



IT IS TIME TO SEPARATE MONEY BANKS
FROM CREDIT BANKS IN ITALY

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It is time to separate money banks from credit banks in Italy

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Abstract

This paper argues that the Italian banking system would benefit from a profound restructuring achieved by separating safe banks, or money banks, from credit banks. The former would accept demandable deposits to be fully collateralized by a combination of monetary base and interest-rate-and-credit-risk-free assets. The latter would fund illiquid loans with equities and long-dated debt obligations. The money bank would fulfill the objective of fully protecting savings in the form of money without the necessity of heavy regulation. The risky bank, the credit bank, would not be exposed to liquidity crises because one cannot run against long-dated bonds and equity. The credit bank, which is subject to insolvency risk, would bear a more intense regulatory and supervision structure than the money bank.

Key words: Chicago Plan, money bank, credit bank, regulation, too big to fail

JEL Classification: E42, E51,52

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I. INTRODUCTION

Article 47 of the Italian Constitution enunciates the principle that people's savings must be protected (*tutela del risparmio*). The drafters of the Constitution were heavily influenced by earlier legislation produced by the Fascist regime, especially the Banking Law of 1936 which came to life after a disastrous banking crisis and economic depression. The 1936 Law was based on two fundamental principles. The first is that the State treats savings and credit as activities of public interest, without specifying exactly what this protection actually meant.¹ The second is that banking was split into two separate types institutions, commercial banks that were funded by deposits and extended credits with relatively short maturity (*credito ordinario*) and special credit institutions that issued long-dated liabilities to fund long-term loans (*credito industriale*). Maturity matching on both sides of the bank's balance sheet was the guiding principle of this institutional separation that tried to repair the damages caused by the failures in the Thirties of the mixed banks. The Bank of Italy, which had gained the monopoly of issue in 1926, was transformed into a public institution and was given the role of supervising the entire banking system, thus completing its process of becoming the bank of banks.

For almost six decades the Italian banking system, like other national banking systems, was sheltered from competition. The Bank of Italy exercised control on entry and branching, while a cartel agreement limited competition in interest rates. Furthermore, capital and exchange controls insulated Italian banking and finance from the rest of the world. In essence, banking was a protected industry and earned monopoly profits that calmed the risk appetite of bankers. The repeal of the 1936 Law in 1993 and the ongoing capital liberalization broke down the protection walls and the inherent weaknesses of fractional reserve banking resurfaced.² In Italy, the depth of the Great Financial Crisis

¹ Protection was left to the discretionary power and decisions of a new governmental agency, the inter-ministerial Committee on credit and savings (*Comitato interministeriale per il credito e il risparmio*), which had a broad mandate, not only to set guidelines on credit and savings, but also to exercise control.

² A parallel story holds for the United States, which passed in 1933 the Glass-Steagall Act that separated commercial banking from investment banking. Banking in America was also protected by regulation that imposed limits on the payment of interest rates on deposits, while branching was constrained to various degrees by state laws. The Act was repealed in 1999.

and its deleterious lingering effects have put on the policy agenda, as it happened after the Great Depression, the issue of how to fix banking.

There are three alternative solutions to reduce risk in banking. The first is to re-create the past monopoly charter, through entry and other restrictions, that would reduce the risk appetite of bankers. The second is to raise capital requirements and regulate every aspect of banking, to the point of squelching any semblance of efficiency. The third is to restructure the banking industry by separating the safe bank, the money bank, where bank deposits are fully collateralized by a combination of monetary base and interest-rate-and-credit-risk-free assets, from a risky bank, the credit bank, where non-marketable loans and other long-dated assets are funded by long-dated liabilities (bonds) and equity capital. The money bank would fulfill the objective of protecting savings in the form of money without the necessity of heavy regulation. The risky bank, the credit bank, would not be exposed to liquidity crises because one cannot run against long-dated bonds and equity capital. But it would be subject to insolvency risk and for that it would necessitate a more intense regulatory and supervisory structure than the money bank. As part of the restructuring plan, governments would have to end the tax deductibility of interest payments on debt, which is at the root of the historical bias towards leverage.

The rest of the paper is structured as follows. Section II deals with the issue of fragility of the traditional banking model. Section III discusses the philosophy underlying the regulatory response to the Great Financial Crisis. Section IV outlines the proposed restructuring of Italian banking into money and credit banks. A concluding section argues why the separation of money from credit banks goes beyond counterfactual thinking and deserves to be treated as a serious alternative to the existing banking structure and companion regulatory apparatus.

II. FRAGILITY OF TRADITIONAL BANKS

People have a strong preference to hold part of their financial wealth in liquid assets with fixed nominal prices, that is money in the form of currency and capital-certain deposits. Yet, the value of wealth changes in response to changes in interest rates, risk of debtors' insolvency and economy-wide shocks. The traditional bank tries to reconcile the market reality of a variable-value wealth with capital-certain preference by holding non-marketable loans, valued at par, to support the fixed valuation of deposit liabilities. For relatively long periods of time cost accounting rules obscured the fact that the value of bank credit was changing. When the par value of credit became widely discredited, whether by fundamentals or by rumors, the bank got in trouble. The introduction of deposit insurance reduced considerably the occurrence of bank runs, but not altogether. For example, the Continental Illinois National Bank and Trust Company of Chicago suffered a bank run in 1984, which prompted the intervention of the Federal Deposit Insurance Corporation. However, the size of the liabilities was so large that the Federal Government felt compelled to intervene with a bail-out. The reason was that the Continental Illinois was too big too fail.

Financial innovation and the financialization of the economy have changed the quality and composition of banks' assets. In the 19th and most of the 20th century bank lending financed primarily trade, inventories and working capital. Today, a great deal of lending finances real estate. For example, Dyson and al. (2016:9) report that in the period 1997-2007 property lending represented 51 percent of assets in UK banks, whereas lending to non-financial sector had dropped to a mere 8 percent. Property lending poses two difficulties for the bank. The first is that it is more difficult to obfuscate the market value of the loan. The second is that credit booms and busts in real estate are a very likely source of financial crises, as can be gleaned from the following table in Reinhart and Rogoff (2009:160). There is a strong coincidence between real housing prices and banking crises in North America, South America, Europe, and Asia. The trigger exerted by property values appears to be on the rise and coincides with the period of capital market liberalization and inter-country capital. This is corroborated by the data compiled by Bordo et al. (2001) on the frequency of banking crises:

15 in the pre-WWI gold standard period 1880-1913, 18 in the inter-war period, zero in the Bretton Woods period, and 26 in the post-Bretton Woods period 1973-1997.

TABLE 10.8
Cycles of real housing prices and banking crises

Country	Year of crisis	Peak	Trough	Duration of downturn	Magnitude of decline (percent)
<i>Advanced economies: The Big Five</i>					
Finland	1991	1989:Q2	1995:Q4	Six years	-50.4
Japan	1992	1991:Q1	Ongoing	Ongoing	-40.2
Norway	1987	1987:Q2	1993:Q1	Five years	-41.5
Spain	1977	1978	1982	Four years	-33.3
Sweden	1991	1990:Q2	1994:Q4	Four years	-31.7
<i>Asian economies: The Big Six</i>					
Hong Kong	1997	1997:Q2	2003:Q2	Six years	-58.9
Indonesia	1997	1994:Q1	1999:Q1	Five years	-49.9
Malaysia	1997	1996	1999	Three years	-19.0
Philippines	1997	1997:Q1	2004:Q3	Seven years	-53.0
South Korea ^a	1997		2001:Q2	Four years	-20.4
Thailand	1997	1995:Q3	1999:Q4	Four years	-19.9
<i>Other emerging economies</i>					
Argentina	2001	1999	2003	Four years	-25.5
Colombia	1998	1997:Q1	2003:Q2	Six years	-51.2
<i>Historic episodes</i>					
Norway	1898	1899	1905	Six years	-25.5
United States	1929	1925	1932	Seven years	-12.6
<i>Current cases</i>					
Hungary	2008	2006	Ongoing	Ongoing	-11.3
Iceland	2007	November 2007	Ongoing	Ongoing	-9.2
Ireland	2007	October 2006	Ongoing	Ongoing	-18.9
Spain	2007	2007:Q1	Ongoing	Ongoing	-3.1
United Kingdom	2007	October 2007	Ongoing	Ongoing	-12.1
United States	2007	December 2005	Ongoing	Ongoing	-16.6

Source: Reinhart and Rogoff (2009:160)

A further complication with financialization is that the relationship between credit and money has changed (Schularick and Taylor 2012). As leverage in banking has increased, bank credit has expanded relative to currency and bank deposits. The consequence is that banking carries a higher risk. One of the most significant findings in Schularick and Taylor's (2012:1031) study of credit booms gone bust reads as follows:

The second financial era, starting in 1945, looks very different, however. First, money and credit began a long postwar recovery, trending up rapidly and then surpassing their pre-1940 levels compared to GDP by about 1970. That trend continued to the present and, in addition, credit itself then started to decouple from broad money and grew rapidly, via a combination of increased leverage and augmented funding via the nonmonetary liabilities of banks. With the banking sector progressively more leveraged in the second financial era, particularly in the last decade or so, the divergence between credit supply and money supply offers *prima facie* support for the credit view as against a pure money view; we have entered an age of unprecedented financial risk and leverage, a new global stylized fact that is not fully appreciated.

In sum, banking crises have become more frequent while the protective umbrella placed over banks has expanded with deposit insurance, liberal use of lending of last resort and the acceptance of the too-big-to-fail principle.

Shadow banking and the trigger of the crisis

The financial crisis in the United States, it is now well established, started in shadow banking and then propagated to traditional banks and the rest of the financial system.³ Shadow banks do banking in the sense that they give credit and effect maturity transformation, but are specialized in securitization and in the use of “secured” funding. Unlike traditional banks, shadow banks have no direct access to central bank borrowing, which is an obvious source of fragility. The world of shadow banks consists of broker-dealers, hedge funds, insurance companies, mortgage institutions, pension funds, and mutual funds. Traditional banks act as shadow banks when they create off-balance sheet investment entities. Funding to shadow banking comes from savers whose demand for liquidity exceeds the guarantee of deposit insurance. Shadow banking provides this “guarantee” with collateral. For example, a money market fund deposits liquidity with a broker-dealer guaranteed by a bond collateral. The transaction occurs with repurchase agreements or repos. Collateralization is not as sure as the backing provided by safe assets like government securities and/or open access to central

³ This section draws from Fratianni and Giri (2015)

bank borrowing. Therefore, collateralization is subject to “haircuts”, measured by the difference between the market value of the collateralized asset and the amount of the received funding. Here is a sketchy account of the eruption of the Great Financial Crisis (Fратиanni and Giri 2015:43)

An index of equally weighted haircuts of nine asset classes started to rise in August of 2007 and triggered a run on repos. [T]his run was the equivalent of a significant cash withdrawal in traditional banking... Early in 2007, a market index of credit default swap contracts gave clear signs of credit deterioration in the residential mortgage-backed security market... In July, 2007 German IKB revealed that it could not cover for the failure of its conduit to roll over asset-backed commercial paper. On August 9, 2007, the interbank bank became illiquid as BNP Paribas stopped the redemptions of three investment funds... The second big spike occurred in connection with the date of Lehman’s failure. Counterparty risk surged as the quality of the collateralized assets was perceived as being doubtful; asymmetry of information made everyone distrustful of where the doubtful assets were located. In this climate haircuts went up. Borrowers lost equity capital and disposed of assets. If sales occur under distress conditions, price declines further reduce the value of the unsold assets and equity. Deleveraging reinforces the vicious circle.

In the 1930s, the run was on the traditional banks because deposit holders did not trust the liquidity of these institutions. When short of liquidity, even a solvent bank can be forced to sell non-marketable assets at fire-sale prices. The post-crisis policy response was deposit insurance and a wide acceptance of lending of last resort. This time the run was on financial institutions that had neither deposit insurance nor access to central bank borrowing. If the collateral had consisted of perfectly safe assets, such as monetary base or government securities, there would have been no haircuts and the run would have not occurred.

III. REGULATORY RESPONSE⁴

The policy reaction to the Great Financial Crisis has been to fiercely re-regulate the system. A complex and extensive regulation industry is now in place consisting of dedicated agencies, large banking compliance departments and a specialized army of consultants and lawyers. We have gone from Basel I to Basel IV. Basel I focused on higher capital requirements based on fixed arbitrary weights. Basel II (2004) modified capital weights and moved to other aspects of risk; it also

⁴ This section draws from Alessandrini et al. (2017)

introduced requirements on information disclosure on capital and risk management. The expansion and the internationalization of regulation and supervision was accompanied by an expansion of the safety net. Central banks became fully committed to provide, in a crisis, liquidity and deposit insurance systems proliferated. The too-big-to-fail principle was officially enshrined in the United States in September of 1984, following the bailout of the Continental Illinois National Bank. That meant that the protection accorded to bank liabilities was expanded beyond the group of small uniformed depositors.

Under the pressure of the crisis, Basel III (2010-11) raised capital requirements and tweaked the underlying methodology. Risk-weighted assets or RWA --the sum of individual assets weighted by specific credit risk factors could be arrived at either by a standard procedure or by an in-house VAR model. Furthermore, Basel III introduced minimum leverage and liquidity ratios, while levying additional capital requirements on a group of 30 mega global banks. While not officially recognized, the banking industry in 2016 identified a spate of new regulations as the beginning of Basel IV. Version IV appears to have been inspired, among other things, by rule avoidance, namely an observed wide disparity in banks' risk assessments. Regulators have plugged this loophole by imposing more uniformity, but in doing so they have raised the danger that banks become less sensitive to credit risk. If loans of different risk are improperly differentiated by the regulator, a bank may be tempted to play the moral-hazard game.

One feature that really stands out in Basel III-IV (and in the American Dodd-Frank Act) is complexity. Complexity goes beyond the enormous number of pages detailing norms and providing interpretations. It is measured in terms of data, analytics, implementation and reporting requirements. For example, Andrew Haldane (2011:2-3), Executive Director of the Financial Stability department of the Bank of England, states that: "...using an advanced internal set of models to calibrate capital...number of risk buckets has increased from around seven under Basel I...to, on a conservative estimate, over 200,000 under Basel II...to over 200 million [under Basel III]."

There are two serious handicaps in the complex web of current regulations. The first is the high implementation and compliance costs. The second is that regulators provide *ex-ante* a vast array of risk categories, ignoring that ultimately (*ex-post*) risk is determined by the interaction of a complex system with a set of complex controls (Caprio 2013). Take, as an example, the zero weight on holdings of government securities. This induces banks to re-allocate portfolios in favor of government debt and governments to accommodate the higher demand, a process that alters the nature of risk. In a crisis, a big wedge develops between the market perception of risk and the definition of risk set by the regulator. This wedge encourages simultaneous sales by all banks, as it happened with Greek bonds during the sovereign debt crisis. The point is that risk changes and that a Gosplan-type regulator works “no better for bankers than it did for tractors” (Haldane 2011:10).

In sum, even setting aside cost and efficiency considerations, it is far from clear that current regulation can offset built-in incentives to take excessive risk resulting from the large protective umbrella that government has placed over the industry. This is the motivation underlying the proposal of dividing banking between two types of institutions, the money bank and the credit bank. This proposal is not a panacea; it has its benefits and costs, but on balance the former promise to exceed the latter. The structural re-organization is designed to be more market friendly than the heavy regulatory apparatus now in place.

IV. THE PROPOSED SEPARATION OF MONEY FROM CREDIT BANKS

The history of the money bank goes deep into history, but for our purposes an important starting date is David Ricardo’s *Plan for the establishment of a national bank* (1824) that influenced the creation of the English Bank Charter Act of 1844 that separated the Bank of England’s note-issuing department --fixing a one-to-one ratio between gold and notes—from the other department dealing with commercial banking. Two years before the English Charter Act, the State of Louisiana passed the Banking Act of 1842 that prescribed that banks had to back notes and deposits with gold and

short-term bills of exchange, that is a money bank (Hammond 1957).⁵ These are the antecedents that influenced the well-known Chicago Plan of the Thirties, whose purpose was to reform the US banking system that had caused so much pain and suffering. An initial statement of the 100 percent reserve bank, the Chicago Plan, was written in 1933 and signed by very prominent economists, including G. V. Cox, Aaron Director, Paul Douglas, A.G. Hart, Frank Knight, Lloyd Mints, Henry Schultz, and Henry Simon (Allen 1993:705; Phillips 1995). Irving Fisher followed up in 1935 with his book on *100% Money*, clearly aimed at influencing the highest policy makers of the country, including President Roosevelt, to adopt the proposed reform and “prevent banking from becoming nationalized.” (quoted by Allen, p. 711). Afterwards, Fisher joined the Chicago group and together wrote a statement by the title *A program for monetary reform* that was sent to the President with the support of 200 economists (Allen, p. 714). The 100 Chicago Plan was rejuvenated by Milton Friedman’s (1960) *A program for monetary stability*.

In the Eighties interest in the money bank idea received the attention of James Tobin (1985), whose deposited currency would work like a safe bank for only a fraction of deposits, Maurice Allais (1987), and Robert Litan (1987) who coined the term ‘narrow banking’; for a review, see Lainà (2015). A bigger impetus to the Chicago Plan of bank reform occurred after the Great Financial Crisis, with writings by Paul de Grauwe (2008), John Kay (2009), Benes and Kumhof (2012), George Pennacchi (2012), John Cochrane (2014), Martin Wolf (2014), and Dyson et al. (2016), among others.⁶

⁵ Pennacchi (2012), in his review of narrow banking, has a good discussion of the Louisiana Bank Act of 1942.

⁶ These are not only academic economists; John Kay and Martin Wolf are very distinguished journalists of the Financial Times.

The money bank

The critical principle underlying the money bank is the collateralization of deposits—the major component of the money stock—by either safe assets like government securities or by the monetary base, or by a combination of the two. Like currency, deposits are used as means of payments. A debtor discharges his debt by drawing on his bank account and transferring the funds to the person or entity to whom the payment is due. These transfers occur through the payment mechanism, whose safety and efficiency are a primary concern of central banks. The payment mechanism is a public good and deserves state protection.

Money, however, also fulfills a store-of-value function. The zero price-variance of money makes it suitable to reduce the risk of a portfolio. Furthermore, highly risk-averse savers like to keep a steady and significant portion of their wealth in capital-certain assets like time deposits, certificates of deposits or money market funds. Banking and finance have responded to the public's preference for capital-certain assets by creating near monies that offer higher interest rates than demand deposits, while maintaining price fixity. As a consequence, the measurement of the money stock has broadened to include liquid deposit-like assets in addition to demand deposits, as in the case of aggregates M2 and M3. But many of these near monies have no real certainty of price fixity. To illustrate, take the popular (at least in the United States) money market fund. Common belief is that shares in money market funds are better than demand deposits in that they offer higher yields, while retaining close properties to deposits as a means of payments. But this is not true as we have seen in our discussion of shadow banking. In fact, the money market fund Reserve Fund “broke the buck” (meaning that its net asset value, NAV, fell below one) after the collapse of Lehman Brothers in 2008. As a result of this experience, the Securities and Exchange Commission issued a new rule on money market funds. Core money market funds, also known as settlement funds, have an assured NAV equal to one if they are fully backed by Federal government securities, while the higher-yielding prime money market

funds may face liquidity fees on redemptions or outright prohibitions of redemptions.⁷ Thus, mutual funds now offer both a proxy of a safe money bank and a riskier money bank.⁸

We can arrive at a rough estimate of the potential size of money banks in Italy by referring to the table on monetary aggregates in the Appendix of the latest Annual Report of the Bank of Italy (2015, Appendice, p. 29). At the end of 2015, Italians held (rounded to the nearest billion):

- € 174 billion in coins and currency
- € 942 billion in demand deposits
- € 121 billion in time deposits with maturity up to 2 years
- € 311 billion in time deposits repayable with prior notice and with maturity of up to 3 years
- € 4 billion in repos
- € 6 billion in shares of money market funds
- € 9 billion in bonds with maturity of up to 2 years.

Based on this information, the preference for safe assets would be comprised between € 942 billion (demand deposits) and € 1,384 (demand and time deposits plus repos plus shares of money market funds). This would be only the starting point because the ebb and flow between money and non-money would change according to a variety of factors. The supply of safe assets would come from government securities and/or the monetary base. Under a 100 percent reserve banking, the monetary base would back the entire stock of deposit money. At the end of 2015, the total assets of the Bank of Italy were € 612 billion, too small a sum to cover the demand for safe assets. The stock of government securities at the same date, on the other hand, was € 2,172 billion, which amply exceeded the estimated initial demand for safe assets. If reserve requirements were to be imposed on money banks, part of the monetary base would be dedicated to back deposit money. Without

⁷ Pennacchi (2012) discusses various types of financial intermediaries that have narrow banking properties. The list can be ranked according to interest rate and credit risks. The 100% reserve base bank has the tightest restrictions and is the reference point, immediately followed by the Treasury money market mutual fund (what I have called the core money market fund). The least restrictive narrow bank is one that has assets in the form of money market instruments with a small degree of interest rate and credit risk.

⁸ The differentiation between the two could have been more distinct if prime money market shares had been allowed to float in price. As Cochrane (2014:21) notes, price flexibility is still “dangerous if all investors want to leave at once.” The problem is that money market shares are a claim on the funds’ assets. If these collapse, value of the shares collapse as well.

reserve requirement, the endogenous growth of deposit money would be totally disconnected from the growth of the monetary base. Government debt, to a large extent, would be monetized. The link between public debt and money would reduce the pressure on government to roll over debt and most likely reduce also sovereign risk.

Money banks would earn interest income from their holdings of government securities. This income, after operating costs and competitive returns on capital, could be passed to deposit holders. The rapid technological advances in payment mechanism—e.g., the wider use of blockchain encryption—are bound to drastically reduce operating costs of a money bank relative to those of a traditional bank.

The credit bank

The credit bank has a different role than the money bank: it needs to finance illiquid loans with funds that are not prone to run. A fully equity funded bank, clearly, is not subject to runs because share prices float and adjust to asset values. But this property also carries over to long-dated bonds. An owner of a long-dated bank bond may suffer an unrealized capital loss as a result of a crisis, but, unlike a fixed-price deposit holder, cannot queue outside the bank to claim a withdrawal of funds. Theoretically, a long-dated-fixed-price time deposit could work the same way but the common practice of redeeming it at par before expiration has made this account liquidity-equivalent to a demand deposit. In sum, a credit bank should be funded by a combination of long-dated bonds and equity. Regulation and supervision would be considerably heavier for a credit bank than a money bank. A credit bank would be subject to minimum capital and liquidity requirements and guidelines on loan standards. Access to the lender of last resort would be permitted.

Credit banks have to be well capitalized to reduce insolvency risk. Banking has been a highly leveraged business because access to deposits, guaranteed explicitly or implicitly by governments, has made it easy for managers to fund new financial activities and deal-making (Kay 2009:25). High leverage would no longer be possible with the separation of money banks from credit banks. Credit

banks would be funded by equity and long-term bonds. Their minimum capital requirements would have to be relatively high to withstand large negative shocks and to re-assure long-term bond holders that insolvency risk is low. A well-capitalized bank is also the best antidote against the exercise of the too-big-to-fail principle. To defuse the time bomb of future massive government bail-outs, the Federal Reserve of Minneapolis (2016) has recently proposed graduated minimum capital ratios ranging from 23.5 per cent applied to large banks all the way to 38 percent for mega banks.

The Annual Report of the Bank of Italy (2015, Appendice, p. 107) gives the essential data of the main items of the aggregate budget of Italian banks as of March 2016. In the following, I ignore the value of deposits (which would be the business of money banks), credit and debts vis-à-vis the Eurosystem and other banks:

- € 1,819 billion of loans
- € 518 billion of securities held as assets
- € 342 billion of foreign assets
- € 320 billion of debt obligations
- € 443 billion of capital and reserves.

The sum of the first three items in the above list, €2,679 billion, provides a rough estimate of the initial size of credit banks. The financing of assets, under the proposal, would have to come from long-dated debt obligations and capital, which in March 2016 summed to €763 billion. The difference between assets and long-dated liabilities is very large and emphasizes to what extent traditional banks leverage bank credit on the guarantees government extend to depositors. It is apparent that the transformation from traditional banking to the proposed separation of money from credit banks cannot occur over night. A transition period would be required, during which capital ratios would have to be increased and debt obligations floated. The organizational structure for the transition could be a holding company, with a money bank and a credit bank acting as separate departments. As capital and debt obligations were raised in the credit department, appropriate amounts of deposits would be transferred from the credit department to the money department.

Implications for the Eurozone

The proposed banking restructure should apply to the entire Eurozone, but it is wishful thinking that it may happen. So, the scenario worth considering is how a banking system based on the separation of money banks from credit banks in one country may work with traditional banking prevailing in the rest of the Eurozone. In Italy, deposit money would be either fully backed, or at least primarily backed, by government debt. The textbook deposit multiplier would no longer apply, unlike in the rest of the Eurozone. The Italian money stock would be completely demand determined; in the rest of the Eurozone money would be an indirect target of the European Central Bank. Also, since public debt would serve as collateral to deposit money, the long standing European concern with the relative size of this debt would be out of place.

Bank credit in Italy would be constrained by the size of equities and debt securities; in the rest of the Eurozone credit would depend on the monetary base, the currency-deposit and the reserve-deposit ratios, among other things. In essence, the transmission mechanism of monetary-policy actions would be stronger and more complex in the rest of the Eurozone than in Italy. The impact of ECB monetary policy on Italy would be felt through the fixed exchange rate and the short-term interest rate. The open-economy model under fixed rates of exchange and perfect capital mobility would apply to Italy in the first approximation.

A credit bank is safer than a traditional bank because it is more capitalized and issues only long-dated securities. If the average cost of capital were to be insensitive to leverage, as implied by Modigliani and Miller (1958), higher capital requirements would not affect the cost of bank lending. But some serious doubts exist that the irrelevance of capital structure holds in banking (Cline 2015). A safer credit bank may generate a higher cost of lending, with obvious consequences on the demand for loans and relative competitiveness of the industry with the rest of the Eurozone. To partly offset these consequences, it would be an excellent opportunity to accompany bank restructuring with the elimination of the tax bias in favor of debt (i.e., the tax deductibility of interest paid on debt). Furthermore, recent developments in technology and wider use of dedicated

large data banks are facilitating a shift from bank credit to market financing. For example, it is now economically feasible to float mini bonds for traditionally bank-centric firms.

V. CONCLUSION

To many the proposal to separate money from credit appears drastic, a sort of jump into the unknown. The researcher faces the methodologic quandary that, while the costs and benefits of traditional banking are measurable, the benefits and costs of the alternative banking structure falls under the domain of an unobservable counterfactual. So, one is left with the force of the arguments, the most important of which is that the nexus between deposits and credit has proved to be dangerous, as a long history of costly banking crises can attest. Bank regulation, on the other hand, has followed the model that bank creditors should be protected and that rules and constraints should be placed on bank assets to curb the risk appetite of bankers. The sharp re-regulation of the banking system after the Great Financial Crisis has not altered on the whole this model; it has simply produced an enormous step-up in quantity and complexity. Almost ten years after the crisis, governments have expanded the safety net over banking to the point that those banks once deemed too big to fail have now become too big to save. This is the background against which the alternative structure ought to be discussed.

Critics of the separation of money from credit point to the fact that banking has evolved over centuries and has endured the test of times. Periodic crises are the inevitable cost to have abundant and cheap credit. A complex and invasive regulatory apparatus is another cost one must bear to reduce the frequency of crises. Under the alternative arrangement, the money bank would be virtually self-regulated with safe assets collateralizing capital-certain deposits. The credit bank would be regulated to be more capitalized than a traditional bank and would be prohibited from accepting deposits or near-money substitutes; other than by equity, loans would be funded by non-runnable long-dated bonds. Critics would say that under a credit bank loans would cost more and would be less abundant than under a traditional bank because the former would bear a higher cost of

funding. Possibly so, but the lower cost of capital in traditional banking is distorted as a result of the high leverage that bank deposits provide; and this high leverage turns out to be costly in terms of protection provided by society as a whole. Another criticism to the separation of money banks from credit banks is that markets create close substitutes of safe deposits. Shadow banks would promise capital certainty and higher interest rates on these near moneys. Investors, the argument goes, would have an incentive to switch from safe moneys to near moneys in normal times and then switch back to safe money in times of trouble, imparting big cyclical movements. A simple disclosure rule would correct this type of arbitrage activity: the shadow banks that promises fixed prices on near moneys would have to indicate the appropriate amount of supporting safe assets. This disclosure is already mandatory in the United States for money market funds.

REFERENCES

- Alessandrini, Pietro, Michele Fratianni, Luca Papi and Alberto Zazzaro. 2017. Banks, regions and development after the crisis and under the new regulatory system, *Credit and Capital Markets*, forthcoming.
- Allais, Maurice. 1987. The credit mechanism and its implications, in G. Feiwel (ed.), *Arrow and the Foundations of the Theory of Economic Policy*, New York University Press.
- Allen R. William. 1993. Irving Fisher and the 100 percent reserve proposal, *Journal of Law and Economics* 36(2): 703-717.
- Benes, J and M. Kumhof. 2012. The Chicago plan revisited, IMF WP 12/202.
- Caprio, G. Jr. (2013): Financial regulation after the crisis: How did we get here, and how do we get out?, LSE Financial Market Group Special Paper Series No. 226, November.
- Cline, W. R. 2015. Testing the Modigliani-Miller theorem of capital structure irrelevance for banks, Peterson Institute for International Economics WP, No. 15-8.
- Cochrane, John H. (2014). Toward a run-free financial system, April 16; available at https://faculty.chicagobooth.edu/john.cochrane/research/papers/run_free.pdf.
- DeGrauwe, Paul. 2008. Returning to narrow banking, CEPS Commentary, November 14.

- Dyson, Ben, Hodgson, Graham and Frank van Lerven. 2016. Sovereign money: An Introduction; available at www.positivemoney.org
- Federal Reserve Bank of Minneapolis. 2016. *The Minneapolis plan to end too big too fail*, November 16.
- Fisher, Irving. 1935. *100% Money*, Adelphi Company.
- Fratianni, Michele and Federico Giri. 2015. The tale of two great rises, MoFir Working Paper N 117.
- Friedman, Milton. 1960. *A Program for Monetary Stability*, Fordham University Press.
- Haldane, Andrew G. 2011. Capital discipline, speech at the American Economic Association, Denver, Colorado, 9th of January.
- Hammond, B. 1957. *Banks and politics in America from the Revolution to the Civil War*, Princeton University Press.
- Kay, John. 2009. Narrow banking: The reform of banking regulation, CSFI Report, 15 September.
- Lainà, Patrizio. 2015. Proposals for full-reserve banking: A historical survey from David Ricardo to Martin Wolf, *Economic Thought* 4(2): 1-
- Litan. Robert. 1987. What should banks do?, Brookings Institution.
- Modigliani, Franco and Merton H. Miller. 1958. The cost of capital, corporation finance and the theory of investment, *American Economic Review*, Vol. 48(3), pp. 261-297.
- Pennacchi, George. 2012. Narrow banking, *Annual Review of Financial Economics*, Vol 4(0):1-35.
- Reinhart, Carmen and Kenneth S. Rogoff. 2009. This time is different: Eight centuries of financial folly, Princeton University Press.
- Ricardo, David. 1824. *Plan for the establishment of a national bank*, J. Murray
- Ronnie, Phillips. 1995. *The Chicago Plan and the New Deal Banking Reform*, M.E. Sharpe.
- Tobin, James. 1985. Financial innovation and deregulation in perspective, *Bank of Japan Monetary and Economic Studies* 3(2): 19-29.
- Wolf, Martin. 2014. *The shifts and the shocks: What we've learned—and have still to learn—from the financial crisis*, Penguin Books.