Financial Stability: Are We Well Equipped to Deal With Potential Turbulence?
A Financial Market Perspective

Peter Mooslechner
Executive Director and Member of the Governing Board
Oesterreichische Nationalbank

National Bank of the Republic of Macedonia and Reinventing Bretton Woods Committee Conference:
Skopje, February 16, 2018
Prologue:
Economic History - A History of Financial Crises...
Outline

● Prologue:
  Economic History: A History of Financial Crises…

● What Do We Think Financial Stability Is?

● What Did Financial Regulation Since 2008 Address?

● What Was/Is the Role of Monetary Policy/Central Banks In All This?

● Any Conclusions?
What Do We Think Financial Stability Is?

Status of Financial System

Financial Stability ↔ ↔ ↔ Financial Crisis

= „Absence of financial crisis“

← In Reality: Different Degrees of Financial Fragility →

Two Different Financial Crisis Perspectives

Institutional Perspective

→ Banking Crisis

→ Sovereign Debt Crisis

→ .....???

Market Perspective

→ Currency Crisis

→ Stock Market Crisis

→ .....???
Crisis Causes and Origin: Market Developments Dominate

From: Racickas/Vasiliauskaite, 2012

From: Blanchard, 2009

Source. Adapted from Figure 1.10: Mortgage Market Flows and Risk Exposures, Chapter 1, p. 11, Global Financial Stability Report, October 2007

From: ECB Monthly Bulletin, October 2010

ECB injects €95bn to help markets

The European Central Bank scrambled to head off a potential financial crisis on Thursday by pumping an emergency €94.8bn ($131bn) into the region’s banking system after liquidity in the interbank market started to dry up, threatening banks’ access to short-term funds.

The cash injection was the biggest in the ECB’s history, exceeding the €69bn provided the day after the terrorist attacks of September 11 2001. The ECB also made an unprecedented one-day pledge to meet 100 per cent of all funding requests from financial institutions.
Financial Institutions: Transmitting Shocks from Market Turbulence to the Real Economy

Market Turbulence

Policy Measures

Financial Institutions ("Banking System")

Policy Measures

Real Economy
Broad Based EU Crisis Response Since 2008

Emergency measures

- Ad-hoc assistance
- ESM (European Stability Mechanism)
- OMT

Financial markets

- Banking Union
- ESRB macroprudential supervision
- EFSF microprudential supervision
- Financial market regulation (Basel III, etc.)

Fiscal policy

- Stability and Growth Pact 3.0
- “Fiscal pact” (TSGE)

Structural policy

- Macroeconomic Imbalance Procedures (MIP)
- Investment plan (EFSI)

European Semester
EU Legislative Measures: Very Much Focussed on the Banking System

„In the wake of the financial crisis, more than 40 new pieces of EU legislation were adopted to restore financial stability and market confidence.“

(European Commission – Fact Sheet, 23. November 2016)

Risk Reduction Measures
- Capital Requirements Regulation
- Single Supervisory Mechanism
- Bank Recovery and Resolution
- Single Resolution Mechanism
- Deposit Guarantee Schemes
- Risk Reduction Measures Package
- Ranking of Unsecured Debt Instruments
- Treatment of Sovereign Exposures
- Measures to Tackle NPL‘s

Risk Sharing Measures
- European Deposit Insurance Scheme
- Single Resolution Fund Backstop

Financial Market Environment: Limited and Specific Regulatory Initiatives Only

- **EMIR (OTC derivatives)**
  - Improving transparency & reducing counterparty risk
  - More information and transparency on money markets
  - Preventing market abuse & more resilient benchmarks
  - Improving transparency
  - Enforcing resiliency of MMFs

- **MMSR**

- **Financial Benchmarks**

- **MiFiR / MiFID II**

- **Money Market Funds reform**

Impact on markets:

- Reduced opacity / more transparency
- Additional demand HQLA
- Higher asset encumbrance
- Higher cost of money market transactions
- Larger role non-banks
G20 Priority Areas of Financial Reform: Mainly Banking

Table on implementation of reforms in priority areas by FSB jurisdictions (as of 30 June 2017)

The table provides a snapshot of the status of implementation progress by FSB jurisdiction across priority reform areas, based on information collected by FSB and standard-setting bodies' (SSBs) monitoring mechanisms. The colours and symbols in the table indicate the timeliness of implementation. For Basel III, the letters indicate the extent to which implementation is consistent with the international standard. For trade reporting, the letters indicate to what extent effectiveness is hampered by identified obstacles.

<table>
<thead>
<tr>
<th>Reform Area</th>
<th>Basel III LR (continued)</th>
<th>Capital</th>
<th>Liquidity</th>
<th>Higher loss</th>
<th>Leverage</th>
<th>Net</th>
<th>Compen-</th>
<th>Over-the-counter (OTC)</th>
<th>Resolution</th>
<th>Shadow banking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Australia</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brazil</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>C, A</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>China</td>
<td>C, A</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hong Kong</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>India</td>
<td>C</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indonesia</td>
<td>LC</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mexico</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherland</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherland</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rep. of Korea</td>
<td>LC</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>C</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spain</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switzerland</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turkey</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United Kingdom</td>
<td>MNC</td>
<td>LC</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>LC</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>LC</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

www.oenb.at
Lower growth

Government:
Unsustainable fiscal trajectory, deteriorating creditworthiness

Worsening fiscal balance

Provide monetary stimulus

Deleveraging & less bank lending

Lower bank asset quality

Central bank

Ease fiscal strains

Ease funding strains

Sovereign risk exposure

Need for public support

Financial sector:
Inadequate capital, need for public sector support

Fiscal consolidation
What Have Central Banks Done, What Can They Do to Stabilize Financial Markets?

- Overall provision of (excess) liquidity
- Targeted liquidity provision
- Forward Guidance
- Selective Asset Purchases

Bernanke (2009) lists more than 20 additional Programs and Measures of the Fed implemented in the course of the crisis.

Central Bank Measures in Times of Crisis: Provide Insurance Against Excessive (i) Financial Sector Instability and (ii) Financial Markets Instability
Eurosysten: Portfolio of Non-standard Monetary Policy Measures

• **Ample liquidity (to the banking system)**
  - Fixed rate full allotment (“unlimited liquidity provision”)
  - Long maturities (TLTROs), “funding for lending”
  - Change of eligibility rules for collateral
  - Change of interest rate corridor (“negative DFR”)

• **Forward guidance (mainly addressed to markets)**
  - On future interest rate path, on future liquidity amounts…

• **Asset purchase program (impact on banks and markets)**
  - Sovereign bonds, covered bonds, corporate bonds, ABS
  - Currently reduced from EUR 60 to EUR 30 billion per month
Forward Guidance As a (New?) Central Bank Tool to Steer Market Expectations

The ECB’s forward guidance

Key ECB interest rates

- expected to remain at present levels for an extended period of time
- and well past horizon of net asset purchases

Asset Purchase Programme (APP)

- **net asset purchases** intended to continue at monthly pace of €30 billion, until end-Sep 2018
- or beyond, if necessary & in any case until GovC sees sustained adjustment in path of inflation (SAPI) consistent with inflation aim
- if outlook becomes less favourable, or if financial conditions become inconsistent with further progress towards SAPI, stand ready to increase APP in size and/or duration
- Eurosysterm will reinvest principal payments from maturing securities for an extended period of time after end of net purchases, and in any case for as long as necessary
The Sequencing Challenge: Monetary Policy Exit from Non-Standard Measures Particular Market Sensitive

- End of Asset Purchases
  - €30bn per month till September 2018

- First Hike in Deposit Facility Rate
  - End of negative DFR

- First Hike in Main Refinancing Rate
  - Main signalling effect for change of monetary policy stance

- Balance Sheet Reduction
  - End of reinvestments

- Reduction of Excess Liquidity
  - Reduction of other elements of liquidity provision

**Money markets**
- O/N level
- Volatility
- Money market curve
- Expectations
- Market activity

**Other financial markets**
- Government bonds
- Corporate bonds
- Covered bonds
- ABS
- Yield levels
- Volatility / spreads
- Yield curve
- Expectations
- Market activity
- Scarcity

**Banking system**
- Profitability
- Liquidity conditions
- Refinancing conditions

**Absorption of excess liquidity**

**Higher key interest rates**

**APP tapering / phasing-out APP reinvestment**

---

**Note:** White fonts indicate price/rate effects/channels, while dark fonts show quantity effects/channels. Red arrows represent predominantly restrictive effects, while green arrows indicate potentially expansionary effects.

**Remember:**
- Bernanke’s Taper Tantrum of May/June 2013
- Stock Market Correction of February 2018
Any *(Tentative)* Conclusions?

- Financial crises are an **inherent characteristic** of our market economies.
- For good reasons most regulatory and supervisory efforts to mitigate crisis effects **target the banking system**…
  …as banks are the main transmission channel of financial shocks to the real economy, the negative effects of which **we want to avoid**.
- Nevertheless it should be kept in mind, that **most financial crises originate from financial market turbulences**.
- We should think about how to tackle these **origins of crises** more directly…
  …even if this seems to be more complicated as it primarily asks for a **change in behaviour of financial market participants**.
- Given the **rise of financial market fragility** over the last decades…
  …Central Banks are increasingly playing an important role in dealing with all aspects of financial crises …
  …as they are well equipped and able **to deal with both banking and market instability** at the same time.

However, a **stronger focus on financial market stability** might help to avoid future „surprises“ of crises and – the return of „This Time Is Different“ again?
Financial Stability: Are We Well Equipped to Deal With Potential Turbulence?

A Financial Market Perspective

Peter Mooslechner
Executive Director and Member of the Governing Board
Oesterreichische Nationalbank

Skopje, February 16, 2018