

JPX IR Day 2021



Derivatives Market

Total smart exchange

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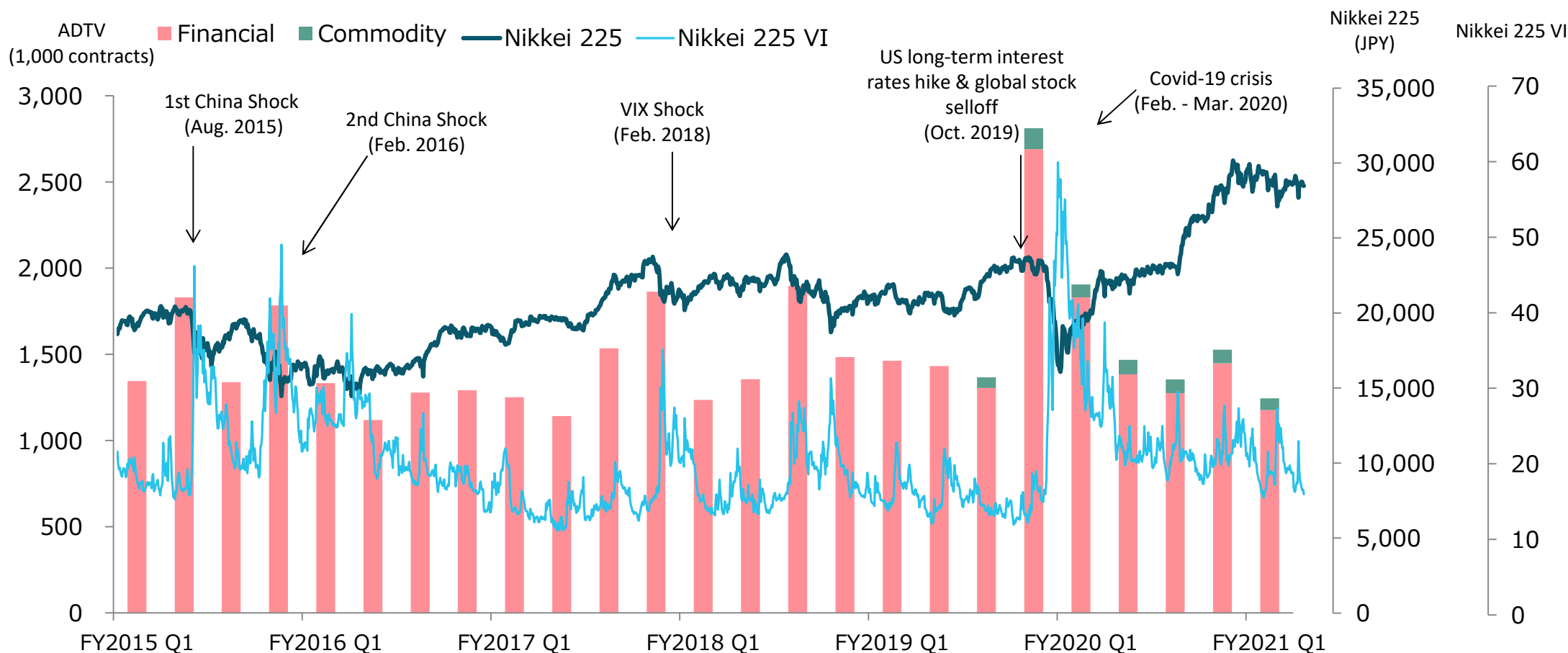


Market Environment



Derivatives Market - Overall Trading Volume -

- Derivatives trading volume is strongly influenced by market conditions and has a strong correlation with volatility.
- In FY2020, volatility levels were high in H1 due to global uncertainty caused by the Covid-19 pandemic, but low in H2. As a result, average daily trading volume was 1.56 million contracts.



Note 1: Trading volumes are quarterly averages. Figures for Nikkei 225 and Nikkei 225 VI are daily values. Levels indicated in the chart are average trading volumes for each quarter (unit: 1,000 contracts). Same applies for the charts in slides 4 and 6.

Note 2: Commodity derivatives have been included in calculation since 3Q FY2019 when TOCOM became a JPX subsidiary.

Source: QUICK

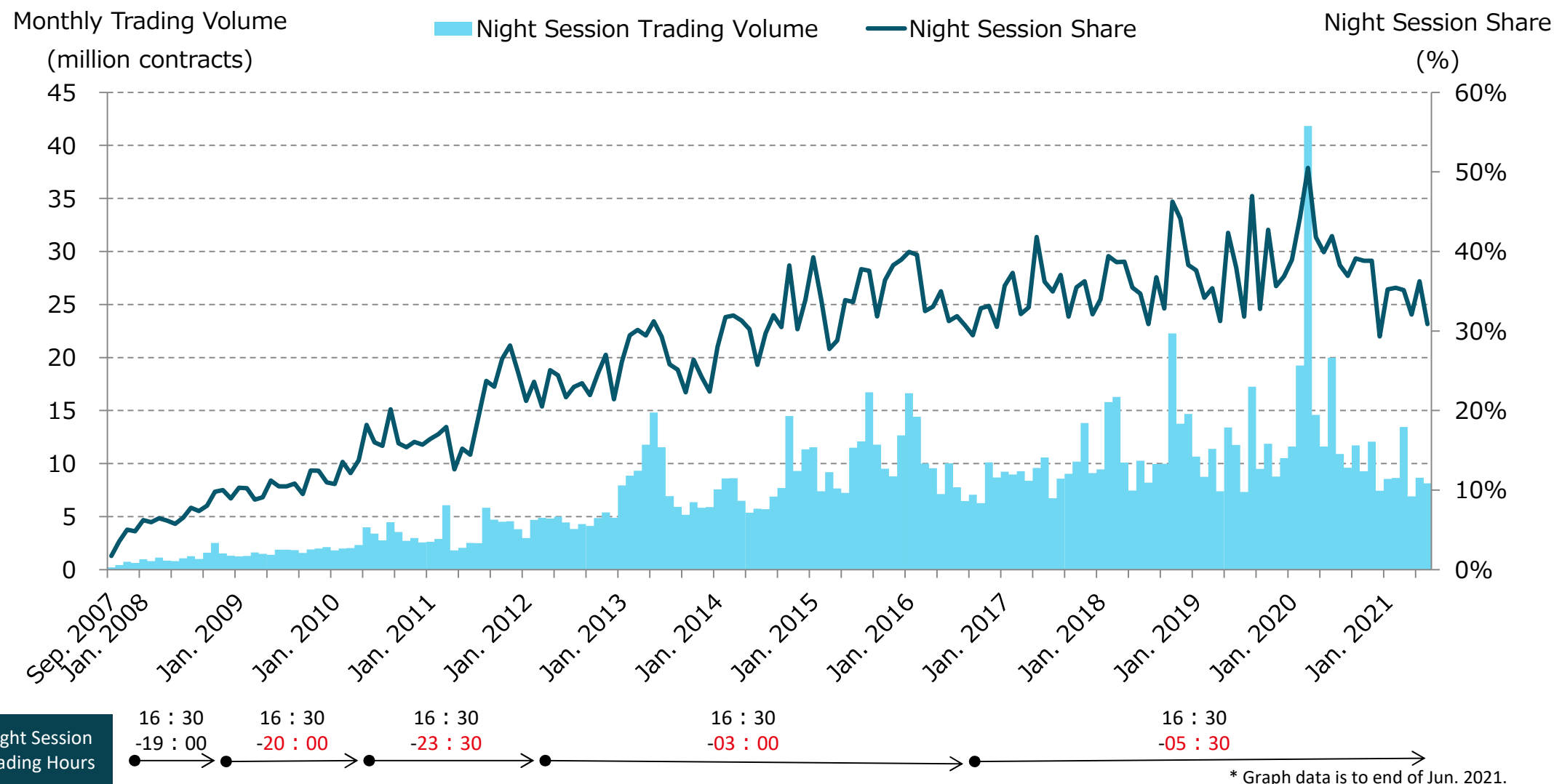
* Graph data is to end of Jun. 2021.

Derivatives Market (Financial) – Revitalized Night Session –

- **Night session trading is steadily expanding, with both its share of trading volume and total trading volume reaching the second highest on record, 37.9% and 130 million contracts respectively, in FY2020.**

- In July 2016, trading hours were extended until 5:30 a.m. the following day, creating an almost full overlap with US market hours. This enabled investors to respond immediately to global political and economic events.

- From September 2021, trading hours are scheduled to be further extended until 6:00 a.m. the following day.



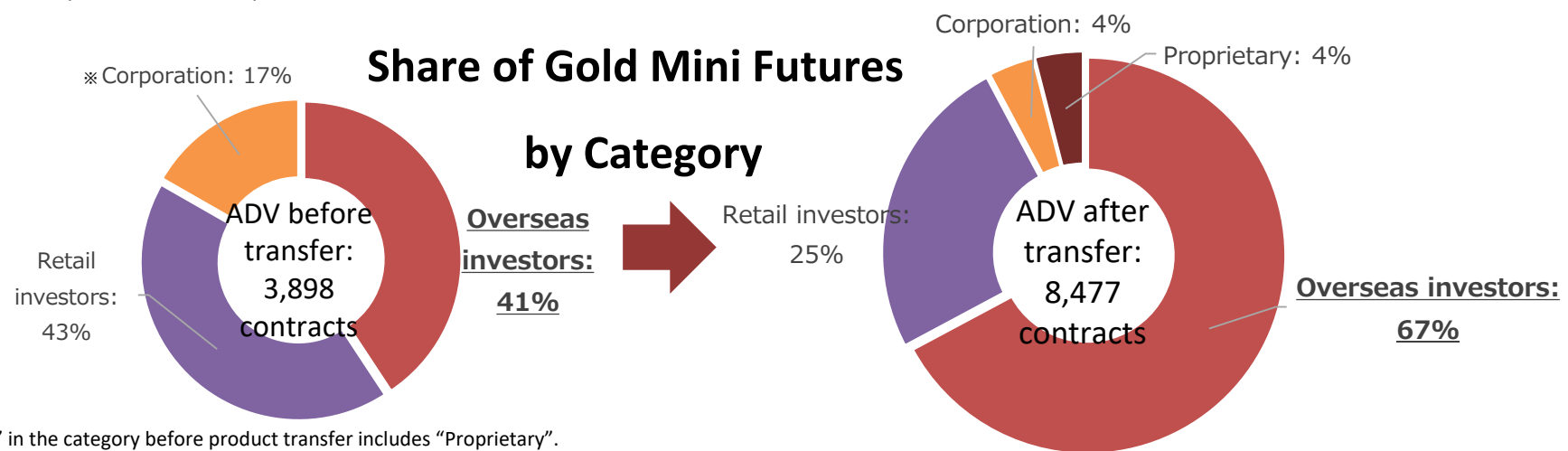
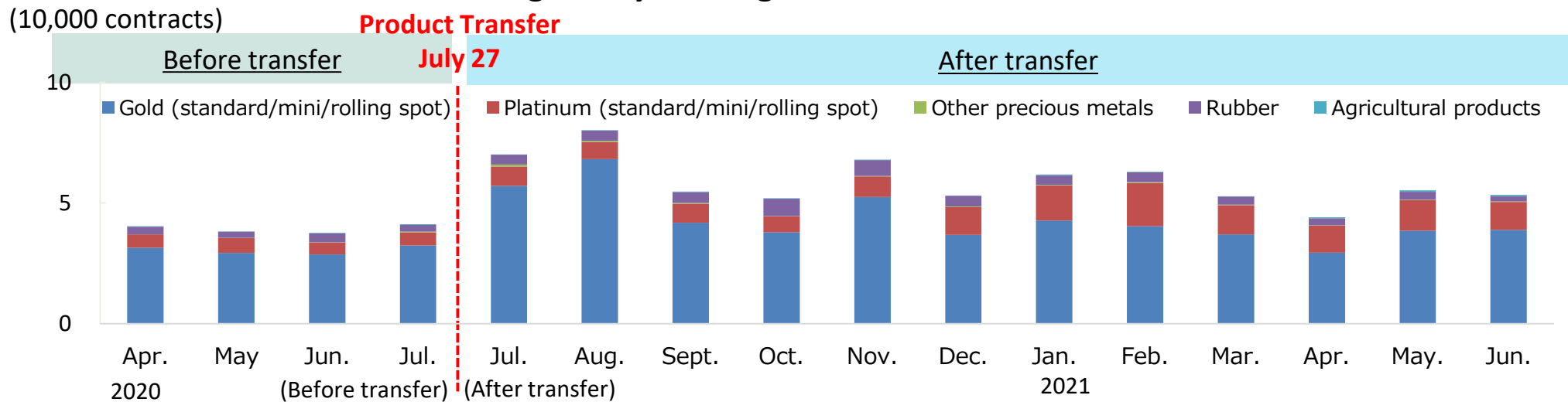
Initiatives to Invigorate the Market



Trading on Commodity Market after Products Transferred to OSE

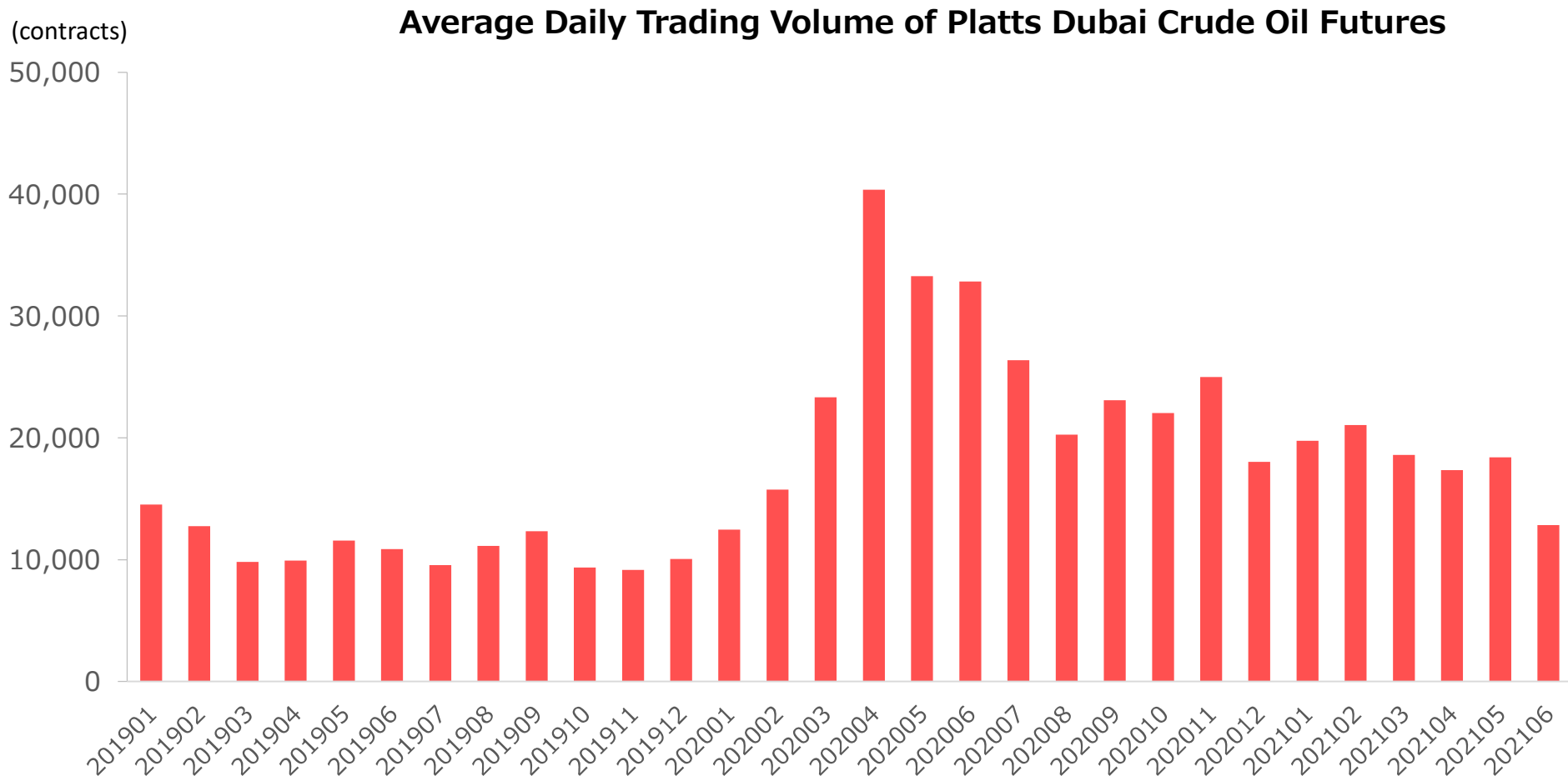
- Trading volume of products transferred to OSE increased after the transfer due to new participants and investors from the financial market.
- Trading volume of Gold Mini Futures in particular more than doubled after the transfer due to a large contribution made by inflows from overseas investors in the financial industry (the share grew by more than 25%).

Average Daily Trading Volume of Transferred Products



* "Corporation" in the category before product transfer includes "Proprietary".

- Platts Dubai Crude Oil Futures still listed on TOCOM remained strong due to an influx of investment fund money in response to rising volatility of crude oil prices.
- The TOCOM market, well-known among commercials at home and abroad, will become a comprehensive energy market handling derivatives linked to energy such as electricity and LNG, in addition to existing crude oil and petroleum products.

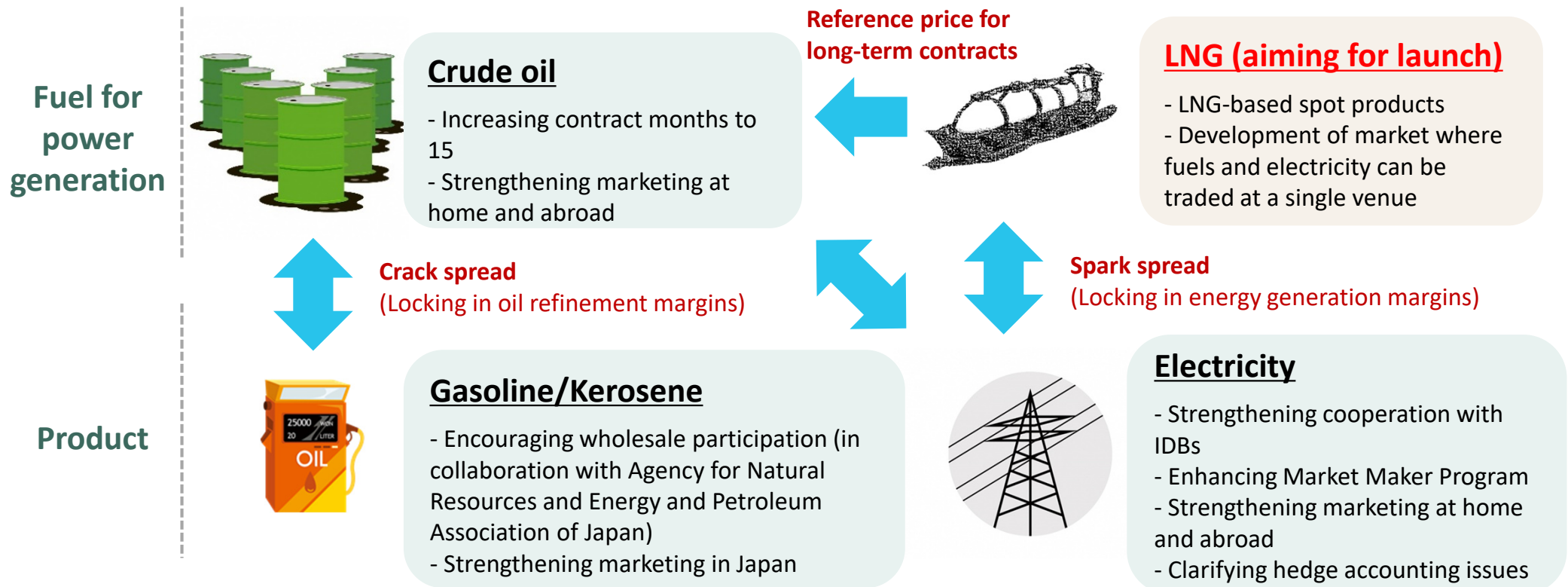


Aiming for a Comprehensive Energy Market (TOCOM)

- TOCOM is working toward the launch of LNG futures to create a comprehensive energy market where fuels and electricity can be traded at a single venue. We will work on broadening the base of hedgers and investors based on the relationships between energy products.
- The number of participants (those with opened accounts) in the electricity futures market grew from 13 at the time of listing to 97 as of the end of June 2021.
 - Average daily trading volume (converted into base load) increased by approx. 70% from 1.5 million kWh in FY2019 to 2.6 million kWh in FY2020. Trading volume and open interest in May both hit record highs.
 - To increase trading further, we are reviewing product design and improving trading rules, among other things.

Crude oil/petroleum products

Electricity/LNG



J-GATE

- The next-generation derivatives trading system (J-GATE3.0) is scheduled to launch on **September 21, 2021**.
 - In line with the launch, trading rules, etc. will be revised and new products will be listed as summarized below.
 - The price fluctuation prevention function will also be enhanced, among other things.



Extension of trading hours

- Extension of the end of night sessions from the current 5:30 a.m. to 6:00 a.m.

- ✓ The extension will cover trading hours in U.S. stock markets in winter (11:30 p.m. to 6:00 a.m. JST)

- Advancement of the start of trading for index options

(from 9:00 a.m. to 8:45 a.m.)



Improvement of system usability

- Enablement of order placement in both OSE and TOCOM markets with a single ID

- ✓ J-GATE3.0 will enable users to access both markets with a single ID. Under the current system, allocation of the right to place orders is separate and therefore users must use a separate user ID (a unit for order placement) for each market.



Introduction of new products

- CME Group Petroleum IndexTM* Futures

- ✓ To meet demand from investors who want to trade energy derivatives as well as products such as stocks and gold under the Financial Instruments and Exchange Act, crude oil-linked commodities will be added to the list of products that can be traded on a OSE platform.

-The underlying index will represent a weighted basket of the following futures contracts which have higher liquidity than other energy-related futures in the U.S.

- ✓ WTI Crude Oil Futures (72%)*
- ✓ RBOB Gasoline Futures (13%)*
- ✓ ULSD Heating Oil Futures (15%)**

- Flexible contract months for index futures trading

- Nikkei 225 Total Return Index Futures

* Reformulated Blendstock for Oxygen Blending

** Ultra-low sulfur diesel

Derivatives Holiday Trading

- We plan to introduce holiday trading in the derivatives market in September 2022, from the perspective of further convenience for investors through provision of hedging opportunities during national holidays, thereby strengthening the competitiveness of Japan's derivatives markets. The outline of the trading rules was published in June 2021.

Eligible products	- All products excluding JGB Futures, Options on JGB Futures, and Securities Options All TOCOM products are eligible.
Eligible days	- All current non-business days (approx. 19 days in a year) excluding Saturdays, Sundays, and January 1 <ul style="list-style-type: none"> ➤ However, when we consider it necessary to use a holiday for the purpose of large-scale system replacement, etc. at JPX or consider that a specific holiday should be excluded, said holiday will not be eligible. ➤ The planned holiday trading days for the next year will be announced in February, and the finalized dates for the first half and second half of the next year will be announced in June and December respectively.

Year	Category	Japan (OSE/TOCOM)	US (CME)	UK (ICE Europe)	Germany (Eurex)	Singapore (SGX)	Hong Kong (HKEX)
2021	No. of national holidays	16	11	8	9	11	17
	No. of non-trading days	16	All day: 3 Half day: 8	3	5	1	13
Holiday trading		no	yes	yes	yes	yes	no
No. of holiday trading days (2021)		0	8	5	2	7	0
Holiday trading for domestic stock index futures		no	yes (S&P500)	no (FTSE100)	yes (DAX)	yes (ST)	no
Holiday trading for Japanese stock index futures		no	yes (Nikkei 225 & TOPIX)	yes (MSCI Japan)	yes (MSCI Japan)	yes (Nikkei 225)	no

* Holiday trading refers to day session trading on holidays (night sessions before and after holidays are excluded) * Excluding CME, no. of non-trading days refers to all-day non trading days.

* HKEX is also planning holiday trading (based on the announcement on Oct. 23, 2020)

* Regional holidays are not included.

Reference Materials



Top 20 Products by Trading Volume (FY2020)

	Product	Trading Volume	y/y	Note
1	Nikkei 225 mini	263,717,725	-10.9%	Third highest ever
2	Nikkei 225 Options	25,422,915	-21.5%	
3	TOPIX Futures	24,969,584	-14.4%	
4	Nikkei 225 Futures	22,476,988	-15.2%	
5	mini-TOPIX Futures	8,264,406	+39.0%	Highest ever
6	10-year JGB Futures	7,126,972	-25.4%	
7	Gold Standard Futures	6,926,337	-30.1%	
8	Platts Dubai Crude Oil Futures	6,128,265	+110.1%	Highest ever
9	JPX-Nikkei Index 400 Futures	5,279,709	-24.1%	
10	Platinum Standard Futures	1,857,363	-47.0%	
11	Gold Mini Futures	1,774,082	+73.4%	
12	TSE Mothers Index Futures	1,663,426	+178.4%	Highest ever
13	Securities Options	1,625,091	+21.7%	Second highest ever
14	Gold Rolling Spot Futures	1,156,189	-28.6%	
15	RSS3 Rubber Futures	1,036,347	-8.8%	
16	TSE REIT Index Futures	922,486	-9.8%	Second highest ever
17	Nikkei 225 Weekly Options	581,367	-26.9%	Second highest ever
18	TOPIX Banks Index Futures	378,829	-15.5%	Second highest ever
19	DJIA Futures	341,602	-7.1%	Second highest ever
20	TOPIX Options	260,612	-20.0%	

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