



THE TWENTY- EIGHTH DUBROVNIK ECONOMIC CONFERENCE

Organized by the Croatian National Bank

Stephen G. Checchetti

Stabilizing Financial Markets: Central Bankers as Lenders and Market Makers of Last Resort

Hotel "Royal Hotels & Resort"

Dubrovnik

July 2 – 4, 2022

Draft version

Please do not quote



CROATIAN NATIONAL BANK

Brandeis

INTERNATIONAL
BUSINESS SCHOOL

STABILIZING FINANCIAL MARKETS: CENTRAL BANKERS AS LENDERS AND MARKET MAKERS OF LAST RESORT

Stephen G. Cecchetti

Brandeis International Business School
and Advisory Scientific Committee
European Systemic Risk Board

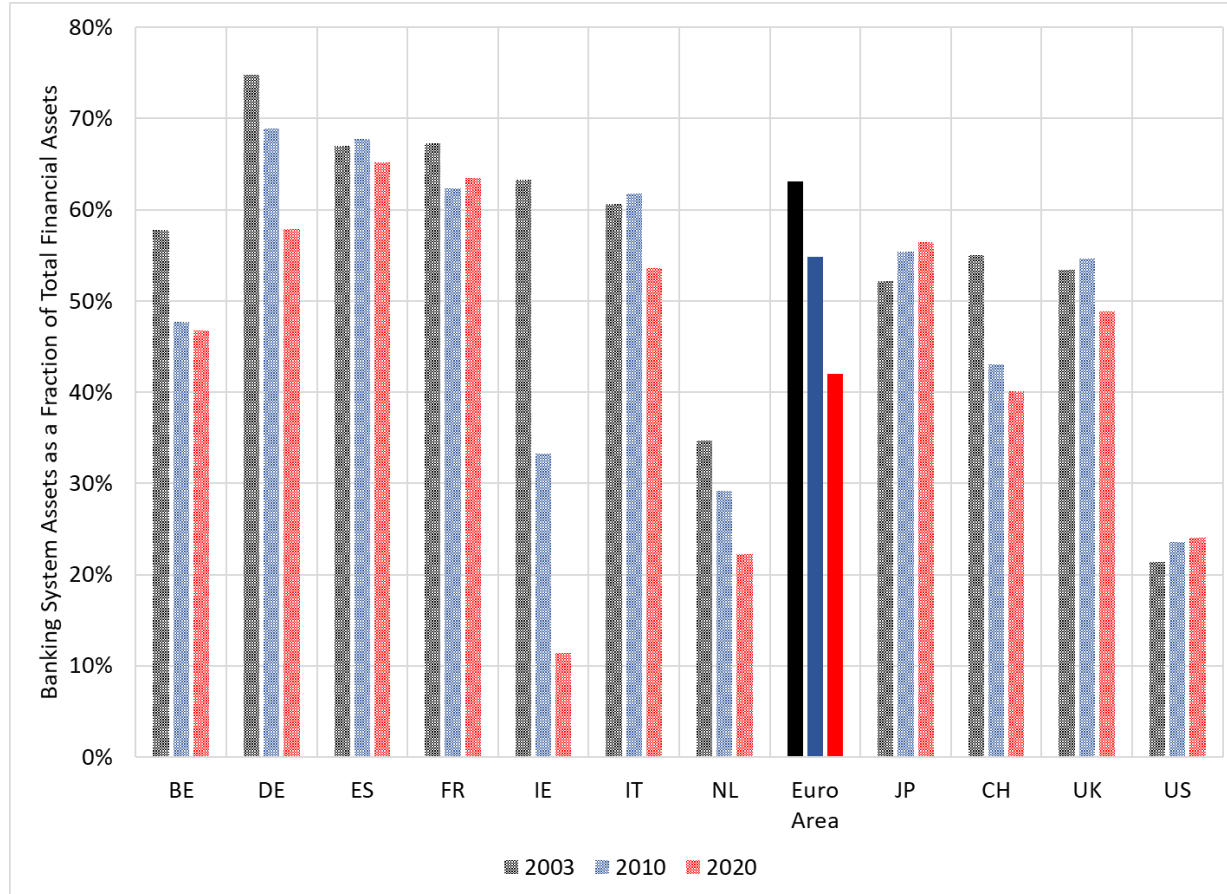
www.moneyandbanking.com

Outline

- Move from bank-based to market-based finance
- How central banks use their balance sheets
- A few examples: the Eurosystem and the Federal Reserve
- Why and how central banks intervene in financial markets
- A framework for stabilizing markets

Relative importance of bank credit is declining

Fraction of Total Financial Assets Accounted for by Private Banks, 2003 to 2020



Average declines 10 pp

Euro area falls by one-third!

Source: Financial Stability Board.

Central banks use their balance sheets in many ways

- Aggregate demand management
- Selective credit support
- Emergency government financing
- Foreign exchange management
- Lender of last resort
- Market maker of last resort
- International lender of last resort

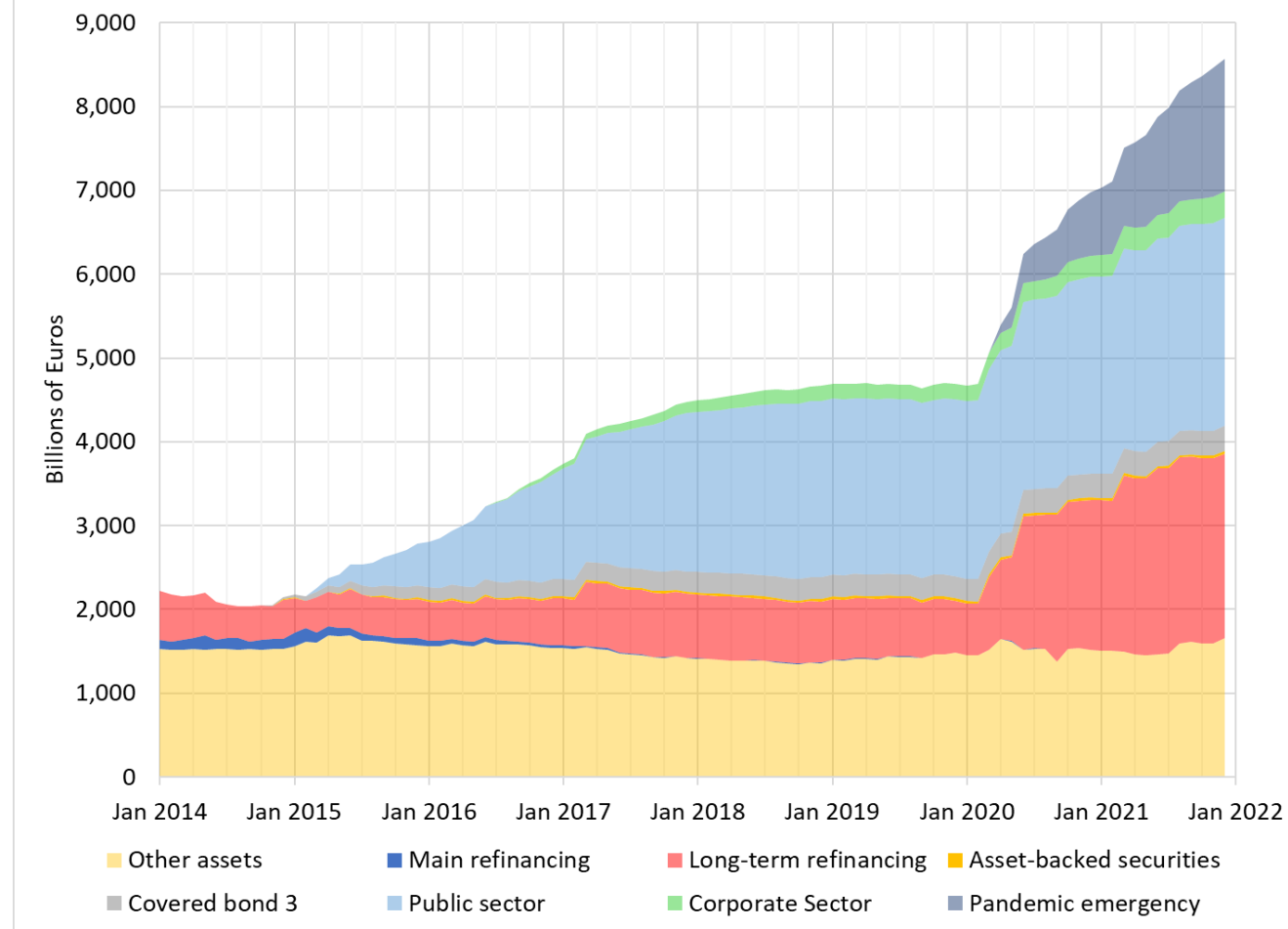
Pandemic interventions were pervasive

Survey of 39 jurisdictions

- 528 interest rate changes
- 50 adjustments in reserve remunerations rates
- 143 lending support operations
- 101 exchange rate policy actions
- 53 asset purchase operations

Source: BIS.

ECB Pandemic Related Facilities



Program	Increase from Mar 2020 to Dec 2021
Long term refinancing	€1,586 bn
Public sector bonds	€ 358 bn
Corporate sector	€ 115 bn
Pandemic emergency	€1,581 bn
Total Change	€3,875 bn

Note: All asset categories eligible under the existing asset purchase program are also eligible under the pandemic emergency purchase program (PEPP). This includes corporate bonds, covered bonds, asset-backed securities, and public sector bonds

Note: Other assets are primarily gold and FX reserves (including SDRs).

Source: European Central Bank.

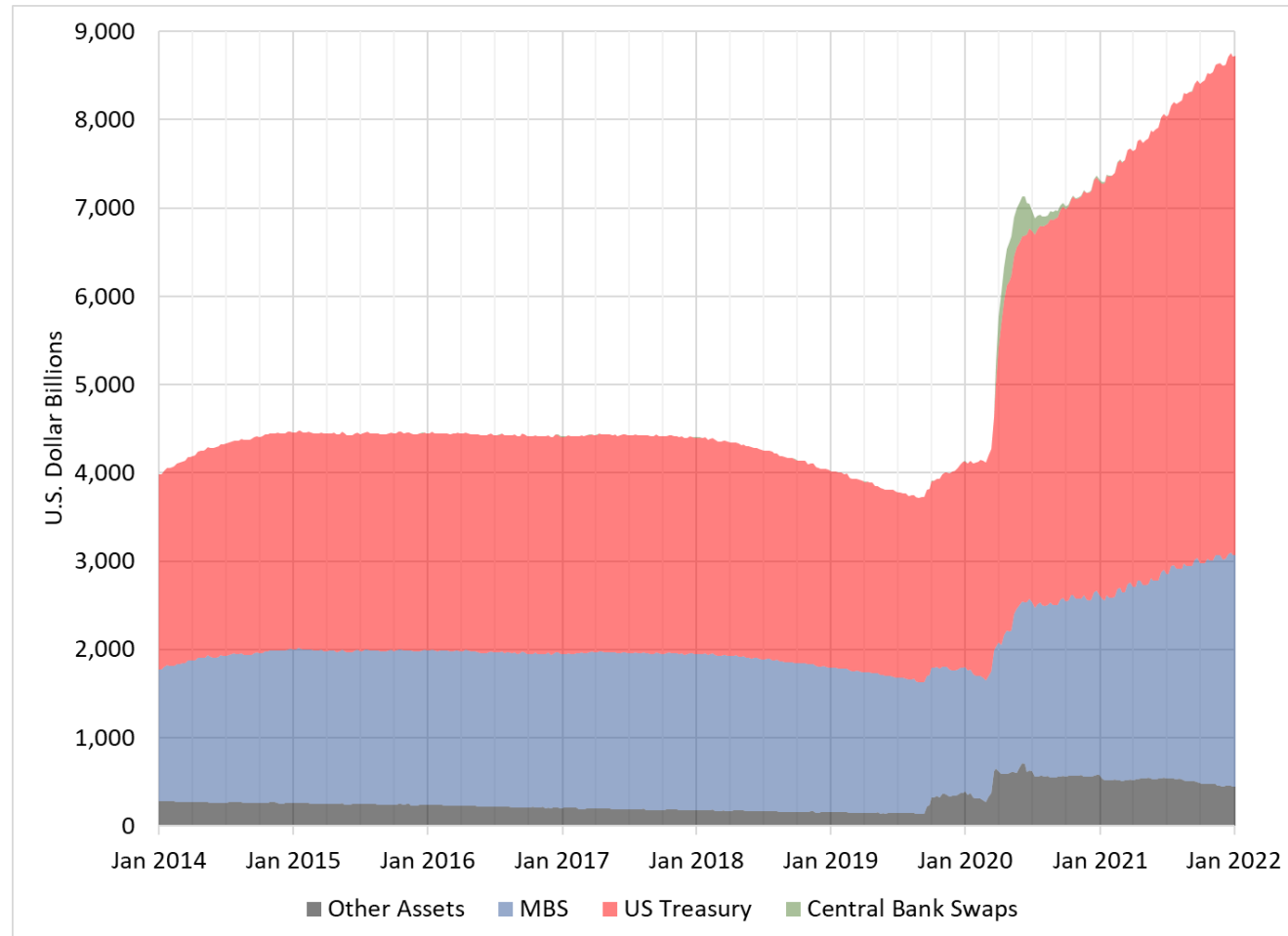
ECB Balance Sheet Tools

Tool\Facility	Function					Peak Use	Date of Peak	Current Level
	AD Mgmt	Credit Support	LOLR	MMLR	Govn't Finance			
Main Refinancing Operations	✓					€337bn	Dec 2008	€0.6bn
Long-term Refinancing Operations	✓							
Targeted Long-term Refinancing Operations (I,II,III)	✓	✓	✓			€2,213bn	Sept 2021	€2,174
Pandemic Emergency Longer-Term Refinancing	✓	✓		✓				
Outright Monetary Transactions	✓			✓	✓	€0	—	€0
Securities Market Programme				✓	✓	€209bn	2012	€3bn
Covered Bond Purchase Programme (1,2,3)	✓	✓		✓		€301bn	Current	€301bn
Corporate Sector Purchase Programme	✓	✓		✓		€342bn	Current	€342bn
Asset-backed Securities Purchase Programme		✓		✓		€32bn	Mar 2020	€26bn
Public Sector Purchase Programme	✓			✓	✓	€2,730bn	May 2022	€2,587bn
Pandemic Emergency Purchase Programme	✓			✓		€1,718bn	Mar 2022	€1,699bn

Note: Reporting of long-term refinancing operations (LTROs, TLTROs, and PELTROs) is consolidated.

Source: European Central Bank.

Federal Reserve Balance Sheet



Asset	Increase from Mar 2020 to Dec 2021
U.S. Treasury Securities	\$3,178 bn
MBS	\$1,244 bn
Total Change	\$4,599 bn

Note: Other assets include conventional lending and credit to various programs. The total peaked at \$214 bn in July 2021. Source: Federal Reserve.

Federal Reserve's extensive pandemic interventions

Tool\Facility	Function					Maximum Size	Peak Use
	AD Mgmt	Credit Support	LOLR	MMLR	Gov't Finance		
U.S. Treasury Security Purchases	✓	✓		✓	✓	Unlimited	\$3.3tr
Mortgage-backed Securities Purchases	✓	✓		✓		Unlimited	\$1.2tr
Discount Window and Discount Rate			✓			Unlimited	\$50.8bn
Overnight Reverse Repo Facility	✓					Unlimited	\$1.9tr
Standing Overnight Repo Facility	✓					\$500bn	\$71.1bn
Term Deposit Facility	✓					Unlimited	\$0
Commercial Paper Funding Facility		✓		✓		Unlimited	\$4.2bn
Primary Dealer Credit Facility			✓			Unlimited	\$33.4bn
Money Market Mutual Fund Liquidity Facility			✓	✓		Unlimited	\$53.2bn
Primary & Secondary Mkt Corp Credit Facilities		✓		✓		\$850 bn	\$14.1bn
Term Asset-Backed Securities Loan Facility		✓		✓		\$100 bn	\$4.1 bn
Paycheck Protection Program Liquidity Facility		✓	✓			\$953 bn	\$88.4 bn
Municipal Liquidity Facility		✓		✓		\$500 bn	\$6.4 bn
Main Street Lending Program (5 facilities)		✓	✓			\$600 bn	\$16.5 bn
Central Bank Liquidity Swaps			✓			Unlimited	\$446.1 bn
Foreign & Int Monetary Authorities Repo Facility			✓			\$3.6tr	\$1.4 bn

Source: Federal Reserve.

Multiple purposes shifting over time

- Fed purchases of US Treasury securities
 - March and April 2020 market stabilization
 - June 2020 to March 2022 \Rightarrow AD stimulus
 - Government finance
- Bank of England Asset Purchase Facility
 - Jan 2009 MMLR for corporate bonds
 - Almost immediately began purchasing gilts
- Eurosystem PEPP
 - Aggregate demand management
 - MMLR
 - Government finance
- ETF purchases
 - BoJ: Starting Dec 2010 for MMLR and then AD stimulus
 - Fed: Starting May 2020 for MMLR

Why centrals intervene in markets

- Markets malfunction, become illiquid, and may disappear
 - Private-sector market makers withdraw
 - Typical market participants vanish
 - Quality of securities come into question
- These are connected*
- Objectives
 - Restore flow of credit to firms, households and governments
 - Restore functioning of systemically important markets
 - Restore functioning of monetary transmission mechanism

How central banks intervene in markets

- Operational objectives
 - Ensure market liquidity
 - Ensure funding liquidity
- Options for intervention to catalyze market making
 - **Enhanced lender of last resort**
Collateralized lending so private agents can purchase and hold securities
 - **Market maker of last resort**
Directly purchase and hold securities

Enhanced Lender of Last Resort

- Bagehot:

“lend to merchants, to minor bankers, to ‘this man and that man,’ whenever the security is good.”

- Scope of eligible counterparties:

Regulated intermediaries engaging in bank-like activities.

- Nature of collateral:

Cover ever-expanding list of what intermediaries hold.

Lending will not always work

- Concerns over quality of instrument or issuer
- Individual is concerned everyone else will exit
- Capital constrained

Market maker of last resort

- Counterparties can be anyone (delivery versus payment)
- Scope requires judging which securities are systemic
- Focus on secondary market
- Set price and purchase what is offered

Challenges to central bank intervention

- Which markets should qualify? Which are systemic?
- Is the facility always available or only under stress?
- How are the terms set?
- Who are the eligible counterparties?
- How swiftly should the balance sheet unwind?
- How can we mitigate moral hazard?

Key attributes of a framework for market stabilization

1. Be transparent and clear about objectives, instruments, and terms
2. Support only markets deemed essential
3. Create permanent facilities that may be dormant
4. Specify counterparties in advance
5. Do not act, react; set a price and be a quantity taker
6. Only intervene when market/funding liquidity is severely impaired
7. Credible announcements may reduce scale required
8. Be clear about the roles of overlapping and competing authorities
9. Exit quickly

Brandeis

INTERNATIONAL
BUSINESS SCHOOL

STABILIZING FINANCIAL MARKETS: CENTRAL BANKERS AS LENDERS AND MARKET MAKERS OF LAST RESORT

Stephen G. Cecchetti

Brandeis International Business School
and Advisory Scientific Committee
European Systemic Risk Board

www.moneyandbanking.com