30, 2012 https://www.proskauer.com/alert/cftc-and-sec-adopt-final-rules-defining-swaps

<sup>&</sup>lt;sup>41</sup> Index transactions are considered 'narrow-based' when the index has nine or fewer components, one component is more than 30% of the index weighting or contains five components that comprise more than 60% of the index. Narrow-based security indices are considered security-based and are under the jurisdiction of the SEC. Other index transactions that do not meet these criteria are considered 'broad-based' and are under CFTC jurisdiction www.cftc.gov/IndustryOversight/ContractsProducts/SecurityFuturesProduct/sfpoverview.html

<sup>&</sup>lt;sup>42</sup> Frequently Asked Questions on Regulation SBSR www.sec.gov/tm/faqs-reg-sbs

<sup>&</sup>lt;sup>43</sup> ISDA Margin Survey Shows \$1.4 Trillion in Margin Collected at Year-end 2022, May 9, 2023 www.isda.org/2023/05/09/isda-margin-survey-shows-1-4trillion-in-margin-collected-at-year-end-2022/

<sup>&</sup>lt;sup>44</sup> Clearing obligation and risk mitigation techniques under EMIR, European Securities and Markets Authority www.esma.europa.eu/post-trading/clearingobligation-and-risk-mitigation-techniques-under-emir

<sup>&</sup>lt;sup>45</sup> Implementing and delegated acts – MIFID II, European Commission finance.ec.europa.eu/regulation-and-supervision/financial-services-legislation/ implementing-and-delegated-acts/markets-financial-instruments-directive-ii\_en

Safe, Efficient Markets

## CONCLUSION

OTC EQDs can provide distinct benefits to a variety of market participants, including institutional investors, asset managers, hedge funds, pension funds, endowments, public and private companies, insurance companies, banks and other market participants.

They offer flexibility, price discovery, diversification, liquidity and access to companies and markets that are not always otherwise available.

OTC EQD total notional outstanding has remained consistent over the past 15 years, both in absolute terms and as a percentage of the overall OTC derivatives market. OTC EQDs represent 1–2% of the total OTC derivatives market and remain smaller than the exchange-traded EQD market.

The US has become the primary market for OTC EQD notional outstanding based on the region of the underlying reference equities. Equity forwards and swaps notional outstanding continues to grow, while equity options notional outstanding has declined. Nearly two-thirds of OTC EQDs mature in one year or less.

Most new OTC EQD transactions are based on single names as opposed to single index or basket transactions, and nearly all transactions are based on price returns versus dividend streams, volatility or variance.

### For questions on ISDA Research, please contact:

#### Olga Roman

Head of Research oroman@isda.org

Adam Perlaky Director of Research aperlaky@isda.org **Melissa Yu** Assistant Director of Research hyu@isda.org

## ABOUT ISDA

Since 1985, ISDA has worked to make the global derivatives markets safer and more efficient. Today, ISDA has over 1,000 member institutions from 77 countries. These members comprise a broad range of derivatives market participants, including corporations, investment managers, government and supranational entities, insurance companies, energy and commodities firms, and international and regional banks. In addition to market participants, members also include key components of the derivatives market infrastructure, such as exchanges, intermediaries, clearing houses and repositories, as well as law firms, accounting firms and other service providers. Information about ISDA and its activities is available on the Association's website: www.isda.org. Follow us on Twitter, LinkedIn, Facebook and YouTube.