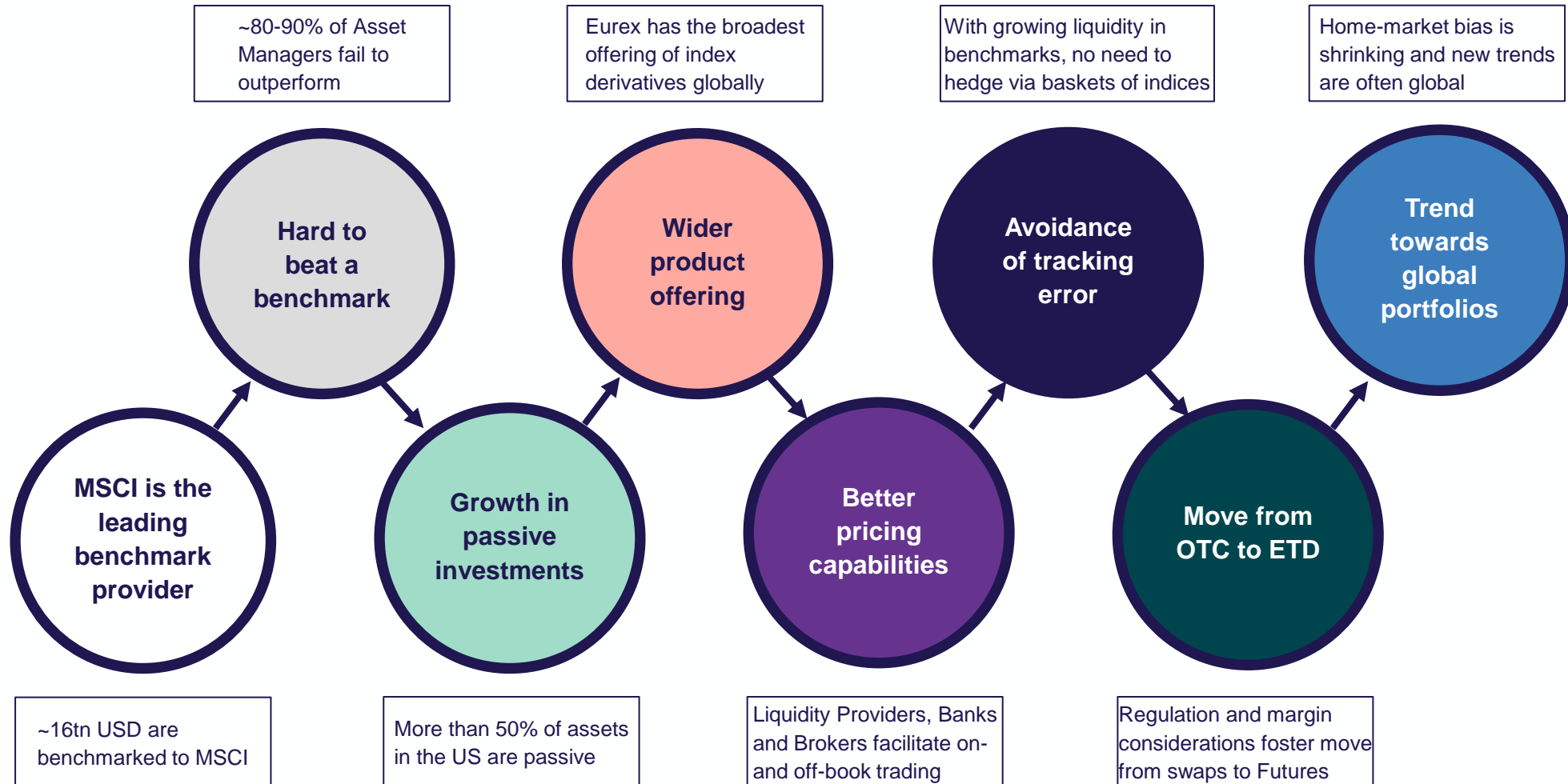


Eurex: The Global Home of MSCI Derivatives Sales Presentation

December 2022

Why are MSCI Derivatives getting popular?



Eurex is the Global Home of MSCI Derivatives



1

by Open Interest with 60.3% market share



2

by Trading volumes with 25.3% market share

2022 Traded volume

EUR 1.346 Billion
28.1 million contracts

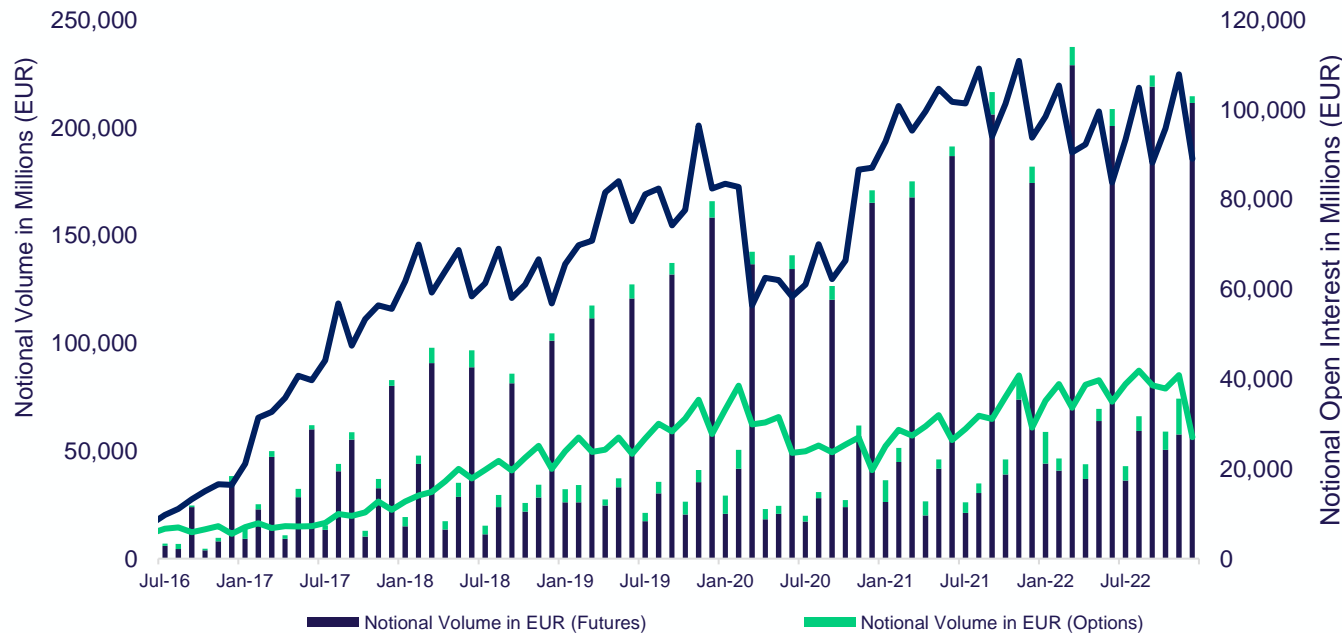
CAGR 2016 – 2022: **26%**

Open Interest

EUR 116 Billion
2.6 million contracts

CAGR 2016 – 2022: **20%**

Evolution of Notional Volume and Notional Open Interest



Open Interest for top MSCI Products

MSCI EM Asia (USD, NTR)	15,295,966,210	Futures
MSCI World (EUR, NTR)	9,481,373,055	
MSCI World (USD, NTR)	8,774,558,654	
MSCI India (USD, NTR)	5,655,949,897	
MSCI USA (USD, GTR)	5,258,126,664	
MSCI Europe (USD, NTR)	4,803,637,615	
MSCI Europe (EUR, NTR)	4,429,244,280	
MSCI Japan (USD, NTR)	3,907,322,595	
MSCI Canada (USD, GTR)	3,831,469,642	
MSCI EM (USD, Price)	3,792,621,756	
MSCI EM (USD, Price)*	13,625,127,508	Options
MSCI World (USD, Price)*	4,766,692,762	
MSCI EAFE (USD, Price)*	3,878,593,475	
MSCI World (USD, NTR)*	2,826,135,000	
MSCI World (EUR, NTR)*	1,061,143,821	

*Based on statistics Dec 2022 Source: FIA
Open Interest as of Dec 30, 2022

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 \(eurex.com\)](#)
December 2022

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

December 2022

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

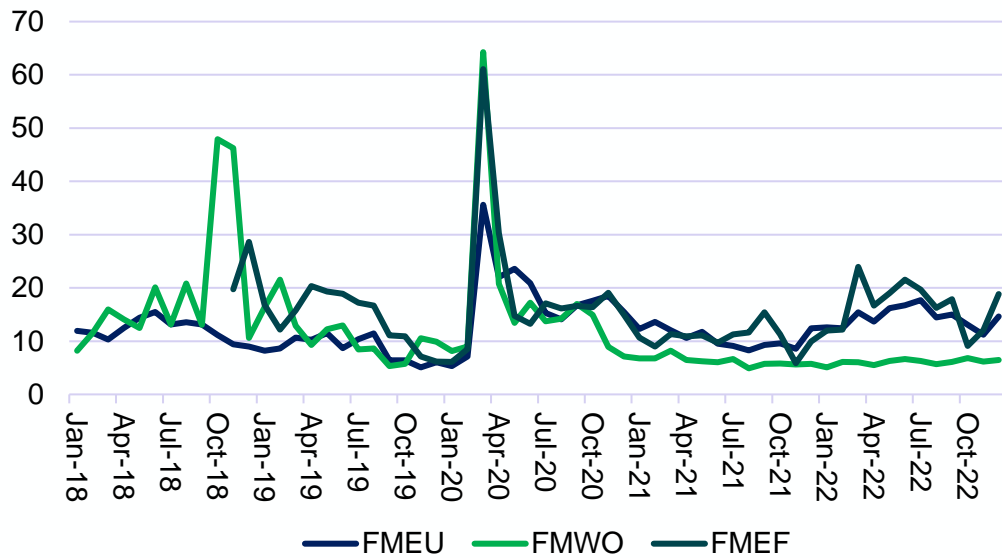
3

Improving order book liquidity picture

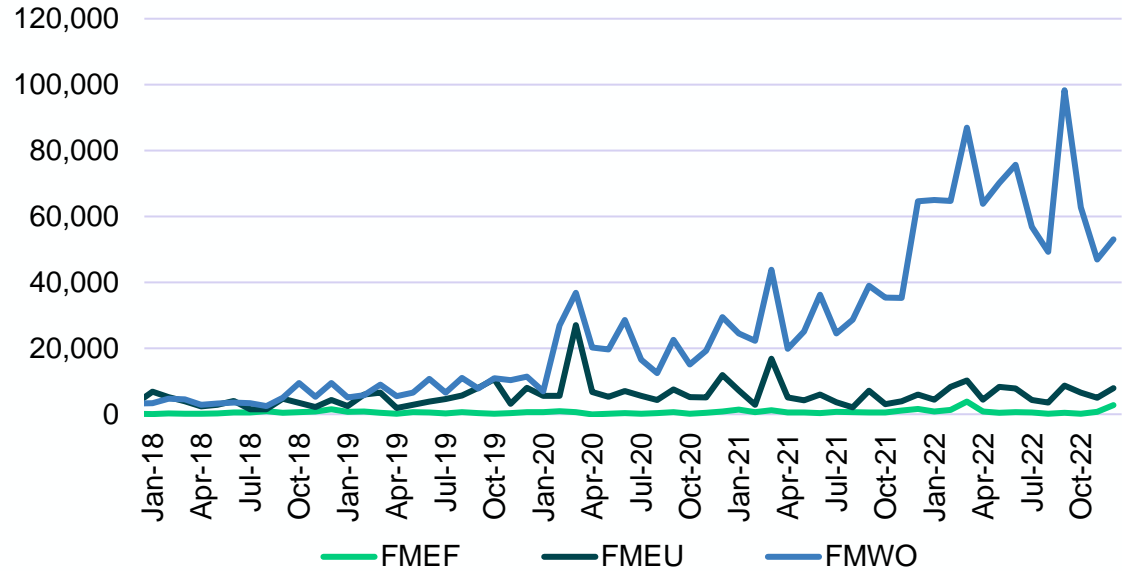
Order book liquidity has continuously improved since Covid peak in March 2020



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

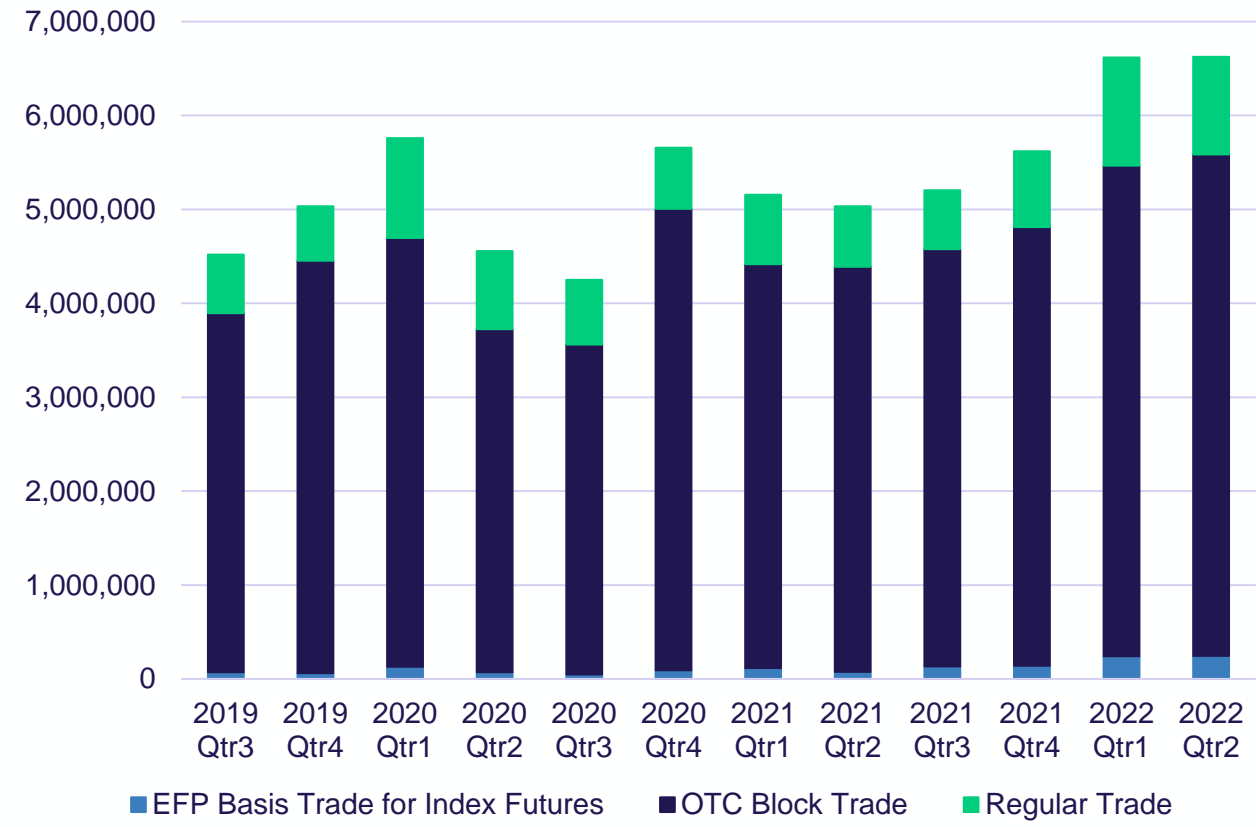
4

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

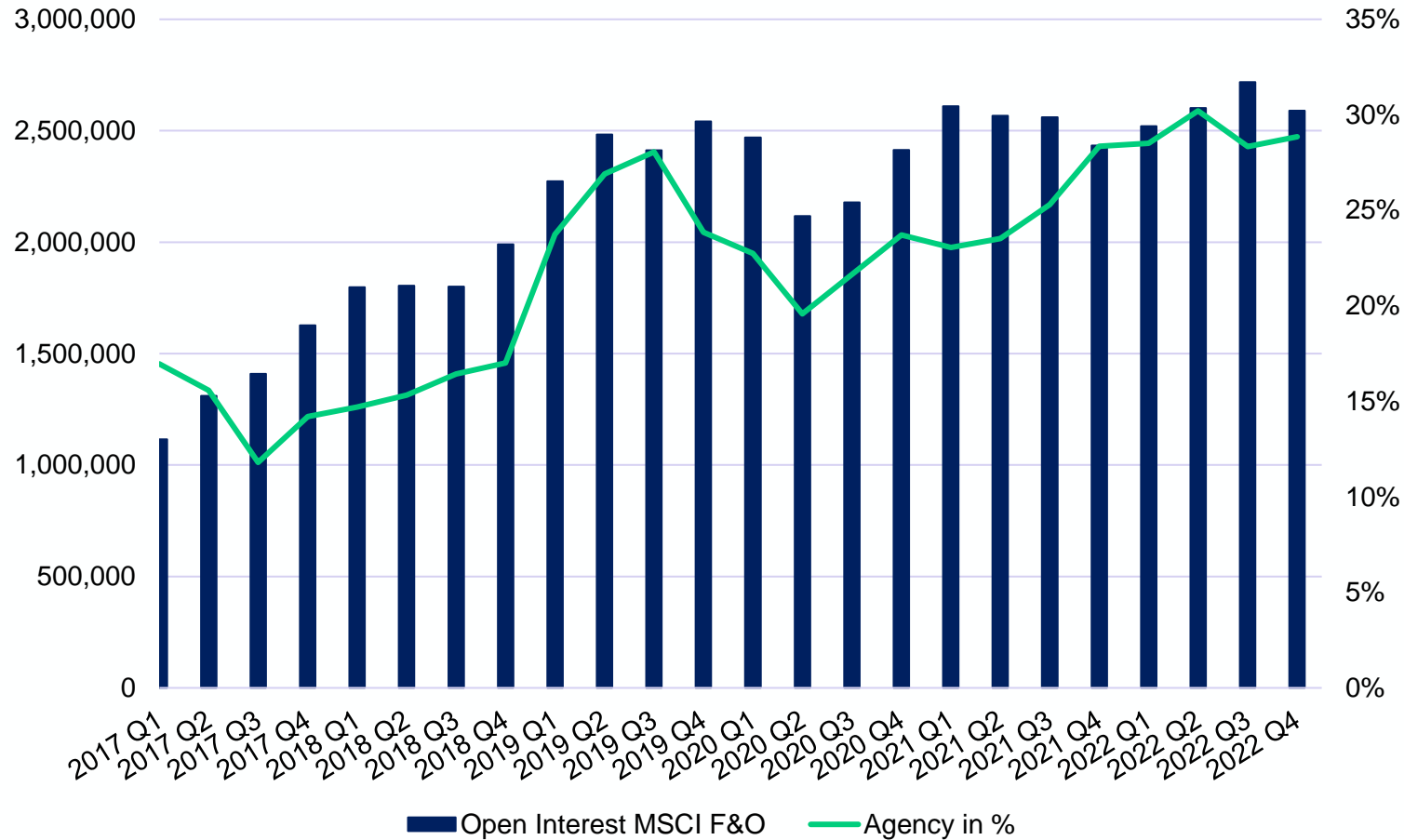
** Fee per contract (contract number ≤ threshold value) in respective currencies

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

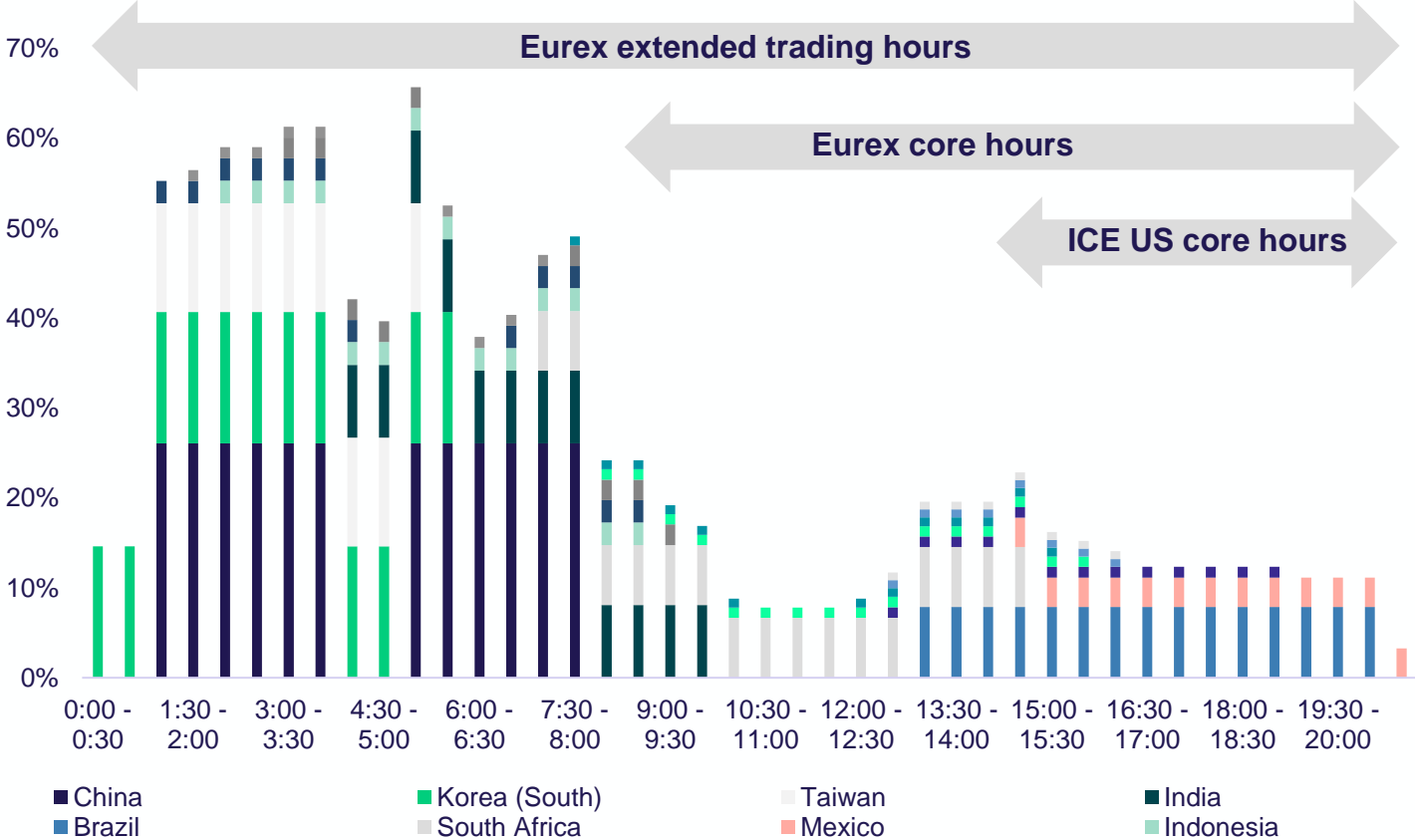
7

Extended trading hours

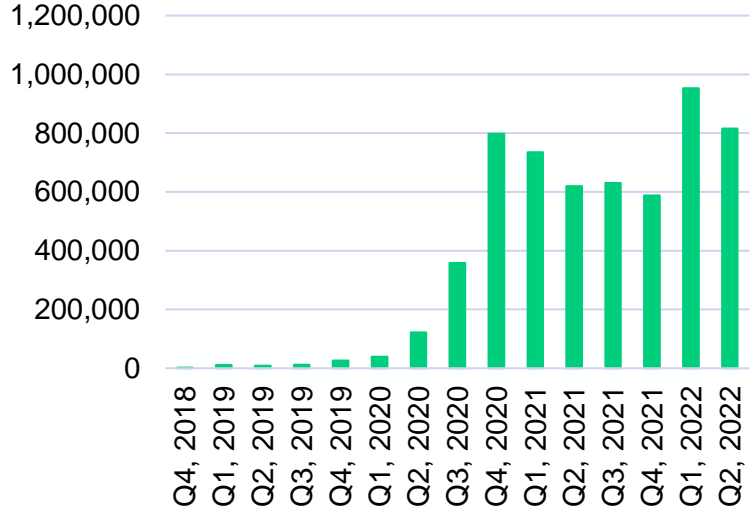
Adding Asian hours has been crucial to compete in Emerging Markets



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

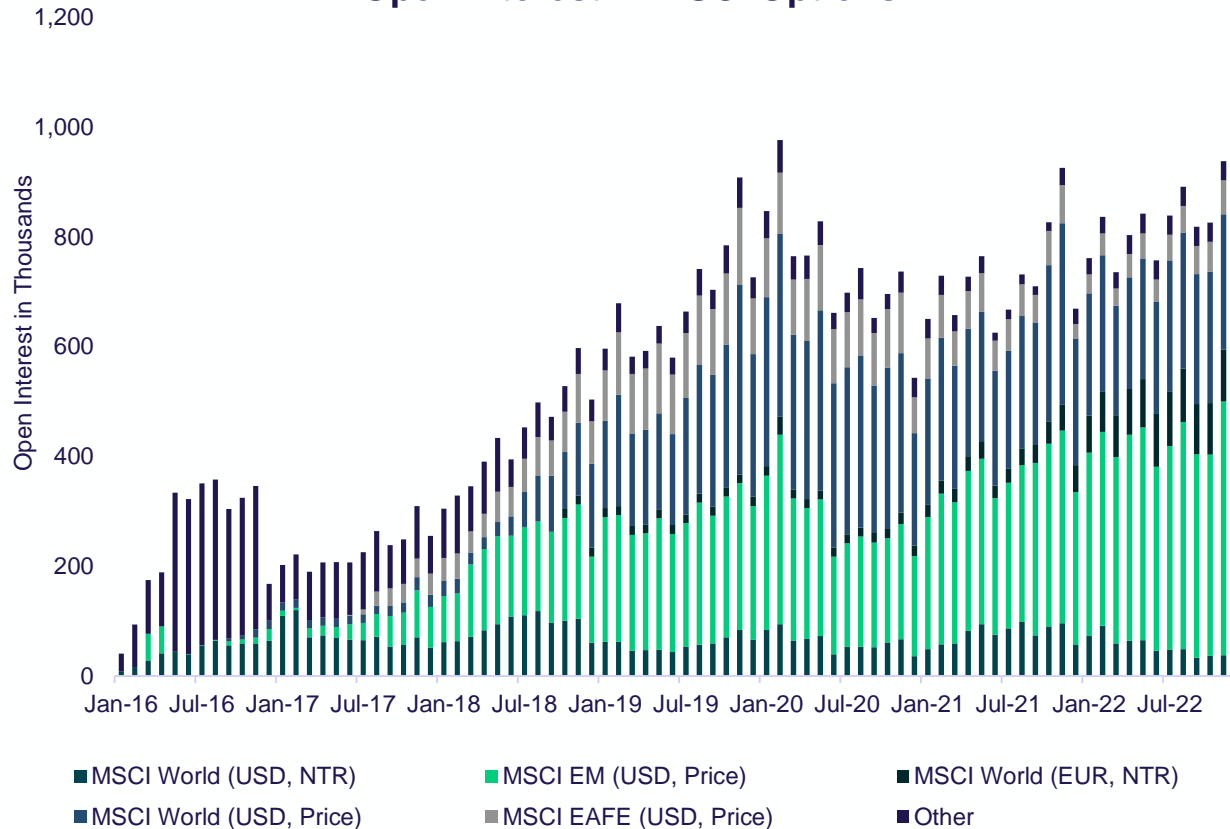


Building a MSCI Derivatives ecosystem

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

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