

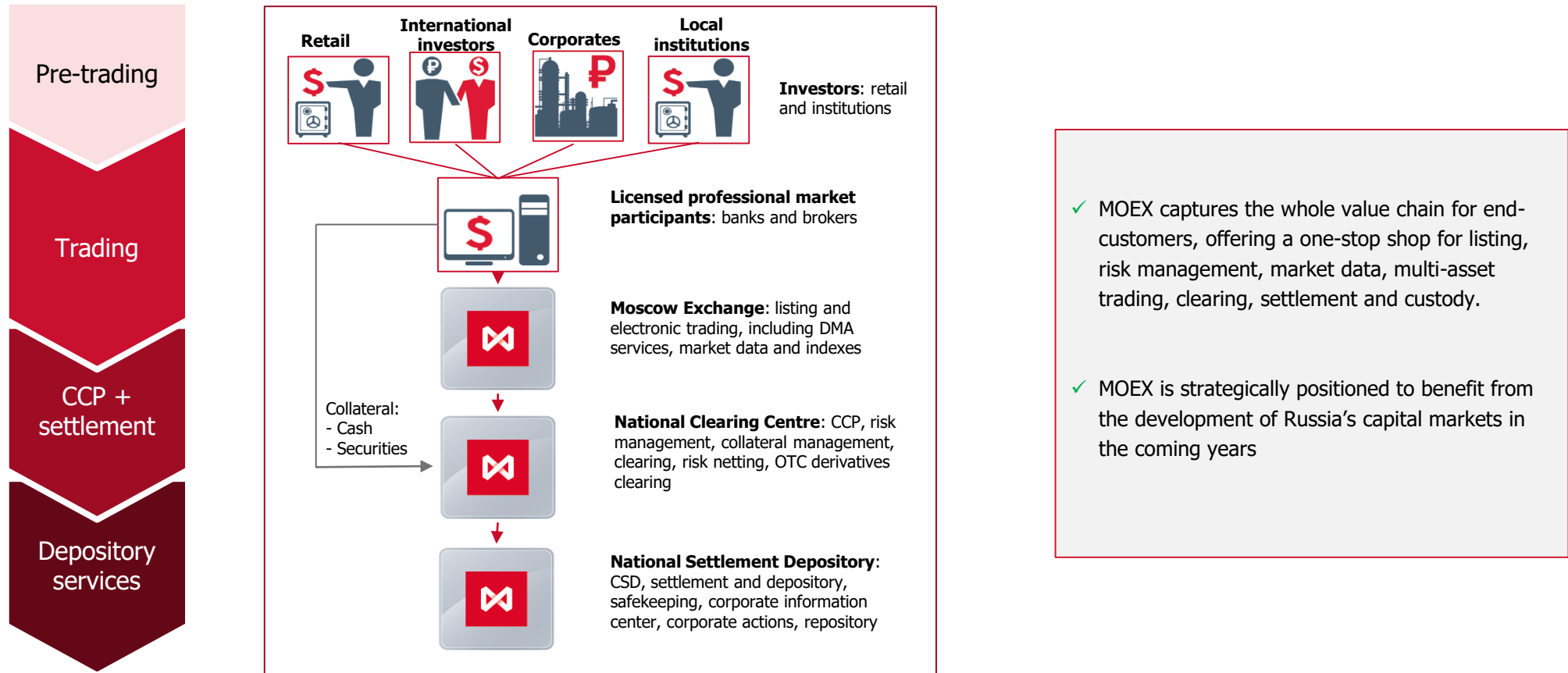
**MOSCOW  
EXCHANGE**

June, 2019

**GOVERNMENT SECURITIES**  
as an effective instrument for  
developing the securities market

# MOEX GROUP OVERVIEW

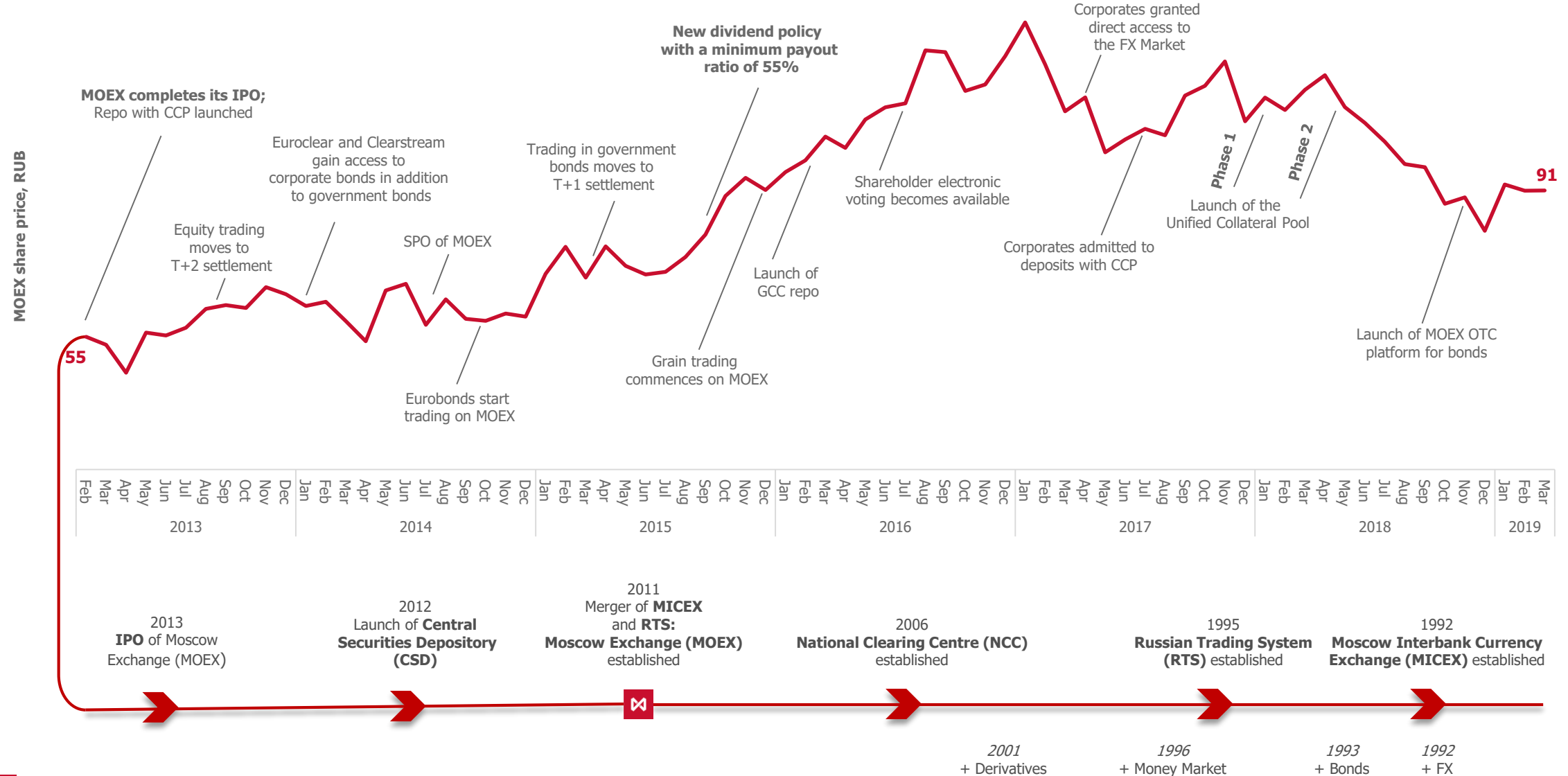
# Moscow Exchange Group: Capturing the whole value chain



- ✓ MOEX captures the whole value chain for end-customers, offering a one-stop shop for listing, risk management, market data, multi-asset trading, clearing, settlement and custody.
- ✓ MOEX is strategically positioned to benefit from the development of Russia's capital markets in the coming years

- ✓ Fully vertically integrated infrastructure with regulation and oversight by the Bank of Russia (CBR)
- ✓ Investors trade through brokers and banks, which are licensed locally and have access to MOEX markets
- ✓ Single-tier clearing system requires all participants to provide eligible collateral to trade any asset class, while pre-trade risk checks prevent "fat fingers"/"flash crash" problems
- ✓ The market is open for competition (except the CSD) since its inception, but barriers to entry are very high due to MOEX's post-trade infrastructure and on-exchange market efficiency. However, the environment is competitive, with OTC being a key source of competition

# History of MOEX: the path of ongoing progress



Share price up to 29 March 2019

# Investment and corporate highlights

## Financial Resilience

- **Counter-cyclical business model** coupled with robust cost control
- **Secular growth of fees and commissions** (F&C) across 7 complimentary F&C business lines
- Business-driven margin and collateral requirements generate **sustainable net interest income** (NII)
- Operating income F&C/NII split of 60/40 **evolving towards F&C**
- One of the **highest EBITDA margins** among global peers
- **Attractive dividend policy** with a minimum payout ratio of 55% and a track record of distributing 55-89% of 2014-2017 net income

## Corporate Governance

- A **26-year history** of successful and continuous implementation of infrastructural and regulatory reforms
- **No single controlling shareholder**: free float of 58% with substantial international participation; the largest shareholder owns <12%
- Most Supervisory Board members are **independent directors** (7 out of 12); **no executives** are present on the Supervisory Board
- Established track record for **efficient capital allocation**

## Strategic Stance

- Operates in Russia – **the world’s 11th largest economy**
- The world’s **most diversified exchange** with trading in **5 asset classes** vs ~3 offered by “traditional” exchanges
- **Cornerstone** of the Russian financial system: MOEX brings together the tiers of the banking system by managing ~3/4 of its total liquidity flow
- Low penetration of financial services indicates **secular growth potential**
- The world’s **only exchange** focused on Russian financial assets – OTC market is the main competitor
- **Complete vertical integration** of a trading engine with a clearing house and a central securities depository makes up **a unique platform**

## Operational Excellence

- **All-electronic** since 1997
- **Vast in-house IT expertise**: ~1/3 of staff are IT developers, supporting a **CAPEX-light business model**
- Pre-order validation with 10,000 risk check scenarios at a **world class latency** of 400 microseconds ensures **integrity of all transactions**
- **Low-cost product scalability**: a new order book launch requires the equivalent of circa USD 10 thousand



# Leading positions in a global context in 2018

## 3<sup>rd</sup> largest exchange in fixed income<sup>1</sup>

Rank	Exchange	Country	Trading vol. (USD bln)	Incl. REPOs
1	BME	Spain	6 791	✓
2	Oslo Borse	Norway	3 885	✓
<b>3</b>	<b>Moscow Exchange</b>	<b>Russia</b>	<b>3 668</b>	<b>✓</b>
4	Johannesburg SE	South Africa	2 341	✓
5	Korea Exchange	Korea	2 193	×
6	Bolsa de Valores de Colombia	Columbia	333	×
7	LSE Group	UK	297	×
8	Shanghai SE	China	295	×
9	Nasdaq OMX	USA	277	✓
10	Santiago SE	Chile	249	✓

## 6<sup>th</sup> largest exchange in derivatives<sup>2</sup>

Rank	Exchange	Country	Contracts traded (mln)
1	CME Group	USA	4 764
2	NSE India	India	3 808
3	BM&FBOVESPA	Brazil	2 246
4	ICE&NYSE	USA	2 212
5	Deutsche Boerse	Germany	1 931
<b>6</b>	<b>Moscow Exchange</b>	<b>Russia</b>	<b>1 499</b>
7	CBOE	USA	1 434
8	Korea Exchange	Korea	1 411
9	Nasdaq OMX	USA	1 270
10	Shanghai Fut. Exchange	China	1 175

## Among top 25 exchanges by equity trading volumes globally<sup>3</sup>

Rank	Exchange	Country	Mkt Cap (USD bln)	Securities listed	Trading vol. (USD bln)
1	ICE&NYSE	USA	20 679	2 285	19 341
2	Nasdaq OMX	USA	11 080	4 077	17 639
3	Shenzhen SE	China	2 405	2 134	7 563
4	Japan Exchange	Japan	5 297	3 657	6 297
5	Shanghai SE	China	3 919	1 450	6 116
6	LSE Group	UK	3 638	2 479	2 548
7	Korea Exchange	Korea	1 414	2 207	2 521
8	HKEx	Hong Kong	3 819	2 315	2 340
9	Euronext	EU	3 730	1 208	2 203
10	Deutsche Boerse	Germany	1 755	514	1 818
...	...	...	...	...	...
<b>24</b>	<b>Moscow Exchange</b>	<b>Russia</b>	<b>576</b>	<b>225</b>	<b>167</b>

## 14<sup>th</sup> largest publically listed exchange by Mkt Cap<sup>4</sup>

Rank	Exchange	Country	Mkt Cap (USD bln)
1	CME	USA	66.7
2	ICE&NYSE	USA	43.2
3	HKEx	Hong Kong	38.4
4	Deutsche Boerse	Germany	25.3
5	LSE Group	UK	20.1
6	BM&FBovespa	Brazil	16.2
7	Nasdaq OMX	USA	13.7
8	CBOE	USA	10.9
9	Japan Exchange	Japan	9.8
10	ASX	Australia	8.8
11	SGX	Singapore	5.8
12	Euronext	EU	4.2
13	BATS	USA	3.4
<b>14</b>	<b>Moscow Exchange</b>	<b>Russia</b>	<b>3.2</b>

Sources: Moscow Exchange, WFE as of 22.01.2019, Bloomberg, LSE Group (for LSE Group data)

1. Due to different methodologies applied, data on fixed income trading may not be directly comparable among exchanges. Data for 2018

2. Data for 2018

3. Top equity trading exchanges are ranked by trading volume. Ranking without BATS (excluded due to absence of data for market capitalization and number of listed companies). Data for 2018

4. Market capitalization of public exchanges based on Bloomberg data as of 22 January 2019

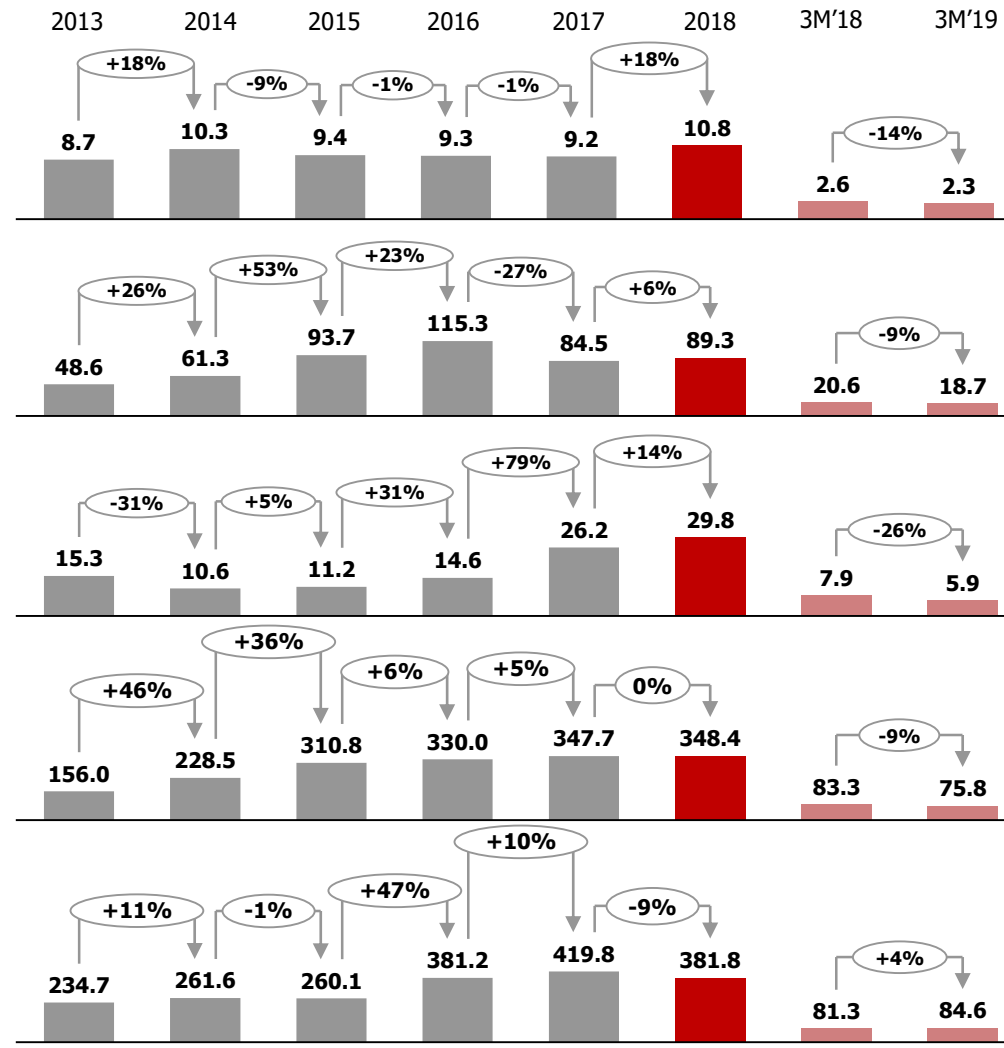


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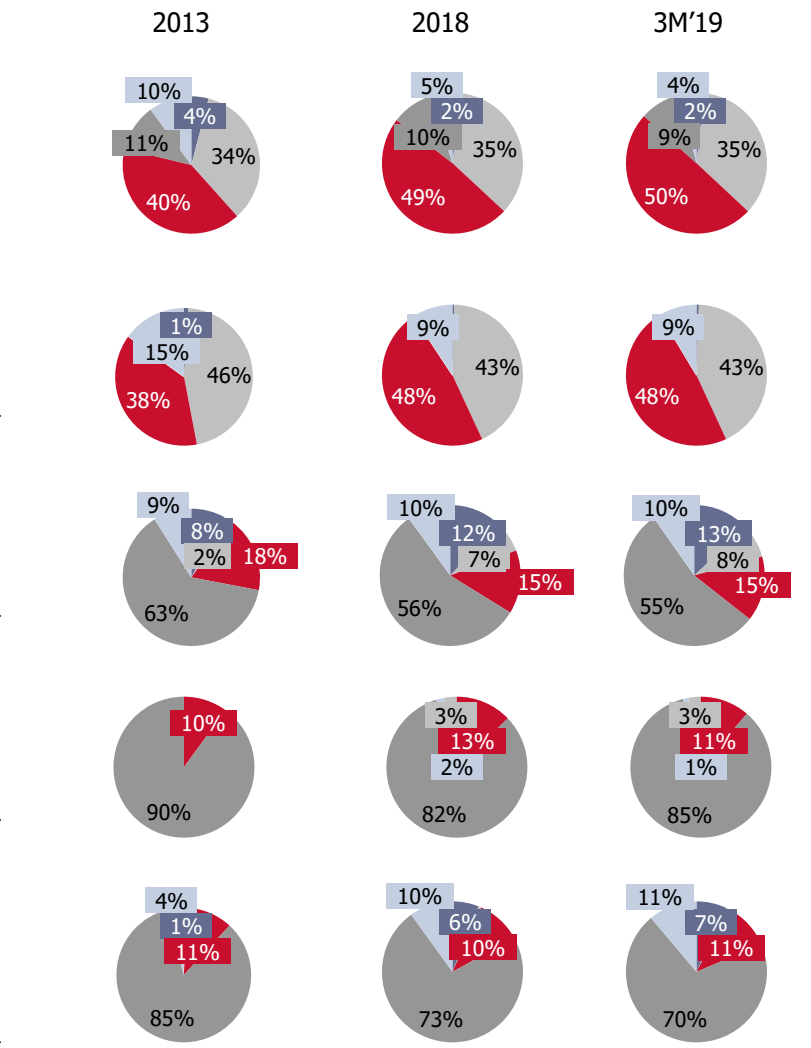
# Diversified investor base across different markets

- Equities Market  
RUB trn
- Derivatives Market  
RUB trn
- Fixed Income Market  
RUB trn
- FX Market  
RUB trn
- Money Market<sup>1</sup>  
RUB trn

Trading volumes



Volume breakdown by investor types



Source: Moscow Exchange data  
<sup>1</sup> Trading volumes include repo with collateral management through NSD. Investor structure is based on on-exchange repo trading volumes only

- Russian funds
- Russian banks and brokers prop. trading
- Russian retail investors
- Foreign investors
- Local corporates

# MARKET OVERVIEW

# Key facts about Russia

## DOING BUSINESS 2019

31<sup>th</sup> place (35<sup>th</sup> in 2018)

All financial assets are available to foreign investors

## Diversified economic structure

High-yielding and underpriced assets  
MSCI Russia P/E **4.9x** vs **15.5x** MSCI World P/E  
One of the highest dividend yield: **7.0%**

No capital restrictions,  
RUB is fully convertible

International reserves  
**>USD 470 BLN**  
Foreign debt to GDP 33%

## Russian economy – the sixth largest in the world

Investment grade  
sovereign credit rating  
**(BBB-) S&P, FITCH**

Stable economic situation

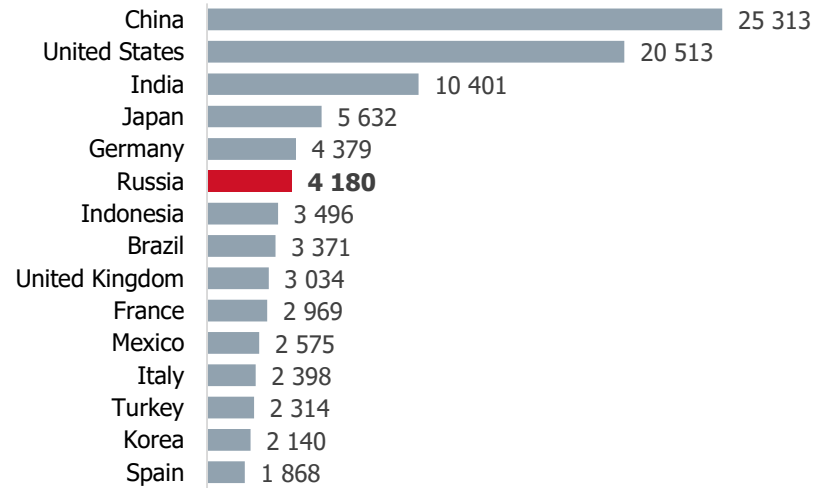
Secure and reliable  
financial infrastructure  
Systemically important infrastructure as recognized by the Bank of Russia



# Russian economy outlook

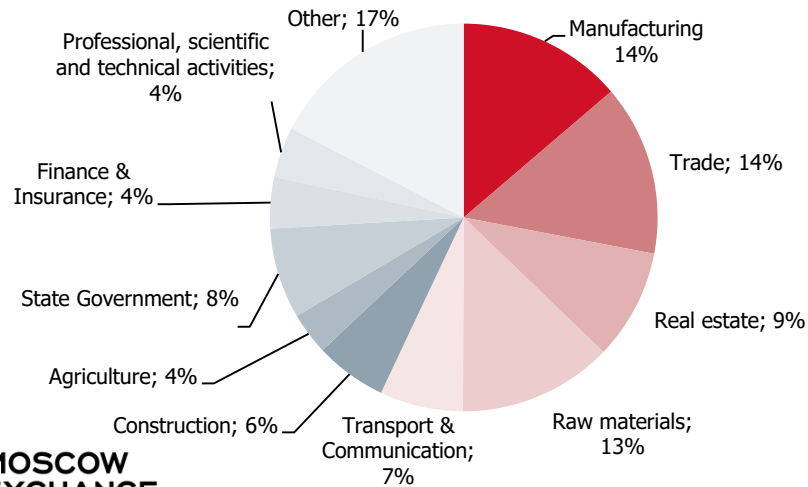
## World 6th largest economy

'2018 GDP in USD bln (purchasing power parity) IMF data



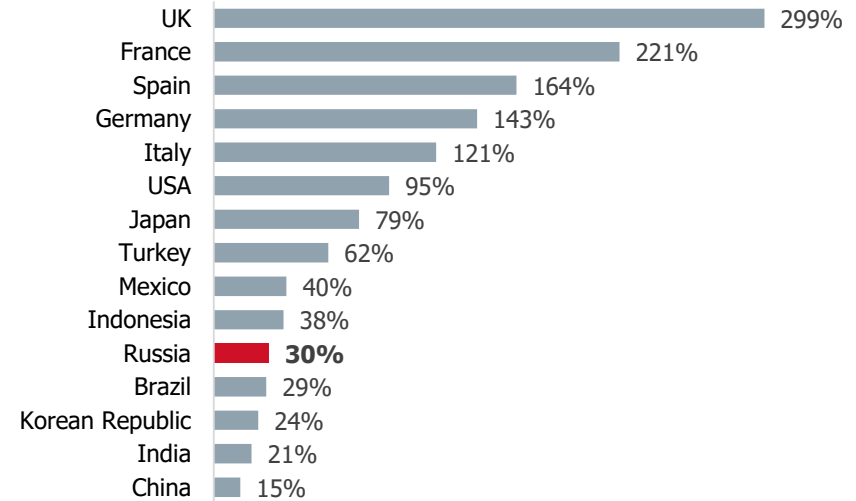
## Diversified economy despite oil and gas shift

Russia: GDP by industry, 2018

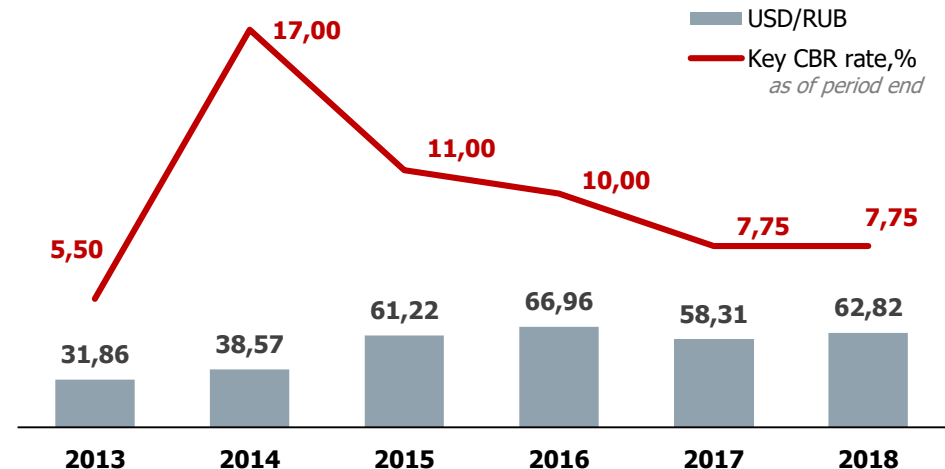


## One of the lowest debt burdens

External debt/GDP %



## CBR Key rate steadily decreases on the back of stabilized RUB exchange rate



Current value of CBR Key rate: 7.5

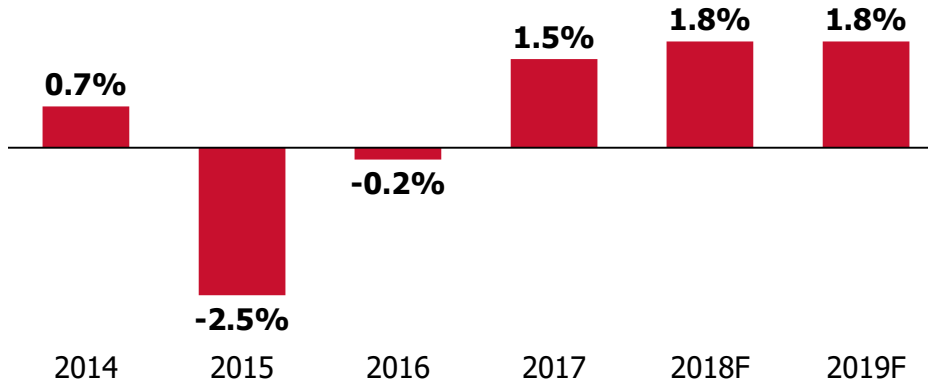


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# Russian macro (1/2)

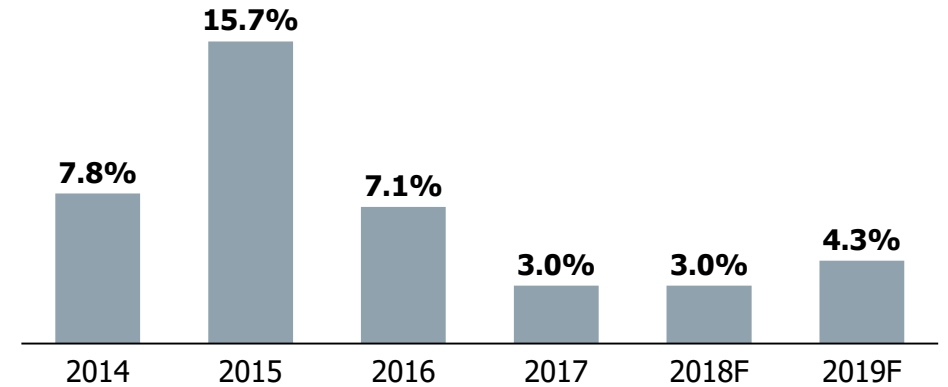
## Real GDP growth

% y-o-y



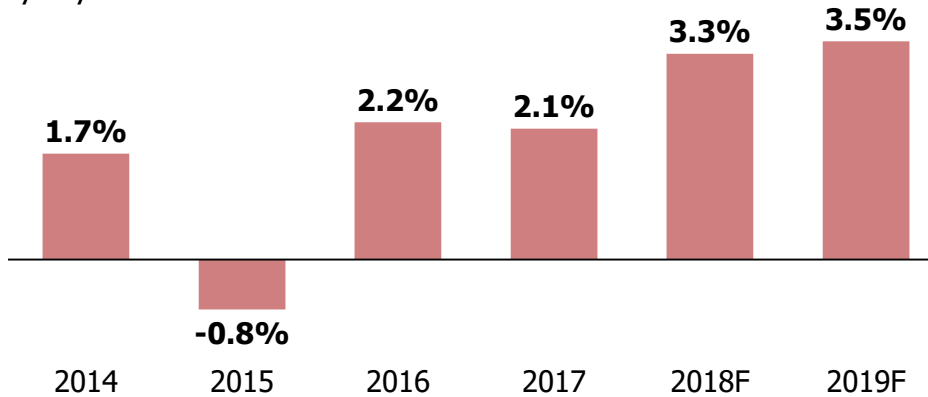
## Inflation

year average % y-o-y



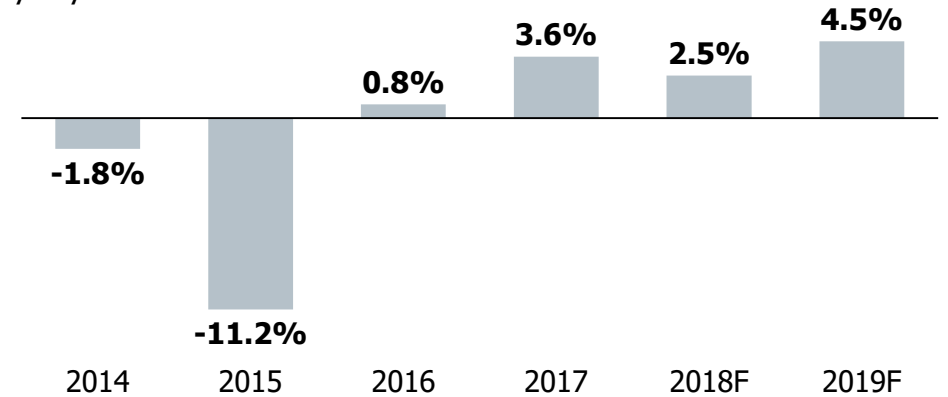
## Industrial production growth

% y-o-y



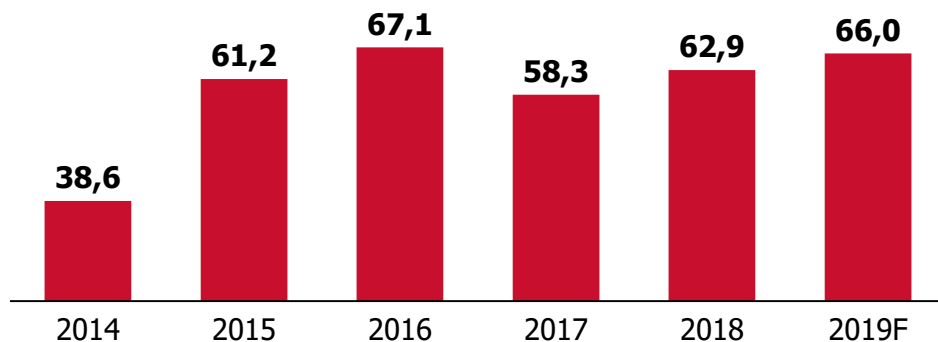
## Gross fixed investment

% y-o-y



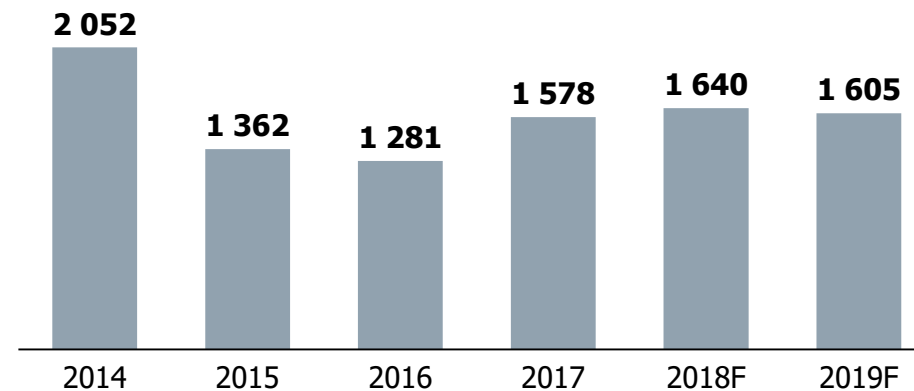
# Russian macro (2/2)

## USD/RUB



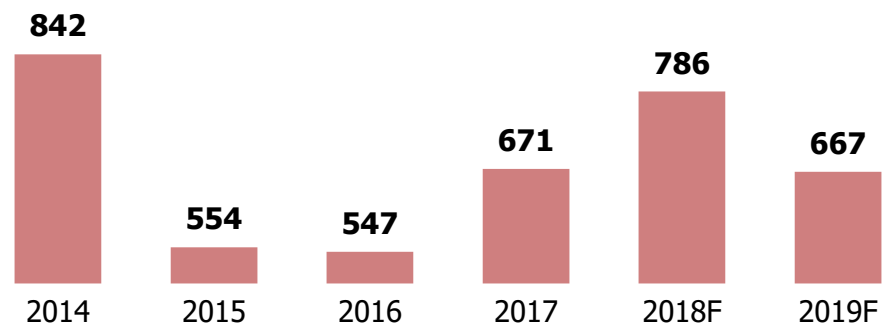
## Nominal GDP

Bln USD



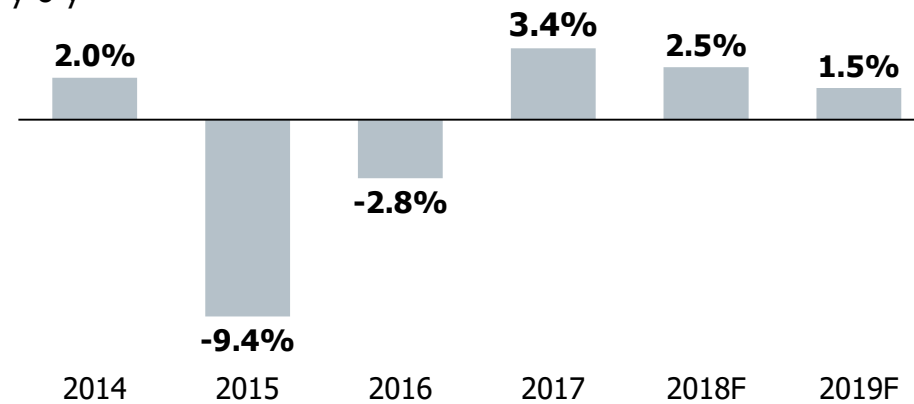
## Average wages

USD



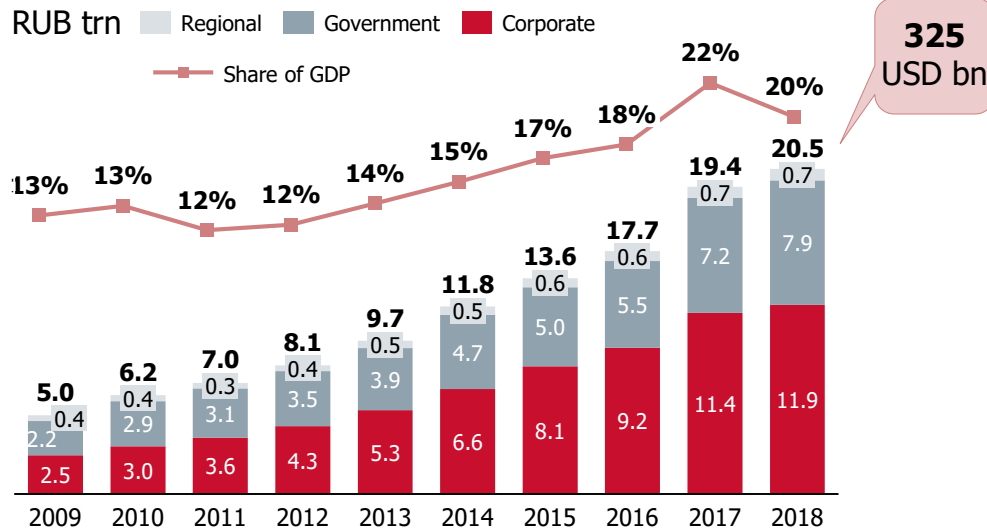
## Personal Consumption expenditures

% y-o-y

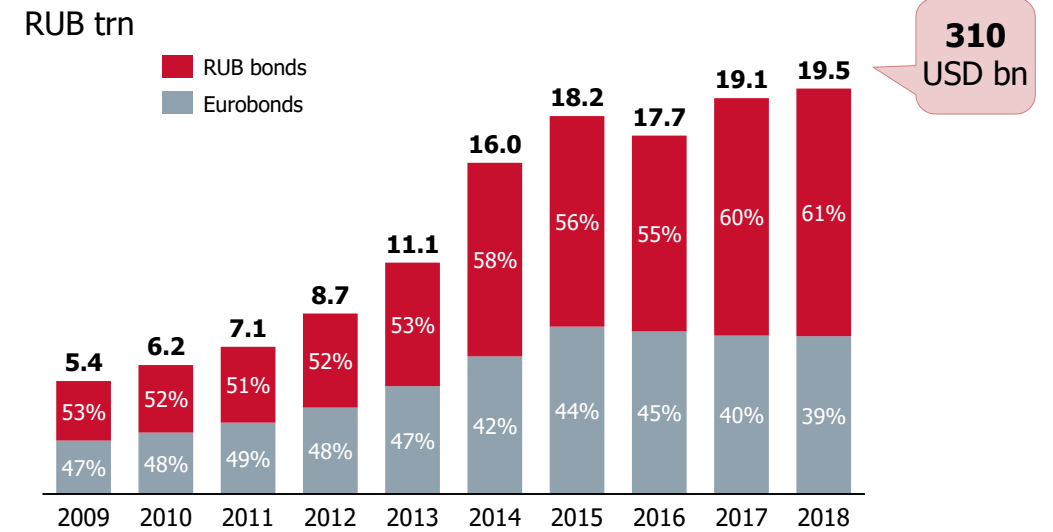


# Bond market: High potential

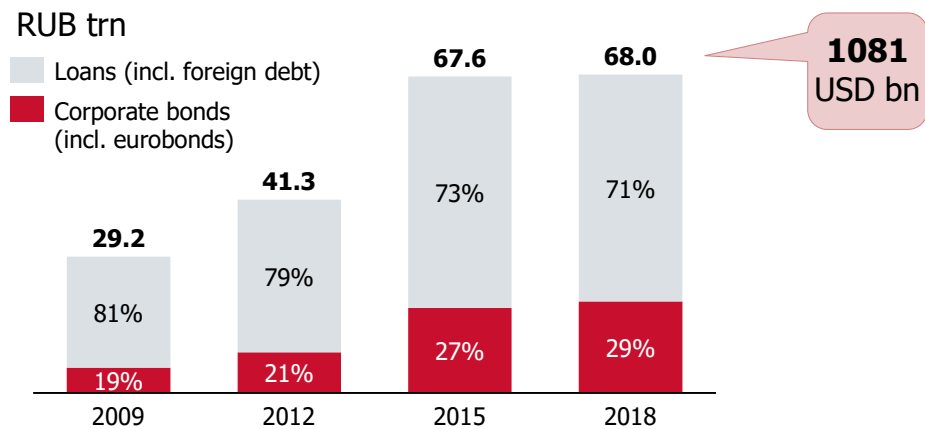
## Growth of outstanding local bonds



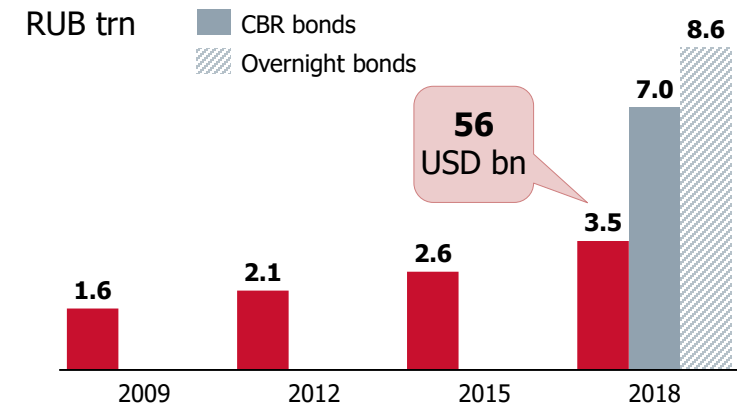
## Local bonds vs Eurobonds of Russian corporates<sup>2</sup>



## Corporate loans vs corporate bonds in Russia



## Bond primary market trading volume



Sources: Bank of Russia, Cbonds, Rosstat, Moscow Exchange

1 RUB-denominated bonds traded on MOEX's Bond Market in January 2018

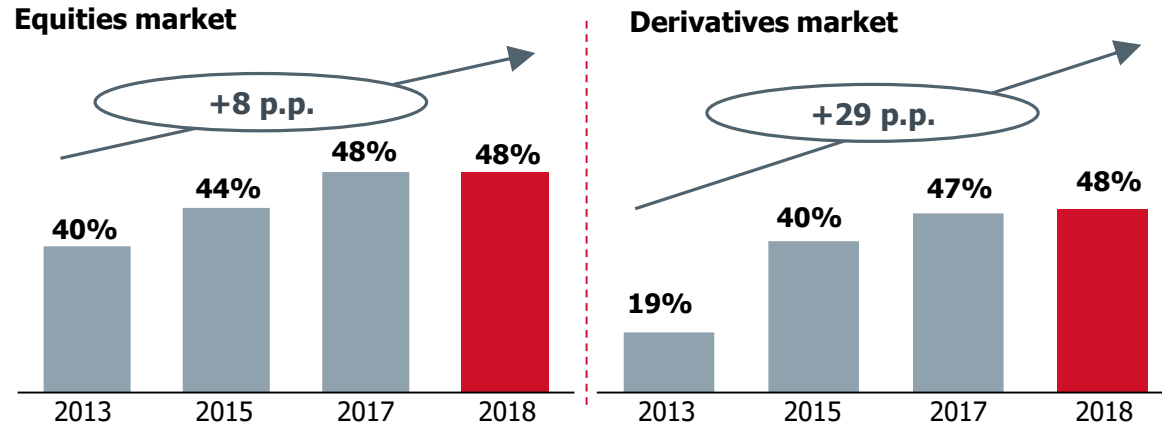
2 Including banks and financial institutions. Data for 2018 as of 31 December 2018



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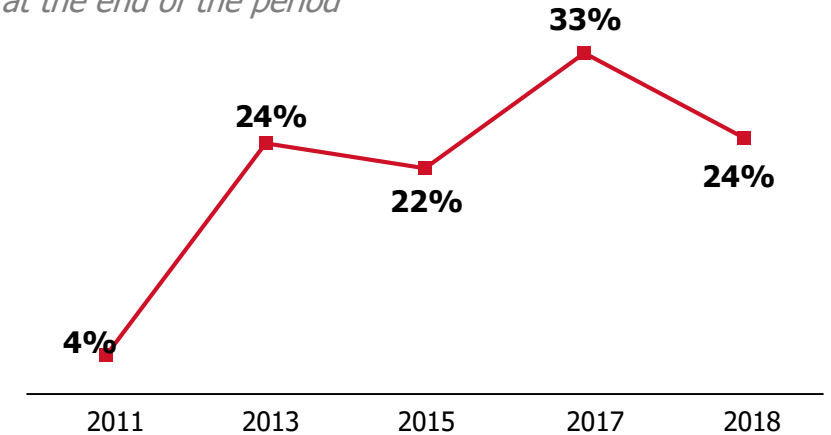
# Russian assets attracting foreign investors

Share of non-residents in trade volumes on the Moscow Exchange markets, %

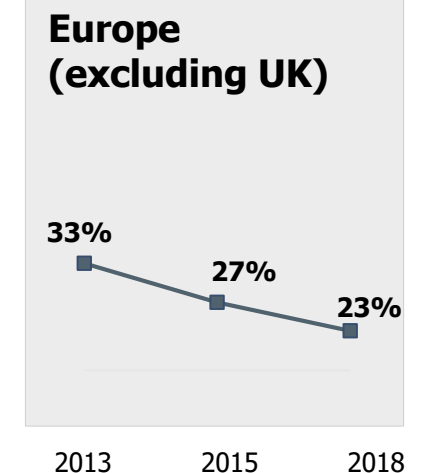
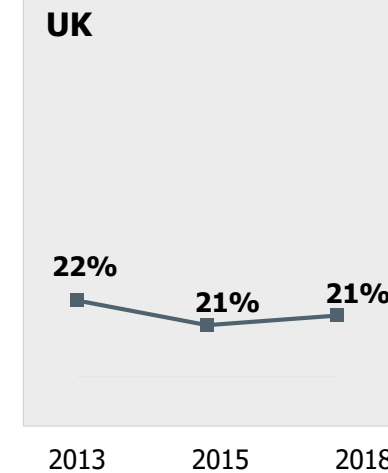
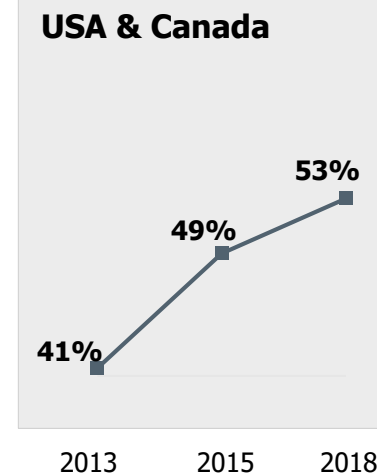
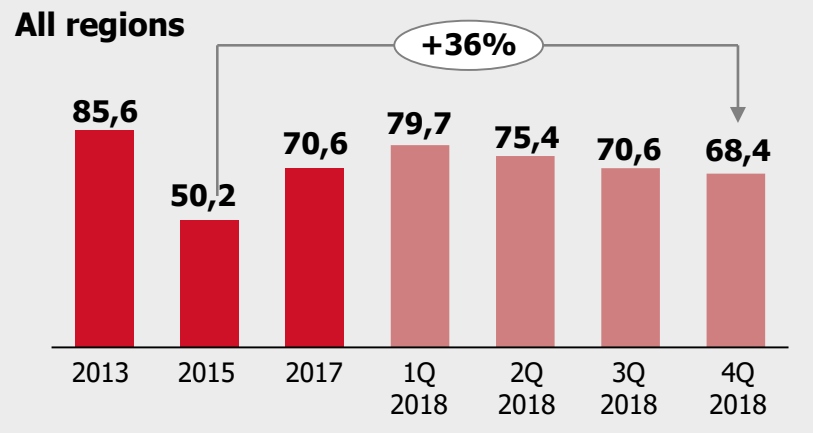


Share of non-residents in OFZ, %

at the end of the period



UK, Europe and North America Foreign funds investment in Russian equities, bln USD



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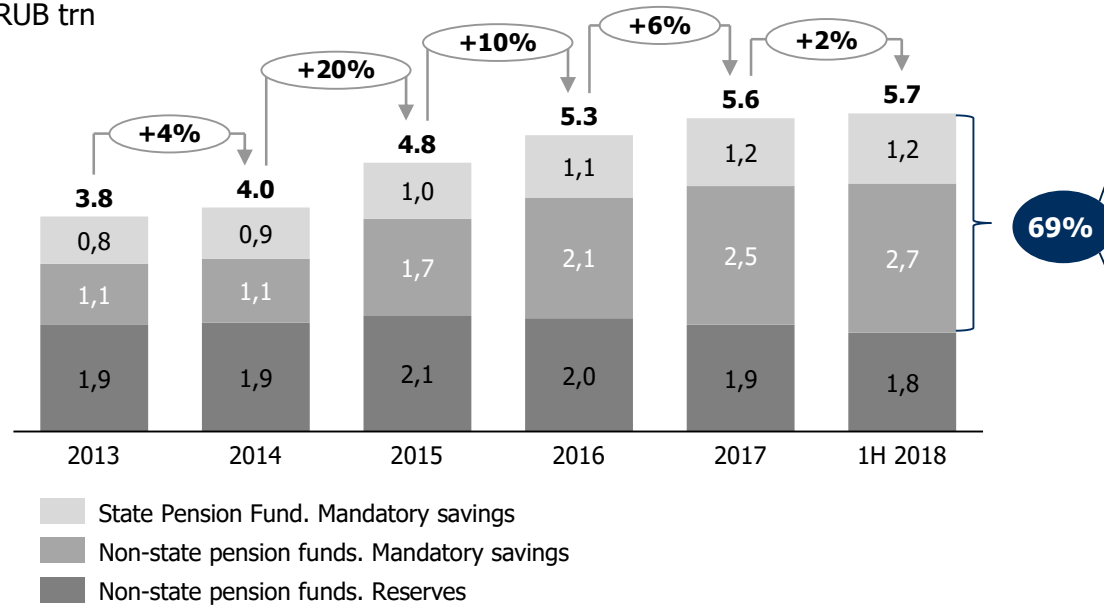
Source: Moscow Exchange, Bank of Russia ThomsonONE – at the end of the reporting period, including DRs on Russian equities

XX% → - CAGR ◆ - Share in investment volume

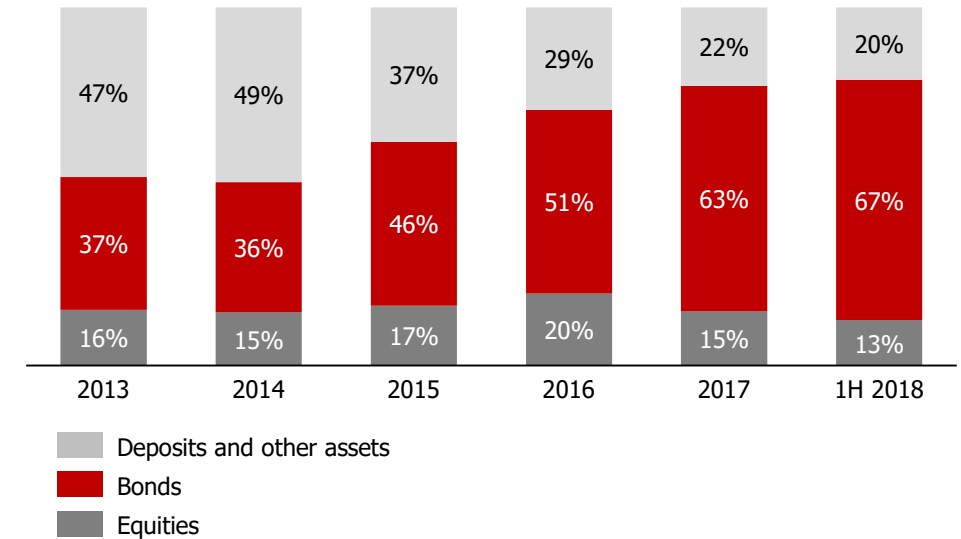
# Local institutional investors: the potential of pension funds

## Pension assets in Russia

RUB trn



## Non-state pension funds asset allocation dynamics<sup>1</sup>

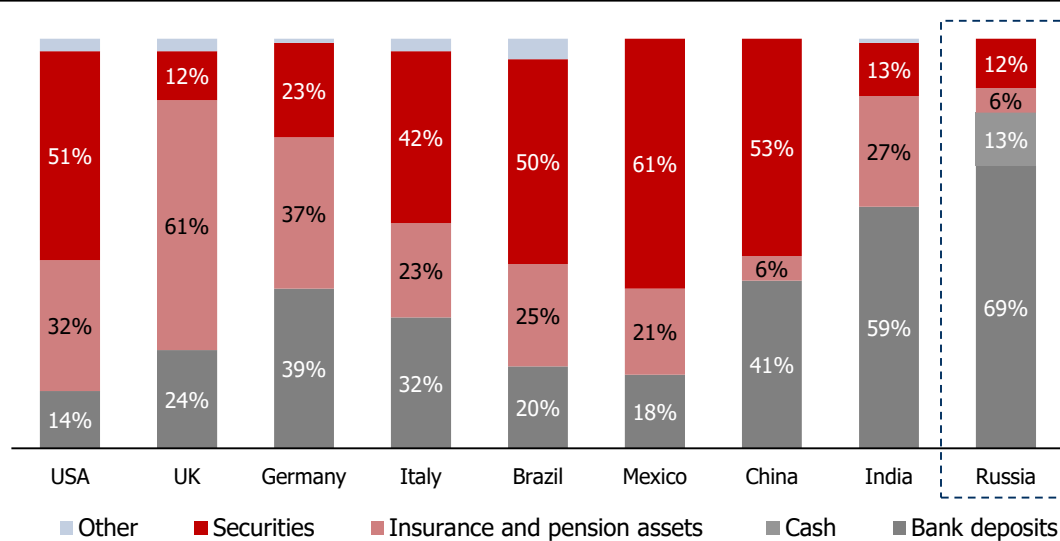


## Key highlights of the pension reform

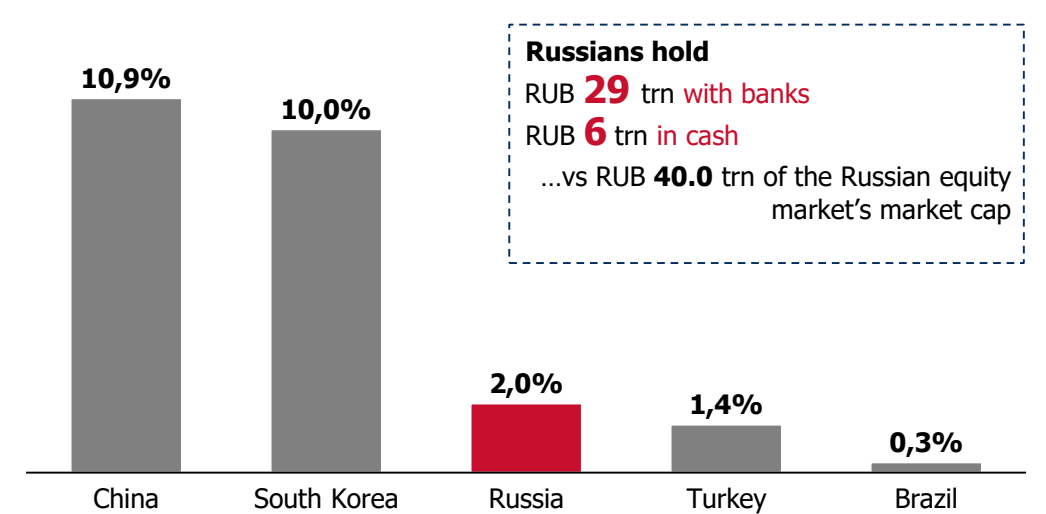
- Bank of Russia became a regulator of the pension system in 2013
- Adopted changes in non-state pension fund regulation:
  - "One year non-loss" rule was abolished
  - Investment horizon of NPFs was extended to 5 years
  - Customers are now incentivized to stay with the fund for not less than 5 years
  - Guarantee fund mechanism (similar to the Deposit Insurance Agency in the banking system)
  - New allocations to NPFs remained under moratorium until 2019, which reduced growth potential and left room for organic growth only

# Retail money: aiming to grow the culture of investing

Russians hold majority of savings in banks and cash<sup>1</sup>

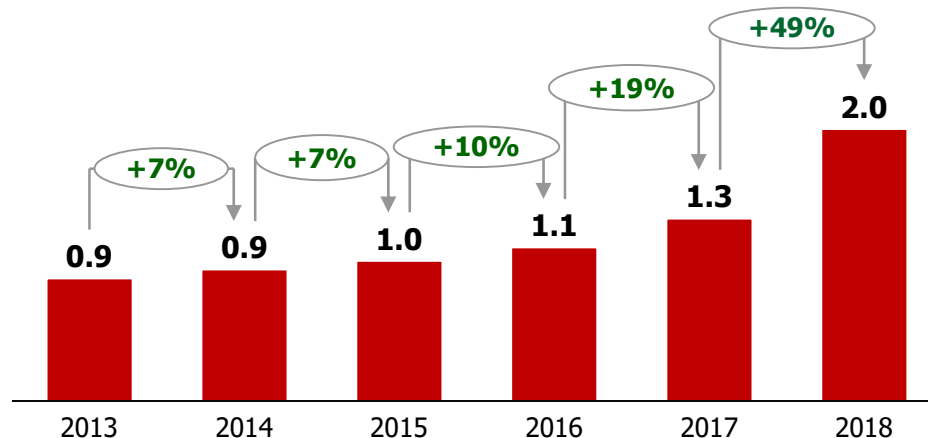


Number of retail broker accounts as % of population<sup>2</sup>



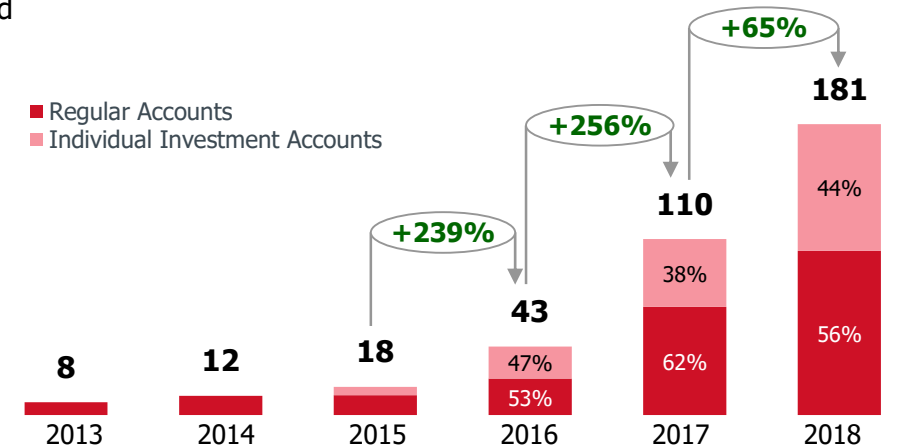
Number of retail clients (unique)

mln



New retail clients in bond market

thousand



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Sources: EIU, World Bank, IMF, central banks of South Korea, Turkey, Mexico, National Bureau of Statistics of China, Allianz, SZSE Factbook, CBR, Moscow Exchange

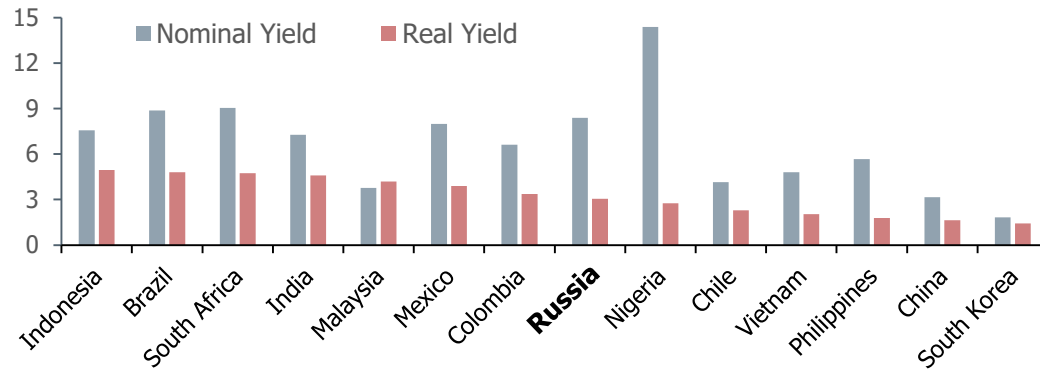
1 As of the end of 2016

2 Russia – 2018, South Korea, Turkey, Brazil – 2014, China – 2015

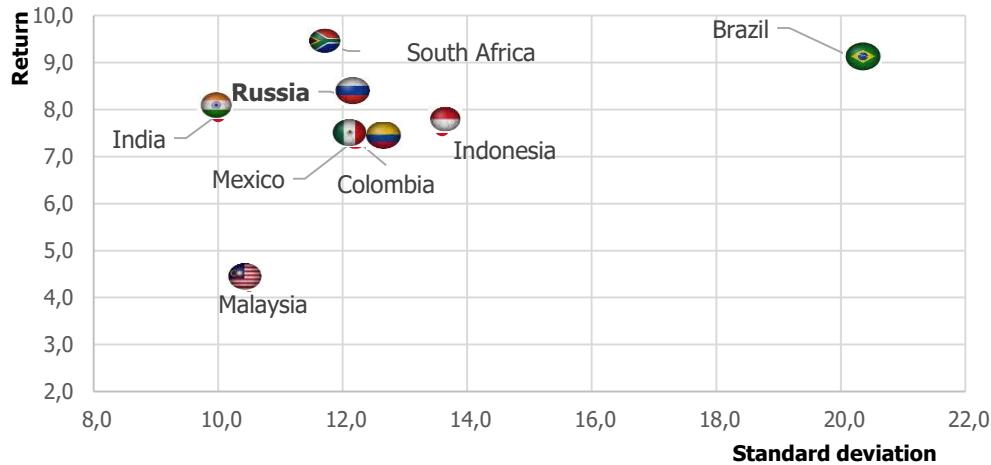
# SOVEREIGN BOND MARKET (OFZ)

# Sovereign Bonds (OFZ): macro and EM debt

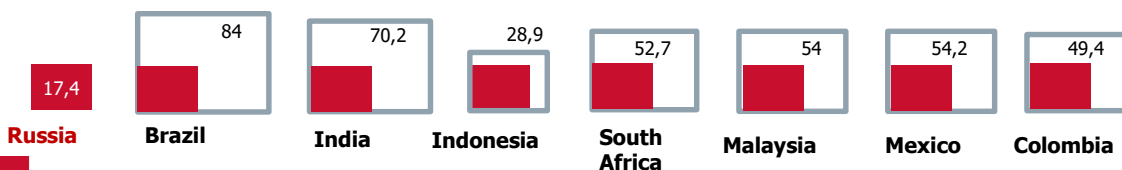
10Y Yields, %



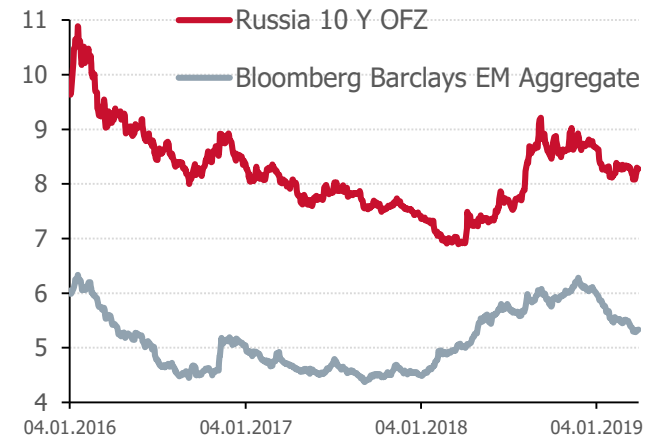
Expected Return / Risk



Debt (public) to GDP



Yield

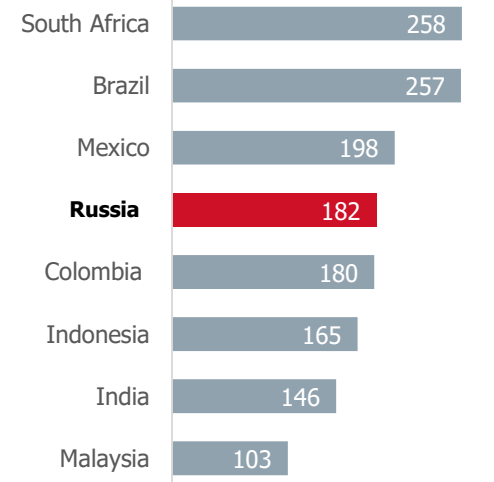


Non-resident share ~27% as of 2018.

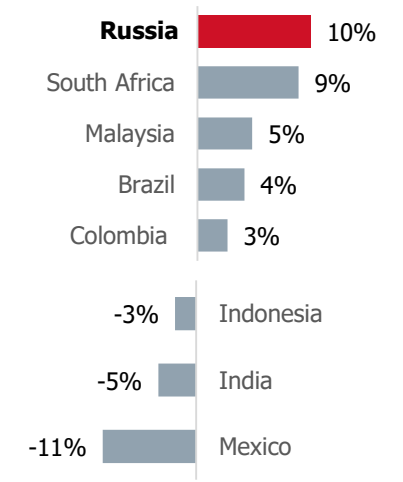
Top fund holders:

- BlackRock
- Stone Harbor Investment
- Fidelity Investment
- Allianz
- Pitcet Funds

10Y CDS

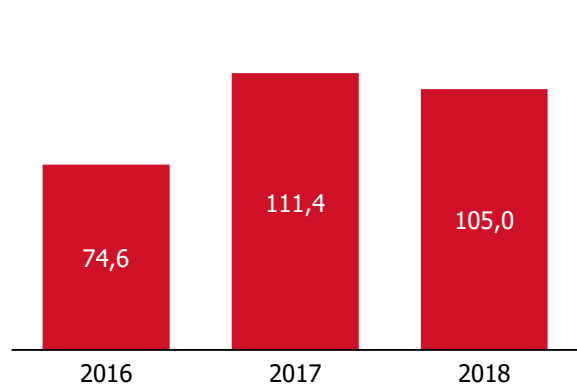


Currency performance 3 year horizon 2016-2019

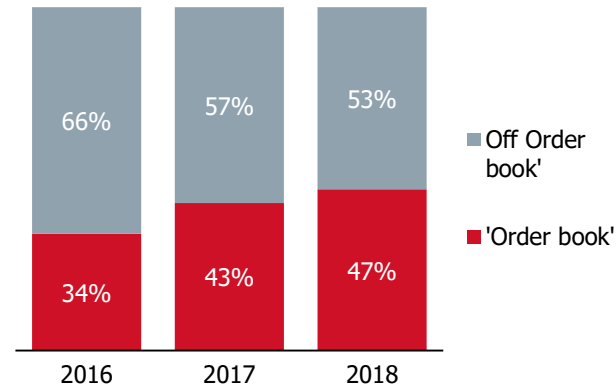


# OFZ liquidity growth

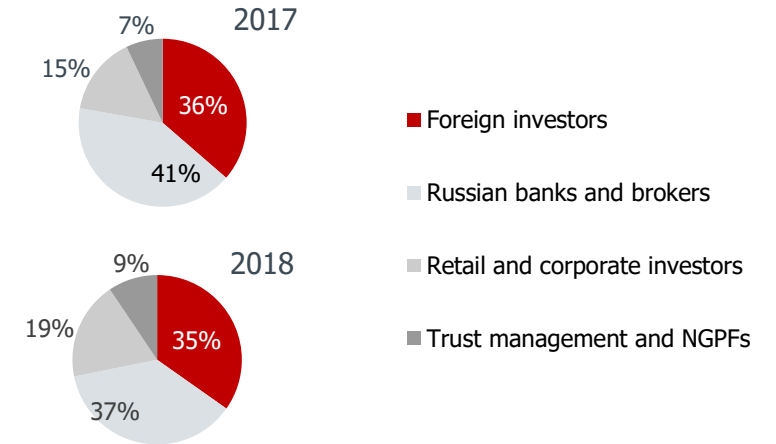
Secondary market trading, USD bln



Share of the CLOB

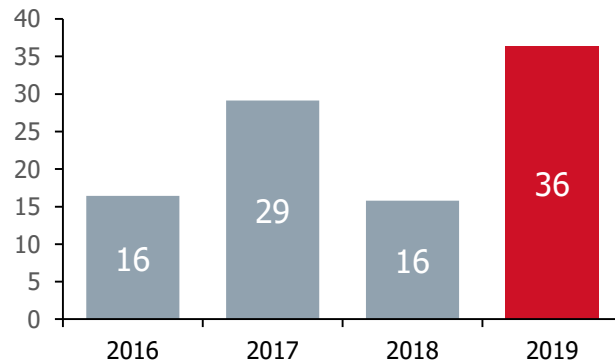


Trading activity by client groups

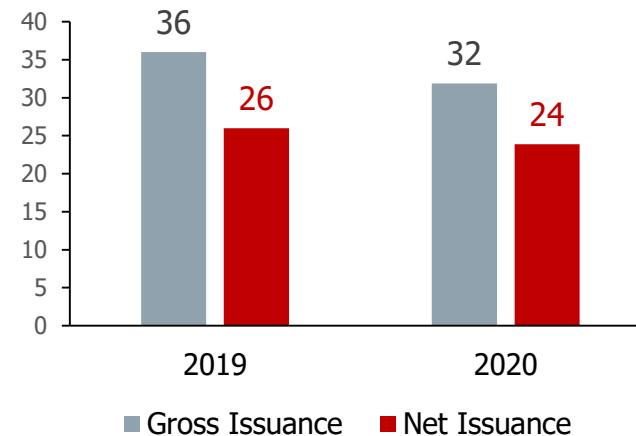


- Strong growth prospect for trading volumes and order book trading share
- Retail and domestic entities increase their trading volume
- Significant growth of new debt including new type of floaters

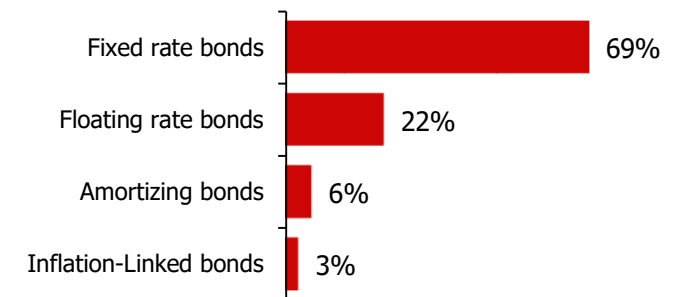
New Issue amount, USD bln



Redemption Schedule



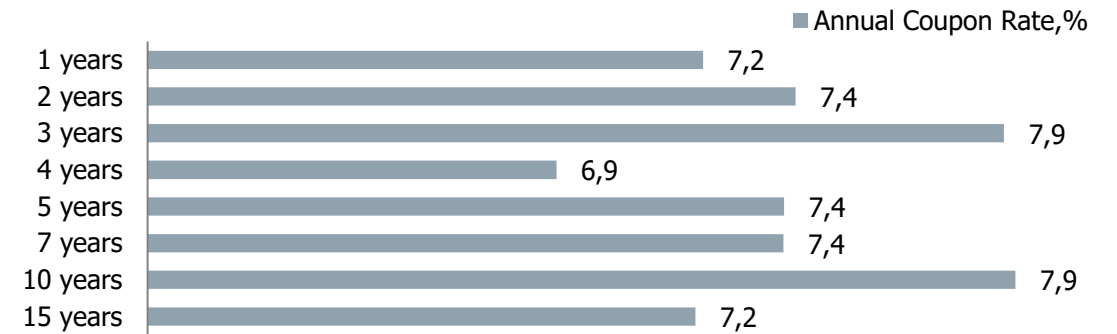
Current Debt Structure



# Variety of OFZ types

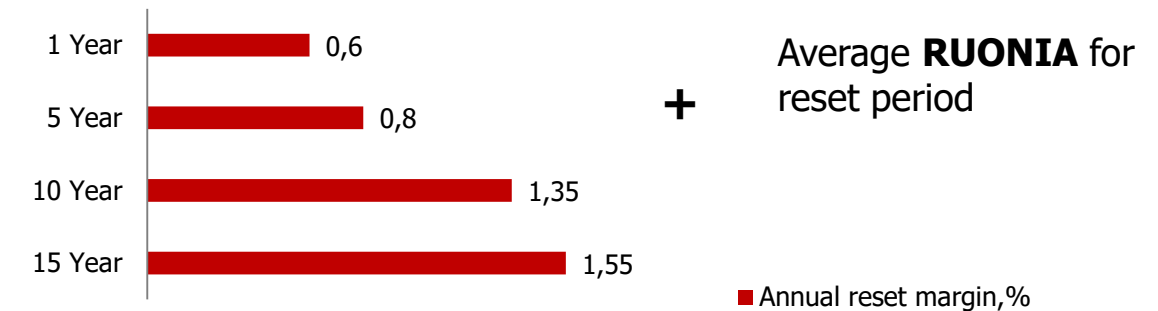
**Fixed-Rate Bonds** - 21 issues, semiannual coupon payment with maturity up to 15 years

(issue security code started with SU25- and SU26-)



**Floating-Rate Bonds** - 8 issues, **RUONIA** reference rate, semiannual coupon payment with maturity up to 15 years

(issue security code started with SU24- and SU29-)



**Inflation-linked Bonds** - 2 issues, semiannual 2.5% coupon bonds with indexed to CPI par value with a three-month lag. The principal floor at redemption set at 100%. Maturity 5 and 10 years

(issue security code started with SU52-)

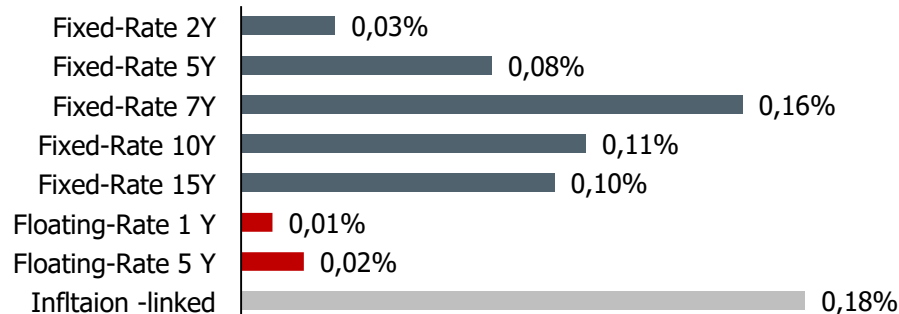
**Amortizing Bonds** - 6 bond issues with amortized principal value

(issue security code started with SU46- and SU48-)



# OFZ: Liquidity and trading solutions at MOEX

## Bid-Ask Spread



- Tight bid-ask spreads
- Balanced liquidity distribution through the day

## Average Daily Trading Volume



## MOEX solution for OFZ market:

- ✓ T+1 settlement cycle
- ✓ Partial pre-funding (collateral requirements from 4% to 10%)
- ✓ Central limit order book (CLOB) and negotiated bilateral trades
- ✓ Market-making in CLOB
- ✓ OFZs used as collateral in repo trades
- ✓ Primarily placements on a weekly basis (for all market participants)
- ✓ OFZs used as underlying of derivatives contracts
- ✓ DMA/SMA for international investors
- ✓ Highly liquid OFZ REPO market with CCP
- ✓ OFZ deliverable futures with quarter expiration available



# MOEX OTC platforms and solutions

## OTC bond platform

- ~**1500** bonds (OFZ, Corporates and Eurobonds)
- 25 participants**
- Access for market professionals and corporates, integration with NSD/NCC clearing, **Plans:** REPO capabilities

## FX links to global liquidity pools

- Non-RUB FX pairs: EUR/USD, GBP/USD
- 36 participants, 2 liquidity providers (JPM & GS)**
- >700 transactions with a total value of USD 330 mln**
- Plans:** new non-RUB FX pairs, new liquidity providers

## Indicative Quotation System (IQS) for options and futures

- Most actively traded underlyings:** USD/RUB, EUR/USD, SBRF, GAZR, VTBR, LKOH, RTS Index
- 14 participants**
- Plans:** backbone for development of RFS/RFQ services

## Standardized OTC derivatives market

- FX swaps, FX forwards, interest rate swaps, cross currency swaps, overnight indexed swaps
- 44 participants**
- Participants started to trade **longer maturities**
- Trading volumes increased 8x YoY in 2018 to RUB 884 bln**

# **OPPORTUNITIES FOR INTERNATIONAL INVESTORS**

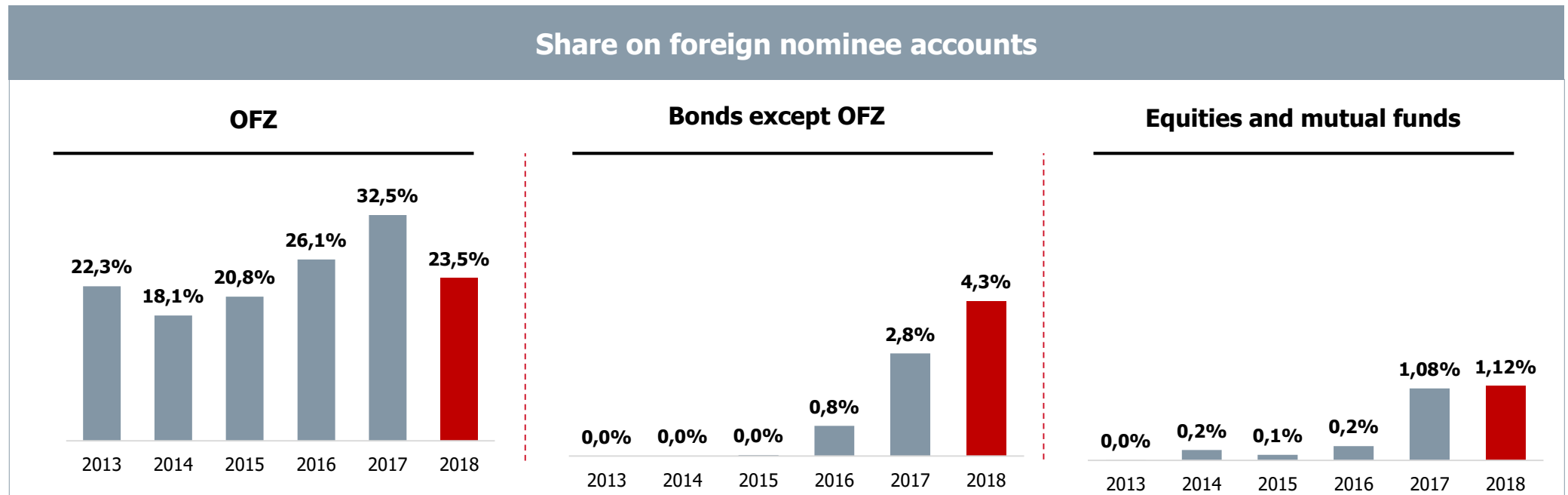
# International investors at MOEX

## Foreign banks and brokers trade on MOEX via Russian subsidiaries

- ~16 000 accounts of foreign investors
- 25 subsidiaries of foreign banks are MOEX trading participants
- 15 subsidiaries of foreign banks have DMA access to MOEX

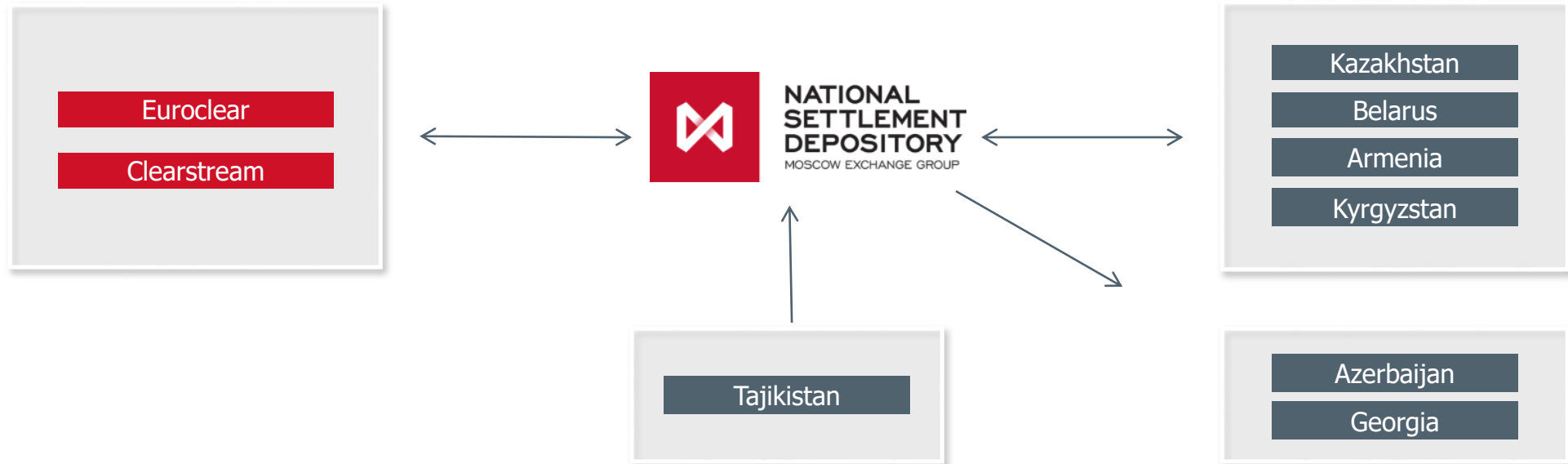
## Key foreign participants of Equity and Bond markets at MOEX:

- |                    |                  |                           |
|--------------------|------------------|---------------------------|
| ▪ Barclays Capital | ▪ JP Morgan      | ▪ ICBC                    |
| ▪ BNP Paribas      | ▪ Merrill Lynch  | ▪ Bank of China           |
| ▪ Citigroup        | ▪ Morgan Stanley | ▪ China Construction Bank |
| ▪ Credit Suisse    | ▪ HSBC           | ▪ Unicredit Bank          |
| ▪ ING Bank         | ▪ Raiffaisenbank | ▪ Commerzbank             |
| ▪ Goldman Sachs    | ▪ UBS            |                           |

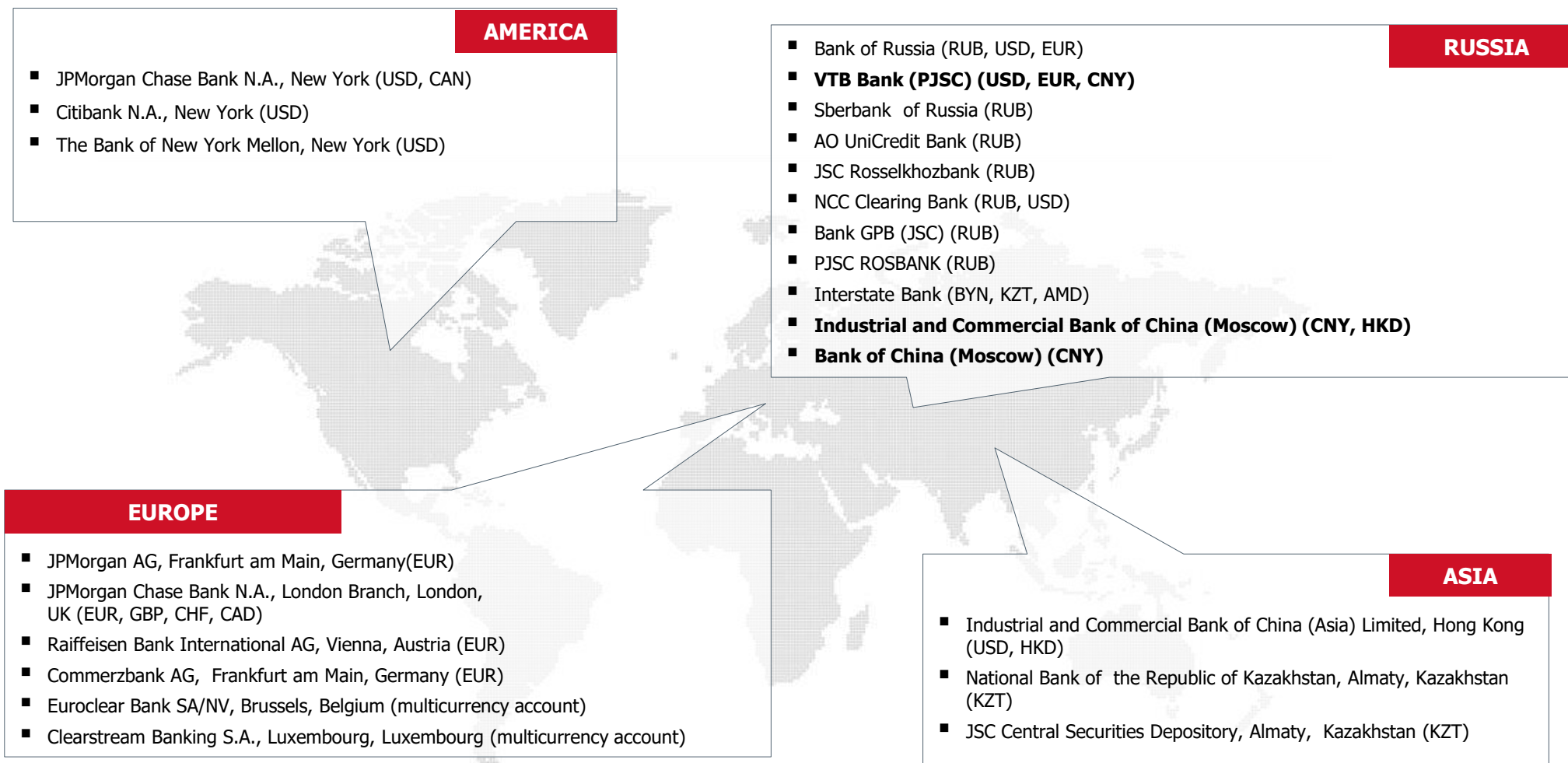


# Infrastructure: accessing Russian market is easy

- ✓ No restrictions on investments in Russian local securities
- ✓ No approval is required to start investing
- ✓ RUB is fully convertible since 2006
- ✓ RUB can be acquired on MOEX for other currencies (HKD, CNY, USD, EUR, etc.)
- ✓ Opening an account with ICSD, global or local custodian
- ✓ An account may be opened at Russian subsidiaries of foreign banks
- ✓ Access through a local broker to MOEX may allow to trade all asset classes



# Geography of NSD cash correspondent network



# Market post-trade infrastructure

## Regulator

- The Bank of Russia

## Trading platform

- Moscow Exchange

## Central Counterparty (CCP)

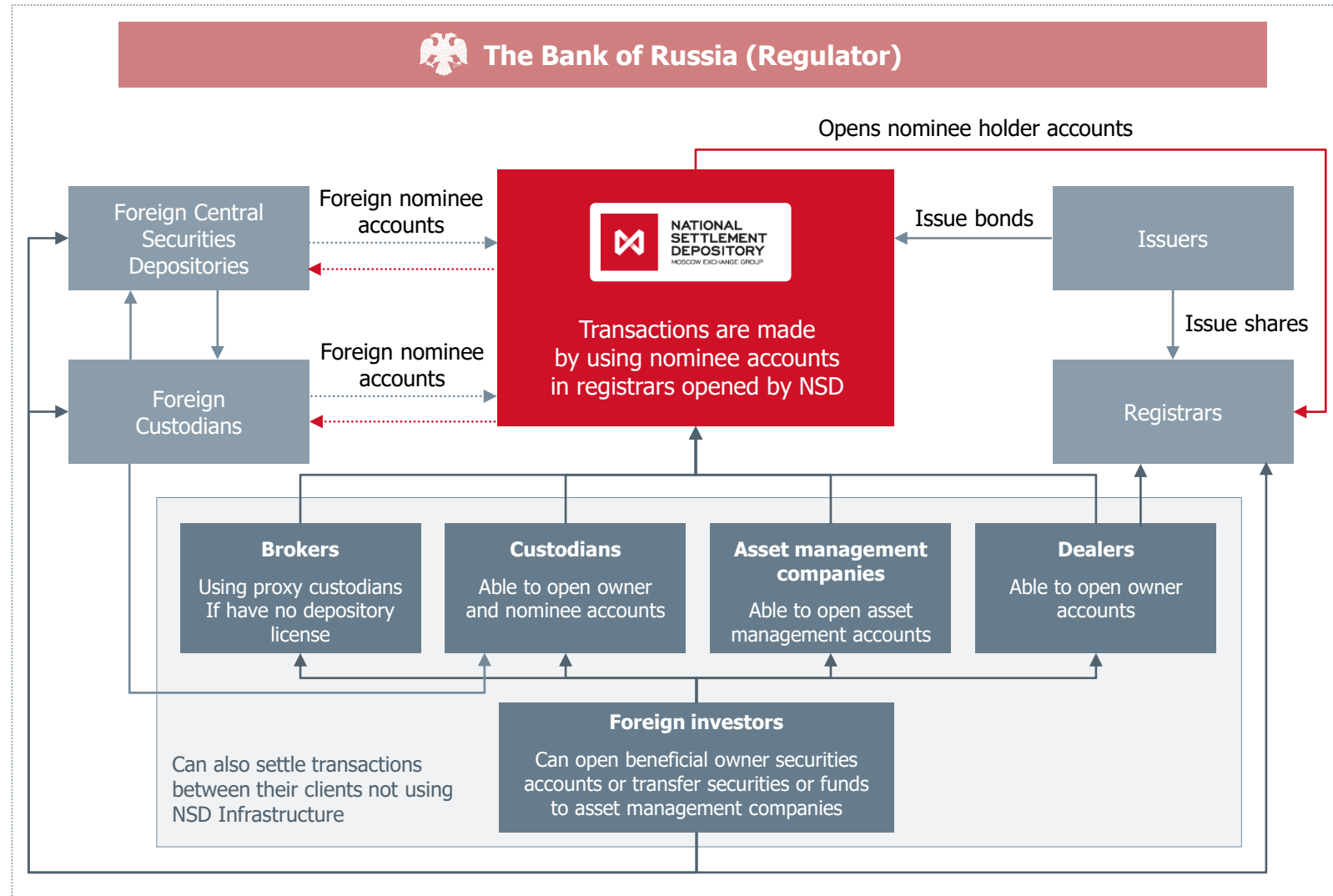
- National Clearing Centre (NCC)

## Clearing platform

- On-exchange trades – National Clearing Centre (NCC);
- OTC trades – National Settlement Depository (NSD)

## Central Securities Depository (CSD)

- National Settlement Depository (NSD)



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–perception of market services offered by the Company and its subsidiaries;

–volatility (a) of the Russian economy and the securities market and (b) sectors with a high level of competition that the Company and its subsidiaries operate;

–changes in (a) domestic and international legislation and tax regulation and (b) state policies related to financial markets and securities markets;

–competition increase from new players on the Russian market;

–the ability to keep pace with rapid changes in science and technology environment, including the ability to use advanced features that are popular with the Company's and its subsidiaries' customers;

–the ability to maintain continuity of the process of introduction of new competitive products and services, while keeping the competitiveness;

–the ability to attract new customers on the domestic market and in foreign jurisdictions;

–the ability to increase the offer of products in foreign jurisdictions.

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