Collateral Frameworks
The European collateral framework and its implications for Asia

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"Money is economical power".
-Walter Bagehot (1873)

- At core of modern monetary and financial systems and economies: central bank money (liquidity)

- Money issued against collateral
  - Nature of collateral.
  - Terms of exchange: Collateral policy. Interest rate policy.

- Central bank collateral frameworks
  - Used every day, but opaque.
  - “Forgotten/ignored” element of monetary policy

Nyborg 2016: Collateral Frameworks: The Open Secret of Central Banks

- Objective: Bring to light functioning, reach, impact of collateral frameworks

- Use Eurosystem’s collateral framework as basis of illustration

- Lever analysis to study euro crisis
Central Bank Balance Sheets
Relative to 2004

All other banks

Bank of England

Q3

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• Investors: Central banks have become a source of risk and uncertainty
  – Slyngstad (former head of Norwegian “oil fund”): “Monetary policy does affect pricing in today’s market to such an extent that monetary policy itself has been a risk you have to watch” (April, 2015)
Central Bankers Have Expressed Concerns

“[a]s a result of the measures implemented during the crisis, central banks took much more risk onto their balance sheets, which could potentially lead to substantial losses.

In order to act appropriately, they need room to maneuver, which implies a sound central bank balance sheet with sufficient equity.”
-Thomas Jordan (2012)

“The unprecedented expansion of central banks’ balance sheets since the start of the crisis is certainly revealing. It shows that central banks’ balance sheets are becoming more and more exposed to economic risk and political pressure. Eventually, this may result in a substantial amount of negative capital in a central bank’s balance sheet. This is undesirable, because it could undermine a central bank’s credibility and independence...An additional concern for central banks is that unconventional monetary policy increasingly comes with some sense of ‘public unease’ about the role central banks play...The fact that criticism of central banks is creeping more and more into the mainstream debate – whether or not this is justified – implies that the public is looking increasingly critically at central banks. While this may not put central bank independence or central banks’ room for maneuver immediately at risk, it does signify that central banks may need to step up their efforts on transparency and accountability.”
-Klaas Knot (2013)
Collateral Framework

1. Set of eligible collateral banks can use to obtain central bank money (liquidity) directly from central bank
2. Quantity of central bank money per eligible collateral
   - E.g. in central bank repo

   \[ \text{Collateral value}_{it} = (1 - \text{haircut}_{it}) \times \text{Price}_{it} \]

   • Central bank provides money. Banks provide collateral.

**Euro area**

- Before QE, central bank money injected predominantly through repos
- 30,000 -- 40,000 securities on public list of eligible collateral
  - From government bonds to asset-backed securities (ABSs)
- Majority do not have market prices (fewer with market prices among lower-quality collateral)
- Haircuts are stale: updated every few years
Collateral Framework: Potential Impact

Financial markets
• Haircuts can affect different securities’ market prices, repo rates, and level of liquidity
  – Lower haircuts imply higher prices (ceteris paribus)

Real economy
• If collateral framework favors certain assets, expect more to be produced
• If collateral framework favors illiquid assets
  – May lead to misallocation of funds in real economy towards less liquid assets and investments
• “If central bank money is only available against igloos or igloo-backed securities, igloos will be built”
• Favoring illiquid assets in depressed economy may make it harder for economy to recover

Financial System
• Favoring illiquid assets may increase financial fragility
Eurosyste'm's Collateral Framework

1. Little role for market forces or market discipline
   - E.g. theoretical prices, stale haircuts

2. Favors illiquid and risky collateral

3. Systemic arbitrage

4. Important role of ratings and rating agencies
   - Magnified by highest ratings rule and A-/BBB+ & BBB-/BB+ haircut thresholds
   - High, pivotal ratings by DBRS have increased collateral values of Italian, Spanish, and Portuguese gov’t bonds by around EUR 200-300 bill

5. Government guarantees used to upgrade collateral and increase collateral values

6. Used to facilitate support to banks and sovereigns

7. Accommodative

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Eligible Marketable Assets

Data source: ECB webpage; collateral data downloaded on August 13, 2018. Based on nominal amounts (averages of values at end of month, quarters for '12 to '17).

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Use of Collateral

Data source: ECB webpage; collateral data downloaded on August 13, 2018.
After valuation and haircuts (averages of values at end of month, quarters for '12 and '17).
Eligible Marketable Assets and Eurosystem Lending

Data source: ECB webpage; collateral data downloaded on August 13, 2018. Based on nominal amounts (averages of values at end of month, quarters for '12 to '17).

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• More Italian banks had collateral with government guarantees than the rest of the euro area put together
• Guarantees granted to take advantage of 2nd three-year LTRO (ca 500 billion euros injected)
Number of Eligible Collateral by Country

- Discontinuity: Unsecured bank bonds trading on non-regulated markets

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Liquidity Policy

Excess Liquidity and Spiral of Stronger Policies

Data source: ECB

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Eurosystem Purchase Programs and Monetary Base

From March 1, 2007 to November 23, 2020. Source: ECB

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Target 2 Balances

Source: ECB. Time-Period: 21.03.2007-18.11.2020
Lessons and Challenges

1. Institutions, governments, markets respond to incentives built into collateral framework

2. If de-emphasize market forces and discipline, other forces step into the vacuum

3. An accommodative collateral policy that is generous to illiquid and risky collateral stimulates the creation of such collateral and underlying real assets
   a. Creates "need" for further accommodation. Vicious circle.
   b. Obstacle to market integration


**Challenges under a common collateral framework across multiple sovereign nations**

1. What to incentivize? Achieving neutrality?

2. Where to strike balance between market forces and discipline versus accommodation?
   a. An accommodative policy may be difficult to reign in when problems arise

3. How to generate role for market forces and discipline?
   a. Eligible collateral, haircuts, rating agencies, secondary market for eligible collateral


5. Sovereignty
Concluding Remarks, 1

• Money matters. Monetary architecture matters.

• Money is issued against collateral
  – Places collateral framework at the core of the monetary and financial system
  – Potentially wide impact: asset prices, real economy

• Collateral frameworks are powerful monetary policy tools

• Eurosystem’s collateral framework
  – Impairs market forces and discipline
  – Favors lower quality collateral
  – Influential role of rating agencies
  – Accommodative – hindrance to market integration
  – Admits systemic arbitrage: before and after crisis (Fecht, Nyborg, Rocholl, Woschitz, SFI wp, 2018)
Concluding Remarks, 2

• Why such a small role for market forces and discipline?
  – Accommodate different countries of euro area. Ease constraints of single currency.
  – “Channel liquidity where it is needed”

• Lack of market forces and discipline
  – can contribute to financial instability
  – creates vacuum for other forces: e.g. politics

• ECB policies
  – Ever stronger
  – Arguably, indirect bailouts of banks and sovereigns
  – Can't resolve euro's fundamental problem – insufficient constraints on sovereigns

• Collateral policy: market discipline vs. accommodation
  • Employ market forces to impose discipline on the system