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Stabilising Capitalism

A Greater Role for Central Banks

Pierluigi Ciocca

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A Greater Role for Central Banks

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Preface

The question of central banks, concerning their independence, their tasks and the ways they perform them, has returned to the top of the political agenda. In Europe it has been addressed in a debate that the European elections in 2014 initiated on the destiny of the Union during a delicate phase of transition.

Since the 1970s the administrative and technical discretion of the central banks have decreased. However, the Anglo-Saxon financial crisis of 2008 triggered a reaction. It has led to a renewed extension of their powers of financial supervision and to an enlargement of the objectives and degrees of freedom of the monetary policies they implement.

The history, practice and best theory of the central banks – institutions that are, the fulcrum of the financial system – bear out these more recent developments. They have demonstrated the possibility and urgent need for reforms that will equip economic policy with an enhanced rather than diminished role for the central banks, the need for which the 2008 crisis provided yet more evidence.

This book – based on my "La banca che ci manca", Donzelli, Rome 2014 – argues that the central banks, starting with the European Central Bank, are required, with their independence and wide margin of discretion, to reconcile the performance of a number of functions: (1) to oversee the security and promote the efficiency of the payment system; (2) to pursue price stability as well as full utilization of the resources, labour and capital available to the economy; (3) to ensure the proper functioning of the financial system and cope with the risks of collapse; (4) to permit the continuity of public expenditure when, even though the budget is balanced, the government has difficulty in placing its securities in the bond market.

These indications confirm that the new can, in part, co-exist with the old. They correspond to the classical tradition of central banking, which the Bank of Italy helped to build. Through the analytical contributions of Bagehot, Keynes and Minsky they draw on the original idea, first enunciated in 1802 by banker and philanthropist Henry Thornton, that the central bank is a bastion against the instability of prices, production and finance that is rooted in the capitalist market economy.

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1
The Roots of Central Banking

In a short and lucid essay Kenneth Boulding addressed the question of the substantive – even more than the legal – legitimation of the institutions called upon, like the central bank, to pursue specific general interests.[1] He classified the sources of legitimacy into six categories: "payoffs" (the service rendered by the institution), "sacrifice", "age", "mystery", "ritual or artificial order", and "alliances".

A reflection on central banking, on its role in the economy, on the ways in which, among difficulties and misunderstandings, that role is interpreted – thus on the service rendered, the primary source of legitimation – must link history, theory and practice, including recent practice, to proposals for reform. It must focus on the economic and legal heart of the central bank institution: the discretion in the performance of its tasks and the independence that is the precondition of that discretion.

To a varying degree the central bank was recognized as having independence and hence administrative and technical discretion[2] to enable it to contribute to the performance of the economy via the functionality of money and finance. The special nature of the service central banks are required to supply and the advantage they enjoy in providing it compared with other institutions lie in their discretionary ability to use both administrative and market instruments promptly and without any budgetary constraints. Central banks can act immediately. They are free from the passage of legislation through Parliament and from the complexities of administrative procedure, the slowness of the bureaucracy. They have full

control over their main resource: the banknotes they issue under the conditions of monopoly granted by law. Accordingly, they regulate the "monetary base" or "high-powered money" – in addition to the banknotes in circulation, the deposits that banks must or want to hold with the central bank – on which the market bases all the monetary, credit and financial activities in the economy.

Money – a public good[3] – is today fiat or bank money, no longer a piece of metal, minted by the sovereign. It consists of the banknotes issued by the central bank and above all of the deposits that the public holds with the banks, equal to a multiple of those that the banks hold in monetary base as a liquidity reserve at the central bank. The Italian case can illustrate the point, Italy being, financially, neither a first-comer nor a late-comer (Table 1.1).

The multiplication of bank deposits – and loans – derives from the fact that the excess reserves lent by a bank to its customers remain within the banking system. Through the flow of collections and

Table 1.1 Monetary ratios in Italy (1861–1971)

	Bank deposits/ currency	**Money (M2)/GDP**
1861	0.13	0.14
1871	0.27	0.31
1881	0.63	0.43
1891	1.15	0.44
1901	1.48	0.50
1911	2.36	0.61
1921	1.66	0.63
1931	4.70	0.94
1951	2.79	0.50
1961	4.41	0.79
1971	7.34	1.08

Sources: Author's calculations based on De Mattia, R., *I bilanci degli istituti di emissione italiani, 1845–1936*, Banca d'Italia, Rome 1967; Banca d'Italia, Servizio Studi, *Bollettino*, various years; Biscaini Cotula, A.M. and Ciocca, P. (eds), "Le strutture finanziarie: aspetti quantitativi di lungo periodo (1870–1970)", in: Vicarelli, F. (ed.), *Capitale industriale e capitale finanziario: il caso italiano,* il Mulino, Bologna 1979; Istat, *Sommario di statistiche storiche dell'Italia, 1861–1975,* Rome 1976.

payments and debit-credit relationships in the economy they are transferred from one bank to another. Each bank keeps a part against the new deposits that it takes and lends the remainder, giving rise to a total stock of deposit-money equal to several times the monetary base created by the central bank.[4]

In a capitalist market economy the fundamental raison d'être of the modern central bank is to provide a barrier against the instability inherent in the mode of production that has spread across the world in the last three centuries.

This economic system multiplied more than tenfold the average real income per capita of the inhabitants of the world, after it had tended to stagnate for thousands of years. This simple fact – the ability to develop production and increase the material wellbeing of a world population that has grown from one billion in 1820 to seven billion today – explains the system's success and its spread even to the countries historically, culturally, institutionally and politically least inclined to adopt it, such as China (Table 1.2).

At the same time the system has proved to be unfair in the distribution of income and wealth, and also polluting and harmful to the environment, since private producers generate negative externalities. What is most important for the purposes of this work is that the system has proved to be highly unstable. Large upward and downward swings of the prices of consumer goods, of the values of assets (shares, buildings, bonds, claims), and of exchange rates, major recessions of investment, production and employment, and strings of bankruptcies of banks and other financial intermediaries have dotted the history of the capitalist market economies. These have given rise to acute tensions and suffering variously distributed

Table 1.2 World population, GDP levels and per capita GDP (1990 Geary-Khamis dollars) *(1820 = 1)*

	1700	**1820**	**1913**	**2013**
Population	0.6	1	1.7	7.0
GDP levels	0.5	1	3.9	76.0
Per capita GDP	0.9	1	2.3	11.0

Sources: Indexes based on Maddison, A., *Contours of the World Economy, 1–2030 AD. Essays in Macro Economic History,* Oxford University Press, Oxford 2007; IMF, *World Economic Outlook* database.

within the social body, with serious repercussions that have also been political and institutional.

In terms of instability, the system has generated:

- consumer goods price inflation in industrial countries at up to double-digit annual rates – during the last part of the 18th century and the Napoleonic Wars, from 1895 to the end of the First World War, and from the middle of the 1930s to the 1980s – that when it became hyperinflation destroyed the real value of money and credit; consumer goods price deflation, on average in the industrial countries between 1821 and 1850 and then, at an annual rate of 1–2 per cent, during the Long Depression of 1874–1896 and at three times that rate from 1927 to 1933, the period that saw the authentic Great Depression, commonly referred to as the crisis of 1929 (Table 1.3);
- frequent contractions of economic activity in individual countries, with world output falling short of its trend value by 8 per

Table 1.3 Consumer prices in industrial countries (1820–1968)

Year	Levels	Average annual changes (%)
1820	100	–
1835	82	–1.2
1847	102	2
1850	80	–7.5
1855	101	5.2
1858	93	–2.7
1873	114	1.5
1895	92	–0.9
1913	116	1.4
1914	100	–
1920	313	52.0
1929	100	–
1933	79	–5.2
1945	169	9.5
1950	100	–
1968	166	3.7

Source: Indexes are based on Ciocca, P., *La Economia Mundial en el Siglo XX,* Critica, Barcelona 2000, figure 4, p. 26.

cent in 1835 and 1853, 4 per cent in 1870 and 12 per cent in 1929–33. The 1929 recession was the worst, with GDP contracting by 29 per cent in the United States, 18 per cent in Latin America and 9 per cent in Europe (Table 1.4). In 1932 world GDP was 17 per cent below its level in 1929;

- unemployment that was persistently more than 10 per cent of the labour force, with peaks of 25 per cent in the United States and Germany in the early 1930s;
- the collapse of share prices on the stock exchange on several occasions – 1895, 1907, 1929, 1937, 1940, 1987, 2001–2002, 2008 among others – to the point of securities losing 80–90 per cent of their nominal value and nearly 50 per cent of their real value;
- current and capital account losses by banks and other financial intermediaries that in some economies amounted to tens of percentage points of GDP in a single year.[5]

Limiting instability is therefore crucial to the management of a capitalist market economy, to ensure its survival.

Today's central banks have evolved over three centuries of events, debates and time scales that differ from country to country. They have in common the gap between the present arrangements and the original reasons that drove the founders of the "banks of issue", the precursors of modern central banks.[6] States gave up the privilege of issuing money to these institutions, private or public banking intermediaries. The aims varied: to receive financial support, to centralize the nation's metallic reserves, to restore value to the currency, to rationalize the payment system, to duck out of a delicate

Table 1.4 Contraction of real GDP from peak to trough (1929–1933)

USA	1929–1933	–29%
Canada	1929–1933	–29%
Germany	1929–1932	–16%
France	1929–1932	–14%
UK	1929–1932	–5%
Italy	1929–1931	–5%
Japan	1929–1930	–7%
Latin America	1930–1932	–18%

Source: Author's calculations based on Maddison, A., *The World Economy*, OECD, Paris 2006.

responsibility by blaming the intermediary for any errors in the difficult management of the currency. As time passed, being the government's banker and depositary of the power of issue, over and above what the State itself had intended, allowed the institutions that had sprung up, mainly in the 19th century, after the prototypes of the 17th century in Sweden (Riksbank) and England (Bank of England),[7] "to develop their particular art of discretionary monetary management and overall support and responsibility for the health of the banking system at large". [8] France equipped itself with a bank of issue in 1800, Austria and Denmark in 1818, Belgium in 1850, Japan in 1882, the United States with the Federal Reserve in 1913. The Bank of Italy was created in 1893, sharing the power of issue with Banco di Napoli and Banco di Sicilia until 1926, when it became the monopoly issuer (Table 1.5).

As long as the metallic standard was in force, monetary management was based on the defence of the public's ability to convert, at a predetermined price, banknotes into metal (gold, under the gold standard, or silver, or gold and silver together under bimetallism) and vice-versa. Convertibility ensured the acceptance of banknotes by the public, thereby making the supply of money consistent with the demand for money coming from the economy. The total quantity of money varied with the central bank's metal reserves, to which the amount of banknotes issued was linked. Within limits, the central bank could respond to losses or excessive increases of metal reserves by raising/lowering interest rates so as to stabilize the total quantity of money (metal plus notes) and therefore, it was believed, the average level of the prices of goods and services.[9] In the era of metallic regimes, from the close of the 18th century to 1913, prices were stable in the very long term. In the main European countries in 1913 they were close to their levels a century earlier. Nonetheless decades-long periods of inflation and deflation alternated during the century.

In addition, the possibility of issuing banknotes required a "bank of the banks" to provide liquidity to the entire financial industry if it was needed. This task could not be independent of a special concern for the balance sheet solidity of the intermediaries to be financed, which nonetheless often competed in the market with the banks of issue. The latter were called upon to lend money, in increasing amounts and with increasing frequency, to the banks that were temporarily

Table 1.5 Foundation dates of central banks

Sweden	1668	Canada	1934
UK	1694	New Zealand	1934
Spain	1782	India	1934
France	1800	Argentina	1935
Netherlands	1814		
Austria	1818	Ireland	1943
Denmark	1818	Brazil	1945
Belgium	1835		
Portugal	1846	South Korea	1950
Germany	1876	Saudi Arabia	1952
Japan	1882	Indonesia	1953
Italy	1893	Israel	1954
Switzerland	1907	Nigeria	1958
USA	1913	Malaysia	1959
Australia	1920	Iran	1960
South Africa	1921	Egypt	1961
Russia	1921	Kenya	1966
Hungary	1924	Malta	1968
Mexico	1925	Singapore	1971
Chile	1925	China	1979
Greece	1927	Luxembourg	1998
Poland	1928	European Union	1998

without, by discounting bills, buying bonds, granting advances against securities and other forms of "lending of last resort".

Apart from the periods of recession, as economic activity expanded, the demand for money tended to grow faster than the stock of metals for monetary uses. The increase in the quantity of banknotes and bank deposits serving as means of payment and store of value for prudential or speculative purposes therefore placed on the banks of issue the task of shoring up currencies whose use could less and less be imposed by law and which were more and more "fiat" money.

The 20th century saw a succession of regimes different from the metal standard: the gold-exchange standard, the dollar standard, currency areas with more or less fixed exchange rates, and various forms of floating exchange rates. It also saw pronounced imbalances caused by price inflation and deflation, bank failures and plunging stock exchanges, contractions of economic activity and unemployment.[10] The abandonment of the classic metallic standard, which was based on the Bank of England and the City of London as the world's financial centre, gave the banks of issue greater freedom in

their management of money and credit. At the same time countering the imbalances called for and justified their actions.

Monetary control was in the form of a managed currency, or a monetary policy, with substantial effects on financial structures and the activity of financial operators. Market and administrative instruments were directed with increasing awareness by the central bank at objectives coinciding with the overall equilibrium of the economy: stability of the average price level, full employment of labour and capital, and interest and exchange rates consistent with the condition of the external accounts desirable in the light of the national interest and the requirements of the international community.

Looking after the banking and financial system was connected in several ways with the macroeconomic objectives. The bank of the banks' lending of last resort was linked to its powers/duties of regulation and supervision of the financial system and its individual players. In the payments and securities transactions fields the technical complexity of the operations and the expansion of their volume were matched by a structure based on the central bank. Even in an abstract world of free banking,[11] with absolute freedom to issue money and a plurality of issuers, it would emerge spontaneously that it was advantageous for the clearing of debits and credits of IOUs, promissory notes and securities to be located at large, solid, "central" banks, savers of resources. The services were provided on behalf of the banking system, to ensure the performance of contracts, operational functionality and technical and organizational progress in payments and the exchange of financial instruments. Here again the stress was on two potentially conflicting terms, between which it was necessary to mediate: the pressure to compete and the advantage of market participants cooperating in customers' interests.

2
Tendencies

The original banks of issue thus progressively acquired three functions that were to become typical – although not exclusive or exhaustive – of central banking: management of the payment system and securities transactions, monetary policy and supervision of the financial system. In interpreting this triad of tasks, the problem of possible conflicts of interest was addressed by transforming central banks from private legal entities into public-law institutions, restricting their activities to those strictly necessary and requiring them to be neutral and separate from the business sector.

The emphasis on stability, subject to the constraint of not encouraging risky behaviour in the banking and financial industry, is already present in the first theoretical works on central banking. This is true right from the fundamental theory put forward in 1802 by Henry Thornton, brilliant banker, philanthropist and member of the English Parliament.

He offered it with reference to monetary and exchange rate policy, to be adapted to changing circumstances:

> To limit the total amount of paper issued, and to resort for this purpose, whenever the temptation to borrow is strong, to some effectual principle of restriction; in no case, however, materially to diminish the sum in circulation, but to let it vibrate only within certain limits; to afford a slow and cautious extension of it, as the general trade of the kingdom enlarges itself; to allow of some special, though temporary, encrease in the event of any

> extraordinary alarm or difficulty, as the best means of preventing a great demand at home for guineas; and to lean to the side of diminution, in the case of gold going abroad, and of the general exchanges continuing long unfavourable; this seems to be the true policy of the directors of an institution circumstanced like that of the Bank of England. To suffer either the solicitations of merchants, or the wishes of government, to determine the measure of the bank issues, is unquestionably to adopt a very false principle of conduct.[1]

He offered it with reference to the supply of liquidity to the market with the aim of countering the contagious spread of desperate requests for repayment by the creditors of the banks:

> If any one bank fails, a general run upon the neighbouring ones is apt to take place, which, if not checked in the beginning by pouring into the circulation a large quantity of gold, leads to very extensive mischief.[2]

He offered it with reference to the narrow line dividing the support to be provided and the moral hazard to be avoided:

> If the Bank of England, in future seasons of alarm, should be disposed to extend its discounts in a greater degree than heretofore, then the threatened calamity may be averted through the generosity of that institution. (...) It is by no means intended to imply, that it would become the Bank of England to relieve every distress which the rashness of country banks may bring upon them: the bank, by doing this, might encourage their improvidence. There seems to be a medium at which a public bank should aim in granting aid to inferior establishments, and which it must often find very difficult to be observed. The relief should neither be so prompt and liberal as to exempt those who misconduct their business from all the natural consequences of their fault, nor so scanty and slow as deeply to involve the general interests.[3]

What is very clear, in these excerpts and in the whole book, is the assignment of the monetary policy function to the central bank, to be interpreted with prudent discretion. Thornton entrusts this

institution with the task of managing the currency on a normal basis, of governing it as an instrument of economic policy with the aim of improving the state of the entire economy.

Partially implicit in Thornton's concerns, made explicit in the works of practitioners and economists in the two following centuries, are the three general forms that instability takes on in a capitalist market economy: instability of the prices of products, instability of productive activities and employment, and instability of asset values and finance. Complete knowledge was also gradually acquired of the repercussions of instability on the economy and on the social body.

Inflation and deflation of the average level of product prices cloud and distort the signals the market sends through the change in the relative prices of the goods that society begins to require and those that it ceases to require. They distort expectations. They erode the propensity and the capacity to save and invest. They therefore generate inefficiency and harm the rhythm, sustainability and quality of the growth of production. They also cause sudden, random and asymmetrical redistributions of income and wealth.[4] Deflation is terrible when it derives from shortfalls of global demand, compared with the economy's ability to produce goods and services. In a vicious recessionary circle, it leads consumers to postpone purchases and firms to hold back investment, partly because it raises interest rates in real terms, given their level in nominal terms. Negative effects on demand are possible even if the deflation is related to productivity growth, which increases real income and the material welfare of citizens.

The gap between the actual output the economy produces and the potential output that it is able to produce provokes inflation if it is positive, deflation, recession and unemployment if it is negative. Of crucial importance is effective demand, when the entrepreneurs' expectation of profits is maximized. Its variability, as Keynes made clear in 1936, is dominated by that of investment in machinery and equipment, linked to the expectations of those called upon to decide, at the historical moment and in conditions of uncertainty, on its implementation: "The marginal efficiency of capital depends (...) also on current expectations as to the future yield of capital goods. (...) But (...) the basis for such expectations is very precarious. Being based on shifting and unreliable evidence, they

are subject to sudden and violent changes. (...) It is not so easy to revive the marginal efficiency of capital, determined, as it is, by the uncontrollable and disobedient psychology of the business world. It is the return of confidence, (...) which is so insusceptible to control in an economy of individualistic capitalism."[5]

The mathematical models of the business cycle developed by Samuelson, Hicks, Goodwin, Metzler and others in the wake of Keynes's *General Theory* are of a purely "real" nature, with no monetary determinants and implications. They confirm that the instability of demand, and hence of production, is rooted in the capitalist market economy. In particular it is rooted in private investment, the most volatile component of global demand, that for Keynes had to be stabilized with public investment.[6] This is so independently of the monetary, credit and financial sphere of the economy.[7]

But stability also means systemic solidity of the banking and financial sector, the creator of both credit and money. It is also exposed to the volatility of expectations: in this case those of the holders of financial assets, creditors/savers. The fundamental instability of the capitalist market economy, whose roots are "real", is intertwined with the instability of financial origin: "Two types of risk affect the volume of investment. (...) The first is the entrepreneur's or borrower's risk and arises out of doubts in his own mind as to the probability of his actually earning the prospective yield for which he hopes. If a man is venturing his own money, this is the only risk which is relevant. But where a system of borrowing and lending exists, (...) a second type of risk is relevant which we may call the lender's risk." [8]

Following in the footsteps of Keynes – and Irving Fisher[9] – Hyman Minsky[10] typified financial crises in a general model open to empirical and historical analysis of a vast and variegated range of episodes. An unexpected event brings new prospects of rapid gains, of a commitment of financial resources seen as highly profitable. Speculation gathers momentum, largely based on debt, fueled by a supply of loans that the finance industry makes elastic. But the speculative excess then begins to reveal its true nature. At that point, "every financial crisis is a crisis of confidence".[11] The borrowers make fire sales to repay the debt they have contracted, the lenders exert pressure to recover the loans they have granted. In view of the risk and the uncertainty, interest rates rise. There is a collapse in the prices of the good speculated in, which can be anything: products, buildings,

securities, foreign exchange, sundry bets. The spiral comes to an end only when confidence spontaneously returns, or is restored by economic policy. The instability of finance depresses the accumulation of capital, on the side of saving as on that of investment. It undermines the ability of the credit system to direct resources to the most profitable uses, holding back economic progress. It subverts social equilibria. It must be countered in the interest of the entire economy, not to protect the wealthy: workers also save.[12]

These two dimensions of instability – the "real" and the "financial" – have been variously present in the hundreds of crisis episodes of disarming variety, despite their common roots, that capitalist market economies have seen over their history.[13]

The phases of most serious and widespread financial instability were 1873–1878, 1889–1894, 1921–1933 and 2007–2009. The first and the third of these periods coincided with contractions in world GDP, the second and the fourth did not. The most recent financial crisis, which saw the erosion of world GDP limited to the zero growth of 2009, will be looked at in the following pages. In individual economies as well, it has not been unusual for financial imbalances not to lead to deep contractions in economic activity, their effects being circumscribed by events or measures that restored confidence in time. Other instances of acute financial tension that were overcome by chance or by external intervention occurred in England in 1793, 1797, 1810 and 1825, in France in 1818, in the United States and in Europe in 1857, in England again in 1866, and in Italy in 1907. After the collapse of the New York stock exchange of 1987 – on 19 October the Dow Jones index lost more than 20 per cent – thanks also to the support provided by the American central bank a check was placed on the damage deriving from the financial instability related to the Gulf War (1990), the Mexican crisis (1995), the Asian crisis (1997), the Russian crisis (1998), the Long Term Capital investment fund (1998), Y2K, the dot-com crash, and the attacks on the twin towers in New York (at the beginning of the new century).

By contrast, contractions in economic activity – when they were acute and, as in 1929–1933, coupled with price deflation – interacted more often, although not always, in a perverse spiral with financial instability. The 1929 crisis was the most severe also in its financial dimension. In the United States and Italy – two economies that in modern history had been, financially, among the most fragile – bank

losses amounted respectively to 5 and 8 per cent of GDP in a representative year, while in real terms stock market prices lost half their value. In Italy recourse was made to the heterodox solution of the Istituto per la Ricostruzione Industriale (IRI) through which the State had to stand in for the private capitalists that had failed and saw major banks and large firms fall into its arms to be saved. Looking at individual countries, the picture is highly variegated with even more dramatic situations than the two cases considered above. As early as 1931 Austria suffered bank losses related to the collapse of Kreditanstalt – a large bank in a small economy – amounting to 9 per cent of GDP. In the last quarter of the 20th century several countries suffered bank failures with losses equal to 17 per cent of GDP in Spain, 12 per cent in Japan, 10 per cent in Finland, and between 2 and 5 per cent in Sweden, Norway, the United States, France and Australia (only 1.5 per cent in Italy). In the same period 100 or so developing economies underwent financial crises whose cost amounted to numerous percentage points of GDP, with a modal value of 15 per cent and extreme values of more than 30 per cent in Thailand and Turkey and close to 50 per cent in Argentina and Chile.

A monetary, credit and financial dimension is potentially present in each of the three general forms of instability to which the capitalist market economy, by its very nature, is exposed. It can be cause, aggravation, effect or manifestation of the instability. The bank that is *at the centre* of that dimension – the central bank – is objectively called upon, by force of circumstances, to counter the instability. It must not make money available to fuel inflation and the excesses of global demand. It must create money to fill the voids in demand, prevent deflation and alleviate unemployment. It must act to curb the speculative excesses of finance and contain their repercussions. It must promote the sound and prudent management, efficiency, liquidity and balance sheet soundness of the banking and financial sector.

Mutually conflicting objectives, that presuppose political preferences and a set of priorities for the interests involved, are assigned to bodies under the Executive. For the central bank, which manages money and credit but institutionally is not part of the Executive, the distinction between macroeconomic or systemic objectives and objectives regarding the allocation of resources or the distribution of income and wealth is necessary, indispensable. Their commingling

would be detrimental to the credibility and hence the operational effectiveness of the institution responsible for managing the monetary and financial conditions of the economy. These conditions affect every citizen, who in a delicate field such as that of money must be able to have confidence not only in the ability of the regulators but also in their impartiality and in the honesty of their intentions.

On the cultural level, through a complex process economists and practitioners came to recognize that instability is structural, intrinsic, rooted in the economy, and that it could be countered by a so-called "central" bank. A double set of blinkers was shed only with difficulty. The quantity theory of money sees changes in the price level as directly, proportionately, linked to changes in the quantity of money. Orthodox economists start from the belief that the capitalist market economy possesses a fundamental ability to find an equilibrium and to return to it spontaneously if external forces move it away from that position. The essential suggestion of the quantity theory is to stabilize prices by somehow fixing the quantity of money, not managing it. And if the equilibrium exists and is stable thanks to the self-correction provided by the mechanism of product and factor prices, monetary management can be considered superfluous if not downright harmful.[14]

3
Rigour and Flexibility

The plurality of aims, constraints, methods and sequences of intervention means the central bank is involved in a continuous exercise of choosing, or reconciling. Thornton again hits the mark when he asks much of those who preside over money and finance: prudence and decision, sense of conservation and ability to see change, rigour and flexibility.

Rigour and flexibility: terms that *prima facie* are opposites but that can be brought into synthesis if account is taken of the opposite ills that can afflict the economy. By its nature, in its underlying trend a capitalist market economy is exposed to inflation, as well as to speculative excesses: the satisfaction of new needs is within sight, the prospects of enrichment attractive, but the resources often unequal to the dynamic pressure inherent in the economy, savings not up to the investment intentions. This economy can also run up against the difficulty of the opposite sign: recession and deflation, when productive capacity exceeds global demand and savings exceed investment; financial panic, when the means of payment and store of value currently available are deemed inadequate to satisfy the preference for liquidity of society.

In the language of the early writers and under the gold standard, convertibility – anti-inflationary and anti-speculative rigour – is the rule to follow; the suspension of convertibility – the anti-crisis flexibility – is the exception not to be excluded. The central bank must grasp the moment in which the economy requires that the exception replaces the rule. It must know how to make the switch from the time of rigour to the time of flexibility.

The greater the long-term confidence in the value of the currency, the more effective the support provided to finance and the economy in short-term difficulties. For Hicks, "the *Thornton precept* (as I shall call it, for he deserves to have his name attached to it) was in two parts. The first necessity, when the crisis has arisen, is for the centre of the system (in his case, or Mill's, the Bank of England) to ensure its own security; for that purpose it must maintain high rates of interest, so as to draw funds to itself, to replenish its reserves. However, when that has been done, it should turn over decisively to the other tack, with the aim of spreading security from itself to the rest of the banking system, and then outside. The two belong together."[1]

For Keynes, firmness in managing the currency can prevent the long-term interest rate – a "recalcitrant" price – from settling at a higher level than that compatible with full employment and growth of the economy. If they lower inflationary expectations, high short-term interest rates push down long-term interest rates, thereby fostering productive investment.[2] The more rigorous the central bank in defending the long-term value of the currency, the more it acquires credibility, which it can spend to support the economy and the financial system in the short-term.

This stylization of the central bank, as it had developed until the 1970s, needs to be qualified and enriched in at least three respects.

The first qualification concerns the link between the monetary policy function and the function of supervising banks and other financial intermediaries. To a large extent that relationship coincides with the central bank's lending of last resort: the support it chooses to grant to banks in difficulty, an instrument at the boundary between the two functions, belonging both to one and to the other. The link is potentially a close one, although some countries have chosen to entrust primary responsibility for supervision to entities other than the central bank, which is nonetheless involved to a varying degree.

To distinguish intermediaries that are only illiquid from those that are insolvent, to refinance those that are short of money when that is indispensable, to create money with the aim of preventing widespread tensions that can have major repercussions on production and employment: the objective needs of the economy, even before the demands of the legislator require that the central bank shoulder these responsibilities.

The demarcation line between illiquidity and insolvency may appear clear in principle, but it is much more difficult to draw in the actual case of a firm in difficulty, especially when the firm is a bank or a financial intermediary. Even a bank that has a sound balance sheet and ample capital reserves, that is profitable and with good income prospects can be illiquid, i.e. temporarily without the money needed to meet its maturing obligations. If it does not promptly obtain short-term loans on the interbank market or the money market, owing to their slowness and shortcomings, to avoid a manifest crisis it will ultimately have to turn to the central bank. But the illiquid bank may actually be insolvent. It is so if it has lost its capital, its losses having caused the debts in its balance sheet to exceed the value of its capital assets and, even more serious, if the bank's resources and organization do not offer the prospect of a stable return to profitability.[3]

Banks that are only illiquid must not be allowed to fail. They are still productive. Insolvent banks must be allowed to fail. They are inefficient. But their collapse could trigger a crisis of the entire financial sector. This would have devastating effects that are to be avoided. Both the distinction between the illiquidity and the insolvency of individual financial intermediaries, and the even more delicate one between failures that are circumscribed and those that generate a chain reaction can be based on market information. The central bank gathers this information because, like other financial operators but unlike the institutions of the State, it is present every day on the money market. As suggested by Walter Bagehot – the theoretical link in the mid 19th century between Thornton and Keynes-Minsky – an indirect and objective method allows the central bank to distinguish between illiquid and insolvent banks and curb the number of failures. In crises the method consists in lending freely, but at high interest rates and against solid collateral, which only the banks that are not insolvent can pay and provide.[4]

While Bagehot may help, the net worth of an intermediary nonetheless depends decisively on the value of the loans it has granted, loans for investment projects that are part of the borrowers' specific strategies. The potential profitability and riskiness of a given investment project depends on the firm implementing it and the set of projects in which the firm includes it. The same loan, to the same customer, has a different yield and risk, and is to be valued

differently, depending on the composition of the entire portfolio of borrowers and on the solidity and capacity of the bank granting the loan. The most valuable information is that within the link, contractual or otherwise, between bank and borrower, information that the market does not possess. A purely market, impersonal assessment of an intermediary's balance sheet assets – hence of its net worth, given its liabilities – and of its income prospects has limits. These are all the greater when considering the probability that the crisis of a single operator will degenerate into a crisis of the entire financial system. This made it desirable initially to recognize the lender of last resort as having a position of *primus inter pares* in a club of banks, then also as controller of the financial system on a legal basis. Supervisory powers give access to the information on the relationship between an individual bank and its customers and on the network of relationships between banks. This information is more comprehensive, direct and penetrating than that available to market participants and the stock exchange.

In view of the information asymmetry from which the credit market particularly suffers,[5] the numberless configurations of the project–customer–bank relationship pose a serious problem of assessment and synthesis. The latter must be based on experience and presuppose a technical judgment by a neutral "referee" recognized as having a discretionary capacity to know and act in the public interest. On this connection between lending of last resort and prudential supervision, several countries have made the further choice to extend the tasks of the central bank from prudential supervision to structural supervision. This last consists in preventing a low level of competition, inefficiency, illiquidity and insolvency in the financial industry even through interventions that affect its morphology and its modus operandi.[6]

The second qualification is aimed at rendering explicit the most delicate aspect of the central banks' entire brief. The decisive factors are expectations, confidence and probabilities, often subjective or incommensurable. The manner, scale and timing of the interventions may be open to question even when the reasons for them and the direction to take are clearly established by experience and doctrine. This is all the more true when a new situation has to be tackled. When the macroeconomic and/or financial problem to be promptly resolved is not a familiar one it is particularly important

to draw on independent institutions: institutions able to act on the basis of an original analysis, and to assume directly the responsibility of acting in the case in question. According to Keynes, they should be "semi-autonomous bodies within the State – bodies whose criterion of action within their own field is solely the public good as they understand it, (...) bodies which in the ordinary course of affairs are mainly autonomous within their prescribed limitations, but are subject in the last resort to the sovereignty of the democracy expressed through Parliament. (...) It is easy to give examples, from what already exists (...) – the Universities, the Bank of England."[7]

A final issue of note in our world of media and mass information concerns the central bank's announcements about the direction of its policy and the problems of the economy that it is designed to tackle. Intervention must be assessed and agreed to confidentially. But the announcements must be clear, the reasons for the choices given *ex post*, the undertakings fulfilled. The credibility of the central bank and the effectiveness of its action depend on this consistency between analysis, action and communication.[8] Clarifying the central bank's policy must be distinguished from the intrusive interference with civil society through what Federico Caffè labelled "instrumental scare-mongering".[9]

4
Discretion, not Rules

The specificity that we have outlined coincides with the independence of the central bank and with its discretion, at least of a technical nature. Independence and discretion are inherent features of the institution – a bank, not a bureaucratic body – entrusted with the management of money and credit. According to a strong formulation, "working to rule is the antithesis of central banking. A central bank is necessary only when the community decides that a discretionary element is desirable. (...) We are doomed to disappointment if we look for rules applicable to all times and all places. We have central banks for the very reason that there are no such rules".[1]

"Rules" may mean fixed criteria, established on the basis of past experience, of operational or strategic intervention. The former are in contrast with the technical aspects of the central bank's mandate. Operations in foreign exchange or securities markets, refinancing the banks and managing public debt following parameters predetermined in detail makes no sense at all. Such rules cannot exist, at least not in a Wall Street market economy, in modern capitalism imbued as it is with finance.

But "rules" have mainly taken on the other meaning, of policy guidelines. For two centuries economists have been debating whether it is possible and desirable to use rules for the basic orientation of monetary management, apart from the individual acts through which it is concretely enacted.

According to the analytical approach that over a century and a half went from David Ricardo to Milton Friedman – thinkers poles apart

in every other respect – a market economy, if possessing a monetary anchor, is reasonably stable. The shortcomings of knowledge and implementation of every economic policy, with its variable lags and forecasting errors would be an additional reason for assigning the determination of monetary conditions to automatic mechansms, to rules, to the law.[2] Where it has administrative and technical discretion, the central bank is considered harmful by economists with a marginalist, neoclassical vision, complemented in the monetary field by the quantity theory of money, of which Friedman was the leading modern exponent: "The central problem is not to construct a highly sensitive instrument that can continuously offset instability introduced by other factors, but rather to prevent monetary arrangements from themselves becoming a primary source of instability."[3]

The analogy with the judiciary becomes very close. Judges must be absolutely independent. Appropriately, they apply the law with margins of personal assessment that are all the narrower the more the rules are precise: "If the central bank is to be independent in the sense in which, say, the judiciary is independent, then it requires a set of instructions to follow just as judges require a set of laws to implement. (...) the instructions must be sufficiently clear that the legislature's intentions are either carried out, or, if they are not, it is clear that they have not been."[4]

According to the other line of thought, from Thornton through Bagehot to Keynes and Minsky (T-B-K-M), instability is inherent in capitalist market economies and cannot be eliminated even though it is not necessarily "explosive".[5] It is more than the reflection of the external turbulence to which any type of economy is exposed. It can have devastating socio-economic repercussions. Owing to the mutability of its specific causes, of the magnitude and manner of its manifestations, instability cannot adequately be curbed by mechanically following pre-established rules. It would be a form of renouncement, a potentially losing solution. What is needed is a discretionary economic policy response, specifically in the monetary sphere. The institution of the central bank is valuable for those who follow the T-B-K-M approach. Perhaps without being fully aware of it, or wanting to, the central banker can only follow this school of thought, and not that of Ricardo and Friedman, in his action if not in his words.

The contrast between the two lines of thought extends from monetary policy to the supervision of the financial system. One

emphasizes the analogies and synergies between money and credit, between monetary policy and supervision. The other concludes from a strict adherence to the quantity theory that only money, and not the size and composition of credit flows, matters for stability. Once the quantity of money needed by the economy has been guaranteed – ideally with a reserve requirement equal to 100 per cent of bank deposits, so as to render them secure (narrow banking, which can also be achieved by means of deposit insurance) – the central bank should divest itself of its supervisory tasks and not concern itself with banks any more than it concerns itself with individual non-financial enterprises or individual consumers.[6]

The two conceptions of central banking are incompatible, irreconcilable.

In reality, up until the 1970s the analytical reasons combined with the political pressures to limit the damage caused by instability to induce those in authority to follow the T-B-K-M approach.

It was not, it must be stressed, a linear process. Central banks' independence and discretion prevailed in particular when the exchange rate was flexible, their legal position consolidated, the government's economic policy reasonably effective, the supervision and lending of last resort function recognized and removed from external constraints.[7] Nonetheless, over time the central bank has been asked to make the payment system and securities transactions orderly and efficient; it has been called upon to contribute with its monetary and exchange rate policy to the achievement of a plurality of macroeconomic objectives, mediating in cases of conflict; the stability of the banking and financial system has been largely entrusted to its supervision and support of banks and other financial intermediaries.

De jure or *de facto*, to a varying degree and with different solutions, politicians and at least the farsighted part of the business world have long granted central banks margins of manoeuvre and discretion aimed at the performance of those tasks. A basically rigorous monetary stance and the timely substitution of flexibility for rigour were considered complementary. The central banks' assessment was relied upon, so that the economy could benefit from long-term discipline but also from anti-recession and anti-crisis degrees of freedom.

5
The Temporary Re-emergence of Rules

The inflation of the 1970s brought to the fore the approach opposite to T-B-K-M. That inflation – which continued until 1985 with average annual peaks of 13 per cent in the OECD countries – was ascribed by many, not to the explosion of the relative prices of energy and labour and the fiscal crisis of the State, but to an alleged monetary laxity on the part of the central banks, "distracted" by the multiplicity of duties assigned to them, including financial supervision.[1]

The independence of central banks was thus reaffirmed and in more than one case institutionally reinforced as regards the control of the quantity of money for anti-inflationary purposes.[2] But the scope of their discretionary powers, the panoply of their instruments, and their field of action all narrowed.

That inflation saw the emergence and diffusion in theory and in monetary policy of monetarism, *à la* Friedman.[3] Subsequently, after inflation had died down, the monetarist paradigm was reassessed by the even more radical orthodoxy of the theory of the "real" business cycle and "rational expectations".[4] Instability was related to external events, random exogenous impulses to which the economy would in any case adapt without serious imbalances in the goods market or the labour market. Introducing so-called post-Keynesian elements – rigidities and lags in wage and price dynamics – monetary policy found a theoretical motivation and a practical *raison d'être* in facilitating the return to balance by acting on interest rates, rather than directly on the money supply. The central bank was nonetheless required to operate in accordance with strict rules, by reacting

to an output/inflation gap with changes in short-term interest rates that were predetermined and foreseeable by the market.

Several central banks adapted their statutes and/or operations to this approach. They concentrated their efforts on the stability of the average level of the absolute prices of goods and productive factors, considered essential if relative prices were not to diverge from those that the market spontaneously expressed, and therefore presumably consistent with maximum employment. The functioning of the financial system was entrusted to the self-referentiality of "perfect" markets, thanks to rules aimed at ensuring correct behaviour and adequate disclosure of information by issuers, investors and intermediaries.[5]

At least two factors were involved: one political, the other analytical.

In a capitalist Wall Street economy, the business world and in particular the world of finance dislike rules and controls, beginning with those of the central bank. These may be invasive and irksome for those who are subject to them, not least because they are entrusted to an institution that lives in the market, knows those worlds, and can impose its directives on them.

At the cultural level, in terms of the theory of finance, from the United States the efficient market hypothesis spread, especially in the Anglo-Saxon countries, with a precise meaning:

> A capital market is said to be efficient if it fully and correctly reflects all relevant information in determining security prices. Formally the market is said to be efficient with respect to some information set, Ø, if security prices would be unaffected by revealing that information to all participants. Moreover, efficiency with respect to an information set, Ø, implies that it is impossible to make economic profits by trading on the basis of Ø.

It has been customary (...) to distinguish three levels of market efficiency by considering three different types of information sets:

(1) The weak form of the Efficient Market Hypothesis (EMH) asserts that prices fully reflect the information contained in the historical sequence of prices. Thus, investors cannot devise an investment strategy to yield abnormal profits on the basis of an

analysis of past price patterns (a technique known as technical analysis). It is this form of efficiency that is associated with the term "Random Walk Hypothesis".

(2) The semi-strong form of EMH asserts that current stock prices reflect not only historical price information but also all publicly available information relevant to a company's securities. If markets are efficient in this sense, then an analysis of balance sheets, income statements, announcements of dividend changes or stock splits or any other public information about a company (the technique of fundamental analysis) will not yield abnormal economic profits.

(3) The strong form of EMH asserts that all information that is *known* to any market participant about a company is fully reflected in market prices. Hence, not even those with privileged can make use of it to secure superior investment results. There is perfect revelation of all private information in market prices."[6]

The supporters of the efficient market hypothesis are aware that it may be violated by the reality of the markets in all three of its forms, and in particular in the strong form. This is confirmed by the historical evidence of excesses in speculative markets: "Pricing irregularities may well exist and even persist for periods of time, and markets can at times be dominated by fads and fashions. Eventually, however, any excesses in market valuations will be corrected."[7] Welded with the neoclassical theory of value and with the formulation of the general equilibrium to which an "optimum" would correspond and to which a capitalist market economy would tend, the belief that finance is efficient has led to an increase in its self-referentiality, to doubts about the usefulness of regulation going beyond the legal framework capable of contributing to wealth and to the diffusion of correct information.

Compliance with the legal framework was largely entrusted to institutions on the model of the US Securities and Exchange Commission (SEC, created in 1934) for financial markets and to other institutions for specific sectors of finance, such as the insurance industry and pension funds. These authorities are not present on the markets and are "independent" in a way that does not coincide with central banks' independence and discretion. They are basically required to

make checks of legitimacy on the regular flow of information and financial operators' correct conduct and not to make assessments of merit that could be followed by discretionary corrective interventions. They are not called upon to take a systemic, project-based, view of the sector for which they are competent, or to intervene in ways that respond to specific circumstances. At the same time, and as a reflection, central banks' tasks of supervision and intervention on the financial system contracted. In an emblematic case the Bank of England was shorn of banking supervision immediately after the victory of the Labour Party in the 1997 elections. Responsibility for the supervision of the entire financial system was entrusted to newly created administrative entities, such as the Financial Services Authority (FSA) in the United Kingdom and the Japanese Financial Services Agency.[8]

The European System of Central Banks (ESCB), and within it the European Central Bank (ECB), which were also newly set up (in 1999), were called upon to regulate the sector comprising the payment system and securities transactions. On the basis of the Treaty, in the field of financial supervision "the ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system. (...) The Council may (...) confer upon the ECB specific tasks concerning policies relating to the prudential supervision of credit institutions and other financial institutions with the exception of insurance undertakings."[9] On the monetary policy front "the primary objective of the ESCB shall be to maintain price stability. Without prejudice to the objective of price stability, the ESCB shall support the general economic policies in the Community", which are aimed at the ambitious objectives solemnly sculpted in the Treaty "a harmonious, balanced and sustainable development of economic activities, sustainable and non-inflationary growth, (...) a high degree of convergence of economic performance, a high level of protection and improvement of the quality of the environment, a high level of employment and of social protection, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among Member States."

The "without prejudice" of the text of the European Treaty and of the statute of the ESCB rules out every possibility for monetary policy

authorities in the Eurosystem to make any discretionary assessment of the problems on the table, or of the relative importance of the aims to pursue. The assumption – according to the ECB widely accepted in economics – is that in the long run a change in the quantity of money in the economy will be reflected in a change in the general level of prices but will not induce permanent changes in real output or employment, while price stability enhances the potential for economic growth.[10] The supply of money needs to be kept on a trend in line with a global demand that in turn is consistent with price stability, trusting that there will not be stagflation, the coexistence of inflation and unemployment. The phenomenon was experienced by the industrial countries from the late 1960s to 1986. Specifically, the inflation peaks coincided with low growth of GDP in 1974–1975 and 1980–1982 (Table 5.1).

Table 5.1 Stagflation in industrial countries (1968–1986)

Year	Rates of inflation (%)	Changes of real GDP (%)
1968	3.9	5.8
1969	4.6	5.3
1970	5.6	3.3
1971	5.3	3.4
1972	4.8	5.1
1973	7.9	5.9
1974	13.4	0.7
1975	11.4	0.1
1976	8.6	4.6
1977	8.8	3.6
1978	7.5	4.4
1979	9.7	3.9
1980	12.4	1.1
1981	10.4	1.7
1982	7.7	0.0
1983	5.2	2.8
1984	5.0	4.8
1985	4.4	3.5
1986	2.6	3.0

Sources: For consumer prices see Table 1.3; for real GDP see Table 1.2.

Faced with stagflation, European monetary policy, given the current statute of the ESCB and the ECB, would be disarmed: that is, forced to sacrifice employment at the cost of serious social repercussions, in order to achieve the primary objective of halting inflation.

The central banks of numerous countries were pressed by economists to base their monetary policies on similar criteria and fixed parameters, albeit formulated in different ways; typical examples were the United Kingdom ("inflation targeting"[11]) and the United States ("Taylor rule").[12] And this despite the enduring broad mandate of the US Federal Reserve introduced by Section 2(A) of its relevant law, to "maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long-term interest rates."

An organizational corollary depends on the collegial nature of the top management of central banks. In matters such as money, and even more finance, the collegiality of those responsible – if it is authentic, among persons not linked by relationships of a hierarchical or some other nature – has two faces: one positive, the other counterproductive. On the one hand, it enriches the analysis of the situation and broadens the spectrum of possible solutions. On the other, it may make decisions slower and more of a compromise because they are the fruit of contingent mediations, and accordingly limit their effectiveness.[13]

Nonetheless, having to ensure compliance with a monetary or banking rule – echoing the proposal of the "wise men" put forward by Ricardo – and not interfere with the working of the markets, it was clearly desirable that the members of the collegiate body be numerous and that they should reciprocally control each other. Suspicion came to be cast on central banks with centralized management, in which the top manager took responsibility for deciding on the basis of his assessment of the probabilities in play on each occasion. In Europe, in particular, it was expected that the top management of the ECB would be made up of about 20 persons, meeting frequently, including by way of conference call meetings. Even the Bank of Italy, which had always achieved good results with a monarchical Governor, saw a law of 2005 inflate its Directorate from three

to five members and turn it into an at least theoretically collegial body, including in supervisory matters.[14]

In sum, from the 1970s up to the most recent crisis the prevailing view was that central banks should be concerned more with prices than with employment, more with monetary policy than with supervision, and in any case should refrain from financing the State. The exercise of discretion was seen, not as an element of strength but as a limitation of the efficiency of central banks' action and as a disturbance and source of inefficiency.

6
The Crisis of 2008

The crisis which reached its peak in 2008 and ravaged American and in part European finance[1] cast doubt both on the suitability of rules – at least of those in force – and on the analytical basis for entrusting the solidity of the finance industry, given the regulatory framework, to the self-referentiality of the markets.

The empirical determination of the origin of instability and the relative importance of its two dimensions – real and financial – is rarely easy. The 2008 crisis is usually considered to have had financial causes and both financial and real manifestations and effects. The supporters of the financial origin of the crisis have nonetheless had different opinions regarding its determinants. In the United States these were looked for in a perhaps excessively long list of factors: insufficient and asymmetric information; toxic securities that only in appearance could diversify risks; the switch in the style of banking business from "originate to hold" to "originate to distribute"; the replacement in balance sheet valuations of historical cost with fair value; illegal and immoral behaviour on the part of financial operators distorted by remuneration schemes, such as stock options; deregulation of the separation between commercial and investment banking and of the limits on the borrowing of large broker-dealers; incompetent or over-lenient regulators, captured by the entities they regulated; banks too big to fail and therefore heedless in taking on risks; implicit State guarantees granted to inefficient institutions, if not to bureaucratic bandwagons that were hostage to politics, such as the Federal National Mortgage Association (*Fannie*

Mae) and the Federal Home Loan Mortgage Corporation (*Freddie Mac*), which, moreover, were at the centre of the mortgage market as intermediaries and guarantors.[2]

Among the elements upstream from the crisis, its seriousness and its international scale it is necessary to consider the enormous quantitative development of finance in the United States and the United Kingdom, as well as the change in its composition.

The Financial Interrelations Ratio (FIR), between the total value of financial assets (banknotes, deposits, loans and securities) and the value of the stock of tangible capital (land, buildings, physical infrastructure, plant and machinery, inventories), is a measure of the relative size of finance in an economy.[3] In the 20 years prior to the crisis the FIR grew enormously in the United Kingdom (jumping from two to seven, with the City of London intermediating increasingly for the world rather than just the UK economy) and in the United States (rising from two to three).[4] This pattern is manifestly anomalous with respect both to the history of the two countries and to other countries (in Italy, for example, the FIR remained almost unchanged at close to one).

In the United States the distribution of financial assets among the many categories of intermediaries also changed in those 20 years (Table 6.1). The share of traditional banks – commercial banks, savings banks and credit unions – fell dramatically from 43 to 23 per cent. The share of insurance companies and pension funds, traditional non-bank intermediaries, also declined, albeit only a little (from 23 to 19 per cent). The majority share came to be held by "other", not infrequently new, financial institutions: issuers of asset-backed securities, mutual funds, money market mutual funds, and securities brokers and dealers.

In the United Kingdom the new forms of intermediation were largely carried out inside the commercial banks. The banks increased their share of total financial assets from 58 to 62 per cent, while that of building societies fell from 10 to 2 per cent, even as their specialization with respect to banks declined to the point of vanishing. On the other hand there was an increase in the distinction between banks' classic retail business and their innovative wholesale business. This occurred even within single "large and complex financial institutions". Here again, however, the fastest growth was among the "other" financial institutions, new intermediaries whose share

Table 6.1 Asset shares (per cent) of US financial institutions (1980–2008)

	2008	1980	1990	2000
Commercial banks	32	24	18	23
Savings institutions and credit unions	18	11	5	4
Life insurance companies	10	10	9	7
Private pensions funds	11	12	12	7
Mutual funds	2	5	12	9
Money market funds	2	4	5	6
Security brokers and dealers	1	2	3	4
Issuers of asset-backet securities	0	2	4	7
Others	24	30	32	33

Source: Author's calculations based on Roselli, A., *Financial Structures and Regulation. A Comparison of Crises in the UK, USA and Italy*, Palgrave Macmillan, London 2012, Table 12.2, pp. 151–152.

rose from 8 to 20 per cent, while that of insurance companies and pension funds fell from 25 to 16 per cent.

The entities that expanded fastest, both in the United States and in the United Kingdom, were also those that were controlled the least, *de jure* or *de facto*. Some of them, at least, came to constitute a sort of "shadow banking system".

The interpretation of the financial origins of the US crisis nearest to Minsky's model was put forward, not by an academic economist but by the leading US monetary authority of the day: "The most powerful theory of the crisis was simple. It started with a long mania of overconfidence, the widespread belief that house prices would not fall, that recessions would be mild, that markets would remain liquid. The mania fueled too much borrowing, too much leverage, and too much runnable short-term financing, with too much of it happening outside the traditional banking system. Borrowers took too many risks; creditors and investors were way too willing to finance those risks; the government failed to rein in those risks, and then was unable to act quickly or forcefully enough when the panic hit. Meanwhile, the actions the government finally took to end the crisis created new dangers of moral hazard. And our Wild West system of consumer protection was a national disgrace."[5]

However, also in this crisis, and especially in the case of the United States, a role was played by real determinants: the distributive inequalities between profits and wages, between rich and

poor; to offset them, the political support for mortgage-financed house purchases by workers and less-well-off citizens; inflation in the building industry; and the deficits on the current account of the balance of payments. The inflows of funds, mainly from Asia, covered the excesses of investment over domestic saving and the current account deficits, but at overvalued exchange rates and low interest rates, with the risk that foreign currencies would slump, starting with the dollar, and interest rates shoot upwards. A paradox of the merely financial interpretation of the international recession is that Japan and Italy suffered the largest cumulative fall in output in the two years 2008–2009, despite their having seen only minor or no difficulties in their banks and finance (Table 6.2).[6]

It would be possible to formulate an interpretation mainly, if not entirely, "real", rather than financial, of the US crisis according to the following sequence: wages compressed by Chinese competition and South American immigration; inequality in the distribution of incomes and wealth; the socio-political choice, dating back to the Clinton administrations of the 1990s, continued by Bush and endorsed by Congress, to correct the distributive inequality by encouraging the less well off to purchase houses with mortgages, with the involvement under political pressure of Fannie Mae and Freddie Mac; the totally unprecedented rise and collapse of house prices across the whole territory of the United States, which also had the effect of nullifying the possibility of diversifying risks via the geographical variance in house prices. The intermediaries that had granted the mortgages had reasonably based their decisions on the

Table 6.2 Real GDP levels in industrialized countries (2008–2014) *(2008 = 100)*

	2008	**2009**	**2011**	**2014**
USA	100	97.2	101	108
Euro Area	100	95.5	99	99
Germany	100	94.9	102	105
France	100	97.1	101	102
Italy	100	94.5	96	92
Spain	100	96.2	96	95
UK	100	94.8	97	103
Japan	100	94.5	98	102

Source: Author's calculations based on data and estimates of IMF, *World Economic Outlook*, Washington, October 2014.

latter possibility, corroborated by historical experience, as had the intermediaries that had underwritten the securities backed by the mortgages, which were no longer protected by the value of the houses mortgaged.

While the etiology of the crisis is complex, it nonetheless uncovered a remarkable series of "failures" of the financial system, in particular in the United States.

In the words of a distinguished economist, no less than seven key weaknesses contributed: "inflated asset prices (...); excessive leverage (...); lax financial regulation (...); disgraceful banking practices (...); the crazy-quilt of unregulated securities and derivatives (...); the abysmal performance of the statistical rating agencies (...); the perverse compensation systems in many financial institutions".[7] In the words of an influential banker, who headed the Fed from 1987 to 2006, the defenses put in place to protect the stability of finance proved clamorously inadequate, in the following order: "risk management (...), credit rating agencies (...), regulation (...), bank capital buffers."[8]

Unlike several commentators[9] neither the economist nor the central banker include the deregulation of finance among the causes of the crisis.[10] They explicitly exclude that a factor contributing to the crisis was the removal of the separation between commercial and investment banking by the Gramm-Leach-Bliley Act of 1999, which dismantled the barriers between the two types of activity that the Glass-Steagall Act had put in place in the early 1930s.[11] In fact the risky transactions that fostered the crisis could have been carried out in full compliance with the Glass-Steagall Act. Bear Stearns and Lehman Brothers – narrowly defined investment banks – and equally Countrywide, Washington Mutual and Wachovia – narrowly defined commercial banks – as well as an insurance company, American International Group (AIG), would have ended up collapsing in any case.[12] Nor was the instability due to unregulated intermediaries, such as hedge funds. These were less indebted than the commercial banks and, *a fortiori*, than the investment banks; in any case they were far from being large enough to shake the whole system if allowed to fail.

7
Regulatory Shortcomings, Supervisory Shortcomings

The financial sector did in fact remain among the most regulated branches of the economy.[1] Although the intermediaries that developed fastest were those, new or "shadow", that were least controlled, it is reductive and inaccurate to pigeonhole the approach that prevailed in the world between the 1970s and 2008 under the label of financial "deregulation". In reality, that period saw the easing of some constraints on banks but also the introduction of a host of new rules. They especially concerned the correct behaviour and transparency of financial markets on the assumption that a market marked by rigorous codes of conduct and by information efficiency is also, in itself, stable.[2] The assumption was then proved wrong by the crisis and weaknesses are discernible in the rules and in the philosophy upon which they were based.

The rules once again failed to embrace the so-called shadow banking system (which in the United States came to account for nearly one third of total intermediation).[3] The complicated capital ratios imposed by the Basel Accords did not prevent the intermediaries' high indebtedness. When established, the liquidity reserve requirements and collateral standards, both connected with the capital ratios, proved inadequate. The rules, moreover, failed to penalize, or to penalize sufficiently, "toxic" operations, newly conceived and spreading rapidly, such as subprime securities, which only apparently diversified risks, and derivatives aimed at the most speculative gambling.[4] *A fortiori*, rules – including those to ensure competition – were unable to prevent cases of pronounced concentration and

growth among intermediaries, or limited competition between the credit rating agencies.[5] Banks and financial firms emerged that were too big to fail, and hence with a propensity to take on risks that were close to irresponsibility.

One factor contributing to moral hazard is the asymmetry that marks monetary policy in the face of changes in the prices of real and financial assets. It cannot curb their rise. The risk is of damage to the entire economy, in view of the unresolved difficulty of distinguishing the "fundamental" component from the "speculative" component when prices rise, even when they rise in such an anomalous way as to cause suspicion of a "bubble" that is bound to burst.[6] Instead, to limit recessionary risks, central banks have sometimes intervened to support the falling prices of financial instruments by injecting liquidity and reducing interest rates.[7] This occurred in the case of the Fed headed by Alan Greenspan, when faced with the October 1987 collapse of the New York stock exchange and on subsequent occasions.[8] In this way markets came to trust in a "Greenspan put": the Fed would also act in the future to support, and not just to calm, the prices of capital assets. This asymmetry fueled the bullish housing speculation that played such a large part in the tensions that came to a head in 2008. US short-term interest rates were particularly low from 2001 to 2005 (less than 2 per cent, the average rate of inflation, in 2002–2004), when real house prices rose fastest (Table 7.1). Interest rates rose above 5 per cent again in 2006–2007, when inflation rose to 3 per cent per year.[9]

The regulatory authorities, of the United States and of other countries, have been severely criticized for not having foreseen the crisis and for not having opposed it in time.

Greenspan has declared that he became aware of the dangerousness of the situation in August 2007 – at which time he had no longer chaired the Fed for more than a year – when BNP Paribas announced that its portfolio contained a very substantial quantity of "defaulting securitized American subprime mortgages".[10] Concerns had nonetheless been expressed in earlier years in several fora, both inside and outside official circles, in response to the symptoms of systemic fragility in Anglo-Saxon finance. In the Financial Stability Forum – set up by the leading countries in February 1999 to monitor world finance, coordinated first by Andrew Crockett, general manager of the Bank for International Settlements in Basel, and then by Roger

Table 7.1 Short-term interest rates and annual (per cent) change of nominal house prices in the United States (2000–2010)

Year	Interest rates	House prices
2000	6.5	6.7
2001	3.7	6.9
2002	1.8	7.1
2003	1.2	7.7
2004	1.6	9.5
2005	3.5	10.4
2006	5.2	6.0
2007	5.3	0.2
2008	3.2	–7.8
2009	0.9	–5.6
2010	0.5	–3.0

Sources: OECD, *Economic Outlook* 95 database and housing prices database.

Ferguson, vice chairman of the Fed – the fears focused mainly on a scenario of excess domestic demand in the United States, the imbalance in its balance of payments, a fall of the dollar and a consequent rise in interest rates. But on repeated occasions attention was also drawn – especially by the French, German and Italian delegations (the latter made up of Luigi Spaventa for Consob, the securities authority, Mario Draghi for the Treasury and the author of this book for the Bank of Italy) – to the problem of the overvaluation of real estate and the overexposure of finance to the Anglo-Saxon property market. In the United States Edward Gramlich of the Fed and Sheila Bair, first at the Treasury and then at the Federal Deposit Insurance Corporation (FDIC), had expressed doubts about subprime loans early in the day.

To fear a financial crisis, however, is very different from foreseeing the spark and the explosion, the timing and manner of its progression, its sequences, extension and domino effects. Between foreseeing a financial crisis and acting to prevent it there is also a gap, due to a number of factors: the resources and instruments available to supervisors, the coordination with the other institutions involved, the quality of the information and the technical difficulty of distinguishing insolvency from illiquidity. In the middle of a crisis of vast proportions it is particularly difficult to map the tangle of changing contractual relationships between the weakest operators and the others, potentially caught up in the former's eventual collapse. The

nodal dilemma – with always different costs and benefits – is between "saving" the insolvent intermediary to block contagion at the root and letting it fail, while at the same time strengthening the defenses of the downstream intermediaries most exposed to the failed one, in an attempt to immunize them.

In the Anglo-Saxon countries, the supervisory authorities, as admitted by their top managers, accepted the risk valuation models built and used by the financial intermediaries they supervised, did not curb the taking on of dangerous risk positions, and permitted high levels of indebtedness. All told, they failed to reduce the structural fragility – in Minsky's sense – of the financial system: by promoting balanced positions, discouraging those of a speculative nature and circumscribing the riskiest bets, *à la* Ponzi.

In the United States – the epicentre of the international financial crisis – the undervaluation of the potential instability occurred despite the presence at the largest intermediaries of resident examiners, inspectors permanently assigned by the main federal supervisory authorities: the Fed, the Office of the Comptroller of the Currency (OCC) and, to a lesser extent, the FDIC.[11] Those authorities had deemed the minimum capital requirements they had imposed on commercial and savings banks to be adequate.[12] "By the end of 2007, capital levels at the five SEC-regulated Wall Street investment banks – Bear Stearns, Lehman Brothers, Merrill Lynch, Morgan Stanley and Goldman Sachs – were just 3 per cent of assets (Table 7.2). At the mortgage giants Fannie Mae and Freddie Mac, they would drop to barely 1 per cent of the assets they owned and guaranteed."[13] The

Table 7.2 Leverage of selected financial intermediaries (2007)

Institutions	Total assets/Equity	Short-term Total Assets (%)
Bear Stearns	34	13
Morgan Stanley	33	30
Merrill Lynch	32	29
Goldman Sachs	22	16
Citigroup	19	66
JP Morgan Chase	13	68
Bank of America	12	73

Source: BankScope, 2008.

indebtedness was to prove excessive, the capital reserves insufficient in relation to the risks. Supervisors shared with large investors and their corporate econometric models the sense of security transmitted by the ... securitization of bundles of mortgage loans.[14] The fact that the main financial groups were so large that the market came to believe they were too big to go bankrupt did not lead politicians or supervisors to rein in their growth.[15]

The bad organization of supervision and its dispersion among a plethora of federal and state institutions contributed to the limited effectiveness with which supervisory responsibilities were exercised in the United States.[16] Their centralization at a single bureaucratic entity such as the FSA nonetheless proved even worse in the United Kingdom. The fragility of the financial system was underestimated. Deprived of its supervisory function, the Bank of England, with the FSA not operating in the market, did not do enough in 2007 to prevent Northern Rock from taking on excessive risks.[17] This medium-sized retail commercial bank, which had grown six-fold between 1997 and 2006 by applying the "originate-and-distribute" model, collapsed when faced with a run on deposits by its customers and was nationalized in October 2008. Nor in the same month was it possible to overcome the acute difficulties of another much larger bank, the centuries-old and traditionally solid Royal Bank of Scotland, which had to have an injection of £20 billion of public money, equal to two thirds of its capital.

In other countries, such as Italy, supervision achieved better results than in the Anglo-Saxon countries. Its tasks were more rationally distributed; its experience in the field dated back at least to the banking legislation of 1926; the central bank had both the prestige and the resources to act efficiently.[18]

Overall, the international picture as regards supervision was variegated. The need emerged clearly to seek more functional arrangements on the various fronts of financial supervision: banks, non-bank intermediaries and markets.

8
A Return to Central Banking

The latest crisis brought a rethinking, both of the arrangements for the defence of stability and of the role of central banks. The collapse of finance and the rise in unemployment were followed by two developments: a reaffirmation of the flexibility of monetary policy and the assignment to central banks of greater responsibility in the care of the financial industry.

Faced with the depth of the recession, the central banks were led to implement an unprecedentedly expansionary monetary policy, unconventional even with respect to their statutes. The objectives ranged from easing the tensions in the financial markets to averting price deflation, from supporting the economy and the building industry to preventing a collapse of public debts. Between the height of the crisis in 2008 and 2012, in order to create monetary base, lower interest rates and force the expansion of monetary and credit aggregates, the central banks of the United States, the United Kingdom and the eurozone tripled, or more than tripled, their balance sheets and the Bank of Japan expanded its own by 50 per cent.[1] The monetary base tripled in the United States and the United Kingdom, more than doubled in the eurozone, and increased by a third in Japan. In all four cases the question was raised of how to mop up later the excess liquidity injected into the financial system, which was stagnating in the banks and had not yet percolated through into the economy. The problem was complicated by the size of the public debt accumulated in each country to mitigate the repercussions of the crisis through greater deficit spending.[2]

The ESCB encountered the greatest difficulties: owing to the rigidity of its statute, the imbalances in the public finances, the different economic and financial conditions in the various eurozone countries, and the rigorous counter-inflationary orthodoxy imposed by Germany. For a long time the ESCB's monetary policy was restrictive, up until just before the financial crisis connected with the collapse of Lehman Brothers. An improvident increase in the official interest rates, from 4 to 4.25 per cent, was implemented by the ECB headed by Jean Claude Trichet at the beginning of July 2008, shortly before the failure of Lehman Brothers. The spectre of inflation deriving from increases in the prices of commodities and energy was overestimated. The risk of the financial instability evident in the Anglo-Saxon markets increasing and spreading was underestimated. From October 2008 onwards, after the collapse of Lehman Brothers, the ECB took precipitous corrective measures, lowering interest rates in several steps to the then historical minimum of1 per cent in 2009. But it acted late, when the eurozone economies had already entered into a recession that in 2008–2009 reduced their GDP by 3.1 per cent. Moreover, even though the interest rates of the ECB – since November 2011 headed by Mario Draghi, the former Governor of the Bank of Italy – were gradually reduced further, to almost zero, the Eurosystem's balance sheet, the total monetary base created and the part of it held by banks and not by the public fell considerably from the peaks recorded in the summer of 2012 to their levels in September 2014 (Table 8.1).

Owing partly to the recession of the European economy and then to its stagnation, in the two years from the summer of 2012 to the

Table 8.1 Liabilities of the European Central Bank and Eurosystem (billions of euros)

	2007 (6 April)	**2012 (6 July)**	**2015 (5 September)**
A) Consolidated balance sheets	1,171	3,085	2,012
B) Monetary base:			
B1) in the hands of the public	626	898	973
B2) in the hands of the banks	186	887	220
B3) Total	812	1,785	1,193

Source: European Central Bank.

summer of 2014 the growth in the money supply slowed considerably with respect to the twelve-month rates recorded before the crisis. The euro appreciated, thus damping European demand and prices: against the dollar it rose from just over 1.20 in the summer of 2012 to nearly 1.40 in May 2014, while in nominal effective terms it strengthened by about 10 per cent. All told, monetary and exchange rate policy failed to quell the deflationary impulses emerging in Europe: these impulses are very difficult to tame once they gather strength, and should instead be forestalled. The so-called quantitative easing of monetary policy, which the ECB with a substantial delay launched in the Spring of 2015, runs the risk of not stimulating aggregate demand – long term real interest rates have been extremely low since 2010 (Table 8.2) – at the same time fuelling speculative bubbles in financial markets and a competitive devaluation of the currency unacceptable by partners outside the Euro Area.

Apart from the merit and timing of these choices, multiplying the size of balance sheets and reducing official interest rates to zero – while inflation was still slightly positive – meant that the major central banks diverged discretionally from every criterion fixed for monetary management and complied with from the 1970s onwards. *Mutatis mutandis*, the situation was analogous to the suspension of the pound's convertibility, which two centuries earlier, 1797–1821, had given rise to the divergent analyses and proposals of Henry Thornton and David Ricardo.

The reaction of the supporters of rigid monetary rules was immediate.[3] In particular, the expansion of the central banks' balance sheets was seen as conflicting with the philosophy of the ECB, according to which in the long run the expansion of the money supply is

Table 8.2 Real long-term interest rates in Europe (2009–2014)

	2009	**2010**	**2011**	**2012**	**2013**	**2014**
Germany	3.0	1.5	0.1	–0.6	0.0	0.6
Euro Area	3.5	2.0	1.5	1.2	1.6	1.9

Source: Author's calculations based on OECD, *Economic Outlook 95* database. "Conventional" real interest rates are nominal rates minus the current percentage change of consumer prices.

inflationary, and with the legal provision requiring monetary policy to support the general economic policies in the Union only "without prejudice to the objective of price stability". The contradiction – it needs to be stressed – is exemplified by the dilemma that the law and statute in force would create for the ESCB in the event of acute stagflation, such as that which Europe experienced in the not so distant past. In such situations the central bank has to mediate between its objectives and calibrate the use of its instruments. It must look for a difficult compromise. In any case, there are very close links between prices and economic activity. Separating the two moments – as the "without prejudice" requires – is artificial and not a solution. Forcing the ESCB to act at the very limit of the letter of its statute – as, of necessity, was the case after 2008 – is undesirable.

Instead it would have been – would be – preferable if monetary Europe had been based on the aforementioned Section 2.A of the Federal Reserve Act, explicitly extending to the short-term the broad range of objectives it contains. In addition to Europe's case, it would be desirable for central banks to adopt such a formulation on an international scale. The stress in Section 2.A is placed as a first approximation on the long-term link between the expansion of the quantity of money/credit and the growth of (potential) production. However, there is an implicit – and better deducible – indication aimed at the central bank for it to take account with discretionary weighting of the short-term links between employment, prices, interest rates and the exchange rate so as to foster employment, stabilize purchasing power, and calm the interest rates of importance for investment.[4]

As for the second development triggered by the crisis, white papers, reports of official commissions, proposals for the reform of the financial system and its governance – including the Turner, de Larosière, Liikanen and Vickers reports – blossomed on both sides of the Atlantic. The trust of analysts, market participants and legislators in the parable of perfect markets was finally undermined. Among economists and jurists there was an at least partial refusal of neoclassical financial analysis, which had been adopted despite the criticisms which for some time had been leveled against it on theoretical and empirical grounds and despite the availability of alternative classical, neo-Ricardian, Keynesian and institutional paradigms.[5]

In several countries the regulation of finance was tightened. In the United States, the *Dodd-Frank Wall Street Reform and Consumer Protection Act* of 2010 imposed registration and disclosure requirements on hedge funds, which in the last crisis had actually not been guilty. There was a return to old ideas, including the distinction between the business of commercial banks and that of investment banks (*à la* Glass Steagall); a distinction that may be desirable, but whose abandonment, like the hedge funds, did not contribute to the crisis. Bans have been introduced on proprietary trading, drafted in Byzantine language, difficult to comply with and costly for intermediaries. They prohibit banks from proprietary trading – not at the behest of their clients – in securities, derivatives, options and futures as well as from owning or investing in a hedge fund or a private equity fund ("Volcker Rule"). Provision has been made for derivatives to be standardized, at least in part, traded on a stock exchange or an open platform, with the execution of contracts entrusted to a clearing house, while the intermediaries that trade them must be adequately capitalized and deposit margins to guarantee their liabilities. Banks are required to use their derivatives only to cover risks, including the few non-standardized contracts they may write.

But nobody has succeeded, even *a posteriori*, in saying exactly what redeeming rule could have prevented the crisis. Therefore no rule for preventing crises in the future and making discretionary interventions unnecessary has been introduced, either in the United States or elsewhere.[6]

With more specific reference to the tasks of the central bank, it has been authoritatively affirmed that "concern for stability by central banks must range beyond prices for goods and services to the stability and strength of financial markets and institutions generally". This is so even though "regulatory agencies, perhaps most specifically the Federal Reserve, had exhibited a certain laxity and ineffectiveness in the period leading up to the financial breakdown of 2008, particularly with respect to the mortgage market". Consistently, the rigour/flexibility principle has been reaffirmed, according to which "with or without a numerical target, broad responsibility for price stability over time does not imply an inability to conduct ordinary countercyclical policies (...). Confidence in the ability and commitment of the Federal Reserve (or any central bank) to maintain price stability over time is precisely what makes it possible to act aggressively

in supplying liquidity in recessions or when the economy is in a prolonged period of growth but well below its potential".[7]

In the legislative sphere Title XI of the Dodd-Frank Act has broadened and strengthened the instruments for interventions with regard to intermediaries' capital and liquidity and to the activities of those subject to supervision. *À la* Bagehot, in the Fed's Board responsibility for banking supervision has been specifically assigned to a new Vice Chairman. The Fed – like the FDIC and the OCC – will have supervisory powers previously assigned to the Office of Thrift Supervision, which has been suppressed, partly in view of the fall in the number of savings banks. The Financial Stability Oversight Council (FSOC) has been created, bringing together the heads of nine federal regulatory authorities and a person appointed by the President, chaired by the Secretary of the Treasury and centred on the Fed, to which the FSOC may address recommendations concerning the main, macro-economically important, financial intermediaries. "Dodd-Frank did ensure that the Fed would have a dominant role supervising the systematically important firms designated by the council, and would take the lead setting capital and liquidity standards in the United States (...). Dodd-Frank also mandated rigorous annual stress tests."[8] The simulations have been entrusted to the Fed, which had made them successfully after the outbreak of the recent crisis.

Interest groups and the indiscriminate unpopularity with the public of all those involved in various ways in the crisis have prevented a simplification of the jungle of US supervisors and the assignment of even greater powers to the Fed in this field.[9] In particular, Section 13(3) of the Federal Reserve Act has been worsened under the pressure of public opinion, by restricting the freedom of the central bank to finance any intermediary, especially if it is insolvent or risks becoming insolvent:[10] "The loss of Fed's power to lend to individual nonbanks leaves the financial system weaker and more exposed to future panics. Letting systemic firms collapse during a crisis without the ability to prevent the panic from spreading can be devastating. That's why the fall of Lehman was so horrible".[11]

In the United Kingdom, the rout of supervision, which the (Labour) Government had brutally removed from the central bank and centralized at the newly established Financial Services Authority (FSA), led the (Conservative) Government to backtrack.

The Financial Services Act of December 2012 abolished the FSA for manifest incapacity with effect from April 2013, assigned macro-prudential powers for the systemic stability of UK finance, and created a new body, the Financial Policy Committee, comprising the Bank of England, the Prudential Regulation Authority (which is part of the central bank, chaired by its Governor and managed by a new Deputy Governor for Prudential Regulation, responsible for micro-prudential activity) and the Financial Conduct Authority (entrusted with protecting users and fostering integrity and competition in the financial system).

Apart from the grotesque case of the UK, in the European Union too, 15 years after the creation of the ESCB, recognition was given to the desirability of employing the central bank in banking supervision. The evidence led to the abandonment of the absurd idea – which had prevailed from the 1970s onwards and always been rejected by the Bank of Italy, both before and after the establishment of the ESCB and the creation of the euro – of an intrinsic conflict between the assignment of this task to the central bank and the rigour of its counter-inflationary monetary policy. Supervision and monetary policy, apart from their not conflicting, can be usefully complementary. The choice of monetary policy instruments, their calibration and the timing of interventions benefit from the direct knowledge, acquired in the field, that the daily supervision of financial intermediaries and markets allows. The financial system provides monetary policy with the channel for the transmission of its impulses to the economy. Especially in counter-inflationary periods it must not fail to take account of the system's average resilience or of the dispersion about the average of its various sectors. Analogously, supervision benefits from direct knowledge of the stance of monetary policy. The liquidity in the economy and interest rates, which monetary policy fixes, are among the main determinants of the variety of risks and returns that the financial system faces. The complementarity is especially valuable between monetary policy and the supervision of banks, whose taking of deposits from households and firms comprises by far the greater part of the stock of money (in the eurozone the ratio of deposits to banknotes held by the public is nine to one for the broadest definition of money, M3, and only a little less than three to one for the narrowest definition, M1).

The eurozone has implemented the decision to concentrate the direct supervision of the major banks at the ECB, with the "assistance" of the national authorities (whether or not they are central banks). This was done in a rush under the pressure of the crisis, without amending the basic norm according to which "the ESCB shall contribute to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system." The coordination among the national authorities, although strengthened in 2010 with the creation of the European System of Financial Supervision (ESFS), was deemed insufficient. The administrative coordination of monetary policy decisions and macro- and microprudential decisions appeared achievable with the creation of a Supervisory Board to perform supervisory activity on a daily basis but subject to the final authority of the Governing Council of the ECB.[12] The move towards the European Banking Authority (EBA) and the complete implementation in Europe of a Single Supervisory Mechanism (SSM) faces obstacles on both the legal and organizational fronts. There may be dangers for savings in the desire to switch from the protection of savers to the protection of taxpayers, by reducing as far as possible the support provided to banks in difficulty with the cost borne by the budget and thus by taxpayers. The allocation of powers between the ECB and the national authorities is partly by subject matter (sundry authorizations of operators) but also partly by type of entity (large and less large operators, their importance in the European economy or in that of a Member State, the importance of operators' cross-border activities). Among those responsible there is the risk of commingling, since the national authorities must assist the ECB, which possesses a competing power of its own. In addition, sanctioning powers are divided on the basis of different criteria from those used for the allocation of the other supervisory powers. The still uncertain criteria for the division of tasks among the authorities will naturally determine the assignment of legal initiatives, the identification of the law applicable to their administrative procedures, especially as regards the administrative and legal remedies available to the recipients thereof, and therefore the assignment of responsibility for illegitimate acts, failures to act and shortfalls in the use of powers. Nonetheless, despite

these difficulties, the process has been set in motion and hinges on the central bank.

The return to central banking – and hence to the discretion inherent, together with independence, in the central bank as an institution – has been preferred to the persistent alternative proposal, that once again did not fail to find proponents.

Allan Meltzer, among others, has sharply criticized the Fed: "The Federal Reserve often acts as guardian of the New York banks' interests." "The Federal Reserve had representatives from its regulatory staff resident in large banks (...). They did not prevent banks from making risky loans or circumventing regulation." "Capture occurs when the regulated become the regulators, or when regulators plan to make a lucrative career change by joining the industry they hitherto had been regulating." Above all, "by failing to announce a lender-of-last-resort rule, the Federal Reserve magnified the crisis." To save some firms and not others would have been a very serious mistake. The lender-of-last-resort rule should have consisted in and, openly announced, should consist in leaving insolvent firms always to fail but at the same time to "open the discount window wide by making loans to all borrowers who offered good collateral" – hoping in this way to avoid domino effects caused by contagious pessimistic expectations of savers-investors. Upstream, since it is not desirable to restrict intermediaries' growth to prevent them from becoming too large to fail, "the most effective way to end bailouts is to require banks to hold more capital."[13] It would be sufficient to have a rigorous criterion *à la* Bagehot and a capital requirement that is high and rising with banks' balance sheet assets, the cancellation of Dodd-Frank, supervision, and central bank and Treasury discretion. "The only thing that can be relied upon are clear, simple rules that limit official discretion."[14]

Only slightly more measured is the proposal put forward by Greenspan, for nearly 20 years head of supervision at the Fed. In his view it was not advisable to abolish supervision and regulation but they should concentrate on precise, circumscribed tasks, beyond which they should not go.[15] "Thus, the most pressing needed reforms in the aftermath of the crisis, in my judgment, are fixes to the levels of regulatory risk-adjusted capital, liquidity, and collateral standards required by counterparties. Private market participants are now

requiring economic capital and balance sheet liquidity well in excess of Basel requirements."[16]

In practice, the conservative indications exemplified by the writings of Meltzer and Greenspan have not prevailed. On the contrary, there has been a revival, albeit with limitations and subject to contradictions that remain to be overcome, of the approach that had been gaining ground from Thornton's pioneering contribution up until the 1970s.

9
Bagehot and Beyond

In the return to authentic central banking triggered by the financial disaster of 2008, and especially in the reassessment of the central bank's role of lender of last resort, reference has often been made to Bagehot.

However, Bagehot can be read in two ways.

The first, just recalled,[1] interprets Bagehot's lesson as suggesting a rule. Bagehot would have preferred a system in which each bank looked after its own stability with a high reserve to protect against risks. However, the City's ultimate reserve was concentrated at the Bank of England. At times of tension it had to mobilize this reserve by selecting the solvent banks, to be refinanced, and the insolvent ones, to be left to fail. But the selection was to be entrusted exclusively to the level of the discount rate and the objective quality of the paper discounted, and not to the subjective assessment of the managers of the Bank of England.

The alternative reading of Bagehot, with pronounced streaks *à la* Thornton, highlights instead the discretion of the central bank. For Bagehot, the level of the reserves and the most appropriate time and conditions for using them had to be decided each time by the central bank and not known to the market. The assessment of banks' creditworthiness had to depend on the valuations of the central bank's management, which was specialized in this task and devoted to it on an exclusive basis. The permanent Deputy-Governor postulated by Bagehot for this function in the Bank of England of the 19th century needed to be an expert and prudent banker: "What we want to introduce into the Bank court is a wise *apprehensiveness* (...)."[2]

The suggestions of an historian are in line with this second reading: "First, strengthen the central bank as the ultimate authority in both the monetary and supervisory systems. Second, ensure that those in charge at the central bank are 'apprehensive' as well as experienced (...). Third, give them considerable latitude in their use of the principal central banking tools (...). Fourth, teach them some financial history (...)."[3] Even more resolutely, years before the crisis but foreseeing and lucidly warning of its possibility, an economist wrote: "The Federal Reserve was organized to control instability. (...) [It] must broaden its scope and take initiatives to prevent the development of practices conducive to financial instability. The Federal Reserve has to be concerned with the effect upon stability of the changing structure of financial relations. (...) The Federal Reserve needs to guide the evolution of financial institutions by favoring stability enhancing and discouraging instability-augmenting institutions and practices."[4]

The aspects most closely linked are the distinction between illiquidity and insolvency; the weighting of the probability of contagion spreading a crisis; and the planning of how and when to intervene to stabilize the market without encouraging irresponsible behaviour. Insolvent intermediaries must exit the market. At the same time illiquidity must not turn into insolvency. Resources are wasted both through the survival of an inefficient intermediary heading for irreversible failure and through the collapse of an intermediary suffering from soluble difficulties but unable, in an imperfect money market, to obtain the credit it temporarily needs. The key point is that neither the illiquidity nor the insolvency of individual banks must be allowed to have repercussions on the entire financial system and the economy. As Thornton said, support must be timely and effective, but not indiscriminate, taken for granted, to the point where it causes financial operators, now and in the future, to engage in opportunistic conduct and take on excessive risks.

Faced with such problems, discretion – that is making an assessment and taking a decision, often as a matter of urgency and with incomplete information – is as difficult to exercise as it is necessary, although not always sufficient.

The rescue of an insolvent intermediary – excluding its directors and shareholders, with the sacrifice of other lenders' exposures and the punishment of any penal responsibilities[5] – may be necessary

if the domino effect would otherwise bring down the whole credit sector: a social cost enormously greater than that of rescuing the insolvent intermediary.

An example is the recent American case.

In the US – and international – financial crisis the detonator was the collapse of Lehman Brothers in the middle of September 2008.[6] Lehman was exposed to the non-residential building industry, heavily indebted (for the most part in the short-term), its shares had plunged on the stock exchange, there were few and not very convinced potential buyers, it had been blandly supervised as a broker-dealer by the SEC although for some time the Fed had been keeping an eye on it.[7] The rescue of Bear Stearns, the other failing investment bank, in March 2008 by the Fed[8] had convinced the market that Lehman, in more serious difficulties but nearly twice as large as Bear Stearns, would have been left to go under. The opposite occurred, with a radical change of course in lending of last resort, which the market did not foresee and which devastated it.

In the evening of Sunday 14 September 2008, the authorities chose bankruptcy for Lehman. Proved wrong, expectations collapsed. With them, the prices of many assets plummeted, demand for liquidity exploded, panic spread, the economy slid into a recession that only a highly expansionary monetary and fiscal policy would bring to an end: "We came very close to a total financial meltdown."[9] Among the failures that followed Lehman's, the Fed, with the backing of the Treasury, two days later lent $85 billion to the large insurance company AIG, potentially taking control of it through convertible preferred stock.[10] Merrill Lynch was the object of a fire sale to Bank of America. Goldman Sachs and Morgan Stanley saved themselves by taking refuge unwillingly, as they had always refused to do, under the control and protective umbrella of the Fed, which to this end recognized the two prestigious investment banks as bank holding companies. Wachovia (the fourth largest US commercial bank) failed, as did Washington Mutual (the main savings institution) and hundreds of other intermediaries.

To support, *in extremis*, the sale of Lehman to the English Barclays group would have cost the American authorities somewhere between $12 billion and $60 billion.[11] Any such amount, including the highest, would have been much less than that actually made available in various ways by the central bank and the federal budget to limit the

crisis. On its own, the TARP – the Troubled Assets Relief Program, entrusted in great haste by Congress to the Treasury on 3 October 2008 in response to the Lehman shock – gave the US Government purchasing power up to $700 billion.

We shall never know whether saving Lehman would have avoided the disaster that followed. But why was it decided to leave Lehman to fail, at the risk of provoking the disaster? Several factors were in play, emblematic of the difficult task to which central bankers are called.

One factor that weighed on the authorities, especially the Secretary of the Treasury (Henry Paulson), was the desire not to consolidate the imprudence generated in the market by the costly rescue of Bear Stearns. It was thought, erroneously, that since Lehman's difficulties had been known for some time the market had already taken sufficient countermeasures. It was believed that despite Lehman's greater size it had less ramified interbank relationships than Bear Stearns (an hypothesis that the facts also proved wrong). The macroeconomic forecasts produced by the Fed, and by others, underestimated the danger of a recession connected with financial instability, which is hard to insert into econometric macro-models.[12] There were probably differences between the assessments of the Secretary of the Treasury, the Chairman of the Board of Governors of the Fed (Ben Bernanke) and the head of the New York Fed (Timothy Geithner, subsequently Secretary of the Treasury), the most concerned of the three about the repercussions that failure to rescue Lehman would unleash.[13]

Nonetheless, the decisive obstacle was probably of a legal nature. It concerned the forms and limits of the central bank's discretion. The limits were established ambiguously in the law. The Section 13(3) of the Federal Reserve Act in force at the time – unlike the subsequent version – allowed the central bank, "in unusual and exigent circumstances" to finance anybody – "individuals, partnerships, and corporations" – subject to rationing in the credit market, provided the paper discounted was "indorsed or otherwise secured to the satisfaction of the Federal Reserve". But it was considered that Lehman was not able to provide sufficient collateral to "satisfy" the central bank. In the words of Ben Bernanke, "in the case of the investment bank Lehman Brothers (...) no buyer for the firm was forthcoming, and the available collateral fell well short of the amount needed to secure a Federal Reserve loan."[14] The Fed feared that a different decision would not have passed the *ex post* scrutiny to which compliance

with Section 13(3) would have been subjected by the political sphere, and above all by the judiciary. Faced with this political and especially legal risk, the risk of a disastrous domino effect was preferred, committing the public finances to provide enormous sums, as in fact happened. The Fed did not dare declare that it was discretionally and subjectively "satisfied" by Lehman's collateral, so that in the Treasury's words: "We didn't believe we had the legal authority to guarantee Lehman's trading liabilities, even using our 'unusual and exigent' powers under 13(3). And we didn't believe we could legally lend them the scale of the resources they would need to continue to operate, because we didn't believe they had anything close to the ability to repay us. (...) We weren't going to defy our own law to lend into a run. (...) We had some discretion about what we deemed solid, but we couldn't inject capital to repair Lehman's hole, and we couldn't guarantee Lehman's obligations."[15]

The relevance of a "legal risk" is confirmed by the subsequent attempt – as sincere as it was clumsy – by Paulson to have a clause included in the TARP Act, whereby the uses of TARP public funds decided by the Secretary of the Treasury "may not be reviewed by any court of law or administrative agency."[16] Congress rejected the proposal indignantly, considering it a threat to the US Constitution, a subversion of the balance of powers laid down in 1748 by Baron Montesquieu in *De l'Esprit des Lois*.[17]

The disastrous handling of the collapse of Lehman Brothers brought on the worst crisis of the US financial system since 1929. The country's GDP contracted (by 3.2 per cent) in the two years 2008–2009. The recession would have been much deeper if macroeconomic, monetary and above all fiscal policy had not powerfully sustained aggregate demand.[18] The financial crisis was triggered by the rigorous application of a rule. What was needed was not a rule but discretion, to "rescue" Lehman.

10
Discretion, not Arbitrariness

Paulson's naive proposal – as evidenced by supervisory events in other countries, including Italy[1] – poses in extreme form the question of the content and limits of central bank discretion.

Discretion consists in the exercise of independence, not arbitrariness,[2] because the central bank's conduct is subject to control *ex post*, as regards both its monetary management and its performance of supervision. The control is susceptible of taking various legal forms; it is always possible from the standpoint of political scrutiny, which is up to the Government and ultimately to Parliament. In both fields it can be traced back to paradigms that economic analysis has rendered increasingly reliable and objective, although not applicable mechanically.

After Keynes, the theory of money in the capitalist market economy makes it possible to identify unambiguously the errors, at least of sign, of monetary policy in the situations that occur most frequently. At the same time empirical analysis, including structural econometric models, can limit the uncertainty that surrounds the intensity, timing and effects of monetary policy intervention even when correctly framed by the central bank. For atypical situations, which require original analyses and responses, the check must necessarily be based on the matching of the results with the resources, the stock of experiences, the instruments with which to intervene and the alternatives available to the central bank.

It is necessary to stress the *ex post* nature of such a control by the Executive and Parliament. An *ex ante* check would negate the

independence of the central bank. It would prejudice the rapidity and effectiveness of its action. It would deprive the function entrusted to the central bank of its social utility.

Institutional independence and operational discretion must not be confused with functional independence.[3] Between monetary policy and the other aspects of economic policy there can and must be complementarity.[4] The case of the Italian economy – which from the 1970s to the introduction of the euro in 1999 would have needed not only monetary and exchange rate policies but also effective fiscal, incomes and structural policies, which instead were lacking – is only the n^{th} proof of this.[5] A constant in central bankers' thought is the rejection of the invitation to substitute for other policy measures, as indeed of the notion that all that is needed is a monetary policy or, worse yet, a monetary "rule."

The coordination between monetary policy and other economic policies is possible in their underlying trends. It is achieved through the definition of a consistent framework of intermediate and final objectives involving the different branches of economic policy. It is up to the central bank to establish the most effective link between the instruments and objectives of monetary policy. The intermediate objectives, although included in the general economic policy framework and publicly announced, must not degenerate into rigid parameters. In the conflict between final objectives the central bank cannot assign little or no importance to price stability or to the stability of the banking system.

Economic analysis offers logical and quantitative criteria to guide regulation, supervision and lending of last resort. The criteria are less secure than those applicable to monetary policy. Nonetheless, they permit a reasonably based assessment of the effectiveness with which the central bank has operated in this no less delicate field.

Where the instability of finance has not been averted, the economic costs can be evaluated with a fair degree of approximation. They can be estimated with reference to the financial industry and with reference to the productive economy and the country's income and wealth. The figures given previously on the financial crisis in the United States are an example. Analogous estimates are available for numerous other episodes of financial instability that have involved developed and developing countries, also in periods going back into the past.[6] For example, the crisis in Italy in the early 1930s – overcome

with the creation of the Istituto per la Ricostruzione Industriale in January 1933 and with the banking legislation enacted in 1936 – caused losses estimated to have amounted to 11 per cent of GDP in 1933 (with banks accounting for 8 per cent) and brought about a contraction in GDP of 6 per cent in 1930–1931 and a fall of 25 per cent in industrial production in 1930–1932.

For the purpose of identifying the responsibilities of the central bank and the other competent authorities, the reconstruction of the network of causal links from which each crisis sprang is more complex but, on a case-by-case basis, not impossible. This is confirmed once again by the 2008 crisis in the United States, notwithstanding the interpretative difficulties we have referred to. In particular, it is easy to see the limits of the handling of Lehman Brothers in the months preceding its collapse and at the time of the crucial decision not to save the bank.

Where instead stability has been ensured, it is still possible to ascertain whether the intervention was efficient as well as effective, that is whether or not the result was obtained minimizing the monetary and non-monetary, short and long-term, costs. The action of the central bank cannot be supposed to be neutral. Every intervention in this sector, even the most efficient and effective, "disturbs" the market. It necessarily interferes with the relationships and arrangements established in the market between intermediaries and between them and their clients. Even in the case of interventions that are effective but not efficient, the economic purpose of general interest that was the reason for the intervention, excluding fraud and grave misconduct, would free the authority that carried it out from being accused of crimes such as abuse of office and market manipulation.

As regards the relationship between central banking and democratic institutions with special reference to Europe, it should be stressed that a central bank granted considerable independence and discretion, equipped with a wide range of instruments and called upon to counter instability in all its forms and manifestations, would contribute much more to European political union than monetary union on its own has contributed and can contribute. A currency without a state is conceivable in theory and has often existed in the past, without this necessarily leading to a unitary state. By contrast, a central bank such as that deemed desirable in these pages is inconceivable in the absence of the political and institutional checks and

balances able to prevent its discretion from degenerating into arbitrariness. Only a Government and a Parliament worthy of the name, authentic expressions of the unified will of the peoples of Europe, could ensure the democratic dialectic with such a central bank and the *ex post* control of its action that would be indispensable.

11
The Protection of Independence and Discretion

The problem therefore becomes how to safeguard the independence and discretion of central banks, as herein defined, justified, and delimited.

Upstream there is the cultural aspect. It is important that civil society, institutions, the political sphere and the judiciary should understand the nature, potentiality and limits of central banking. Such knowledge would contribute not a little, together with the good operational performance of the central bank, to determining its legitimacy *à la* Boulding.

In terms of institutional guarantees a variety of solutions are possible, not a few of which have been tried. Factors of undoubted importance, although to a varying extent depending on the political and social context and the legal system, include: the legal form of the central bank; its governing bodies; the procedures for their appointment; the duration of managers' appointments; its specific tasks; the method for distributing its profits; its capital; and, possible subscribers. A management with a strong personality and prestige, selected on the basis of merit and not of wealth or party membership card, an efficient structure, possessing a sense of the institution and devoted to the general interest confer *de facto* independence on a central bank even if it lacks de jure independence. Substantive legitimacy and formal legitimacy are normally complements, but can be substitutes. There is too much variety in the economic, cultural, legal and political make-up of the countries concerned, at different historical moments.

In general terms, abstracting from the vast range of individual cases, it is necessary to distinguish between safeguarding the independence and discretion of the central bank from the Financial-Industrial complex and safeguarding them from the Political-Bureaucratic complex.

Independence from the Financial-Industrial complex would be undermined if the central bank intentionally interfered in the allocation of resources and the distribution of income and wealth. Involvement would be inevitable and the pressures irresistible. It would become impossible to implement a rigorous monetary and exchange rate policy. This policy inevitably affects some firms and industries more than others. It may jeopardize the condition of less solid banks. The separation between banking and commerce – on which Italian legislation hinged until recently, to protect the efficiency and stability of banks and the economy – helps to save the central bank from these risks. The movement of managers between the central bank and supervised intermediaries is to be avoided: revolving doors are a possible source of commingling and collusion, if not corruption.

Another question is that concerning the activity of the central bank in financial supervision, in addition to banking supervision. Understood correctly – not only as intervention in individual cases, but as economic policy aimed at making the financial system more efficient and stable, primarily through competition and protection against illiquidity and insolvency – the supervisory function is complementary to monetary and exchange rate policy and strengthens it. The crucial point remains lending of last resort. A sort of positive "ambiguity" is typical of an instrument that is already valuable if it exists at all, without implying that it must always be made use of. But two aspects in particular can be made less opaque: the entities that the central bank can refinance and the collateral it must require for the credit it grants.

The original formula of Section 13(3) of the Federal Reserve Act – the formula preceding the restrictive amendment introduced by the Dodd-Frank Act – provides an initial basis on which to build. The exceptional circumstance that in extreme cases would justify lending – to any banking or non-banking entity that was illiquid but that also ran the risk of being insolvent – is that the central bank justifiably considers the stability of the entire financial system to

be in danger. The collapse of the financial system is to be avoided, in view of the devastating repercussions it would have on the entire economy. Collateral must be obtained for loans granted for this purpose. Shares and convertible bonds of the borrower are to be preferred to government bonds, so as not to make an indirect contribution to the Treasury, but also because in the most serious crises not even the temporary nationalization of banks can be excluded. The acceptability of the collateral needs to be adapted, moreover, to the resources of the central bank. The risk associated with lending that the collateral did not cover would in any case need to be kept within the upper limit of the capital of the "bank of the banks", capital that is to be considered as serving to protect the systemic solidity of finance, in addition to the solvency of the central bank itself. The additional resources that might be needed would be charged to the budget, their cost borne by taxpayers, who are nonetheless also savers, interested in the protection of the liquidity that they have entrusted to the financial system.

Such a hypothesis is preferable to the ESCB's current rules, which are manifestly in conflict with it. Not only the ECB, lacking any instruments for the purpose, but not even the national central banks (NCBs), with their Emergency Liquidity Assistance, can finance non-banks or insolvent entities: "National legislation foreseeing the financing by NCBs of credit institutions other than in connection with central banking tasks (such as monetary policy, payment systems or temporary liquidity support operations), in particular to support insolvent credit and/or other financial institutions, is incompatible with the monetary financing prohibition".[1] It is feared that the NCBs might substitute their credit to insolvent entities for that provided by the state, thus surreptitiously financing the state. It is also feared that, suffering losses, the NCBs would have to turn to the state to be recapitalized. In both cases the independence of the ESCB would be at risk.

But, to deprive European central banking of an extreme defence against the systemic instability of finance – while imposing the duties of supervision on the ECB – could prove to be a serious error. Lehman-type cases, with domino effects, can also occur in Europe. The effectiveness of supervision would suffer. Monetary policy's credibility would be diminished if it had to transmit its impulses to a financial system of doubtful stability.

One aspect not to be underestimated is that interventions by the central bank and/or the Government to support the financial system, if they are able to solve the crisis, can in due course produce not losses but profits for the authorities and therefore for taxpayers. Carried out when the market values of the capital assets acquired or accepted as collateral are at their minimum, interventions record capital gains when, the crisis over, these values rise and the assets can be sold at advantageous prices. The US case confirmed this, with an overall profit for the authorities estimated at $166 billion, instead of $2 trillion of losses forecast by the IMF in April 2009 ($4 trillion for the entire world financial system).[2]

Connected, and no less arduous, is the problem of the central bank's position among the public institutions responsible for economic policy and in relation to the Executive. The extreme of self-referentiality is set against that of insufficient independence. Neither *de jure* nor *de facto* must the central bank be made to finance the state, in any way. But the survival of a democratic society would be threatened if the central bank was forced to refuse credit to the state in each and every difficulty – economic, social or political – the country had to face.[3]

The best solution, in order to avoid the extremes of enslavement and complete self-referentiality, is to ask the central bank to bring into the open any conflict that should emerge between monetary policy and exchange rate policy and highlight the contradiction between the need for stability and the need to finance public expenditure. At the same time it is necessary to provide for institutions and procedures that ensure, ultimately by relying on Parliament's legislative power, the resolution of the conflict with the Executive and consistency between the means and ends of economic policy.

From the economic standpoint a state exists to provide its citizens with public goods. If it has contracted debts because in the past its expenditure exceeded its revenue, the state – even if it does not have salable capital assets – is not for that reason necessarily insolvent. Over time, in addition to reducing its expenditure, the state can raise taxes, to the point of bringing the budget into surplus and repaying the creditors unwilling to roll over their government bonds at maturity. A public-finance balanced budget constraint would in itself guarantee that no new debts were contracted, on a net basis. Those in existence would be repaid by replacing them with new debts, on a gross basis.

Nonetheless, even a state with a balanced budget might not be able to place its bonds in the market. The 2008 financial crisis confirmed that the capital market is far from perfect, not least because it is sensitive to the improper, politically biased assessments of the rating agencies, better equipped to analyze firms than States. The impossibility of obtaining credit, even at high rates of interest, would lead to the interruption of payments to a state which had renounced the issuing of money and given up part of the profits from "seignorage" to the central bank. The economic and social repercussions, and those on public order, would be devastating: the end of the state. The absolute ban on the central bank acquiring government bonds at issue turns out, in extreme situations, to be suicidal, senseless.

In no case does united Europe allow public administrations, and in particular the Member States, to have access to monetary financing with loans from the ECB or the ESCB and/or their acquisition of bonds at issue. Under the Treaty and the Statute of the ESCB and the ECB: "Overdraft facilities or any other type of credit facility with the ECB or with the central banks of the Member States (hereinafter referred to as 'national central banks') in favour of Community institutions or bodies, central governments, regional, local or other public authorities, other bodies governed by public law, or public undertakings of Member States shall be prohibited, as shall the purchase directly from them by the ECB or national central banks of debt instruments."[4]

In the euro area the states have implemented the decision, of enormous import, to renounce the individual printing of money. At the same time they have undertaken to comply with budgetary criteria that on paper are extremely rigorous, aimed at ensuring the sustainability of the public finances in the long run.

The concept of budgetary equilibrium, and the constraint that imposes it, is crucial.

From the economic standpoint balance should coincide with outlays, net of investment expenditure, that do not exceed receipts over a period of time that takes the cycle into account. In a recession the public deficit tends to increase, driven by the contraction in tax revenue caused by the fall in income and the expansion in expenditure, to support the needy and unemployed that recession creates. In a rapidly expanding economy, where labour and capital

are used to the limit, the opposite occurs: more income and fewer unemployed increase revenue and reduce social expenditure, and the budget tends to be in surplus. These reactions of the budget to the cyclical conditions of the economy represent automatic built-in stabilizers, mechanisms that attenuate the fluctuations of economic activity. They are called automatic because they do not presuppose discretionary interventions by the Government.

Keynes, contrary to what is widely asserted,[5] "never directly endorsed government deficits – rather, this took place with Lerner's concept of functional finance – and when Keynes analyzed the public deficit as a temporary measure, he showed a clear preference for expenditure for investment over expenditure for consumption."[6] The fluctuations of private investment are, for Keynes, the primary source of capitalism's instability. Hence, to stabilize investment, in the short and the long run, should be the primary objective of economic policy: "If two-thirds or three-quarters of total investment is carried out or can be influenced by public or semi-public bodies, a long-term programme of a stable character should be capable of reducing the potential range of fluctuation to much narrower limits than formerly". "It has nothing whatever to do with deficit financing". "The main task should be to *prevent* large fluctuations by a stable long-term programme. If this is successful it should not be too difficult to offset small fluctuations by expediting or retarding some items in this long-term programme". "If, for one reason or another, the volume of planned investment fails to produce equilibrium, the lack of balance would be met by unbalancing one way or the other the current Budget. Admittedly this would be a last resort". "Capital expenditure would, at least partially, if not wholly, pay for itself (...) and does not involve the progressive increase of budgetary difficulties, which deficit budgeting for the sake of consumption may bring about or, at any rate, would be accused of bringing about", by the financial markets and not only them.[7]

Apart from what citations taken out of context cannot say, we must agree on the following summary interpretation of the use recommended by Keynes of stabilizing public finances: "The budget should be divided into two parts, one regarding capital and the other current items: the budget on capital account should be in balance in the long run but could be adapted to offset exogenous cyclical

changes; in the final analysis the budget on current account could show surpluses or deficits to offset short-term rigidities in the budget on capital account, but should also be in balance in the long run."[8]

Defined in terms of the cyclically-adjusted budget net of investment expenditure, balance must be laid down in the constitution (as in the case of the new Article 81 of the Italian Constitution[9]), guaranteed by rules that the Government and Parliament cannot break, and certified by a technical body that is independent of the Executive as well as of the majority and minorities in Parliament.

In the European case, by analogy – *mutatis mutandis* – with that referred to earlier of an illiquid but not insolvent commercial bank, it might be useful to give the central bank the right to make direct loans to prevent the illiquidity of solvent eurozone States. It would be up to the ESCB to ascertain whether the demand for credit of a Member State with its budget in balance is not met, even at high interest rates, because the bond market is discriminating against that state, overestimating its riskiness. One positive indirect effect of the central bank's potential support is that, together with the risk premium on the bonds the state issues, the latter's interest expense would decline and its interest rate differentials with respect to the public paper most highly rated by the financial markets would narrow.

The alternative is that the solvent but illiquid state should abandon the euro, forced to take back its right of seignorage by printing money or, in other words, the possibility, *de facto* or *de jure*, of having recourse to the national central bank as the only way to finance unpostponable expenditure. By contrast, the euro-area countries may cure their budgetary balances, not least so as to merit the support of the ESCB if they found themselves in the state of illiquid solvency. In this way the interest expense associated with these countries' public debt would also decrease.

Any monetary base that the central bank created on behalf of the state would be offset – "sterilized" – by a smaller creation of monetary base for the market. The total monetary base would continue to be managed to counter both the inflation and the deflation of prices, both an excess and a shortfall of aggregate demand.

12
Concluding Remarks

Perhaps no law can draw the line between the effective discretion, and a harmful arbitrariness, of the central banker. The nature, importance and difficulty of his task must be understood by the political world, by economic and legal thought, by the judiciary, by public opinion.

History, theory and practice nonetheless offer abundant arguments in support of the view that the central bank's independence and discretion are valuable. In very summary terms, better defined and protected, they must be able to contribute:

a) in monetary policy, to price stability and the full use of resources;
b) in looking after the financial system, to preventing its illiquidity and combating its collapse, even to the point of supporting an insolvent operator;
c) in financing the state, to ensuring the continuity of public payments when the state, although solvent, is prevented from accessing the money market.

These proposals for a fully functional central bank draw on a tradition that the Bank of Italy and other central banks have contributed to establishing. At the same time they can constitute the basis for the construction of the new central bank that the economy needs, not only in the eurozone.

A central bank reformed in this way would mark a significant advance on the preceding arrangements. It would nonetheless not guarantee a solution to the instability inherent in the capitalist market economy. The effectiveness of its action would remain subject to structural limits, in contexts that require recourse to the governmental instruments of economic policy. It would have to overcome both cognitive and operational obstacles on the three fronts to which that action is directed. It is worth examining these obstacles and these limits.

The central bank is in a position to curb aggregate demand: for investment in the first place, but also for consumption and exports net of imports. It can do this by making money and credit scarce, raising interest rates, causing the exchange rate to rise and altering expectations. Once demand has been brought back into line with the economy's productive potential, prices will stabilize. So-called demand inflation, which occurs when demand exceeds production, will be averted or halted, with the limited cost of a temporary reduction in investment and economic activity.[1]

But there can be inflation even in the absence of excess aggregate demand: if there is exogenous upward pressure on wages or profits, if there is an increase in the international prices of commodities or energy, if the exchange rate falls, if for lack of competition as the relative prices of products vary their absolute prices rise with excess demand more readily than they fall with excess supply.[2] In these cases, of "cost" inflation in the broad sense, as amply experienced in the 1970s and 1980s, monetary tightening is less effective; or, for it to be effective, must be administered in doses that, by compressing aggregate demand, cause losses of production and employment. These costs can be socially very high. Accordingly it is necessary to assess the extent and even the desirability of curbing inflation with monetary policy rather than other instruments, such as incomes policy and the promotion of competition in the markets for goods and factors of production.

Restrictive monetary policy must in any case overcome cognitive and operational difficulties: in the choice of instruments, in the calibration and timing of their application, in forecasting their effects. But in the fight against inflation monetary management can be decisive, especially if the costs it imposes on society are ignored.

This is much less true for expansionary monetary policy, aimed at combating recession, unemployment and price deflation. The intuitive slogan is that you can pull on a piece of string but not push on it. Beyond given limits the liquidity that the central bank injects into the economy is hoarded by the public and banks and therefore does not translate into greater financing of firms and households or lower interest rates. Firms' profit expectations and households' income and employment prospects can be so depressed that even the greater availability of loans at low interest rates does not lead to investment and consumption, so that recession and deflation persist. In such situations a much more effective solution is likely to be a fiscal policy based on lower taxes and above all on public investment, supplemented by a monetary policy that removes the financial constraints on the expansion of aggregate demand.

That the complementarity between monetary policy and fiscal policy is particularly valuable when it is necessary to overcome a recession is confirmed in the European case. This also involves the international dimension, which is crucial in today's economies integrated by movements of goods, capital and people. In addition to the Maastricht rules and the even stricter ones that followed the Treaty, the recovery in economic activity in Europe was held back by Germany's economic policy. Its rigour was in contrast with the expansionary stance of monetary policy that the ESCB and the ECB tried to pursue.

The German economy stagnated both in 2012 and in 2013 (Table 12.1). In 2014 there was a slow recovery that was still below the economy's potential. The contribution of the public budget to aggregate demand in these years was modest, insufficient to sustain aggregate demand. Employment increased, with the help of the trade unions, but in the most ordinary, low-wage, jobs only temporarily accepted by young people. Labour productivity stagnated after making good progress for years. These mediocre results were achieved even though the budget was in structural balance, the public debt limited, and there was excess demand for Bunds – a sort of hedge, good with zero interest rates. The expansion of the economy, far from undermining these equilibria, would have consolidated them.

The main way to make good a shortfall in demand – in Germany, in Europe, in Italy – is naturally to invest: in viable and useful

Table 12.1 Real and financial indicators, Germany (2011–2014)

	2011	2012	2013	2014
GDP volume (% change)	3.4	0.9	0.5	1.9
Real domestic demand (% change)	2.8	–0.2	0.5	1.6
Employment (% change)	2.3	1.0	1.0	0.6
Consumer prices (% change)	2.5	2.1	1.6	1.1
Government balance (% of GDP)	–0.8	0.1	0.0	–0.2
Current account balance (% of GDP)	6.8	7.5	7.6	7.9

Source: OECD, *Economic Outlook* database.

public works, something for which every country always has a need. It makes no sense to sacrifice this expenditure by including it in the calculation of general government net borrowing subject to European constraints. As made clear by Keynes, since there are unutilized resources of labour and capital, by increasing income this expenditure generates the savings that finance it. If it is profitable, it gives rise to external economies and productivity gains in the private sector, thus fostering growth in the long run. It has a strong multiplier effect on income and employment.[3]

Germany's economy is one of the most efficient and trade union moderation contributes to the competitiveness of the products it manufactures. Consequently, its exports tend to exceed its imports. Since 2002 the country's trade balance and its balance of payments on current account have been in surplus; in 2013 the trade surplus amounted to €200 billion (7 per cent of GDP). At the same time the country had a net external creditor position equal to 40 per cent of GDP.

But the disproportionate trade surplus is matched by an outflow of capital, with an equal transfer of real resources to the rest of the world. If those resources were used instead in Germany, the country's firms would be able to produce more, its households to consume more and the state to supply more services to citizens. This would happen if German economic policy promoted the expansion of domestic demand, causing imports and exports to draw closer and halting the outflow of precious resources towards other countries.

The stagnation of Mediterranean Europe also increases the migratory pressure in Germany, where immigrants and persons with at least one immigrant parent are already close to one fifth of the population.

Persons who arrive in Sicily alive know there is no work in Italy or Southern Europe. They will look for it in Germany, where unemployment has fallen to about 5 per cent, compared with 12 per cent in Italy, 10 per cent in France, 25 per cent in Spain and 27 per cent in Greece (Table 12.2). They will also look for a break in the uncivilized barriers put in place by "Dublin III" to the right of asylum. If exports and aggregate demand had grown in Mediterranean Europe, creating employment again, the migratory pressure that threatens to spread from the South of Italy to the German labour market would have been eased.

Germany therefore chooses to deny its citizens a conspicuous increase in their welfare. It does not contribute, with a faster expansion of demand, to overcoming a stagnation of the European economy that is undermining the foundations of the Union and stimulates large additional migratory flows towards Germany itself.

As a possible justification for this absurd economic choice, harking back to the spectre of inflation (the Weimar hyperinflation of a century ago), and thus to protection of the saving public, grates with an annual rise in prices lower than the 2 per cent upper limit and tending to decline. The risk instead, for Germany and therefore for Europe, is deflation (Table 12.3).

The strategic flaw extends to German foreign policy. It is not good for Germany to present itself as the leader nation again just because its economic policy makes it a creditor; nor for it to be seen by half of Europe as the guardian of an orthodoxy that imposes stagnation, creates social tensions and hinders progress towards political union.

Table 12.2 Harmonized unemployment rates in Europe (2008–2013)

	2008	**2009**	**2010**	**2011**	**2012**	**2013**
Germany	7.5	7.8	7.1	6.0	5.5	5.3
France	7.5	9.1	9.3	9.2	9.8	10.3
Italy	6.7	7.8	8.4	8.4	10.7	12.2
UK	5.7	7.6	7.8	8.0	7.9	7.5
Spain	11.3	18.0	20.1	21.6	25.1	26.4
Greece	7.7	9.5	12.6	17.7	24.3	27.3
Euro Area	7.6	9.6	10.1	10.1	11.3	12.0

Source: OECD, *Main Economic Indicators*.

Table 12.3 Consumer prices (per cent changes) in Europe (2012–2014)

	2012	2013	2014
Germany	2.1	1.6	0.9
France	2.2	1.0	0.7
Italy	3.3	1.3	0.1
UK	2.8	2.6	1.6
Spain	2.4	1.5	0.0
Greece	1.5	–0.9	–0.8
Euro Area	2.5	1.3	0.5

Source: IMF, *World Economic Outlook*, Washington, October 2014.

In the absence of an expansionary fiscal policy in Europe and above all in Germany, monetary policy on its own cannot quell the recessionary and deflationary pressures present in the eurozone.

As for the second front, that of financial crises, the assessment and discretionary intervention of the central bank for preventive purposes may fail, either for lack of information or for lack of instruments suited to the specific case. Discretion is not the same as omniscience or omnipotence.

There is a complementarity that is important for preventing financial crises: that between rules and discretion. Rules are useful for treating outbreaks of instability already experienced in the past, those that are most frequent: lack of capital and excessive borrowing from intermediaries, imbalances between balance sheet assets and liabilities, high-risk transactions, problems of corporate governance and cases of fraud. On the basis of well-tried rules the discretion of the central bank can give the best of itself in combating the new forms of finance that generate instability, that necessarily escape rules based on past experience. To separate the wheat from the chaff in finance is as essential as it is difficult: financial innovations are no less important than traditional intermediation because to a large extent they determine the levels and rates of growth of productivity in the entire economy.[4]

Curbing the consequences of a crisis that it did not prove possible to prevent and that is under way requires the central bank to finance the entities involved. If the "rule" simplified by Bagehot, of the abundance of credit granted at high interest rates and against sound guarantees, does not suffice, it is only possible to entrust the central

bank's discretion with the task of distinguishing the insolvent from the illiquid and the contagious from those that are not – or have only limited dealings with – the rest of the system. Given the difficulty of such assessments, and the risks they entail, the capitalization of the central bank becomes of great importance.

The third front is that of ensuring the continuity of the expenditure of a state that, despite having its accounts in order, is discriminated against in the primary market for the securities it issues. Apart from the evident political and institutional aspect, the central bank is faced with three technical questions.

If discriminated against means that the state completely fails to place its securities and cover urgent public expenditure, the situation is clear. The central bank will, temporarily, finance the state. If instead discriminated against means that the state *can* place its securities, but only at an interest rate driven up by the "high" risk premium demanded by the market, the central bank's assessment becomes particularly delicate, turning on the complex quantification of the correct relationship between risk and return when purchasing securities. Care must be taken to avoid granting subsidized credit to the state. Here again the capitalization of the central bank is important.

The second question concerns the definition of "investment", in the economic sense, the specification of the components of public expenditure to be exempted from constraints such as those of the Maastricht Treaty in Europe. Capital expenditure – including the purchase of financial assets by general government – does not coincide with spending on investments producing a future income, such as a useful public work; productive investments themselves are so to a varying extent; the boundary between spending for investment and spending for durable goods is not always clear.

No easier, to conclude, is estimating the cyclically adjusted budget balance. The link between cycle and trend is one of the unsolved issues of economic theory. A trend line can be drawn with different statistical methods and different results. The same has to be said of the econometric quantification of the elasticity of the budget balance with respect to the cyclical divergence of the economy from its trend or its production potential. It is important that Parliament should entrust these assessments to a group of experts independent of the Executive. However, the central bank, which is called upon to

finance the public expenditure not covered by the market through the purchase of newly issued securities, must also make the same assessments internally and independently.

In the unstable capitalist market economy nothing is determined or securely determinable. The central bank cannot – must not – be forced to make up for the Government's inadequate economic policies, a task it is not able to perform. And yet the instability may be significantly reduced if the central bank is put in the best possible position to govern the credit system: "A developed credit system (...) has the advantage over a pure hard money system, in that its reserves are in places where they can more readily be used, if there is the intelligence and strength of will to use them. It is, of course, only too true that these essential qualities may not be there. But to fall back on rules, making the monetary system mechanical, is a confession of failure."[5]

Notes

1 The Roots of Central Banking

1. Boulding, K.E., "The Legitimacy of Central Banks", in: *Federal Reserve System-Board of Governors, Reappraisal of the Federal Reserve Discount Mechanism,* (1969), Federal Reserve System, Washington, 1972, Vol. 2, pp. 3–13.
2. Following Massimo Severo Giannini the Italian legal doctrine long understood *administrative* discretion to be "the weighing of the various public and private secondary interests on which the choice of the administration impinges against a primary interest, that for which the administration is granted its administrative power". *Technical* discretion concerns "the application of specialist knowledge", "technical assessments, which differ from true technical verifications because of the questionableness of the choice, the margin of uncertainty it leaves, the variability of the result in relation to the method adopted" (Cassese, S. (ed.), *Istituzioni di diritto amministrativo,* Giuffrè, Milan 2004, pp. 199 and 201). More recently there has been a tendency to substitute the notion of "evaluations that require special technical skills" for that of "technical discretion" and to enhance the control of the administrative judge – aided by consultants – on those evaluations (Clarich, M., *Manuale di diritto amministrativo,* il Mulino, Bologna 2013, pp. 120–122).
3. "The creation of money is in many respects an example of a public good" (Arrow, K.J., "The Organization of Economic Activity: Issues Pertinent to the Choice of Market Versus Nonmarket Allocation" (1969), in: V. Tanzi and H.H. Zee (eds), *Recent Developments in Public Finance,* Vol. I, Elgar, Cheltenham 2011, p. 68.
4. The definitive formulation of the deposit multiplier was put forward by Phillips, C.A., *Bank Credit,* Macmillan, New York 1921. A thorough analysis is to be found in Fazio, A., *Base monetaria, credito e depositi bancari*, Ente per gli Studi Monetari, Bancari e Finanziari Luigi Einaudi, Rome 1968.
5. Carriero, G., Ciocca, P. and Marcucci, M., "Diritto e risultanze dell'economia nell'Italia unita", in: Ciocca, P. and Toniolo, G. (eds), *Storia economica d'Italia*, Vol. 3.2, Laterza, Roma-Bari 2004, pp. 502–513.
6. A thorough and original analysis of this process is to be found in Giannini, C., *The Age of Central Banks* (2004), Elgar, Cheltenam 2011. A reprint of works useful for the purpose of comparative description is Collins, M. (ed.), *Central Banking in History,* Elgar, Cheltenham 1992. For the shortest summary of an endless literature, see Goodhart, C., "Central Banking", in: *The New Palgrave Dictionary of Money and Finance,* Macmillan, London

1992, Vol. I, pp. 321–325. Independence as a historical problem is in Toniolo, G. (ed.), *Central Bank's Independence in Historical Perspective,* Walter de Gruyter, Berlin 1988.

7. National Monetary Commission, *Banking in Sweden and Switzerland,* Vol. XVII, Government Printing Office, Washington, 1911; Clapham, J.H., *The Bank of England. A History, 1694–1944,* Cambridge University Press, Cambridge 1944.
8. Goodhart, op. cit., p. 322. Also worth citing, and not just for the title, Hawtrey, R.G., *The Art of Central Banking*, Longmans, Green & Co., London 1932.
9. Mc Callum, B.T., *Monetary Economics,* Macmillan, New York 1989, Ch. 13; de Cecco, M., "Gold Standard", in: *The New Palgrave Dictionary of Money and Finance,* cit., Vol. II, pp. 260–266; Roccas, M., "International Bimetallism Revisited", European Economic Association Congress, Copenhagen, August 1987.
10. Ciocca, P. (ed.), *La economìa mundial en el siglo XX. Una sìnthesis y un debate*, (1998), Critica, Barcelona, 2000.
11. Hayek, F.A. von, *Choice in Currency, The Institute of Economic Affairs*, The Institute of Economic Affairs, London 1976 and *Denationalization of Money*, The Institute of Economic Affairs, London 1976; Smith, V.C., *The Rationale of Central Banking*, King, London 1936.

2 Tendencies

1. Thornton, H., *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain,* Hatchard, London 1802, p. 295. It is this page of the English banker's work that Schumpeter considered to be the real Magna Charta of central banking (Schumpeter, J.A., *History of Economic Analysis,* Allen & Unwin, London 1954, p. 729*)*. For Thornton as a person and his work, see Ciocca, P. and Sannucci, V., "Henry Thornton, primo teorico della banca centrale", introductory essay to the Italian edition of the *Enquiry,* Cassa di Risparmio di Torino, Turin 1990. On the part played by Thornton in the English monetary debate, see Rotelli, C., *Le origini della controversia monetaria (1797–1844),* il Mulino, Bologna 1982.
2. Thornton, op. cit., p. 173.
3. Thornton, op. cit., pp. 185–186.
4. The distributive effects of price inflation cannot be offset by those of the opposite sign deriving from a subsequent deflation of the same size, and vice-versa. The asymmetry between inflation and deflation (studied by Keynes, J.M., *A Tract on Monetary Reform,* Macmillan, London 1923) is at the heart of Piero Sraffa's dissertation for his Law Degree at the University of Turin (see Sraffa, P., *Monetary Inflation in Italy During and After the War,* (1920), "Cambridge Journal of Economics", 1993, 17.

5. Keynes, J.M., *The General Theory of Employment, Interest and Money*, Macmillan, London 1936, pp. 315–317.
6. Keynes, J.M., "Activities 1940–1946. Shaping the Post-War World: Employment and Commodities", in: *The Collected Writings of J.M. Keynes*, Vol. XXVII, Macmillan, London 1980.
7. For an introduction to the formal aspects of these models, see Baumol, W.J., *Economic Dynamics. An Introduction* (1951), Third Edition, Macmillan, London 1970 and Gandolfo, G., *Mathematical Methods and Models in Economic Dynamics,* North Holland, Amsterdam 1971.
8. Keynes, *The General Theory of Employment, Interest and Money*, op. cit., p. 144.
9. "We can assume that the general thrust of Irving Fisher's description in the 'Debt-Deflation Theory of Great Depressions' ('Econometrica', 1933) of the aftermath of a crisis was accepted by Keynes as a rough-and-ready statement of post-crisis system behavior, and that it was assumed implicitly that a symmetric development occurred during a boom. Fisher also failed to offer an explanation or theory of the crisis." (Minsky, H.P., *John Maynard Keynes,* Columbia University Press, New York 1975, p. 64). Minsky, an authentic Keynesian, was convinced moreover that Keynes "never articulated a model – or an explanation – of how the liability structure of firms, banks, and other financial institutions evolve and how the endogenous generation of money and money substitutes takes place" (Ibidem, p. 106). Both Minsky's assessments concerning Fisher and Keynes are open to discussion.
10. See in particular, Minsky, H.P., *Stabilizing an Unstable Economy* (1986), Yale University Press, New Haven 2008. Most recently, see, Detzer, D. and Herr, H., *Theories of financial crises: An overview,* Institute for Political Economy, Berlin, Working Paper No. 32/2014.
11. Geithner, T.F., *Stress Test. Reflections on Financial Crises*, Random House, London 2014, p. 7.
12. Ciocca, P., *Risparmio dei lavoratori, risparmio dei capitalisti,* "Rivista di Storia Economica", 2000, pp. 233–239. After other countries, this also happened in Italy once wages rose above the subsistence level. According to Bank of Italy data, in 1991 some 94 per cent of households held deposits and 35 per cent also owned government securities, which were owned by 29 per cent of worker households (55 million lire on average) and by 41 per cent of pensioners (102 million lire on average). Households accounted for 66 per cent of private savings and held 38 per cent of the country's gross financial assets (equal to six million billion lire); employee and pensioner households accounted for 78 per cent of the total flow of household savings and 75 of total household financial assets (Barca, F. and Ciocca, P., *Il risparmio: tre ragioni per tutelarlo,* "Parolechiave", no. 6, 1994, p. 59). Apart from the case of Italy, at international level the fact that wages were close to the subsistence level in the 19th century but rose in the 20th and allowed workers to save may help to explain the less pronounced inequality not only of

incomes but also of wealth in the latter century within several advanced economies. Again in the 20th century the inequality of incomes tended to increase instead across countries and globally with the spread of capitalism worldwide (Weil, D.N., *Economic Growth*, 2nd ed., Addison-Wesley, Boston 2005, Fig. 1.8, p. 19).

13. A rough map of the crises – divided as indicated into real, financial and real and financial – can be found in Ciocca, P., *Crisi, economica e finanziaria*, in: Enciclopedia delle Scienze Sociali, Istituto della Enciclopedia Italiana, Rome 1992, Vol. II, pp. 607–617. Minsky's model is applied to the historical investigation of the causes and modalities of the main episodes of crisis in Kindleberger, C.P., *Manias, Panics, and Crashes. A History of Financial Crises,* Macmillan, London 1978. In the absence of a rigorous definition of the typical crisis of a capitalist market economy, the long list of cases of instability, including precapitalist cases going as far back as medieval feudalism, collated in Reinhart, C.M. and Rogoff, K.S., *This Time Is Different. Eight Centuries of Financial Folly,* Princeton University Press, Princeton 2009, has to be considered mainly descriptive.
14. For the main stages of this process, see Ciocca, P., "Between 'a Science' and 'an Art': Central Banks and the Political Economy of Money", in: Ciocca, P. (ed.), *Money and the Economy. Central Bankers' Views*, Macmillan, London 1987.

3 Rigour and Flexibility

1. Hicks, J., *A Market Theory of Money,* Clarendon Press, Oxford 1989, p. 97, based on the same author's essay "Thornton's 'Paper Credit'", in: Hicks, J., C*ritical Essays in Monetary Theory,* Clarendon Press, Oxford 1967. See also Caffè, F., "La teoria monetaria nella concezione di John Hicks", in: Id., *Teoria e problemi di politica sociale,* Laterza, Bari 1970.
2. Keynes, *The General Theory of Employment, Interest and Money*, cit., p. 203.
3. For Italian bankruptcy law a firm is insolvent when "it is no longer able" to meet its obligations regularly. The complexity of translating the economic notions of illiquidity and insolvency, with all their distinctions and nuances, into positive and procedural law is analysed in Aghion, P., *Bankruptcy and its Reform,* The New Palgrave Dictionary of Economics and the Law, Vol. I, London 1998, pp. 145–149 and in: Terranova, G., *Le procedure concorsuali. Problemi di una riforma,* Giuffrè, Milan 2004.
4. "The end is to stay the panic; and the advances should, if possible, stay the panic. And for this purpose there are two rules: – First. That these loans should only be made at a very high rate of interest. This will operate as a heavy fine on unreasonable timidity, and will prevent the greatest number of applications by persons who do not require it. (...) Secondly. That at this rate these advances should be made on all good banking securities, and as largely as the public ask for them. (...) the way to cause alarm is to refuse some one who has good security to offer. (...) the 'unsound'

people are a feeble minority, and they are afraid even to look frightened for fear their unsoundness may be detected." "What is wanted and what is necessary to stop a panic is to diffuse the impression, that though money may be dear, still money is to be had. If people could be really convinced that they could have money if they wait a day or two, and that utter ruin is not coming, most likely they would cease to run in such a mad way for money." (Bagehot, W., *Lombard Street. A Description of the Money Market* (1873), Sixth ed., King, London 1875, pp. 197–198 and pp. 64–65).

5. Arrow, K.J., *Limited Knowledge and Economic Analysis,* "American Economic Review", 1974, pp. 1–10.
6. According to an adage dating back at least to the Great Depression of 1929, banking competition is a source of instability because it encourages banks to run excessive risks to defend their profits eroded by competition. Roosevelt's Banking Act of 1933 consequently limited competition between US banks, in particular by calming interest rates on deposits. But a banking system that is not operating in competitive conditions is inefficient and for that very reason unstable. Thus in finance there is not a contrast between the objective of stability and that of competition. There is complementarity.
7. Keynes, J.M., "The End of Laissez-faire", (1926), in: Id., *Essays in Persuasion,* Rupert Hart-Davis, London 1952, pp. 313–314.
8. The value of the combination of central bank independence and credibility has been sustained and empirically confirmed, with reference to anti-inflationary monetary policy, by a vast literature in the wake of Barro, R. and Gordon, D.B., *Rules, Discretion, and Reputation in a Model of Monetary Policy,* "Journal of Monetary Economics", 1983, pp. 3–20. This line of enquiry was taken up and enriched by Lippi, F., *Central Bank Independence, Targets and Credibility,* Elgar, Cheltenham 1999.
9. Caffè, F., *La strategia dell'allarmismo economico,* "Giornale degli Economisti e Annali di Economia", 1972, pp. 692–699.

4 Discretion, not Rules

1. Sayers, R.S., "The Theoretical Basis of Central Banking", in: Id. *Central Banking after Bagehot*, Clarendon Press, Oxford, 1957, pp. 1 and 7.
2. Within this line of thought the underestimation of instability took on forms and tones that go from denying that it is innate in capitalist market economies to claiming that it is tolerable and can be reduced through appropriate structural arrangements not through ad hoc policies, which if anything increase it.
3. Friedman, M., *A Program for Monetary Stability,* Fordham University Press, New York, 1959, p. 23; Id., "Should there be an Independent Monetary Authority?", in: Yaeger, L.B. (ed.), *In Search of a Monetary Constitution,* Harvard University Press, Boston, 1962; Id., "Statement of Dr. M. Friedman", in: U.S. Congress, House of Representatives, Subcommittee on Financial Institutions, *Financial Institutions and the Nation's Economy*

(FINE), Washington, 22 January, 1976, pp. 2151–2192. Early versions of these theses, typical of the Chicago school of economics, can be found in Simons, H.C., *Rules versus Authorities in Monetary Policy,* "Journal of Political Economy", 1936, pp. 1–30. In monetary matters Ricardo's position was often the opposite of that of Thornton, his friend and colleague. Shortly before he died in the summer of 1823, Ricardo drafted a bill that took away the privilege of issuing notes from the Bank of England and entrusted it to an institution guided autonomously by five wise men ("Commissioners"), under Parliament's aegis (Ricardo, D., "Plan for the Establishment of a National Bank", in: *The Works and Correspondence of David Ricardo,* edited by Sraffa, P., Cambridge University Press, Cambridge 1951, vol. IV). Ricardo's adherence to an oversimplified version of the quantity theory of money was insisted on by Sayers, R.S., "Ricardo's Views on Monetary Questions", in: Ashton, T.S. and Sayers, R.S. (eds), *Papers in English Monetary History,* Clarendon Press, Oxford 1953. A similar view on Ricardo's monetary thought, albeit with qualifications, had been taken by Schumpeter, op. cit., pp. 703–704.

4. Capie, F. and Wood, G., *Central Bank Independence: Can it Survive a Crisis?*, "Rivista di Storia Economica", 2013, pp. 196–197. This essay was critically reviewed by Nardozzi, G., *Central Bank's Independence as a Will-o'-the-Wisp. A Comment on Capie and Wood*, "Rivista di Storia Economica", 2013, pp. 343–348. See also the reply by Capie and Wood, *Response to Professor Nardozzi's Comment,* "Rivista di Storia Economica", 2014, pp. 189–195.
5. For Keynes the economy tends to settle at equilibria marked by unemployment: "It is an outstanding characteristic of the economic system in which we live that, whilst it is subject to severe fluctuations in respect of output and employment, it is not violently unstable. Indeed it seems capable of remaining in a chronic condition of sub-normal activity for a considerable period without any marked tendency either towards recovery or complete collapse. Moreover, the evidence indicates that full, or even approximately full, employment is of rare and short-lived occurrence. Fluctuations may start briskly but seem to wear themselves out before they have proceeded to great extremes, and an intermediate situation which is neither desperate nor satisfactory is our normal lot." (Keynes, *The General Theory of Employment, Interest and Money*, cit., pp. 249–250). Keynes (Ibidem, pp. 250–254) identifies four factors as the stabilizers inherent in the economic system: a multiplier that is slightly greater than unity linking investment, consumption and income; the low elasticity of investment with respect to the interest rate; wages and prices that move in the same direction as demand and employment, but moderately; the fact that greater investment quite rapidly erodes the marginal efficiency of capital, with the effect of bringing a downturn in investment itself.
6. Friedman, *Statement,* cit., p. 2155.
7. A case of government influence frequently referred to is that of the Chancellor of the Exchequer who limited the Bank of England's lending of last resort in the Overend Gurney crisis of 1866 (Fetter, F.W., *Development of British Monetary Orthodoxy,* Harvard University Press, Cambridge 1965).

5 The Temporary Re-emergence of Rules

1. See Meltzer, A.H., *A History of the Federal Reserve, 1970–1986,* Vol. 2, Book 2, University of Chicago Press, Chicago 2009. Criticisms of the monetarist interpretation and an alternative reading of the stagflation of the 1970s are to be found in Bruno, M. and Sachs, J.D., *Economics of Worldwide Stagflation,* Blackwell, Oxford 1985. See also Ciocca, P., *Disproportionalities, Allocative Mechanisms and Stagflation*, "Journal of Post Keynesian Economics", 1982, pp. 231–239, and Id. *L'instabilità dell'economia,* Einaudi, Turin 1987, Ch. 3.
2. In 1960–1989 eight OECD countries reinforced the independence of their central banks for anti-inflationary purposes. Between 1989 and 1998 this occurred in 25 countries, some outside the OECD, of which 13 had belonged to the Soviet bloc (Cukierman, A., *Central Bank Strategy, Credibility and Independence: Theory and Evidence,* MIT Press, Cambridge 1992).
3. For monetarists, beyond a transitory phase money does not influence relative prices, but only absolute prices, thus determining – according to the quantity theory of money – the movement in their average level (inflation, deflation or stability of the values of goods and services). At a more general and abstract level, "Monetarism I take to be the doctrine that the perfectly competitive economy in Walrasian equilibrium is adequately descriptive of the world we live in. (...) Such a characterization may appear surprising since it does not mention money. (...) Monetarism cannot have anything to do with Keynes. (...) Keynes not only believed that people could remain involuntarily unemployed, but even spoke about equilibrium with involuntary unemployment. Moreover he thought that this highly unsatisfactory condition could be improved by a simple intervention of the State. In a Walrasian equilibrium none of all that is wrong: it simply has no sense." (Hahn, F., "Alcune riflessioni keynesiane sul monetarismo", in Vicarelli, F. (ed.), *Attualità di Keynes,* Laterza, Rome-Bari, 1983, p. 5). "Underlying the Keynesian view is the concept of an economy that in itself is extremely unstable in its real determinants, so that monetary management has the stabilizing task of acting 'against the tide'. On the opposite side there is, precisely on the terrain of confidence in the intrinsic stability of the real forces of the economy, the monetarist theoretical paradigm, whereby monetary management can consequently be only a source of disturbance, with the corollary that the wise policy is to make the quantity of money grow at a constant rate. Not substantially different, in terms of policy prescriptions, is the conclusion reached by new classical macroeconomics, although along a theoretical path that is all the more refined and all the more detached, for its hypothesis of rational expectations, from the concrete reality of the world in which we live." (Vicarelli, F., "Autonomia delle banche centrali e teoria monetaria", in: Masciandaro, D. and Ristuccia, S. (eds), *L'autonomia delle banche centrali*, Fondazione A. Olivetti, Comunità, Milan 1988, p. 288).

4. Muth, J.F., *Rational Expectations and the Theory of Price Movements*, "Econometrica", 1961, pp. 315–335; Lucas, R.E. Jr., *Studies in Business-Cycle Theory*, MIT Press, Cambridge 1981; Cukierman, A., *Inflation, Stagflation, Relative Prices, and Imperfect Information*, Cambridge University Press, Cambridge 1984. For criticisms of this approach, see Rodano, G. (ed.), *Ascesa e declino della nuova macroeconomia classica*, il Mulino, Bologna 1987 and Vercelli, A., *Keynes dopo Lucas. I fondamenti della macroeconomia*, La Nuova Italia Scientifica, Rome 1987.
5. Rubinstein, M., *A History of the Theory of Investments: My Annotated Bibliography*, Wiley, New York 2006 summarizes the literature of the neoclassical theory of markets characterized by information efficiency. This literature is based on Hayek's original idea, according to which "the economic problem of society (...) is a problem of the utilization of knowledge which is not given to anyone in its totality." According to Hayek, the problem is resolved by markets able to ensure that "by a kind of symbol (the price), only the most essential information is passed on and passed on only to those concerned." (Hayek, F.A., *The Use of Knowledge in Society,* "American Economic Review", 1945, pp. 520 and 527).
6. Malkiel, B.G., "Efficient Market Hypothesis", in: *The New Palgrave Dictionary of Money and Finance*, cit., Vol. I, p. 739.
7. Ibidem, p. 742.
8. "Since being deprived of his regulatory role, which was handed to the Financial Services Authority by Gordon Brown, the governor has been in the unenviable position of running a monetary policy research department (combined recently with an emergency money-printing works)." (Ferguson, N., *The Great Degeneration. How Institutions Decay and Economies Die,* Allen Lane, London 2012, p. 76). Gordon Brown was Chancellor of the Exchequer from 1997 to 2007 and Prime Minister from 2007 al 2010.
9. The failure to assign supervisory tasks to the ECB was contrary to the opinion of experts, such as Alexandre Lamfalussy: "If we had agreed in the early years of the last decade to assign the ECB joint responsibility for supervision, it would have had a mine of information that it didn't have and still doesn't have. (...) But the Europeans didn't want to play this role because the Germans were against it. They believed that if the ECB took on this new task, it would risk subverting its core mandate, which is to oversee the currency." (Lamfalussy, A. cited in Lamfalussy, C., Maes, I. and Péters, S., *Alexandre Lamfalussy. The Wise Man of the Euro,* Lannoo Campus, Leuven 2013, pp. 171–172). Lamfalussy played a part in the assignment of greater supervisory powers to the Belgian central bank after the 2008 crisis (Ibidem, pp. 163–165).
10. ECB, *The monetary policy of the ECB*, ECB, Frankfurt 2004, pp. 41–42 and subsequent updatings of this publication.
11. Leiderman, L., Svensson, L.E.O. (eds), *Inflation Targets,* CEPR, London 1995.

12. Taylor, J.B., *Discretion versus Policy Rules in Practice,* in Carnegie-Rochester Conference Series on Public Policy, 1993, pp. 195–214. The Bank of Italy – in view of its cultural tradition and the lack of non-monetary instruments for the country's economic policy, and because of its lengthy period of strong autonomy, *de facto* more than *de jure* – was an exception compared with the fashion of having recourse to rules in monetary policy.
13. Doubts on the superiority of collegial decisions are expressed, on theoretical and empirical grounds, in Baffi, E. and Drago, C., *Decisioni individuali versus decisioni collegiali,* "ApertaContrada", 13 January 2015.
14. Abbadessa, P. and Cesarini, F. (eds), *La legge per la tutela del risparmio. Un confronto tra giuristi ed economisti*, il Mulino, Bologna 2007.

6 The Crisis of 2008

1. "That crisis came from the determination on the part of US banks to sell toxic debt across the world, including to the European banking system. This does not absolve those who bought it of their responsibility, but if it hadn't been there, they couldn't have bought it. That is a crucial point." (Lamfalussy, A., cited in Lamfalussy, Maes and Péters, *Alexandre Lamfalussy. The Wise Man of the Euro,* cit., p. 168).
2. For a survey, see Lo, A.W., *Reading About the Financial Crisis: A Twenty-One-Book Review,* "Journal of Economic Literature", 2012, pp. 151–178.
3. Goldsmith, R.W., *Financial Structure and Development,* Yale University Press, New Haven 1969.
4. Roselli, A., *Financial Structures and Regulation. A Comparison of Crises in the UK, USA and Italy*, Palgrave Macmillan, London 2012, p. 151.
5. Geithner, op. cit., pp. 394–395. Timothy Geithner, previously president of the Federal Reserve Bank of New York, was Secretary of the US Treasury from January 2009 to February 2013.
6. In both cases GDP slumped as a consequence of the persistent structural weaknesses in the real economy. Following the fall in exports and investment, the recession of 2008–2009 caused GDP to fall by 6.5 per cent in Japan and by 7 per cent in Italy. Owing to the limits and errors of economic policy and the weakness of firms, in Italy there was another fall of 4.5 per cent in 2012–2013, with signs of recession extending into 2014. This occurred when the imbalances of Anglo-Saxon private finance had been righted and the Italian banking system was confirming the stability that had been a feature since the end of the Second World War, thanks also to the supervisory action of the Bank of Italy. By contrast with the earlier contraction, this recession primarily concerned consumption and was provoked by the exceedingly restrictive fiscal policy pursued by Italian governments in response to the problem of the public debt. In 2013 GDP was down by 9 per cent on 2007, consumption by 8 per cent, investment by 30 per cent and industrial production by 25 per cent, while the rate of unemployment rose from 6 to 13 per cent. Although

subjected to powerful tensions as a result of these violent contractions at short intervals, the financial system nonetheless demonstrated appreciable resilience. According to the Bank of Italy, the main supervisor, "the Italian banking system underwent a major transformation, spurred by heightened competition. A large number of mergers and acquisitions, by increasing the average size and efficiency of Italian banks, helped to improve their resilience in the face of the crisis. (...) The system remains characterized by the clear prevalence of credit intermediation activity in favour of households and firms, strong local roots and a generally balanced structure of assets and liabilities. At the end of 2008 structured credit instruments represented just under 2 per cent of the assets of the main banking groups. Wholesale funding made up 29 per cent of total funding for our system, against an average of 41 per cent in the euro area. A fundamentally sound model of intermediation, together with a particularly prudent regulatory framework and supervisory approach, has shielded Italian banks from the most devastating effects of the market turbulence. Taxpayers have not been saddled with the costs of losses and bankruptcies seen in other countries" (Banca d'Italia, *Annual Report for 2008, The Governor's Concluding Remarks,* Rome, 29 May 2009).

7. Blinder, A.S., *After the Music Stopped. The Financial Crisis, the Response, and the Work Ahead,* The Penguin Press, New York, 2013, pp. 27–28. At least hypothetically, it has been explained how in the United States the "disgraceful banking practices" – although involving relevant crimes – were not followed by trials of the financial operators responsible for those practices because the best magistrates were engaged on other fronts, including the repression of terrorism after 09 November 2001 (Rakoff, J.S., *The Financial Crisis: Why Have No High-Level Executives Been Prosecuted?,* "The New York Review of Books", No. 1, 2014, pp. 4–8). An opposing view is that, for the most part, the federal and state investigative bodies "simply concluded that the financial activities most responsible for the crisis weren't illegal, however unethical or dumb they may have been" (Geithner, op. cit., pp. 503–504).
8. Greenspan, A., *The Map and the Territory. Risk, Human Nature, and the Future of Forecasting,* Allen Lane, London 2013, Ch. 2.
9. An example is Krugman, P., *Reagan Did It,* "The New York Times", 31 May 2009.
10. This opinion is shared by scholars who nonetheless have different theoretical views, such as Niall Ferguson (op. cit.) and Allan H. Meltzer (*Why Capitalism?,* Oxford University Press, Oxford 2012).
11. In reality "a judgment of April 1987 had confirmed the interpretation of Glass-Steagall that allowed bank holding companies to control investment banks" (Greenspan, op. cit., p. 355).
12. "The travails of Bank of America, Wachovia, Washington Mutual, and even Citi (...) did not come – or did not *mostly* come – from investment banking activities. Rather, they came from the dangerous mix of high leverage with disgraceful lending practices, precisely what has been

getting banks into trouble for centuries." At the same time "the five giant investment banks prior to the crisis – Bear Stearns, Lehman Brothers, Merrill Lynch, Goldman Sachs, and Morgan Stanley – were not creatures of Gramm-Leach-Bliley. (...) Nor would Glass-Steagall strictures have prevented any of the shenanigans at Bear Stearns, AIG, Countrywide, and the rest" (Blinder, op. cit., pp. 266–267, author's italic). In the same sense, see Geithner, op. cit., pp. 390–391.

7 Regulatory Shortcomings, Supervisory Shortcomings

1. Meltzer, *Why Capitalism?,* cit., p. 8. In the developing countries, more than deregulation from the 1970s onwards it was a question of overcoming a persistent condition of backwardness and financial "repression" (see Caprio, G., Honohan, P. and Stiglitz. J.E. (eds), *Financial Liberalization. How Far, How Fast?,* Cambridge University Press, Cambridge 2001).
2. In Italy the flowering of rules on financial markets made it advisable to bring them together in a consolidated text (Legislative Decree 58/1998, known as the Consolidated Law on Finance). Other rules were introduced subsequently (see Banca d'Italia, *Normativa sui mercati finanziari e relativi sistemi di garanzia e collocamento,* Banca d'Italia, Rome 2004). The 1936 Italian Banking Law had contained only a few rules on stock exchanges and other financial markets.
3. Virtually as a mirror image, the share of "deposit institutions" fell in the United States from 63 per cent in 1990 to 42 per cent in 2007 (Geithner, op. cit., p. 506 and figure on p. 82, described on p. 546). "Shadow banking includes the activities of investment banks, hedge funds, structured investment vehicles (SIVs), and other credit intermediaries acting outside the regular banking system" (Greenspan, op. cit., p. 40).
4. In 1998 Brooksley Born, head of the Commodity Futures Trading Commission (CFTC), proposed that OTC derivatives should be placed under the control of her agency, but the Treasury, the Fed and the SEC objected that "regulating derivatives would create legal uncertainties, stifle valuable innovations, and send derivative trading offshore" (Blinder, op. cit., p. 63). "They saw derivatives as valuable tools for hedging and distributing risks (...) and more specialized over-the-counter derivatives as particularly valuable for specific businesses facing specific risks. In many ways, the battle was more about turf and interests than substance or ideology. (...) Even Born was not proposing to ban derivatives. She just thought they should be regulated as futures by the CFTC and traded on the Chicago exchanges. My biases were with the Fed, mostly because of the quality of the Fed officials (...). The CFTC did not have a sterling reputation for market sophistication, and was widely perceived as captured by Chicago" (Geithner, op. cit., p. 87).
5. Ferri, G., Lacitignola, P., *Le agenzie di rating. Tra crisi e rilancio della finanza globale*, il Mulino, Bologna 2009.

6. In the United States, from 1890 onwards, "real" house prices had never risen – on average and with such small geographical variations – as in 1997–2006, when, interrupting a constant pattern, they rose by 85 per cent, followed by an even more rapid deflation in 2007–2012 (Blinder, op. cit., Figure 2.1, p. 32).
7. "The Fed has a limited but vital role in responding to stock market crashes. When the abruptness of a crash threatens the payment system and intermediation, a classic lender of last resort role is appropriate, as occurred in 1929 and 1987. In addition, even if the market's descent is slower and the financial system has weak balance sheets, intervention may be appropriate in order to prevent a broader financial crisis. In both cases, however, it is a brief intervention that is required – not a shift in the Fed's intermediate or longer-term goals." (White, E.N., "Bubbles and busts: the 1990s in the mirror of the 1920s", in: Rhode, P.W. and Toniolo, G. (eds), *The Global Economy in the 1990s. A Long-run Perspective,* Cambridge University Press, Cambridge 2006, p. 216.)
8. The further episodes include those already mentioned: the Gulf War, the Mexican, Asian and Russian crises, the LTCM fund, the dot-com crash and 9/11, up to the rescues immediately preceding the collapse of Lehman Brothers in September 2008.
9. "The Federal Reserve feared that there would be a complete collapse if real estate prices stopped rising. And there was also the fundamental belief of Alan Greenspan, Chairman of the Fed, that every American should be helped to get their own house. He said it several times" (Lamfalussy, A., cited in Lamfalussy, Maes and Péters, *Alexandre Lamfalussy. The Wise Man and the Euro*, cit., pp. 162–163).
10. Greenspan, op. cit., p. 37. Greenspan stepped down from his position as Chairman of the Fed on 31 January 2006. He was succeeded by Ben Bernanke, professor of economics, who held the position until early 2014.
11. "U.S. commercial and savings banks are extensively regulated; despite the fact that for years our ten to fifteen largest banking institutions have had permanently assigned on-site examiners to oversee daily operations, many of these banks still were able to take on toxic assets that brought them to their knees. (...) the FDIC has had to charge off well upward of a half trillion dollars since the Lehman default" (Greenspan, op. cit., p. 47). The figure was close to 4 per cent of the country's GDP in 2008.
12. "And through all of the years of my tenure at the Fed, bank capital had always seemed adequate to regulators" (Greenspan, op. cit., p. 48).
13. Geithner, op. cit., p. 96. In 2004, in response to an impulse imparted by Commissioner Annette Nazareth, the SEC had signed a voluntary agreement with the investment banks (the Consolidated Supervisory Entity Program) for their supervision, but the assessment of "systemic risk was not their mandate or their expertise" (Ibidem, p. 548).
14. "Regulators, in my experience, are no better qualified to make such judgments than the initiators of the investments" (Greenspan, op. cit., p. 52).

15. "Megabanks (...) are increasingly complex entities that create the potential for unusually large systemic risks (...). Federal Reserve research had been unable to find economies of scale beyond a modest-sized institution. (...) I see no alternative to forcing banks to slim down to below a certain size threshold where, if they fail, they will no longer pose a threat to the stability of American finance" (Ibidem, pp. 42 and 298–299).
16. "A big part of the problem was America's balkanized regulatory system. It was riddled with gaps and turf battles. It was full of real and perceived sources of capture. And nobody was accountable for the stability of the entire system. Even the traditional banking sector was a byzantine mess, with responsibilities for supervising thousands of commercial banks divided among the Fed, the Federal Deposit Insurance Corporation (FDIC) and the Office of the Comptroller of the Currency (OCC), as well as state banking regulators working from 50 different sets of rules. The Office of Thrift Supervision (OTS) regulated 'thrifts' (...). There were also geographic divisions within the Fed. The New York Fed oversaw Citigroup and JP Morgan Chase, while the Richmond Fed supervised Bank of America and Wachovia, and the San Francisco Fed handled Wells Fargo. Often, multiple agencies oversaw a single institution. (...) This glut of watchdogs with overlapping jurisdictions encouraged regulatory arbitrage." (Geithner, op. cit., pp. 96–97).
17. "The United Kingdom had separated its lender-of-last-resort function from its supervision function, with disastrous results; its central bank, lacking the situational awareness that comes with supervisory boots on the ground, badly underestimated the crisis and allowed a run to cripple Northern Rock" (Geithner, op. cit., pp. 418–419).
18. Ciocca, P., *Supervision: one or more institutions?*, "BIS Review", 39/2001, pp. 1–4 (www.bis.org/review/r010516d.pdf) and Banca d'Italia, "Economic Bulletin", no. 33, October 2001, pp. 113–116).

8 A Return to Central Banking

1. Fawley, B.W. and Neely, C.J., *Four Stories of Quantitative Easing,* "Federal Reserve Bank of St. Louis Review", January/February 2013, pp. 51–88.
2. In the leading economies budget deficits rose on average from 2 per cent of GDP in 2007 to 10 per cent in 2009 and then declined slowly in the following years. Public debts accordingly exploded, with servicing and repayment problems. Between 2007 and 2013 the ratio of (gross) public debt to GDP rose from 64 to 105 per cent in the United States, from 67 to 95 per cent in the eurozone, from 44 to 89 per cent in the United Kingdom, from 183 to 243 per cent in Japan, and from 67 to 89 per cent in Canada (IMF, *World Economic Outlook,* April 2014, Washington, *Statistical Appendix,* Table A 8, p. 192).
3. "Inflation will return (...). The Federal Reserve increased its consolidated balance sheet (...). In a sluggish economy with slow growth and little demand to borrow, the risk of inflation remains low. As the economy

recovers and borrowing increases, these excess reserves will support a large inflationary increase in money growth" (Meltzer, *Why Capitalism?*, pp. 132–133).

4. In practice the Fed sticks to this extensive interpretation of its mandate, especially as regards the compromise between price stability and full employment in the short-term (the "dual mandate"). For example, in an educational publication one of the Federal Reserve Banks described the monetary policy function, putting the emphasis on the short-term: "Monetary policy has two basic goals: to promote 'maximum' sustainable output and employment and to promote 'stable' prices. These goals are prescribed in a 1977 amendment to the Federal Reserve Act. (...) In the long run, the amount of goods and services the economy produces (output) and the number of jobs it generates (employment) both depend on factors other than monetary policy. These factors include technology and people's preferences for saving, risk, and work effort. So, maximum sustainable output and employment mean the levels consistent with these factors in the long run. But the economy goes through business cycles in which output and employment are above or below their long-run levels. Even though monetary policy can't affect either output or employment in the long run, it can affect them in the short run. For example when demand weakens and there's a recession, the Fed can stimulate the economy – temporarily – and help push it back toward its long-run level of output by lowering interest rates. (...) Persistent attempts to expand the economy beyond its long-run growth path will press capacity constraints and lead to higher and higher inflation, without producing lower unemployment or higher output in the long run." (*What Are the Goals of U.S. Monetary policy?*, May 2014, www.frbsf.org). The former Chairman of the Fed, Ben Bernanke, put it more simply: "The Fed has a dual mandate; we always have two objectives. One of them is maximum employment (...). The second part of our mandate is price stability" (Bernanke, B.S., *The Reserve and the Financial Crisis. Lectures by Ben S. Bernanke*, Princeton University Press, Princeton 2013, p. 107).
5. "Nor has market discipline alone restrained episodes of unsustainable exuberance before the point of crisis. Too often, we were victims of theorizing that markets and institutions could and would take care of themselves" (Volcker, P.A., *The Fed & Big Banking at the Crossroads*, "The New York Review of Books", no. 13, 2013, p. 33). Richard Posner's self-criticism is important in itself, perhaps even symptomatic; after, at an advanced age, at last reading Keynes in the light of the recent crisis, the Chicago jurist took less uncritically laissez fair positions in economics and legal policy (Posner, R.A., *A Failure of Capitalism. The Crisis of 2008 and the Descent into Depression,* Harvard University Press, Cambridge, 2009). On the misunderstanding and underestimation in academic circles of the authentically Keynesian and neo-Ricardian economics and its criticism of neoclassical theory, see Pasinetti, L.L., *Keynes and the Cambridge*

Keynesians. A 'Revolution in Economics' to be Accomplished, Cambridge University Press, Cambridge 2007.

6. A summary outline of the main contents of the Dodd-Frank Act – a weighty, complex and difficult to decipher piece of legislation that refers to a series of secondary legislative acts whose complete entry into force will take a while – can be found in Roselli, *Financial Structures and Regulation,* cit. pp. 188–194. In the United States the Dodd-Frank Act has been sharply criticized by, among others, Skeel, D.A. Jr., *Making Sense of the New Financial Deal* (2011), University of Pennsylvania Law School, Faculty Scholarship. Paper 365, pp. 182–199, according to which "our financial world is just as prone to bailouts after Dodd-Frank as it was before, and it would have made a lot more sense to focus on bankruptcy as the solution of choice for troubled financial institutions" (p. 182). The book by Blinder provides a description of the US debate on the reform of finance (including the author's proposals), of the climate in which it has taken place and of the direction taken by the legislator in response to the pressure of the conflicting interest groups and their lobbies (Blinder, op. cit., especially Chs. 10 and 11).
7. Volcker, op. cit., p. 33.
8. Geithner, op. cit., p. 426.
9. Geithner, op. cit., p. 402. The unpopularity of finance with the public is not new (Carli, G., *Why Banks Are Unpopular,* The Per Jacobsson Lectures, Basel, September 1976).
10. Section 13(3) currently reads as follows: "Discounts for individuals, partnerships, and corporations. A. In unusual and exigent circumstances the Board of Governors of the Federal Reserve System, by the affirmative vote of no less than five members, may authorize any Federal Reserve Bank (...) to discount for any participant in any program or facility with broad-based eligibility, notes, drafts, and bills of exchange when such notes, drafts, and bills of exchange are indorsed or otherwise secured to the satisfaction of the Federal Reserve Bank: *Provided*, that (...) the Federal Reserve bank shall obtain evidence that such participant in any program or facility with broad-based eligibility is unable to secure adequate credit accommodations from other banking institutions (...). B. (...) Such policies and procedures shall be designed to insure that any emergency lending program or facility is for the purpose of providing liquidity to the financial system, and not to aid a failing financial company, and that the security for emergency loans is sufficient to protect taxpayers from losses (...). The Board shall establish procedures to prohibit borrowing from programs and facilities by borrowers that are insolvent (...). The Board may not establish any program or facility under this paragraph without the prior approval of the Secretary of the Treasury". A diametrically opposite position, contrary to the enlargement of the Fed's powers/duties, has been taken by the supporters of rules, strenuous opponents of central bank discretion (see, for example, White, L.R., *The Federal Reserve and the Rule of Law,* Cato Institute, Washington, 12 September 2013).

11. Geithner, op. cit., p. 429.
12. The Board appears likely to be crowded, with a chairman, a deputy chairman, four representatives of the ECB, a representative of each national authority (two, with a single vote, for the countries that do not have a single competent authority).
13. Meltzer, *Why Capitalism?,* cit., pp. 13, 33, 35, 36–37, 39, 142.
14. Ibidem, p. 143.
15. "What, in my experience, supervision and examination *can* do as backup to capital requirements and counterparty surveillance is promulgate rules that are preventative and *are not predicated on regulators being able to accurately predict an uncertain future*.

    SUPERVISION
    - can audit and enforce capital and liquidity requirements,
    - can require that financial institutions issue some contingent convertible debt (...),
    - can put limits or prohibitions on certain types of concentrated bank lending,
    - can inhibit the reconsolidation of affiliates previously sold to investors, especially structured investment vehicles (SIVs), and
    - can require 'living wills' in which financial intermediaries indicate, on an ongoing basis, how they can be liquidated (...)".

    (Greenspan, op. cit., p. 110 (italic in the text).
16. Ibidem, p. 103.

9 Bagehot and Beyond

1. Meltzer, *Why Capitalism*?, cit..
2. Bagehot, op. cit., p. 233 (italics in the text).
3. Ferguson, op. cit., pp. 74–75.
4. Minsky, *Stabilizing an Unstable Economy*, cit., p. 349.
5. The delicate problem of the relationship between rescuing the firm and the penal repression of its bad management is discussed in a masterly manner, also based on his experience as Governor of the Bank of Italy in 1945–1948, by Einaudi, L., "Noise", (1960), in: *Selected Economic Essays*, Palgrave Macmillan, New York 2006, pp. 182–187.
6. "It was only after Lehman Day that the crisis truly went global." There were 80 insolvencies in 18 countries, including Fortis in the Netherlands, Dexia in Belgium, Hypo Real Estate in Germany, six large banks in Ireland and three in Iceland (Blinder, op. cit., p. 168 et seq.).
7. "The SEC was much better equipped to focus on investor protection issues than on the financial health of the investment banks, and imposed few constraints on leverage" (Geithner, op. cit., p. 98).
8. The smallest of the investment banks, supervised by the SEC and not by the Fed, was saved with a Fed loan of $13 billion, followed by a $29 billion guarantee, both granted to JP Morgan to make its purchase of

Bear Stearns advantageous (Blinder, op. cit., pp. 105–107). "We knew we would be crossing a line the Fed had not crossed since the Great Depression, indirectly lending to a brokerage house that was supposed to function outside the bank safety net. We would insist on enough collateral to secure the loan to our satisfaction – meeting the legal test that we have a reasonable expectation that we wouldn't lose money even if Bear defaulted – but in reality we would be taking some risk. The moral hazard risk was real, too" (Geithner, op. cit., p. 151).

9. The declaration was made by Ben Bernanke, at the time Chairman of the Fed (cited in Blinder, op. cit., p. 145).
10. "On Tuesday, September 16 (...) the Federal Reserve Board overcame its reluctance to invoke Section 13(3) and extended a massive $85 billion loan to AIG." (Blinder, op. cit., p. 136). "I acknowledged that any rescue would create some moral hazard, not to mention a why-AIG-but-not-Lehman? public relations challenge. (...) Rescuing AIG was our least-worst option. It would look like a lurch, but within the limits of our authority, it was our only hope of averting unimaginable carnage" (Geithner, op. cit., p. 194).
11. Blinder, op. cit., p. 123.
12. At the time of the Lehman crack the forecasts of the Fed's economists were positive: real US GDP was seen as growing at an annual rate of 1.1 per cent in the fourth quarter of 2008 with the rate accelerating to 2 per cent in 2009 and then to 2.75 per cent in 2010 (Madrick, J., *Why the Experts Missed the Recession,* "The New York Review of Books", no. 14, 25 September 2014, p. 67).
13. Paulson "didn't want to be known as 'Mr. Bailout', (...) he couldn't support another Bear Stearns solution" (Geithner, op. cit., p. 179).
14. Cited in Blinder, op. cit., p. 127.
15. Geithner, op. cit., pp. 186–187; Bernanke, op. cit., p. 126.
16. Cited in Blinder, op. cit., p. 185.
17. Geithner, op. cit., pp. 208–209.
18. It has been roughly estimated that in the absence of this support GDP in 2011 would have been 6 per cent lower and the unemployment rate 3 per cent higher, with 4.8 million more unemployed (Blinder, A.S. and Zandi, M., *How the Great Recession Was Brought to an End,* "Moody's Analytics", 27 July 2010).

10 Discretion, not Arbitrariness

1. From the end of the Second World War to 2005 the Governors of the Bank of Italy – persons incapable of fraud or misconduct – encountered in different ways risks of a penal nature in the field of supervision, sometimes with serious adverse consequences for themselves and the institution they headed.
2. The concern that discretionary monetary policy entrusted to the central bank becomes arbitrary is also shared by the supporters of independence in monetary control: "I believe that monetary policy should be brought

under the control of the Executive and Legislature (...). I must admit that there is a danger of monetary mismanagement in the pursuit of political objectives; but I consider it preferable for such mismanagement to be a clear responsibility of the administration, and accountable to the electorate" (Johnson, H.G., "Should There Be an Independent Monetary Authority?", in: Smith, W.L. and Teigen, R.L. (eds), *Readings in Money, National Income and Stabilization Policy,* Irwin, Homewood, 1965, p. 249).

3. See Woolley, J.T., *Monetary Politics: The Federal Reserve and the Politics of Monetary Policy*, Cambridge University Press, Cambridge 1984.
4. See Kahn, R.F., "Memorandum of Evidence Submitted to the Radcliffe Committee" (1958), in: Id., *Selected Essays on Employment and Growth,* Cambridge University Press, Cambridge 1972. If one sets aside the contingent proposals for the weakened UK economy of the 1950s – such as a "mild control of imports" (p. 135) – Kahn offers a scheme for the assignment of economic policy instruments/objectives in which the majority of central bankers would probably recognize themselves. It is up to fiscal policy to foster the propensity to save, to counter "the bias of a democratic society towards an ill-considered preference for immediate consumption at the expense of investment" (p. 126), by ensuring the non-inflationary balance of the public budget, as a component of aggregate demand. It is up to nominal incomes policy to curb "the competitive struggle between trade unions and inside some of the trade unions between various sections of labour" (p. 142), a generator of cost inflation. If fiscal policy and incomes policy are effective, in normal conditions monetary policy can devote itself to the task of ensuring that the exchange rate and the interest rate are consistent, also in relation to the exchange rate regime, with the external balance of the economy and with the need not to prejudice, and at the limit to support, productive investment.
5. Ciocca, P., *Ricchi per sempre? Una storia economica d'Italia (1796–2005),* Bollati Boringhieri, Turin 2007.
6. Among a vast literature, see the analyses made by Gerard Caprio and Daniela Klingebiel for the World Bank, starting from their "*Bank Insolvencies: Cross-Country Experience*", Policy Research Working Paper no. 1620, Washington 1999.

11 The Protection of Independence and Discretion

1. ECB, *Convergence Report*, ECB, Frankfurt 2008, p. 24.
2. Once the crisis had been successfully overcome, "TARP's bank capital programs would end up earning nearly twice as much for taxpayers as it would cost to restructure GM and Chrysler", the two auto companies that had failed, which required subsidies amounting to $15 billion (Geithner, op. cit., pp. 357, 496 and the table on p. 497).
3. In this spirit the Governor of the Bank of Italy, Guido Carli, expressed himself with words too often mistaken to be a manifestation of laxity on the part of the central banker in financing public expenditure: "We asked

ourselves then, and continue to do so, whether the Bank of Italy could have refused, or could still refuse, to finance the public sector's deficit by abstaining from exercising the faculty, granted by law, to purchase government securities. Refusal would make it impossible for the government to pay the salaries of the armed forces, of the judiciary and of civil servants, and the pensions of most citizens. It would give the appearance of being a monetary policy act; in substance it would be a seditious act, which would be followed by a paralysis of the public administration. One must ensure that the public administration continues to function, even if the economy grinds to a halt" (Banca d'Italia, *Relazione del Governatore all'Assemblea Generale Ordinaria dei Partecipanti tenuta in Roma il 31 Maggio del 1974,* Rome 1974, p. 426). Ten years later, in accordance with the conditions that the law had laid down, another Governor of the Bank of Italy, Carlo A. Ciampi, in similar circumstances, refused to finance the state. On 24 January 1983 Parliament passed Law 10/1983 requiring the Bank of Italy to grant an extraordinary advance to the Treasury equal to two-thirds of the monetary base that would be created during the year.

4. Outright monetary transactions (OMTs), introduced by the ECB in August 2012, can comprise purchases of government bonds with no time or quantity limits, with the ECB renouncing its privileged creditor status. However, the purchases may not be made in the primary market; they serve exclusively to correct the erroneous perception of the risk of euro reversibility; according to some they violate the ban on the financing of public budgets.
5. Misunderstandings, or exploitations, of Keynes's thinking have been made possible and unfortunately become popular because he couches his economic policy proposals in a language bordering at times on the paradoxical. One such case is his "*In the long run* we are all dead" (Keynes, *A Tract on Monetary Reform,* cit., p. 65, italics in the text). To use this quip to accuse Keynes of having no interest in the long run, growth or the destiny of capitalism is stretching things. For Keynes the change in long run expectations as an exogenous determinant of effective demand, the importance of interest rates on securities not maturing in the immediate, planned public investments and the "Economic Possibilities for Our Grandchildren" were, among others, crucial questions at the centre of his thinking no less than unemployment equilibrium and the determination of income in the short-term (for a given endowment of capital in the economy at the present time). Another case, linked to the question of public investment, concerns the utility of "digging holes" to create work at times of unemployment. Obviously Keynes preferred income-producing investments to such solutions: "It is curious how common sense (...) has been apt to reach a preference for *wholly* 'wasteful' forms of loan expenditure (which include the public investment financed by borrowing from individuals and also any other current public expenditure which is so financed) rather than for *partly* wasteful forms, which (...) tend to be judged on strict 'business' principles. (...) whilst the form of digging holes

in the ground known as gold-mining, which not only adds nothing whatever to the real wealth of the world but involves the disutility of labour, is the most acceptable of all solutions. If the Treasury were to fill old bottles with banknotes, bury them at suitable depths in disused coal-mines which are then filled up to the surface with town rubbish, and leave it to private enterprise on well-tried principles of *laissez-faire* to dig the notes up again (...) there need be no more unemployment (...) It would, indeed, be more sensible to build houses and the like; but if there are political and practical difficulties in the way of this, the above would be better than nothing." (Keynes, *The General Theory of Employment, Interest and Money,* cit., pp. 128–129).

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8. Kregel, *Finanziamento in disavanzo,* cit., pp. 60–61.
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12 Concluding Remarks

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