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The evolution of Alexandre Lamfalussy's thought on the international and European monetary system (1961-1993)

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The evolution of Alexandre Lamfalussy's thought on the international and European monetary system (1961-1993)



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by Ivo Maes

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Abstract

The establishment of the European Monetary Institute (EMI), the predecessor of the European Central Bank, on 1 January 1994, was a milestone in the process of European monetary integration. In this paper, we look at the work on the international and European monetary system of Alexandre Lamfalussy, its first president. Lamfalussy pursued a threefold career: as a private banker, a central banker and an academic. Partly under the influence of Robert Triffin, Lamfalussy soon became interested in international monetary issues. This paper analyses his views on the international monetary system and on European monetary integration, including his contributions to the Delors Report, which provided the framework for European monetary union. The paper draws extensively on archival research in the Lamfalussy papers at the Bank for International Settlements and the minutes of the EEC Committee of Governors' meetings. The paper provides not only an analysis of Lamfalussy's thought on European monetary integration, but also offers crucial insight into the Weltanschauung and way of thinking of European central bankers in this period.

JEL codes: B31, E42, F36,

Key words: Lamfalussy, exchange rates, European monetary integration, Delors Report.

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The views in this paper are those of the author and do not necessarily reflect those of the National Bank of Belgium or the Eurosystem. All remaining errors are the author's responsibility.

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1 INTRODUCTION

Alexandre Lamfalussy has been highly influential in the process of European monetary and financial integration. He is especially well known as the first president of the European Monetary Institute (EMI), the predecessor of the European Central Bank, and as the Chairman of the Committee of Wise Men, which developed a new approach for the regulation of European financial markets (Maes, 2007).

In his farewell address upon Alexandre Lamfalussy's departure as president of the European Monetary Institute, Wim Duisenberg, his successor, beautifully summed up Lamfalussy's contribution at the EMI: "One of your greatest assets is, that you managed to combine this typical conservative and cautious nature of a central banker, always focused on substance, with your firm belief in European monetary integration. ... You have never believed that a true single market is in the long run compatible with a quasi-floating exchange rate system. Over the past three and a half years, you have acted as a devoted missionary of EMU and European integration in general. In this capacity, you have managed to convert at least some incredulous European central bankers".

The establishment of the European Monetary Institute, the predecessor of the European Central Bank, on 1 January 1994, was a milestone in the process of European monetary integration. The main preoccupation of European central bankers became the elaboration and preparation of a single monetary policy for the countries of the future euro area. This contrasted with their earlier focus on exchange rate stability in the framework of the Bretton Woods system and European monetary arrangements, like the snake and the European Monetary System.

In this paper, we will analyse the work of Lamfalussy on the international and European monetary system until he became president of the European Monetary Institute, namely the period from 1961 to 1993. Alexandre Lamfalussy pursued a three-pronged career, as a private banker, a central banker and an academic. He studied Economics at the Catholic University of Louvain and at Nuffield College, Oxford. In 1955, Lamfalussy started working at the Banque de Bruxelles, Belgium's second commercial bank. He became Chairman of the Executive Board in 1971. Then in 1976, he moved to the Bank for International Settlements, becoming General Manager in 1985. Simultaneously, Lamfalussy was active as an academic.

The paper draws extensively on archival research in the Lamfalussy papers at the Bank for International Settlements and the minutes of the EEC Committee of Governors' meetings. This paper provides not only an analysis of Lamfalussy's thought on European monetary integration but also offers crucial insight into the Weltanschauung and way of thinking of European central bankers in this period.

This paper is part of a more general research project on Alexandre Lamfalussy. Two earlier studies are already published: "The young Lamfalussy: An empirical and policy-oriented growth theorist" (WP 163, cf. also Maes 2009) and "On the origins of the BIS macro-prudential approach to financial stability: Alexandre Lamfalussy and financial fragility" (WP 176, cf. also Maes 2010).

Below, we provide an overview of Lamfalussy's career. Thereafter we go into his views on the international monetary system and on European monetary integration, paying particular attention to his contributions to the Delors Report.

2 MAIN PHASES IN THE CAREER OF ALEXANDRE LAMFALUSSY

2.1 EARLY ACADEMIC WORK

Alexandre Lamfalussy was born on 26 April 1929 in Kapuvar, Hungary. He started Economics studies at the Budapest Polytechnic in 1947. In January 1949, Lamfalussy fled 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 (Maes, Buyst and Bouchet, 2005). The dominant figure was Léon-H. Dupriez. He was a leading scholar in business cycle analysis. Two elements were typical for Dupriez's approach to economics (Maes, 2008). Firstly, he based his analysis on extensive empirical investigations (with a lot of attention paid to descriptive statistical methods, as well as graphs and tables). Secondly, he was not in favour of new schools of economic thought, like Keynesian economics. He disliked the use of models, econometrics and national income accounts. For him, it was crucial that economic theory should go back to individual economic decisions.

Lamfalussy became Dupriez's assistant for business cycle analysis and participated also in the monthly meetings of the Institute with industrialists. However, Lamfalussy took more "Keynesian" positions than Dupriez (Maes, 2009). While Dupriez disliked formal model building, for Lamfalussy this was a way to make explicit the implicit model which one was

using anyway¹. 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 would become a hallmark of Lamfalussy's style of economics.

Lamfalussy went to Oxford for his doctorate. The theme was investment and growth in postwar 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 on to Yale University. It gave him an American experience as well as an opportunity to go deeper into the topic of Europe's postwar growth performance.

So, in his early academic work, Lamfalussy focused on growth and investment theory and Belgium's and Europe's growth patterns in the postwar period. He emphasised virtuous (or vicious) circles, in which stronger export growth promotes higher investment, which in turn strengthens productivity and investment, further reinforcing exports. Even now, Lamfalussy is still considered as one of the main protagonists of the Keynesian approach of export-led growth in the postwar period (Crafts and Toniolo, 1996, 12).

2.2 A CAREER AS A COMMERCIAL BANKER

In the summer of 1955, Lamfalussy returned to Belgium and began working at the Banque de Bruxelles, Belgium's second commercial bank. He started as an economist in its Economic Studies Department, becoming Chairman of the Executive Board in 1975.

With his experience as a commercial banker, Lamfalussy developed a keen awareness of the financial markets, which became a constant characteristic in his analysis. In the early 1960s, he was entrusted with responsibilities in the area of investment management. He was involved in the creation of certain mutual funds and played a role in international investment banking, an area which was then emerging. For instance, in July 1963, he represented the Banque de Bruxelles at the signing of the subscription agreement of the first Eurobond issue, a \$15 million bond for Autostrada (Norman, 2007, 95). However, during Lamfalussy's chairmanship of the Banque de Bruxelles, in 1974, some traders took large open foreign exchange positions, which caused significant losses (Moitroux, 1995,

¹ Later, Lamfalussy (1985, 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".

217)². At the end of 1975, Lamfalussy resigned from the bank. All this had evidently had a strong impact on his view of the financial system: risk and financial fragility became important preoccupations for him.

During his time at the Banque de Bruxelles, Lamfalussy's research interests shifted to monetary and financial issues, both national and international. He was intellectually close to the Radcliffe Report (see Lamfalussy 1961b). In the 1963-1965 period, 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). The Segré Report underlined the linkages between freedom of capital movements and progress in other areas, such as monetary and economic policies. He also participated in meetings of several groups on the reform of the international monetary system, one of the most famous being the Bellagio group together with, among others, Sir Roy Harrod, Harry Johnson, Peter Kenen, Fritz Machlup, Robert Mundell, Jacques Rueff, Robert Triffin, Tibor Scitovsky and Pierre Uri³. In the early 1970s, Alexandre Lamfalussy was a member of the so-called "Group of Rome" (see Lamfalussy et al., 1974). In the mid-1970s, he was a member of the "Villa Pamphili group", which produced a report on monetary arrangements in the European Common Market (Balassa, 1976).

2.3 LAMFALUSSY AT THE BIS

The Bank for International Settlements was set up in 1930 to administer the German reparation payments and as a forum for central bank cooperation aimed at improving the functioning of the gold-exchange standard (Toniolo, 2005). It provided central bankers with three main services: research on issues relevant to international payments and prudential supervision, a venue for regular and discreet meetings, and 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.

In January 1976, Alexandre Lamfalussy joined the Bank for International Settlements in Basel as Economic Adviser and Head of the Monetary and Economic Department. He was General Manager from May 1985 until the end of 1993. During his time at the BIS, financial fragility, with the Latin American debt crisis of the early 1980s, was his main

² 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.

³ He also organised a meeting of the Bellagio Group in Basel in November 1985 (BISA 7.18 (15) LAM 7/Fo 21).

preoccupation. Lamfalussy (not unlike Tobin) retained a certain scepticism about the functioning of the financial markets. He became the main architect of the BIS macro-prudential approach to financial stability, which 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 economy⁴.

At the BIS, Lamfalussy was in a first-rate position to observe the international and European monetary system. He took part in the meetings of the G10 governors, including the informal dinners⁵. It was at these dinners that the most open and confidential discussions took place between the world's central bank governors. Moreover, throughout the process of European monetary integration, the BIS has been providing services to the central banks of the European Community. Lamfalussy was also invited to attend the meetings of the EEC Committee of Governors, which took place in Basel, on a personal basis⁶. With the support of the Monetary and Economic Department of the BIS, he would present analyses of the economic and monetary situation, typically placing current developments in a broader analytical framework. Meetings of the EEC Committee of Governors would usually start with an overview of the foreign exchange markets (exchange rate developments and foreign exchange interventions). Lamfalussy would widen the analysis to interest rates and introduce "real" exchange rates and interest rates. He also presented papers on specific issues, like the US balance of payments, monetary targeting, the developments (and statistics) of the international financial markets⁷.

During his time at the BIS, Lamfalussy was also a member of the Delors Committee, in 1988-1989, which played a pivotal role in the EMU process and the preparation of the Maastricht Treaty. He made a well-noted contribution on the coordination of budgetary

⁴ Lamfalussy's vision was largely based on a mix of business cycle theory and a Keynesian Weltanschauung, that a market economy is not sufficiently self-adjusting. For an overview of Lamfalussy's ideas on financial fragility, see Maes, 2010.

⁵ The informal dinner, on Sunday evening before the official meetings, was the most selective central bank meeting. There were thirteen participants: the "eleven" G10 governors as well as the General Manager and the Economic Advisor of the BIS.

⁶ Before Lamfalussy, Rainoni, the Deputy Head of the Monetary and Economic Department attended the meetings. As a General Manager of the BIS, from May 1985 onwards, Lamfalussy did not attend the meetings anymore. He was succeeded by Horst Bockelmann, the new BIS Economic Advisor.

⁷ Lamfalussy's work was well appreciated by the governors. For instance, when discussing plans to set up a working group on US monetary policy and inflation, Renaud de la Genière, the then Governor of the Banque de France, suggested a preliminary study by Lamfalussy, "Toutefois, avant de donner un mandat à un groupe de travail, il serait utile d'avoir, lors de la prochaine séance, un échange de vues préliminaire, peut-être sur la base d'une note de M. Lamfalussy, en vue de délimiter les problèmes à étudier" ("However, before giving a working group a mandate, it might be useful to have a preliminary exchange of views at a forthcoming session, perhaps on the basis of a note from Mr Lamfalussy, in order to single out the problems to be examined") (Minutes of the 152th Meeting of the Committee of Governors, 10/02/1981, NBBA).

policies, concluding that "fiscal policy coordination appears to be a vital component of a European EMU" (Lamfalussy, 1989, 93)⁸.

3 LAMFALUSSY'S VIEW ON THE INTERNATIONAL MONETARY SYSTEM

3.1 THE NEED FOR AN INCREASE IN INTERNATIONAL LIQUIDITY

Lamfalussy's first important work on the international monetary system was "La liquidité du système monétaire international"⁹, the introductory report for a conference of the Société royale d'économie politique de Belgique in Brussels on 22 and 23 April 1961 (Lamfalussy, 1961a).

The report was divided in three parts: (1) the notion and functions of international liquidity, (2) the actual situation and (3) proposals for reform. Lamfalussy's thesis was that the liquidity situation of the international monetary system was inadequate and that thorough reforms, on the lines advocated by Keynes and Triffin, were necessary.

In the introduction, Lamfalussy stressed that his report was not "neutral". He underlined that it was built on the acceptance of economic growth as a crucial objective of economic policy. He further stressed that growth was crucial for the survival of western civilisation.

In the first chapter, Lamfalussy went into the notion and functions of liquidity. Very much under the influence of the Radcliffe Report, he rejected approaches (by the IMF and Triffin) to calculate an "ideal" relation between the global volume of international liquidity and international trade¹⁰. Instead he focused on "admissible" balance of payments deficits (for instance cyclical deficits). These deficits should be covered by putting at the disposal of the deficit countries enough international reserves, so that these nations could avoid controls or deflationary policies. As Lamfalussy observed, this approach of "admissible" deficits had far reaching consequences as it was not only based on positive economic analysis. So would it impose the elaboration of "un système explicite de morale

⁸ During his time at the BIS, Lamfalussy also got to know so many European central bankers. It would become an enormous advantage when he had to recruit people for the European Monetary Institute.

⁹ "Liquidity in the international monetary system".

¹⁰ Lamfalussy noted that this idea was based on Triffin's penchant for the "quantity theory", "Cette proposition dégage inévitablement le fumet archaïque de la théorie quantitative de la monnaie, pour laquelle Triffin a avoué ailleurs un curieux penchant" ("This proposal inevitably gives off the archaic aroma of the quantity theory of money, for which Triffin has admitted elsewhere that he has a curious penchant") (Lamfalussy, 1961a, 76).

économique internationale"¹¹ (Lamfalussy, 1961a, 24). In the rest of the chapter, he discussed various types of balance of payments deficits.

Lamfalussy concluded that a more flexible international monetary system was necessary. A first reason was that, even without a consensus on "admissible" deficits, certain deficits would have to be financed. Discretion was necessary: "Or rien ne permet de prévoir la fréquence, la durée ni la répartition de ces déficits; rien ne permet non plus de prévoir les circonstances précises dans lesquelles ils surgiront"¹² (Lamfalussy, 1961a, 41). Just as national banking systems were developed in the 19th century, there was a need to develop an international monetary system on the same basis. The gold standard or the gold exchange standard were not flexible enough: "Le premier lie la liquidité internationale directement à la quantité disponible en or monétaire: cette quantité peut être insuffisante ou excessive selon les circonstances; elle n'a pas plus de chance de convenir à nos besoins qu'un costume choisi au hasard, à l'aveuglette, dans les rayons d'un grand magasin. L'étalon de change-or est plus souple; toutefois, en liant la liquidité internationale à la santé réelle ou imaginaire des monnaies-clef, il demeure essentiellement erratique"¹³ (Lamfalussy, 1961a, 41). The second reason for more flexibility concerned the need to transfer resources to the less developed countries.

In the second part of the report, Lamfalussy provided an empirical analysis of the liquidity situation of the world economy in 1960 and 1961. His analysis of the functioning of the gold exchange standard was very much inspired by Triffin. He concluded that the United States' balance of payments deficit was not sustainable and that the country would have no net international reserves in 1962. A radical reform of the international monetary system was urgently needed: "Le maintien du déficit américain ne semble, en effet, guère possible. Le gold exchange standard ferait peser sur l'Administration américaine la menace d'une conversion massive des dollars en or si le déficit global persistait; au taux actuel du déficit, les États-Unis n'auraient plus de réserves de change nettes pour le début de 1962. Ils seront en conséquence acculés à dégonfler leur déficit global, à moins qu'une refonte radicale du système monétaire international puisse être réalisée encore

¹¹ "A clear system of international economic ethics".

¹² "Now, there is no way of predicting the frequency, the duration or the distribution of these deficits, nor is there any way of predicting the exact circumstances in which they arise".

¹³ "The former links international liquidity directly with the amount available in monetary gold: this quantity may either be insufficient or excessive depending on the circumstances; it has no more chance of meeting our needs than a suit picked at random, blindly, from the rails of a large store. The gold exchange standard is more flexible; but by linking international liquidity to the actual or imagined health of the key currencies, it is still basically erratic".

dans le courant de l'année 1961"¹⁴ (Lamfalussy, 1961a, 56).

Possible solutions were discussed by Lamfalussy in the third part of the report. He rejected several options, such as extending the gold standard to other strong currencies¹⁵, revaluing the gold price, having flexible exchange rates¹⁶ and increasing capital mobility. In Lamfalussy's view, the only all-encompassing and rational solution was the transformation of the International Monetary Fund into a real "International Central Bank". Although he was very much in favour of Keynes's ideas of a "Clearing Union", he admitted that, politically, this was not a realistic option. "Si le plan Keynes a été rejeté en 1944, alors que le souvenir de l'immense gaspillage déflationniste de 1929-36 était encore présent à tous les esprits, comment pourrait-on espérer que les hommes politiques lui réservent un meilleur sort en 1961, après l'expérience de longues périodes d'inflation?"¹⁷ (Lamfalussy, 1961a, 75). So, Lamfalussy realised that a more modest proposal was necessary. Inspired by Triffin, he proposed setting up an International Central Bank. In order to contain potential inflationary tendencies, there should be limits on its issuing powers, and especially a global ceiling on its loans.

Lamfalussy's report was the topic of intense debate at the meeting of the Société royale d'économie politique. His assertion that the crisis was imminent came in for particular criticism, not least by Kindleberger.

In later writings in the 1960s, Lamfalussy continued to stress the need to expand international liquidity as a basic condition for the functioning of the international monetary system. One of his key arguments was that international reserves had become insignificant compared to domestic liquidity in the principal countries of the Western world (Lamfalussy, 1968a, 547). He feared that a significant reduction of liquidity might have serious consequences for economic growth, with an "risque inacceptable d'un blocage du

¹⁴ "Indeed, it hardly seems possible to sustain the American deficit. Owing to the gold exchange standard, the threat of a massive conversion of dollars into gold would weigh heavily on the US Administration if the global deficit were to persist; at least at the current rate, the United States would have no more net foreign currency reserves by the beginning of 1962. Consequently, it would be forced to deflate its overall deficit, unless a radical overhaul of the international monetary system could still be carried out during the course of the year 1961".

¹⁵ In a footnote, he characterised the extent of Germany's resistance: "Quand on voit la résistance qu'oppose l'Allemagne à la *diminution* de son *surplus*, il faudrait être particulièrement optimiste pour prévoir qu'elle accepte un déficit d'une durée et d'une ampleur suffisantes pour contribuer à la solution du problème de liquidité" ("When you look at the resistance that Germany is putting up to *reducing* its *surplus*, you would have to be particularly optimistic to anticipate it accepting a deficit big enough and lasting long enough to contribute to solving the liquidity problem") (Lamfalussy, 1961a, 66, fn 1, original italics).

¹⁶ His main arguments were the dangers of destabilising speculation and the inflationary temptations of a system of flexible exchange rates.

¹⁷ "If the Keynes plan was rejected in 1944, when the memory of the tremendous deflationary wastage from 1929 to 1936 was still uppermost in everyone's minds, how can anyone expect politicians to look on it more favourably in 1961, after the experience of long periods of inflation?"

processus de la croissance, voire celui, plus grave encore, d'une dépression mondiale, étant entendu que nos économies - à tort ou à raison - se sont adaptées à un plus grand degré de liquidité"¹⁸. However, Lamfalussy was also well aware that an increase in international liquidity was not a miracle cure. Appropriate domestic policies remained necessary, "La solution effective dépendra de l'usage que les gouvernements feront de cette marge de manœuvre rétablie; elle sera toujours fonction de la mise en œuvre de politiques appropriées dont d'éventuelles modifications de taux de change"¹⁹ (Lamfalussy, 1968a, 578).

3.2 THE ACCEPTANCE OF EXCHANGE RATE FLEXIBILITY

In September 1969, with tensions in the Bretton-Woods system rising, Lamfalussy presented the sixth Per Jacobsson Lecture on the theme "The role of monetary gold over the next ten years" (Lamfalussy, 1969). It marked an important break in his view on the international monetary system, as he accepted the idea of exchange rate flexibility.

Lamfalussy's Per Jacobsson lecture was not limited to the role of monetary gold, but provided a wide-reaching analysis of the international monetary system. It contained several of his cherished themes, like the need to increase international liquidity²⁰. However, the lecture marked an important break with Lamfalussy's acceptance of exchange rate flexibility.

While Lamfalussy remained optimistic about certain aspects of the policy-making process, especially improved application of the policy mix²¹, he also observed that national trends in economic policy-making are becoming stronger and stronger. This made him more sceptical about the external adjustment process. He put forward two main arguments. Firstly, he believed, as argued in his earlier work on Europe's postwar growth patterns (Lamfalussy, 1963), that there were "vicious" or "virtuous" circles in productivity increases: "This implies that a rapid rate of growth of productivity creates conditions which lead to further rises in productivity, and vice versa: we need only consider the case of Germany

¹⁸ "unacceptable risk of holding up the growth process, or an even more serious risk of a global slump, given that our economies - rightly or wrongly - have adapted to a higher degree of liquidity".

¹⁹ "The actual solution will depend on the use that governments make of this regained margin of manoeuvre; it will always depend on implementing appropriate policies, including possible exchange rate adjustments".

²⁰ As in earlier writings, Lamfalussy also rejected a generalised system of controls on capital flows, as it would be ineffective without re-introducing restrictions on trade in goods and services.

²¹ "Some definite progress has been made recently in the proper use of the "policy mix". ... We have the impression therefore that governments will, in the future, pay more attention to ensure that the two policies are applied simultaneously or at least in a co-ordinated way (Lamfalussy, 1969, 19).

and Japan, in one sense, and that of Great Britain, in the other" (Lamfalussy, 1969, 20). Secondly, Lamfalussy had lost his faith in wage and income policies²². The combination of the two elements showed "the extreme fragility of any hopes of an adjustment based on the gradual changes of relative unit costs" (Lamfalussy, 1969, 20).

So, in Lamfalussy's view, the greater openness and interpenetration of the Western economies were conflicting with the increasing divergence in economic developments in the different countries. The only way out for Lamfalussy was the acceptance of exchange rate flexibility: "I suggest that a large part of our problems have been brought about by this divorce between the fundamental interpenetration of our economies and the persistence and strengthening of social and political trends in individual countries. ... This is why I believe so strongly that, in order to reconcile these two fundamental trends, both of which are facts of life, we have to find some sort of compromise, and I cannot see any other compromise than a greater flexibility in exchange rates" (Lamfalussy, 1969, 7).

3.3 THE NEED FOR POLICY COORDINATION

The beginning of the 1970s saw the breakdown of the Bretton-Woods system. Over the weekend of 13 August 1971, the Nixon administration suspended the gold convertibility of the dollar. Extensive negotiations culminated in the Smithsonian Agreement of December 1971, with a general realignment of parities and a widening of the fluctuation bands. The new arrangement did not end the speculation. At the end of February 1973, a new climax was reached. On 1 March, the international currency markets were closed again, this time until 19 March. Thereafter currencies were left to float freely.

Officially, this meant the end of the dollar standard. In reality, however, the dollar held its ground and even extended its influence (Van der Wee, 1986, 493). World reserves were increasingly expressed in dollars and the greenback remained important as an intervention currency too, while continuing to play a dominant role on the international capital markets. So, the dollar remained the main international currency. The "exorbitant privilege" continued. Too much US liquidity and the US balance of payments deficit remained a key problem for the world economy, certainly in Lamfalussy's opinion.

For Lamfalussy, the US balance of payments deficit was always a very dangerous imbalance in the world economy. However, there was a shift in his concerns. In the early 1960s, he feared that the US would follow deflationary policies to bring it back under

²² In "*The UK and the Six*" (Lamfalussy, 1963) he was very optimistic on wage policy. Already in an earlier paper Lamfalussy had formulated doubts about wage policies.

control. From the end of the 1960s onwards, he was concerned that the US was not taking corrective measures (as symbolised by the remark of Nixon's finance minister Connally, "The dollar is our currency and your problem"). He feared that the deficit was leading to economic distortions and protectionist calls in the US. Moreover, it was pumping too much liquidity in the world economy, contributing to low interest rates and excessive credit growth and risk-taking, a fundamental factor behind financial crises, like the 1982 Latin American debt crisis and the 2008 global financial crisis.

As mentioned above, Lamfalussy was at the Bank for International Settlements from January 1976 onwards. An important topic of discussion at the BIS and the EEC Committee of Governors was the US dollar. The continued weakness of the dollar in the second half of the 1970s (the time of the Carter presidency) was a major preoccupation for Lamfalussy: "la persistance de la faiblesse du dollar serait susceptible de créer un désordre général sur les marchés des changes, car on ne conçoit pas que la dépréciation persistante d'une monnaie aussi largement détenue dans le monde entier puisse être 'ordonnée', si l'on en juge notamment par les événements qui se sont produits dans le passé pour la livre sterling"²³ (Minutes of the 120th Meeting of the Committee of Governors, 11/04/1978, NBBA).

In the 1977 BIS Annual Report (p. 4), Lamfalussy was critical of the US balance of payments deficit. In the introductory chapter, the US current account deficit was singled out as the most important risk in the world economy: "There remain, of course, ample grounds for concern. Firstly regarding the possible size of this year's US current-account deficit. While in the present circumstances such a deficit contributes to world recovery and facilitates the adjustment process elsewhere, it is in no one's interest that it should reach excessive proportions or become lasting. It would be a grave mistake to believe, merely because the dollar floats, that the state and the structure of the US balance of payments simply do not matter. A deep US current-account deficit, even if it were offset by capital imports, could not be a permanent arrangement; and much less so since in fact it is not"²⁴. These remarks caused something of a stir in the central banking community. Bundesbank President Otmar Emminger did not share Lamfalussy's criticism: "On peut regretter toutefois les critiques qui ont été exprimées à l'égard du déficit américain par la BRI dans son dernier rapport annuel"²⁵ (Minutes of the 113th Meeting of the Committee of Governors, 12/07/1977, NBBA).

²³ "the continuing weakness of the dollar may be likely to cause general disruption on the foreign exchange markets, because it is not conceivable that the persistent depreciation of a currency as widely held as that throughout the world could be 'orderly', at least if events with the pound sterling are anything to go by".

²⁴ Low US interest rates in the second half of the 1970s contributed to the Latin American debt build up and the ensuing 1982 debt crisis, see Maes, 2011.

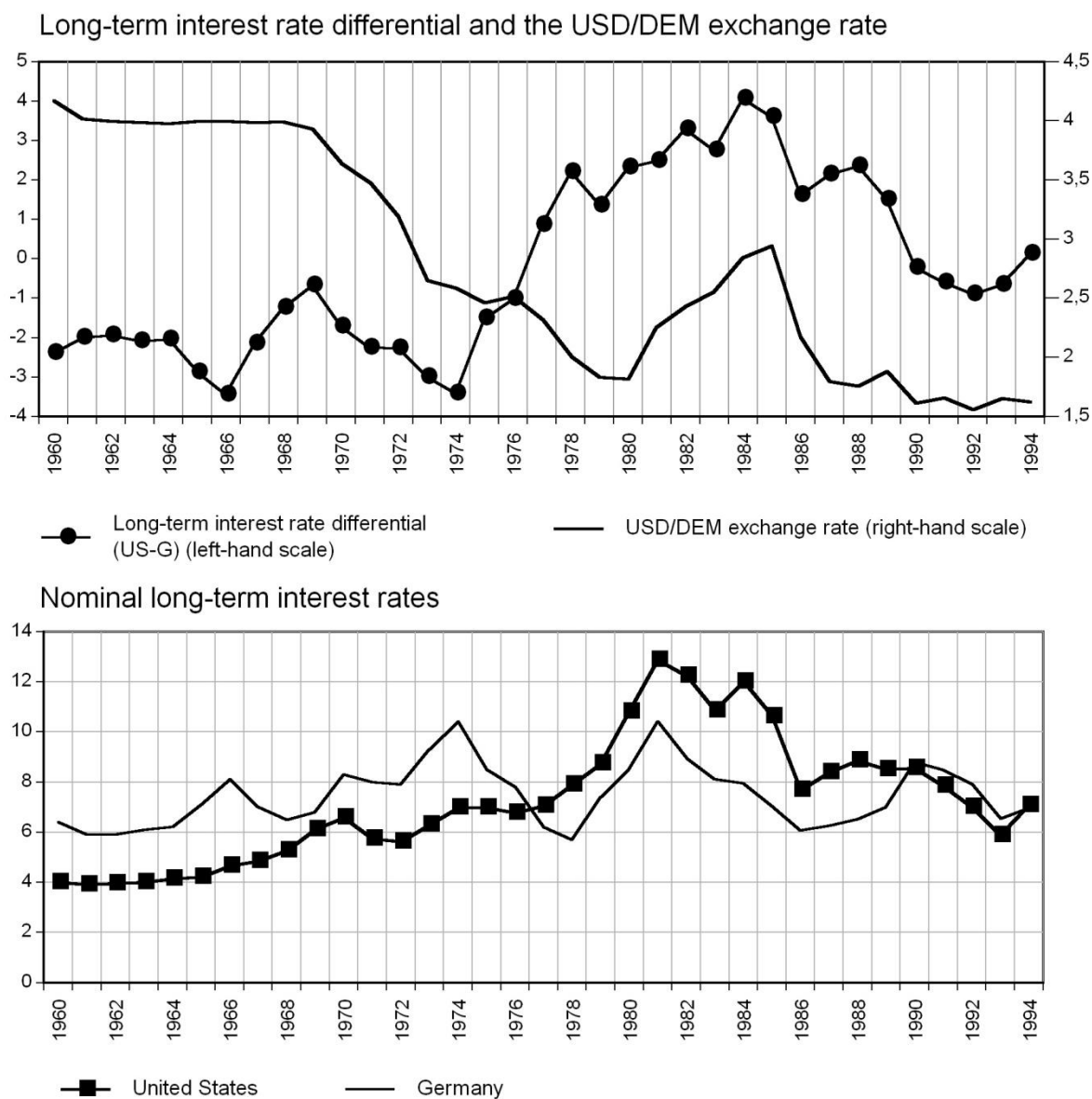
²⁵ "The criticism about the American deficit voiced by the BIS in its latest Annual Report is regrettable".

At the beginning of the 1980s, with the sharpening of US monetary policy under Paul Volcker, the situation on the foreign exchange markets started to change, with the dollar appreciating. The EEC Governors spent a lot of time discussing these new developments. Lamfalussy argued that the relationship between interest rates and the dollar exchange rate had changed significantly between 1979 and 1980: "En effet, alors que, pendant toute l'année 1979, les mouvements des cours de change du \$EU vis-à-vis des monnaies européennes ont été négativement corrélés avec ceux des différentiels de taux d'intérêt (par exemple, entre juin et décembre 1979, le différentiel de taux d'intérêt a eu tendance à augmenter mais le dollar EU n'a cessé de se déprécier vis-à-vis du DM), on observe à partir de février 1980 une corrélation positive marquée ... la corrélation positive ... semble s'expliquer par une modification radicale des attentes en matière de taux de change"²⁶. For Lamfalussy, the change in exchange rate anticipations was related to the change in the conduct of US monetary policy, whereby the Fed, under the presidency of Paul Volcker, had introduced monetary targeting, "une nouvelle méthode de contrôle monétaire depuis octobre 1979. Les marchés ont du mal à interpréter les développements monétaires et, si la nouvelle technique monétaire n'a pas rétabli la confiance dans le dollar, elle a eu tendance à brouiller les attentes et à créer une incertitude qui est encore accentuée par la perspective de l'entrée en fonction de la nouvelle administration ... Toutefois, le souvenir d'un mark fort est encore assez présent pour qu'une grande incertitude se manifeste à l'égard de l'évolution de son taux de change"²⁷ (Minutes of the 151th Meeting of the Committee of Governors, 13/01/1981, NBBA).

²⁶ "While, throughout the year 1979, movements in the US\$ exchange rate against European currencies had a negative correlation with movements in interest rate differentials (between June and December 1979, for example, the interest rate differential tended to increase, but the US dollar did not stop depreciating against the DEM), from February 1980 onwards, a significant positive correlation was observed ... that positive correlation ... seems to be explained by a radical shift in exchange rate expectations".

²⁷ "A new method of monetary control since October 1979. The markets are finding it hard to interpret monetary developments and, while the new monetary technique has not restored confidence in the dollar, it has tended to blur expectations and create uncertainty that is further accentuated by the prospect of a new administration coming into office ... However, the memory of a strong Deutschemark is still sharp enough to lead to widespread uncertainty about movements in its exchange rate".

Chart 1 Interest rates¹ and the USD/DEM exchange rate² (1960-1994)



2011_Wisselkoersen_IM_Ch01f

Sources: BIS, NBB.

¹ United States: secondary market, US treasury notes and bonds, 10 years. Germany: secondary market, public-sector bonds, 7 to 15 years.

² Number of DEM for one USD.

During the first half of the 1980s, Lamfalussy became increasingly worried about the high interest rates in the US and the strong dollar, leading to exchange rate misalignments (exchange rate levels that deviate significantly from purchasing power parity), distortions and protectionist threats: "Le niveau des taux d'intérêt américains et le différentiel qu'ils

impliquent par rapport à d'autres taux d'intérêt tels que ceux au Japon et en Allemagne, suscitent des mouvements de capitaux importants. Ceux-ci provoquent une surévaluation du dollar et permettent aux États-Unis d'avoir un déficit en comptes courants dont l'ampleur n'est pas soutenable à long terme (les poussées protectionnistes aux États-Unis sont déjà une manifestation de ces effets)²⁸ (Minutes of the 175th Meeting of the Committee of Governors, 12/04/1983, NBBA). It was a crucial experience for Lamfalussy, which would greatly shape many of his later analyses, like his contribution on the coordination of fiscal policy for the Delors Report²⁹.

Lamfalussy went further into the reasons for the high US interest rates, tracing them back to the policy mix: "Sur un plan fondamental, le niveau des taux d'intérêt américains relève d'une explication traditionnelle qui met en évidence le dosage relatif des politiques. La politique budgétaire et fiscale des États-Unis est manifestement expansionniste ... Il s'en suit que les marchés financiers adoptent une attitude qui a pour résultat le maintien des taux d'intérêt, en particulier à long terme, à des niveaux exorbitants"³⁰. He further discussed the most appropriate policy mix for the future: "la politique monétaire pourrait-elle être relâchée? La Réserve Fédérale, depuis novembre 1982, semble avoir fait à peu près tout ce qu'elle pouvait dans ce sens. Toutefois, sa liberté d'action paraît être limitée par l'importance donnée à l'évolution des agrégats monétaires, ... qui est observée de très près par les marchés financiers et les agents économiques et est marquée actuellement par une forte croissance ... En conclusion, la seule modification appropriée de la "policy mix" devrait porter sur la politique budgétaire américaine et même s'il s'agit d'une constatation banale, la voix des Gouverneurs pourrait se faire entendre"³¹ (Minutes of the 175th Meeting of the Committee of Governors, 12/04/1983, NBBA).

In several presentations made in 1983, the tenth anniversary of floating, Lamfalussy expressed his concerns about freely floating currencies. He started observing that there had been "greater, more frequent and more 'erratic' fluctuations in exchange rates than

²⁸ "The level of American interest rates and the spread that they imply in relation to other interest rates such as those in Japan and Germany are giving rise to major movements of capital. These are causing an overvalued dollar and enabling the United States to run a deficit on current account that is too high to be sustainable in the long term (protectionist pressures in the United States are already a reflection of these effects)".

²⁹ High US interest rates were also one of the causes of the 1982 Latin-American debt crisis.

³⁰ "Basically, there is a conventional explanation for the level of American interest rates which highlights the policy mix. The United States' budget and fiscal policy is obviously expansionist ... Consequently, the financial markets adopt an attitude that results in interest rates, and particularly long-term rates, being kept at exorbitant levels."

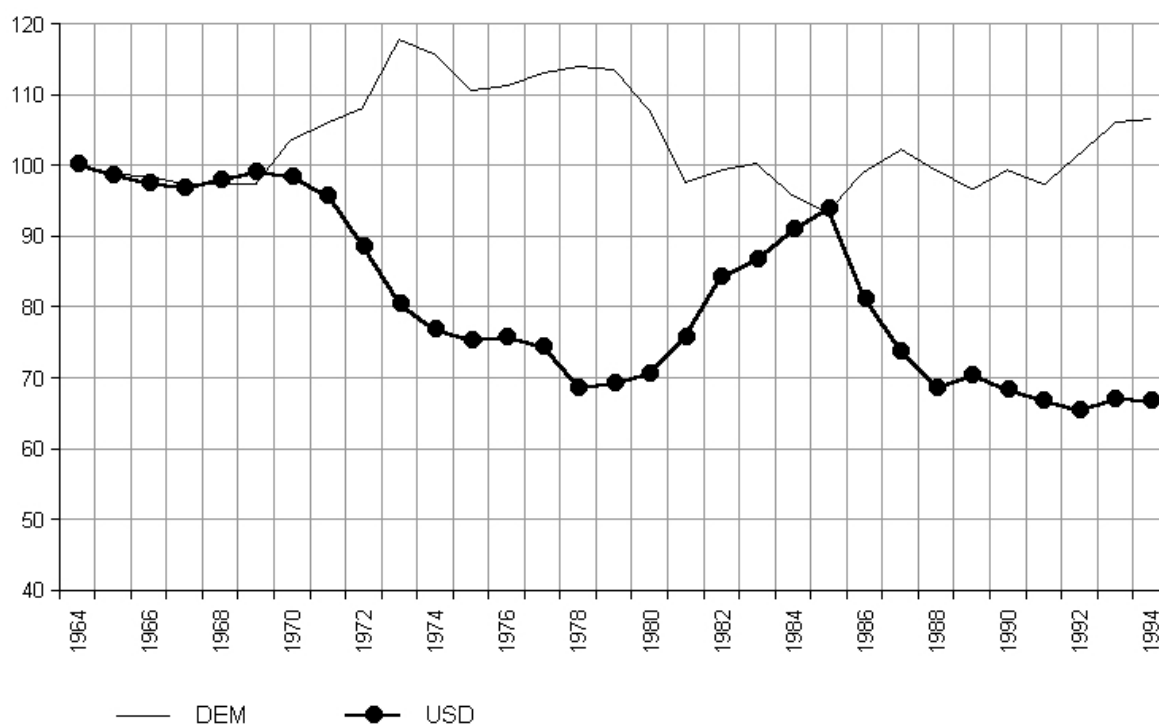
³¹ "could monetary policy be relaxed? Since November 1982, the Federal Reserve seems to have done more or less everything it could to this end. However, its margin for manoeuvre appears to be limited by the importance attributed to changes in monetary aggregates, but such trends are watched very closely by the financial markets and economic agents and the current trend is one of strong growth ... By way of conclusion, the only appropriate change in the "policy mix" would concern US fiscal policy and even if this is quite a run-of-the-mill observation, the Governors' voice could be heard".

anybody ever predicted ... The end result is always the same: there have been lasting and substantial movements in real effective exchange rates" (see Chart 2, as well as Kenen, 1988, or Krugman, 1989). Lamfalussy further observed that "the exchange rate is the most important 'relative price' in the economy - its importance growing with the degree of 'openness' of the economy - and therefore had an appreciable impact on a wide number of market participants. It is more important than, for instance, the price of energy". This had serious consequences for a country which is exposed to an appreciation of its exchange rate: "The easily foreseeable result is an upsurge of protectionist pressures: one need only consider what is currently happening in the United States. This experience has also to be set against the earlier hopes of free floaters. It is the irony of the history that the second of the arguments in favour of floating was precisely that of avoiding protectionism induced by exchange rates being kept artificially high. But there is nothing 'artificial' about the current value of the dollar, since the dollar is not pegged by the authorities" (Lamfalussy, 1983).

The EEC central bank governors also discussed the issue of interventions on the foreign exchange markets (in fact, the Bundesbank intervened in January 1984). However, there was a general consensus that, without the participation of the United States, interventions did not have much chance of being successful, "En effet, seules des interventions concertées des grandes banques centrales du monde, y compris la Réserve Fédérale, pourraient influencer les cours et démontrer aux marchés qu'ils ne sont pas entièrement maîtres du jeu. L'abstention des américains ou leurs interventions rares et très limitées qui sont plutôt contre-productives, amènent à être très réservés sur l'utilité d'interventions régulières et importantes"³² (Minutes of the 182nd meeting of the Committee of Governors, 10/01/1984, NBBA). In fact, it was not until September 1985, with the Plaza Agreement, that there was more policy coordination, with concerted interventions, to drive down the dollar.

³² "Indeed, only concerted interventions by the world's major central banks, including the Federal Reserve, might influence rates and show the markets that they are not entirely in control of things. The non-participation of the Americans or their rare and very limited interventions that tend to be rather counter-productive lead to considerable reservations as to the usefulness of large and regular interventions".

Chart 2: Real effective exchange rates¹ (1964-1994)



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Source: BIS.

¹ Effective exchange rates (27 countries), consumer price index based, 1964=100.

Also after the Plaza and Louvre Agreements, Lamfalussy voiced his concerns about exchange rate misalignments, saying that "Such deviations are likely to foster large, undesirable and unsustainable current-account imbalances, with potentially damaging consequences for the 'real' economy" (Lamfalussy, 1987, 105). He feared a protectionist backlash and argued in favour of coordinated policy actions: "Lack of control of developments in these fields could lead to mounting political pressure in favour of retreating from trade or financial liberalisation, or from both - as is demonstrated by the current revival of protectionism. To combat such a danger, policy co-ordination is essential. But it is not easy to devise this; and it may on occasion be even more difficult to enforce it" (Lamfalussy, 1987, 117). In Lamfalussy's view, international policy cooperation has "conspicuously lagged behind the pace of private market integration in both the real

and financial spheres. We are much better at crisis handling than at crisis prevention" (Lamfalussy, 1989c, 99)³³.

4 A CONVINCED ADVOCATE OF EUROPEAN MONETARY UNION

4.1 ON THE ORIGINS OF LAMFALUSSY'S EUROPEAN CONVICTIONS

Alexandre Lamfalussy has always been a convinced pro-European. In his preface to his book on Europe's postwar growth patterns, he clearly admits this "value judgment": "I do believe that the Common Market is a good thing, that 1st January, 1958, is a turning point in Western European history" (Lamfalussy, 1963a, p. ix).

During his student days in Louvain, Lamfalussy was active in the "Cercle Européen" and the "Nouvelles équipes internationales" (the European Christian Democratic movement), together with several friends, like Emile Koutny, Emile Quevrin, Fernand Herman (later a Member of the European Parliament), Hugues Leclercq and Albert de Schaetzen³⁴. For them, European integration was a very profound conviction, which had a special dimension for Lamfalussy, as he had just escaped from Hungary, at the other side of the iron curtain. They were genuinely asking the question: what can we do? They were convinced that it was necessary to break down the barriers which divided Europe. In their view, European integration should be a stimulus to get the economy out of its stagnation. Moreover, while the economic motive was important, there was also a clear cultural dimension, as one felt one belonged to a common cultural heritage³⁵.

Lamfalussy also attended a meeting of the "Nouvelles équipes internationales" in Saarbrücken, a symbolic city on the Franco-German border (a clear expression of the participants' conscience of involving Germany in European integration). Kaiser (2007, 302) argued that the Christian Democrats' fundamental aim was to create a "tamed Europeanised nation-state embedded in a supranational constitutional system". Their ideas were drawn from their shared confessional and regional identities and their

³³ The need for international policy coordination in order to avoid exchange rate misalignments would remain a constant theme of Lamfalussy: "there is a strong case in favour of policy co-ordination in such a highly integrated world in which individual countries, even the very large ones, cannot isolate themselves from outside influences ... The actual or potential costs of the resulting exchange rate misalignments and external imbalances are substantial. They include the misallocation of resources, a climate of uncertainty which is the worst enemy of investment, the re-emergence of trade protectionism, and even financial protectionism, in the deficit countries, and instability in the financial markets" (Lamfalussy, 1993, 36).

³⁴ The "Cercle Européen" was very active, with weekly meetings and events.

³⁵ Several of them, including Lamfalussy himself, would later become members of "La Relève" (both a political club and a weekly magazine) close to the left wing of the Belgian Christian Democrat party (Persoons, 1975). It is also noteworthy that the keynote speaker at the conference for the 30th anniversary of La Relève, on 29 November 1975, was Jacques Delors.

opposition to the "centralised liberal and socialist nation-state" (which the Second World War had seriously discredited)³⁶. The European integration project was to a significant extent shaped by Christian Democrats, with politicians such as Schuman, Adenauer and de Gasperi playing a leading role. It constituted market-based integration with limited state intervention and with elements of a supranational Europe³⁷.

Moreover, Lamfalussy was influenced by Dupriez, his teacher, who was involved in studies for the High Authority of the European Coal and Steel Community. Dupriez was also a member of the "Groupe de Recherches sur les Conditions et les Conséquences sociales du Progrès technique", which was chaired by Jean Fourastié (Dupriez, 1960). This involved several studies on the coal and steel industries. As Dupriez's assistant, Lamfalussy thus became professionally involved in European economic integration studies as well.

4.2 EARLY WRITINGS ON EUROPEAN MONETARY INTEGRATION

In the concluding chapter of *The United Kingdom and the Six*, Lamfalussy argued that the EEC had transformed the macroeconomic policy framework in the countries of the Community: "we have tended to overlook that the E.E.C. is not only a customs union, but has also been devised as an organization for co-ordinating the economic policies of its member countries. Articles 2, 3, 103 and 105 of the Rome Treaty are most explicit on this point" (Lamfalussy, 1963a, 130).

In this work, Lamfalussy was optimistic about the future of the EEC and argues that it is quite possible that it will be easier to deal with payments imbalances within the Community, thanks to the new institutional framework which the EEC provides. He argues that an asymmetric adjustment to balance of payments imbalances might be avoided: "If the surplus countries can be persuaded to expand their home demand at the same time as the deficit countries deflate their own economy, the balance can be restored without undue damage to the rate of growth of the Community as a whole. We do not know what

³⁶ "The roots of transnational Christian democracy's broad constitutional ideas and preferences for European integration were embedded in their largely shared collective experience of the overbearing centralised liberal nation-state, their regional political anchoring and identity, their preferences for societal - and political - organisation in line with the principle of subsidiarity derived from Catholic social teaching and federalist thought as it largely developed inside the intellectual tradition of personalism - and this combined with the borrowing of essentially liberal interwar ideas about functional market integration as a suitable mechanism for eventually bringing about political integration as well" (Kaiser, 2007, 10). So the Christian Democrats' ideas constituted a kind of "pincer movement" on national sovereignty, based on the subsidiarity idea.

³⁷ Initially, the Christian Democrats were more interventionist-oriented. However, especially in Germany under the influence of Erhard, they soon returned to more traditional market-oriented policies (Kaiser, 2007, 177).

will be the *degree* of success achieved by the Community authorities in their co-ordinating activity; but it is certain that the existence of an administrative machinery and of an institutional framework (already successful in other fields) will improve the ability of the area to deal with such problems" (Lamfalussy, 1963a, 131)³⁸.

Lamfalussy was in favour of strengthening monetary integration, very much in line with Triffin's plea for a European Reserve Fund³⁹, "*A fortiori*, the organization of common monetary institutions could be of great help in coping with possible balance of payments problems of the Community. For instance, the pooling of gold and foreign exchange reserves would greatly strengthen the E.E.C.'s resilience to export-induced recessions" (Lamfalussy, 1963a, 131-132). However, Lamfalussy takes a more balanced position than Triffin, not only in favour of monetary integration, but arguing that policy coordination is necessary too: "the prerequisite to a successful pooling of reserves is the effective co-ordination of economic policies"⁴⁰. This contrasts with Triffin (1957), who argued that "Monetary unification would not require, in any manner, a full unification of national levels of prices, costs, wages, productivity, or living standards. ... Neither does monetary unification require a uniformization of the budgetary, economic, or social policies of the member countries. ... The problem of monetary unification is therefore a political rather than an economic problem". At the time, Lamfalussy was hopeful that policy co-ordination could be accomplished, pointing out that "the smooth working of the E.E.C. institutions during the first five years of their existence (be it the result of good luck or of good management) has provided a safe and practical basis for a policy of enlightened co-operation" (Lamfalussy, 1963a, 131-132)⁴¹.

³⁸ A rather optimistic assessment. Asymmetric adjustment and the sharing of the burden of adjustment would be key themes in European monetary integration debates in the following decades, as they still are now. However, it was in line with some of the prevailing ideas of the time. For instance, in 1962, the European Committee proposed a plan for EMU (see Maes, 2006).

³⁹ See, for instance, Triffin, 1958, or the Annexes 4 to 8 in Ferrant and Sloover, 1990. For a general overview of the idea of a European Reserve Fund, see Maes and Buyst, 2004.

⁴⁰ This advocacy of symmetry between the monetary and economic dimension was a rather constant feature in the work of Lamfalussy (see also Lamfalussy, 2008). The debates on European monetary integration are well known as the controversy between the "monetarists" and the "economists". The "monetarists", with France as a dominant player, were in favour of plans for greater exchange rate stability and exchange rate support mechanisms, including the establishment of new European (monetary) institutions. They saw a driving role for European monetary integration in the process of economic and, also, political integration of Europe. The "economists", under the leadership of Germany, emphasised the new monetary order to be created. The coordination of economic policies and the convergence of economic performances, especially inflation, were a precondition for EMU. According to their view, monetary union could be only the last and crowning phase in the process of economic integration (coronation theory). The various European projects regarding monetary integration were largely a synthesis of, and a compromise between, these two schools of thought.

⁴¹ However, compared to his earlier writings, Lamfalussy is becoming more sceptical about the possibilities of successful wage and incomes policies, "The need for such policies is clearly recognized in most member countries but there is a long way from this recognition to an effective brake on the rise in wages" (Lamfalussy, 1963, 15).

4.3 EUROPE'S FIRST ATTEMPT AT MONETARY UNION

At the Hague Summit in December 1969, EMU became an official objective of the European Community. The October 1970 Werner Report provided a first blueprint for EMU. However, also with the turbulence in the international monetary system and the oil shocks, not much progress was made in the ensuing decade. At the same time, Lamfalussy was wrestling with the question of how it might be possible to make progress with European monetary integration.

In September 1971, Lamfalussy gave a presentation for the Belgian Financial Forum on the topic of European monetary integration. Arguing his case on the basis of his "sentiments de banquier" (banker's instincts), he rejected a system of floating exchange rates, mainly because it created incentives for lax economic policies and caused uncertainty: "J'avoue très humblement qu'alors que tous mes instincts et tous mes raisonnements d'économiste me poussent vers un système de taux de change flottants et que je trouve ce système raisonnable, tous mes instincts de banquier me poussent exactement dans l'autre sens"⁴² (Lamfalussy, 1971, 15)⁴³.

Foreshadowing the Mundell-Fleming-based "impossible triangle" thesis⁴⁴, Lamfalussy argued that monetary integration was in the logic of the European integration process. "Simultanément, l'intégration économique exige aussi la liberté complète des mouvements financiers. Et la coexistence des deux: la fixité, la rigidité des taux de change sans aucune marge ou dans une très petite marge avec les mouvements de capitaux, équivaldrait pratiquement à une intégration du système monétaire. *Par conséquent nous devons adopter comme thèse de base, l'établissement d'un système de parité rigide à l'intérieur de la Communauté*"⁴⁵ (Lamfalussy, 1971, 15, original italics).

Lamfalussy was well aware that the international environment, with increased exchange rate instability and a stronger emphasis by governments on their own national policy objectives, was not favouring European monetary integration. Moreover, Lamfalussy was

⁴² "I must admit very humbly that while all my instincts and all my reasoning as an economist steer me towards a system of floating exchange rates and I find this system quite sensible, all my banker's instincts push me precisely in the other direction".

⁴³ When presenting Lamfalussy, Robert Henrion quoted Keynes, "Quand un banquier indique qu'il a un sentiment, je le suis volontiers, mais lorsqu'il se met à penser, je le fuis" ("When a banker indicates that he has an instinct, I am willing to follow him, but when he starts to think, I run") (in Lamfalussy, 1971, 3).

⁴⁴ The so-called "impossible triangle", indicating that it is impossible to have free movement of capital, fixed exchange rates and an autonomous monetary policy at the same time, was quite popular among finance ministry officials and central bankers in the second half of the 1980s (Maes, 2002, 148).

⁴⁵ "At the same time, economic integration also requires complete freedom of financial movements. And the coexistence of the two elements: fixed and rigid exchange rates (with no margin or only a very small margin) alongside capital movements would be practically tantamount to monetary integration. *Consequently, we must adopt as a basic postulate the establishment of a system of fixed exchange rates within the Community*".

convinced that a monetary union was only viable with profound changes in the economic policy framework, implying a centralised European economic government and, thus, massive transfers of sovereignty. "Il ne suffit pas d'harmoniser les politiques conjoncturelles, il ne suffit pas d'harmoniser les moyens d'assurer la fiscalité - ce sont là choses très importantes, mais c'est insuffisant. Il faut créer un marché financier unique, il faut instaurer un gouvernement central avec prélèvements fiscaux et dépenses sociales unifiés"⁴⁶ (Lamfalussy, 1971, 20)⁴⁷.

So, as reflected in his earlier work⁴⁸, Lamfalussy was convinced that monetary integration should go hand in hand with progress in economic policy coordination, a fairly balanced position in the "monetarist" versus "economist" debate. However, in his conclusion, Lamfalussy took a rather "fuite en avant" ("forward-flight") approach, favouring a "monetarist" approach: "Commencer l'intégration monétaire, ... que les taux de change deviendront de plus en plus stables, que les marges commenceront à diminuer, eh bien, on sera engagé dans le processus. Et c'est à ce moment-là qu'on devra exécuter les changements institutionnels. Pourquoi? Parce que c'est à ce stade qu'on sera littéralement condamné à réussir, qu'on sera forcé de réaliser ces changements; qu'on se trouvera devant des situations de déséquilibre interne dans la balance des paiements qui mettront en route ces modifications institutionnelles; que la vie économique elle-même créera les contraintes, les obligations, qui briseront les résistances"⁴⁹ (Lamfalussy, 1971, 22). The crucial factor is that Lamfalussy cannot accept the status quo. He wanted to go forward with the process of European integration, which was for him a very profound conviction: "je n'accepte pas le statu quo, ... je crois que l'Europe a dans son destin d'être unifiée, que ce sera une bonne chose pour les Européens et aussi pour le reste du

⁴⁶ "It is not enough just to harmonise cyclical policy, nor is it enough to harmonise taxation - and these are very important things, but it is not enough. There is a need to create a single financial market, set up a central government with standardised fiscal levies and social security expenditure".

⁴⁷ Answering a question, Lamfalussy also mentions that his views were quite close to the ones of the Werner Report, "Je crois que le plan Werner est un plan qui ne dit pas entièrement ce qu'il implique. Et peut-être cela vaut-il mieux ainsi. Mais je crois que l'instauration graduelle d'une certaine fixité des taux de change est tout de même une idée du plan Werner. Ce qui n'y est pas, si vous voulez, ce sont les conséquences fondamentales sur le plan institutionnel. Et je crois, ... que c'était peut-être une bonne chose de ne pas le dire aussi clairement. Mais il n'y a pas, me semble t-il, une différence tellement frappante entre l'optique du plan Werner et la mienne" ("I think that the Werner Plan is a plan that does not say entirely what it means. And perhaps it is better like that. But I believe that the gradual establishment of a certain degree of exchange rate fixing is nevertheless one of the Werner Plan's ideas. What isn't, if you like, are the fundamental consequences in institutional terms. And I think ... that it was perhaps a good thing not to say it out loud like that. But it seems to me that there is no really striking difference between the Werner Plan's angle and mine") (Lamfalussy, 1971, 23-24).

⁴⁸ See also Lamfalussy (1968b).

⁴⁹ "Starting monetary integration ... exchange rates will have to become more and more stable, the margins will have to start narrowing, and there you are, we will be entering into the process. And that is the moment when it will be necessary to make the institutional changes. Why? Because it is at this stage that we will literally be condemned to succeed, forced to carry through these changes; that we will find ourselves faced with situations of internal balance of payments disequilibrium which will set these institutional changes in motion; and that economic life itself will create constraints, obligations that will break down the resistance".

monde. C'est une vérité difficile à démontrer, mais c'est en tout cas un acte de foi de ma part"⁵⁰ (Lamfalussy, 1971, 21).

4.4 THE EMU PROJECT AND THE MONETARY STORMS OF THE 1970S

In August 1974, Lamfalussy presented the introductory paper in the session on monetary and fiscal integration at the congress of the International Economic Association in Budapest. He focused his presentation on monetary integration in the EEC. However, these were dire times for European monetary integration. Lamfalussy also had to admit that "we have gone backward, rather than forward in monetary matters" (Lamfalussy, 1976, 220).

With his background as a commercial banker, Lamfalussy was critical of the European exchange rate agreement, the so-called snake: "Personally, I have always thought that such an agreement was somewhat spurious, in that it gave all market parties an illusion of stability. The purpose, of course, was to achieve real stability, but this cannot be expected from an arrangement setting a limit to *continuous* exchange-rate movements while leaving the way open for *discontinuous*, and possibly large, parity changes. If I have left myself without forward cover and incur an exchange loss because the Deutschmark central rate is revalued against the Belgian franc, it is small consolation to me that this revaluation has in fact not infringed the rules of the Community 'snake'"(Lamfalussy, 1976, 219)⁵¹.

The core of the paper was a discussion of whether the European Community constituted an optimum currency area or not. Lamfalussy had to admit that several conditions for the creation of an optimum currency area were not fulfilled, "This applies, in the first place, to intra-Community mobility of factors of production and, hence, to the formation of factor prices compatible with the existence of a currency area" (Lamfalussy, 1976, 223). Also a second condition, that its member countries should have a fairly similar "inflation propensity", was not met: "In this there are very wide divergences among European countries and these divergences matter all the more as inflation gathers pace throughout the world" (Lamfalussy, 1976, 224). However, in Lamfalussy's opinion, there were arguments that were "weighty enough to win the day". His first argument was that foreign-

⁵⁰ "I don't accept the status quo, ... I think it is in Europe's destiny to be unified, and that it will be a good thing for Europeans and also for the rest of the world. It is a fact that is hard to prove, but in any case, it is an act of faith on my part".

⁵¹ "On the other hand, what does matter is the total absence of any sort of *common* policy with respect to the numerous restrictions imposed on capital movements in the current battle against speculative, or "hot", money. European central banks have assembled an impressive arsenal for this purpose, but I have been unable to find one single weapon anywhere that makes a distinction between capital originating in other EEC countries and capital from elsewhere" (Lamfalussy, 1976, 219).

trade integration among the member countries of the EEC had expanded rapidly, which had increased the degree of openness of the EEC countries. Secondly, there was the question whether the customs union had any chances of survival without monetary union, "My instinct is to say no" (Lamfalussy, 1976, 224). Thirdly, there were the negative effects of intra-Community exchange-rate fluctuations. Fourthly, Lamfalussy argued that the international monetary crisis constituted an argument in favour of "transforming the EEC into a currency area" (Lamfalussy, 1976, 226).

However, notwithstanding all his arguments, Lamfalussy admitted that, because of the turbulences in the world economy and the absence of political will, it was not the right moment to stick to the exchange rate mechanism, "In these circumstances, I regard the open and free floating of European currencies against each other as the lesser evil compared with the efforts to keep the diminished snake alive, because (a) if the snake survives, it will tend to create a Deutschmark zone, which would have serious political drawbacks; and (b) if the snake perishes, in spite of all efforts to keep it alive, then the idea of a concerted policy of central banks, which even now is open to a good many doubts, will be discredited for ever" (Lamfalussy, 1976, 227). He argued in favour of structural reforms in order to create the structural conditions for the establishment of a currency area, "These reforms should not stop short at the simple slogan of 'co-ordination of monetary and fiscal policies'; they should go deeper and prepare the way for a process of optimal adjustment of interregional balances of payments" (Lamfalussy, 1976, 227)⁵².

4.5 LAMFALUSSY AND THE EMS

By taking part in the meetings of the Committee of EEC Central Bank Governors, Lamfalussy obviously followed the discussions on European monetary integration very closely. He and his staff were also involved in the preparations for the new European Monetary System⁵³.

In Lamfalussy's view, there were close interrelations between the international monetary system and the process of European monetary integration. He was therefore at pains to stress the interaction between movements of the dollar and European exchange rate troubles, "M. Lamfalussy indique que si l'on regarde l'histoire des tentatives d'intégration

⁵² Lamfalussy did not like a parallel currency approach, like the "Europa" proposal (letter to Magnifico, 30 June 1976, BISA 7. 18(15) LAM 7/Fo 18).

⁵³ For instance, when discussions about pegging the European currencies to a basket of currencies started in the second half of the 1970s, he asked a member of the BIS staff, Gunter Baer (later a rapporteur to the Delors Committee), to investigate the issue (a summary of the paper was later published as Baer, 1979).

monétaire dans la Communauté, on constate que la faiblesse du dollar a joué régulièrement un rôle destructeur. Les échecs de ces tentatives tiennent certes aux divergences entre les États membres, mais ces divergences ont été exacerbées par la faiblesse du dollar qui produit des effets différenciés sur les économies européennes"⁵⁴ (Minutes of the 120th Meeting of the Committee of Governors, 11/04/1978, NBBA).

Initially, Lamfalussy was relatively sceptical about the impact of the creation of the EMS. In a paper on the consequences of the EMS for the international monetary system, prepared for the Trilateral Commission, he sounded very much like in his early analyses of the lack of liquidity in the world⁵⁵. Lamfalussy argued that the EMS would add little or nothing to international liquidity as central banks would merely swap part of their dollar and gold holdings for ECUs. Moreover, he feared that the role of the ECU would remain limited. Consequently, "the EMS is very unlikely to exert any strong influence on the rest of the world either by creating international liquidity or by developing a new kind of reserve asset available for third-country central banks" (Lamfalussy, 1979, 2). In his view, the use of the ECU would only take off if the European Monetary Fund "were to play the role of a genuine European central bank" (Lamfalussy, 1979, 7).

Over time, Lamfalussy became more optimistic on the EMS, He observed that the realignments were transforming the EMS into a "crawling peg", but this was not necessarily "a failure for the EMS", "En effet, dans la mesure où celui-ci entérine les différentiels d'inflation et maintient les cours de change réels entre les monnaies participantes, il évite le problème majeur du système de flottement généralisé, à savoir les très grands écarts par rapport à l'évolution des parités de pouvoir d'achat qu'on observe par exemple pour le dollar et le yen"⁵⁶ (Minutes of the 175th Meeting of the Committee of

⁵⁴ "Mr Lamfalussy points out that if we look at the history of attempts at monetary integration in the Community, it can be seen that the weakness of the dollar has regularly played a destructive role. The failures of these attempts are certainly due to divergences between the Member States, but these divergences have been exacerbated by the weakness of the dollar which has differing effects on the European economies".

⁵⁵ As is well known in the economic literature, liquidity has always been a difficult concept. In the international economy, the concept of liquidity has also evolved significantly. Traditionally, the term "international liquidity" tended to be interchangeably with "foreign exchange reserves". However, especially since the 1970s, in the context of a more globalized economy, deeper financial markets and financial innovation, the concept has become more fuzzy, with many more potential sources of liquidity creation. Moreover, liquidity conditions are also influenced by perceptions and states of confidence or fear, as we have seen all too often in the last years.

⁵⁶ "Indeed, in so far as this confirms inflation differentials and maintains real exchange rates between participating currencies, it avoids the major problem of the system of generalised floating rates, namely very wide gaps in comparison with changes in purchasing power parities that can be observed in the case of the dollar and the yen, for example".

Governors, 12/04/1983, NNBA) ⁵⁷.

At a conference held in honour of Robert Triffin in the early 1990s, he argued that the EMS had shown a judicious balance between exchange rate constraint and exchange rate flexibility: "There has been enough flexibility to avoid real exchange rate movements of a duration and magnitude that could have led to the collapse of the System. On the other hand, the mere existence of a declared and unambiguous exchange rate commitment has exerted a lot of pressure on the behaviour of labour market participants as well as on domestic policies, as a result of which changes in nominal exchange rates have been limited" (Lamfalussy, 1993, 41)⁵⁸. Moreover, he argued that the "effectiveness of monetary policy action undertaken to counter pressure on the exchange rate is greater, and the costs involved in such policy action are smaller under a regime of fixed but adjustable pegs than under a system of floating rates". The crucial reason, for Lamfalussy, was the way that exchange rate expectations are formed, "the absence of any anchor in a floating rate system allows expectations to run wild. We have learned the hard way that the moderating influence of stabilising speculation by market participants is wishful thinking" (Lamfalussy, 1993, 42)⁵⁹.

Noteworthy, too, is the fact that Lamfalussy defended the promotion of the international role of the ECU in the Committee of Governors, "Il est probable que le système monétaire international ne reviendra plus sous la domination totale du dollar (même si périodiquement ce dernier peut réaffirmer sa position) ni sous celle de l'or. Par conséquent, le système de monnaies de réserve multiples devrait persister, voire se développer, situation en face de laquelle les pays membres de la CEE ont pris des

⁵⁷ Lamfalussy also played a significant role behind the scenes. For instance, he discussed the functioning of the EMS during a lunch with Edouard Balladur, then French Finance Minister, in the winter of 1985. One of Lamfalussy's main arguments was that the EMS was protecting German industry during periods of dollar weakness (Letter to E. Balladur, 2 December 1985, BISA, 7.18(15), LAM4/F12).

⁵⁸ One might observe that the paper was published in the midst of the crisis of the European Monetary System of 1992-1993. In September 1992, Italy and the United Kingdom had to leave the exchange rate mechanism. For both countries, the fixed exchange rate had led to losses of competitiveness and balance of payments imbalances, given their higher inflation and costs increases. Sir Alan Walters, Thatcher's economic advisor, had already argued that there was an inherent tendency towards instability in the EMS. Countries with higher inflation rates would have lower real interest rates (as joining the exchange rate mechanism would lead to a lowering of nominal interest rates), driving inflation further up (Walters was clearly putting forward the "one-size-fits-all" criticism of EMU). In a later contribution, Lamfalussy discussed at length the potential movements of real exchange rates in EMU. His conclusion was rather optimistic: "I believe that the hard discipline of a stability oriented single monetary policy will gradually steer our governments towards the required degree of co-operation - just as it will alter the behaviour of labour market participants and the pricing policies of our enterprises. The freedom of choice of all of us will be substantially constrained - in particular, the freedom to pursue irresponsible policies at all levels. Not by decree, but by market forces operating within an environment of monetary stability." (Lamfalussy, 1998, 41). With hindsight, one has certainly to admit that not sufficient attention was given to balance of payments imbalances and competitiveness issues in the economic governance framework of EMU.

⁵⁹ For Lamfalussy, the EMS was also an opportunity for European central bankers to get to know one another, a crucial condition for the success of the EMU project.

positions variables dans le temps ... L'approche communautaire à ces problèmes pourrait consister à promouvoir l'utilisation internationale de l'Ecu, approche non encore débattue d'une manière approfondie jusqu'à présent"⁶⁰ (Minutes of the 162th Meeting of the Committee of Governors, 12/01/1982, NBBA).

4.6 CONTRIBUTIONS TO THE DELORS REPORT

As the meetings of the Delors Committee took place at the BIS in Basel (after the meetings of the EEC Committee of Governors), Alexandre Lamfalussy, in his capacity as General Manager of the BIS, was, *de facto*, the host of the Delors Committee. One of his collaborators, Gunter Baer, was a Committee rapporteur, together with Tommaso Padoa-Schioppa. The BIS also provided several services, such as a secretariat, for the Delors Committee⁶¹.

While Lamfalussy was not one of the protagonists in the Delors Committee, like Delors himself or Karl-Otto Pöhl, he nonetheless played an intellectually stimulating role, in line with the work he had provided for the EEC Committee of Governors. He contributed three background studies, also with the help of colleagues and collaborators of the BIS. The first one was a more descriptive paper on the functioning of the ECU banking market (Lamfalussy, 1988). The other two concerned the coordination of fiscal policy and monetary policy operations in the second stage.

In Lamfalussy's view, fiscal policy coordination "appears to be a vital component of a European EMU" (Lamfalussy, 1989a, 93). He advanced two main reasons. The first one very much reflected his preoccupations with the policy mix on the international monetary scene: "the determination of a global fiscal policy in a way that is sufficiently responsive to evolving domestic and international requirements". The second reason foreshadowed the "binding rules on budgetary policy" in the Delors Report itself, namely, the need "to avoid tensions arising from excessive differences between public sector borrowing requirements of individual member countries".

⁶⁰ "The international monetary system will probably not come back under total domination by the dollar (even though it may periodically reassert its position) or by gold again. Consequently, the multiple reserve currency system should remain in place, and even develop further, an issue on which the member countries of the EEC have taken varying stances over the years ... The Community approach to these problems could consist of promoting the international use of the ECU, an approach that has so far not yet been debated in any depth".

⁶¹ Lamfalussy especially got to know Delors during the time that the latter was President of the European Commission and took part in meetings of the EEC Committee of Governors. Since Lamfalussy, as BIS General Manager, was also in charge of organising the dinners, he often arranged for Delors to sit next to him during the meal.

The paper had also an extensive annex, discussing the experience of federal states and the EEC. It singled out the particularity of the EEC, with a much smaller-sized Community budget. For Lamfalussy, this had far-reaching consequences, "The combination of a small Community budget with large, independently determined national budgets leads to the conclusion that, in the absence of fiscal coordination, the global fiscal policy of the EMU would be the accidental outcome of decisions taken by Member States. ... As a result, the only global macroeconomic tool available within the EMU would be the common monetary policy implemented by the European central banking system" (Lamfalussy 1989a, 101). For Lamfalussy, this had two unpalatable implications: "Even within a closed economy, this would be an unappealing prospect as it would imply the serious danger of an inappropriate fiscal/monetary policy mix and pressures tending to divert monetary policy from the longer-run objective of preserving price stability. But such a situation would appear even less tolerable once the EMU was regarded as part and parcel of the world economy, with a clear obligation to cooperate with the United States and Japan in an attempt to preserve (or restore) an acceptable pattern of external balances and to achieve exchange rate stabilization" (Lamfalussy, 1989a, 101).

While the paper put more emphasis on the external dimension than most central bank analyses⁶², it was well received by the central bank governors, not least because it was in line with the consensus view that constraints on fiscal policy were necessary for a truly independent monetary policy.

The third paper by Lamfalussy concerned a proposal for stage two, under which monetary policy operations would be centralized in a jointly-owned subsidiary. His idea was that EC central banks should set up a jointly owned subsidiary. The central banks would use this subsidiary for carrying out monetary policy operations in the financial markets. However, national central banks would remain responsible for monetary policy-making, as Lamfalussy emphasised, "Although their operations would be performed through common facilities, and hence be completely transparent to their partners, individual member central banks would retain ultimate responsibility for the deployment of their national foreign exchange reserves, and for the supply of domestic bank reserves" (Lamfalussy, 1989b, 214).

Lamfalussy admitted that the scheme could impinge on national sovereignty, as member central banks would no longer be able to hide the content of their domestic and foreign monetary operations from their EC partners. Moreover, he also admitted that there could

⁶² As mentioned earlier, Lamfalussy was heavily marked by the strong appreciation of the US dollar in the early 1980s, due especially to the US policy mix.

be a tendency, over the long run, for money markets to migrate to the country in which the "subsidiary" was located. This proposal was much less enthusiastically received by the central banks, especially the Bundesbank, which adhered strongly to the view of the indivisibility of monetary policy.

5 CONCLUSION

Alexandre Lamfalussy has been highly influential in the process of European monetary integration. He is especially well known as the first president of the European Monetary Institute, the predecessor of the European Central Bank.

In this paper, we have presented an analysis of Lamfalussy's thought on the international and European monetary system for the period from 1961 to 1993. It was a period of tremendous change, with the Werner Report, the collapse of the Bretton Woods system, monetary turmoil in Europe in the 1970s, the establishment of the European Monetary System, the Delors Report and the Maastricht Treaty as important highlights. A first and crucial element of Lamfalussy's approach to economics is close attention to the real world (like Dupriez, his teacher at Louvain). With such upheavals on the European monetary scene, it comes as no surprise that there were changes in Lamfalussy's thought.

Lamfalussy pursued a threefold career: as a commercial banker (at the Banque de Bruxelles from 1955 to 1975), a central banker (at the BIS from 1976 to 1993) and an academic. His 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, emphasising virtuous and vicious cycles. Later on, Lamfalussy (not unlike Tobin) would retain a certain scepticism about the functioning of the financial markets, becoming the main architect of the BIS macro-prudential approach. His vision of the financial markets also permeated his view of the foreign exchange markets, with a basic distrust of floating exchange rate systems.

Partly under the influence of Triffin, Lamfalussy soon became interested in international and European monetary issues. Initially, Lamfalussy advocated an increase in international liquidity and the creation of an international central bank. At the end of the 1960s, he admitted that a greater degree of exchange rate flexibility was inevitable.

For Lamfalussy, the US balance of payments deficit always remained a very dangerous imbalance in the world economy. However, there was a shift in his concerns. In the early 1960s, he feared that the US would follow deflationary policies to bring it back under

control. Gradually, from the end of the 1960s onwards, he was concerned that the US was not taking corrective measures (as symbolised by the remark of Nixon's Finance minister, Connally, "The dollar is our currency and your problem"). He feared that the deficit was leading to economic distortions and protectionist calls in the US. Moreover, it was pumping too much liquidity in the world economy, contributing to low interest rates and excessive credit growth and risk-taking, a fundamental factor behind financial crises, like the 1982 Latin American debt crisis and the present financial crisis.

The strong appreciation of the US dollar in the early 1980s, due to differences in the policy mix between Europe and the US, would mark Lamfalussy (and many other central bankers) profoundly. For Lamfalussy, it was a clear indication that flexible exchange rates could not be relied on to avoid serious exchange rate misalignments. Moreover, the period showed the dangers of exchange rate misalignments, especially strong protectionist threats. It also showed to Lamfalussy the need for international policy coordination, also in systems of floating exchange rates.

Lamfalussy has always been an advocate of a strengthening of European (monetary) integration. In the early 1960s, he favoured the creation of a European Reserve Fund, as proposed by Triffin. However, in the "monetarist-economist" debate, he took a more balanced position than Triffin, stressing the need to strengthen policy coordination as well. Like the Werner Report, Lamfalussy favoured a symmetric economic and monetary union, not only a European system of central banks, but also a European economic government, implying significant transfers of sovereignty.

Being at the BIS from 1976 to 1993, he took part in meetings of the G10 and EEC Committee of Governors and was thus at the core of the discussions on the international monetary system and European monetary integration. Lamfalussy was also a member of the Delors Committee. He made a well-noted contribution on the coordination of budgetary policies, concluding that "fiscal policy coordination appears to be a vital component of a European EMU". This was in the logic of his view as a central banker and as an advocate of a symmetric economic and monetary union. Moreover, the international monetary scene of the early 1980s had clearly demonstrated the threats to the world economy of imbalances in the policy mix.

Lamfalussy's advocacy of European monetary integration had its origin in two main sources: a profound European conviction, marked by the devastations of the second world war and the iron curtain, and a fundamental distrust of systems of floating exchange rates. As observed by Duisenberg, "You have never believed that a true single market is in the long run compatible with a quasi-floating exchange rate system".

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ANNEX: CHRONOLOGY OF MAIN EVENTS (1944-1994)

1944	July	Bretton Woods agreements (fixed exchange rate system, creation of the IMF and World Bank).
1947	5 June	European Recovery Programme (Marshall plan) proposed.
1948	16 April	Organisation for European Economic Cooperation (OEEC) established.
1949	18 September	Devaluation of the pound by 30.5%, start of a wave of IMF-approved devaluations.
1950	9 May	Schuman Plan for a European Coal and Steel Community.
	19 September	Agreement for the establishment of the European Payments Union (EPU)
	24 October	Pleven Plan for a European Defence Community
1951	18 April	European Coal and Steel Community (ECSC) treaty signed.
1954	30 August	French Assembly rejects European Defence Community.
1955	1-2 June	Conference of Messina: ECSC countries relaunch the European integration project.
	5 August	European Monetary Agreement signed (to take effect after the end of EPU).
1957	25 March	EEC and Euratom treaties signed in Rome.
	10 August	Devaluation of French franc by 16.7%.
1958	1 January	EEC and Euratom treaties come into force.
	29 December	French franc devalues by 14.8%.
	31 December	Restoration of convertibility. European Payments Union wound up and replaced by European Monetary Agreement (EMA).
1959	30 July	Radcliffe Committee report.
1961	6-7 March	Revaluation of Deutsche mark and Dutch guilder by 5%.
	12 March	"Basel Agreement" on the close cooperation of central banks in the exchange markets. Short-term credits agreed to help support pound.
	30 August	OECD replaces OEEC.
	12 November	Start of the "Gold Pool" aimed at stabilising the gold price through central bank interventions.
	18 December	General Arrangements to Borrow (GAB) are approved. Origin of the Group of Ten (G10).
1962	February	Swap network arranged by Federal Reserve, BIS, and nine other central banks.
1964	13 April	Formal establishment of the "Committee of the Governors of the Central Banks of the Member States of the EEC".
1966	13 June	First Group Arrangement for pound sterling support.
1967	18 November	Devaluation of the pound sterling by 14.3%.
1968	15 March	Gold crisis climax: closure of London gold market.
	17 March	Gold Pool operations discontinued. Central banks agree to refrain from buying and selling gold on the free market.
	May	Student revolt and social unrest in France.
1969	8 August	French franc devalued by 11.1% against dollar.
	28 September	Deutsche mark floated.
	24 October	Floating of the DM ends with 9.3% revaluation.
	1-2 December	Hague Summit: EMU becomes a Community objective.
1970	9 February	Agreement on system for short-term monetary support between EC central banks signed in Basel.
	27 October	Presentation of the Werner Report on the creation of EMU.

1971	19 April	EEC Committee of Governors announces reduced exchange rate fluctuation margins effective 15 June
	5 May	Foreign exchange markets close in Germany, Austria, Belgium, the Netherlands, and Switzerland.
	9 May	Floating of Deutsche mark and Dutch guilder and postponement of reduced exchange rate margins.
	15 August	President Nixon suspends gold convertibility of US dollar.
	18 December	Smithsonian Agreement: measures for monetary stability agreed by the G10 countries ("tunnel").
1972	10 April	Basel Agreement for narrowing fluctuation margins between EC currencies adopted: the "snake" in the "tunnel".
	23 June	Pound sterling leaves the Snake.
1973	13 February	Italian lira leaves the Snake. US dollar devalued by 10%.
	March	New currency crisis: definitive end of the Bretton Woods fixed-exchange rate regime.
	19 March	Switch to block floating: "tunnel" disappears but "snake" remains.
1974	19 January	French franc leaves the Snake.
1975	10 July	French franc rejoins the Snake at original parity.
1976	15 March	French franc leaves the Snake.
1979	13 March	Establishment of the European Monetary System (EMS).
1985	14 June	European Commission White Paper on the completion of the internal market.
	22 September	G-5 Plaza Agreement (concerted intervention to drive down the dollar)
	16-17 December	Adoption of the Single European Act.
1987	22 February	Louvre Accord: G-6 countries agree to stabilise and maintain exchange rates around their current levels.
	12 September	Basel-Nyborg agreement on strengthening the EMS.
1988	24 June	European Commission approves directive providing for full liberalisation of capital movements on 1 July 1990.
	27-28 June	Creation of the Delors Committee.
1990	1 July	Beginning of stage one of EMU (abolishment of capital movement restrictions).
1991	9-10 December	European Council agrees on Maastricht Treaty.
1992	16 September	Sterling leaves ERM.
	17 September	Italian lira out of the ERM.
1993	1 January	Single European Market comes into force.
	10 August	ERM crisis: adoption of 15% margins.
	1 November	Treaty on the EU (Maastricht Treaty) takes effect.
1994	1 January	Start of stage two of EMU (establishment of the European Monetary Institute).

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