Rule evasion by the state: How US government agencies laid the foundations for the shadow banking system (1948-1966)

2nd presentation Scholar in Residence

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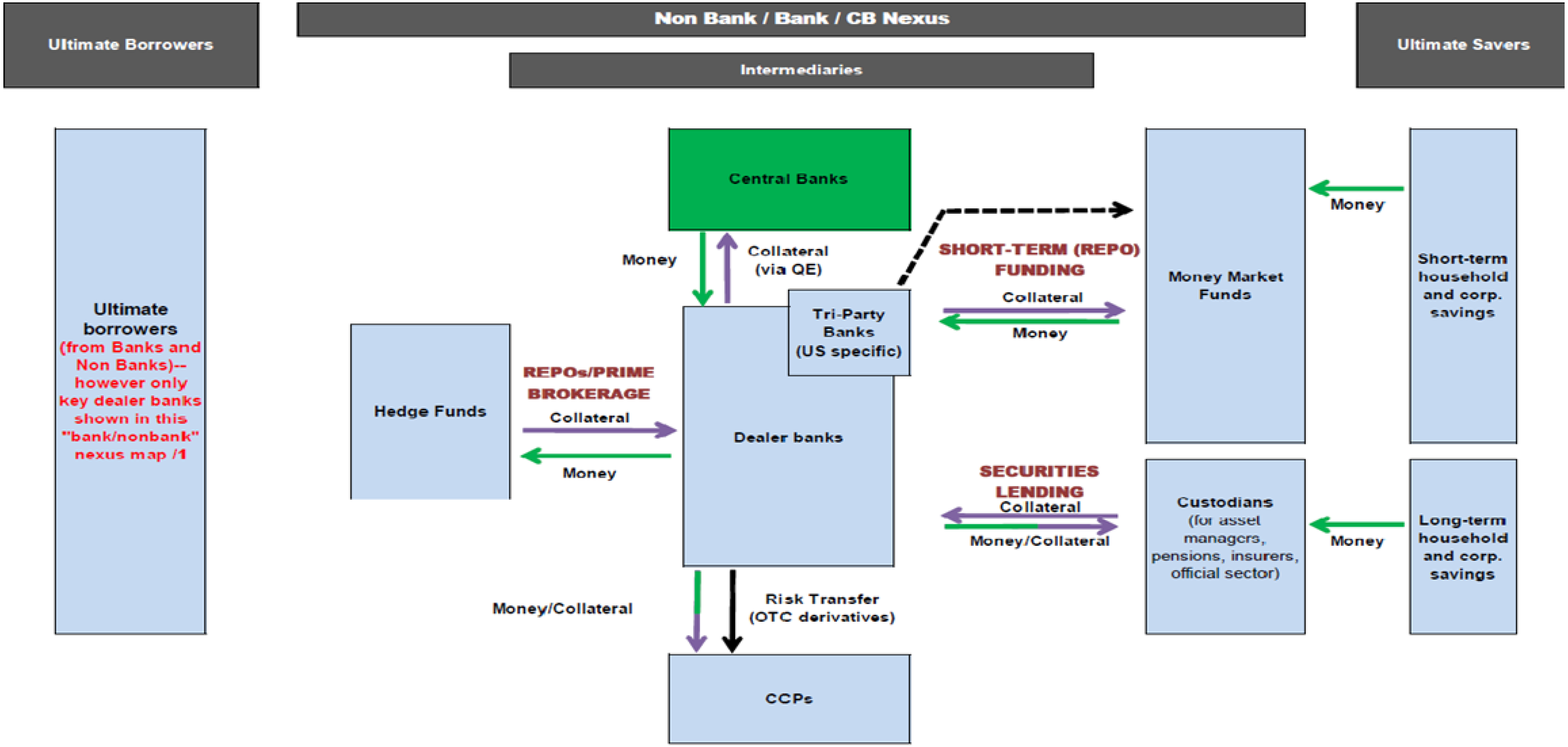
Talk structure

1. Recap: what is shadow banking and which role do central banks play in it?
2. Rethinking the origins of shadow banking: Overcoming the liberal imaginary
3. Historical Narrative: The Federal Reserve at war and its search for autonomy (1941-1951)
4. Post-Accord (1951-1966)
5. The 1966 Credit Crunch
6. Conclusion

What is shadow banking?

- Low margin, high volume activity outside of banking regulation
- «Money market borrowing for capital market lending», on or off-banks balance sheet
- Liquidity, maturity and credit transformation in a chain of financial intermediaries
- based on cash-equivalent money market instruments (Repurchase Agreements)



/1 Figure 1 is a snapshot of "z" or the nonbank/bank nexus explained in the analytical framework. The dealer bank depicted above are active in the cross-border collateral intermediation. . So "zi" is important for dealer bank "i". The ultimate borrowers also borrow directly from commercial banks; however they are not shown in this figure as their interaction with nonbanks is minimal; hence "zi" is negligible.

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Central banks at the heart of shadow banking

- Right from the beginning, shadow banking was a state project driven by the Federal Reserve
- Rather than a haphazard bystander, who joins in the practices from cunning private actors from time to time and understands little, the Fed is actually the initiator of these practices and provides the public liquidity backstop for these practices from the beginning
- These practices then spread beyond the public liquidity backstop, and so the Fed might be forced to backstop new agents, but it can never question the initial legal arrangement upon which its power to control the money supply rests

Shadow Banking as Financial Statecraft

- **Argument**: Shadow banking is an outcome of **state-driven financial engineering**, not just market innovation.
  - Fed & Treasury played active roles through legal and regulatory creativity.
- **Political Economy of Liquidity**:
  - A **"world-making"** process with winners and losers (establishing a liquidity regime).
  - Central banks, private non-bank dealers, and economists form a powerful **coalition of interests**.
- **Key Takeaway**:
  - Understanding shadow banking requires rethinking state-market boundaries and historical narratives.

Rethinking the origins of Shadow Banking

The difficult task of rethinking the state-market interaction at the heart of financial markets

- Initial sociological research on shadow banking followed implicitly an assumption of private practice first, state intervention second
- In my own work on shadow banking, I tried to show that „embedded regulators" could make much of a difference in the evolution of the interpretation of rules and regulations in markets, and hence market evolution (Thiemann and Lepoutre 2017, Thiemann 2018)
- Yet, I failed to jump over the boundary of the imaginary, even incapable of imagining that state actors could come first (also due to not looking at US, at least initially)

The liberal imaginary on money and finance

- Once there was a private market in money
- Then came the state (state of nature thinking, from Locke to Smith)
- From this imaginary, we inherit the idea that private activity comes first and the state comes back in to regulate
- Regulatory dialectic: first, private moves, then public reacts
- Strong counter-movement by heterodox economists and anthropologists of money

Graeber‘s 5000 year of debt

- Based on Chartalism and the Keynesian position of hybridity, a strong critique of this imaginary has developed
- State is always present from the beginning in the creation of money (money of account) and in defining which forms of money can answer to the debts expressed with it
- While there is an acknowledgement of bank money as a way to circumvent potential sovereign restrictions (Keynes 1930), this imaginary leads us to expect a very different dynamic (the state is there at the very beginning of the motion and he is almost always there)
- Can he also initiate these market practices?

Where did shadow banking come from?

- Story 1: Postwar financial innovations circumventing New Deal regulations separating banking and capital markets (Minsky e.g. 1957) → **tragic, inevitable consequence of profit seeking**

- Story 2: Beginning in 1970s market bailouts by Federal Reserve validated rule-evading shadow banking innovations which were later institutionalized by legal amendments to bankruptcy laws (e.g. Konings, 2011; Wansleben, 2020) → **governmental agency important but only reactively following rule-evading market innovations**

- Our story: **shadow banking was actively facilitated by US government agencies in earlier postwar period**

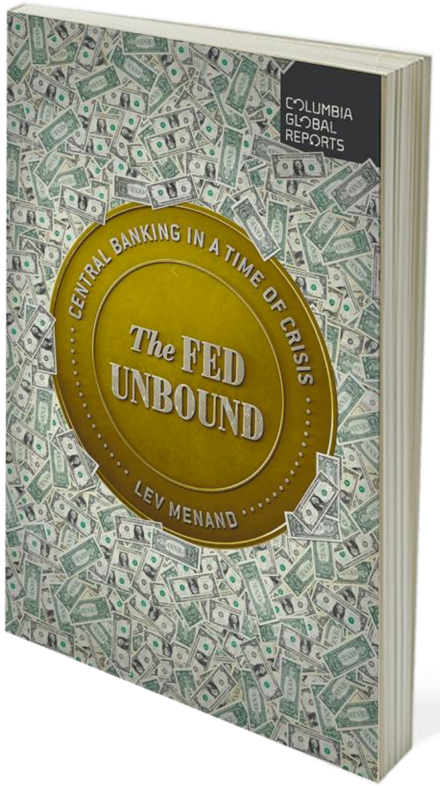
2. Rethinking the origins of shadow banking

- Scholarship increasingly understanding financial markets as a source of ‘infrastructural power’ for states (e.g. Konings, 2010; Braun, 2020; Walter and Wansleben, 2020)
- Historical work has shown:

➢ The construction of repo markets as the backbone for monetary policy transmission in the Eurozone (Gabor 2016)

➢ The role played by the European Central Bank in preventing a financial transactions tax on repurchase agreements (Braun 2020)

➢ The “creative lawyering” required for the Fed to extend repurchase agreements to dealers in postwar period (Menand and Younger, 2023)



"the Fed played a pivotal role in allowing deposit alternatives to emerge at scale, as it nurtured many shadow banks during the second half of the twentieth century and helped them to erode the safeguards Congress built into the American Monetary Settlement during the New Deal." (Menand, 2022: 106)

Menand is right **but**:

- Insufficient evidence to support such a strong statement
- Not just the Fed but a wider array of US government agencies were involved
- No theorization of the motives and political dynamics

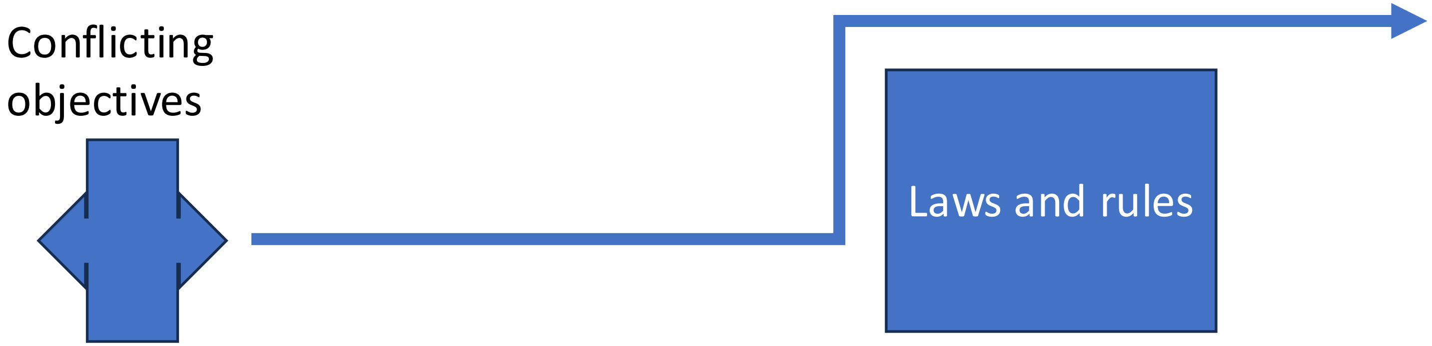
Thus, **our project**:

- Comparative historical analysis of the emergence of shadow banking (repurchase agreements) in postwar period focusing on governmental agency
- Theorization of rule evasion by the state

Conceptualising “rule evasion by the state”

Definition: Rule evasion by the state: **rule evasion by regulated state actors which is actively enabled and facilitated by the administrative authority for interpretation of laws they have been granted**.

Motivation: State agents do this because they **cannot reconcile conflicting objectives operating within legislation and rules they are unable to reform**. –> creative lawyering



New practices of uncertain legal and normative status but which **permit reconciliation of conflicting regulatory objectives**

Social signatures of elite rule evasion

- Rule evasion by state agency will provoke **factional intra- and inter-organizational struggles** emerging from disagreements over how to prioritize conflicting objectives and to what extent rule evasion is necessary.

- ➢ Ideological (desired ends)
- ➢ Strategic (best means to desired ends)
- ➢ Structural (institutional autonomy to achieve desired ends)

Rule evasion by the state: Rethinking the imaginary

- The Fed is also subject to regulation: it is an administrative authority and has market agency
- The Fed engages in „creative lawyering“ to justify providing loans to broker-dealers (it could be deemed both)
- It does so first in the 1920s and then repeatedly in 1948 and 1950/1955: declaring the repurchase agreement a sales and repurchase of a security rather than a collateralized loan in this agreement is an act of rule evasion from above
- It can only be understood if we take into account the interests of the Federal Reserve at this particular point in time and why it needed repos

Repos as part of a governmental project of the Fed

- The Fed, in 1951 finds itself in a very peculiar situation: it wants to gain independence from the Treasury to fight inflation, while guaranteeing the Treasury safe financing
- To fight inflation, it needs to tighten monetary conditions, but to secure treasury financing it needs to provide ample funding and incentives for private market actors to buy treasuries and trade them in liquid markets
- Repos to broker-dealers are the answer to that contradiction

The historical narrative

Great Depression and Changes in Banking Law

- Great Depression seen as the outcome of merger of broker-dealers and large money center banks, using deposit funding for stock market speculation (securities affiliates)
- Therefore, a separation between commercial banking and investment banking was installed (Glass Steagall Act 1933), allowing banks only to trade in government securities and barring broker-dealers from direct access to the discount window
- Banking Act of 1935 confirms this and specifically limits what the Fed can lend against and to whom (Open market operations allowed, „buying and selling“, not lending)

5. The Federal Reserve at war and its search for autonomy (1941-1951)

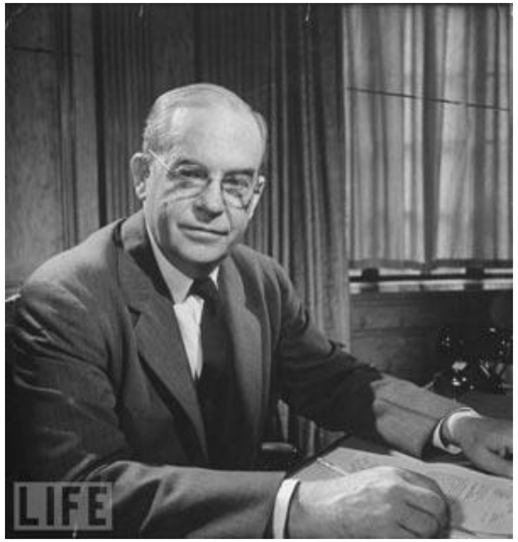
- With the US’s entrance into World War 2 the Federal Reserve is enlisted to support fixed interest rates and keep Treasury borrowing costs low
- Fed subordinated to the Treasury and its debt management function
- Monetary policy impossible due to volume of US treasuries on Fed balance sheet (20.2% of nominal GDP) and pressure by Treasury to keep interest rates low
- Unable to satisfactorily respond to postwar inflation surge

US postwar inflation surge

Figure 6: U.S. Inflation, 1944–49

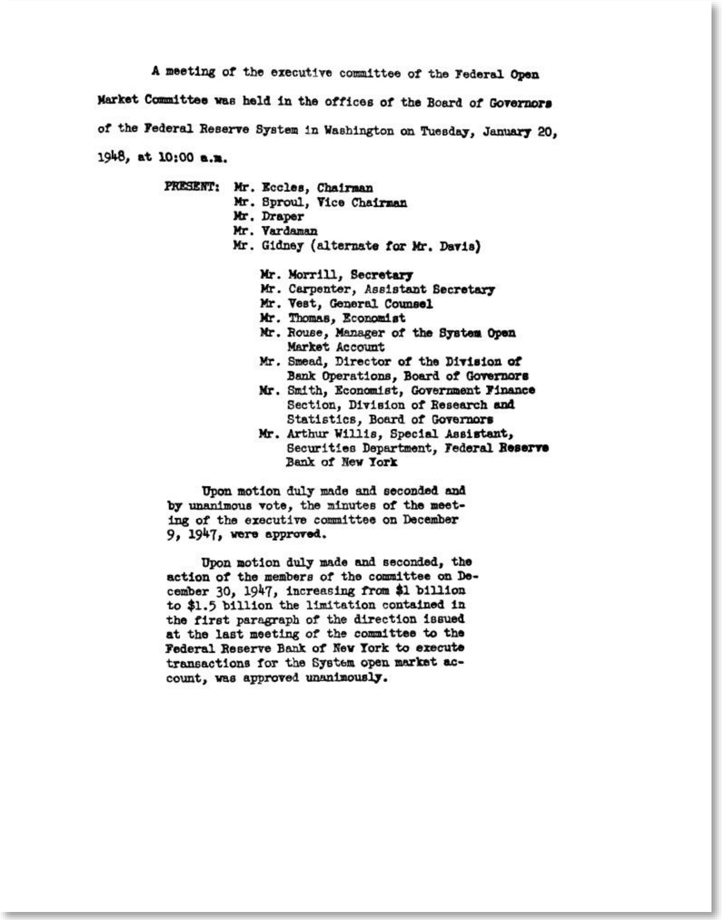
Note: Data depict year-ago percentage change for all items in a U.S. city average.
Source: The monthly consumer price index from the Federal Reserve Bank of St Louis

The reintroduction of repos



- Robert Rouse (Assistant Vice President in the Securities Department of NY Fed) writes a memo to Allan Sproul (President of NY Fed, pictured) in 1947 requesting to revive repurchase agreements
- Aim is to assist securities' dealers in maintaining inventory of Treasuries and shrink Fed holdings
- Federal Open Markets Committee authorizes Fed to begin repurchase operations in 1948
- **Hypothesis**: designed to restore monetary policymaking autonomy when unable to reconcile debt management and inflation reduction objectives

Conditions for repurchase operations



A meeting of the executive committee of the Federal Open Market Committee was held in the offices of the Board of Governors of the Federal Reserve System in Washington on Tuesday, January 20, 1948, at 10:00 a.m.

PRESENT: Mr. Eccles, Chairman
Mr. Sproul, Vice Chairman
Mr. Draper
Mr. Vardaman
Mr. Gidney (alternate for Mr. Davis)

Mr. Morrill, Secretary
Mr. Carpenter, Assistant Secretary
Mr. Vest, General Counsel
Mr. Thomas, Economist
Mr. Rouse, Manager of the System Open Market Account
Mr. Smead, Director of the Division of Bank Operations, Board of Governors
Mr. Smith, Economist, Government Finance Section, Division of Research and Statistics, Board of Governors
Mr. Arthur Willis, Special Assistant, Securities Department, Federal Reserve Bank of New York

Upon motion duly made and seconded and by unanimous vote, the minutes of the meeting of the executive committee on December 9, 1947, were approved.

Upon motion duly made and seconded, the action of the members of the committee on December 30, 1947, increasing from $1 billion to $1.5 billion the limitation contained in the first paragraph of the direction issued at the last meeting of the committee to the Federal Reserve Bank of New York to execute transactions for the System open market account, was approved unanimously.

- Select Federal Reserve banks may extend a repurchase operation with a securities dealer for up to 15 calendar days
- Interest rates should not be below the discount rate offered to member banks
- Cover only short-term government securities
- Be used “only in periods of strain, with care and discrimination, as a means of last resort” (FOMC minutes, 20 January 1948: 9)
- Chair Eccles unsure about necessity but Governor Sproul justifies as them as “minor instrument” and “not important”

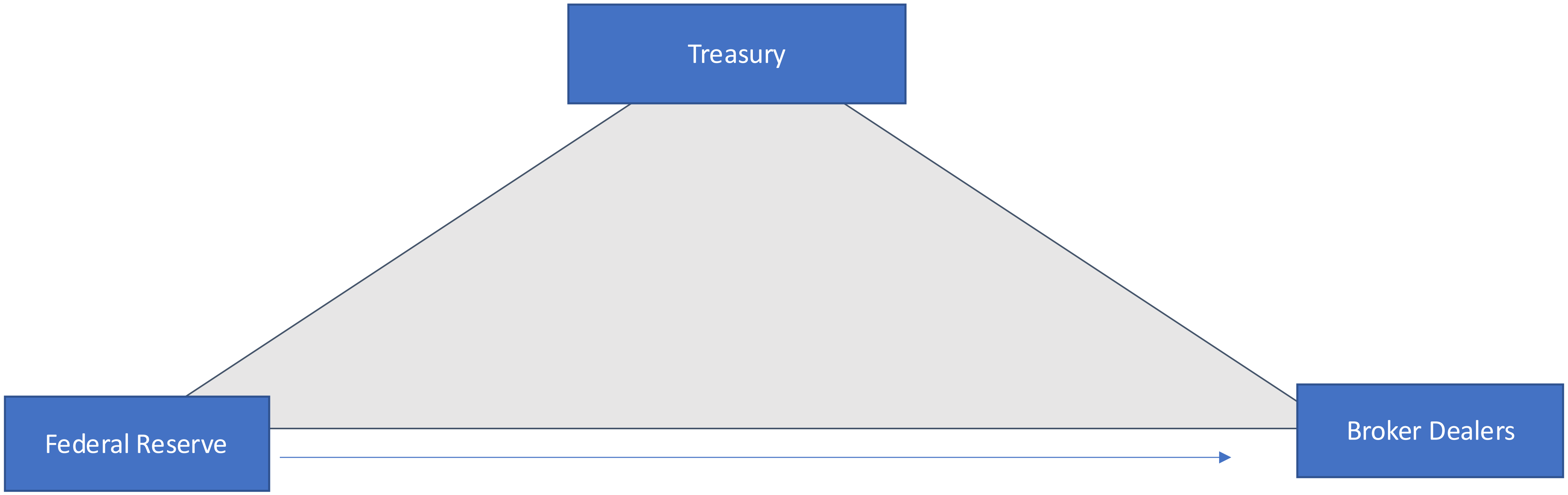
Fed-Treasury Accord of 1951

- War in Korea leads to clash between President, Treasury and Fed, which wants to fight inflation and not return to war financing
- Federal Reserve's subordination to the Treasury officially ends with an agreement to separate debt management from monetary policy (March 1951)
- William McChesney Martin (formerly Treasury, formerly head of NYSE, former broker-dealer) is appointed as Chair of the Fed and enacts a project to defend autonomy of the Fed against Treasury

Crucial element in this project

- Repo markets: the Fed will increasingly use this questionable element which straddles the boundary between Open Market Operation (Purchase) and Loans to provide liquidity to broker-dealers
- Three goals:
- 1. allow the Fed to reduce its holdings of Treasury while placing them into a robust “resilient” money market, capable of intermediating them, allowing the Treasury to keep funding the war effort without disruptions and sudden rise of costs
- 2. Manage the growth of credit in the system through “reserve management”, while running a tight monetary policy (fight inflation)
- 3. Establish a liquid money market, which connects the whole country and manages to activate pools of capital outside of New York

The liquidity triangle: the Fed, Broker Dealers and Treasury



Providing Public Liquidity Put for Private Liquidity Provision (Broker-Dealers) for Treasury Funding

Why Repos? Why Broker-Dealers? A neoliberal compromise

- Broker-dealers are highly leveraged actors, in the business of low margin high volume transactions intermediation based on funding borrowed in the money market (prototypical for „money market funding for capital market lending“: carry trades, but also intermediation)
- Broker-dealers are highly reactive to funding conditions (they might either shut down/reduce their business or engage strongly based on arbitrage opportunities)→ Using repos, the Fed New York felt they could react quickly to moments of strain
- Repo-lending to member banks would have challenged the primary role of the discount window, questioning the institutional architecture of the Fed (a no go)

Evolution of funding sources for broker-dealers

- Initially, broker-dealers were refinanced mostly by money center banks in New York
- They mostly provided funding above the discount window rate, which in the conditions of the drop of Bills rates would make carry trades largely impossible for broker-dealers
- To stabilize, Fed provides repos (avoid retrenchment, make broker-dealers make profits by playing their role for the system)
- Over time, non-financial corporations and non-New York banks engaged in repos with broker-dealers, improving their funding conditions and allowing the Fed to realize its project (not possible without backstop) (Minsky 1957)

6. Post-Accord (1951-1966)

- Fed-Treasury Accord of 1951 begins a strong acceleration of use of repos by **Fed**, used to gain autonomy from the Treasury
- Governor Robertson (formerly in Treasury) is appointed in 1952 and begins a near one-man crusade against repurchase operations (intra-Fed opposition)
- Questions their legality, necessity and effects on monetary policymaking autonomy
- **Hypothesis**: repos become a way to intervene in the market in a 'hidden' fashion away from public repurposing of open-market operations as a communicative device for public policymaking (signaling), this contradiction needs to be managed

Liberalisation of repo conditions

- In successive iterations the original conditions put upon repurchase operations are liberalized, e.g.:
- **1949**: Extend repo credit to non-bank dealers at a rate below the discount rate pending decision to lower discount rate for banks.
- **1950**: Repo rate for non-banks set as 1/8% above bills rate rather than the discount rate
- **1952:** Minimum repo rate adjusted to lesser of discount rate or auction-rate on 13-week bills
- **1954:** Repos authorized at a rate <u>**below**</u> the discount rate available to member banks ("repos as a relief valve", Garbade 2016)

FREQUENCY AND VOLUME OF REPURCHASE AGREEMENTS EXTENDED BY THE FEDERAL RESERVE TO U. S. GOVERNMENT SECURITY DEALERS

Year	Number of Weeks in which Outstanding Repurchase Agreements were Reported	Weekly Average Outstanding Volume (a) (millions of dollars)	Peak Volume (b) (millions of dollars)
1949	7	n. a.	n. a.
1950	10	n. a.	n. a.
1951	30	n. a.	n. a.
1952	31	n. a.	n. a.
1953	38	86	734
1954	29	30	468
1955	32	51	382
1956	43	61	394
1957 (thru October 2).....	32	69	384

n. a.—not available
(a) Average of weekly averages of daily figures
(b) From average figures

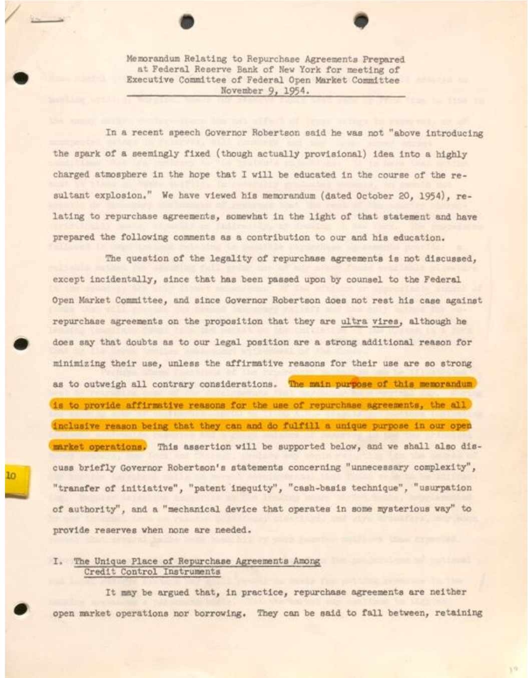
1954 Robertson intervention

- Robertson had dissented from FOMC repo decisions since his appointment but in 1954 issued a strong statement against their use
  - Repos are loans hiding behind façade of being open-market operations, hence in contravention of intent of Federal Reserve Act and Congress
  - Contributes complexity to operations and hands the initiative to dealers (leads to following the market)
  - The fact that dealers can borrow at a rate beneath the discount rate represents a “competitive advantage” (subsidy) for dealers

Legal response by Legal Counsel Vester 1954

- Repos have been used by the Fed since 1917, more aggressively since 1922
- They have been deemed illegal by legal counsel of the Fed Wyatt in 1923 (a loan masquerading as a sale), but this opinion has never been adopted by the Board
- 1925: Board approves use of repos→ 30 years use
- administrative interpretation as guidance for legality established by Supreme court: “settled administrative construction is entitled to great weight and should not be overturned except for cogent reasons” (Normative power of the factual)
- So it is legal, because it was deemed legal, even if the legal counsel deemed it illegal

Response by NY Fed – 9 November 1954



Memorandum Relating to Repurchase Agreements Prepared at Federal Reserve Bank of New York for meeting of Executive Committee of Federal Open Market Committee November 9, 1954.

In a recent speech Governor Robertson said he was not "above introducing the spark of a seemingly fixed (though actually provisional) idea into a highly charged atmosphere in the hope that I will be educated in the course of the resultant explosion." We have viewed his memorandum (dated October 20, 1954), relating to repurchase agreements, somewhat in the light of that statement and have prepared the following comments as a contribution to our and his education.

The question of the legality of repurchase agreements is not discussed, except incidentally, since that has been passed upon by counsel to the Federal Open Market Committee, and since Governor Robertson does not rest his case against repurchase agreements on the proposition that they are <u>ultra vires</u>, although he does say that doubts as to our legal position are a strong additional reason for minimizing their use, unless the affirmative reasons for their use are so strong as to outweigh all contrary considerations. The main purpose of this memorandum is to provide affirmative reasons for the use of repurchase agreements, the all inclusive reason being that they can and do fulfill a unique purpose in our open market operations. This assertion will be supported below, and we shall also discuss briefly Governor Robertson's statements concerning "unnecessary complexity", "transfer of initiative", "patent inequity", "cash-basis technique", "usurpation of authority", and a "mechanical device that operates in some mysterious way" to provide reserves when none are needed.

10

I. <u>The Unique Place of Repurchase Agreements Among Credit Control Instruments</u>

It may be argued that, in practice, repurchase agreements are neither open market operations nor borrowing. They can be said to fall between, retaining

- Neither open-market operations nor borrowing but “fall between”
- Quasi-Hayekian argument that the needs of the market and its “tone” cannot be read by indicators and need to be “continually tested”
- Distinguishes money market conditions from “underlying and true credit situation”
- Use of discount window or open-market operations would send a confusing signal when repos’ utility is of a “largely technical” nature

Agreeing to disagree March/June 1955

- Robertson concedes there may be some utility in repurchase agreements but insists they should be "policed"
- There should be a discount window for repos for dealers which would be transparent with a set price at any given time to prevent abuse
- Initiative rejected by the Board, which emphasizes that they have the right of initiative for repos (qualitatively yes, quantitatively no)
- Also, danger of unconstitutionality (repo rate vs discount rate)

Consequences of Repo-backstop for broker-dealers

- Minsky 1957: repos from non-financial corporations to government bond houses have become the new norm in 1956
- This provides liquidity, which in turn allows broker-dealers to reduce their lending from commercial banks, which in turn frees up reserves in the system (if not included in the model of the central bank, persistently estimates below available reserves)
- But why do non-financial corporates lend to broker-dealers? The strategy of the Fed in this context seems to matter (Minsky 1957, p. 177, footnote 6): it is a privilege, not a right for broker dealers, but it is also sensitive to the threat of liquidity crunches (in the summer of 1956, the Fed „opened the window“ for repos): inclined to accept whatever is brought

1956/1957: Money Center Banks strike back

- OCC Gidney in 1956/1957 changes the treatment of repos for banks from sales to loans, and limits the amount of repos banks can do for broker-dealers
- Seen as a relief by money center banks which complain about competitive disadvantage due to repos (a source of funding they cannot access and which takes away their funding source, Clearing House Association report)
- Seen as a problem by broker-dealers who complain about lack of funds (internal review by Fed New York, 1958)

First Repo-induced Treasury crash 1958

- Broker-dealers engage in highly speculative carry trade, based on plenty of cheap funding through repos and no margins posted
- Surprising recovery of economy leads to a repricing of treasuries, which means dealers‘ carry trade no longer is profitable
- Deleveraging based on selling of treasuries- self-reinforcing negative liquidity spiral
- First Treasury, then Fed intervenes, calling it a „disorderly market“ on July 18th 1958 and allowing for unlimited purchases by the Fed

Banks enter massively into the repo market

- 1964: new OCC President Saxton removes lending limits, by recategorizing repos as sales and repurchases
- From 1960s onwards, banks massively use repos to circumvent reserve requirements
- 1969 Regulation D: repos are counted for banks as deposits
- But little to no impact, because reporting standards were not changed (Memo 1971 Hexter to Robertson), reserve requirements underreported

7. The 1966 Credit Crunch

- Fed responds to inflationary pressures and in so doing leads to massive disintermediation of banks
- This is the moment when on the one hand credit growth stops and the Fed has to face the fact that its work to enliven capital markets in the US truly worked
- The moment when the Fed ‘lost its innocence’ and was forced to relent to interest rate pressures: its capacity to control the system fades

1966 attempts to stem the inflationary tide

- Reverse Repurchase Agreements are installed by the Fed for the first time in order to remove liquidity from the money market
- Debate on profits of broker dealers: undesirable, but unavoidable (July 1966)
- Yet, Fed is incapable of controlling the disintermediation process and in the end lowers the interest rate
- Within the old Regulation Q regulation, the Fed finds itself severely hamstrung with respect to inflation

1972 Robertson’s final memo

- Facing normalization of repo, he notes the absurdity of the justification of the increased use of repo
- Constantly having opposed it, Robertson was capable of limiting some of the boundary breaches and delay some of it
- But in the end, he could only delay a trend too strong (path-dependent?) to be stopped
- In January 1972, by a 1-10 vote, the FOMC approves to again temporarily permit repo-rates below the discount rate (the final breach)

Conclusion

- The use and growth of repos develops out of the conflicting objectives faced by the Fed
- At the heart of the conflict between Robertson and the NY Fed is where to draw the boundary between politics and markets
- The NY Fed positioned repos as a neutral, technical instrument solely addressing money markets and of no wider public policy relevance (a backstage ‘hidden’ market instrument)
- Analysis resonates with Wansleben (2024) on the bifurcation of monetary policy and Fink (2023) on the inability of Fed to openly communicate reasons for bank failures in early 1970s

Building a robust alliance

- The Fed, pursuing a project of gaining organizational independence and monetary governance at the same time established Repos as a boundary object which could be different things for different actors
- Shadow Banking is a state project in the United States
- Therefore, the possible critical contribution resides not in overcoming a lack of knowledge (there are Fed actors who do know all along about regulatory arbitrage and legal ambiguity), but in the critique of this state project and the necessity for legal clarification

New Deal restrictions and the role of the Fed

- In 1933, the Glass-Steagall Act is passed
- Drawing the lessons from the Financial Crash that precipitated the Great Depression, this law severed banks from broker-dealers (investment banks) and prevented them from issuing deposit-liabilities to the public
- Banks had coalesced with broker-dealers in 1920s, setting off a speculative dynamic
- A corrolary of this was that the Fed has no business in providing liquidity to these broker-dealers in the form of loans (no discount window, no open market operation)
- A second one was that broker-dealers were placed under the regulatory supervision of the Securities and Exchange Commission (different register)

From rule evasion from below to rule evasion from above

- Fed did not think of these restrictions as very helpful, and sought to operate at the boundary of the permitted to base itself on the expertise of broker-dealers (to enrol them) to achieve its own goals to manage the money supply, but also the funding of the government
- Fed sought to engage in a meaningful position of mutual exchange/entanglement with the broker-dealers and it did so based on the repo-market
- The use of the repo-instrument should hence be understood as a means to enact such an entanglement to strengthen its capacities to govern through the capital markets, but with it in the wider economy (Fed’s original sin)

Fed-Treasury Accord 1951

- Since 1942, Fed is under direct command by Treasury
- The need for a liquid market in treasury bills that supports treasury issuance

The business model of broker-dealers in the Treasury Market

- They are market-makers: as such they hold treasury bills and bonds in their inventory and sell and buy at pre-specified rates
- Their market-making capacities allows these government bonds to be liquid, to be easily convertible into cash
- They only carry these bonds on their balance sheet if they do not make too much of a loss/ if they make money
- The refinancing rate for them is hence of crucial importance to them and the market (commercial banks provide punitive rates)
- When and at what rate should the Federal Reserve provide liquidity to the market-makers? Fix repo below discount rate? Money markets well below at this point

Resistance within the Fed

- Robertson

Resistance outside the Fed and updating

- 1956: Gidney, by OCC decides to remove old statutory limitations on how much a bank can sell and buy securities (very limiting) and instead decides to treat them as a collateralized loan, with specific lending limits: acts of de- and reregulation
- 1957: OCC even seeks to reregulate further/curtail capacity of the Fed to
- This creates legal dissonance, with one regulator/supervisor of banks using a particular notion of repos as a loan and the other using it as a purchase and sale (Fed)
- Clearing House Association 1957

Degrees of agency

Sins of omission

- Unwillingness to enforce rules
- Neglecting market developments

Analytic either/or

Practical continuum/ entanglement

Sins of commission

- Actively seeking to undermine rules
- Promoting the development of new markets and instruments
- Blocking efforts at re-regulation

Central banks as "boundary organizations" between politics and markets (Coombs and Thiemann, 2022)

POLITICS

GOALS

- Public debt management
- Public policy objectives: maximizing economic growth and employment; stable inflation; regulation and crisis prevention

ACTORS

- Parliaments
- Treasuries
- Public/media

CENTRAL BANK

MARKETS

GOALS

- Transact (buy and sell) in bond markets to smooth/set interest rates, influence banks' asset allocation
- Manage CB balance sheet to minimize losses and maximise returns

ACTORS

- Private banks and associations
- Dealers, hedge funds, asset managers

4. Sources and data

- Histories of the Federal Reserve and Treasury market (Read)
- Federal Open Markets Committee digital archive (read)
- Senate and House Committees on Banking and Currency hearing transcripts (Very partially researched)
- Memorandums and personal correspondence between key actors (National Library, Library of Congress, JFK Library, New York Fed archive) (Very partially researched)
- Archive of the Clearing House Association, Columbia University (Partially researched)

1968 -December 1971

- Robertson opposes again repos below discount rate in 1968 (statement to FOMC, April 30th 1968)
- First time, in December 1971 the FOMC decides to enact repos below discount rate, even against Robertson’s complaints
- The discount rate hence was de facto no longer the benchmark rate, at least if one follows the reasoning of Robertson
- Final break of taboo, from then onwards the abolition of the inhibition is actively discussed (confidential memo Hollande, January 1972)