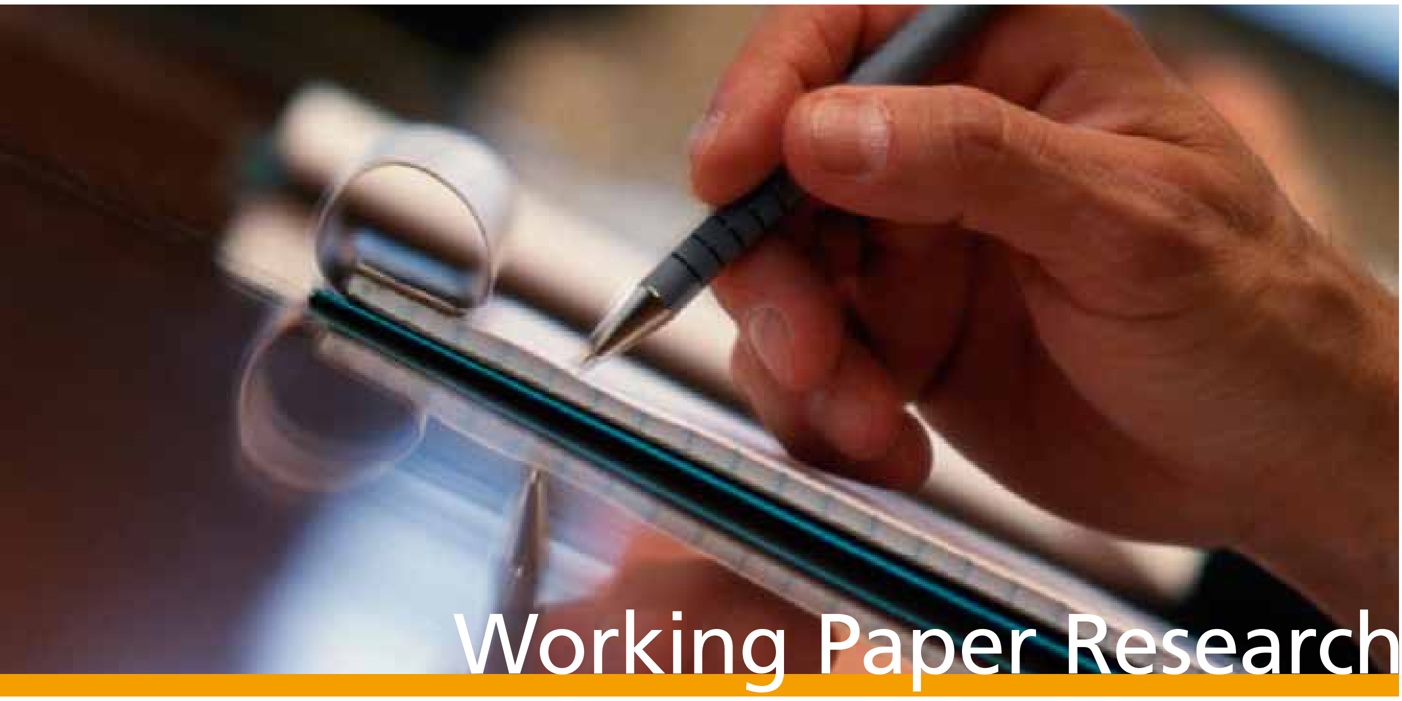
# On the origins of the BIS macro-prudential approach to financial stability: Alexandre Lamfalussy and financial fragility




by Ivo Maes

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## Abstract

Among the international policy institutions, the Bank for International Settlements (BIS) is known for its sensitivity to financial stability issues. Attention to the "macro-prudential" dimension of financial stability is very typical for the BIS. The Bank's macro-prudential approach first came to the fore in the 1986 Cross Report. It defined the macro-prudential domain as "the safety and soundness of the broad financial system and payments mechanism". In this paper, it will be argued that Alexandre Lamfalussy, who was at the BIS from 1976 to 1993, played a crucial role in shaping the Bank's approach to financial stability. Lamfalussy is renowned for taking a broad macroeconomic view and for focusing on the systemically important financial institutions, as the failure of one of these individual institutions would threaten the whole financial system. In Lamfalussy's view, there is thus very much an overlap between the micro- and macro-prudential dimensions of financial stability. This paper traces Lamfalussy's analysis of financial fragility and goes into the reasons for his sensitivity to it. Among the main elements involved were: a "Keynesian" *Weltanschauung* (that a market economy is not sufficiently self-correcting); the emphasis of Dupriez (his teacher in Louvain) on cycles; Lamfalussy's own experience as a commercial banker; BIS involvement in financial stability issues, especially the Latin American debt crisis of 1982-83; and research in the central banking community on financial innovations in the early 1980s.

Key Words: Lamfalussy, BIS, macro-prudential, systemic stability, financial fragility, risk.
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# 1 INTRODUCTION

While the crisis has left many reputations in tatters, the Bank for International Settlements (BIS) is receiving more and more attention for its analysis of financial stability issues. The *Financial Times* observed recently that, "The central bankers' bank had previously given the most accurate warnings about the impending financial crisis" (Gilles, 2009)[1]. The BIS is renowned for talking a broad approach to financial stability, "marrying" the micro- and macro-prudential dimensions of financial stability (Crockett, 2000, Knight, 2006).

The BIS approach, with its emphasis on the macro-prudential dimension, first came to the fore in the Cross Report on innovations in international banking. It is commonly accepted that this was the first published official document that used the term "macro-prudential" (Bini-Smaghi, 2009). The Cross Report defined the macro-prudential domain as "the safety and soundness of the broad financial system and payments mechanism" (BIS, 1986, p. 2). In later research, it was argued that the approach has two distinguishing features (Borio, 2009). Firstly, it focuses on the financial system as a whole, paying attention to the macroeconomic dimension of financial crises. Secondly, it treats aggregate risk in the financial system as dependent on the collective behaviour of the financial institutions (which contrasts with the micro-prudential view, where financial institutions are regarded as having no influence on the global situation).

**Causes of the current financial crisis**

The current financial crisis has given rise to important debates in the economists' community. Broadly speaking, one might argue that three main elements contributed to the crisis: (1) a free market capitalist economy is inherently characterised by cycles of boom and bust, in which phases of optimism and pessimism feed a credit cycle: "*Manias, Panics and Crashes*" (Kindleberger, 1979); (2) in many cases, an "innovation" is at the basis of the phases of optimism and pessimism, like the "dot.com bubble", which burst in March 2000. In the present crisis, financial innovation, especially securitisation, was at the heart of the cycle. A crucial belief was that the redistribution of risk was leading to not only a more efficient but also a more stable financial system. The process of financial innovation went also, to a certain extent, together with a tendency towards financial deregulation; (3) around 2005, a "liquidity overhang" was contributing to an accelerated erosion of risk awareness, a decline in risk premiums, a mispricing of assets, and growing leverage. Loose monetary policies, especially in the United States, and the US current account deficit were often regarded as important causes of this liquidity overhang.

[1] Also *The Economist* (18 July 2009, p. 11) singled out "the team at the Bank for International Settlements", together with Robert Shiller and Nouriel Roubini, for their "prescience".

Alexandre Lamfalussy was also one of the "Cassandras" who had long been warning about the fragility of the financial system and a potential crisis. In 2004, Lamfalussy observed that financial innovations cannot "insure" the system against a breakdown of asset prices, but could only redistribute this loss. Moreover, he insisted that central banks should worry about asset price bubbles, as the bursting of a bubble might create a propitious environment for a systemic crisis: "If a central bank does not try to discourage 'irrational exuberance', it may well fall into the trap of asymmetrical policy reactions, with obvious moral hazard implications" (Lamfalussy, 2004, p. 11)[2]. In 2006, he drew attention to the worldwide "liquidity overhang". He warned that this was a breeding ground for asset price bubbles and was driving down risk premiums to historical lows. He concluded that "excess liquidity represents a genuine, although unquantifiable, danger for the stability of our financial system" (Lamfalussy, 2006, p. 12).

In this paper, it will be argued that Alexandre Lamfalussy, who was at the Bank for International Settlements from 1976 to 1993, played a crucial role in shaping the BIS view of financial stability with its emphasis on the macro-prudential dimension. Furthermore, the "macro-prudential" concept was prominent in the work of a Working Party, chaired by Lamfalussy, in 1979-1980. We start with a section on the characteristics of the micro- and macro-prudential approaches. In the next section, we trace the origins of Lamfalussy's sensitivity to financial fragility, going into his formation as an academic and a commercial banker. Thereafter, we move to the Bank for International Settlements itself, focusing especially on Lamfalussy's involvement in the Latin American debt crisis and research on financial innovations.

## 2 MARRYING THE MICRO- AND MACRO-PRUDENTIAL DIMENSIONS OF FINANCIAL STABILITY

The attention paid by the BIS to the macro-prudential dimension of financial stability came clearly to the fore in speeches by the General Managers of the BIS, Andrew Crockett and Malcolm Knight, at the International Conferences of Banking Supervisors in 2000 and 2006. Both speeches discussed the theme of "marrying" the micro- and macro-prudential dimensions. In both presentations, a strengthening of the macro-prudential dimension was advocated.

**Table 1: A stylised view of the macro- and micro-prudential perspectives**

| | Macro-prudential | Micro-prudential |
|---|---|---|
| Proximate objective | limit system-wide distress | limit distress of individual institutions |
| Ultimate objective | avoid output (GDP) costs | depositor protection |
| Model of risk | (in part) endogenous | exogenous |
| Correlation and common exposures across institutions | important | irrelevant |
| Calibration of prudential controls | in terms of system-wide distress; top down | in terms of risks of individual institutions; bottom up |

Source: Borio, 2003, p. 2.

[2] A slightly veiled criticism of US monetary policy. Lamfalussy (2000, pp. 136-138) also criticised the asymmetry of US monetary policy in 1987 and 1998.

Crockett (2000, p. 2) defined the macro-prudential objective as "limiting the costs to the economy from financial distress, including those that arise from any moral hazard induced by the policies pursued". As such, it is very much concerned with "systemic risk"[3]. It contrasts with the microprudential objective, which focuses on limiting the failure of individual institutions ("idiosyncratic risk") and is, in the first instance, concerned with the protection of (small) depositors. The macro-prudential approach actually focuses on the financial system as a whole, paying special attention to the risk of correlated failures and to institutions that have a systemic significance for the economy. White (2006, p. 1) noted some interesting similarities between the macro-prudential approach and Austrian business cycle theories, like a focus on imbalances in the economy, the assumption of systemic errors of judgment by economic agents and an inherent tendency towards periodic crises[4].

A second characteristic of the macro-prudential approach is the view that aggregate risk depends on the collective behaviour of individual institutions, the so-called "endogeneity of risk". As Knight (2006, p. 2) argued, "A macro-prudential orientation highlights the fact that asset prices and the macroeconomy are themselves strongly affected by how financial institutions behave; a micro-prudential orientation tends to take movements in asset prices and the macroeconomic backdrop as given - as 'exogenous'". A crucial consequence is that actions that might be appropriate for individual financial institutions may not result in desirable aggregate outcomes (for instance, extensions of credit driven by concerns for market shares in good times or sales of assets in bad times).

The macro-prudential approach also has clear policy implications. It implies the calibration of regulatory and supervisory arrangements depending on the institutions' systemic importance (a top-down approach). Moreover, the macro-prudential orientation emphasises the importance for financial institutions to build up buffers in good times, when financial imbalances and the associated risks increase (even if risk perceptions decline).

Knight (2006, p. 2) argued that there are two "overarching" reasons why a macro-prudential orientation is an important complement to a micro-prudential one. Firstly, he suggests that the "dynamics of distress throughout history" show that the financial crises that have caused the most significant costs for the real economy have not generally arisen from the contagious spreading of problems encountered by individual institutions[5]. Rather, they resulted from common exposures to macroeconomic risks. Moreover, "these financial crises have been exacerbated by the behaviour of financial institutions themselves, both in the build-up of the financial imbalances and in the blow-out

[3] Borio (2003, p. 6) emphasises that systemic risk arises primarily through common exposures to macroeconomic risk factors. He argues that widespread financial distress, arising from the failure of an individual institution, which then spreads via contagion mechanisms (like payment and settlement systems or the interbank market) through the financial system, is much less significant.

[4] Lamfalussy was a student of Dupriez, whose business cycle theory was very close to the Austrian approach, cf. infra.

[5] The micro-prudential paradigm is greatly influenced by the 1974 Herstatt collapse, which was very much behind the creation of the Basel Committee on Banking Supervision (cf. infra).

of distress" (Knight, 2006, p. 2). Knight's second argument is that structural changes have increased the relevance of the macro-prudential orientation. Financial innovations are one of the first factors. "New financial instruments have made it much easier to transfer risk across the financial system ... Strengthened regulation of traditional financial institutions has been a factor contributing to a migration of risk onto the balance sheets of institutional investors, other asset management vehicles and the household sector" (Knight, 2006, p. 2-3). The consequence was that a financial crisis might now also arise outside the banking sector. The other structural change was the growing internationalisation of the financial industry. So, the macro-prudential approach has to be global too. In this respect, White (2006, p. 2) argued that the "keeping one's house in order" view might not be sufficient to provide international financial stability. White argues for a "new international monetary order" to help prevent the build-up of external financial imbalances.

## 3 LAMFALUSSY'S FORMATION AS AN ACADEMIC AND A COMMERCIAL BANKER

### 3.1 Early academic work

Alexandre Lamfalussy was born on 26 April 1929 in Kapuvar, Hungary, into a family with a strong engineering tradition. He started his economics studies at the Budapest Polytechnic in 1947. In January 1949, Lamfalussy succeeded in leaving Hungary and came to Belgium, where he continued his studies at the Catholic University of Louvain.

At that time, Louvain was one of the leading places for economics in the francophone world. The *Institut des sciences économiques*, established in the interwar period, focused very much on business cycle analysis (Maes and Buyst, 2005). The Institut gained international status in the 1930s, obtaining several grants from the Rockefeller Foundation. Furthermore, it produced very influential business cycle analyses and forecasts, which were sold to private and (semi-) public corporations and institutions.

The dominant figure at Louvain in the 1950s was Léon-H. Dupriez (Maes, Buyst & Bouchet, 2000). He was a leading scholar in business cycle analysis, to be considered in a broad sense: the interaction of growth and different types of cycles in economic life. His theoretical framework resembled that of Hayek’s general equilibrium-oriented business cycle theories of the late 1920s (Hayek, 1928). Moreover, for Dupriez, money and finance had a central place in economic life. Dupriez was also a pioneer in the introduction of statistical methods of business cycle analysis in Europe. He was greatly inspired by foreign research institutions, especially the Harvard Committee on Economic Research[6]. Two elements were typical for Dupriez's approach towards economics. Firstly, he based his analysis on extensive empirical investigations (with a lot of attention to descriptive statistical methods, as well as graphs and tables). Dupriez himself described it as "une théorie conjoncturelle «collant aux faits»" ("a business cycle theory 'sticking to the facts'") (Dupriez, 1959, VIII). Secondly, he was not in favour of new schools of economic thought, like Keynesian economics (Maes, 2008). He disliked the use of models, econometrics and national income

[6] Dupriez had studied at Harvard in 1918 and 1919.

accounts. Dupriez's theoretical approach was greatly inspired by Walrasian general equilibrium theory, very much like Austrian business cycle theory[7]. In his view, it was crucial that economic theory should go back to individual economic decisions.

Lamfalussy became Dupriez's assistant for business cycle analysis and also attended the monthly meetings of the Institute with industrialists. However, Lamfalussy took more "Keynesian" positions than Dupriez (Maes, 2009)[8]. While Dupriez disliked formal model-building, Lamfalussy saw this as a way to make explicit the implicit model which one was using anyway[9]. Lamfalussy was also strongly in favour of government intervention and planning, including a selective government policy to stimulate investment in new industries, something which Dupriez abhorred (see the discussion in Dupriez, 1961). However, Dupriez's approach of basing economic analysis on empirical material and his contacts with industrialists were important elements in the formation of Lamfalussy. Basing economic analysis on extensive empirical investigations would become a hallmark of Lamfalussy's style of economics. Moreover, through time, Lamfalussy became more and more positive about Dupriez, acknowledging that Dupriez understood that cycles should be moderated, but not suppressed, "Le rêve d'une économie sans conjoncture est aussi «idéaliste» que celui d'une société politique universelle sans heurts et s'inscrit donc dans la lignée des utopies"[10] (Dupriez, 1959, p. XIII).

As Lamfalussy still only had a refugee passport, he could not go to the United States for graduate studies. Thanks to Dupriez's contacts, he went to Oxford for his doctorate. The theme was investment and growth in post-war Belgium, with Philip Andrews as supervisor and Sir John Hicks as the main examiner. Later, in the academic year 1961-1962, under the influence of Robert Triffin, Lamfalussy went to Yale University. It gave him an American experience as well as an opportunity to delve deeper into the topic of Europe's post-war growth performance[11].

So, in his early academic work, Lamfalussy focused on growth and investment theory and Belgium's and Europe's growth patterns in the post-war period. At that time, Lamfalussy, like many others, was intrigued by the issue of the reconciliation of macro- and microeconomics (especially imperfect competition theory). For Lamfalussy, this preoccupation was strongly pragmatic. He had seen that other countries were developing new industries, which were notoriously absent in

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[7] In the post-war period, Keynesian economics gained ground only very slowly in Belgium and Italy, mainly due to a strong position of Austrian business cycle theory (Maes, 2008).

[8] Partly under the influence of three other professors (Rousseaux, Woitrin and Urbain), who, compared to Dupriez, were more in favour of government intervention and model-building.

[9] Later, Lamfalussy (1985a, p. 412) remarked about Schumpeter's growth theory: "When I read his writings, more years ago than I care to remember, I hardly understood what he had in mind and dismissed it anyhow because I could not convert it into equations".

[10] "The dream of an economy with no business cycle is as 'idealistic' as that of a conflict-free universal political society and therefore falls within utopian tradition."

[11] He also met James Tobin, who was already more critical about the functioning of the financial system.

Belgium. Lamfalussy's objective then was to reconcile imperfect competition theory with the theory of investment in order to explain the investment and growth performance of Belgian industry[12].

In "*Investment and Growth in Mature Economies*. *The Case of Belgium*" (Lamfalussy, 1961a), based on his Ph. D. dissertation, Lamfalussy introduced the concept of "defensive investment", aimed at rationalising production. However, in the medium to long run, the scope for productivity increases from defensive investment is limited, curbing the growth potential of the (Belgian) economy. In "*The United Kingdom and the Six. An Essay on Economic Growth in Western Europe*" (Lamfalussy, 1963), he emphasised virtuous (or vicious) circles, in which stronger export growth promotes higher investment, which in turn strengthens productivity and investment, further reinforcing exports. Broadly speaking, Lamfalussy's analyses fit into the Keynesian tradition. His emphasis on vicious and virtuous circles clearly showed that the free market economy was not stable and self-adjusting, a good indication of a Keynesian *Weltanschauung*. His policy conclusions were in favour of more planning in economic life, also giving the government a role in influencing the composition of investment. Like many other progressive economists of the time, Lamfalussy was clearly more interventionist than the (textbook) Keynesian view of steering effective demand. Even now, Lamfalussy is still considered as one of the main protagonists of the Keynesian approach of export-led growth in the post-war period (Crafts and Toniolo, 1996, p. 12).

### 3.2 A career as a commercial banker

After two years in Oxford, in the summer of 1955, Lamfalussy returned to Belgium and started working at the Banque de Bruxelles, Belgium's second biggest commercial bank. The Banque de Bruxelles was at that time under the leadership of Louis Camu, a former senior civil servant and Royal Commissioner for Administrative Reform. In Camu's mind, banks were not only private institutions, they also had a public function. A key reason was that they had an essential role in the financing of the economy (Moitroux, 1995, p. 156). Moreover, they were the trustees of the citizens' savings, "Le grand principe est que nous sommes responsables de l'argent des autres" ("The main principle is that we are responsible for other people's money") (Camu, 1977, p. 36).

Lamfalussy started with the Banque de Bruxelles as an economist in its economic studies department, becoming the bank's Economic Adviser in 1962. From 1965 to 1970, he served as an Executive Director, and from 1971 to 1975, as Chairman of the Executive Board. In 1975, after the merger of the Banque de Bruxelles and the Banque Lambert, Lamfalussy became an Executive Director of the Banque Bruxelles Lambert.

With his experience as a private banker, Lamfalussy developed an awareness for the financial markets, which became a constant characteristic in his analysis. Lamfalussy was at the Banque de Bruxelles during the 1950s and 1960s, years of great expansion in the banking sector in Belgium, also for the Banque de Bruxelles. One of the key problems facing the private banks was the

[12] There is a certain similarity here with Lamfalussy's later work, trying to reconcile the macro- and micro-prudential dimensions of financial stability, paying special attention to financial institutions which are of systemic importance.

different instruments of quantitative control which the monetary authorities were applying, especially the "redeployment" coefficient, whereby banks had to invest a significant part of their resources in government paper (Collin, 1977). They were a great nuisance for the Banque de Bruxelles[13]. In the early 1960s, Lamfalussy was entrusted with responsibilities in the area of investment management[14]. He was involved in the creation of certain mutual funds, which the Banque de Bruxelles introduced in the Belgian market. He also played a role in international investment banking, an area which was just emerging at the time. For instance, in July 1963, he represented the Banque de Bruxelles at the signing of the subscription agreement for the first Eurobond issue, a $15 million bond for Autostrada (Norman, 2007, p. 95). Lamfalussy became an expert on the Eurobond market. He was even invited to give a lecture at the Institute of Bankers in London on this theme (Lamfalussy, 1968b). He also wrote a book on European financial markets (Lamfalussy, 1968a). However, during Lamfalussy's time at the helm of the Banque de Bruxelles, in 1974, some traders took important open foreign exchange positions, which caused significant losses for the bank (Moitroux, 1995, p. 217)[15]. It became Lamfalussy's first exercise in financial crisis management. The National Bank of Belgium also opened special discount and credit facilities for the Banque de Bruxelles (which, however, were not used, PV CD no 3479/19 of 26 November 1974, NBBA)[16]. The issue was the topic of intense debates in the Belgian Parliament and induced the Government to introduce new legal dispositions to strengthen banking supervision in Belgium (De Clercq, 1975). At the end of 1975, Lamfalussy resigned from the bank. Evidently, all this had a strong impact on Lamfalussy's view of the financial system: risk and financial fragility became important preoccupations for him[17].

During his time at the Banque de Bruxelles, Lamfalussy's research interests shifted to monetary and financial issues, both national and international. Lamfalussy was intellectually close to the Radcliffe Report. In an article in *The Banker*, he defended the Radcliffe Report against criticism from Robertson and Harrod who argued that the principle of "loans create deposits" applies only to banks. In their view, all other financial institutions were pure intermediaries, who can only lend what

13 Camu even argued it led to a paradoxal division of labour between private and public credit institutions: "Au lendemain de la seconde guerre mondiale, les intermédiaires financiers furent spécialisés et les marchés compartimentés. Il y avait un croisement d'attributions anormal: les institutions publiques développaient, souvent avec l'aide de l'Etat, leurs crédits aux entreprises privées, alors que les banques se voyaient contraintes de remettre les deux tiers de leurs dépôts à l'Etat" (Camu, 1977, p. 39). ("Just after the Second World War, financial intermediaries were specialised and markets fragmented. There was an abnormal overlap of remits: public institutions were developing their lending to private enterprises, often with the help of the State, while the banks felt obliged to hand back two-thirds of their deposits to the State".) Naturally, with the memory of the Great Depression still vivid, these coefficients were also introduced for prudential reasons.

14 Later, he also became responsible for the agency network in Wallonia.

15 The breakdown of the Bretton Woods system marked an important turning point in the environment in which financial institutions operated. It implied a significant increase in the risks of foreign exchange and arbitrage operations. At that time, there were no prudential regulations concerning open foreign exchange positions in Belgium. After the Banque de Bruxelles announced its foreign exchange losses, it received a telex from a German bank, saying "Join the club" (Moitroux, 1995, p. 217).

16 The BIS was very closely involved in the unwinding of the foreign exchange positions (PV CD no 3460/14 of 15 October 1974, NBBA).

17 For instance, later at the BIS, Lamfalussy was to pay major attention to risk control and the internal audit.

they get. Lamfalussy claimed that this argument breaks down if non-bank financial intermediaries provide near-money assets which are quasi-perfect substitutes for money held in excess of transaction balances. Consequently, effective demand in the economy may grow although the supply of money and liquidity preference remain unchanged[18]. If non-bank financial intermediaries are able to create appropriate near-money assets, "they cease, of course, to be intermediaries: they become creators of near-money in just the same way as banks are creators of money" (Lamfalussy 1961b, p. 48)[19].

In the 1960s, Alexandre Lamfalussy was also a member of certain committees which investigated the financial system. In 1963-1965, he was a member of the Segré Committee, appointed by the European Commission, which investigated the integration of the capital markets in the EEC (CEC, 1966)[20]. The Segré report underlined the linkages between freedom of capital movements and progress in other areas, such as monetary and economic policies. In the second half of the 1960s, he was a member of the De Voghel Committee (Commission Gouvernementale, 1970), which played an important role in the preparation of the legal framework for the despecialisation of financial institutions in Belgium[21].

## 4 THE BIS IN THE 1970S

Founded in 1930, the Bank for International Settlements is regarded as the oldest international financial institution (Toniolo, 2005). It was set up to administer the German reparation payments under the Versailles Treaty and as a forum for central bank cooperation, aimed at improving the efficiency and stability of the gold-exchange standard. It became the main institutional locus for multilateral central bank cooperation. The BIS provided central bankers with three main services: it carried out research on issues relevant to international payments and prudential supervision, served as a venue for regular and discreet meetings, and acted as a financial arm (particularly important in the gold market).

In the postwar period, Basel was one of the main centres of international monetary cooperation, contributing to the longevity and success of the Bretton Woods system (Toniolo, 2005). In the 1960s, central banks became more and more interested in the growth of the Euro-currency market and its impact on international liquidity creation. So, in order to monitor the international banking markets, the Standing Committee on the Euro-Currency Market was set up in April 1971. The oil price shock of 1973 had important consequences for the nature of international banking. With the recycling of petrodollars, the focus shifted from the traditional Euro-currency markets to Euro-dollar lending to developing countries (which was growing at a tremendous pace).

[18] Also later, as a central banker at the BIS, Lamfalussy would keep a distance from monetarist ideas, even if he accepted certain of their policy conclusions (see, e.g., Lamfalussy 1981 or 1984).

[19] A view which was intellectually close to the views on the "shadow" banking system, as one of the sources of liquidity creation at the origin of the present crisis.

[20] Lamfalussy played an important role in the committee. Claudio Segré, the chairman of the committee, called Lamfalussy "mon trésor" ("my precious") (interview, 12 June 2007).

[21] Lamfalussy (1967) was quite critical of a segmented financial system.

The collapse of the Bretton Woods system, in the early 1970s, contributed significantly to a shift in the objectives of central bank cooperation. It went hand in hand with a more general shift from a government-led to a market-led financial system (Maes, 2007). With floating exchange rates, increasing capital mobility and financial liberalisation (also inside countries), cooperation shifted away from monetary stability towards financial stability (Clement, 2008, p. 6). The high-profile collapse of certain banks, like Herstatt and Franklin National, helped focus central bank cooperation on the strengthening of international prudential regulation and of payment and settlement systems. In December 1974, the central bank governors of the G10 countries set up the Committee on Banking Regulations and Supervisory Practices (the name was later changed to the Basel Committee on Banking Supervision). It led to an agreement allocating cross-border supervisory responsibilities among member authorities, the so-called "Concordat", in 1975 (Borio and Toniolo, 2008, p. 61). This was followed by the development of good practice guidelines and standards in all areas of banking regulation and supervision (see Annex 1). A landmark agreement was the establishment of minimum capital standards, the so-called "Basel Capital Accord" in July 1988.

# 5 ALEXANDRE LAMFALUSSY AT THE BIS

## 5.1 A new economic adviser at the BIS

In January 1976, Alexandre Lamfalussy joined the Bank for International Settlements in Basel as Economic Adviser and Head of the Monetary and Economic Department. Between 1981 and 1985, he served as Assistant General Manager. He was General Manager from May 1985 until the end of 1993.

At first sight, the choice of Alexandre Lamfalussy as Economic Adviser might seem somewhat curious, as he had no central banking or policy-making background[22]. However, "Professor" Lamfalussy had a clear academic background and was well introduced in the international economic policy-making world. For instance, in 1969, Lamfalussy had given the sixth Per Jacobsson Lecture, on the theme *The Role of Monetary Gold over the Next Ten Years*[23]. Moreover, as a commercial banker, Lamfalussy had a profound knowledge of the financial markets, a big advantage for a central bank, which always has to be attentive to financial market developments[24]. Lamfalussy was indeed the right man in the right place. With his knowledge of the financial world and his alertness to financial fragility, he was well suited to navigate the BIS and the central banking community through the new environment of financial uncertainty.

One might remark, in this respect, that Lamfalussy's profile was quite different from that of Milton Gilbert, his predecessor as Economic Adviser. Gilbert, an American, had started his career with

[22] With the exception of serving on certain committees, like the Segré or De Voghel Committee, cf. supra.
[23] He was then a commercial banker and just 40 years old.
[24] For Lamfalussy, as a former commercial banker, the fact that the BIS had also a "Banking Department" was an important motivation to go there.

work on the national accounts and had also been at the OEEC in Paris. Gilbert's main research focus was on the real economy, as well as on the international monetary system. The 1975-1976 BIS annual report, the first one published under the direction of Lamfalussy, showed some significant changes of emphasis, compared to the earlier reports under Gilbert. For instance, there was a new chapter entitled "Domestic credit and capital markets". Also, Lamfalussy focused the analysis more on broad themes and tendencies, like recession and recovery, and inflation and monetary policy, something which contrasted with the country-by-country approach under Gilbert. Many people further mention that Lamfalussy had a "nose" for spotting new trends and tendencies[25].

As mentioned above, research was one of the crucial areas of BIS activity. In his different functions, from Economic Adviser to General Manager, Lamfalussy would play an important role in this field. During his time at the BIS, research was concentrated on three broad topics (Lamfalussy, 1985b): (1) the international banking scene (especially the Euro-markets), with the regular publication of data and comments[26], (2) domestic monetary control techniques, such as monetary targeting, on a comparative basis, and (3) the development of financial innovations in both the international and domestic markets. These were three areas of key interest to central banks and for which the BIS was well positioned because of the international or comparative dimension. With the support of the central bank governors, Lamfalussy also pushed hard for the construction and development of the BIS's statistical database. Furthermore, the Bank's Monetary and Economic Department was also responsible for the secretariat of the G10 Governors' various working groups.

In this section, we will look further into Lamfalussy's role at the BIS and his involvement in the Latin American debt crisis, research on financial innovations and efforts at strengthening the financial system.

## 5.2 The Latin American debt crisis

### 5.2.1 The Latin American debt build -up

During his time at the BIS, Lamfalussy was very much involved with the Standing Committee on the Euro-Currency Market, of which he also became a Chairman. As mentioned, in the mid 1970s, with the recycling of the petrodollars, the focus shifted from the traditional Euro-currency markets to Eurodollar lending to developing countries. At first, this recycling was largely beneficial to the world economy, "official organisations could not have lent the same amounts at the same speed" (Lamfalussy, 1976a, p. 2). However, it also implied that the international banking system was faced with an increase in country risk. The BIS therefore extended its analysis from the Euro-currency market narrowly defined to international bank lending in general. So, in the mid 1970s, the BIS improved the coverage of its international banking statistics to cast light on the rising exposure of

[25] For instance, Norman (2007, p. 95) remarks that Lamfalussy "had a good nose for identifying problems and proposing solutions well ahead of the herd".

[26] International banking and the Euro-markets were also the topics of the first BIS Economic Papers, cf. Mayer, 1979, McClam, 1980 and Johnston, 1981.

banks to the developing world (Borio and Toniolo, 2008, p. 63). Moreover, the statistics were published from 1974 onwards.

The BIS data revealed the massive growth in indebtedness of certain countries as well as its increasingly short-term character, which was sowing the seeds of a crisis. In speeches he gave in 1976, Lamfalussy had already drawn attention to the risks involved, "De mes trois premiers points - le développement continu (des crédits), l'extension des risques à un grand nombre de pays et le changement dans la nature des crédits - je retiens la conclusion que le problème des risques devient urgent"[27] (Lamfalussy, 1976b, p. 5).

Lamfalussy also emphasised that a borrowers' market had been developing. He argued that the "supply-led growth of international bank credit has led to a reduction of bank margins to the pre-Herstatt levels, to the lengthening of the maturity of bank loans and to the increase in the size of individual syndicated lending operations" (Lamfalussy, 1978, p. 4). For Lamfalussy, important causes of this borrowers' market were loose monetary policies and the US current account deficit, which was "pumping liquidity into the international financial system"[28]. So, a distinguishing characteristic of Lamfalussy's approach is that he placed debt problems in a broader macroeconomic context, paying particular attention to the interaction of global imbalances and debt dynamics. Noteworthy, too, is that Lamfalussy was less concerned about potential inflationary consequences of these imbalances than about potential financial stability effects (just as he was later, in the first decade of the 21st century, see Lamfalussy 2006).

In the following years, Lamfalussy further emphasised potential financial stability implications of the borrowers' market. He argued that the increasing maturity transformation might "raise particular problems for banks lending in currencies for which they do not have a widely spread, perhaps retail-banking, domestic deposit base" (Lamfalussy, 1979, p. 4). Moreover, he was concerned about the adequacy of the equity positions of the banking system, "claims on specific individual countries have reached in some banks - even in some banking systems - levels that are too high in relation to their equity" (Lamfalussy, 1981, p. 7).

### 5.2.2 Efforts at restraining the debt build-up

When Lamfalussy arrived at the BIS in 1976, he launched the idea of setting up a "centrale des risques" (risk office) there. His idea was that the 40 or 50 major commercial banks would submit, directly to the BIS, information on their claims to individual countries. The information would also

[27] "From my first three points - the continuous growth (of lending), the extension of risks to a large number of countries and a change in the nature of the loans - I draw the conclusion that the risk problem is getting urgent."

[28] In a contribution to a March 1979 report, entitled "Major payments imbalances and international financial stability" (p. 56-59), for the Trilateral Commission (BISA, 7.18(25), LAM30/F77), Lamfalussy argued that, from end 1973 to mid 1976, international bank lending was highly beneficial and "anti-deflationary", as it did not lead to a net increase in international reserves. However, from mid 1976 to end 1978, the pattern of external imbalances changed, with an erosion of the OPEC surplus and a large US current account deficit, "an ample increase in *net* international liquidity in dollars, supplying too much of the wrong kind of liquidity" (original italics).

comprise a breakdown into the four or five major economic categories and a broad maturity structure[29]. Lamfalussy had further discussions with commercial bankers to explore the feasibility of the project[30]. He argued that it would provide a much better picture of the debt situation than the available data. It is an example of Lamfalussy's pragmatic approach, focusing on getting crucial information to understand the essence of the debt problem[31]. It also shows a typical element of his "macro-prudential" approach: a focus on the key players, which are of systemic importance, again to get a better understanding of the macro situation.

Lamfalussy's idea was not taken up. However, the discussions led to improvements in the BIS statistics. In 1978, the statistics were supplemented by information on the maturity structure of exposures. The Standing Committee on the Euro-Currency Market thus played a key role in the development of international financial and banking statistics.

Lamfalussy was further involved in behind-the-scenes efforts to moderate international bank lending. In 1977, Arthur Burns, the then Chairman of the Fed, suggested drawing up a "checklist of questions" for banks which were lending to sovereign borrowers (Lamfalussy, 2000, p. 12). The idea was to ask the banks to have a look at the relevant economic indicators before taking their lending decisions. Lamfalussy contacted fifty-seven international banks to sound out their willingness to participate in this arrangement. However, he was met with scepticism and reluctance. The main reason was that banks feared losing lucrative business to unfair competitors. Moreover, Lamfalussy discovered that the CEOs of the banks did not know about the BIS statistics, a crucial tool for understanding the credit risks they were taking.

A few years later, in May 1979, the G10 Governors decided to investigate how the Euro-currency market could be better "controlled" (Note, Le contrôle du marché des euromonnaies, NBB, 6/3/1980, NBBA, C.416/1). They set up three study groups:

- the Larre Group (presided by René Larre, the General Manager of the BIS), instructed with identifying the areas in which international lending gave rise to concern;
- the Lamfalussy Group (officially, Working Party on Possible Approaches to Constraining the Growth of International Bank Lending), which had to examine the different possible approaches to limit the growth of the banks' international lending;

[29] Note by Lamfalussy, Some remarks on the Memorandum on The Euro-currency market and regulations of international financial flows, 9 July 1976, BISA 7.18(15), LAM 27/F72.

[30] For instance, with W. Schoellkopf of Chase Manhattan New York, BISA 7.18(15), LAM 27/F72.

[31] There is a certain similarity with Lamfalussy's idea of entrusting the ECB with operational responsibility in the supervision of a limited number of large European banks, as they are crucial for systemic stability (Lamfalussy, 2004, p. 20).

- the Axilrod Group (chaired by Steve Axilrod of the Federal Reserve Board), which investigated techniques for the establishment, on a consolidated basis, of reserve requirements on Euro-currency deposits[32].

There was a kind of hierarchy between these groups, with the Larre Group discussing the major policy concerns, the Lamfalussy group possible techniques, while the Axilrod Group was a sub-group of the Lamfalussy Group.

Within the Lamfalussy Group itself, there were "profound divergences", mainly between Lamfalussy and Axilrod of the Fed, according to the minutes of the representatives of the National Bank of Belgium[33]. They concerned in particular: (1) the mandate of the Group, with Lamfalussy emphasising an approach to control international bank lending and the Fed focusing on control of international liquidity[34]; (2) the role of national monetary policies in the control of the Euro-markets, with Lamfalussy emphasising that the key lay in domestic monetary policy[35], while the Fed and the Bundesbank were in favor of a permanent and uniform system of international control based on reserve requirements; (3) the nature of reserve requirements, which were considered by Lamfalussy rather as one of the disparities between official regulations of domestic and international banking, which could be removed, while the Fed and the Bundesbank considered them as a technique for controlling the Euro-currency market.

In his invitation for the Working Party, Lamfalussy proposed to investigate four main approaches to curbing the growth of international bank lending: equalisation of competitive conditions between Euro-currency and domestic currency bank lending, direct controls on the growth of international bank lending, the appropriate use of domestic monetary policies, and prudential measures (Telex of 8 June 1979, NBBA, C.416/6).

The use of prudential measures to limit international bank lending aroused quite some debate at the first meeting of the Group, on 19 June 1979. Axilrod was sceptical of the idea, which was defended by Lamfalussy and the representative of the Bank of England.

32 The Federal Reserve Board had taken the initiative to propose a reserve requirements on Euro-currency deposits (Note, Proposition du Federal Reserve Board d'appliquer un coefficient de réserve aux dépôts en euro-monnaies, NBB, 26/4/1979, NBBA, C.416.2).

33 Notes of 29 June 1979 and 20 February and 6 March 1980, NBBA, C.416/6.

34 At that time, the monetary aggregates were the intermediate target of US monetary policy.

35 In line with his view that the strong growth of international lending was related to the borrowers' market and loose US monetary policies.

The discussions continued during the second meeting of the Group, on 7 November 1979, on the basis of a paper by the Bank of England, "The use of prudential measures in the international banking markets" (BISA, 7.18(15) LAM25/F66)[36].

In the Bank of England paper, the "macro-prudential" concept was forcefully advanced. The paper argued strongly that the micro-prudential aspect of banking supervision needed to be placed in a wider perspective. The paper characterised the "macro-prudential approach", as focusing on problems that "bear upon the market as a whole as distinct from an individual bank, and which may not be obvious at the micro-prudential level". The paper suggested three examples of macro-prudential problems, to illustrate that the micro-prudential viewpoint might fail to take full account of the wider macro-prudential picture:

- the growth of the market. While the growth of an individual bank's business might seem wholly acceptable from a microprudential standpoint, the overall rate of growth of international lending might be risky. So, banks might make rather optimistic assumptions about the adjustment process of countries with balance of payments deficits;
- the perception of risk. The paper argued that, as bad debt had been low in recent years, "sovereign risk has appeared to the banks not only to be low but perhaps even to be declining";
- the perception of liquidity. Banks are faced with both interest rate risks and funding risks. The paper argued that banks probably regard interest rate risk as the greater risk, at least in the short term, "and at the micro-level this perception is both understandable and in most circumstances correct". So, banks may be "unduly complacent" about the funding risk. This is especially so as the structure of the international markets, with chains of transactions between banks, might make banks vulnerable to an exogenous shock.

The concept of macro-prudential supervision was further very prominent in the Lamfalussy Group's final report (of 29 February 1980, BISA, 7.18(15) LAM25/F66)[37]. The term "macro-prudential supervision" was used six times, including three times in the conclusion. So, the Lamfalussy Report stressed the need for an "effective supervision of the international banking system, from both the micro-prudential and the macro-prudential points of view" (p. 12). A crucial reason was the increased risks confronting the banks, due to the recycling of the new OPEC surpluses, after the second oil price shock of 1979.

The Bank of England paper further discussed five groups of prudential measures to constrain the growth of international bank lending: control of banks' foreign exchange exposure, control of banks'

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[36] As London was an important centre of the Euro-markets, the Bank of England was closely monitoring international banking developments (see, e.g., the regular articles in the Bank of England *Quarterly Bulletin*). Moreover, after the "secondary banking crisis" of 1973-1974, the Bank of England was invested with statutory responsibility for banking supervision, following the Banking Act of 1979 (Cooke, 1982, p. 547). This naturally stimulated interest in supervisory issues at the Bank of England. However, Goodhart (2003, p. 33) observed that, initially, supervision itself was a very practical business, which "eschewed academic input" from economists.

[37] In the chairman's interim report of 8 February 1980, Lamfalussy used the term "macro-economic surveillance" (BISA, 7.18(15), LAM25/F66).

country risk exposure, capital ratios, maturity transformation, and controlling the "entry" of new market participants. The paper was quite positive on the use of prudential measures, concluding that they "could be a useful approach to ensuring that growth of international bank lending markets is soundly based. They could further have some, albeit modest, constraining influence on that growth".

The Bank of England paper was a topic of intense discussion in the Lamfalussy Group. In the end, it was decided to consult the Committee on Banking Regulations and Supervisory Practices (chaired by P.W. Cooke of the Bank of England) about the technical feasibility of using some of these prudential measures[38]. So, a questionnaire concerning the feasibility of the use of special balance-sheet provisions for involuntarily rescheduled loans and the use of capital ratios was sent to the Cooke Committee.

The Cooke Committee was not very much in favour of a "macro-prudential" approach[39]. In its Report, it took as its starting point the view that "supervisors should not impose on the banks for which they are responsible any measures for which there are not sound prudential reasons"[40]. The Cooke Committee rejected the proposals of the Lamfalussy Group to use prudential measures in order to constrain the growth of international bank lending, not only for technical reasons, but also because of a lack of prudential justifications and even of a potential conflict between macroeconomic and prudential aims. It observed that the two proposed prudential measures "would be technically difficult to implement at the national level and, on the basis of experience to date, both would be difficult to justify on prudential grounds. More importantly, both appear to pose problems of conflict between macroeconomic and prudential aims[41]; and neither appears likely to exercise much constraining influence on banks' international lending beyond what would be achieved by effective prudential controls on individual banks applied on a consolidated basis".

In its final report, the Lamfalussy Group emphasised three elements: the need for effective supervision of the international banking system, the reduction of inequalities in competitive conditions between domestic and international banking, and the monitoring of international banking developments[42]. In this respect, the Report pleaded for improvements in the timeliness and quality of the statistics reported to the BIS, a typical Lamfalussy concern. On the basis of the different

[38] Chairman's progress report on the activities of the "Working Party on Possible Approaches to Constraining the Growth of International Bank Lending", 28 November 1979, BISA, 7.18(15), LAM25/F67.

[39] Committee on Banking Regulations and Supervisory Practices, Report on the use of certain prudential measures to constrain the growth of banks' international lending, February 1980, BISA, 7.18(15), LAM25/F67.

[40] However, it continued: "At the same time, it is recognised that there can be concerns of a macro-prudential nature, which may not readily be perceived at the level of the individual bank, to which the supervisor should have regard. In addressing itself to the questions posed by the Lamfalussy Working Party, the Committee has not attempted to reach a collective judgment on whether or not such concerns arise in present circumstances".

[41] The "problems of conflict" were not specified in the Cooke Committee Report.

[42] It also mentioned that "a number of members of the Working Party" were in favour of prudential measures to constrain international bank lending.

reports, the G10 Governors decided, in April 1980, to officially entrust the Standing Committee on the Euro-Currency Market with the monitoring of international banking developments.

The Lamfalussy Working Party provided an example of the, sometimes very difficult, dialogue in the central banking community on prudential issues, especially between the Basel Committee on Banking Supervision and the Standing Committee on the Euro-Currency Market[43]. The Committee on Banking Supervision typically took a micro-prudential point of view. Its main objective was to check the compliance of the banks with prudential regulations. The Euro-Currency Committee took a more "macro-prudential" approach, pointing to the increasing debt of certain countries. However, for the Committee on Banking Supervision, the risks of these credits were regarded as very limited: it was short-term credits (floating-rate notes) which could be withdrawn quickly if there was the slightest danger (a rather naïve view, one might argue, as a general withdrawal would lead to a collapse of the system). For Lamfalussy, this was an eye opener: he became there conscious of the need to combine micro- and macro-prudential supervision, implying also a crucial role for the central bank[44]. It was to become a recurring theme in Lamfalussy's discourse on financial stability.

In August 1982, the Latin American debt crisis broke out. The BIS played an important role in crisis management, especially in the provision of "bridging loans" (before IMF stabilisation loans could be accorded)[45]. Moreover, the BIS statistics were invaluable for policy-makers to quickly identify the banks involved in the debt crises and the amounts of their credits[46].

### 5.3 Financial innovation and fragility

#### 5.3.1 The spread of financial innovations

In the mid 1970s, financial innovations increasingly became a topic of discussion among economists and policy-makers, especially in the United States. There was a significant acceleration of financial innovation[47]. A crucial driving force was the interaction of rising inflation with regulations which limited interest rates on certain financial products. An important policy consequence was that conventional money demand functions began to overpredict the quantity of money in circulation, leading to the "puzzle of the missing money" (Goldfeld, 1976). Financial innovation and its effects on monetary policy thus became a crucial topic of research among central bankers, as well as in the academic world[48].

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43 Interview, Lamfalussy, 5 May 2009.

44 The Cross Report also stressed the role of the central banks. At one point, it even defined macro-prudential as "the implications for the overall stability and structure of the financial system and for central banks' responsibilities for that system" (BIS, 1996, p. 233).

45 Lamfalussy also reacted to press articles, e.g. in the *Economist* and *Financial Times*, which questioned the value of the BIS statistics as early warning indicators.

46 Lamfalussy now talks with a hint of "nostalgia" about the Mexican debt crisis, as compared to the lack of transparency during the present credit crisis.

47 Even if innovation dated back to the 1950s, as noted by Gramley (1982, p. 393), "Innovation in financial markets has proceeded at an impressive pace for a quarter-century".

48 An overview of the main research in the Federal Reserve System can be found in Akhtar, 1983. See also Hester, 1981 or Silber, 1983.

However, as observed by Wenninger (1984, p. 232), the impact of financial innovation on financial fragility was rather neglected. Naturally, there were exceptions, especially at the Federal Reserve Bank of New York (which was responsible for the supervision of the large banks and close to the international financial markets where many financial innovations had their origin)[49]. Richard Davis, a NY Fed official, argued in 1981 that there was growing evidence of financial fragility. His main arguments were that shorter debt maturities increased the problem of debt roll-over and that variable interest rates implied more interest rate risk for banks, as not all this risk can be passed on to the borrowers (Davis, 1981, p. 25). Also other authors of papers on financial innovations and monetary policy, like Akbar Akhtar and John Wenninger (both at the NY Fed), Lyle Gramley (Board of Governors of the Fed) or Charles Goodhart (Bank of England)[50], argued that innovation was increasing financial fragility.

In the early 1980s, the Bank of England also paid more and more attention to financial innovations (see Fforde, 1983)[51]. In May 1983, it organised an important conference on financial innovations, at which Alexandre Lamfalussy was a "super-discussant" and which he had been encouraging[52]. The conference also looked at the implications for banking supervision. The general impression was that banking was becoming "a more risky and uncertain activity" (Bank of England, 2003, p. 360). Three main reasons were advanced: excessive competition (which could erode the profitability of banks), higher volatility of interest rates and risks associated with technological developments.

As mentioned earlier, financial innovation became a main topic of research at the BIS. This was clearly apparent in the fifty-third Annual Report, published in June 1983, which included for the first time a chapter entitled "Financial Markets and Financial Innovations". The main preoccupation, not unnaturally, was the impact financial innovations could have on monetary policy. In the Autumn of 1983, the theme of the annual central bank economists' meeting was "Financial innovation and monetary policy" (BIS, 1984). The introductory paper, "Financial innovations and their implications for monetary policy: an international perspective", was written by Akhtar, an economist on secondment from the New York Fed[53].

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[49] The main prophet of financial doom was naturally Hyman Minsky, in the tradition of Fisher and Keynes (see, e.g., Minsky, 1977). The work of Minsky was widely criticised. For instance, Sametz (1977, p. 137) concluded that "a consensus is developed that the concept of 'crisis inevitability' has few supporters either in theory or in practice". However, Minsky was quite well known at the BIS (see, e.g., Mc Clam, 1982). Noteworthy is also that Lamfalussy appreciated very much Irving Fisher's 1933 *Econometrica* article (Letter to A. Coppé, 14 December 1983, BISA, 7.18(15), LAM2/F7).

[50] For instance, Goodhart (1984, p. 142) argued that, with the erosion of low-cost retail deposits, banking was becoming riskier, reinforcing the need to pay more attention to prudential control and capital adequacy.

[51] The Bank of England was also close to the Euro-markets, a breeding ground for financial innovations. A specialist of the Bank of England in this area, Johnston, had been seconded to the BIS.

[52] Letter from J. Fforde, 3 June 1983, BISA, 7.18(15), LAM2/F6.

[53] Letter to A. M. Solomon, 9 June 1983, BISA, BISA, 7.18(15), LAM2/F6. Akhtar also far thanks Lamfalussy and McClam for advice and encouragements (Akhtar, 1983, p. 5).

In his analysis of the financial innovations, Akhtar (1983, p. 6) distinguished five broad categories of change: (1) the increasing use of interest-sensitive funds by banks and other financial institutions; (2) variable rate lending or borrowing and maturity shortening; (3) the growth of financial markets and of marketable financial instruments; (4) more competitive retail banking; (5) the blurring of distinctions between different types of financial intermediaries.

In his contribution to the BIS meeting, Wenninger (1984) distinguished two main types of financial innovations: those related to regulatory rigidities and changes, and those related to the desire to shift risks. Later research at the BIS would focus closely on the second, most fundamental, type of financial innovation. It would also become a major preoccupation for Lamfalussy.

Both as a commercial banker and at the BIS, Alexandre Lamfalussy had been very much involved with the Euro-markets, where many financial innovations had their origin[54]. It would, to an important extent, shape his perception of financial innovation. When analysing the international financial markets in the post-war period, Lamfalussy (1986a, p. 1) distinguished three major phases of structural change. Firstly, there was the emergence and development of the traditional Euro-markets, which lasted until the late 1960s. The typical product was a short-term Euro-dollar deposit, which was onlent at an agreed spread over a reference rate[55]. The second phase started in the late 1960s, with the launching of medium-term syndicated bank loans at variable interest rates, linked to LIBOR and adjusted every three or six months. The third phase, the "financial revolution", really took off from the early 1980s (see above and Akhtar, 1983).

As mentioned earlier, the debate on financial innovations was very much focused on the United States and the United Kingdom. They were generally regarded as the leaders in this area. The European continent was generally considered to be lagging. However, Lamfalussy begged to differ, drawing on his previous experience as a commercial banker. He argued that innovations did occur in continental Europe, but they were not recognised. He advanced two arguments. Firstly, in several countries, especially small open economies, financial innovations had taken the international route: "This certainly applies to Belgium and Switzerland, two countries with which I am familiar. The development of international connections between their banks and the external world through the Euro-currency market has played a very active rôle in changing banking practices" (Lamfalussy, 1983, p. 2). This especially concerned wholesale banking, where floating rate bank lending had been introduced via the Euro-markets and where active liability management and the management of banks' liquidity positions was occurring via foreign exchange transactions. A second reason was that in continental Europe, with a tradition of universal banking, many innovations were taking place within institutions. An example was the development of mutual funds (or unit trusts), which were sponsored by banks, "fixed-interest mutual funds, taking in their portfolio bonds denominated in foreign currencies and in domestic currency, originated in these countries

[54] The Banking Department of the BIS was an important source of information for BIS economists in their analysis of financial markets and innovations.

[55] There was also a small but active Euro-bond market.

and in the banks. I speak from experience, since in my earlier incarnation, I played a role in putting one of these funds on the market" (Lamfalussy, 1983, p. 2).

Contrary to general opinion, Lamfalussy very quickly took a cautious attitude towards financial innovations. At the Bank of England conference in May 1983, Banking Supervision Committee Chairman Peter Cooke said, according to Lamfalussy, that supervisors never question whether financial innovations are a good thing. Lamfalussy (1983, p. 4) replied, "Well, in some of my more courageous moments, I do". He further confessed that, "It doesn't seem to me intuitively obvious that, *on balance,* financial innovations are a good thing". Lamfalussy did not question that financial innovations could improve efficiency and help protect market participants against uncertainty[56]. However, in his opinion, financial innovations also create problems, especially for monetary policy-making, "if the result is that we end up in a monetary policy mess, and therefore major policy mistakes ... then I begin to have doubts about the balance of *pros* and *cons*" (Lamfalussy, 1983, p. 4)[57].

In the following years, Lamfalussy would become more and more cautious about financial innovations, not only their impact on monetary policy, but also their effects on the efficiency and stability of the financial system. In a certain sense, Lamfalussy always kept a "Keynesian" *Weltanschauung*, with a certain scepticism about the functioning of markets[58]. In a conference in Amsterdam, Lamfalussy (1984) argued in favour of a research programme in the field of "normative financial economics", referring also to Tobin's Fred Hirsch memorial lecture, which raised questions about the efficiency of the financial system (Tobin 1984)[59].

### 5.3.2 Financial innovations and financial fragility

In January 1985, at the invitation of Charles Kindleberger, Lamfalussy was the speaker at a joint luncheon of the American Economic Association and American Finance Association. The topic was "The changing environment of central bank policy" (Lamfalussy, 1985a). Financial fragility was one of the main themes of the presentation.

Lamfalussy emphasised that the financial systems of the Western industrial countries were in the midst of several interconnected evolutionary processes, like disinflation, internationalisation, innovation and deregulation. Lamfalussy started with the disinflation process. He stressed that the process of disinflation was going slowly, which implied significant uncertainty regarding future inflation rates. He was very concerned about the implications of this slow disinflation for the

56 Later, he would become more cautious on these issues.

57 His other concern was that people who are protected against inflation may feel able to live with it (the traditional German concern with the indexation of securities).

58 Lamfalussy remarked, at a conference in Brussels, that economists generally adhere to a "principe - ou d'un acte de foi que je ne partage pas - que le marché sait mieux que quiconque quel est le prix correct d'un actif financier et qu'il ne convient donc pas de polémiquer avec lui" ("principle - or an act of faith that I do not share - that the market knows better than anybody what the right price of a financial asset is and so there is no point in arguing with it" (Lamfalussy, 1985c, p. 5)

59 Lamfalussy knew Tobin from his time as a visiting professor at Yale in 1961-1962.

prudential side of central banking policies[60], "Can manifestations of financial fragility be taken care of by the normal market mechanism, or does their containment require specific lender-of-last-resort intervention by central banks in order to prevent domino effects? Here, too, I would much welcome a wide-ranging theoretical debate on the mechanics of financial adjustment during a slow process of disinflation, as distinct from crisis manifestations at cyclical turning points" (Lamfalussy, 1985a, p. 410).

Thereafter, he turned to the internationalisation process. For Lamfalussy, a crucial implication was that no country could isolate itself from other countries, whatever its exchange rate regime (an old theme of Lamfalussy's). He then went into the consequences of the growing cross-border interdependence for financial stability, "whether it increases, or, on the contrary, diminishes the fragility of the Western countries' banking systems" (Lamfalussy, 1985a, 410). Lamfalussy was cautious about the idea that fiercer competition would strengthen the resilience of the financial system. He was especially concerned about asymmetries in the opening of markets, with more active competition in some fields (internationally), coupled with continued market imperfections in others (domestically).

The third evolutionary process concerned the accelerating speed of financial innovation. This was leading to a flow of new financial instruments and techniques, as well as the blurring of dividing lines between institutions and between markets[61]. After discussing the implications for monetary policy, Lamfalussy turned to the prudential implications. He raised several issues: "What should be done, for instance, on a purely technical level, with a number of balance-sheet items listed as contingent liabilities, or with the host of intermediary balance-sheet items classed somewhere between equity and "traditional" liabilities? How should minimum capital ratios be established? Should such ratios be established at all? Are they not going to produce "evasive" innovations? What are the macroeconomic implications of assigning greater control responsibilities to the supervisory authorities?". His last, and most fundamental question, concerned the effects on financial stability of the redistribution of risk by these new techniques and instruments, "You may argue that when risk-averse market participants shift risks associated with unexpected interest and exchange rate developments onto willing risk takers, everybody is going to be better off. This may well be the case, but increased collective happiness does not necessarily mean greater systemic stability. Or does it?" (Lamfalussy, 1985a, p. 411).

In a speech in 1986, Lamfalussy gave a negative answer to the question whether the redistribution of risk improved financial stability. His argument was strongly influenced by his analysis of the Latin American debt crisis. In his view, the shift to a generalised use of floating interest rates in medium-term bank loans, during the petrodollar recycling phase, allowed banks to protect themselves against the erosion of their margins of intermediation. However, it also had the effect of passing on short-term market interest rate movements to borrowers. With negative real interest rates in the

[60] As often, Lamfalussy voiced his concerns in the form of questions, a more diplomatic way to treat sensitive issues.

[61] Already a theme of the 1959 Radcliffe Report, to which Lamfalussy was sympathetic (see above).

1970s, credit demand was stimulated, leading to a period of over-expansion. The return to positive real interest rates in 1979 placed a "crippling" burden on many debtors. The ensuing debt crisis threatened the world financial system. Lamfalussy concludes: "Innovation allowed banks to transform margin risk into capital risk which, in this case, was probably a greater threat to the stability of the international banking system - not to mention its rather disastrous effects on the borrowers themselves" (Lamfalussy, 1986b, p. 14).

An important concern for Lamfalussy was that, with financial innovations, the transparency of the financial system was waning. "The proliferation of different types of assets and liabilities, both on and off banks' balance sheets, clearly obscures their activities - for the banks' own management, for bank supervisors and for the market" (Lamfalussy, 1986b, p. 14). This also had serious consequences for the statistics which the BIS had been constructing, as did the gradual merging of the Euro-bond market with international bank lending, "progressively eroding the usefulness of traditionally defined international banking statistics and removing the little transparency which we have managed to create in this particular field" (Lamfalussy, 1985a, p. 411).

Lamfalussy was concerned that the advantages of financial innovation had been overstated. An example was securitisation. In his view, securitisation had attracted quality borrowers to the financial markets, by the prospect of borrowing more cheaply than through the banks. Problem debtors, however, who were unable to tap the financial markets, would continue to take bank credits (and their liabilities would remain on banks' balance sheets in a non-negotiable form)[62]. Moreover, securitisation might make the managing of an international credit crisis more difficult: "Past experience is not reassuring in this respect. In the 1930s, the large share of international debt in the form of bonds prevented the kind of restructuring of debts that has taken place with bank lending in recent years" (Lamfalussy, 1986b, p. 15).

Over the next few years, Lamfalussy further elaborated and articulated his basic vision. He was concerned about the basic fragility of the financial system, especially banking. He stressed that the Schumpeterian process of creative destruction might entail serious risks for the banking sector. "If, like me, you cannot accept the view that the risk of systemic runs on banks is now a thing of the past, you feel that such destruction can be more dangerous in banking than in any other sector of the economy" (Lamfalussy, 1988, p. 137). Furthermore, he would always pay attention to the international dimension, as "the worldwide integration of banking has given this risk a dimension that it never had before". He would further stress that the interaction of global imbalances and a more competitive and innovative financial system was apt to lead to increases in debt ratios, "carrying obvious risks in the event of a cyclical downturn" (Lamfalussy, 1988).

### 5.4 BIS work on strengthening the financial system

In his different functions at the BIS, Lamfalussy also played a major role in the Bank's efforts at strengthening the international financial system. At the heart of this work was Lamfalussy's vision

[62] Naturally, the securitisation process went much further than anticipated here by Lamfalussy, also including, for instance, subprime mortgages.

that the micro- and macro-prudential dimensions of financial stability very much overlap. Typical for Lamfalussy is a focus on the systemically important financial institutions, whereby the failure of an individual institution would threaten the entire system. Moreover, while Lamfalussy was very conscious of the growing globalisation of the economy, his view was very much that crises would have regional origins, especially in the periphery, like the debt crises in emerging economies[63]. One of his crucial policy conclusions was to strengthen the robustness and resilience of the banking system (with higher capital requirements) as well as the infrastructure of the financial system (especially payment and settlement systems)[64]. Furthermore, Lamfalussy always remained attentive to the changing nature of the financial system.

Three main lines of work at the BIS can be singled out: research on the evolution of the financial system, the elaboration of measures aimed at strengthening the banking system and efforts to improve the infrastructure of the financial system.

The BIS continued its research on financial innovations and financial stability. In April 1986, an important Report on "Recent Innovations in International Banking" was published, the so-called Cross Report (BIS, 1986). Besides the sharp acceleration in the globalisation of financial markets, the report emphasised two main tendencies. Firstly, a move towards securitisation, which contributed to a blurring of the distinction between bank credits and the capital markets. Secondly, an increasing importance of off-balance-sheet items, especially derivative products, like currency and interest rate swaps, currency and interest rate options and forward rate agreements. The Cross Report also focused on the implications for financial stability and macro-prudential policy[65]. A main theme was the blurring of distinctions between banks and other financial institutions (which was also impairing the usefulness of the BIS statistics). The Cross Report became an important input for the work of the Standing Committee on the Euro-Currency Market, which Lamfalussy himself chaired.

In the area of banking, the Basel Committee on Banking Supervision played a crucial role. A landmark agreement was the so-called "Basel Capital Accord" in July 1988, establishing minimum capital requirement standards. A key objective was to strengthen the banks' resilience in the event of losses on loans, as with the Latin American debt crisis. Moreover, the international convergence of bank capital standards was also intended to establish a "level playing field" between banks in different countries (Kapstein, 2008, p. 131). An important contribution to the agreement was the

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63 Lamfalussy (2000, p. 141) mentions the 1998 LTCM crisis as a watershed and a new type of crisis, implying market risk in the center of the financial world, "LTCM seems to have gone under, and needed to be rescued, not because of poorly assessed credit risks, but because its risk-taking decisions had been based on the expectations of a certain pattern of asset price behaviour and of adequate market liquidity - expectations which turned out to be mistaken".

64 When compared with the stylised macro-and micro-prudential perspectives of Borio (2003), one might argue that Lamfalussy was very much taking a "meso" perspective, with his focus on the important financial institutions and attention to regional shocks.

65 Just before that, the Banking Supervision Committee had also produced a report on the off-balance-sheet activities of banks.

research work of the Monetary and Economic Department of the BIS, which was under the responsibility of Lamfalussy.

Moreover, growing attention was being paid to the infrastructure of the financial system. October 1981 saw the first meeting of a newly established Group of Payment System Experts. In November 1990, it was transformed into the Committee on Payment and Settlement Systems (CPSS). Several reports were produced, among them the "Report on Netting Schemes" (February 1989), the "Report of the Committee on Interbank Netting Schemes" (the so-called Lamfalussy Report, as the group was chaired by Lamfalussy, in November 1990, BIS, 1990) and the Report on "Delivery versus Payment in Securities Settlement Systems" (September 1992). It is noteworthy that, during the financial crisis of 2007-2008, there were no serious problems with the actual financial infrastructure. The clearing, settlement and payment systems continued to function properly. This contrasted with the "Great Crash" of 1929, when there were recurring problems. For instance, the ticker was mostly lagging at the New York Stock Exchange (Galbraith, 1975, p. 133). So, the big investments, to enhance the crisis-resistance capabilities of the financial infrastructure, have "been rewarded by high returns" (Lamfalussy, 2009).

In the early 1990s, with EMU looming, Lamfalussy also anticipated that monetary policy issues would become less important at the level of the G10 Governors. So, he pushed for a further shift in focus at the BIS towards financial stability.

## 6 CONCLUSION

In this paper, it is argued that Alexandre Lamfalussy, who was at the BIS from 1976 to 1993, played a crucial role in shaping the Bank's view of financial stability, with its attention to the macro-prudential dimension.

Alexandre Lamfalussy's early academic work was very much in the Keynesian tradition. It focused on growth and investment theory and Belgium's and Europe's growth patterns in the postwar period. Gradually, he would move towards the ideas of Dupriez, his teacher in Louvain and a leading scholar on business cycles, acknowledging that cycles should be moderated, but not suppressed. However, Lamfalussy, quite like Tobin, retained a certain scepticism about the stability of the financial markets. This mix of business cycle theory and a Keynesian *Weltanschauung*, that a market economy is not sufficiently self-correcting, is also very much the vision behind the BIS macro-prudential approach.

In 1955, Lamfalussy started working at the Banque de Bruxelles, Belgium's second biggest commercial bank. In the 1960s, he became responsible for investment banking, comprising the Euro-bond markets. While there, he developed an awareness for the financial markets, which became a constant characteristic in his analysis. Later, he became the Chairman of the bank. However, in 1974, some traders took large open foreign exchange positions, causing significant losses and leading to Lamfalussy's resignation in 1975. It evidently had a strong impact on his view of the financial system, with risk and financial fragility becoming important concerns.

In the mid 1970s, the BIS was going through a fundamental transformation. The collapse of the Bretton Woods system led to a shift in the objectives of central bank cooperation. It went together with a more general shift from a government-led to a market-led financial system. With the advent of floating exchange rates and financial liberalisation, cooperation shifted from exchange rate stability towards financial stability. The high-profile collapse of certain banks, like Herstatt and Franklin National, was a further factor behind this. Lamfalussy became Economic Adviser at the BIS in January 1976. With his academic background and his profound knowledge of the financial markets, he was well suited to steer the BIS through this new environment of financial instability.

Two of the main challenges during Lamfalussy's time at the BIS were the Latin American debt problem and the rise of financial innovations. As early as the second half of the 1970s, Lamfalussy was warning about the debt build-up in Latin America. Moreover, he stressed the interrelationship with loose US monetary policies and the US balance of payments deficit. In 1976, he proposed to create a "risk office" at the BIS in order to collect crucial information on a limited number of systemic banks. In 1979-1980, a Working Party which he chaired advanced the term "macro-prudential". In the Working Party, there was also a heated debate on the use of prudential instruments (like capital ratios) to moderate credit growth. While Lamfalussy was in favour of this idea, it was rejected by the Committee on Banking Supervision.

In the early 1980s, central bankers paid more and more attention to financial innovations, mainly for monetary policy reasons. Lamfalussy quickly turned to the impact on financial stability. In 1985, he questioned whether financial innovations, and the redistribution of risk which they entail, do actually contribute to greater systemic stability. He was also critical of the benefits of securitisation, questioning whether the financial system was fulfilling its "risk management" function. Moreover, he emphasised that financial innovations reduce the transparency of the financial system and that they can lead to new types of systemically important institutions.

Lamfalussy thus combines a broad macro-economic view with a focus on the systemically important financial institutions. His fundamental vision is that the micro- and macro-prudential dimensions of financial stability overlap considerably. His view, at that time, was very much that crises might have their origins in the periphery, like debt crises in emerging economies. He further followed a two-track approach, being attentive to cases of strong debt build-up and to strengthening the robustness and resilience of the financial system, also in the developed world. Moreover, he was always attentive to the changing nature of the financial system and the growing globalisation of the economy.

A mirror of Lamfalussy's view on financial stability was his view of the foreign exchange markets. He was distrustful of systems of floating exchange rates, fearing currency misalignments with severe consequences, including calls for protectionism. It made him a strong advocate of international policy coordination and European monetary integration.

Lamfalussy stimulated work on financial stability issues at the BIS, adopting and "marrying" the micro- and macro-prudential approaches. Examples are the Cross Report on financial innovations or work on strengthening the financial infrastructure. Moreover, and very fundamentally, he greatly contributed to the creation of a "BIS atmosphere", that one should be attentive to imbalances, debt build-ups and bubbles, which may sow the seeds of financial crises.

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Annex: Chronology of main events (1944-2008)

| | | |
|---|---|---|
| 1944 | July | Bretton Woods conference |
| 1959 | 30 July | Radcliffe Committee Report. |
| 1969 | 1-2 December | The Hague Summit: EMU becomes an objective of the EEC. |
| 1971 | 18 April | Establishment of the Standing Committee on the Euro-Currency Market |
| | 15 August | Nixon suspends gold convertibility of US dollar. |
| 1973 | March | New currency crisis: definitive end of the Bretton Woods regime. |
| | October | OPEC raises oil prices by 70%. |
| 1974 | June | Bankhaus Herstatt collapses. |
| | October | Franklin National Bank collapses. |
| | December | Establishment of the Basel Committee on Banking Supervision (BCBS). |
| 1975 | December | "Basel Concordat" calls on host- and home-country authorities to share supervisory responsibility for banks' foreign activities. |
| 1979 | 13 March | Establishment of the European Monetary System. |
| | June | Second oil shock. |
| | October | Tightening of US monetary policy. |
| 1980 | April | Euro-Currency Standing Committee also entrusted with the monitoring of international banking developments. |
| 1981 | October | First meeting of the Group of Payment System Experts. |
| 1982 | March | Hungarian debt crisis. |
| | 12 August | Mexican troubles: start of Latin American debt crisis. |
| 1983 | April | Creation of the International Organisation of Securities Commissions (IOSCO). |
| | May | Report "Principles for the Supervision of Banks' Foreign Establishment". |
| 1984 | May | Continental Illinois Bank collapses. |
| 1985 | 14 June | European Commission White Paper on Completing the Internal Market. |
| 1986 | April | Report on "Recent Innovations in International Banking" (Cross Report). |
| | June | Mexican foreign debt default averted. |
| 1987 | 19 October | Black Monday: stocks drop by 22.6% on Wall Street. |
| 1988 | 27-28 June | Hanover Summit: creation of the Delors Committee. |
| | July | "Basel Capital Accord". |
| 1989 | February | "Report on Netting Schemes". |
| 1990 | April | Report on "Principles for the Supervision of Banks' Foreign Establishments". |
| | 1 July | Beginning of stage one of EMU (abolishment of capital controls). |
| | 12 November | Establishment of permanent Committee on Payment and Settlement Systems (CPSS). |
| | November | Report of the Committee on Interbank Netting Schemes (Lamfalussy Report). |
| 1991 | 5 July | Bank of Credit and Commerce International closed after allegations of fraud. |
| | 9-10 December | European Council agrees on Maastricht Treaty. |
| 1992 | September | Report "Delivery versus Payment in Securities Settlement Systems". |
| 1993 | September | Report "Central Bank Payment and Settlement Services with Respect to Cross-Border and Multi-Currency Transactions". |
| 1994 | 1 January | Start of stage two of EMU (establishment of the European Monetary Institute). |
| | July | Publication by the BCBS of guidelines for the supervision and risk management of derivatives. |
| | September | Report: "A Discussion Paper on the Public Disclosure of Market and Credit Risk by Financial Intermediaries" (Fisher Report). |
| | November | Report on "Macroeconomic and Monetary Policy Issues Raised by the Growth of Derivative Markets" (Hannoun Report). |

| | | |
|---|---|---|
| | December | Collapse of the Mexican peso - the country faces default. |
| 1995 | February | Report on "Issues related to the Measurement of Market Size and Macro-prudential Risks in Derivative Markets". |
| | 26 February | Barings crashes after huge losses in derivatives trading. |
| | March | Report on "Cross-Border Securities Settlements". |
| | May | BCBS issues "A Framework for Supervisory Information about Derivatives Activities of Banks and Securities Firms". |
| 1996 | March | Report on "Settlement Risk in Foreign Exchange Transactions". |
| | October | Report on "Supervision of Cross-Border Banking". |
| | 23 October | The International Association of Insurance Supervision (IAIS) decides to locate its secretariat at the BIS. |
| 1997 | March | Reports on "Real-Time Gross Settlement (RTGS) Systems" and "Clearing Arrangements for Exchange-traded Derivatives". |
| | April | BCBS releases its "Core Principles for Effective Banking Supervision". |
| | 2 July | Devaluation of the Thai baht: start of the Asian crisis. |
| 1998 | July | "Reducing Foreign Exchange Settlement Risk: A Progress Report". |
| | August | Russia defaults on its GKO debt (government short-term bonds). |
| | September | Long-Term Capital Management (LTCM) hedge fund nearly collapses. |
| | | Report "OTC Derivatives: Settlement Procedures and Counterparty Risk Management". |
| 1999 | 1 January | Introduction of the Euro. |
| | February | Creation of Financial Stability Forum (FSF). |
| | | The G10 Euro-Currency Standing Committee, is renamed "Committee on the Global Financial System" (CGFS). |
| | April | The CGFS issues recommendations for the design of liquid markets. |
| | May | European Commission publishes Financial Services Action Plan. |
| | June | The BCBS releases a first consultative paper for the reform of the Basel Capital Accord. |
| 2001 | 15 January | Report "Core Principles for Systemically Important Payment Systems". |
| | February | Final Report on the Regulation of European Securities Markets by the Committee of Wise Men (chaired by Lamfalussy). |
| | April | CGFS publishes "A Survey of Stress Tests and Current Practice at Major Financial Institutions". |
| 2001 | November | CPSS and IOSCO publish "Recommendations for Securities Settlement Systems". |
| 2003 | January | Report on "Credit Risk Transfer". |
| 2004 | 26 June | Agreement on "Basel II" framework. |
| | November | CPSS and IOSCO publish "Recommendations for Central Counterparties". |
| 2007 | June | Problems with two Bear Stearns hedge funds: start of sub-prime crisis. |
| | September | Northern Rock in trouble. |
| 2008 | March | Takeover of Bear Stearns by JPMorgan Chase. |
| | September | Lehman Brothers collapses: start of a new phase of the financial crisis. |

Source: Toniolo, 2005, Annex D and NBB.

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