

Mikel Larreina Díaz

THE FINANCIAL SYSTEM

A European approach to Financial Institutions,
Instruments & Markets



Desclée
De Brouwer

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Henao, 6 - 48009 Bilbao

www.edesclee.com

info@edesclee.com

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CHAPTER 1:
THE FINANCIAL SYSTEM

A channel for savings

The Financial System is a key element of societies and has been a fundamental driver of economic development since the Ancient Age, facilitating the raising of capital and therefore productive investment. Despite this central role in economic activity, it also tends to experience periodical overgrowth periods which may result in deep and socially disturbing economic crisis once a given financial bubble explodes. Hence, understanding both the appropriate uses of the Financial System, and the reasons for its malfunctioning are crucial for taking educated decisions related to saving, investment and finance; and even for understanding our society.

In any society, at least those more evolved than hunter-gatherers, we can find economic agents that have more resources than what they need, and others in the opposite situation. Resources will be better allocated if there are procedures for transferring them from those that will keep them idle to those that need them; otherwise economic agents would be forced to “*operate as self-contained economies*” (Santomero and Babbel, 2001). The Financial System is a complex whole composed of Institutions, Instruments and Markets, whose aim is precisely to channel savings from Surplus Economic Units (SEU) to Deficit Economic Units (DEU) as can be seen in Figure 1 (Fabozzi and Modigliani, 2002). The structure of the financial system could vary, and different models could be thought of¹. Hereinafter, examples will refer to the current model that we have in the early XXI century, specifically to the model prevailing in Europe, a model in which “*the money goes round and round, just like a carousel on a fairground*” (Valdez and Molineux, 2013).

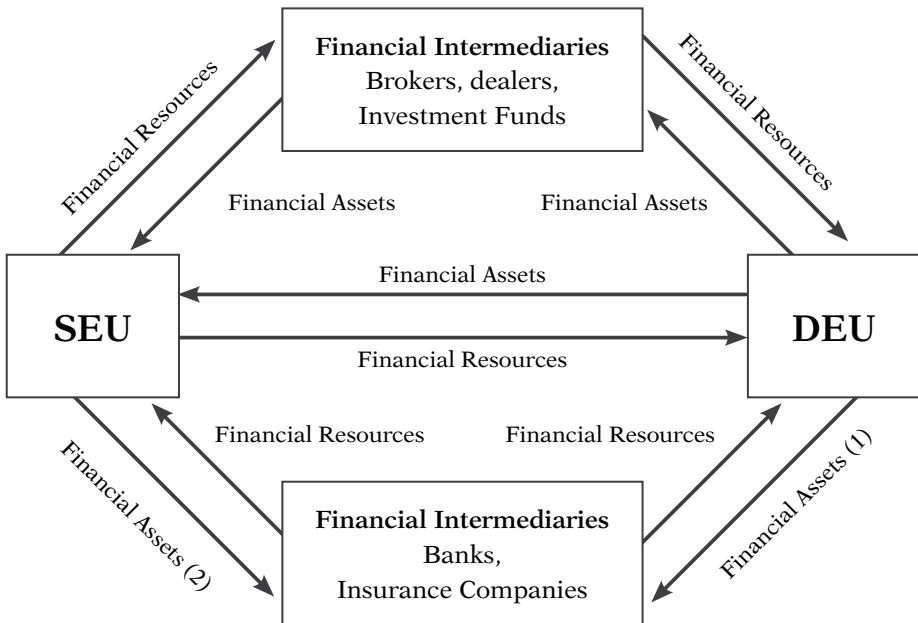
1. Markets, in fact, may be defined according to moral principles, and show a certain vision of the world (Lakoff, 2006; p. 137). Accordingly, the use of alternative moral guidelines, like giving a higher importance to climate change or to poverty reduction, may generate alternative financial models, like the coupon market proposed by Roemer (1994) or the socialisation of the financial firms proposed by Mason (2015).

Nevertheless, the global financial model has shown extreme weaknesses periodically (inflating financial bubbles), and due to its critical role for the current functioning of our societies the economic recessions deriving from financial crises are generally deeper and more protracted than others (Bordo *et al.*, 2001; Reinhart and Rogoff, 2009; Romer and Romer, 2014). The consequences of financial crises have an “*enormous human and economic cost*” (Camdessus, 1998; p. 2). The recent global crisis, which has left depression-level unemployment in many countries of peripheral Europe and a combination of low growth and deflation or extremely low inflation in most developed economies, is not unique; the 1929 crash and the Great Depression being the clearest precedent.

Besides, the current global financial model seems unable to cope with the main challenges affecting the human species². Hopefully, our financial system will be improved in the short term (even though this thought seems too optimistic): as Rocard and Pope Francis, among many others, put it, our financial system must be *rethought*³ for our own safety, so as to prevent financial catastrophe and dramatic recessions (Rocard, 2011): “*foregoing a firm commitment to reviewing and reforming the entire system, only reaffirms the absolute power of a financial system, a power which has no future and will only give rise to new crises after a slow, costly and only apparent recovery*” (Francis, 2015). Time for change is dramatically short: as some have argued, these challenges cannot wait any longer and should be addressed as soon as possible before their consequences become irreversible (Stern, 2006; Elliot, 2008; Jackson 2009; GFDRR, 2015; Klein 2015). Fortunately, in mid-2017 there is more hope for this evolution than in previous years: there are currently a number of driving forces that may drastically reshape the financial system, as will be discussed later.

-
2. Among others: the incapability to reach the Millennium goals; the climate change and the destruction of the environment; the proliferation of nuclear weapons; the spread of poorer labour conditions despite technical progress; the rise of inequality... Besides those already known, we may face at any time *black swans* for which we are quite likely unprepared.
 3. It is “*un système bancaire à repenser*” (Rocard, 2011). A thoughtful analysis may be found in Rocard (2015 and 2015b).

Figure 1 - Three Channels for Transferring Financial Resources – Before the internet of Money



Financial resources may be transferred directly, with no intermediaries between the SEU and the DEU. The former transfers funds to the latter in exchange for a financial instrument (asset for the SEU; liability for the DEU). For instance, a company issues stock (primary market) and an investor buys these shares: when Repsol took over the Argentinean oil company YPF in the late nineties, it needed a very large amount of money in order to pay former YPF shareholders. Repsol raised the money they needed by issuing new shares, that worldwide risk-takers, eager to invest in the resultant company, willingly bought. Investors were in this case the SEU; Repsol was the DEU; and the financial instruments for which money was exchanged were newly issued Repsol shares. In this financial channel the SEU is accepting the risk of financing the DEU with which it has engaged.

Particularly, if the stock is issued by a public company, listed in an official Exchange, quite likely financial intermediaries would be involved: brokers, if they only facilitate SEUs and DEUs agreeing to the

deal; dealers, if they have a more active role. Brokers do not bear any risk in their operations, simply mediating between SEUs and DEUs, while charging a fee for this mediation. Meanwhile, dealers may buy and sell financial instruments for their own sake, accepting the risk of a price reduction between the purchase and the sale, and hoping to get a profit from price differences. Both financial intermediaries constitute the semi-direct channel of transferring funds: their intervention does not break the relationship between DEUs and SEUs, but only facilitates that both parties meet and agree on the contents of the contract.

Funds can also be transferred through the indirect channel. This method relies on the existence of financial intermediaries like credit institutions or insurance companies⁴. These institutions raise money from SEUs by issuing financial assets; after that, they pass these financial resources to DEUs in exchange for a different kind of financial assets. There is no relationship between any given SEU and a specific DEU, they only have a bilateral relationship with the Financial Intermediary which will bear the risk of any inaccurate choice of DEU⁵. It may be useful for understanding how this channel works to have in mind a schematic bank's balance sheet, as seen in Figure 2.

-
4. It is arguable if an Investment Fund, funded 100% by equity, that raises money from investors (issuing Fund units) and uses this money for investing in stock or bonds, paying a return to the investors depending on the results obtained in these stocks or bonds, would fit into this group. In this case, the SEU is bearing the risk of who is the DEU, even though it uses an intermediary that issues financial instruments. Other Collective Investments Schemes and Pension Funds would be in this situation.
 5. This means that if we could track down how the financial resources of a given SEU have been used by the Financial Intermediary, and the DEU that receives the money defaults, this will not affect the SEU. Obviously, if there is a large number of DEUs having received financial resources from the financial intermediary that default, all (or at least, a significant number of) SEUs having relied on that specific financial intermediary will suffer the consequences.

Figure 2 - A bank's Balance Sheet

Assets	Equity & Liabilities
Credits & Loans	Equity
Other Assets	Other Liabilities
	Deposits

As may be inferred from the figure, investors with extra money go to a credit institution and place a deposit (the bank owes them the money and usually promises to pay an interest rate on it⁶); simultaneously, economic agents expecting a deficit go to the credit institution asking for credits or loans (the bank has a claim on this money, that bears an interest rate typically higher than that of the deposit).

A brief historical approach

Since the first monetary systems, when items like stones, shells, teeth, salt or even barley were used as *money* for trade⁷, there have been two essential financial instruments: the deposit and the loan. As them, many of the other current institutions and instruments also have a long history. They have experienced a number of evolutions: *financial innovation* continuously produces new products and specialized institutions, although their fundamentals remain unchanged. In fact, in the financial market, "*plus ça change, plus c'est la même chose*"⁸.

One of the first banks from which we have historical records existed in the Mesopotamian city of Uruk around 3300 BC. Apparently, it held

-
6. An era of zero-interest rates or even negative rates shatters this conception.
 7. See Weatherford (1997) for a well-documented *History of Money*.
 8. The more it changes, the more it remains the same.

land and received donatives and offerings that were put into productive uses through loans. Some authors argue that some Mesopotamian families acted as merchant bankers, funding entrepreneurial activities and trade in the VII and VI centuries BC, under the Neobabylonian Empire. They issued promissory notes, and acted as real-estate agents for absent land owners (Nemet-Nejat, 1998). More or less simultaneously, since VII century BC some Greek temples conducted banking operations, using the wealth they have acquired from believers' donations, and from deposits left by people trusting these religious entities (particularly noteworthy was the temple of Apollo at Delos. Temples have several advantages: not only did the gods themselves protect the money, metals, precious stones and the like that were deposited, but these riches also enjoyed the protection of guards. Besides, violations of their sacred spaces was harshly punished (Roberts, 2011).

Later on, in the V and IV centuries BC some financial agents that we could properly denominate bankers developed in Greece. For instance, *trapezitai* accepted deposits, on which they paid an interest; they had "*current accounts*", they made payments for their clients' sake, and they also lent money. Another category of financial agents were the *kollybistes* who changed money. According to Roberts (2011, p.126), a banker in the island of Rhodes was so proud of his activities that had this epitaph engraved in his tomb: "*for three decades he kept on deposit gold for foreigners and citizens alike, with pure honesty*"; he even "*kept his bank open at night*". The Greek city-states even had public banks, managed by the polis itself; the Hellenistic Ptolomeic kingdom in Egypt further developed these services: it even had a branch system that allowed clients to withdraw deposits in a city different from that where the deposit was made, without an actual transfer of coins (Roberts, 2011). A well analysed private bank was that run by Pasion, a slave-born father of a famous Athenian politician, Apollodorus, and which is mentioned in a number of philosophical speeches (Shipton, 1997; Shipton, 2012). In Rome, they created a specific kind of official, the *quinqueviri mensarii*, who were appointed to solve the problem of citizens' indebtedness (Niczyporuk, 2011); since the 352 BC, this commission acted as a *resolutory body*: credit worthy debtors who faced

liquidity problems were covered with public resources by *quinqueviri mensarii*. The debtors who were not able to pay back, and could not arrange a roll-over of their loans, had to transmit their property to the creditors as debt repayment. In these cases, the seizure of property and the forced sales were done after a reliable pricing by the *mensarii*.

In the following centuries, due to religious beliefs preventing other peoples to lend with interest, in most of Europe and the Mediterranean basin, Jews had a key role in providing finance for commerce, but also for funding wars and even major construction projects as cathedrals (Penslar, 2001). In the X century they were bankers in such different places as Bagdad and Christian European courts. Later on, Christian theologians and lawyers developed an understanding that only “*usurious*” interest should be forbidden, and that money lent for productive investment could pay an interest. For instance, saint Bernardino of Siena⁹ wrote in the early XV century that “*money has not simply the character of money, but it has beyond this a productive character, which we commonly call capital*” (Penslar, 2001). This opened the way for Christian merchants to lend money with interest, and to finance riskier commercial ventures; while their partners in Islamic regions could not do so. Some authors like Kuran (2011) blame the inability of the Islamic world to adapt their laws to allow credit with interest, as a relevant factor that prevented during the Renaissance an economic development in the Middle East similar to that experienced in Europe.

In this sense, the Republic of Venice played a significant role in the development of modern banking. After chartering the first private bank in 1171, the *Serenissima* republic passed the first law on banking activity in 1270; in the following century there were up to 10 banks opened at the same time, with around 4.000 depositors, roughly a 12% of the total adult male population of Venice (Lane, 1973). The money held in deposit accounts was lent for commercial ventures; for instance in the 1330s the Venetian banker Francesco Cornairo “*was paying his depos-*

9. Saint Bernardino wrote his book *On Contracts and Usury*, in the years 1431–1433. Among his interesting remarks he claimed that commercial success required not only piety and diligence but also careful bookkeeping and a willingness to take risks.

itors 5%, whilst making loans for industrial or commercial purposes at 8%” (Spufford, 2014). Other Italian states like Genoa, Pisa or Florence quickly followed Venice, regulating and promoting banking activity.

A very relevant bank in the Middle Ages was that belonging to the Medicis, which was established in 1397 in the city of Florence. Among the financial innovations they developed, we can count the double entry system in accounting. They were the bankers not only for the Holy See, but also for the majority of reigning Houses and merchants in Europe. This reputed bank failed in 1494, due to a number of non-performing loans. The fall of Constantinople to the Turks, the failed loans to the Duke of Burgundy Charles *the Bold*, and those to the king of England Edward IV, pushed Banco Medici to bankruptcy (Pérez Ramírez, 2011). In any case, it is interesting to note in its balance sheet for 1460 that more than half the assets it held were loans, and that the equity roughly amounted to 22% of the total size of the balance. Hence, this bank would financially look as a healthy bank nowadays (except for the excessive accumulation of risk in a few individual borrowers).

As large fairs developed in some cities of Europe (like the Fair of Champagne or those of Bruges or Antwerp), specialised financial services were required. Traders who exchanged goods brought from different nations needed the services of merchants that provided banking brokerage, particularly credit and currency exchange.

Private bankers also had a key role in the Renaissance and Modern era; for instance, in Spain, the main discoveries of the centuries XV y XVI, and the wars of that period, needed to be financed by them. This did not come without risk, as could be expected from a kingdom fighting simultaneously against the Ottoman Empire, Dutch rebels, Portugal, France, England, and principalities in Italy and Germany, while consolidating its grasp on America. His navy engaged foes and privateers throughout the Mediterranean Sea, and the Atlantic, Indian and Pacific Oceans. Under Philip II, the Spanish crown defaulted three times, seemingly due to the lenders’ refusal to roll over debts. In one of these bankruptcies, the Genoese lenders imposed “*a three-year embargo on all currency transfers and letters of exchange between the Crown and its agents and troops in the Low Countries where it was engaged*

in a major campaign against Dutch rebels. A direct consequence of this measure was that in November, 1576, troops of the king's own Army of Flanders mutinied and sacked Antwerp because they had not been paid" (Conklin, 1996).

Public banks were also created in order to cover market inefficiencies. Thus, the *Banco di San Giorgio* was created in Genoa in 1408 in order to deal with the excessive volatility of exchange rates between coins of different metals. In 1587, the *Banco di Rialto* was established in Venice to "*supply a payment service hitherto provided by the private sector, but in a manner found to be wanting*" (Roberds and Velde, 2014); seemingly, the preamble of the law establishing the institutions stated that "*the city needs a bank*".

The same need to provide essential services had been felt elsewhere and led to the creation of other public banks like the Barcelonese *Taula de Canvi*, created in 1401 provided banking services to the City (and shortly after, to the Generalitat of Catalonia) and drew deposits away from the private sector in order to finance the city's short-term debt more cheaply than with annuities (Roberds and Velde, 2014). In Germany, the city of Frankfurt created a municipal bank in 1402, which only lasted until that year's autumn fair was finished; its main role was to weigh the coins to be used during the fair.

The Bank of Amsterdam, created in 1609, played an important role in the Low Countries, as it successfully fought the "*poor state of circulating coinage, and consequent uncertainty regarding settlement of bills of exchange*". This bank did not issue banknotes, but created highly liquid assets with its ledger money. It was a model for other public banks, as those of Nuremberg and Hamburg, which also tried to prevent the use of debased currency.

In Spain, the *Banco Nacional de San Carlos* was founded in 1782 by king Carlos III (this bank is the first precursor of Banco de España). It had private capital but it was under royal protection, from where it took its name. The State owed the bank over 300 million *reales* in 1814, forcing shareholders to renovate the bank as Banco Español de San Fernando some years after. It was the only issuer of currency in

Spain until 1844, when two other banks allowed to print banknotes were established: Banco de Isabel II and Banco de Barcelona (another bank was established two years later, in 1846, Banco de Cádiz). Shortly after, in 1856 Spain passed the first law regulating private banking, which permitted the establishment of Banco de Bilbao, Banco de Vitoria, Crédito Vasco, Banco de Santander...

Since their inception, banks have been prone to suffer runs and panics; hence, banking bailout plans have a long tradition. Lane (1973) recalls the story of how the failure in 1499 of the oldest of the four banks existing at the time in Venice, provoked a banking panic as depositors withdrew money from the other banks. As a matter of fact, massive withdrawals condemned them to failure, as they did not have the cash, invested in funding trading ventures. The Pisani bank was able to live through this crisis thanks to the quick formation of a sort of guarantee fund, what calmed down depositors that were already gathering in front of the banker's table claiming their money back. The Venetian government proclaimed the formation of that guarantee, which was backed by the friends and relatives of the banker. In fact, once they saw that local rich men had guaranteed the deposits, in order to gain political leverage, all the foreigners who were at Rialto "*of every country, Catalans, Spaniards, Marranos, Florentines, Pisans, Milanese, Lucchese, Sienese, Bolognese, Genoese and Romans and of every other people that is found on the Rialto*" made pledges themselves as well (Lane, 1973 p.328).

Other financial institutions also have a similar long history, for instance, payment instruments. There were primitive instruments with similar characteristics to the *bills of exchange*¹⁰, which could be found in Babylon, Egypt, Greece, Rome, India, China or in the Arab world (Denzel, 2008). Our current bill of exchange was created in some Italian cities during the Middle Ages: the *Littera Cambiale* had widespread circulation already in the XII century. It was a letter in which a person ordered another individual to make a payment to a third one on a specific date. In the Middle Ages four different individuals participated in

¹⁰ *Letras de cambio*, in Spanish; *lettre de change* in French.

a bill of exchange: the person who gave money to the banker; the banker that issued the letter asking for the payment (the *drawer*); the banker to whom the letter was addressed and who should pay the money (*drawee*); and finally, the person who would receive the money (*payee*). Initially, the bill of exchange was used for making payments from one city to other without needing to physically move the money, what at the time could be hazardous. The possibility to endorse it could provide easy liquidity, and led to its relevance in European trade until the XX century. It allowed for safer cheaper trade, as it reduced the sending of money that required strong vigilance; in fact, “*south and west of a line from Bruges to Venice cash-less payment predominated in long-distance trade by the fourteenth century*” (Spufford, 2014).

Public debt in the form of tradable bonds has also had a long life: in 1171, the Republic of Venice, looking for funding its wars, took a compulsory loan from its citizens; the *prestiti* paid 5 percent interest per year and were perpetual (Lane, 1973). Other Italian city-states such as Florence and Genoa became bond issuers, usually as a means of financing warfare, and with specific tax revenues backing the debts (Goldthwaite, 2009). As the payment of interest was done in due form and time, bondholders could easily sell their bonds if they needed money, creating a market for trading these bonds in Italy and other countries. In Castille, the *Juros Reales*, an acknowledgement of debt signed by the king were issued since the XIII century; they were backed by particular fiscal sources and mainly held by local merchants and nobles. In the case of Genoa, in 1404 creditors of public debt established an institution, the Casa di San Giorgio, which represented them and managed the debt on their behalf. The Casa “*became a formidable institution, a State within a State, to protect the interests of the creditors*” (Roberds and Velde, 2014).

Stock Exchanges also have also a long history (Smith, 2004), that could be traced back to some dark antecedents in Rome. More recently, it was in the 12th century France, when the first brokers are believed to have developed trading in debt and government securities. The term “*Bourse*,” comes from a merchant house in Bruges, belonging to the