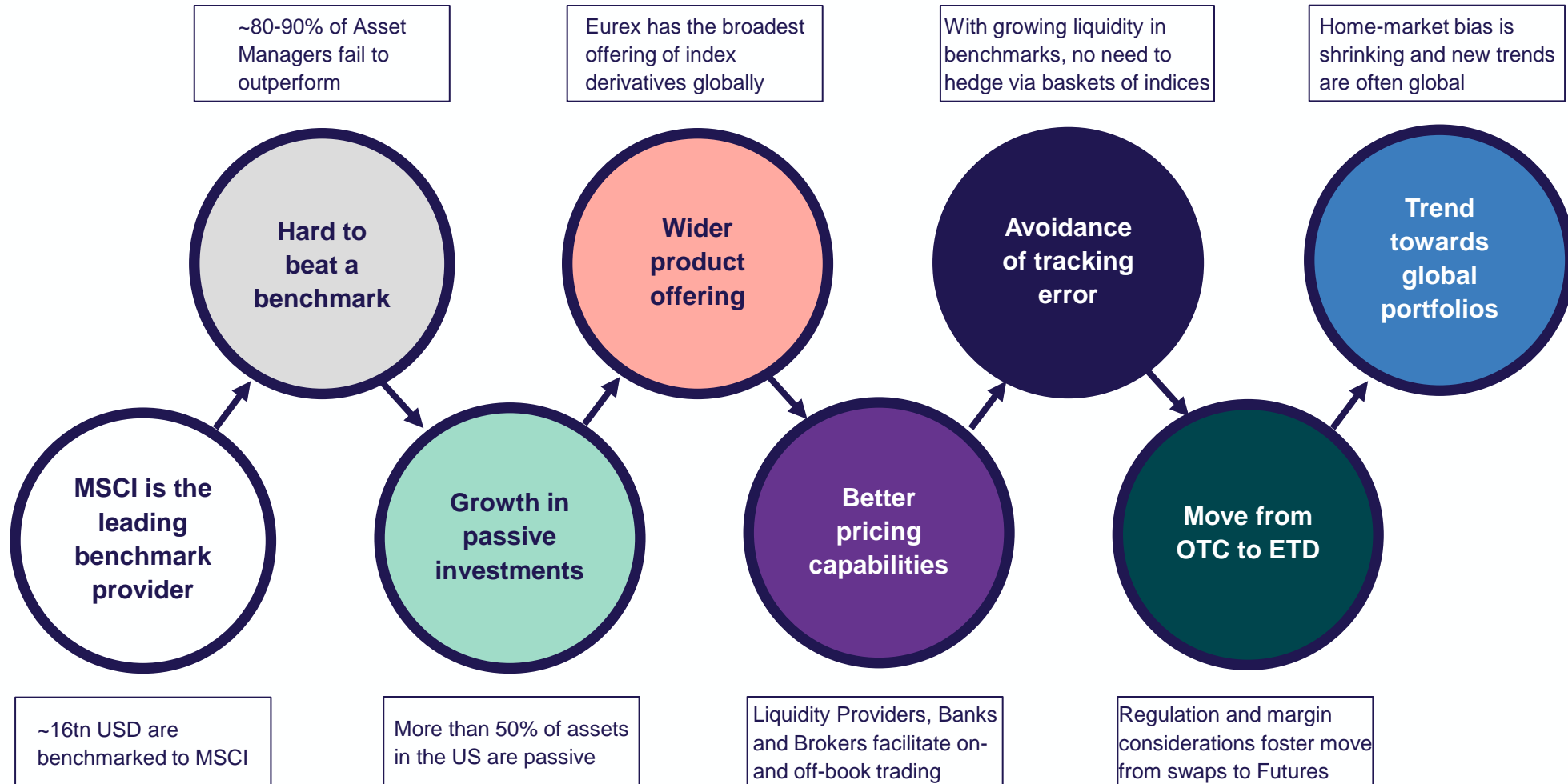


Eurex: The Global Home of MSCI Derivatives Sales Presentation

February 2023

Why are MSCI Derivatives getting popular?



Eurex is the Global Home of MSCI Derivatives



1

by Open Interest with 57% market share



2

by Trading volumes with 27% market share

2023 Traded volume

EUR 104 Billion

2.3 million contracts

CAGR 2016 – 2023: **31%**

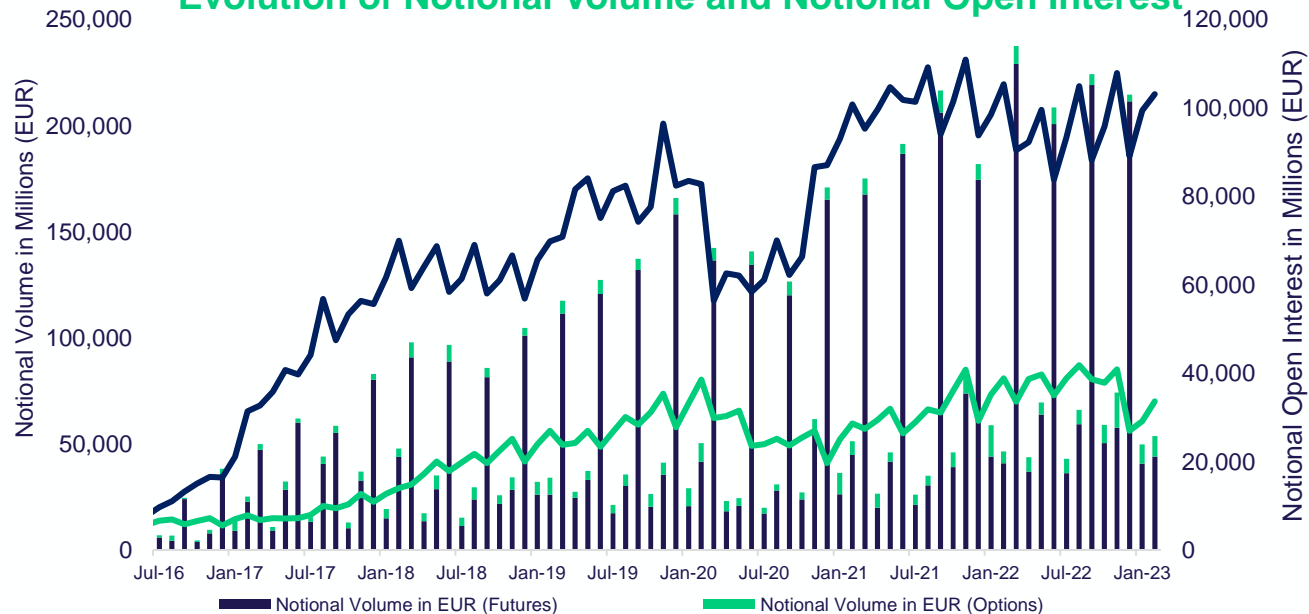
Open Interest

EUR 137 Billion

2.95 million contracts

CAGR 2016 – 2023: **35%**

Evolution of Notional Volume and Notional Open Interest



Open Interest for top MSCI Products

MSCI EM Asia (USD, NTR)	18,413,568,264	Futures
MSCI World (EUR, NTR)	9,933,000,480	
MSCI World (USD, NTR)	9,072,658,207	
MSCI USA (USD, GTR)	6,078,805,528	
MSCI EM (USD, Price)	5,369,028,830	
MSCI India (USD, NTR)	5,332,288,841	
MSCI Europe (USD, NTR)	5,279,040,230	
MSCI Japan (USD, NTR)	5,227,024,004	
MSCI Europe (EUR, NTR)	5,153,832,915	
MSCI Canada (USD, GTR)	4,019,979,697	
MSCI EM (USD, Price)*	17,410,922,874	Options
MSCI World (USD, Price)*	5,332,288,841	
MSCI EAFE (USD, Price)*	5,285,090,404	
MSCI World (USD, NTR)*	4,302,578,209	
MSCI World (EUR, NTR)*	2,826,135,000	

*Based on statistics Dec 2022 Source: FIA
Open Interest as of Feb 28, 2023

Statistics do not include Open Interest and Traded Volumes for MSCI ESG & Dividend Products

* Options not eligible under SEC no-action relief as of Nov 30.2022. For eligible options, visit : [MSCI Options Snapshot.pdf \(eurex.com\)](https://www.eurex.com/MSCI-Options-Snapshot.pdf)

Growth drivers for Eurex MSCI Derivatives



1

Broadest offering of MSCI Derivatives

- Eurex offers 160 MSCI futures & 32 options on regional and country indexes

2

Capital efficiency

- Eurex's portfolio-based margining methodology (PRISMA) offers the high levels of cross-margin offsets across equity derivatives

3

Improving order book liquidity picture

- Market Makers provide streaming quotes in all 3 time zones and on calendar spreads during roll periods

4

Flexibility in entering trades

- Eurex is offering multiple functionalities to enter pre-negotiated trades

5

Cheaper fees

- Eurex is significantly cheaper than main competitors

6

Buy-Side clients are getting increasingly involved

- UMR as a regulatory driver, but also increased interaction with buy-side clients

7

Extended trading hours

- Asian hours trading has been crucial to compete and price in Emerging Markets

8

Building a MSCI Derivatives ecosystem

- Futures & Options on one platform
- Futures on ESG & Dividend Points

1

Broadest offering of MSCI Derivatives

Eurex lists over 160 Futures and 32 Options on Regional and Country Indexes



Country Indexes *

Dev. Markets.: 24 Fut & 1 Opt
Emerg. Markets.: 24 Fut & 3 Opt



Regional Indexes *

Dev. Markets.: 18 Fut & 8 Opt
Emerg. Markets.: 11 Fut & 6 Opt
ACWI: 9 Fut & 3 Opt



Sector Indexes

World: 11 Fut
Europe: 11 Fut
EM: 11 Fut



ESG Indexes

8 ESG Screened Fut
4 ESG Screened Opt
5 ESG Enhanced Focus Fut
4 ESG Enhanced ETF Opt



Size Indexes

Small Cap: 2 Fut
Mid / SMID: 2 Fut
Large Cap: 2 Fut & 2 Opt



Factor Indexes

7 World Factor Futures
4 US Factor Futures



Thematic Indexes

1 China Tech Futures



Style Indexes

10 Value & Growth Fut & 2 Opt



Dividend Indexes

3 Div Fut for World, EAFE, EM

Full list of all MSCI products incl. specs & codes can be found in the [specs and vendor file](#)

* Only standard indexes counted here

February 2023

2

Capital efficiency

Efficient Portfolio margining approach via PRISMA



Portfolio	Product name	Eurex code	BBG code	Long	Short	Net	Net Notional (in EUR)	Initial Margin (in EUR) per product	in %	Sum of Initial Margin (in EUR) per product	Initial margin (with Portfolio Margining)	Margin Savings
FESX	Euro STOXX 50	FESX	VG	35,000	16,000	19,000	757,340,000	79,933,029	10.55%			
add FMWO	MSCI World	FMWO	ZWP	2,000	25,000	(23,000)	1,785,320,755	150,727,474	8.44%			
add FMEF short	MSCI EM Futures	FMEF	RBE	-	16,000	(16,000)	726,792,453	54,840,423	7.55%			
add FMEA long	MSCI EM Asia Fut	FMEA	ZTW	12,000	-	12,000	649,811,321	59,419,520	9.14%	367,634,955	95,726,563	74%
add FMEL long	MSCI EM LatAm Fut	FMEL	ZUL	3,000	-	3,000	141,487,736	16,245,358	11.48%			
add FMEE long	MSCI EM EMEA Fut	FMEE	ZUY	2,500	-	2,500	62,735,849	6,469,151	10.31%			
Total							4,123,488,113	367,634,955	8.92%		2.32%	

*Calculation Date: 14 Dec 2022

- Single product margins in this example are between 6.38% and 13.2% (with an portfolio average of 8.27%)
- However, based on PRISMA model, margin for the entire portfolio is only 1.86%, which is a reduction of 77%
- In general:** the better a portfolio is balanced, the higher the margin offsets under PRISMA will be
- Eurex is in a unique position to generate margin offsets, since it hosts an open interest pool of ~140mn Equity & Index derivatives, which are all used to offset against each other
- Index products hereby include STOXX, DAX, SMI, MSCI, FTSE / Equity Products include Eq. Options / SSF

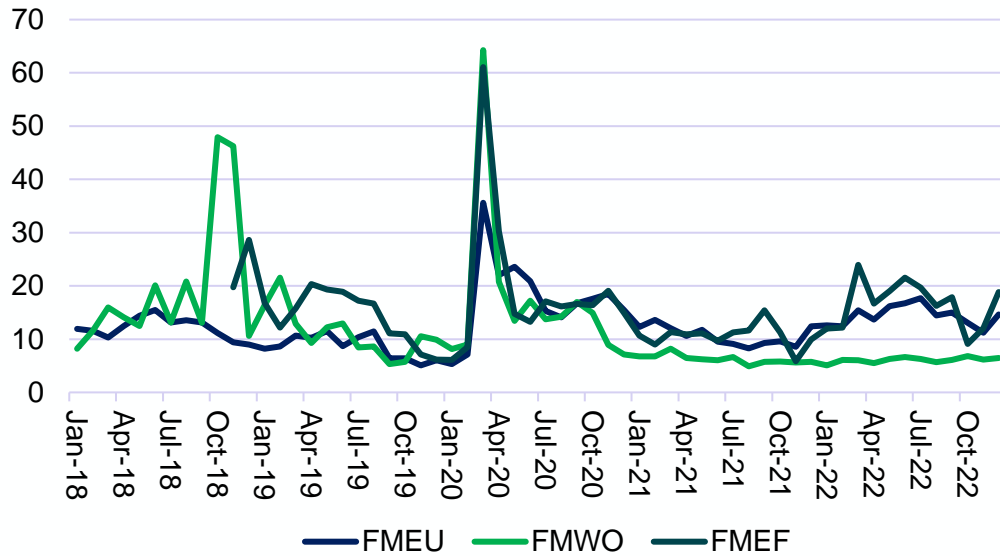
3

Improving order book liquidity picture

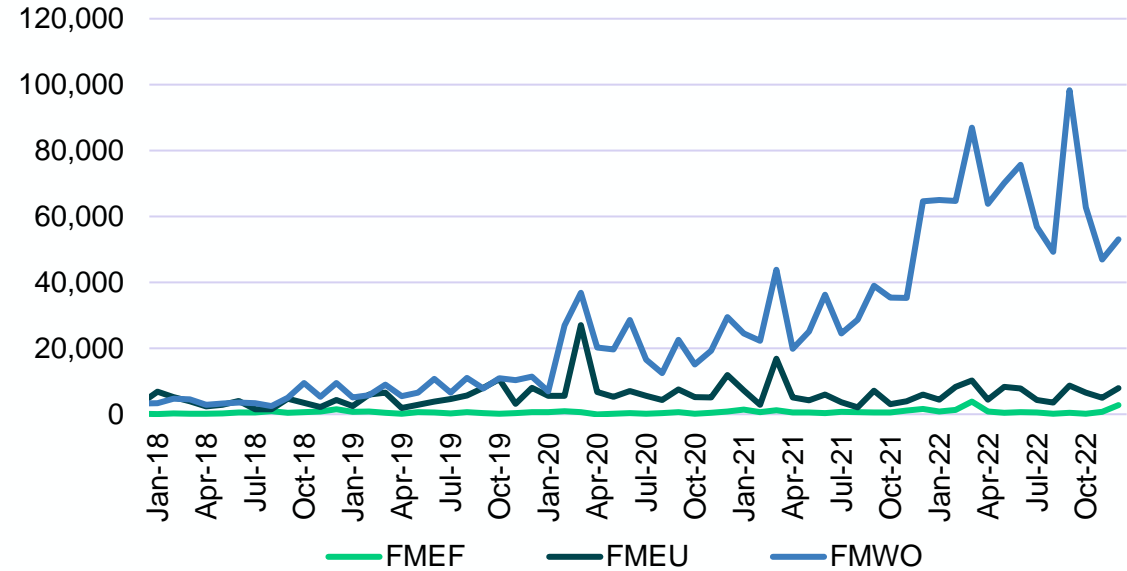
Order book liquidity has continuously improved since Covid peak in March 2020



ELM* in MSCI Europe, World & EM for a 2M EUR Order



Number of Trades in MSCI Europe, World & EM Futures



- Spreads on MSCI World Futures (FMWO) have been tightening continuously over time.
- Average impact for a 2M EUR order has decreased from ~15 bps in 2018 to ~6 bps in Q1, 2022
- Spreads on MSCI Europe Futures (FMEU) and EM Futures (FMEF) increased again in March 2022 based on Russian invasion
- Better liquidity is resulting in higher number of trades (esp. in MSCI World) and vice versa

* Eurex Liquidity Measure (ELM) measures the market impact of a certain order size in bps

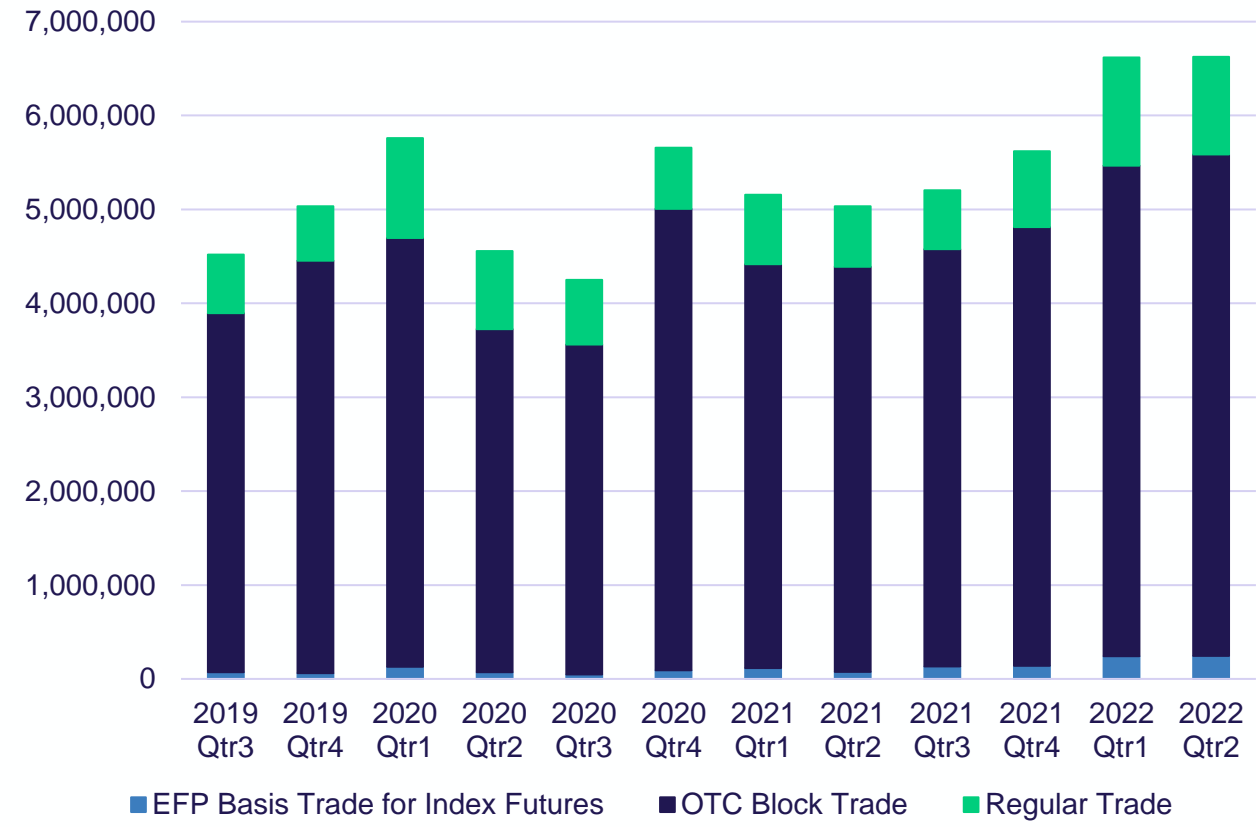
4

Flexibility in entering trades

Majority is still block traded



Order book („regular“) vs TES trades („Block, EFP“) in MSCI Futures



- Even though Eurex encourages and incentivizes trading via the CLOB (Central Limit Order book), the majority of trading is still done via trade entry (TES)
- In order to facilitate those in the most efficient way, Eurex is offering a number of functionalities:
 - All blocks in MSCI Futures can be entered with **0.001** increments
 - **Flex trades** are allowed for Futures / Options
 - **Minimum Block Trade sizes** are rather low
 - Intraday **Non-Disclosure limits** in place
 - **Strategy trades** between Futures & Options
 - **Longer expiries** for FMEF, FMWP, FMFP (5 years)
 - **EnLight** is offered as a RFQ solution
 - MOC T+x is coming to facilitate **Basis Trading**



Cheaper fees

Eurex is charging only ~50% exchange fee for MSCI Futures vs main competitor



Contract	MSCI Futures		MSCI Options		
	EUR/ GBP/ USD/ CHF		EUR/ GBP/ USD		
Currency					
Fee differentiation	Standard fee	Reduced fee *			
Account	A / P / M	A / P / M	A	P	M
Orderbook	0.6	0.3	0.58	0.5	0.5
Eurex EnLight	0.9	0.45	0.58	0.5	0.5
TES	0.9	0.45	0.58	0.5	0.5
Threshold (number of contracts)	n. a.	n. a.	3,000 **	2,000 **	n. a.

* For **EM Futures** (FMEM, FMEF) / **EAFE Futures** (FMFA, FMFP) / **Asian country Futures** (FMCN, FMCH, FMIN, FMID, FMMY, FMPH, FMTH, FMTW) until end of 2023

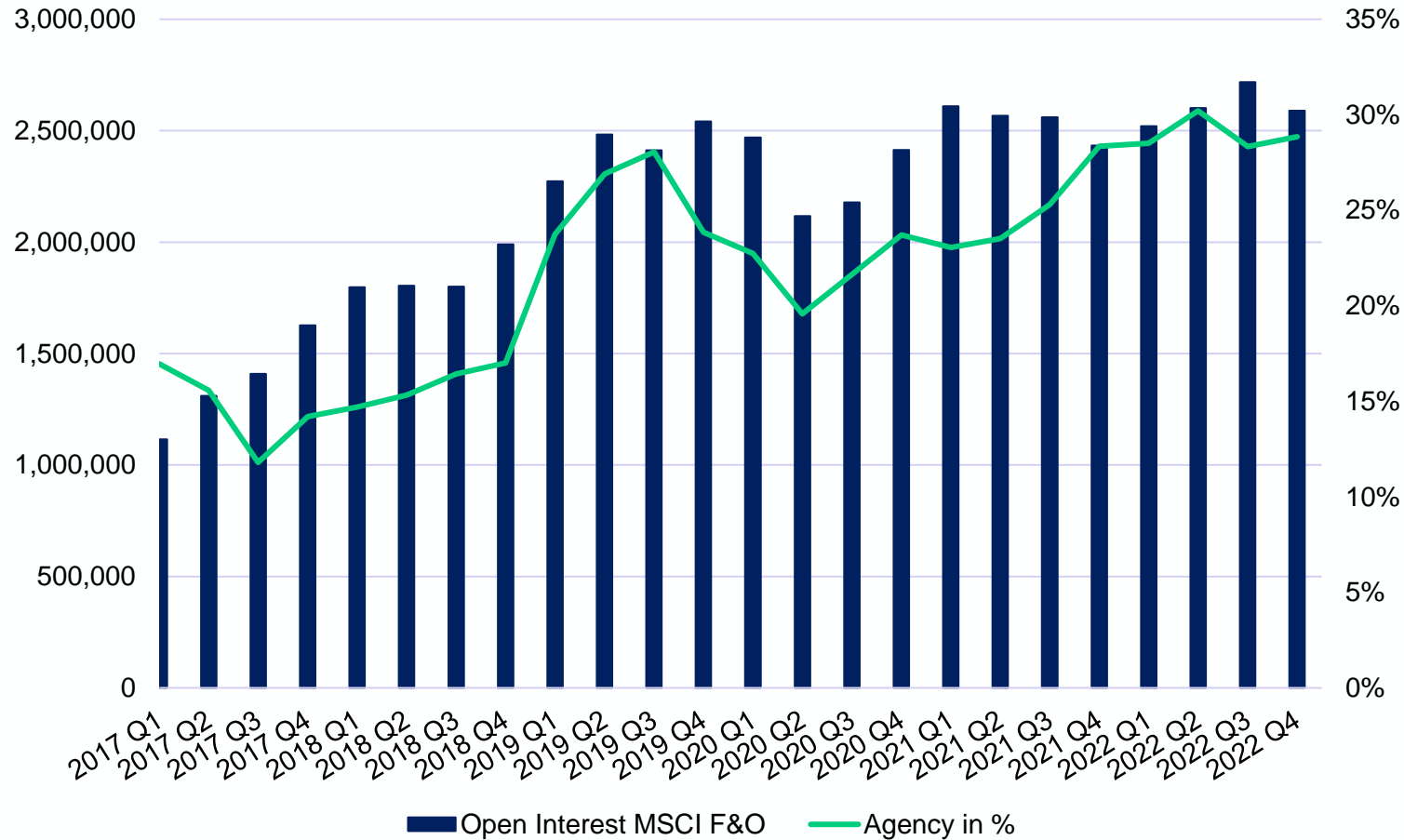
** Fee per contract (contract number ≤ threshold value) in respective currencies

6

Buy-Side clients are getting increasingly involved



End client positions now represent 30% of Eurex's MSCI Derivatives flow



- With UMR (Uncleared Margin Rules) coming into play, it is expected that additional flow from buy-side clients will come into Futures
- Conversations ongoing with clients and dealers on how to optimize this shift
- Additional growth should attract also new players like hedge funds and more market makers / liquidity providers

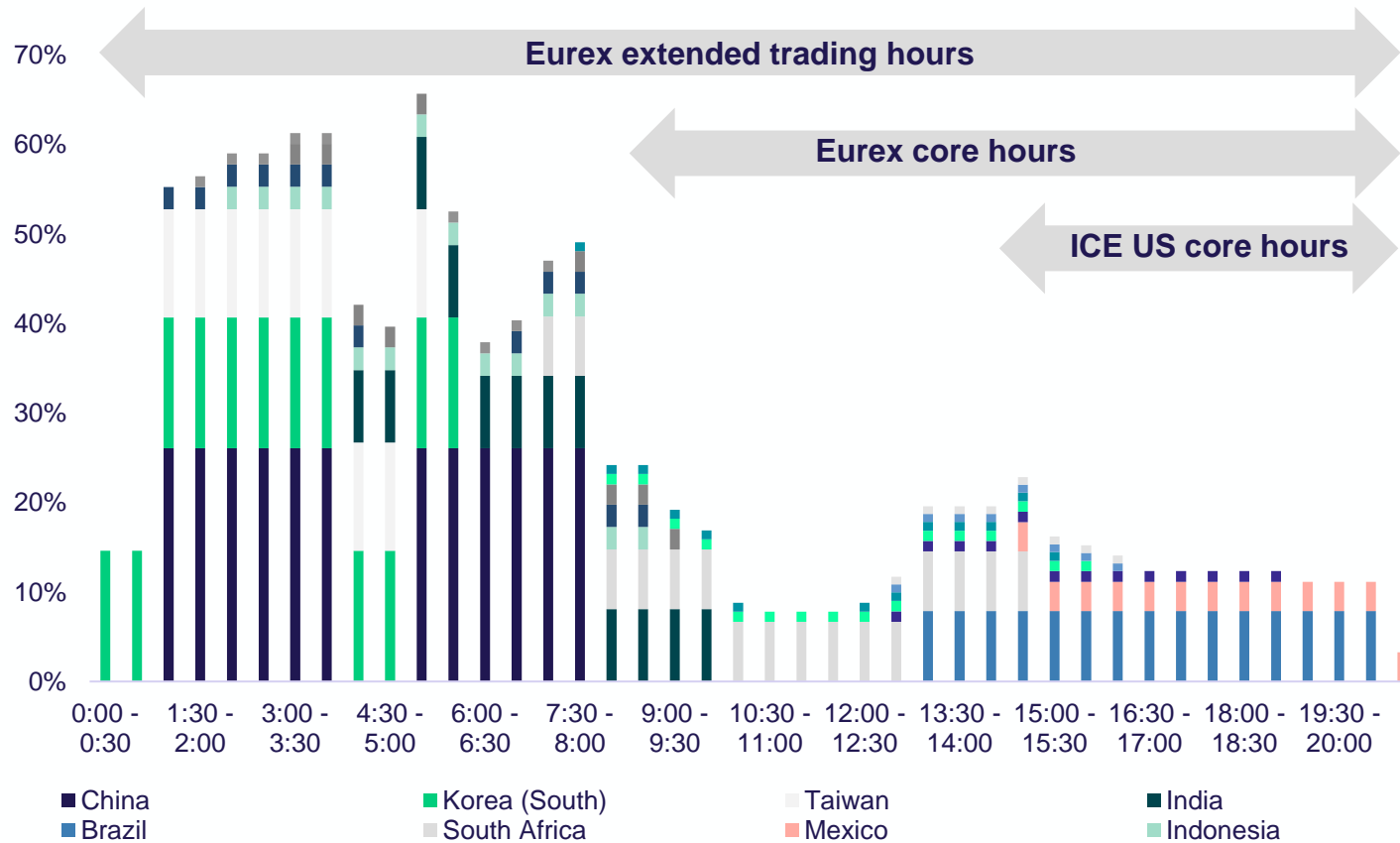
7

Extended trading hours

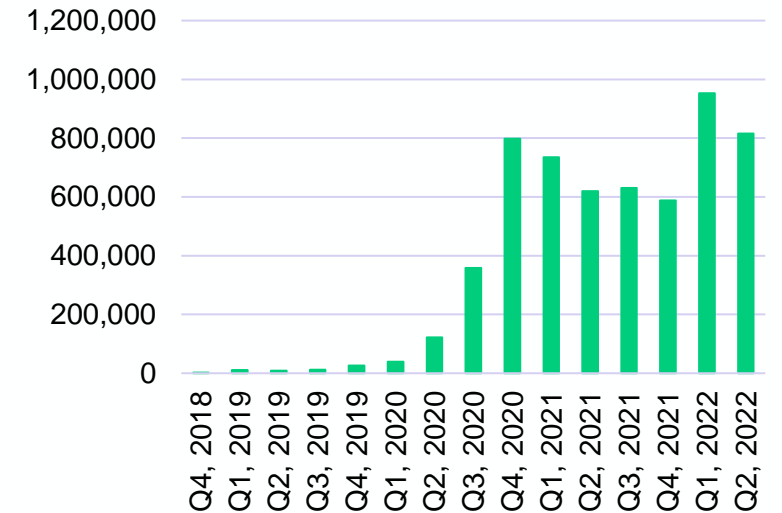
Adding Asian hours has been crucial to compete in Emerging Markets



Share of MSCI EM Index open for trading throughout the trading day



Traded contracts in MSCI during Asian hours



➤ As the majority of EM countries are Asia-based (in total almost 80%), it is important to foster tradability of MSCI Futures in the Asian hours

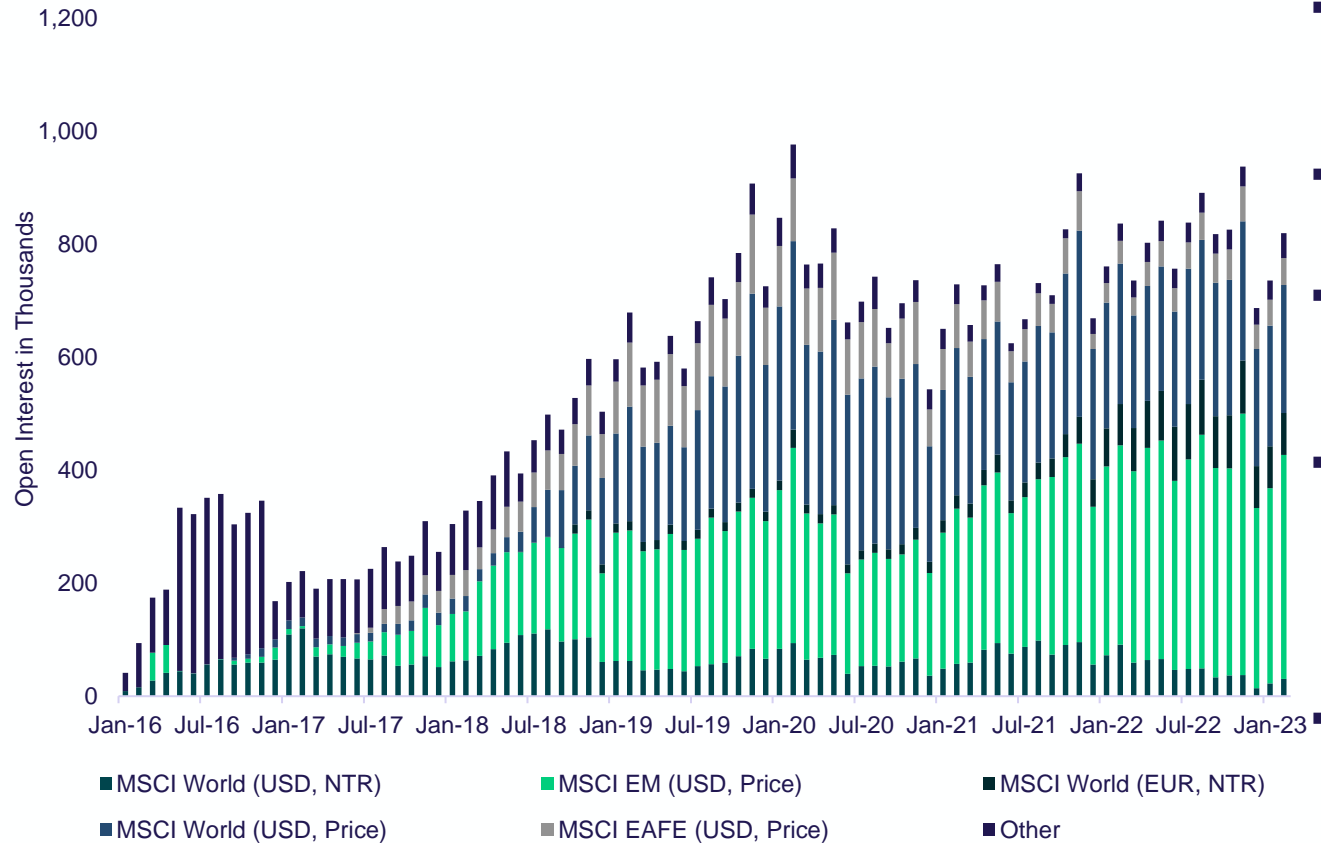


Building a MSCI Derivatives ecosystem

Options & Futures on one platform / additional product alternatives



Open Interest in MSCI Options



- Offering Futures and options on the same platform offers advantages in hedging, margining, strategy trading
- Development in the options segment is focussing on EM, World & EAFE indices, as shown on the left
- Beside of that, Eurex offers different product types (same index in different currencies, Price vs NTR indices)
- Additional choice is given by the launch of ESG index derivatives: Screened indices follow a simple, values-based approach, whereas the Enhanced Focus CTB derivatives reach for a higher ESG score, while maintaining a low tracking error to the parent index
- Finally, Eurex is also offering Dividend point Futures (again on EM, World & EAFE) to make Dividends tradable on it's own

Disclaimer

© Eurex 2023

Deutsche Börse AG (“DBAG”), Clearstream Banking AG (“Clearstream”), Eurex Frankfurt AG (“Eurex”), Eurex Clearing AG (“Eurex Clearing”) and Eurex Repo GmbH (“Eurex Repo”) are corporate entities and are registered under German law. Eurex Global Derivatives AG is a corporate entity and is registered under Swiss law. Clearstream Banking S.A. is a corporate entity and is registered under Luxembourg law. Eurex Frankfurt AG is the administrating and operating institution of Eurex Deutschland. Eurex Deutschland is in the following also referred to as the “Eurex Exchange”.

All intellectual property, proprietary and other rights and interests in this publication and the subject matter hereof (other than certain trademarks and service marks listed below) are owned by DBAG or its affiliates and subsidiaries or used under authorization by their respective owners, including, without limitation, all patent, registered design, copyright, trademark and service mark rights. While reasonable care has been taken in the preparation of this publication to provide details that are accurate and not misleading at the time of publication DBAG, Clearstream, Eurex, Eurex Clearing, Eurex Repo as well as the Eurex Exchange and their respective subsidiaries, servants and agents (a) do not make any representations or warranties regarding the information contained herein, whether express or implied, including without limitation any implied warranty of merchantability or fitness for a particular purpose or any warranty with respect to the accuracy, correctness, quality, completeness or timeliness of such information, and (b) shall not be responsible or liable for any third party’s use of any information contained herein under any circumstances, including, without limitation, in connection with actual trading or otherwise or for any errors or omissions contained in this publication.

This publication is published for information purposes only and shall not constitute investment advice respectively does not constitute an offer, solicitation or recommendation to acquire or dispose of any investment or to engage in any other transaction. This publication is not intended for solicitation purposes but only for use as general information. All descriptions, examples and calculations contained in this publication are for illustrative purposes only.

Eurex and Eurex Clearing offer services directly to members of the Eurex Exchange respectively to clearing members of Eurex Clearing. Those who desire to trade any products available on the Eurex market or who desire to offer and sell any such products to others or who desire to possess a clearing license of Eurex Clearing to participate in the clearing process provided by Eurex Clearing, should consider legal and regulatory requirements of those jurisdictions relevant to them, as well as the risks associated with such products, before doing so.

Only Eurex derivatives that are CFTC-approved may be traded via direct access in the United States or by United States persons.

A complete, up-to-date list of Eurex derivatives that are CFTC-approved is available at: <https://www.eurex.com/ex-en/rules-regs/eurex-derivatives-us/direct-market-access-from-the-us>.

In addition, Eurex representatives and participants may familiarize U.S. Qualified Institutional Buyers (QIBs) and broker-dealers with certain eligible Eurex equity options and equity index options pursuant to the terms of the SEC’s July 1, 2013 Class No-Action Relief.

A complete, up-to-date list of Eurex options that are eligible under the SEC Class No-Action Relief is available at: <https://www.eurex.com/ex-en/rules-regs/eurex-derivatives-us/eurex-options-in-the-us-for-eligible-customers>. Lastly, U.S. QIBs and broker-dealers trading on behalf of QIBs may trade certain single-security futures and narrow-based security index futures subject to terms and conditions of the SEC’s Exchange Act Release No. 60,194 (June 30, 2009), 74 Fed. Reg. 32,200 (July 7, 2009) and the CFTC’s Division of Clearing and Intermediary Oversight Advisory Concerning the Offer and Sale of Foreign Security Futures Products to Customers Located in the United States (June 8, 2010).

Trademarks and Service Marks

Buxl®, DAX®, DivDAX®, eb.rexx®, Eurex®, Eurex Repo®, Strategy Wizard®, Euro GC®, FDAX®, FTSE 100, FWB®, GC Pooling®, CPI®, MDAX®, ODAX®, SDAX®, TecDAX®, USD GC Pooling®, VDAX®, VDAX-NEW® and Xetra® are registered trademarks of DBAG or its affiliates and subsidiaries. MSCI®, EAFE®, ACWI® and all MSCI indexes (the “Indexes”), the data included therein, and service marks included therein are the intellectual property of MSCI Inc., its affiliates and/or their licensors (together, the “MSCI Parties”). The Indexes are provided “as is” and the user assumes the entire risk of any use it may make or permit to be made of the Indexes. No MSCI Party warrants or guarantees the originality, accuracy and/or completeness of the Indexes and each expressly disclaims all express or implied warranties. No MSCI Party shall have any liability for any errors or omissions in connection with any of the Indexes, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages. For full disclaimer see [msci.com/disclaimer](https://www.msci.com/disclaimer).

ATX®, ATX® five, CECE® and RDX® are registered trademarks of Vienna Stock Exchange AG. IPD® UK Quarterly Indexes are registered trademarks of Investment Property Databank Ltd. IPD and have been licensed for the use by Eurex for derivatives. SLI®, SMI® and SMIM® are registered trademarks of SIX Swiss Exchange AG. The STOXX® indexes, the data included therein and the trademarks used in the index names are the intellectual property of STOXX Limited and/or its licensors. Eurex derivatives based on the STOXX® indexes are in no way sponsored, endorsed, sold or promoted by STOXX and its licensors and neither STOXX nor its licensors shall have any liability with respect thereto. PCS® and Property Claim Services® are registered trademarks of ISO Services, Inc. Korea Exchange, KRX, KOSPI and KOSPI 200 are registered trademarks of Korea Exchange Inc. The names of other companies and third-party products may be trademarks or service marks of their respective owners.

FTSE® is a trademark of the London Stock Exchange Group companies and is used by FTSE International Limited (“FTSE”) under license. All rights in the FTSE®100 Index (the “Index”) vest in FTSE or its licensors. Neither FTSE nor any of their affiliates or licensors (a) assumes any liability, losses, damages, expenses or obligations in connection with any derivative product based on the Index; or (b) accepts any liability for any errors or omissions, fitness for a particular purpose or the results to be obtained from the use of the Index or related data. No party may rely on the Index or related data contained in this communication which Index and data is owned by FTSE or their affiliates. No use or distribution of the Index is permitted without FTSE’s express written consent. FTSE does not promote, sponsor or endorse the content of this communication nor any financial or derivative product that it relates to.

PRIIPs: Eurex Deutschland qualifies as manufacturer of packaged retail and insurance-based investment products (PRIIPs) under Regulation (EU) No 1286/2014 on key information documents for packaged retail and insurance-based investment products (PRIIPs Regulation) and provides key information documents (KIDs) covering PRIIPs traded on Eurex Deutschland on its website under the following link: <https://www.eurex.com/ex-en/rules-regs/priips-kids>.

In addition, according to Art. 14(1) PRIIPs Regulation the person advising on, or selling, a PRIIP shall provide the KID to retail investors free of charge.