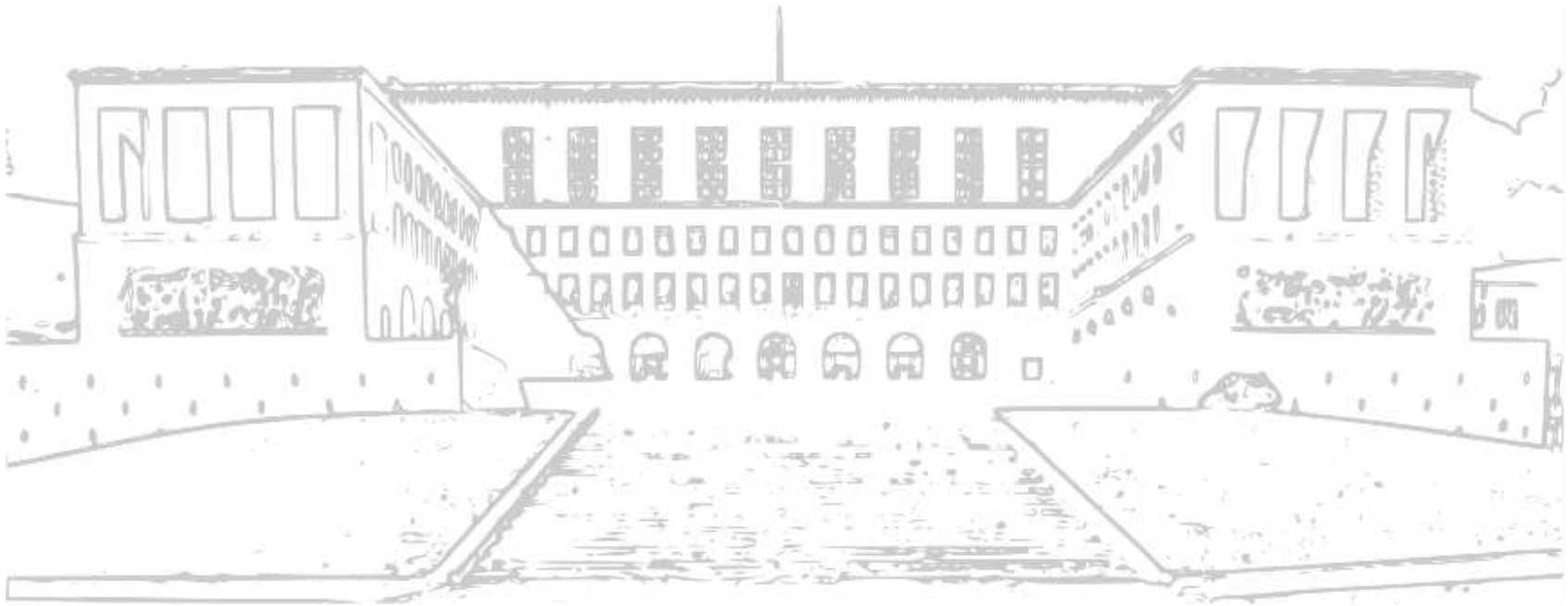


FINANCIAL MARKETS AND INSTITUTIONS

MONEY MARKETS

A.Y. 2020/2021

Prof. Alberto Dreassi – adreassi@units.it



DEAMS
University
of Trieste

AGENDA



- Why do money markets exist?
- Who is active on MM?
- What is traded in MM?

NATURE AND PURPOSE

Aims:



- Provide **low-cost** and **quick** funds for short-term liquidity shortages
- Allowing **returns** and **safety** for short-term funds' availability

How?

- Trading quasi-money instruments (**not money!**)
 - often OTC
 - very liquid (active secondary market)
 - short-term (less than 1y, mostly within 3m)
- Large denomination: millions €/ \$ per deal
- Low risk of default:
 - CBs/banks are the main operators, gov. bonds used extensively
 - some safety-nets



NATURE AND PURPOSE

Why so important?

- Markets are not perfectly efficient and are limited by regulation
- Banks need to cover short-term funds' excesses or deficits:
 - reserve requirements designed to avoid bank-runs
 - regulation for financial stability limits competition
 - money markets host wholesale operations: less restrictions
- All make **treasury decisions** more often than investing/borrowing



INTERMEDIARIES

The same intermediaries act as both lenders and borrowers, from time to time

- Gov.'s treasuries: borrower only
- Central banks: monetary policy
- Banks: mainly short-term gov. bonds, but also others (CDs, acceptances, interbanking deposits, repos, ...)
- Investment corporations and securities' firms:
 - Money brokerage firms
 - Finance companies
 - Insurers and pension funds
 - MMMF
- Few major non-financial corporations

INTERMEDIARIES

The following data, from ECB, reports figures on the overall European money market.

Weighted average rate for wholesale sector borrowing in the unsecured segment by tenor and maintenance period

(Percentage)



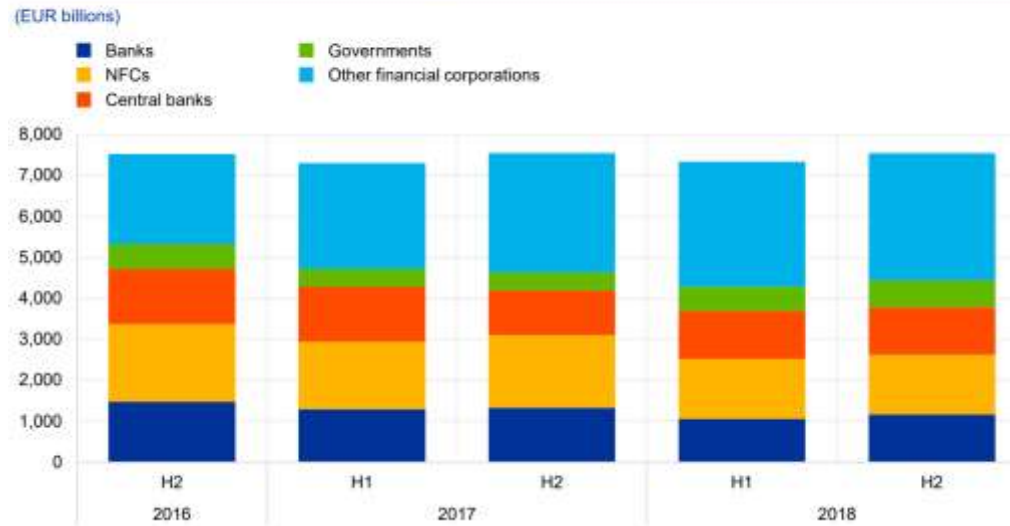
Euro money market statistics

		Turnover (EUR billion)				Average rate O/N (Percentage)	
		Daily average		Total		MP 7 2020	MP 8 2020
		MP 7 2020	MP 8 2020	MP 7 2020	MP 8 2020		
Unsecured	Borrowing, wholesale	129	120	3.875	3.371	-0,54	-0,55
	Of which, interbank	11	11	344	297	-0,56	-0,57
	Lending, interbank	6	7	192	194	-0,39	-0,41
Secured	Borrowing, wholesale	358	325	10.730	9.113	-0,55	-0,57
	Lending, wholesale	295	256	8.848	7.161	-0,51	-0,56

INTERMEDIARIES

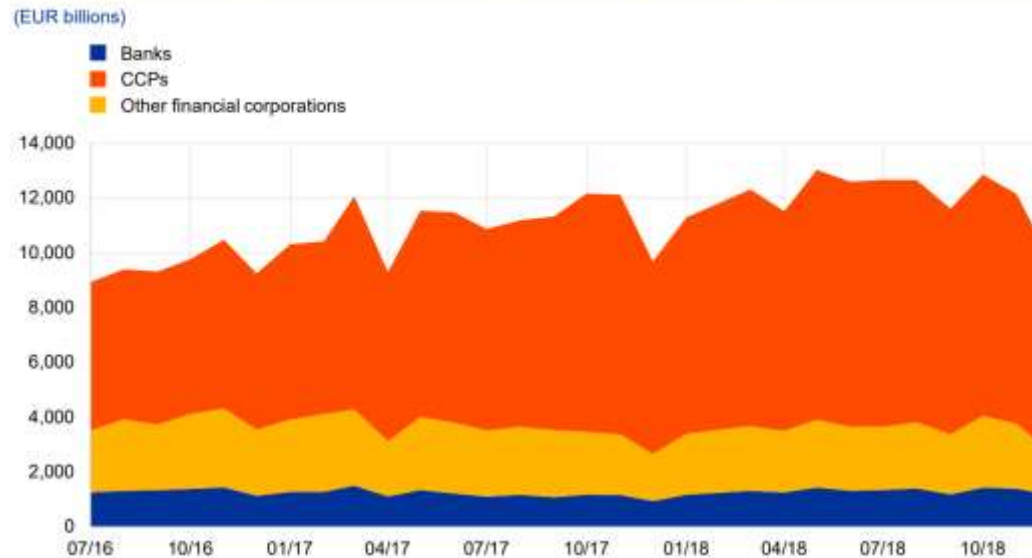
Unsecured

Activity in the unsecured market by institutional sector



Secured

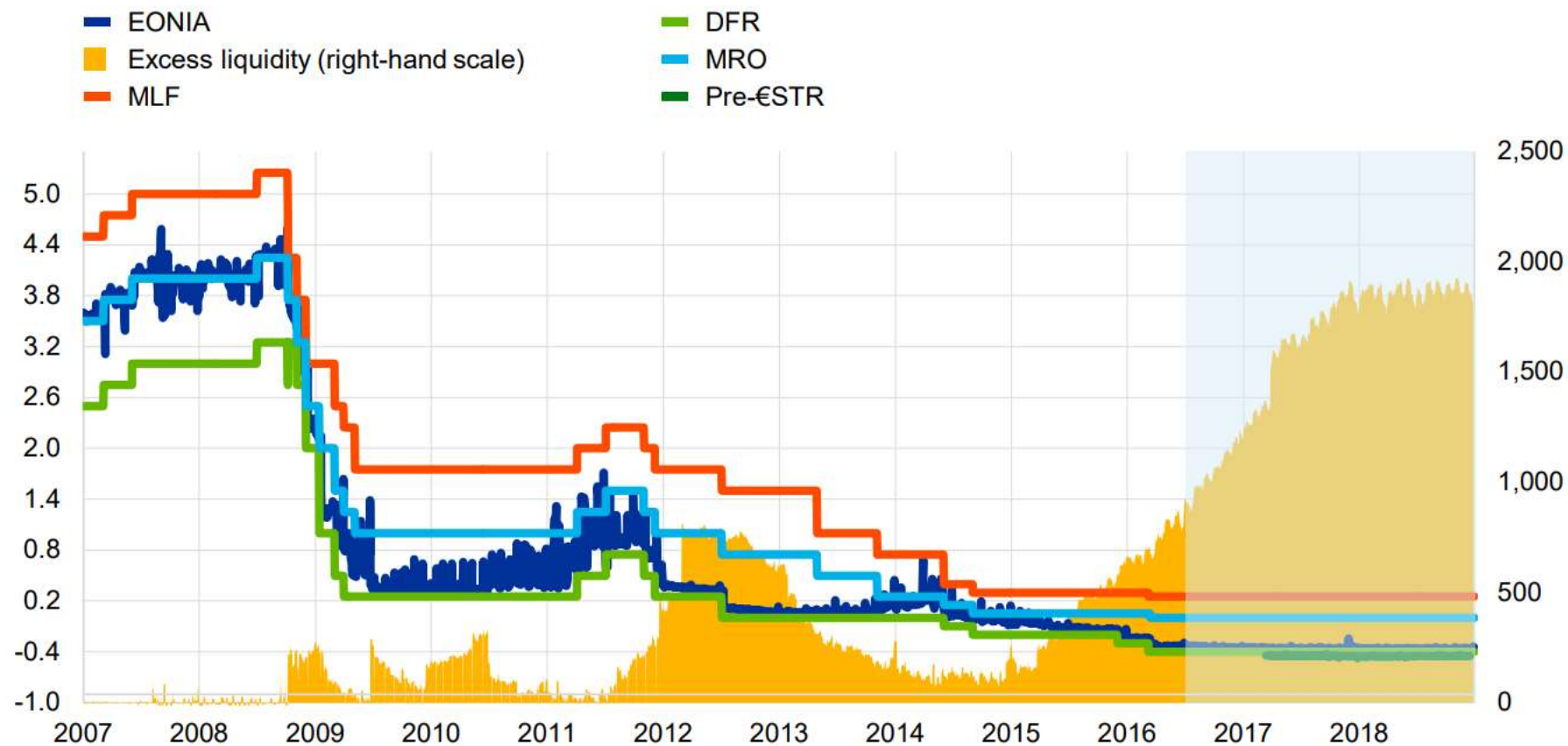
Monthly volume by institutional sector (all maturity buckets)



INTERMEDIARIES

Key ECB interest rates, market reference rates and excess liquidity

(left-hand scale: percentages; right-hand scale: EUR billions)



PRODUCTS AND SECURITIES

Short-term gov. bonds:

- Short-term liquidity shortages (f.i. gap between tax inflows and salaries of public employees)
- Usually ZC
- Very low IR: low default-risk, low inflation risk, low liquidity risk
- Placement usually occurs through biddings (competitive and noncompetitive)
- Dematerialisation
- Extremely low IR



BIDDINGS

Competitive bidding:

- Maturity, amount and features are announced
- Operators make P/Q bids that are classified by the offered price (H to L) or, equivalently, required yield (L to H)
- Bids are accepted until the total amount is achieved
- Each bid is priced as bidded (yet other rules apply)

Noncompetitive bidding:

- Bidders communicate only amounts (not prices)
- All offers are accepted and priced through a linked competitive bidding

Regulation is needed to avoid **market cornering**



PRODUCTS AND SECURITIES

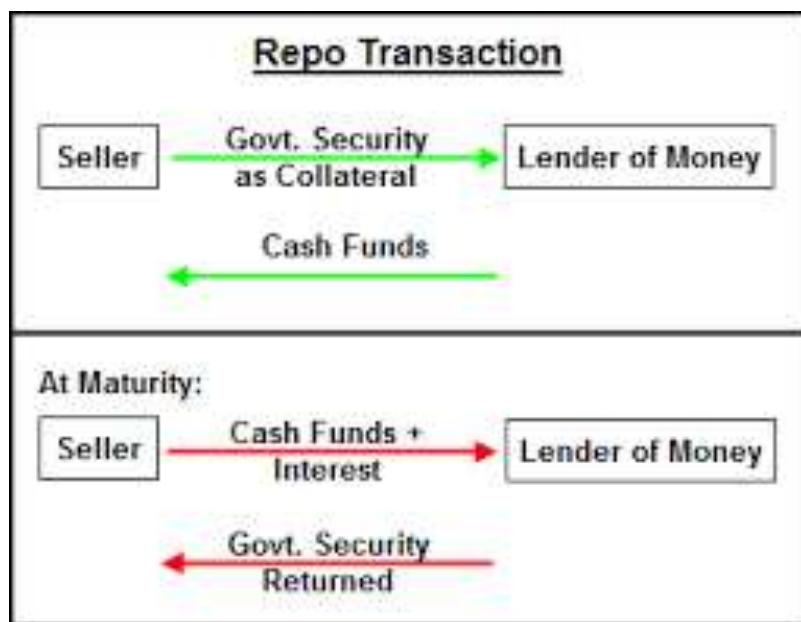
Interbanking deposits (f.i. e-MID):

- Funds mostly **extremely short-term** transferred between banks, typically 1 day
- **Vast volumes**: European overnight averaging around 20 billions € daily only
- Loans are mostly **unsecured** (no collateral), but can be secured
- Allows banks to **flexibly respect reserve requirements** from CB
- Allows banks to **cover temporary liquidity gaps**
- Typical maturities are **overnight** (t, t+1), **tomorrow next** (t+1, t+2), **spot next** (t+2, t+3), but also **on-sight** (t, n) and **broken date** (k, n) are available
- IR developed here are extremely relevant (Euribor, Eonia) and affect other IR
- CBs **influence** these rates by acting on reserves or by producing/absorbing liquidity

PRODUCTS AND SECURITIES

REPOs:

- Very short term but longer than typical interbanking funds
- Loan is **collateralised by securities** traded in an active market (mostly, gov. bonds)



- Specified maturity, current market price, specific future price
- CBs are also active in the repo market, injecting or absorbing liquidity
- Low default risk

PRODUCTS AND SECURITIES

CDs:

- Securities issued by banks documenting a deposit and bearing a **maturity date** and **interest rate** (fixed or variable), usually closely tracking **inflation** or **short-term gov. bonds with a premium**
- **Could be bearer instruments**, allowing an easier negotiability (yet AML applies)
- Maturities are generally **between 1m and 4m**, concentrated in shorter maturities
- **High face values**: mostly greater than 1 million \$

Commercial paper:

- **Unsecured** promissory notes, mostly within 20-45 days and ZC
- **Only major and secure corporations as issuers** (liquidity/safety concerns)
- **Secondary markets are not deep and liquid**
- **Could be indirectly secured by a banking line of credit**
- **Asset-backed commercial paper (ABCP)**: secured by a specified asset (f.i. mortgages), quality of security depends on pledged assets (as happened for RMBS)

Banker's acceptances and other instruments are less relevant (we'll see **derivatives!**)

PRODUCTS AND SECURITIES

Eurodollars:

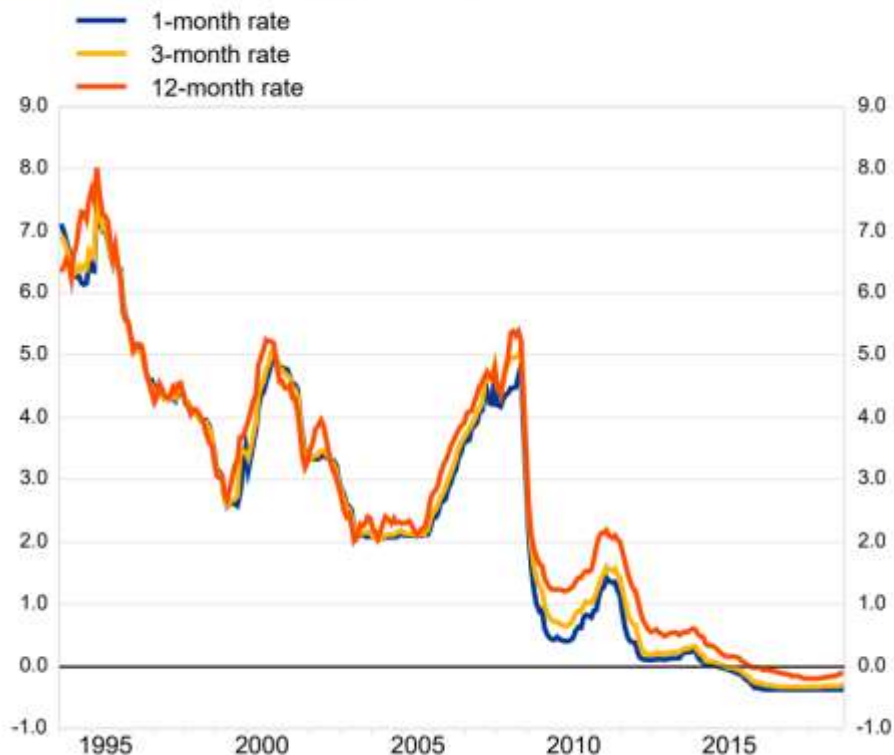
- Deposits in USD outside the US, originated by WWII and internal regulation
- Created the role of the London interbank market, developing reference IR such as LIBOR (London Interbank Offer Rate) and LIBID (London Interbank Bid Rate)
- Deep and highly competitive market
- Maturities and other features similar to interbanking funds
- Also Eurocurrencies, Eurodollar CDs, ...(yet thin markets)



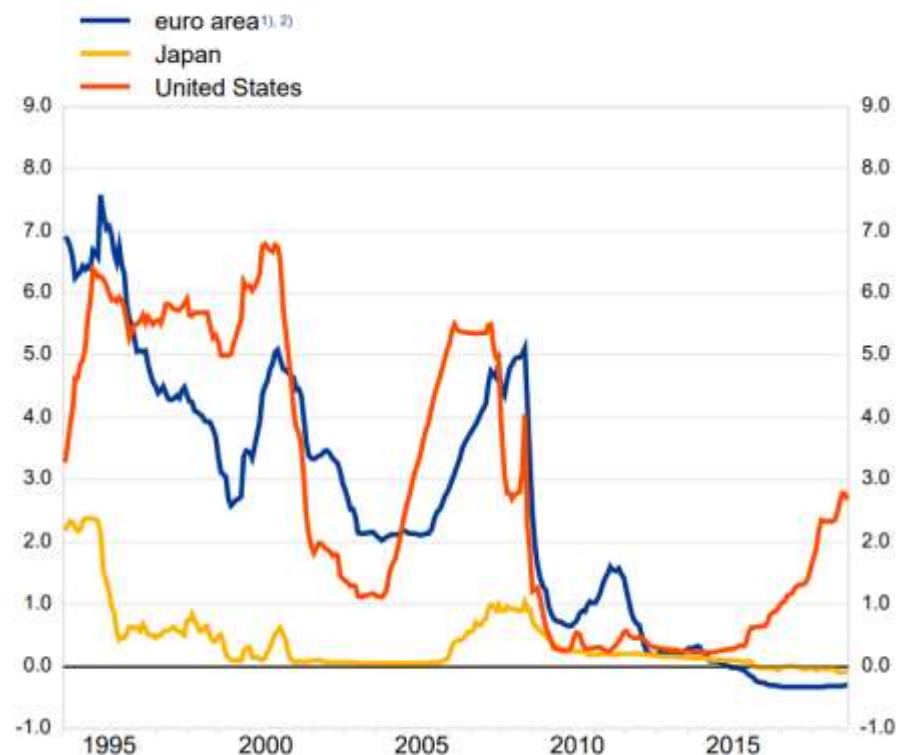
EXAMPLES

1. Consider the following data from ECB on European money market rates. Any comments?

4.6.2 Euro area money market rates ^{1), 2)}
(monthly averages; percentages per annum)

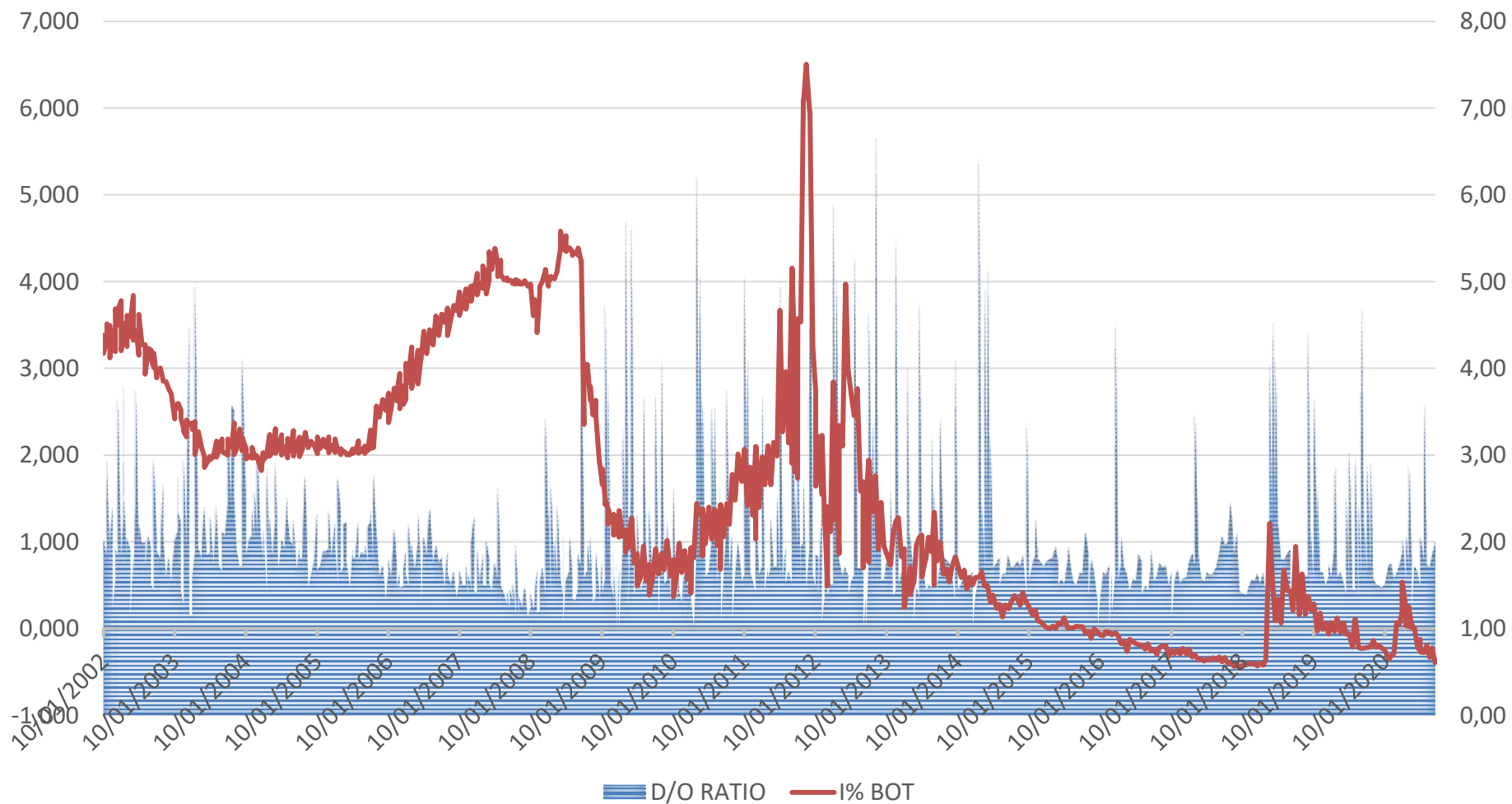


4.6.3 3-month money market rates
(monthly averages; percentages per annum)



EXAMPLES

2. The following graph presents the annual return on Italian short-term bonds (BOT) emerged during competitive biddings. Comments?

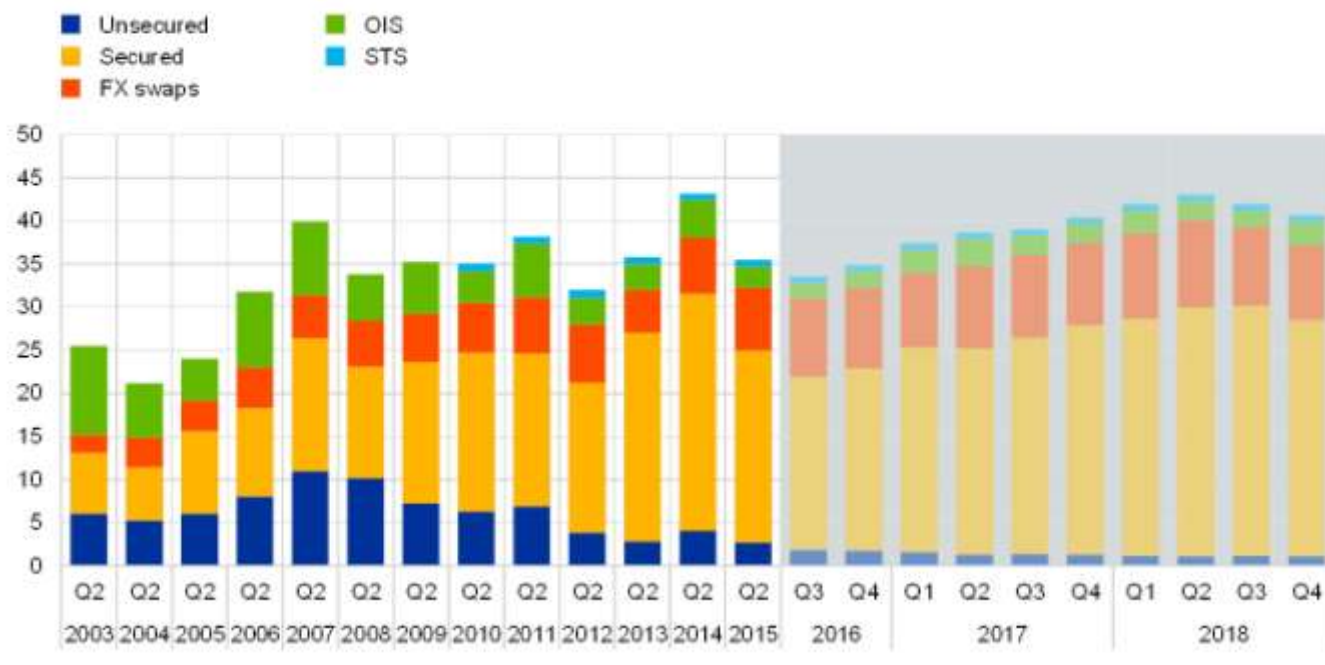


EXAMPLES

3. Consider the following data from ECB on European money markets. Any comments?

Market share of the cumulative volume per quarter per segment

(EUR trillions)



OIS: Overnight Index Swap

FX swaps: currency swap

STS: Short Term Securities

EXAMPLES

3. Consider the following data from ECB on European money markets. Any comments?

Unsecured yield curve and volume evolution

(left-hand scale: yield, percentages; right-hand scale: volume, EUR billions)

