Future Challenges: Old Problems in New Shapes

ESADE MSc in Finance, Welcome Week

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1. Banks

Widespread misinterpretation of what takes to be a bank and why banks are needed

- Banks create money!
  - Role in money creation: help the monetary policy trasmision mechanism. Rather than being a problem, it is a blessing! MP can be more efficient/powerful.
- Deposit taking institutions: short term liabilities.
- Maturity transformation: Banks are the sole financial intermediaries that can transform short term liabilities into long term loans.
  - Dilution of risks: risks are diversified within the balance sheet (different vintages, sectors, loan size, guarantees, etc.) and capital (own funds help) to absorb losses. Markets do not dilute risks, they distribute risks.
- Central role in payment systems: retail and wholesale, national and international.
- Heavily regulated and supervised:
  - Transparency/conduct of business rules/solvency/competition rules/resolution/deposit insurance…
  - Supervisors apply an intrusive supervision aimed at ensuring individual health of Banks and at the same time preserving financial stability of the banking sector and the financial system.

2. Dynamic forces in the Financial System

What are the prevailing characteristics of the modern financial system?

- Financial Innovation: new instruments and new intermediaries that increase efficiency or offer new risk/reward combinations.

- Regulatory Financial Arbitrage: activities will flow to areas that are cheaper in terms of regulatory costs.
    - Capital and beyond (SPACs and IPO rules).

- Greed/Scientific Illusion (“this time is different”).

- Backward looking regulation (regulating the last crisis, not the next one) versus a dynamic financial sector.

3. The Global Financial Crisis

A quick review of the main elements

- A banking crisis? A bit more complicated than that.

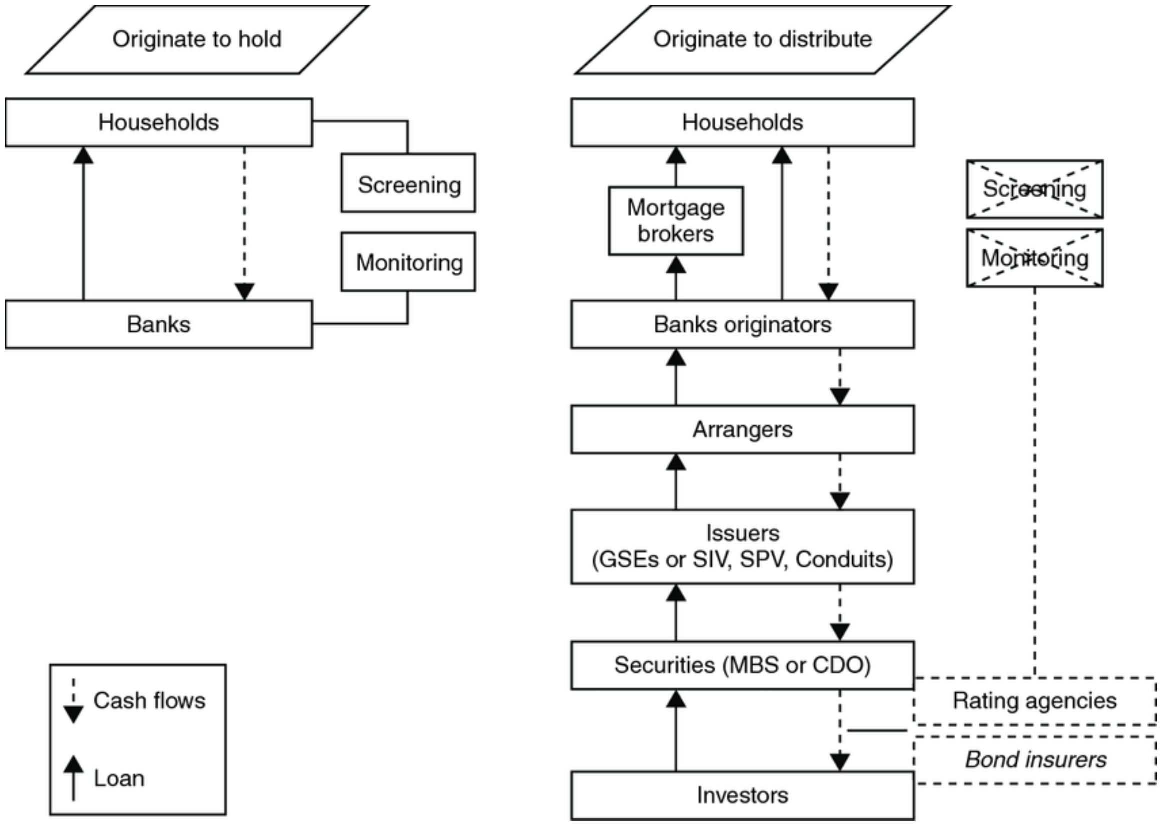
- Multiple new players/ new products.

- Mix of:
  - old problems in new cloths:
    - Credit risk.
    - Leverage.
    - Lack of liquidity.
    - Opacity of risks allocation.
  - new problems:
    - Credit risk transfer beyond banks.
    - Complexity of the financial system.

- Role of innovation and arbitrage.

4. The Originate to Distribute Model

From lend to hold in the bank´s balance sheet to market distribution



5. The 2007/08 Crisis

From “financial turbulences” to meltdown

- Step 1: Summer 2007. Illiquidity of credit risk.

- Step 2: Lehman collapse and AIG Rescue. Panic around credit risk and value of financial assets.

- Problems:
  - Excessive leverage inside and outside the banking sector.
  - Poor credit risk selection.
  - Opacity and valuation problems for complex financial instruments (fair value level 3 and mark to myth).
  - Complexity both of balance sheet and of interrelations among players.
  - Lack of system wide view of financial stability (lack of macroprudential policies).
  - Low capital levels at Banks (not proportional to risks taken).
  - Different levels of intensity of supervisión among countries and within single jurisdictions.

6. The Good, the Bad and the Ugly

Who´s who in the GFC

- The Good:
  - Universal banks like JP Morgan.
  - International commercial banks geographically diversified: Santander, BBVA.
- The Bad:
  - New Shadow Banking operators.
  - SIVs (SPVs sponsored by banks).
  - Insurance Companies trading credit insurance. AIG, Monolines.
  - Investment Banks (US). Broker/Dealer in EU jargon (they were not banks, they didn´t take deposits).
- The Ugly: Commercial banks with wrong footing. WAMU, Fortis, most saving banks in Spain.
- There was no single “right” business model. We saw problema in investment Banks (Lehman Brothers), in universal banks, in mortgage banks (Northern Rock), in internationally diversified banks (Dexia, Fortis), in regional banks (Spanish Cajas).

7. “The GFC was a banking crisis.”- Sure?

It was a credit crisis but not only a bank crisis

- There were banking crisis along the way, but the cause of acceleration of the crisis in 2008 did not lie within them, but on investment banks, non-traditional insurance companies.

- US Investment Banks were not “real” banks.
  - They were not deposit takers.
  - They were not supervised by the Fed/OCC.
  - They did not have access to Emergency Liquidity Assitance of central banks (ELAs).
  - They were what we call in the EU broker/dealer or investment firms, but with a lighter regulation than in the EU.

- Non traditional insurance companies
  - Monolines: Insurers of credit risk, already disappeared.
  - AIG:
    - The counterpart at the global level of the Credit Default Swap Market (CDS).
    - The world survived to the collapse of Lehman, but couldn’t have survive the collapse of AIG.
    - Rescued and wind up by the US Goverment.

8. The Banking Crisis Component of the GFC

Some banks were also actors in the crisis

- Why some banks (WAMU in US, Fortis in the EU) collapsed?
- Two main reasons:
  - Interconnectedness: banks were at the core of the Originate to Distribute Model.
  - SIVs:
    - SPVs sponsored by banks (liquidity providers of last resort).
    - Should have been consolidated in the banks' balance sheet but weren´t, and financial statements conveyed a wrong message of Banks´capital strength and liquidity.
- Bail out. Keep the system working. Credit Channel (avoid a credit crunch as in 1929), but also preserving the monetary policy transmission mechanism.

9. Post GFC reforms, centred around Banks (BCBS,FSB, G20)

Financial reforms geared to make the financial system more resilient

- Basel III
  - Banks regulatory capital increased by three times (10 times for trading book position).
    - Increase in Capital buffers.
  - Increased liquidity in banks' balance sheet.
    - Structural: NSFR.
    - Short term stress (30 days): LCR.

- Resolution
  - Procedure+instruments (TLAC)+authorities to wind up any bank+resolution fund.
  - Ensure Financial Stability and protect taxpayer money (limit bail outs).

- Too big to fail.
  - Not just banks, but insurance, market infrastructure, etc.

10. The structure of banking regulation

International rule makers

G20

- **Financial Stability Board (FSB)**
  Collaboration with IMF and OECD

- International standard bodies and regulatory forums:
  - **IAIS**
  - **IASB**
  - **BCBS**
  - **IOSCO**

EU

- **EU legislators**:
  - Council of the EU
  - European Parliament
  - European Commission

- **European Systemic Risk Board (ESRB)**

- **European Supervisory Authorities (ESA)**
  - European Baning Authority (EBA)
  - European Insurance and Occupational Pensions Authority (EIOPA)
  - European Securities and Markets Authority (ESMA)
  - Forthcoming: European AML Authority

Eurozone-Banking Union

- **Single Supervisory Mechanism (SSM)**
  - European Central Bank (ECB)
  - National Competent Authorities

- **Single Resolution Mechanism (SRM)**
  - Single Resolution Board (SRB)
  - National Resolution Authorities

National Governments, supervision and resolution authorities

11. The Shadow Banking Side, work by FSB (I)

New area of concern since the GFC

- Non Bank Financial Intermediation.
  - "Core": Credit risk, leverage, maturity mismatch.

- What do we know after 13 years? Very little.
  - Some idea of size. And growing!
  - Some idea of complexity (NY Fed).
  - No idea of interconnectedness.

11.The Shadow Banking Side, work by FSB (II)

The Shadow Banking Sector

- **The non-bank financial intermediation (NBFI) sector** is a broad measure of all non-bank financial entities and comprising all financial institutions that are not central banks, banks or public financial institutions.

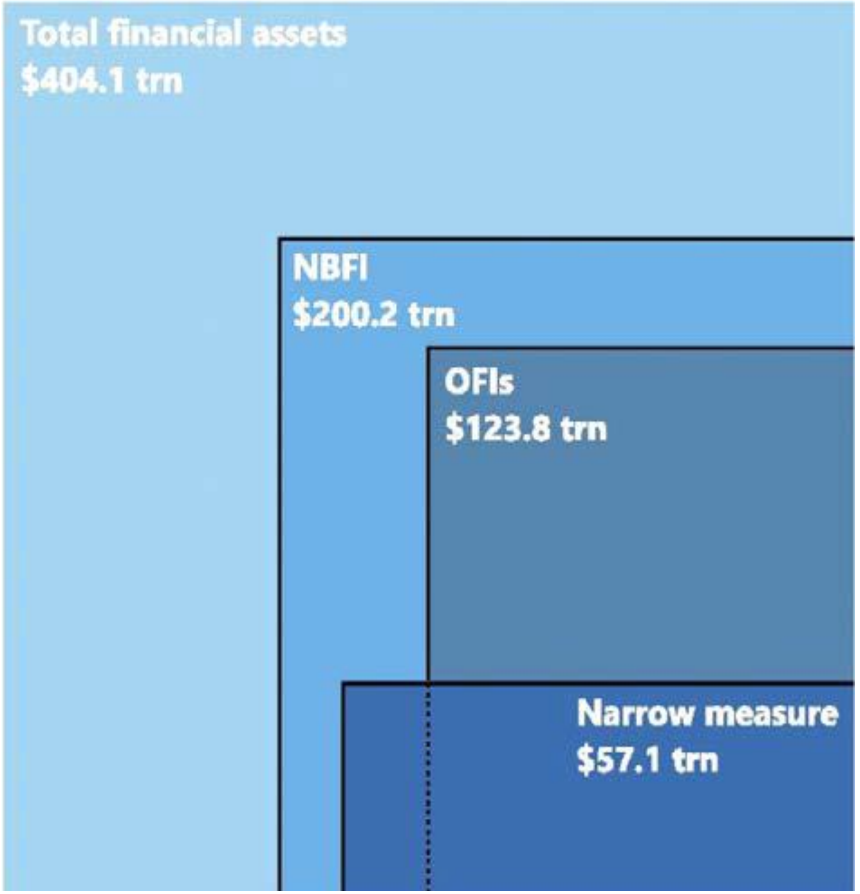
- **OFIs (other financial intermediaries)** is a subset of the NBFI sector, comprising all financial institutions that are not central banks, banks, public financial institutions, insurance corporations, pension funds, or financial auxiliaries. OFIs include, for example, investment funds, captive financial institutions and money lenders (CFIMLs), central counterparties (CCPs), broker-dealers, finance companies, trust companies and structured finance vehicles.

- **The narrow measure of NBFI** (or “narrow measure of non-bank financial intermediation”) comprises a subset of entities of the NBFI sector that authorities have assessed as being involved in credit intermediation activities that may pose bank-like financial stability risks (i.e. credit intermediation that involves maturity/liquidity transformation, leverage or imperfect credit risk transfer) and/or regulatory arbitrage, according to the methodology and classification guidance used in the FSB’s annual monitoring exercise. The narrow measure comprises five economic functions or activities.

11. The Shadow Banking Side, work by FSB (III)

Size of monitoring aggregates and composition of the shadow banking sector (at the end of 2019)

Source: Jurisdictions' 2020 submissions (national sector balance sheet and other data); FSB calculations.



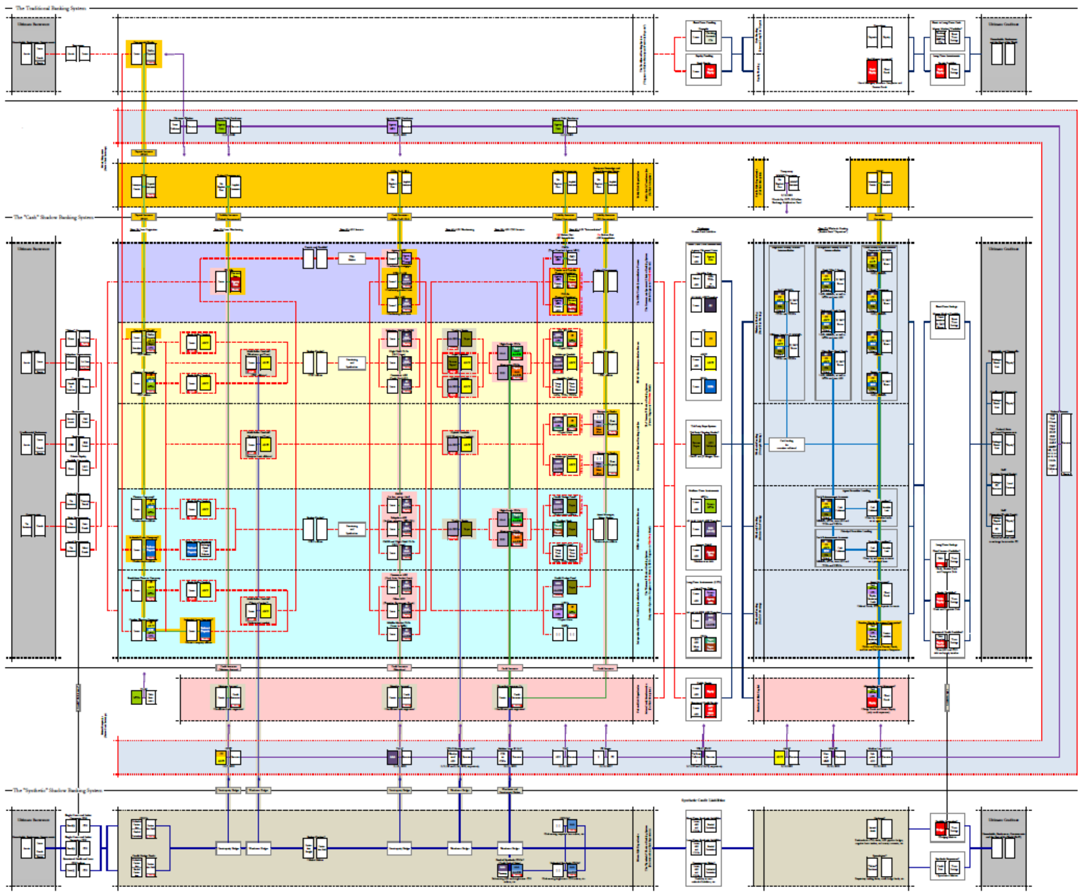
Composition of the narrow measure[2]

Economic Functions	Size (USD trillion)	Share (%)	Change in 2019[3] (%)
EF1 (*collective investment vehicles with features that make them susceptible to runs*)	41.7	72.9	13.5
EF2 (*lending dependent on short-term funding*)	3.9	6.8	6.1
EF3 (*market intermediation dependent on short-term funding*)	4.7	8.2	5.4
EF4 (*facilitation of credit intermediation*)	0.5	0.8	16.6
EF5 (*securitisation-based credit intermediation*)	4.8	8.4	2.5
Unallocated	1.7	2.9	7.0
Narrow measure (total)	**57.1**	**100**	**11.1**

[2] Net of prudential consolidation into banking groups.
[3] This table does not reflect the percentage contributions to the growth rate and thus the total does not add up to the sum of the components.

12. A Stylized Description of the US Shadow Banking Sector

Complexity, interconnectedness



The Federal Reserve Bank of New York, November 2009.
Source: *Shadow Banking* (Pozsar, Adrian, Ashcraft, Boesky (2010)).

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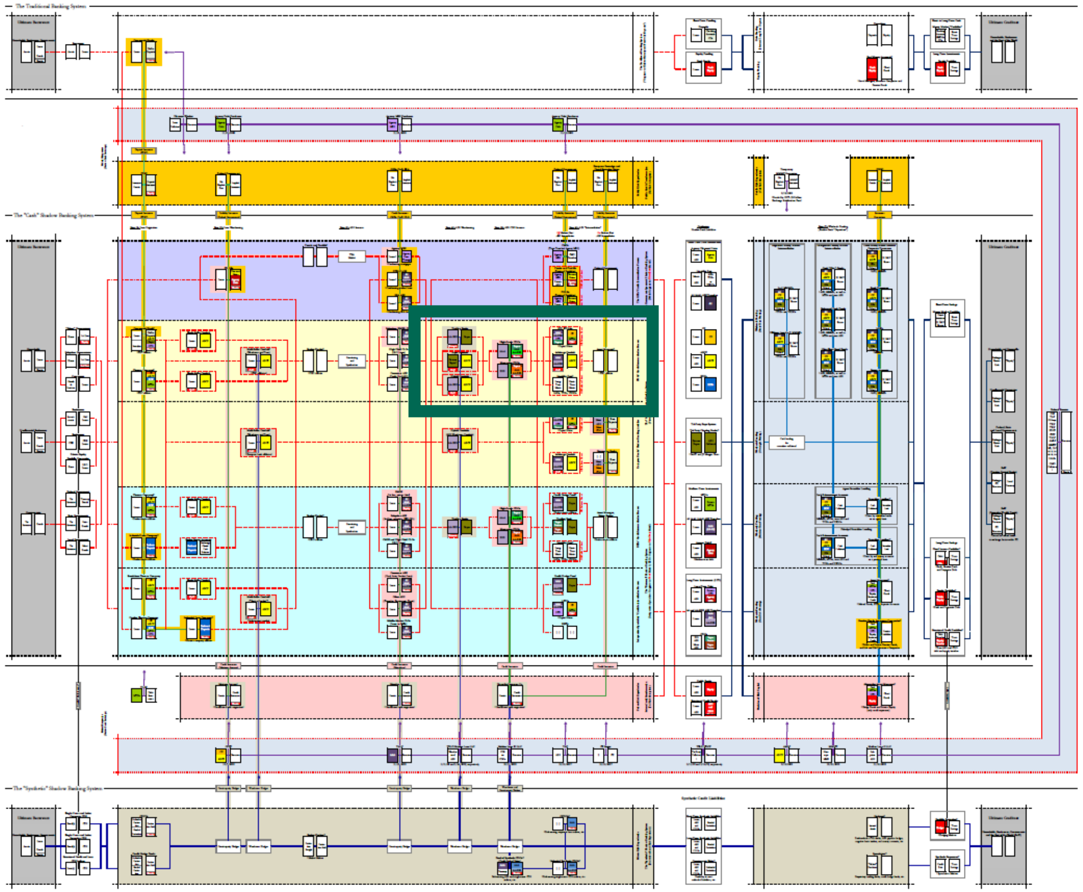

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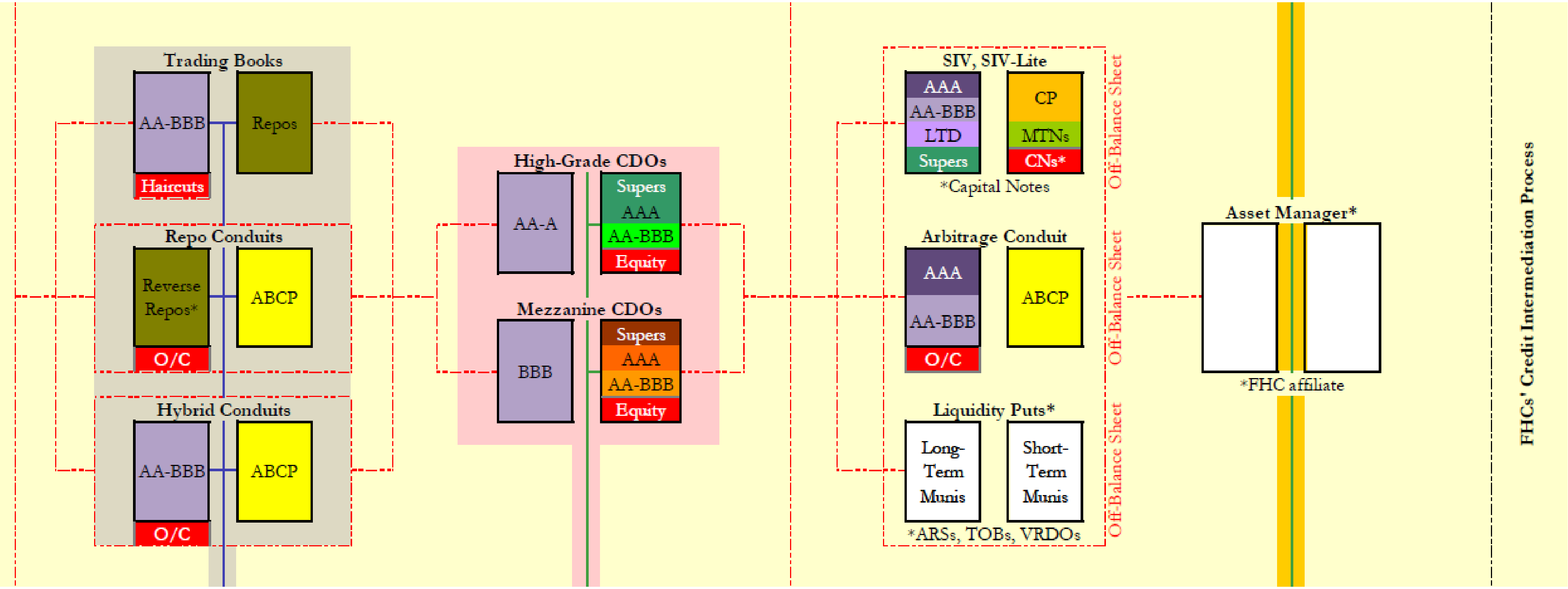

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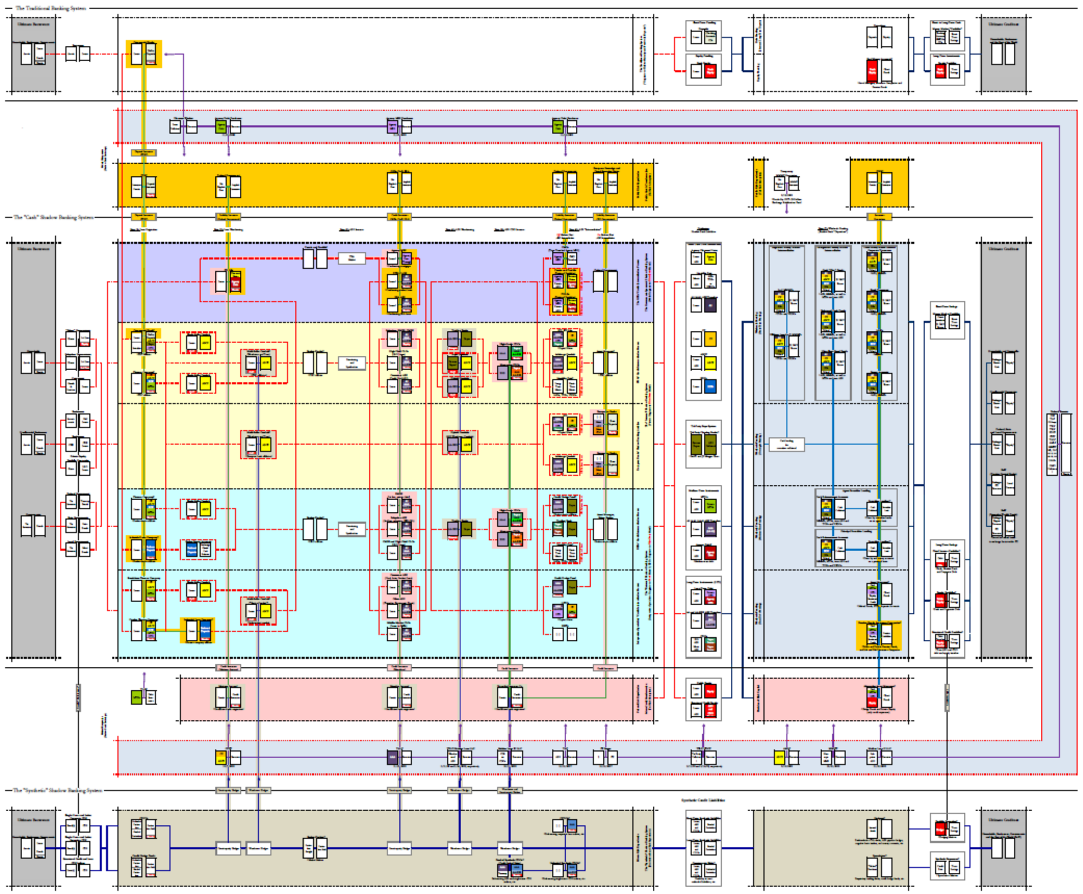

13. The New Financial System: The Digital and Green Revolution

Elements of the Digital Revolution

- Technology has always been at the core of the financial system: this is not new.

- But the evolution seems to be acelerating. From linear to exponential?

- Covid has been a game changer and shitfed demand from analog channels to digital channels.

- But pre-Covid we have witnessed the emergence of new players:
  - Fintechs: specialized in precise segments (credit cards, payments, quick loans), no legacy systems, deconstrution of Banks' business model?
  - Bightechs: powerful thanks to their network externalities with 10% of their revenues already derived from financial services.

- Banks:
  - Where to cooperate?
  - Where to compete?
  - Where to give up, as well?

14. CBDC and crypto currencies

Technology driving changes (Blockchain/DLT)

- Three characteristics of money/currencies:
  - Unit of account.
  - Store of value.
  - Medium of Exchange.

- Crypto currencies will not compete with “true” money.
  - Their value is too volatile to become a unit of account or a store of value.
  - They are a very limited medium of exchange.
  - Cryptos as a form of “incomplete” money.

- CBDC: oficial crypto currencies issued by Central Banks.
  - They are digital money; they will compete with notes and coins.
  - Will they compete with deposits? In principle, no…but probably yes:
    - remains to be seen.
    - if it does compete, it will have a very profound impact on the financial system and the Conduit of MP.

15. The Green Financial Revolution (I)

Covid, being a consequence of human pressure on the environment (COVID; SARS; MERS; HIV; Ebola; avian flu;swine flu), has accelerated the fight against climate change

- Incredible push:
  - 1.000 major initiatives around the world in the area of sustainability and finance.
  - Up to 5.500 if we include broarder aspects such as reporting, supervision policies, stress tests, etc.

- New instruments:
  - Green, social and sustainable bonds and loans.
  - Green government bonds.
  - Social impact bonds and loans.
  - Green covered bonds.
  - Derivatives for hedging climate risk.

15. The Green Financial Revolution (II)

The fight against climate change is changing also the institutional landscape of the financial system

- New players:
  - Official sector: European Commission (the High Level Expert Group, the Technical Expert Group, and the Finance Platform, the Sustainable Finance Action Plan, with the well-known taxonomy regulations and disclosure requirements for public companies), the EBA, but also IOSCO, the NGFS, the Basel Committee at the supra-European level or at the local level the Climate Change Office in Spain and the various ministries involved in the issue, with special emphasis on the Vice-Presidency for Ecological Transition.
  - Private sector: New suppliers such as external verifiers, certifiers, ESG rating providers, carbon footprint measurement companies, specialists in providing market information on all ESG-related issues, specialists in green financial risk measurement, and specialists in standarization (benchmarks), with a mix of incumbents and challengers in each of these áreas.
- Challenges: regulation, data, methodologies to measure progress, etc.

16. The Extended Shadow Banking Sector

Are we safe after the financial reforms post GFC?

- Strategy of the Post GFC Regulation: make the core if the Financial System, the banks, safer.
  - "Nuclear reactor" strategy works only if there are no leakages.
  - The reform rightly tackled the issues of excessive leverage, solvency, liquidity, resolution, opacity of derivatives markets (creation of CCPs, Data Repositories for OTC derivatives) and complexity (TBTF) in the banking sector.
  - But it left the rest of the financial system either untouched or with an unfinished new regulation.

- Are there leakages? Yes, and:
  - We don't know where.
  - We don't know how much water/risk is flowing out and where it is going to.

- The Digital and Green Revolution:
  - From Shadow Banking 1.0, pre-GFC, to Shadow Banking 2.0, post-GFC, and now to Shadow Banking 3.0, after the Digital and Green Revolution.
  - Greater complexity and diversity.

17. Conclusions: How to avoid the next financial crisis

A new approach needed for Financial Regulation in this New Brave World

Elements:

- Soundness of the core (Banks) will not suffice to guarantee financial stability. Stop obsession over Banks!

- Need to equalize the competitive balance between banks and (new and old) shadow banking players.
    - It is not an issue of fairness, but of financial stability!

- Authorities need to control the shadow banking sector.
    - Improve knowledge: complexity/interconnectedness, where is risk flowing to, how risks are being transformed and which new risks are being generated. MAP THE RISKS!!
    - Regulate what needs to be regulated: entity-based regulation, activity-based regulation, or a combination of both (for bigtechs, for instance).
    - Greater discretionary powers for financial supervisors beyond their traditional field.

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