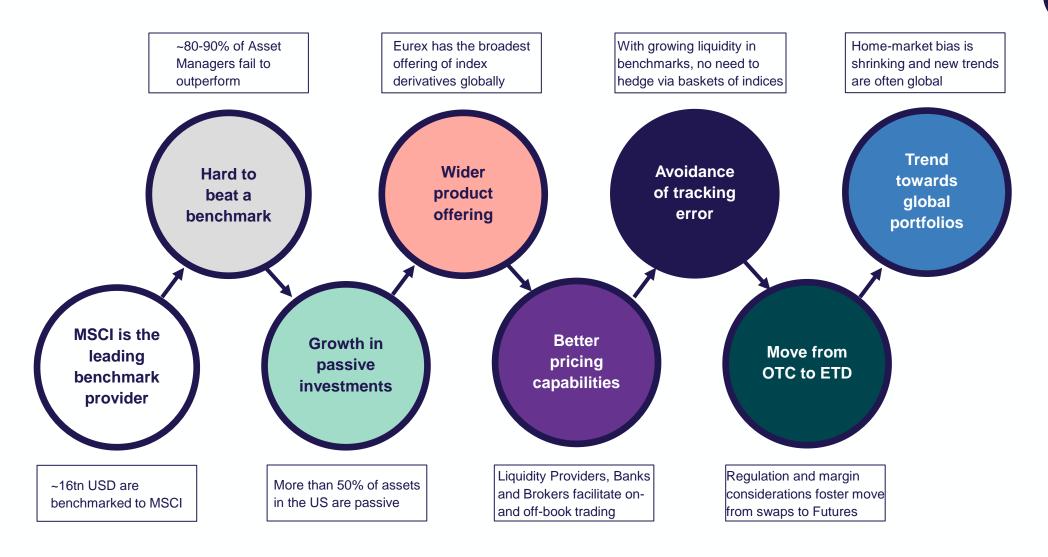
EUREX Architects of trusted markets



Eurex: The Global Home of MSCI Derivatives Sales Presentation

March 2024

Why are MSCI Derivatives getting popular?



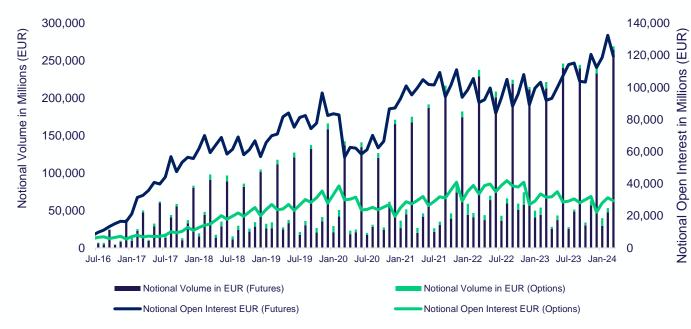
EХ

Internal

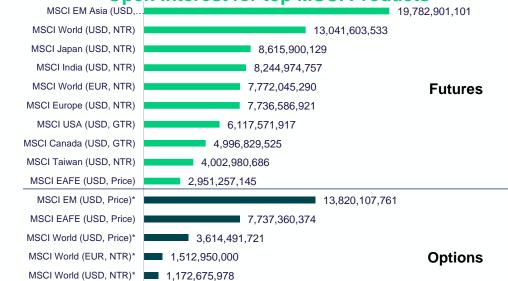
Eurex is the Global Home of MSCI Derivatives



Evolution of Notional Volume and Notional Open Interest



Open Interest for top MSCI Products



*Open Interest Market Share as of Dec 2023 Source: FIA

Open Interest as of March 28, 2024

* Options not eligible under SEC no-action relief as of February 29.2023. For eligible options, visit: : <u>MSCI Options Snapshot.pdf</u>

(eurex.com

EUREX

Growth drivers for Eurex MSCI Derivatives



Broadest offering of MSCI Derivatives

 Eurex offers 166 MSCI futures & 28 options on regional and country indexes



Capital efficiency

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



Improving order book liquidity picture

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



Flexibility in entering trades

Eurex is offering multiple functionalities to enter pre-negotiated trades



Cheaper fees

 Eurex is significantly cheaper than main competitors



Buy-Side clients are getting increasingly involved

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



Extended trading hours

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



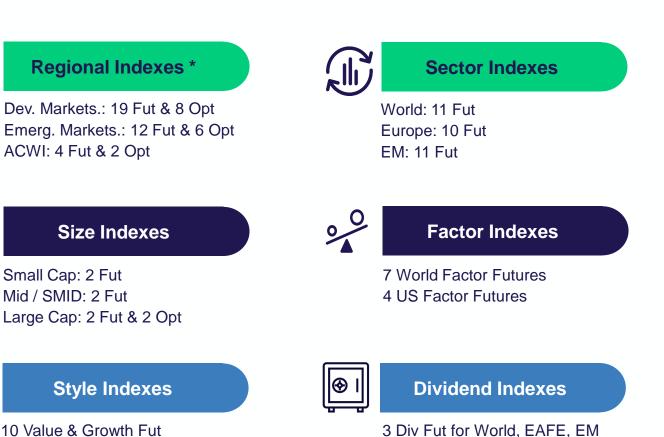
Building a MSCI Derivatives ecosystem

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

Internal

Broadest offering of MSCI Derivatives 1

Eurex lists over 169 Futures and 28 Options on Regional and Country Indexes



Full list of all MSCI products incl. specs & codes can be found in the specs and vendor file

* Only standard indexes counted here

March 2024

EХ

1 China Tech Futures

8 ESG Screened Fut

4 ESG Screened Opt

4 ESG SRI Fut

Country Indexes *

Dev. Markets.: 24 Fut & 1 Opt

Emerg. Markets.: 22 Fut & 2 Opt

ESG Indexes

5 ESG Enhanced Focus Fut

Thematic Indexes

Small Cap: 2 Fut Mid / SMID: 2 Fut

Large Cap: 2 Fut & 2 Opt

Style Indexes

10 Value & Growth Fut

 $\overline{\mathbf{T}}$





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 | |
|----------------|-------------------|---------------|-------------|--------|--------|----------|--------------------------|---|--------|---|-----------------------------------|-----|
| FESX | Euro STOXX 50 | FESX | VG | 35,000 | 16,000 | 19,000 | 757,340,000 | 79,933,029 | 10.55% | 367,634,955 | 5 95,726,563 74 | |
| add FMWO | MSCI World | FMWO | ZWP | 2,000 | 25,000 | (23,000) | 1,785,320,755 | 150,727,474 | 8.44% | | | 74% |
| 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% | | | |
| 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

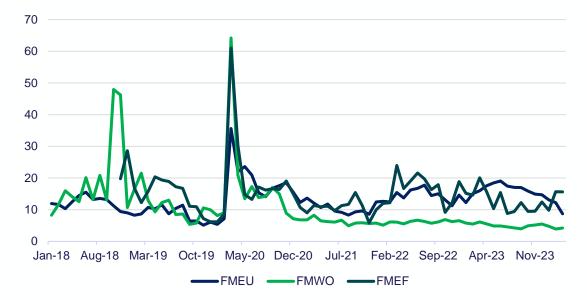
- Single product margins in this example are between 6.38% and 13.2% (with an portfolio average of 8.27%)
- However, based on PRISMA model, margin for the entire portfolio is only 1.86%, which is a reduction of 77%
- In general: the better a portfolio is balanced, the higher the margin offsets under 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

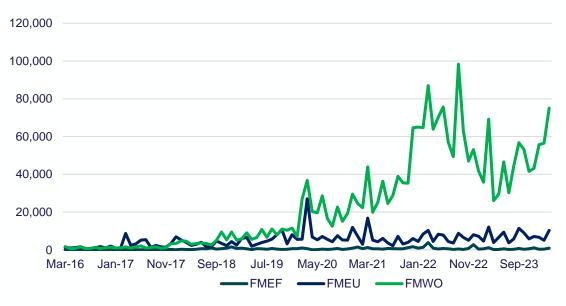


Order book liquidity has continuously improved since Covid peak in March 2020



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

7

Internal





7,000,000 6.000,000 5,000,000 4,000,000 3,000,000 2,000,000 1,000,000 0 2019 2019 2020 2020 2020 2021 2021 2021 2021 2022 2022 2020

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

Qtr4

Qtr3

Qtr1

■ EFP Basis Trade for Index Futures

Qtr2

Qtr3

Qtr4

Qtr1

■ OTC Block Trade

Qtr2

Qtr3

Qtr4

Regular Trade

Qtr1

8

Qtr2



| MSCI F | Futures | MSCI Options | | | | |
|-----------|---------------|--------------|---------------|-----|--|--|
| EUR/ GBP/ | / USD/ CHF | | EUR/ GBP/ USD |) | | |
| d fee | Reduced fee * | | | | | |
| М | A/P/M | А | Р | М | | |
| | 0.3 | 0.58 | 0.5 | 0.5 | | |

0.5

0.5

2,000 **

0.5

0.5

n. a.

0.58

0.58

3.000 **

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

0.45

0.45

n. a.

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

Standard fee

A/P/M

0.6

0.9

0.9

n. a.

Contract

Currency

Fee differentiation

Account

Orderbook

Eurex EnLight

TES

Threshold (number of

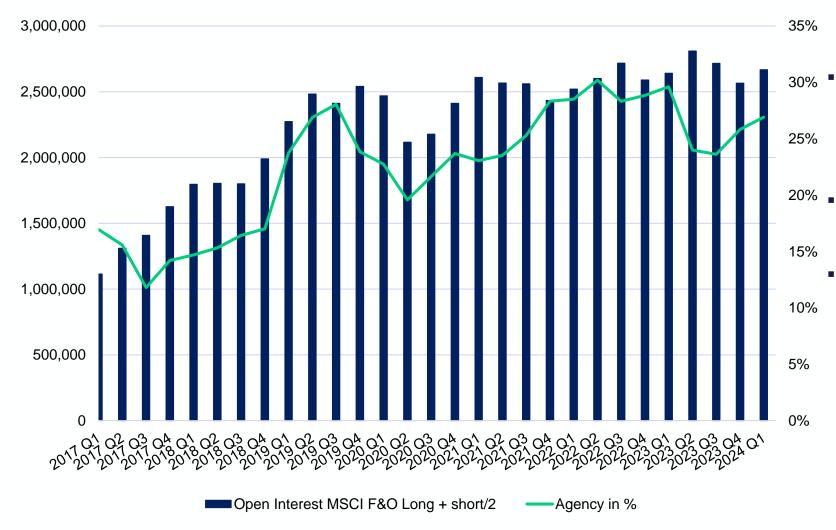
contracts)

EX

Buy-Side clients are getting increasingly involved



End client positions now represent 24% of Eurex's MSCI Derivatives flow



6

EUREX

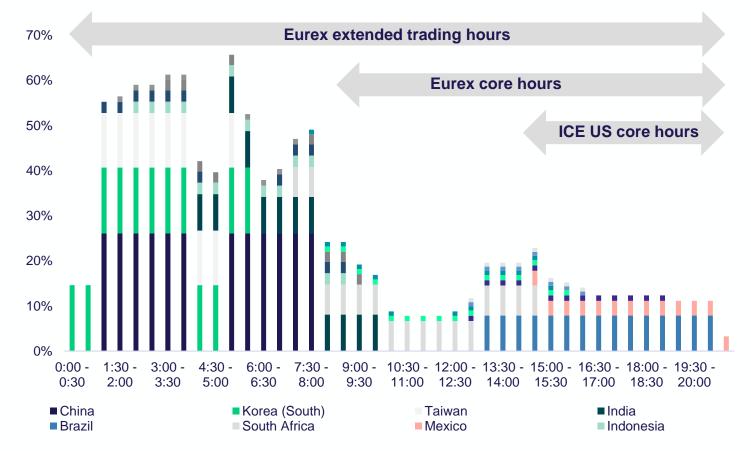
- With UMR (Uncleared Margin Rules) coming into play, it is expected that additional flow from buy-side clients will come into Futures
- Conversations ongoing with clients and dealers on how to optimize this shift
- Additional growth should attract also new players like hedge funds and more market makers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



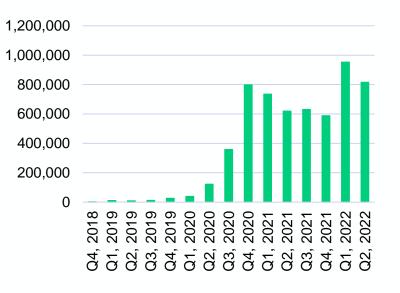
Extended trading hours

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



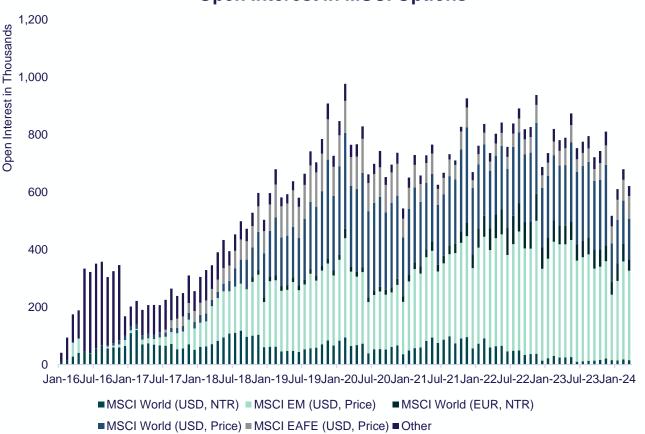
As the majority of EM countries are Asiabased (in total almost 80%), it is important to foster tradability of MSCI Futures in the Asian hours

Internal



Building a MSCI Derivatives ecosystem Options & Futures on one platform / additional product alternatives

EX



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, valuesbased 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/directmarket-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/rulesregs/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.

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 of 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.