

Fiduciary Media and Banking in Medieval Venice Revisited

by
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Abstract:

At the center of the trade and wealth of medieval Venice was the banking system, as Reinhold Mueller showed in his 1979 article, *The Role of Bank Money in Venice 1300-1500* (*Studi Veneziani*). This was a system that built largely on trust, Mueller argues, and on the existence of what he calls fiduciary money (media). But in what sense did trust matter? In what sense was this important especially for the banking system? It turns out Mueller uses the term in a totally different way compared to Ludwig von Mises in his *The Theory of Money and Credit*. This paper discusses the distinction between Mueller's and von Mises' use of the word, especially its effect on system-wide bank failures, and concludes that Mises' use makes a much richer analysis possible. From this, Mueller's alleged evidence of the existence of fiduciary media and the alleged causes of the system-wide bank failures in Venice are re-examined. The result is that most of the evidence collapses, with two notable exceptions. Firstly, fiduciary media was created by Government intervention through (i) forced loans, (ii) by extending credit itself, or by (iii) by favoring the money creation by banks. Secondly, fiduciary media was created by, not by credit expansion over reserves as we are used to in the more modern era, but by reserve contraction. Thus, the causes of system-wide bank failures in Venice could very well have been other than what Mueller proposed, namely government intervention and poor clearing (the latter probably due to insecure property rights).

"That's what's so unique about Venetian capitalism, the state exists in order to help people make money... The same people who sat in the great council and in the senate were the people who were investing and who were using taxpayers' money to give them an advantage... against Genoese competitors, Catalan competitors and so forth."

- Professor Reinhold Mueller, University of Venice

1. Introduction

Reinhold Mueller's 1979 article, *The Role of Bank Money in Venice 1300-1500*, is regarded as a seminal work in history of banking. The heart of the wealth creation of medieval Venice was the banking system, Mueller argues. The banking system was generally successful, but from time to time there were panics and system-wide failures. Mueller explains the up and downs by referring to the issue of trust. But in what sense did the trust matter? In what sense was this important specifically for the banking system? At the center of the answers to these questions, lies the term fiduciary media.

This paper discusses the implications of the difference between Mueller's use of the term and that of Ludwig von Mises. I will show how Mises' version makes a much richer analysis possible. With Mises' version in mind, Mueller's evidence on the causes of the system-wide bank failures and the creation of fiduciary media and credit expansion is re-examined. This is of importance since Mueller tries to explain bank runs and system-wide bank failures by means of his version of the term. But what if he misses out on some major causes of these runs and failures? Or if he identifies a cause, that really is not a fundamental cause? To really be able to understand the use of bank money, one must understand what is meant by fiduciary

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money. This term comes from Latin, and according to the New Oxford English Dictionary, *fiducia* means trust, *fidere*, to trust.

Mueller uses the term fiduciary money (media) as a way of expressing the trust a depositor must have in a banker, to be certain enough to deposit his money at all. The depositor trusts the banker to pay back the cash on demand. The alternative use and meaning of the term fiduciary media, follows Ludwig von Mises and his use of the term in *Theorie des Geldes und der Umlaufsmittel* from 1912 (translated into *The Theory of Money and Credit* in 1934). According to his use, fiduciary media is the part of money supply that is not directly backed up with standard money (in this case, commodity money), and, thus, can exist only by the fiducia of the depositors that it is they who will be repaid on demand, but not necessarily that everyone will be repaid. It is implied in this, that it is impossible to tell the difference between fiduciary media and ordinary standard money¹. Thus, the fiduciary money in this sense do not exist under 100 percent reserves, but is restricted exclusively to the case of fractional reserves. The distinction between Mueller's and von Mises' use of the term fiduciary media becomes apparent by a simple example. Suppose a merchant in Venice deposits cash, i.e. specie, in a bank and he receives bank money in return (i.e. a credit in the books of the banker). According to Mueller, this is an increase in fiduciary media. According to von Mises, it is not, since it is fully backed by specie. Fiduciary media in Mueller's sense is present both under fractional reserves and 100 percent specie reserves. Fiduciary media in von Mises' sense always involve fractional reserves, per definition.

And why is the distinction important? It is important, because a major component of bank failures and bank crises is a monetary contraction. When one bank fails, it is quickly spread to the whole system. However, if 100 percent reserves are kept, a bank failure will not spread, because the money is still there. The imprudent bank goes bankrupt, but the deposits are still in the vaults. There is no monetary contraction, and no bank system failure. This is true under a 100 percent specie reserve standard, and Venice at the time was on a specie standard of gold, silver and copper.

Moreover, the issue of trust is in a way misunderstood by Mueller. Was the issue of trust he refers to really a special feature of banking? One could argue, that this kind of trust is a kind that is essential to all types of economic intercourse between individuals. However, it is a trust that largely, in everyday life, we do not put in the people we deal with *per se*, but in the supposed rationality of the counterparts and ultimately in the judicial system. In a rational society where contracts are enforced, we don't have to check people out all the time. If the society was less rational or contracts were not enforced, we would probably only deal with our cousins and close friends, as is very often the case in places where contracts and property rights are less secure. But this is not a question of trust that is restricted to banking only. Hence, in this way it could be argued that this is nothing special for banks. And since it apparently was possible to enforce repayment of deposits in Venice at the time², Mueller's use of the term fiduciary could be regarded a bit to wide.

Thus, we see that there is a major difference between for example the cases where the money supply increases because of more specie is around, or if the money supply increases because

¹ “Fiduciary media are transferable claims to standard money, payable by the issuer on demand, and accepted as the equivalent of standard money, but for which no standard money actually exist”, George Reisman, *Capitalism*, p.512.

² Judging from Mueller's quote of Luca Pacioli, reading “as authoritative as a notorial instrument since it is backed by the government” (p.49).

of more un-covered bank money. As I said, Mueller's use of the term fiduciary money does not allow for this difference. And as we will see, there are numerous cases where he writes that there is credit expansion, but he does not distinguish between if the expansion is followed by more specie deposits or not.

Before we turn to the evidence for fiduciary media in Venice, it is perhaps appropriate to say a few things about the use of other resources as reserves, i.e. the use of collateral. The individuals that became bankers were self-made businessmen and often seem to have been rather wealthy. This was probably a prerequisite for someone to put his money in the hands of the banker; one knew that the banker would be around and that he had some wealth that could be collected by enforcement if necessary. Does this imply that there is no difference between using real estate and other collateral compared to using the gold deposited, as reserves? No, because the collateral, be it real estate or something else, is at the time it is put up as cover to the bank money, valued at its market value calculated in money of account. But the market value of a house etc, is highly dependent on the existence of money itself. If there is a for example a bank failure the creditors are paid of by selling the house or houses in question. That would lead to a downward force on the prices of houses, thus weakening the reserves of other banks. Thus, we see that the security and value of the bank money depend on the value of the collateral behind them. However, furthermore, the value of the collateral behind the bank money depends on the continued existence of the bank money itself. In this fashion, a bank failure could spread. Bank money backed up by collateral takes on very much the same character of fiduciary media as do bank money without any backing at all. The only safety against system-wide bank failures is if bank money is backed up by specie (standard money), i.e. at 100 percent. Collateral backing is not sufficient. Hence, we can conclude that the kind of backing used for the bank money is of great importance. No reputation, no fiducia, no other assets, whether liquid or illiquid, can actually prevent system-wide bank failures. In fact, the belief that they can is a prerequisite for the system-wide bank failures.

2. Fiduciary media in Venice

Mueller starts by noting that "The demand deposit is a liability on the banker's balance sheet and is the client's claim on the specie he deposited" (p.48). This situation is shown in Figure 1. Let's say a merchant deposits specie worth 100 ducats in a bank. He then gets a demand deposit of the same value, and, hence, his assets are unchanged. The banks assets increase by 100 ducats of specie and the liabilities by 100 ducats of demand deposits. Thus, the balance of the bank increases by 100 ducats.

Figure 1 – Specie deposited in bank (changes on balance sheets)

Assets	Bank	Liabilities
Specie (reserve)	100	100 Demand deposit
	+100	+100

Assets	Merchant	Liabilities
Specie	-100	
Demand deposit	+100	
	0	

The bank money's primary function was to facilitate payments. Suppose our merchant wants to pay another merchant for some reason. They then walked into the banker's office and ordered the payment. This is described by Mueller's quote of the man Pacioli as:

“Now suppose you are the banker ... performing a transfer: if your creditor, without withdrawing cash, orders payment to another party, in your journal you debit that depositor and credit the assignee. Thus you make a transfer from one creditor to another, while you yourself remain debtor” (p.49).

Figure 2 – Payment by bank money (changes on balance sheets)³

Assets	Bank	Liabilities
Specie (reserve)	0	-100 Demand deposit Merchant A
		+100 Demand deposit Merchant B
	0	0

Assets	Merchant A	Liabilities
Demand deposit	-100	
	-100	

Assets	Merchant B	Liabilities
Demand deposit	+100	
	+100	

From this simple description, we enter into the world of fiduciary media. The merchant that wants to deposit specie can choose to make a time deposit, where he agrees not to reclaim the money within a specified term, or a demand deposit. In the former case, the banker can lend the 100 ducats, while maintaining full reserves. A saving deposit is similar, as evidenced by Mueller as he writes that “Saving deposits left with a banker in the hope of earning interest were not readily transferable nor were they intended to serve as a means of payment” (p.51). But on the other hand, if the merchant wants a demand deposit, which seems to have been mostly the case⁴, this could lead to the creation of fiduciary media. The crucial part is whether the banker maintains full reserves, or if he uses the reserves to expand credit to others. This is basically what we have to try to find out from the facts Mueller presents.

The first real indication Mueller gives that the bankers were working on a fractional reserve basis, is the fact that “A Venetian law of 1321 which gave bankers three days after demand in which to make liquid the deposit credits of clients was already a tacit admission that a system of fractional reserve was in operation” (p.52). This is a measure often adopted later on in banking history as banks were working on a fractional reserve. It is a measure to avoid bank runs. The bank could be solvent on an ordinary scale, but is not always liquid enough. In the case of Venice, it seems like the bankers used the deposits themselves, to invest in other lines of business (remember that they often were businessmen originally) or to lend them. Mueller continues by noting that the general public “attributed the failures of private banks to their investment of depositors’ money” (p.53), i.e. to the fractional reserve system. However, according to Mueller the fractional reserve system permitted an expansion of money supply by (i) bank loans, (ii) client overdrafts, and (iii) monetized state debt (more about the latter below). But by now we know that the first two of these do not involve an expansion of the money supply by necessity. This is because the bank can have reserves coming from time and saving deposits to lend, i.e. (i) and (ii) could be possible even under a 100 percent reserve

³ See Murray Rothbard’s *The Mystery of Banking*, for more on how to analyze banking with the help of balance sheets.

⁴ “Individuals leave large sums of money with a banker merely for the convenience, and not in order to earn interest” (p.49).

system. Here we see the problem with using Mueller's definition of fiduciary media. It simply does not allow for this distinction. Thus, the evidence is perhaps not as strong as Mueller suggests, but we clearly cannot rule out the possibility of fractional reserves.

The exposition made by Mueller on the use of bank money in Venice (pp.53-61) does not give any evidence of the presence of fiduciary media. However, the part about the bullion market (pp.61-67), requires some closer analysis. Mueller writes that "It was the general custom in Venice for the importer and seller of silver to be paid by bank transfer" (p.62). What this means is that a goods-exporting merchant is receiving bullion as payment (i.e. bullion is imported). As the payment arrives in Venice, the merchant surely would like to deposit the bullion in the bank. Each individual banker then probably was bidding on this bullion by offering a competitive bullion exchange rate (between bullion and minted coins). In this way banker could be seen as buying the bullion. This certainly results in an expansion of the money supply, as Mueller notes (p.65). But there is always specie at the market value covering the bank money. And, hence, there is no fiduciary media present (or at least necessarily so). One bank could incur losses or fail by speculating on the exchange rate, but the prerequisites for the spreading of the failure are not proved to be present. The system-wide bank failures of 1374 cannot with any certainty be said to have been caused by bullion speculation. The same holds for the failures in September 1429. All the legislation that occurred in this area could have been misguided and are not proof enough and not even the special laws during the war of Chioggia necessarily lead to any fiduciary media. When it comes to the process of minting the bullion (p.66-67), Mueller is once again right about the fact that new credit is created and that the money supply is expanded, but once again, there is bullion present as full backing.

The next issue of importance is the state's acceptance of bank money. This is perhaps the most complex issue to analyze, because there are many ways in which the state manipulates the bank reserves to its advantage. The state accepted payments of taxes and of the forced loans (!) by means of bank money. The most important magistracy was in this regard the *Officium Extra-ordinarium* (OE), which collected duties and freight charges on the state galleys (the state owned the galleys used for trade). The acceptance of bank money commenced as OE required payment for the galley freight services and the duties in advance. This meant that the merchants had to pay before they could sell the arriving goods, which lead to some problems for the merchants (they had probably sent away a considerable part of their money on the galleys to acquire the goods). The problem was solved by accepting personal guarantees to payment, and here the bankers stepped in as guarantors. But later also others were accepted as guarantors, i.e. also the merchants. This involvement by the state in credit transactions soon led to a demand by the merchants for the state to accept bank money as payment. Hence, now the state suddenly had a new way of directly influencing the amount of bank money, as manifested by Mueller's comment: "Thus bank money became not only a legal means of paying customs but also the usual means" (p.70). This situation was reversed in 1417, when the OE once again demanded cash as payment. The reason was a difficulty in collecting debts, indicating that there was a monetary contraction present, for whatever reason (and the demand by the OE did probably not lessen the contraction). But remember that a monetary contraction only can appear if there is a decrease in the money supply caused by the wiping out of fiduciary media. Later, and as a means of softening the cash problem of the merchants, the customs office was allowed to extend credit to the merchants. This meant renewed creation of fiduciary media (in believing that the poison that caused the problem actually was the antidote). Hence, we see that the state's involvement, in addition to their use

of forced loans, was extended to the dubious function of extending credit in the form of fiduciary media.

Mueller then discusses the reserves, inter-bank deposits and overdrafts of the Venetian banking system. He states that the state's insistence on bankers being "licensed to operate in the city was an obvious attempt to protect depositors in a system where bankers were not keeping 100% reserves" (p.73). Although it may be an indication of a fractional reserve system, it is certainly not an obvious attempt by the state to protect depositors. The state's involvement in the banking system actually made it more of an accomplice. We cannot even rule out the case that the state's forced loans and own credit extension, was the actual root of the fractional reserve system (as it is today). The state actually forced bankers to keep 100% reserves while at the same time creating fiduciary media and forcing bankers to extend loans. Moreover, Mueller "evidence" that the bank's surety increased from 3000 lire in 1270 to 25000 lire in 1523 could easily be explained by the fact that the amount of specie had increased by something like that in the 263 years, as new gold was dug out, the New World was discovered, and that the Venetian wealth grew faster than other parts of the world, thus attracting specie. It is not proof enough for a case of increased protection of depositors.

The further proposals in 1356 and 1374 for a public bank running on full reserves, Mueller once again declares to be evidence for a fractional reserve system. What he does not consider, judging from the article, is the fact that (i) the proposals *per se* could have appeared at a time when banks actually were running on full or almost full reserves, because that would certainly be a good time to impose such a sound law. Or, (ii) it could simply be a case for politicians to go into the banking sector, under the guise of sound banking, a rhetoric that probably has always been around. Furthermore, (iii) the proposals could have been cases of covering up for the state's own manipulation of the banking system in the form of forced loans and credit extension. After all, if a depositor wants to deposit specie, the banker would only be happy to receive it and credit the books in the depositor's name. It is only if the depositor does not bring any specie that the banker has to be forced to credit the books. This is the case when the state forces the bank to extend credit, uncovered by specie. An indication of this last point could perhaps be found in Mueller's "the total of loans and investments permitted was limited to one and one-half times the amount of forced loans levied on the banks by the government" (p.74). That clearly is an attempt to limit the effect of the fractional reserve banking forcedly imposed by the government.

As noted above, the Great Council ruled that banks had to meet the demand within three days. This was in part in response to the fact that it is in each banker's interest to keep as much of the specie deposited and hence to discourage withdrawals. They did this by putting a small charge on withdrawals and by sending the depositors to other banks where the banker had a positive balance. But, as also noted above, this is not necessarily evidence that the banks were on a fractional reserve, although it is yet another indication that they were.

Mueller continues by asserting that inter-bank deposits "weld individual banks into a banking system which can further increase the stock of money" (p.75). The presence of inter-bank deposits on the balance sheet of the banks is shown in Figure 3. The first half of the figure, denoted a), shows the changes of the balance sheets of two banks in the case of actual specie transfer. Let us say a client B of bank B wants to pay a client A of bank A a sum of 100 ducats. He then has to withdraw the sum in cash or have it transferred to bank A, and then the account of client A is credited. Thus, both client A's and bank A's assets increase by 100

ducats, while the reverse is true for client B and bank B. The changes are completely offsetting.

Figure 3 – Inter-bank deposits (changes on balance sheets)

a) Specie transfer

Assets	Bank A		Liabilities
Specie	+100	+100	Demand deposit of client A
	+100	+100	

Assets	Bank B		Liabilities
Specie	-100	-100	Demand deposit of client B
	-100	-100	

b) Inter-bank deposit

Assets	Bank A		Liabilities
Demand deposit at bank B	+100	+100	Demand deposit of client A
	+100	+100	

Assets	Bank B		Liabilities
Specie	0	-100	Demand deposit of client B
		+100	Demand deposit of bank B
	0	0	

In part b) of the figure, there is no apparent specie transfer. Both clients step into the office of bank A and give the transfer order of the 100 ducats. Now, client A's account in bank A is credited with 100 ducats and at that instance the transaction is over for the clients point of view. But now bank A has a claim on bank B of 100 ducats, and in this case this has to be cleared by an inter-bank deposit (since there is no specie transfer). On the balance sheets, it appears like bank B is unaffected, while the balance of bank A has increased. There is money creation in the form of inter-bank deposits. But under what conditions is this situation sustainable? It is sustainable only as long as bank A is willing to accept the IOU from bank B. This will be the case if, for example, the banks know that they will both profit from doing this, and that there is no competition for the clients to turn to, i.e. if there are legal barriers to entry. Once again, the easy part for bank A is to expand their deposits, but the crucial part is the relation with bank B. If the banks were fierce competitors, bank A would not accept any larger IOU's from B for any longer periods of time. It would demand specie transfer before crediting client A's account. This is called the principle of mutual clearing. Hence, on a competitive bank market, this kind of money creation is not sustainable. Only if banks are forced to accept IOU's, like they were forced to do by the government, or if the government imposed restrictions in the competition, could the money creation exist on a large scale⁵. Instead, and as Mueller notes, the merchants seemed to have accounts at several banks. This would not be necessary if inter-bank deposits were widespread, and thus is an indication that the inter-bank deposits actually were not very widespread.

Finally, let us have a closer look at the government's intervention in the banking business. So, far we have seen that the government intervention forced the banking system onto fractional reserves via (i) forced loans and (ii) by extending credit itself. After the war of Chioggia, the

⁵ It is of course possible that smaller inter-bank deposits actually existed and were cleared once in a while.

“close relationship between the state and the private banks developed and became a permanent feature of the Venetian economy” (p.78). This meant that the banks were carrying the floating debt of the government. “The banker lent money to the state by substituting his promise to pay for that of the state”, Mueller continues (p.79). This close relationship resembles the Central Bank – Treasury – bank-system – relationship of most modern countries. The government can spend money by borrowing direct from banks, without security in the form of specie, but instead the only backing is the short-term government debt. This is a clear instance of fiduciary media, “similar to the issuance of bank notes”, as Mueller notes (p.79). The banks provided cash or credit to the government, so that it could pay its dues, and where re-paid later. The fiducia of the general public in the banking system rested on the promise that the government would repay (out of revenue from forced loans and taxation levied on the public itself). This appears to have been one of the causes of the bank failures of 1499, as Mueller notes (pp.82-83). It is important to note that this situation creates opportunities for not so prudent bankers to earn more interest revenue and market shares on the expanding stock of credit. The prudent banker loses under this system, since his market share decreases and the inflated money supply favors his creditors. Thus, the system actually invites bankers to act imprudent. When at times the government did not fulfill its promises, the result was system-wide bank runs. Hence, we see that the government also created problems for the banking system by favoring the monetizing of its debt, i.e. money creation by banks.

To sum up this section about the existence of fiduciary media in Venice, I am not too inclined to agree with his statement that he actually has “established the existence of fractional reserves and inter-bank relations [...]” (p.77). The only clear evidence is the fiduciary media created by the governments intervention, i.e. by either (i) forced loans, (ii) by extending credit itself, or by (iii) by favoring the money creation by banks.

3. Trade Patterns in Venice 1300-1500

Venice at the time in question did not manufacture much itself. Instead successful trade created its wealth. This has important bearing on the question of specie reserves and fiduciary media, since the trade resulted in great variations in the available quantity of specie. At times, a lot of specie was needed to be sent southwards on the galleys to pay for imports, and at other times there were large inflows of specie as the merchants received payments from mainly Northern Europe for the exported goods. As Venice itself did not produce very much, these flows of goods and specie are important for the survival and well being of the merchants, the bankers and as well as other Venetians. Figure 4 depicts the trade flows.

Hence, Venice wealth rested the volume of imported goods exceeding the volume of exported goods, while the specie flows in the other direction served as means of payment (from this it does not follow by necessity that the specie outflows had to exceed the specie inflows). Today this situation would be called an unfavorable trade balance, as it was also at the time of the earlier so-called mercantilists. It is actually a favorable trade balance, because in the reverse situation, Venice would be drained of its wealth (wealth being physical goods). To see this consider the following. For a single merchant, it was essential to be able to receive higher revenue, i.e. more specie, for the goods he exports than he has to pay for the goods he imports. The difference is of course his profit. For a single merchant to become wealthy, his specie inflow must exceed the outflow. But to conclude from this fact, that it is a good thing for Venice as a whole that the inflow of specie exceeds the outflow of specie, is, as I said, an old mercantilist fallacy. It is a fallacy of composition, of mistakenly assuming that what is good for a part of the whole also is good for the whole. Instead, what is good for Venice as a

whole is that the inflow of goods exceeds the outflow of goods. One does not live by money, one rather lives by goods. For if it would be preferable with an excess of an outflow of goods over an inflow of goods, one could as well throw the goods in the Mediterranean.

Figure 4 – Venetian trade simplified



Thus, each individual Venetian merchants wanted to send as much specie on the galleys as they could, for the purpose of obtaining as much goods as possible, to re-sell at a profit. Once again, this does not mean that more specie flew out than in. How much a given sum of specie buys, depends exclusively on the prices. If the merchants were able to buy goods cheap, keep some of it in Venice, and sell the rest to other parts of the world, this could mean that over time, the specie out- and inflows were matched. Moreover, as the bankers often were successful merchants to begin with, they probably were tempted to send some specie abroad as well. Furthermore, the government was running the galleys and this, together with customs duties, probably was a nice source of revenue. This means that also the government had an interest in sending as much specie as possible abroad.

4. Fiduciary Media and Trade in Venice 1300-1500

Under these conditions, sending specie abroad must have meant that either (i) specie was withdrawn with bank money decreasing to the same extent, or, (ii) specie was withdrawn without bank money decreasing to the same extent, i.e. a case of the creation of fiduciary media. Mueller notes that bank money expanded with specie or bullion in-flows, and contracted in August at the time of the galleys departing with specie (p.78. See also pp.55, 67 and 81). Since the specie flows in and out of Venice probably were relatively large in proportion to the average amount of specie in Venice an average year, this could actually be one of the larger sources of the creation of fiduciary media and, thus, also of bank failures. If, for example, a banker sent away part of the banks reserves, i.e. the specie deposited by others, that would be creation of fiduciary media, without new bank money coming into existence! That is not noted by Mueller. But if, in the highly uncertain trade operation of that time, something happened to the galleys and the specie was lost, there would be a permanent decrease in reserves, bank money left uncovered, and a universal lack of goods. With so much of the wealth coming from and depending on the trade, a disaster like that at least must have caused bank runs. I would guess even a rumor of pirates or the like would have caused a run. Loads of bank money, no reserves, and no goods surely could make the collateral fall in monetary value, and system-wide bank failures follow. At least one of the crises Mueller refers to comes in September (1429, pp.63-64), just after the specie has been sent away, an indication that this line of reasoning might hold.

This might be an extreme case, but the government intervention surely did not prevent the creation of fiduciary media, as we have seen. Imprudent bankers, merchants and the government profited on this as long as the fiducia was kept up and nothing went wrong. This procedure probably was the largest source of fiduciary media, since the gains were large and bankers, merchants and the government were all in on it. But was it a gain for Venice as a whole? Money creation might be of gain for the receiver of the new money, who receives it without a productive effort. The newly created money spreads through the economy as the first receiver spends it on particular goods, bidding up prices and, thus, raising the revenue of

the sellers of those goods. But it is at the expense of those who are the ones that are the last to receive part of the new money, while at the same time have to pay higher prices. And then there is the risk of bank failures, a risk everybody will be affected by. Hence, we see that the bankers, the merchants and the government are the first to benefit by the creation of fiduciary media. But this also means that it is at the expense of other parts of the population. And at a crisis, everybody is likely to lose. But note that this is only possible with the government's consent, making it bear the ultimate responsibility.

But could the success of Venice have been possible on 100 percent reserves? As I said, if one ships abroad a certain amount of specie, how much that specie will buy depends on the prices. As Venetians once a year arrive with galleys full of specie, traders on the other side arrive with goods that they want to sell. Using the formula for general price determination of the classical economists, $P=D/S$, where P is the general price level, D is the demand, i.e. the sum of money, and S is the supply of physical goods, we see that a larger amount of specie only raise prices⁶. Less specie, would probably mean lower prices. This depends on the assumption that there is a fixed supply of goods at the time the galleys arrive, an assumption not totally unrealistic. The fact that Venice played such an important part of Mediterranean trade, perhaps makes it more realistic. In any case, we cannot rule out the case that the same trade pattern and the same success could have been achieved with full reserves. A country has never grown wealthy by means of money creation. A country grows rich by productive activity, like the trade of Venice.

5. Final comments

In this paper we have re-examined the role of bank money and the existence of fiduciary media in Venice of the 12th to the 14th century. We found that Mueller's evidence for fractional reserves perhaps were not as strong as he wants to make us believe. The only real evidence presented in his article is that the government intervened by either (i) forced loans, (ii) by extending credit itself, or by (iii) by favoring the money creation of by banks, and in that manner used its legislative power, backed ultimately by its force, to create fiduciary media.

We also found that the role of fiduciary media in Venetian trade could have been the exact opposite to the common belief; the trade created fiduciary media, not the other way around, as perhaps is the common belief. The fiduciary media was created, not by credit expansion over reserves like nowadays, but by *reserve contraction*. And the reserve contraction was in turn a consequence of the need to send specie reserves abroad for trade purposes. Remember that the international clearing systems were not fully developed at the time, at least not between Venice and the southern parts of the Mediterranean. One would expect that the insecure trading context of the time should lead to clearing taking place. With a clearing system, the shipping of specie to a large extent would disappear. Why this did not happen could possibly be explained by the lack of enforcement of property rights for foreigners. Hence, the trade made the existence of fiduciary media a common component in Venice, and not in any way the other way around. But the fiduciary media was not a consequence of the trade by necessity. It is likely that Venice would have succeeded even on 100 percent reserves, since it is the productive activity that makes a country wealthy, not money creation. Instead, the existence of fiduciary media was made possible by what probably was some sort of silent agreement between bankers, merchants and the government, who all benefited from this, likely at the expense of others.

⁶ This formula of the classical economists is explained in George Reisman, *Capitalism*, p.505.

This paper has pointed to the need for further investigation into the role of bank money, trust and fiduciary media in medieval Venice, to determine its role in banking and system-wide bank failures. Since the fiduciary media was not a prerequisite for the trade and neither the trade a prerequisite for fiduciary media, what were instead the causes of the fiduciary media of the banking system and the successful trade, respectively? If it were possible to establish existence of fiduciary media in the von Mises sense and the causes of it, we would learn more about the causes of the system-wide bank failures of medieval Venice. And of more modern ones. Perhaps there is more evidence to be found on the existence of fiduciary media in Mueller's two-volume work on Venetian money and banking. After all, one would expect these to provide more information than the close reading of his article that I have performed. But that is something for future research.

Hopefully this article have shown how von Mises' much richer use of the term fiduciary media can be used in analyzing banking, past and present. But since prominent banking historians like Mueller, telling from the quotation above, obviously cannot see the difference between capitalism and mercantilism, I wonder if this really will help.

Readings:

Ludwig von Mises, The Theory of Money and Credit. New Haven: Yale University Press, 1953. Reprint. Irvington-on-Hudson, New York: Foundation for Economic Education, 1971. Reprint. Indianapolis: Liberty Classics, The Liberty Fund, 1981.

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Murray Rothbard, The Mystery of Banking, Richardson & Snyder, 1983.

The New Oxford English Dictionary, Oxford University Press, 1998.