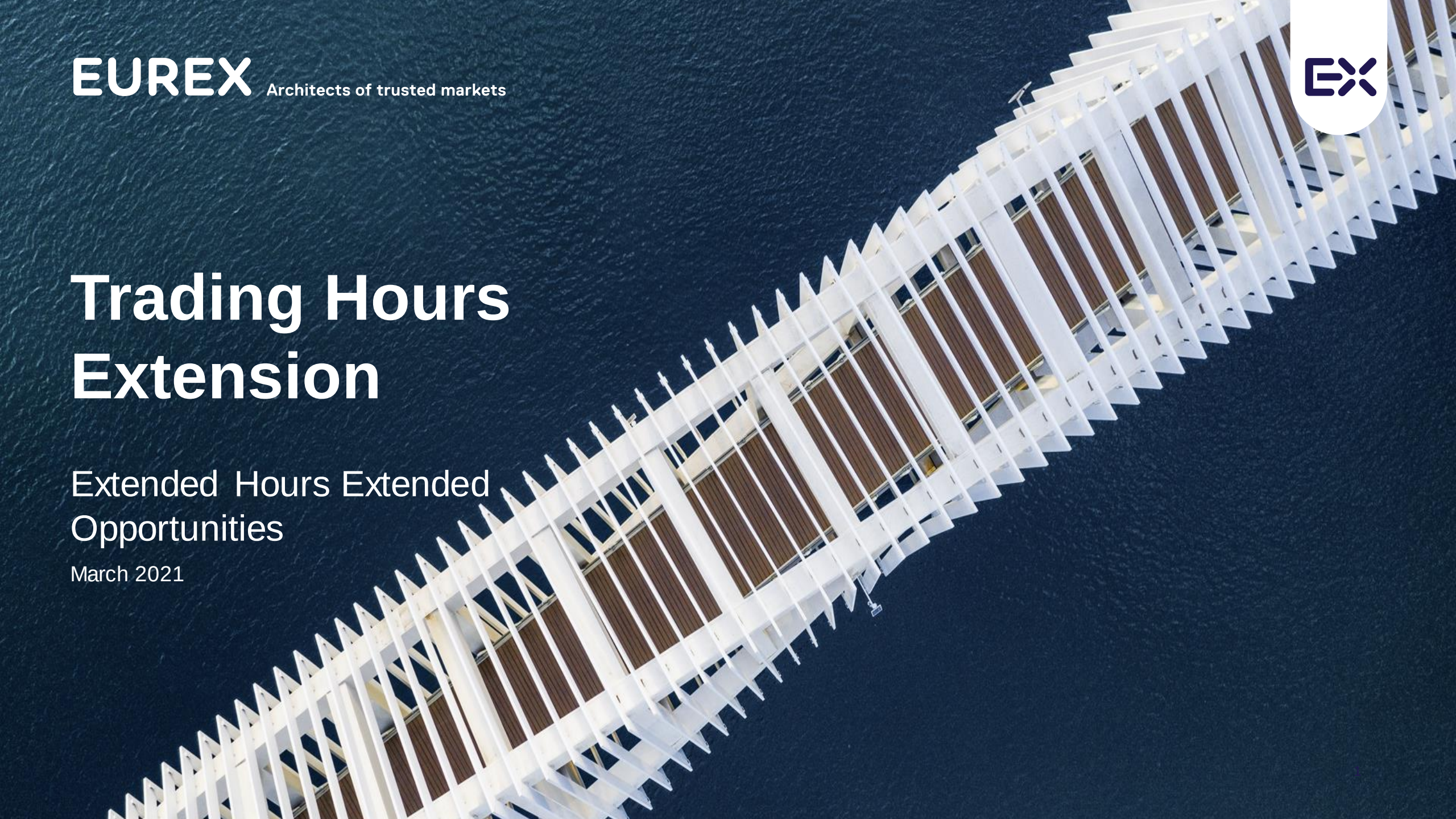
EUREX Architects of trusted markets

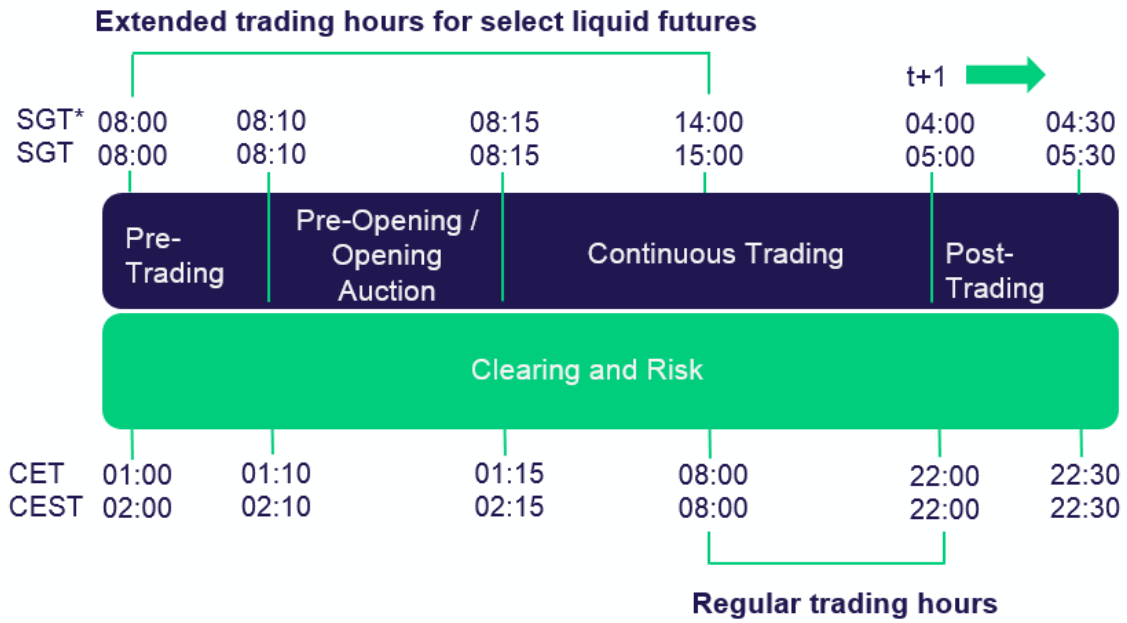
Trading Hours Extension

Extended Hours Extended Opportunities

March 2021



Key Facts



Extended trading hours always commence at 08:00 am Singapore, Hong Kong and China Standard Time: UTC +8h

Eurex extended its trading hours on 10th December 2018 to provide coverage during the Asian time zone.

Products in Phase I: Selected benchmark Futures and 136 MSCI Index Futures

Market opening is at 08: 00 am SGT; End of trading & clearing day unchanged

TES entry service (Block-, EFP-, EFS trades) available from 08:15 am SGT

Open GTC/GTD orders in THX relevant Futures can be executed in Asian Hours

Additional offerings were introduced on 7th December 2020 as part of Eurex's effort to provide price transparency and liquidity on highly sought-after products during the Asian hours

Products in Phase II: 10-year Euro-OAT, EURO STOXX® Banks, STOXX® Europe 600, and VSTOXX® Futures

*Singapore time during Central European Summer Time. Time difference: SGT/CET + 7h; SGT/CEST: +6h
**To optimize overnight processing, as of 25th February 2019, the post-trading phase is reduced from 30 mins to 10 min (22:00 CET to 22:10 CET). The clearing services are not impacted and will continue to be available until 22:30 CET.

Products Overview

All products listed are available for trading from 2:15AM CEST – 10:00PM CEST

Phase 1
(Launched 10th December 2018)

Equity Index Derivatives

- EURO STOXX 50® Futures (FESX)
- DAX® Futures (FDAX)
- Mini-DAX® Futures (FDXM)
- All MSCI Futures (136 products)

Interest Rates Derivatives

- Euro-Bund Futures (FGBL)
- Euro-Bobl Futures (FGBM)
- Euro-Schatz Futures (FGBS)
- Euro-Buxl® Futures (FGBX)

Phase 2-1
(Launched 7th December 2020)

Equity Index Derivatives

- EURO STOXX® Banks Futures (FESB)
- STOXX® Europe 600 Index Futures (FXXP)

Volatility Derivatives

- VSTOXX® Futures (FVS)

Interest Rates Derivatives

- Euro-OAT Futures (FOAT)*

Phase 2-2
(To launch 19th April 2021)

Equity Index Derivatives

- Micro-EURO STOXX® 50 Futures (FSXE)
- Micro-DAX® Futures (FDXS)

*Euro-OAT Futures trading hour is extended to both Asian hours (02:15 CEST – 08:00 CEST) and US hours (19:00 CEST – 22:00 CEST)

Development of the Trading Hours (1/2)

Eurex Trading Hours Extension offers attractive spreads and liquidity in European Benchmark products during the extended hours.

Eurex offers attractive spreads during Asian Hours:

Product	Asian Hours	Core Hours
EURO STOXX 50®	1 tick	1 tick
DAX®	3 ticks	2 ticks
Mini-DAX®	5 ticks	2 ticks
Euro-Bund	1 tick	1 tick
Euro-Bobl	1 tick	1 tick
Euro-Schatz	1 tick	1 tick
Euro-Buxl®	3 ticks	2 ticks

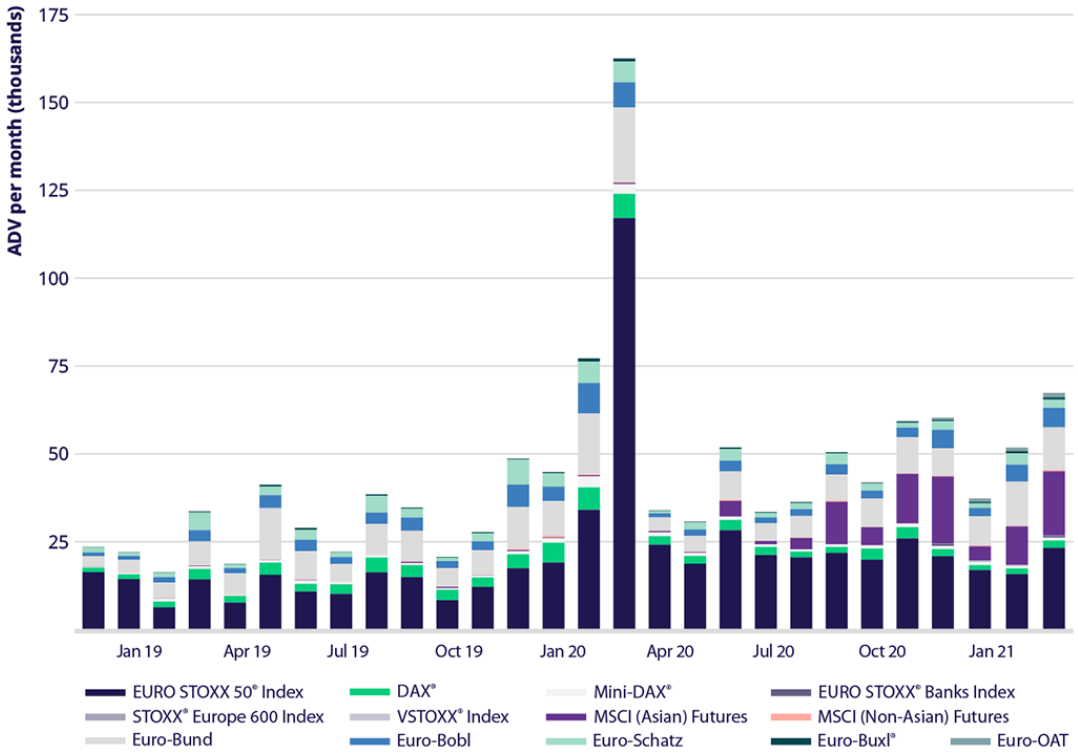
	Extended Hours Volume March 2021	Extended Hours ADV March 2021	Notional Volume in USD million	% Off-book	% Agency	% Extended Hours March 2021	2021 YTD Volume	2021 ADV	% Extended Hours 2021
	Phase 1 Benchmark Products								
EURO STOXX 50	534,386	23,234	23,776	0.0%	37.7%	1.8%	1,192,291	18,925	1.9%
DAX	48,163	2,094	20,537	0.0%	29.7%	2.8%	108,603	1,724	2.7%
Mini-DAX	17,442	758	1,486	0.0%	31.5%	1.4%	50,698	805	1.6%
Euro-Bund	279,151	12,137	56,534	0.0%	36.8%	1.3%	696,868	11,061	1.2%
Euro-Bobl	128,560	5,590	20,411	0.0%	29.4%	0.9%	272,755	4,329	0.8%
Euro-Schatz	54,135	2,354	7,142	0.0%	42.2%	0.5%	144,497	2,294	0.6%
Euro-Buxl	14,442	628	3,530	0.0%	23.9%	0.6%	35,827	569	0.5%
	Phase 1 MSCI Products								
MSCI (Asian) Futures	**421,698**	**18,335**	**25,549**	**98.7%**	**98.1%**	**41.2%**	**718,964**	**11,412**	**39.5%**
MSCI EM Asia	59,631	2,593	4,648	96.7%	96.9%	18.4%	228,157	3,622	32.0%
MSCI Japan	51,731	2,249	4,097	99.6%	99.2%	35.2%	74,895	1,189	34.1%
MSCI China	61,115	2,657	3,697	94.8%	95.6%	59.2%	84,391	1,340	54.7%
MSCI Australia	14,132	614	669	99.9%	99.9%	62.0%	25,678	408	25.5%
MSCI (Non-Asian) Futures	**9,019**	**392**	**591**	**22.5%**	**64.0%**	**2.0%**	**16,457**	**261**	**0.6%**
	Phase 2 Benchmark Products								
VSTOXX	1,926	84	5	0.0%	63.6%	0.1%	6,769	107	0.2%
EURO STOXX Banks	11,944	519	61	0.0%	50.8%	0.1%	19,311	307	0.1%
STOXX Europe 600	1,228	53	30	0.0%	48.4%	0.2%	2,165	34	0.04%
Euro-OAT (Asia Hours)	29,569	1,286	5,658	0.0%	38.4%	0.5%	68,834	1,093	0.5%
Euro-OAT (US Hours)	39,514	1,718	7,562	0.0%	42.5%	0.7%	88,668	1,407	0.6%
Total	**1,777,786**	**77,295**	**185,983**	**23.5%**	**47.4%**	**1.7%**	**3,835,828**	**60,886**	**1.5%**

Data updated on 31st March 2021

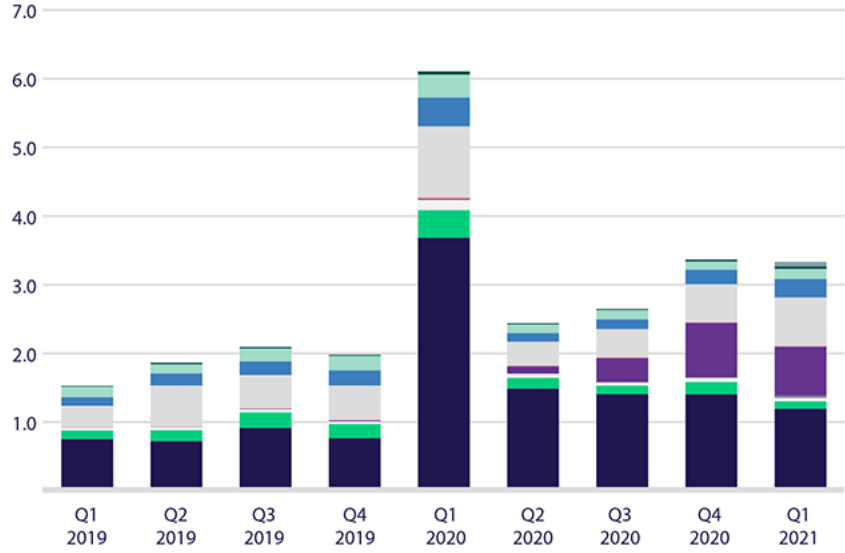
Development of the Trading Hours (2/2)

Eurex Trading Hours Extension has developed steadily over the years since inception, with strong monthly and quarterly volume growth.

Monthly ADV by product (December 2018 to March 2021) – Eurex Asian Hours
01:15 AM CET to 08:00 AM CET
08:15 AM SGT to 03:00 PM SGT



Quarterly traded volume comparison (in millions) – Eurex Asian Hours



Q1 2021 maintained the trading volume from Q4 2020. A huge boost in trading activity in **interest rate futures** observed given the current increasing yield situation, with a growth of **+33%** QoQ.

Data updated on 31st March 2021

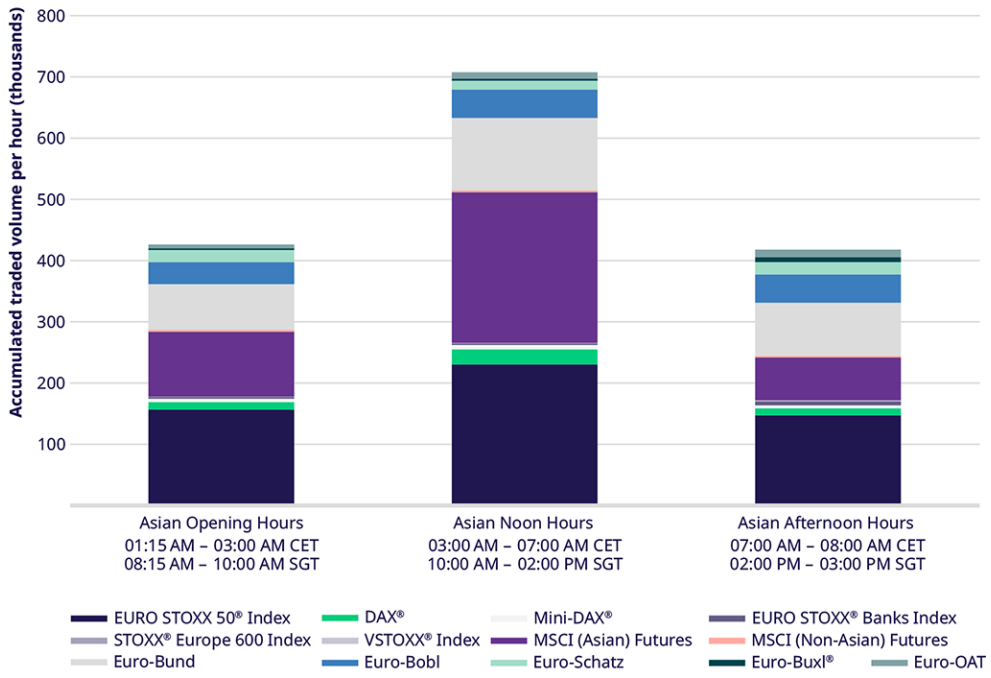
Distribution of Activities

Accumulated Hourly Traded Volumes show a healthy distribution of activity during the extended hours.

Total volume during Extended trading hours (Single counted)	**3,835,828** contracts traded in 2021 YTD
Trading participation- Account Roles 2021 YTM	**47%** on A-accounts (Agency) **53%** on P-accounts (Principal) and M-accounts (Market Making)
Total number of active Eurex members 2021	**214** (accumulated)

Over 260 direct members have contributed to the liquidity during Asian hours with 40% flow from end clients (Agency-Account) in 2020

Accumulated hourly traded volumes by product (March 2021) – Eurex Asian Hours
01:15 AM CET to 08:00 AM CET
08:15 AM SGT to 03:00 PM SGT



Monthly Data from: 1st March 2021 – 31st March 2021

Benchmark Index Futures (1/2)

Average Daily Volume (ADV) development shows opportunities during the Asian time zone.

Average daily volume (2021)

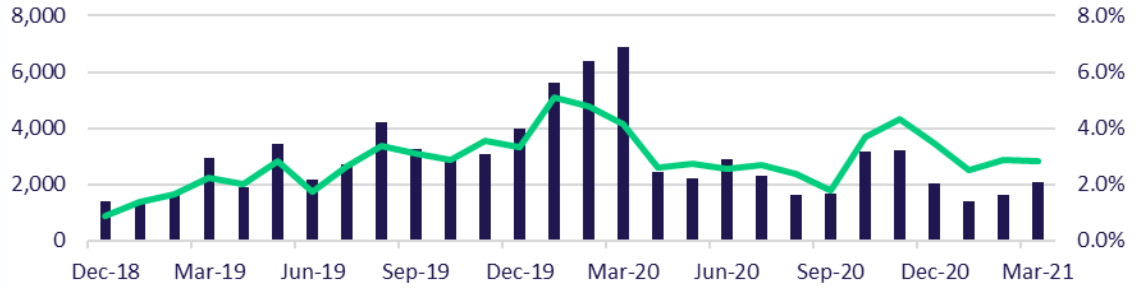
18,925 contracts on EURO STOXX 50® Index Futures

1,724 contracts on DAX® Index Futures

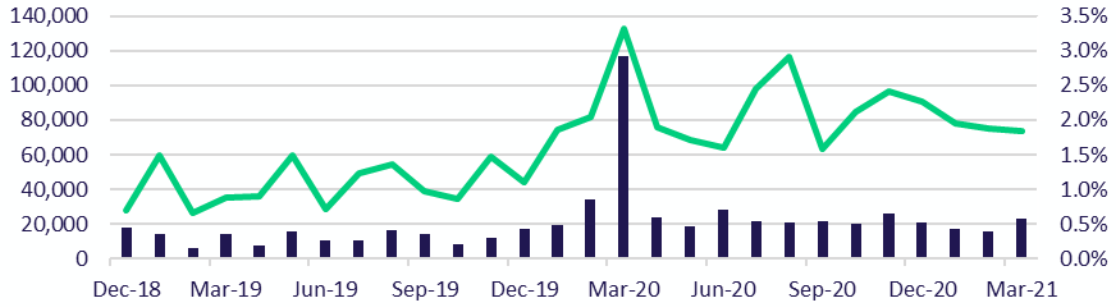
805 contracts on Mini-DAX® Index Futures

Good improvements shown in monthly ADV of **Equity Index Futures** during THX since launch.

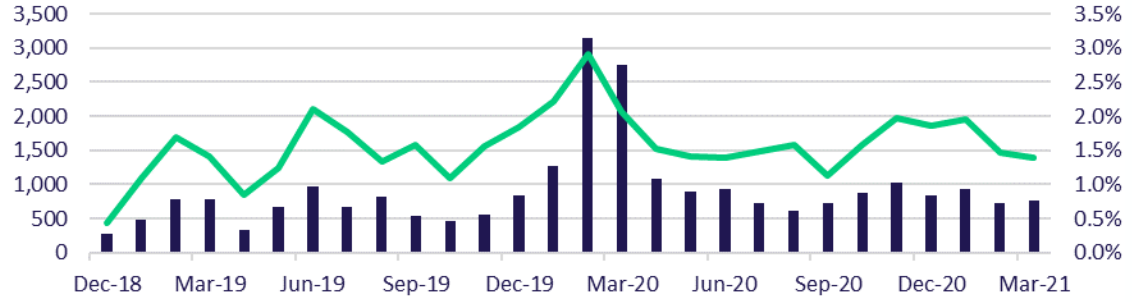
DAX® Index Futures



EURO STOXX 50® Index Futures



Mini-DAX® Index Futures



Monthly Average Daily Volume (LHS) % of Whole Day Volume (RHS)

Data updated on 31st March 2021

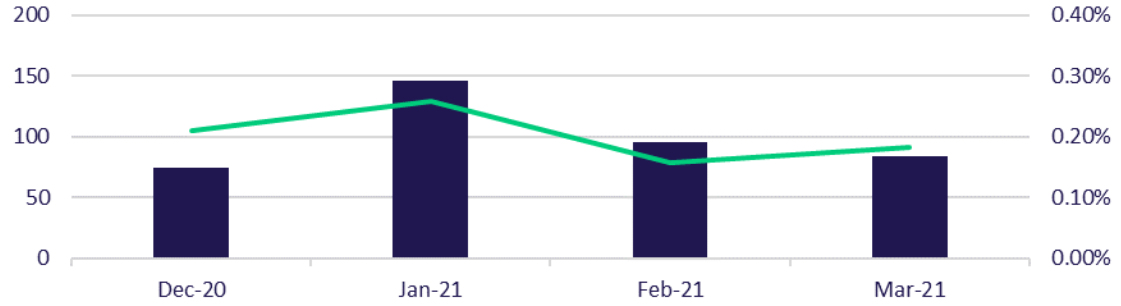
Benchmark Index Futures (2/2)

Average Daily Volume (ADV) development shows opportunities during the Asian time zone.

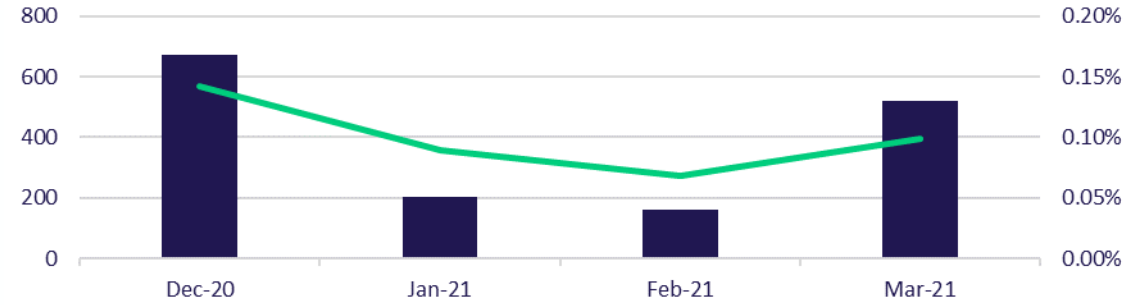
Average daily volume (2021)	
	307 contracts on EURO STOXX® Banks Index Futures
	34 contracts on STOXX® Europe 600 Index Futures
	107 contracts on VSTOXX® Index Futures

Good development in VSTOXX® and EURO STOXX® Banks Index future, with over 100 lots traded daily on average.

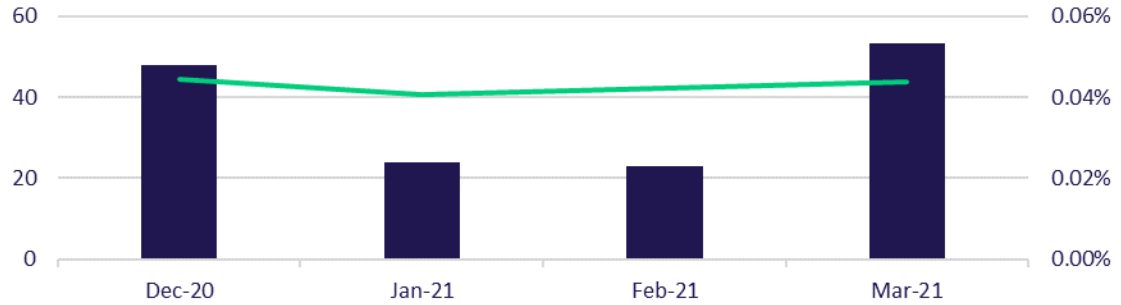
VSTOXX® Futures



EURO STOXX® Banks Index Futures



STOXX® Europe 600 Index Futures



Monthly Average Daily Volume (LHS) % of Whole Day Volume (RHS)

Data updated on 31st March 2021

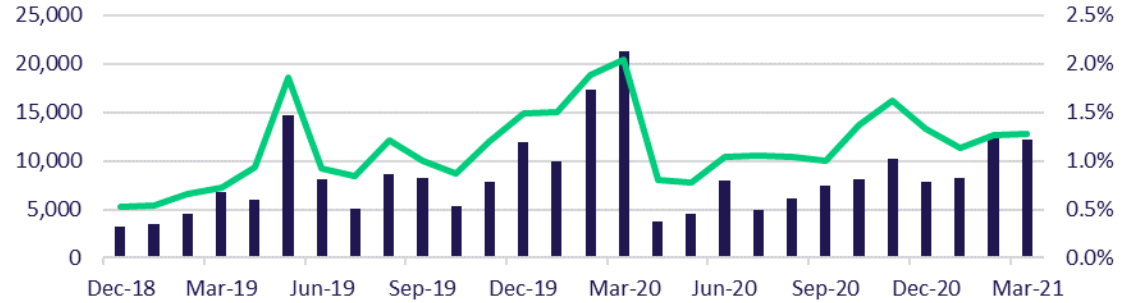
Benchmark Interest Rate Futures (1/2)

Average Daily Volume (ADV) development shows opportunities during the Asian time zone.

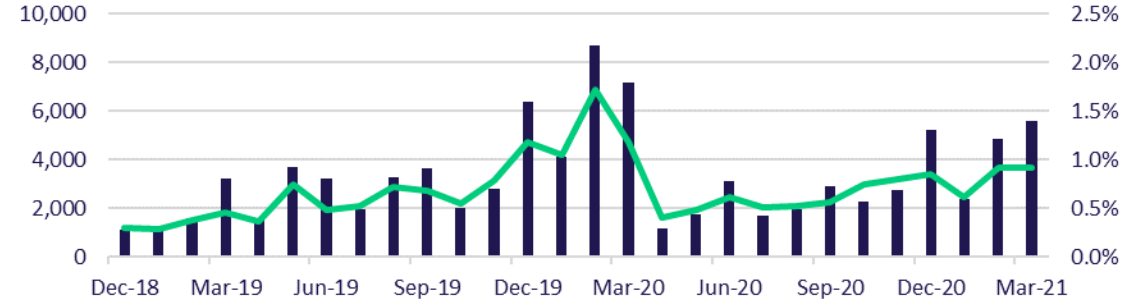
Average daily volume (2021)	
	11,061 contracts on Euro-Bund Futures
	4,329 contracts on Euro-Bobl Futures
	2,294 contracts on Euro-Schatz Futures

Good improvements shown in monthly ADV of **Interest Rate Futures** during THX since launch.

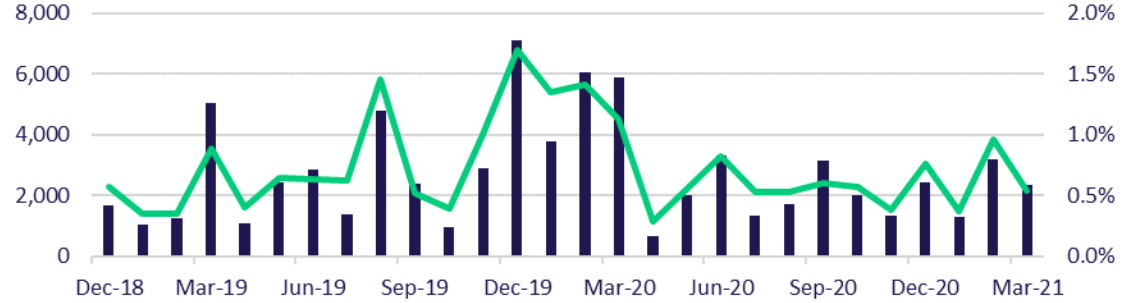
Euro-Bund Futures



Euro-Bobl Futures



Euro-Schatz Futures



Monthly Average Daily Volume (LHS) % of Whole Day Volume (RHS)

Data updated on 31st March 2021

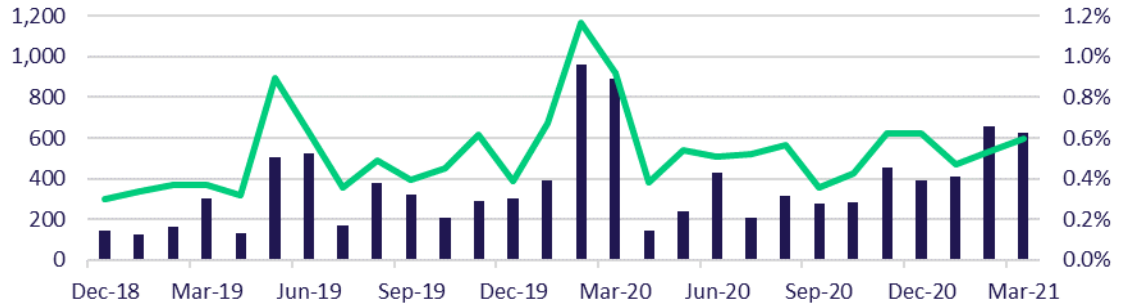
Benchmark Interest Rate Futures (2/2)

Average Daily Volume (ADV) development shows opportunities during the Asian time zone.

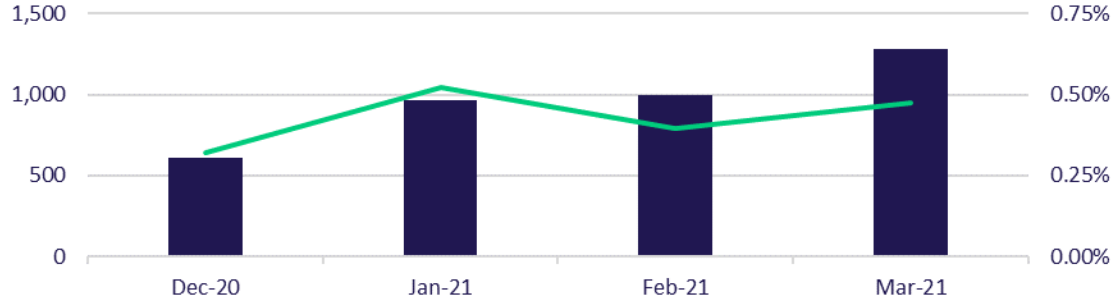
Average daily volume (2021)	
	569 contracts on Euro-Buxl® Futures
	1,093 contracts on Euro-OAT Futures (Asian hours)
	1,407 contracts on Euro-OAT Futures (US hours)

Euro-OAT Futures gained good traction during Asian and US Trading Hours, activity shows **strong client demand**.

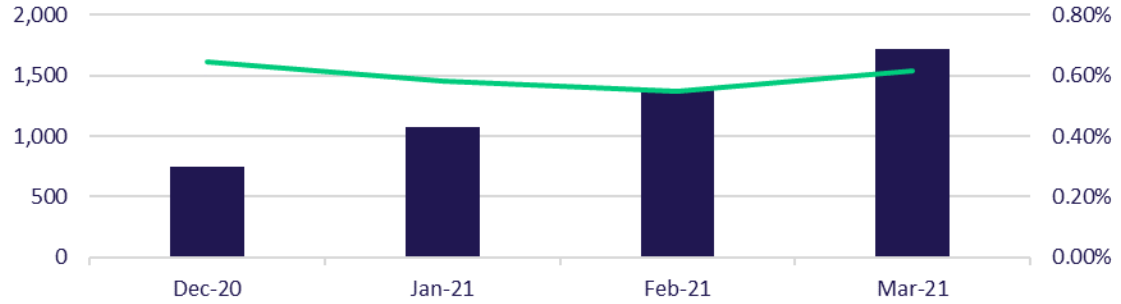
Euro-Buxl® Futures



Euro-OAT Futures (Asian Hours)



Euro-OAT Futures (US Hours)



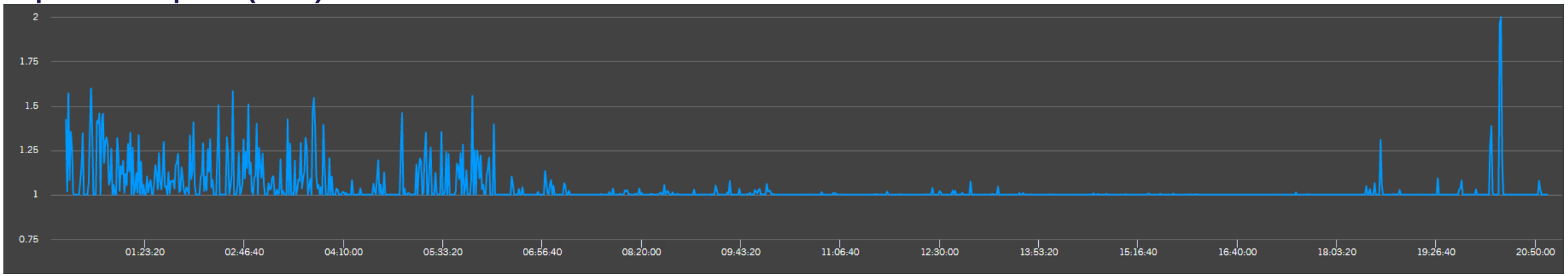
Monthly Average Daily Volume (LHS) % of Whole Day Volume (RHS)

Data updated on 31st March 2021

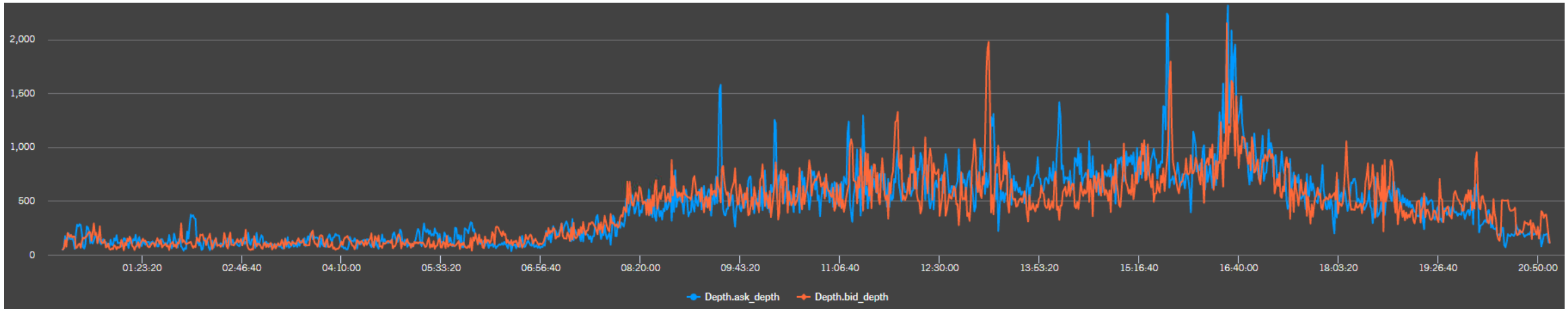
Liquidity Snapshot (1/4)

EURO STOXX® 50 Index Futures

Top-of-book Spread (ticks)



Top-of-book Depth

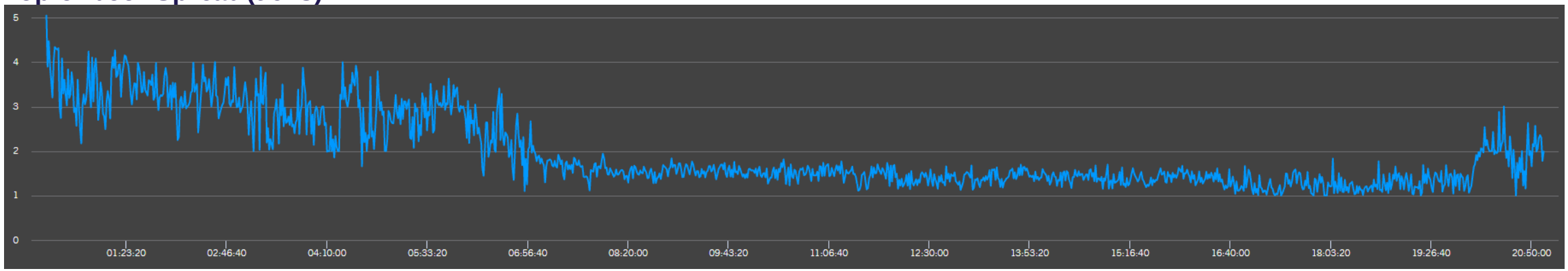


Data source: Deutsche Boerse A7 Analytics Platform. Date sampled: 15th March 2021. Time zone: UTC +01:00

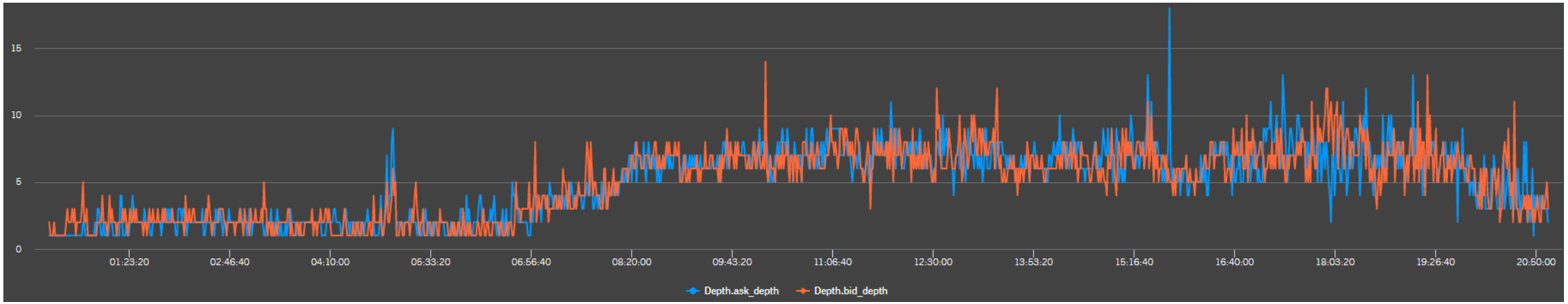
Liquidity Snapshot (2/4)

DAX® Index Futures

Top-of-book Spread (ticks)



Top-of-book Depth

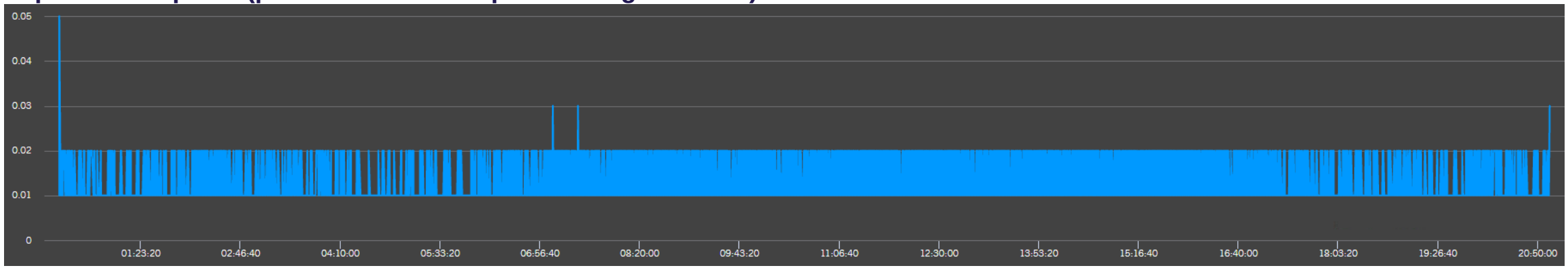


Data source: Deutsche Boerse A7 Analytics Platform. Date sampled: 15th March 2021. Time zone: UTC +01:00

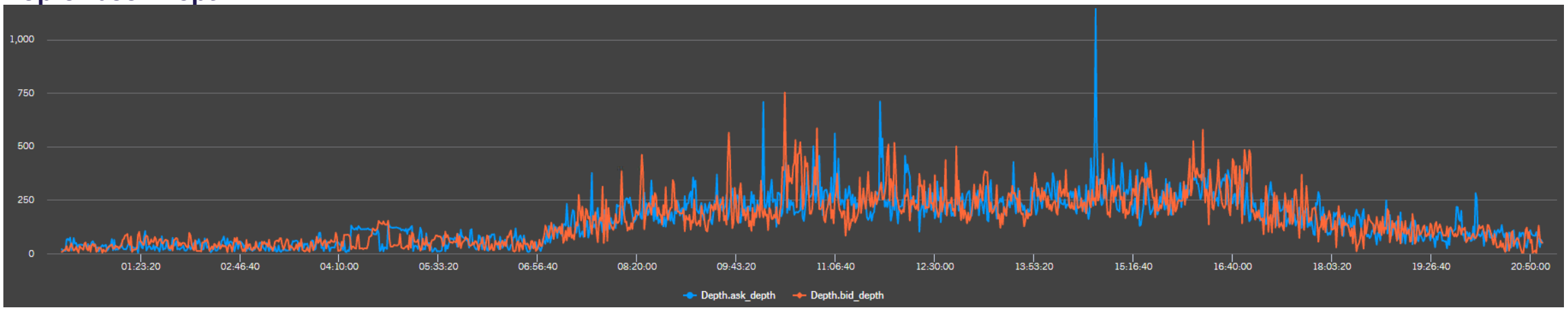
Liquidity Snapshot (3/4)

Euro-Bund Futures

Top-of-book Spread (percent – minimum price change = 0.01%)



Top-of-book Depth

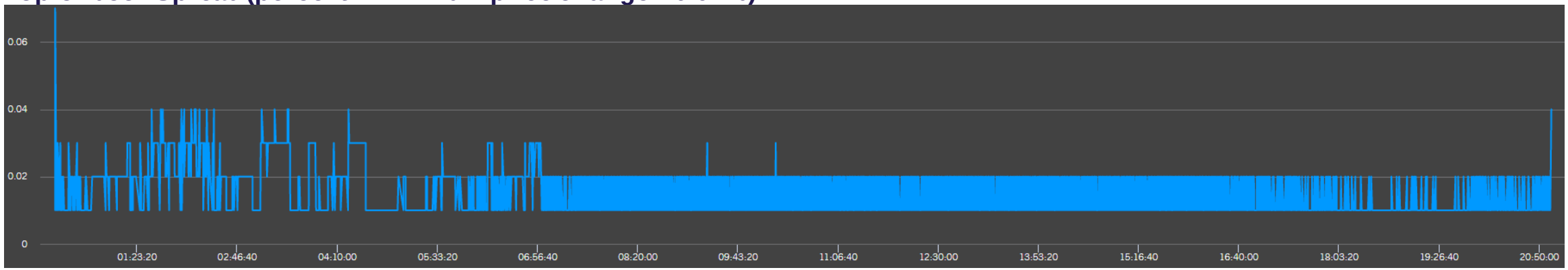


Data source: Deutsche Boerse A7 Analytics Platform. Date sampled: 15th March 2021. Time zone: UTC +01:00

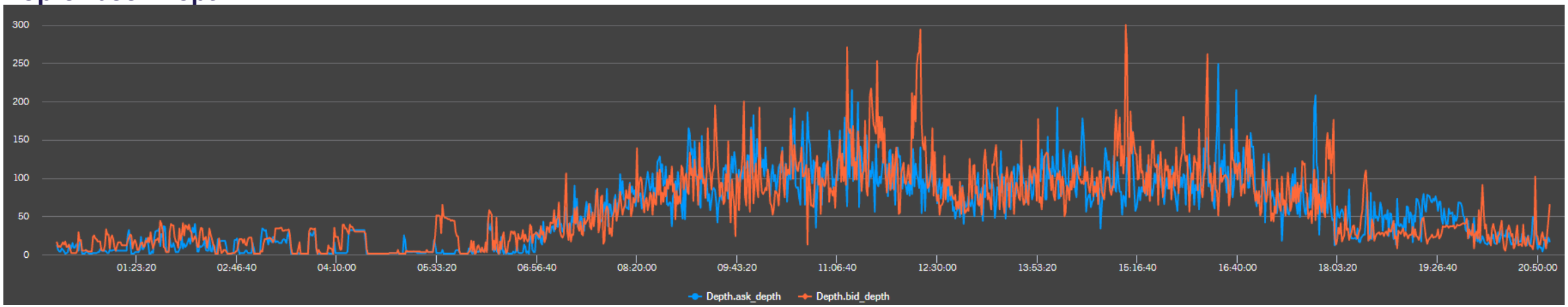
Liquidity Snapshot (4/4)

Euro-OAT Futures

Top-of-book Spread (percent – minimum price change = 0.01%)



Top-of-book Depth



Data source: Deutsche Boerse A7 Analytics Platform. Date sampled: 15th March 2021. Time zone: UTC +01:00

Appendix

Major Design Elements – Trading

Equity Index Futures	▪ **FESX (EURO STOXX 50® Index Futures)** ▪ **FDAX (DAX® Index Futures)** ▪ **FDXM (Mini DAX® Index Futures)** ▪ **FESB (EURO STOXX® Banks Index Futures)** ▪ **FXXP (STOXX® Europe 600 Index Futures)** ▪ **FVS (VSTOXX® Index Futures)** ▪ 136 Eurex MSCI Index Futures
Interest Rate Futures	▪ **FGBL (Euro-Bund Futures)** ▪ **FGBM (Euro-Bobl Futures)** ▪ **FGBS (Euro Schatz Futures)** ▪ **FGBX (Euro Buxl Futures)** ▪ **FOAT (Euro-OAT Futures)**

Product Scope for Eurex Asian Trading Hours

General	▪ All trading functionalities available including T7 Trade Entry Service (TES) ▪ Full re-use of existing Eurex membership, technical infrastructure, login data and trader IDs
Market Integrity	▪ Risk Protection for Liquidity Providers (LP): the Eurex system provides LPs with various features for system-based risk protection which can help LPs can significantly constrain operational and market risks, preventing too many simultaneous trade executions on quotes provided by any LP ▪ Volatility Interruption: the risk that markets decline in large price drops is not only a result of market orders but also limit orders. To guard against that, in its benchmark products, the Eurex system validates every single trade against price bands within given time frames. If the system concludes that price determination lies outside the price bands, it automatically stops regular order book trading ▪ Market Supervision: on-going level of support during trading hours, using various parameters and triggers to monitor abnormalities in the order book activity and ensure there is a fair and orderly market
Liquidity Provision	▪ Liquidity Provision programs available for the Asian time zone, combined with attractive incentive schemes for qualifying Liquidity Providers (more information on LP schemes upon request) ▪ Continuous quotes during Asian trading hours will be provided by our partnering Liquidity Providers

Major Design Elements – Clearing & Risk

General	▪ Clearing and risk functionalities available during Asian trading hours ▪ Full re-use of existing Eurex Clearing membership, technical infrastructure, login data and Member ID ▪ Intraday Risk Management; Intra-night Margin calls to be fulfilled during Asian trading hours ▪ Staff must be reachable during Asian trading hours ▪ Post-trade functionalities expected to be available for select benchmark products during Asian hours
Risk Management	▪ Risk functionalities (portfolio-based margining methodology) to be applied during the Asian trading and clearing hours for active products ▪ Advanced Risk Protection handling (level 1: alert, level 2: slow down, level 3: halt) based on PRISMA calculations available during Asian trading and clearing hours ▪ No changes to default management process ▪ Same Intraday risk reports as of today (e.g. CI042, CI050, CI060) offered during the Asian hours to members on Common Report Engine (CRE) ▪ Real time risk monitoring and consistent margin call procedures during Asian trading hours ▪ Margin calls to be fulfilled in AUD or via existing USD payment infrastructure during Asian hours

Major Design Elements – Clearing & Risk

Margin Calls during the Asian Hours

- Existing margin call procedures for activities during the standard trading session will remain unchanged
- Overnight margin calls are auto debited the following morning by 8am CET (EUR) / 9am CET (CHF/GBP)
- Regular intraday margin calls may be issued between 8am CET and 10pm CET (today's practice)
- New: Margin calls during Asian trading hours shall only be issued in the case of position changes (i.e. no intra-night margin call solely based on market movements)*
- Calculated overnight shortfalls are "set to zero", i.e. Eurex Clearing will consider overnight margin calls as fulfilled by the start of Asian hours, even though the call will only be debited by 8am CET (EUR) / 9am CET (CHF/GBP). Eurex Clearing will treat all collateral pools flat or over-collateralized for the start of the Asian trading hours*
- Eurex Clearing will only issue a margin call during Asian hours, if the intraday margin limit has been exceeded (in general 10% of the Clearing Member's overnight margin requirement per pool)*

Major Design Elements – Clearing & Risk

Margin Calls: Mitigating Measures	▪ Clearing Members can pledge additional cash / non-cash collateral with Eurex (i.e. over-collateralization) during regular hours on the preceding business day to avoid margin calls during Asian hours ▪ Clearing Members can define a Permanent Cash Balance (PCB) to establish a cash buffer which is automatically restored on a daily basis ▪ Clearing Members may actively manage their total margin requirement by entering risk reducing trades ▪ Clearing Members have the possibility to delete their own open orders from the order book prior to Asian hours market opening to avoid position changes and hence margin calls during the extended session
Correspondent Banks	▪ Available correspondent banks for USD include Citibank N.A., Deutsche Bank Trust, Bank of New York Mellon, JP Morgan Chase Bank N.A., JP Morgan Chase Bank N.A., London, and Bank of America ▪ Available correspondent banks for AUD: ANZ Banking Group Limited and Westpac Banking Corporation

Disclaimer

© Eurex 2021

Deutsche Börse AG (DBAG), Clearstream Banking AG (Clearstream), Eurex Frankfurt AG, 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. DeutscheBoerse Asia Holding Pte. Ltd., Eurex Clearing Asia Pte. Ltd. and Eurex Exchange Asia Pte. Ltd are corporate entities and are registered under Singapore law. Eurex Frankfurt AG (Eurex) is the administrating and operating institution of Eurex Deutschland. Eurex Deutschland is in the following 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 and its affiliates and subsidiaries 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 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 in order 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: http://www.eurexchange.com/exchange-en/products/eurex-derivatives-us. In addition, Eurex representatives and participants may familiarise 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: http://www.eurexchange.com/exchange-en/products/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®, Eurex Strategy WizardSM, Euro GC Pooling®, FDAX®, FWB®, GC Pooling®,,GCPI®, MDAX®, ODAX®, SDAX®, TecDAX®, USD GC Pooling®, VDAX®, VDAX-NEW® and Xetra® are registered trademarks of DBAG. All MSCI indexes are service marks and the exclusive property of MSCI Barra. 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. Bloomberg Commodity IndexSM and any related sub-indexes are service marks of Bloomberg L.P. 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. BSE and SENSEX are trademarks/service marks of Bombay Stock Exchange (BSE) and all rights accruing from the same, statutory or otherwise, wholly vest with BSE. Any violation of the above would constitute an offence under the laws of India and international treaties governing the same.
The names of other companies and third party products may be trademarks or service marks of their respective owners.

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: http://www.eurexchange.com/exchange-en/resources/regulations/eu-regulations/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.