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Financial innovation and the golden ages of international banking: 1890–1931 and 1958–81

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International banking is essentially a facet of international economic interdependence. Over the second half of the twentieth century as during the decades before 1931, the growth of cross-currency and cross-border banking, together with banks' transnational expansion through branches and subsidiaries, were 'pull' and 'push' factors within rising economic and financial globalisation. Nationalistic interwar retrenchment from 1931 and the resultant 'U'-shaped pattern of internationalisation over the twentieth century has suggested to some a 'back-to-the-future' scenario, in which the new millennium's international economy hardly compares with the level of financial integration attained during pre-1914 globalisation.[1] However, this interpretation's general validity has been convincingly disputed by recent studies. These emphasise the many aspects of post-1970 globalisation – in both scope and scale – that make it substantially different from its historical antecedent.[2] The resulting scholarly debate has raised interesting questions. Should international banking's revival from the 1960s be viewed as a return to patterns that emerged with the pre-1914 global wave? Or should banking's recent internationalisation be regarded as a secular shift in scale and scope towards something qualitatively unprecedented? This article aims to provide some tentative answers.

As is known, international banking raises two discrete though interrelated sets of issues. One, concerned with international finance, mainly focuses upon banks as agents and vehicles for international capital flows. The other, rooted in industrial

[1] See R. Zevin, 'Are world financial markets more open? If so, why and with what effects?', in T. Bassuri and J. B. Schor (eds), *Financial Openness and National Autonomy* (Oxford, 1992); and J. Sachs and A. Warner, 'Economic reform and the process of global integration', *Brookings Papers on Economic Activity*, 1 (1995).

[2] See M. D. Bordo, B. Eichengreen and J. Kim, 'Was there really an earlier period of international financial integration comparable to today?', *NBER Working Paper*, 6738 (1998), pp. 7–8. They emphasise the larger scale of post-1970 flows as well as qualitative differences in the sectoral and functional composition of portfolios and the predominance of foreign direct investments over portfolio investments. See also M. D. Bordo, B. Eichengreen and D. A. Irwin, 'Is globalisation today really different than globalisation a hundred years ago?', *NBER Working Paper*, 7195 (1999), pp. 27–56.

organisation, has led to the emergence of a theory of multinational banking addressing competitive advantages, organisation and management.[3] This article attempts to reconcile these two perspectives in a more comprehensive approach, based upon recent theories of financial intermediation and innovation. Section I outlines both the conceptual framework employed to analyse the functions performed by banks in their international activities and the role of financial innovations in enabling them to discharge such functions more efficiently. Sections II and III draw a stylised, comparative account of relevant financial innovations within international banking during the 1890–1931 and 1958–81 periods, considered here respectively as the 'Golden Eras' of traditional international banking and 'revolutionary' Eurobanking. Section IV provides a long-term historical perspective and raises some further questions.

I

Current theories of banking consider that financial intermediaries perform two different functions: brokerage and portfolio transformation.[4] Brokerage implies obtaining, processing and supplying information to bring borrowers and lenders together but without altering the nature of claims transacted. As brokers, banks enjoy cost advantages for overcoming both *ex ante* and *ex post* information asymmetries, while reducing market imperfections by lowering search, information and transaction costs. They earn fees by providing evaluation, advising and monitoring services.[5] When banks also provide services that qualitatively alter the nature of claims transacted, they discharge a function of portfolio transformation. In these cases, banks stipulate contracts for acquiring primary securities issued by borrowers (thus actually internalising information within their assets portfolio).[6] They also enter a different contractual relationship by offering to lenders secondary securities drawn upon themselves – thus acting as 'delegated monitors'.[7] With 'debt

[3] See R. Z. Aliber, 'International banking. A survey', *Journal of Money, Credit and Banking*, 16 (1984), pp. 661–4.

[4] Surveys of recent theories of financial intermediaries in K. T. Davis and M. K. Lewis, *Domestic and International Banking* (Oxford, 1987), pp. 14–32; S. Batthacharya and A. V. Thakor, 'Contemporary banking theory', *Journal of Financial Intermediation*, 3 (1993); and M. K. Lewis, 'An overview', in idem (ed.), *Financial Intermediaries* (Aldershot, 1995), pp. xiii–xxxii.

[5] As dealers, they act as principals by buying and selling assets temporarily held in their books and bear a contingent liability risk; the spread between buying and selling price is the profit they earn as a compensation for the risk assumed. Both brokers and dealers make markets possible by altering the relative use of different types of securities, and the overall magnitude of capital transacted.

[6] In the case of relationship banking, the contract assumes the character of long-term commitment. The issue has been addressed by C. Mayer, 'New issues in corporate finance', *European Economic Review*, 32 (1988).

[7] For the concept of delegated monitoring, see D. W. Diamond, 'Financial intermediation and delegated monitoring', *Review of Economic Studies*, 51 (1984). A critical assessment is in Batthacharya and Thakor, 'Contemporary banking', pp. 7-15; and M. Hellwig, 'Banking, financial intermediation and corporate finance', in A. Giovannini and C. Mayer (eds), *European Financial Integration* (Cambridge, 1991), pp. 44–57.

substitution', primary and secondary securities substantially differ in the degrees of their liquidity, determined, in turn, by differences in maturity, marketability, reversibility, divisibility and capital certainty.[8] Portfolio transformation varies with both the precise process undertaken and the guarantees offered against risk. 'Size intermediation' involves banks acquiring large assets and offering lenders liabilities representing a share of them without altering their liquidity properties, so producing 'liquidity distribution'. When banks engage in 'quality intermediation' and contracts with lenders differ qualitatively from those issued to borrowers, they provide 'liquidity services' and act as agents of 'liquidity creation'. By engaging in 'maturity transformation', banks give 'liquidity insurance' to both depositors and borrowers.[9] Through bearing higher interest, credit and default risks, their managements may have a stronger incentive to screen, monitor and control borrowers to reduce the risks of adverse selection and moral hazard.[10] Finally, banks supply off-balance sheets services – guarantees and commitments of an intermediate nature – that tend to blur boundaries between brokerage and portfolio transformation.[11]

Banks can be viewed, therefore, as peculiar financial intermediaries that provide specific packages of information and liquidity insurance services to customers, and bridge the different portfolio preferences of borrowers and lenders. They also manage the payment system and provide mechanisms for saving and borrowing. As asset transformers, they monitor and discipline borrowers and bear risks that require

[8] Marketability relates to the ease and speed with which the value of an asset can be realised. Reversibility refers to the discrepancy between the contemporaneous acquisition and realisation of an asset (depending upon transaction costs). Divisibility is reflected in the minimum denomination in which transactions in a given asset can take place. Capital certainty is the degree of predictability of an asset's future value. As a combination of such characteristics, 'liquidity' can be hardly measured and 'lies very much in the eye of the beholder, since it reflects in part assessments of future conditions in the market': see Davis and Lewis, *Domestic and International,* pp. 28–9.

[9] Depositors are given guarantee that their deposits can be withdrawn on demand or at short notice, in full or in part, at a fixed price. Borrowers are given guarantee of availability of funds to borrowers. The nature of such insurance depends upon the nature of the loan contract – whether it is fixed or floating rate. In both cases, risk and cost of servicing are recovered from the spread and service charges.

[10] See Batthacharya and Thakor, 'Contemporary banking', pp. 29–31. Liquidity risk is the risk of sudden withdrawal of funds by lenders. Credit and default risk refer to possible losses that stem from a decline in the market value of assets held in portfolio. Adverse selection and moral hazard both refer to information asymmetries that give borrowers an advantage over lenders as to the potential of their investment projects and their commitment to investment decisions taken.

[11] See Davis and Lewis, *Domestic and International*, pp. 115–22. By providing guarantees that create off-balance sheet exposure (such as bill acceptances), banks, against the payment of a fee, substitute their own credit rating for that of the debtor and reduce the credit and default risk assumed by the creditor. In underwriting contracts for securities issues, the fee earned by banks can be seen as 'insurance premium' charged to borrowers against the risk of the market not absorbing a flotation at the hoped for price. In loan commitments, banks reduce the liquidity risk of borrowers and are rewarded with a commitment fee. See also A. V. Thakor, 'Toward a theory of bank loan commitments', *Journal of Banking and Finance*, 6 (1982).

appropriate pricing and efficient processing techniques to allow them to increase their income.

Differences in relative functional specialisation and the range of services offered determine how banking institutions are categorised. Over time, banks (like other financial intermediaries) react, variously, to external shocks, changing environmental conditions and internal constraints by devising innovative ways for performing their functions and managing risks. Financial innovation, therefore, is a historical process that can be systematically analysed and interpreted by determining the factors and conditions that initiated the supply of, and demand for, new financial products, techniques or institutions. However, financial innovation is, notoriously, an elusive and controversial concept and no generally accepted theory has yet emerged.[12]

Clear-cut distinctions between product and process innovation are difficult to establish. Sometimes, innovations solely transfer and adapt techniques across sectors, or comprise the rise of an existing practice to an unprecedented scale. Demand-side approaches emphasise technological progress and increases in real income as the primary stimuli producing a secularly rising requirement for diversified financial claims with new combinations of characteristics.[13] Conversely, supply-side approaches focus upon exogenous factors, such as the impact of information and data-processing technology (which enable new types of operation, or stimulate the introduction of new techniques by lowering their costs). Or, they may consider endogenous responses to regulation (which induce circumventing innovation and trigger a 'regulatory dialectic' process),[14] external monetary shocks[15] or opportunities to reduce transaction costs provided by information technology.[16] Indeed, the 'circumventive' theory has been incorporated within an eclectic consensus view that itself considers financial innovations as a reaction to exogenous changes in constraints – a general concept encompassing government-imposed, self-imposed (cartels) and market-imposed constraints.[17]

[12] Surveys of theories of financial innovations in S. I. Greenbaum and B. Higgins, 'Financial innovation', in G. J. Benston (ed.), *Financial Services: The Changing Institutions and Government Policy* (Englewood Cliffs, NJ, 1983), pp. 230–3; and T. M. Podolski, *Financial Innovation and the Money Supply* (Oxford, 1986), pp. 106–12, 181–215.

[13] See S. I. Greenbaum and C. F. Heywood, 'Secular change in the financial services industry', *Journal of Money, Credit and Banking*, 3 (1971). State regulation imposed for the sake of 'stability' is assumed to alter substantially the 'natural' evolution of financial structures.

[14] The circumventive innovation approach has been formalised by E. J. Kane, 'Good intentions and unintended evil', *Journal of Money, Credit, and Banking*, 9 (1977). See also D. D. Hester, 'Innovation and monetary control', *Brookings Papers on Economic Activity*, 1 (1981).

[15] See R. Sylla, 'Monetary innovation and crises in American economic history', in P. Wachtel (ed.), *Crises in the Economic and Financial Structure* (New York, 1982); and A. M. Wojnilower, 'The central role of credit crunches in recent financial history', *Brookings Papers in Economic Activity*, 2 (1980).

[16] J. Niehans, 'Innovation in monetary policy', *Journal of Banking and Finance*, 6 (1982); and Podolski, *Financial Innovation*, pp. 203–8.

[17] See W. L. Silber, 'Towards a theory of financial innovations', in idem (ed.), *Financial Innovation* (Lexington, MA, 1975), pp. 61–71; and idem, 'The process of financial innovation', *American Economic Review*, Papers and Proceedings, 73 (1983).

Since the demand for financial instruments arises from their embodied characteristics, attention has increasingly focused upon specific incentives to innovate. These take the form of demand for liquidity, credit, equity and risk-transferring mechanisms emerging from changes within the economic environment (including monetary policy, regulation and competition), as well as from financial intermediaries' own portfolio preferences and constraints. Innovations emerge because they enhance the efficiency of the functions performed by financial intermediaries under changing circumstances - through the design of new instruments, techniques, institutional arrangements and markets, or by unbundling and repackaging characteristics of existing products and practices. Consistent with this view, financial innovations can be categorised, variously, as: liquidity-enhancing, credit-generating, equity-generating, and risk-transferring. Or, and complementarily, as: aggressive (stemming from competition, research investment and active marketing by specialised institutions), defensive (reacting to policy and regulatory changes), responsive (adapting to changes in portfolio requirements of customers), and protective (adopted by financial intermediaries to meet their own portfolio constraints).[18]

This article proposes an interpretation of the history of innovation in modern international banking based upon the conceptual framework briefly outlined. Functions performed by banks in their international activities differ from domestic only in their cross-border and/or cross-currency nature. The additional risks borne are country and currency risks, which require specific techniques to be priced, allocated, diversified and compensated for. As brokers (usually associated with investment banking), banks offer evaluation, monitoring and advisory services to foreign customers. They also supply liquid and standardised instruments for managing international payments, and operate monetary exchange between different currencies. They manage liability and asset international portfolios (including deposits and loans), operate both international liquidity distribution and creation, and act both as principals for, and agents of, international capital flows. The financial innovations adopted are analysed here as a process of incentives and responses to changes in the economic and regulatory environment (either domestic or international), through which bank managements have designed new products, techniques or institutional arrangements to perform international functions.[19]

II

Throughout the decades between the 1890 Baring crisis and the systemic collapse of 1931, the upsurge of international banking was a manifestation of a truly world-wide interdependent economy. It was also a response to structural changes in

[18] See D. Llewellyn, 'Financial innovation: a basic analysis', in H. Cavanna (ed.), *Financial Innovation* (London, 1992), pp. 19–24.

[19] See G. Dufey and I. H. Giddy, 'The evolution of instruments and techniques in international financial markets', *SUERF Series* (1981), 35A, pp. 1–6.

communications technology, the sustained expansion of trade and the increased capital requirements of governments, public utilities and industrial companies.[20]

The institutional architecture of the international monetary system was particularly conducive to the internationalisation of finance. Under the classic gold standard, access to financial markets was generally free and capital controls limited. Central-bank intervention was based upon market-oriented instruments,[21] exchange rates remained fairly stable and confidence in the public commitment to gold parities and external convertibility high.[22] With the gradual evolution of a *de facto* gold-exchange standard, substantial 'lines of defence' were erected in the form of liquid foreign-exchange reserves (foreign bills and bonds, balances with foreign central and commercial banks) to provide means for sterilising gold movements and making monetary adjustment more flexible.[23] The allocation of international liquidity[24] was largely determined by microeconomic factors within a decentralised framework since capital flows comprised mainly private investment and payments. This remained the case even during the 1920s, when private financial houses acted especially as agents of governments and diplomacy.[25] Despite unprecedented instability and volatility of interest rates and the foreign exchanges, the monetary authorities' attitude towards regulation and controls over international financial transactions remained fairly liberal.[26]

[20] R. Cameron, 'Introduction', in R. Cameron and V. I. Bovykin (eds), *International Banking 1870–1914* (Oxford, 1991), pp. 12–14.

[21] 'Gold devices', discount-rate actions and open-market operations were employed to manipulate capital flows and sterilise gold movements: see A. Bloomfield, *Monetary Policy Under the Gold Standard 1880–1914* (New York, 1959); and L. Gomes, *The International Adjustment Mechanism. From the Gold Standard to the EMS* (London, 1993), pp. 151–69.

[22] B. Eichengreen, *Globalising Capital. A History of the International Monetary System* (Princeton, 1996), pp. 25–38. On the interrelationships between capital control, adjustment and confidence issues, see G. M. Gallarotti, *The Anatomy of an International Monetary Regime. The Classical Gold Standard, 1880–1914* (Oxford, 1995), pp. 45–57 and 207–17.

[23] See A. Bloomfield, *Short-Term Capital Movements Under the Pre-1914 Gold Standard*, Princeton Studies in International Finance, 11 (Princeton, 1963); M. De Cecco, *The International Gold Standard. Money and Empire* (London, 1984), pp. 39–61; and M. Bordo, 'The gold standard: the traditional approach', in M. D. Bordo and A. J. Schwartz (eds), *A Retrospective on the Classical Gold Standard, 1821–1931* (Chicago, 1984), pp. 23–98.

[24] The concept of international liquidity has been used with many different meanings. See H. Genberg and A. K. Swoboda, 'The provision of liquidity in the Bretton Woods system', in M. Bordo and B. Eichengreen (eds), *A Retrospective on the Bretton Woods System. Lessons for International Monetary Reform* (Chicago, 1993), pp. 271–5. For present purposes, the issue of international liquidity refers to the nature of international money (the reserve question) and the ability of countries to access this money – i.e. how countries are able to attract capital to finance temporary balance-of-payments deficits (the 'monetary' adjustment question), and how capitals move within an international monetary regime (the capital flows question): see Gallarotti, *The Anatomy*, pp. 7–14.

[25] M. De Cecco, 'The international debt problem in the interwar period', *EUI Working Paper* (1984), n. 103. See also the classic study by H. Feis, *The Diplomacy of the Dollar, 1919–1932* (New York, 1966).

[26] American and British authorities retained some politically-oriented controls on access of foreign borrowers to their capital markets. Official government authorisation was required in the USA,

The expansion of banks' transnational activities from 'core' industrialised countries was perhaps the most visible sign of financial globalisation. Foreign banks' entry was generally unhindered in most countries, though subject to political and economic conditions. It occurred through agencies, branches, subsidiaries or joint ventures (the acquisition of local banks or participations). Within a multitude of motivations, strategies, organisation and operating criteria varying between banks and countries, two major patterns of transnationalisation emerged: one responding to the incentives of economic and financial penetration into host countries; the other to obtaining direct access to international or supranational financial markets.[27]

As throughout the nineteenth century, the incentives for banks to multinationalise were strongly related to the economic expansion of industrialised countries into peripheral areas, either as commercial penetration or direct investment. This created increasing scope for banks – sometimes as leaders, more often as followers[28] – to provide trade finance and foreign-exchange services to local national customers. Competition in multinational retail banking in 'core' countries was limited, generally ill-planned and unsuccessful.[29] The increasing presence of European (and from 1913 American) banks was concentrated in peripheral areas. There, besides trade finance, opportunities arose to provide investment-banking services to colonial and foreign governments issuing debt on major financial markets, or to collect deposits and manage national emigrants' remittances. In some cases, foreign institutions became gradually 'naturalised', diversifying into local retail banking services (a strategy that provided a safeguard against adverse foreign-exchange fluctuations). Such 'financial pioneering' often became an active factor of financial modernisation.

This 'foreign dominance' pattern of transnational banking – largely based upon the creation of specialist overseas banks responding to the 'gravitational pull effect'

while the British authorities maintained an informal embargo on foreign loans and did not discontinue the practice of consultation with issuing houses even after the lifting of capital controls in 1925: see P. Einzig, *The Fight for Financial Supremacy* (London, 1931), pp. 41–2; and J. M. Atkin, 'Official regulation of British overseas investment, 1914–1931', *Economic History Review*, 23 (1970).

[27] For an illustration of the eclectic model of multinational banks' growth, see J. M. Gray and H. P. Gray, 'The multinational bank: a financial MNC?', *Journal of Banking and Finance*, 5 (1981); and K. R. Cho, *Multinational Banks. Their Identities and Determinants* (Ann Arbor, MI, 1985), pp. 55–75.

[28] C. P. Kindleberger, 'International banks as leaders or followers of international business. An historical perspective', *Journal of Banking and Finance*, 7 (1983), p. 592, argues that, when banks were aggressive in building world networks and industry focused on single projects and defensive investments, banks were likely to be leaders and industrial companies followers, and vice versa.

[29] The distinction between multinational retail banking, multinational service banking and multinational wholesale banking is drawn by H. G. Grubel, 'A theory of multinational banking', *BNL Quarterly Review*, 123, 31 (1977). On British and American banks' foreign branches in Europe, see G. Jones, 'Lombard Street on the Riviera: the British clearing banks and Europe 1900–1960', *Business History*, 24 (1982); idem, *British Multinational Banking 1830–1990* (Oxford, 1993), pp. 71–3; and T. Balderston, 'German banking between the wars: the crisis of the credit banks', *Business History Review*, 65 (1991).

exercised by national trade[30] – reached its apex during the first three decades of the twentieth century. Then the dominance of British 'free-standing' overseas banks (partially consolidated into international banking arms of major clearing banks)[31] had been eroded, especially within Latin America and the Far East. It arose from the activities of French and German commercial banks (often backed, or officially sponsored, by their respective governments),[32] and of aggressive American commercial banks, freed from binding regulation that had previously prevented them from developing a large acceptance market and overseas branches.[33] The European periphery (the Mediterranean basin, the Balkans and eastern Europe) was a privileged area for the expansion of continental universal or 'crédit-mobilier model' banks. This was mainly undertaken through joint subsidiaries to assist corporate customers' direct investments or to provide 'mixed bank' services to emerging local industry – an aspect absent (or weaker) within 'imperial' areas, where financing other than for trade was limited to railways and public utilities.[34] Overall, the 'foreign dominance' pattern of transnational expansion involved the play of net ownership-specific advantages (not only size but also the existence of a customer-base with internationally- or multinationally-oriented activities, high reputation, solid managerial resources, cumulated experience and information capital, and access to capital resources at favourable conditions). These were successfully combined with specific location advantages related to trade and direct investments between host and home country.

Different (though to some extent correlated) incentives motivated all major

[30] See J. Metais, 'Les processus de multinationalisation des grandes banques commerciales. Une approche en terme d'économie industrielle', *Revue Economique*, 3, 30 (1979).

[31] The reference text is Jones, *British Multinational Banking*, pp. 30–62 and 92–102; see also idem, 'British overseas banks as free-standing companies, 1830–1996', in M. Wilkins and H. Schröter (eds), *The Free-Standing Company in the World Economy 1830–1996* (Oxford, 1998).

[32] See P. Hertner, 'German banks abroad before 1914', in G. Jones (ed.), *Banks as Multinationals* (London, 1990); and R. Tilly, 'International aspects of the development of German banking', in Cameron and Bovykin, *International Banking*.

[33] Before 1914 only a few trust companies and international banking corporations had established foreign branches in London and Paris. On international activities of US banks before the Federal Reserve Act, see V. P. Carosso and R. Sylla, 'US banks in international finance', in Cameron and Bovykin, *International Banking*. On the rapid expansion of overseas branching in the 1920s, see T. F. Huertas, 'US multinational banking: history and prospects', in Jones, *Banks and Multinationals*, pp. 248–53; and H. van B. Cleveland and T. F. Huertas, *Citibank 1812–1970* (Cambridge, MA, 1985). A general perspective is given in P. P. Abrahams, *The Foreign Expansion of American Finance and its Relationship to the Foreign Economic Policies of the United States, 1907–1921* (New York, 1976).

[34] See H. Bonin, 'The case of the French banks'; H. Van der Wee and M. Goossens, 'Belgium'; and B. V. Anan'ich and V. I. Bovykin, 'Foreign banks and foreign investments in Russia', all in Cameron and Bovykin, *International Banking*; P. L. Cottrell, 'Aspects of Western equity investment in the banking systems of East Central Europe', in A. Teichova and P. L. Cottrell (eds), *International Business and Central Europe, 1918–1939* (Leicester, 1983); and R. Di Quirico, 'The initial phases of Italian banks' expansion abroad, 1900–31', *Financial History Review*, 6, 1 (1999). A good counter-example is Brazil: see M. B. Levy, 'The banking system and foreign capital in Brazil', in Cameron and Bovikyn, *International Banking*.

American and European banks to establish branches or subsidiaries in major financial centres (London and Paris before 1914; New York thereafter). A direct presence here was instrumental for gaining direct access to information and economic intelligence, foreign-exchange and trade facilities and, not least, for winning a reputation as a bank of truly international standing. Beyond locational advantages, branching in London and Paris allowed banks to internalise foreign-exchange functions, to engage more efficiently in interest and exchange arbitrage and to operate more discreetly in the market. The latter aspect was particularly relevant in the light of functional links with a home country's monetary policy. Commercial banks' foreign branches often managed part of the exchange reserves and intervened, as agents of their respective national monetary authorities, on the foreign exchanges and capital markets in order to influence the exchange of the domestic currency and the course of their respective government's foreign debt.[35] Branches in international financial centres were therefore mainly motivated by internalisation advantages, combined with those specifically of location, such as the direct acquisition of expertise of process and product innovations, and direct access to network linkages.[36]

From 1890 to 1914, in the absence of systemic instability and binding regulation, financial innovation in international banking was essentially a responsive to a shortage of international medium of exchange or to financial crisis. These occurred along with a structural change, marked by the decline of specialised institutions, such as British acceptance houses, continental *haute banques* and private merchant banks. In all major countries, amalgamation led to large joint-stock banks providing a wide range of services domestically and to an increasingly extent internationally. These institutions developed foreign networks of branches and transnational relationships and, eventually, established their leadership in international finance. International banking during the first three decades of the twentieth century was a long-term consequence of the revolution over the nineteenth century brought about by the rise of deposit-banking systems. It was, therefore, increasingly characterised by the emergence of new techniques for financing international trade, conducting foreign-exchange banking and transacting international interbank dealings, which shaped the modern system of international 'correspondent' banking.

During the late nineteenth century, sterling bills became the fundamental vehicle of international liquidity, not only employed to finance international trade but also

[35] For the Italian case, see M. De Cecco (ed.), *L'Italia e il sistema finanziario internationale 1861–1914* (Rome, 1992); and M. D'Alessandro, 'L'organizzazione delle reti estere Comit e Credit nei centri finanziari internazionali (1910–1935)', *Archivi e Imprese*, 9 (1998).

[36] M. Casson, 'Evolution of multinational banks: a theoretical perspective', in Jones, *Banks as Multinationals*, pp. 19–20. Benefits from internalisation are expected to vary across banks, according to different level of ownership-specific advantages as well as to differences in business operated. Usually more information-oriented activities (such as borrowing and lending) are supposed to offer greater opportunities for internalisation benefits than less information-oriented business lines (such as providing letters of credit for international trade). The point is emphasised by Cho, *Multinational Banks*, p. 60.

held by banks as liquid reserve investments.[37] The decline of 'inland' bills was more than compensated by the rise of 'foreign bills', which made the market increasingly international. From the early 1890s, a new secular rise occurred in the London discount market's volume, which by 1914 exceeded the peak attained 40 years earlier.[38] Despite increased competition from French and German banks in trade finance and their successful attempts to create 'naturalised' acceptance markets in francs and marks,[39] it is argued that London retained a dominant role until the 1931 crisis. This was thanks to low interest rates, narrow spreads and its money market's high liquidity.[40] However, major structural changes were also occurring in trade finance through overdrafts and telegraphic transfers replacing commercial bills (associated with mail transfers). These innovations were fostered by trade's sustained growth, improvements in communication technologies and the rising power of large commercial banks as determined competitors in international intermediation (also in Britain, where previously they had merely provided liquid short-term funds to merchants, discount houses and bill brokers).[41]

The diffusion of credit instruments in trade finance had a major impact upon foreign-exchange dealings, which increasingly hinged upon foreign balances held with correspondents on a basis of reciprocity. While foreign-exchange turnover required by trade and capital accounts transactions grew incessantly, traditional dealings declined. Transactions at the Royal Exchange, London (and other similar formal markets in continental centres where dealers and brokers periodically met) lost their role. Confidence in exchange stability and the rising volume of business motivated commercial banks at leading centres to keep permanent balances with their correspondents for their foreign-exchange business. They accepted informal transfers from such balances as the basis for exchange transactions even with banks in the Americas or the Far East, and granted mutual overdraft facilities in their own

[37] Gallarotti, *The Anatomy*, pp. 29–30.

[38] C. Goodhart, *The Business of Banking 1891–1914* (Aldershot, 1986), pp. 144–8; and S. Nishimura, *The Decline of Inland Bills of Exchange in the London Money Market 1855–1913* (Cambridge, 1971), pp. 11–25.

[39] On the emerging role of the French franc and the mark as international key-currencies, see P. Lindert, *Key Currencies and Gold 1900–1913*, Princeton Studies in International Finance, 24 (Princeton, 1969). On the German challenge to British leadership in international acceptances, see S. Chapman, *The Rise of Merchant Banking* (London, 1984), pp. 121–5.

[40] Einzig, *The Fight for Financial Supremacy*, pp. 26–48.

[41] Although on the eve of the First World War 7 major merchant banks still accounted for nearly half the accepting credit business carried out in London, joint-stock banks had conquered a substantial market share after their relatively late entry in the 1890s. See Chapman, *The Rise*, pp. 104–8; P. Cottrell, 'The domestic commercial banks and the City of London, 1870–1939', in Y. Cassis (ed.), *Finance and Financiers in European History 1880–1960* (Cambridge, 1992), pp. 50–3; and idem, 'Aspects of commercial banking in northern and central Europe, 1880–1931', in S. Kinsey and L. Newton (eds), *International Banking in an Age of Transition* (Aldershot, 1998), pp. 119–29. De Cecco, *Money and Empire*, pp. 127–70, considers the crisis of 1914 as the ultimate manifestation of joint-stock banks' bid for hegemony over City merchants as international intermediaries.

currencies.[42] This rapidly brought about the consolidation of the international system of 'nostro' accounts, which allowed banks to access foreign-currency balances held with correspondents abroad, sometimes covered against exchange risk.[43]

During the early 1920s foreign-exchange markets in the modern sense emerged in all major financial centres, based upon telephone connections between commercial banks' foreign-exchange departments and minor brokers.[44] Modern foreign-exchange banking, however, also implied a higher risk for banks acting as principals. Consequently, they quoted firm rates rather than operating as brokers (i.e. charging customers the rate obtained in the market with a commission added). In this new capacity, banks enabled customers to save the costs of obtaining information on market prices and to avoid higher uncertainty and risk implied by alternative methods.[45] They also lent their names to customers' transactions, generally obtaining better conditions (especially in the case of small industrial and commercial firms).[46] Modern foreign-exchange banking, based on 'nostro' accounts and correspondent relationships, aided the processing, and sharing, of exchange risk through operating as an informal cooperative process of risk management, based upon bilateral arrangements and motivated by mutual interests in liquidity supply.[47]

The development of interbank relationships, motivated by foreign exchange, also created further scope for the emancipation of interbank transactions from trade finance. Indeed, from the 1890s the search for new vehicle instruments for interbank dealings, together with short-term capital flows, led to the rise of 'finance' bills, usually drawn against the deposit of securities or the borrowing bank's general creditworthiness. These international short-term borrowings caused a marked upward shift in the average size of transactions, as well as an increasing standardisation and sophistication of exchange-rate quotations for different bill

[42] P. Einzig, *The History of Foreign Exchanges* (London, 1970), pp. 179–80. British clearing banks made a late entry, whereas large commercial banks on the continent developed foreign-exchange banking functions much earlier.

[43] With the development of the 'nostro' account system, sterling, French franks or marks acquired by foreign banks in the course of foreign exchange dealings were therefore held with London, Paris or Berlin banks. Rates allowed on credit balances (i.e. net credit positions) and charged on overdrafts (i.e. net debt positions) could be fixed until further notice or varied automatically according to official discount rate. Excess credit balances could be invested in other local money market securities (such as Treasury bills) in order to get a higher return. On 'nostro' accounts, see P. Einzig, *A Dynamic Theory of Forward Exchange* (London, 1967), pp. 47–8.

[44] Einzig, *History of Foreign Exchange*, pp. 238–9.

[45] As an alternative, customers could instruct the bank to buy or sell 'at best' or at some maximum or minimum rate. Both these methods, however, implied substantial uncertainty as to the extent to which foreign-exchange dealing would affect profit margins of commercial transactions, or high risk that the bank might find it impossible to deal at max-minimum rate set by customers.

[46] Thus some contracts included also a guarantee under which (similar to acceptances) banks substituted their standing for that of their customers: see Einzig, *A Dynamic Theory*, pp. 20–3.

[47] Risk arose from the fact that, when engaging in foreign-currency banking, banks found themselves cut off from their domestic liquidity support arrangements: see Davis and Lewis, *Domestic and International*, p. 341.

maturities.[48] 'Finance' bills gained a dominant role in London (up to 60 per cent of prime bank acceptances outstanding in 1913). Nishimura has estimated that growth from the mid-1890s was principally due to the use of finance bills.[49] Their expansion was mainly driven by arbitrage opportunities, arising from interest-rate differentials between money markets (made, in turn, more efficient by enhanced communication). At times, they also provided an important source of liquidity to banks suffering from domestic credit restraint – as well as a profitable outlet for excess liquidity – also in the absence of favourable market rates.[50]

By 1914, the 'finance'-bill system had developed into something akin to a wholesale international interbank market, based upon correspondent networks linking the United States,[51] the United Kingdom and the continent,[52] and functioning as a channel of international liquidity distribution. 'Finance' bills, however, had only limited flexibility and were increasingly replaced by direct interbank short-term borrowing and lending through deposits and advances. Such practice probably reached its mature development during the 1920s, when volatile interest and exchange rates led banks to resort to more flexible and efficient techniques of foreign-exchange liquidity management, which substantially enhanced their elasticity to opportunities for arbitrage and speculation.[53]

[48] Traditionally, exchange rates for bills included interest charges. At the mid-century such charges were allowed for only approximately. From the 1870s, the practice of the market evolved towards quotations for 'usance' maturities (regardless of the actual maturities of bills) – 30 days for bills on Paris and Geneva, one month for Germany and Holland, two months for New York, three months for Italy and South America: see Einzig, *History of Foreign Exchange*, pp. 175–6.

[49] Bloomfield, *Short-Term Capital Movements*; and Nishimura, *The Decline*, pp. 105–15.

[50] Nishimura gives evidence that finance bills (contrary to commercial, or 'real' bills) generally showed a negative correlation to both the absolute level of interest rates in London and the differentials between London and other relevant financial centres. In fact, the volume of finance bills tended to decrease when discount rates in London were high and interest differentials (that is, scope for arbitrage) narrow, and vice versa. There were exceptions to this, however, as it was the case in the 1906–07 boom (which induced banks to raise funds in London in spite of high rates), and in the ensuing depression (when low rates in London did not induce any significant surge in borrowing, whereas British banks were far from keen to lend abroad): see Nishimura, *The Decline*, pp. 70–1.

[51] 'Finance' bills were drawn in substantial volumes by American banks upon London banks, especially during periods of rising interest rates in the USA and booming stock-market activity (as in 1905–06). On the use of finance bills on London by American banks, see C. Goodhart, *The New York Money Market and the Finance of Trade, 1900–1913* (Cambridge, MA, 1969). Chapman's sources give further evidence of the connection of finance bills with stock-exchange speculation: see Chapman, *The Rise*, pp. 123–4.

[52] Also German and Russian banks engaged in sizeable transactions with correspondents both in London and Paris, whereas French banks used to grant short-term foreign credits to German, Russian and other European correspondents through different techniques. Bloomfield's sources report French banks as the most intensively engaged in the so-called 'bill pensioning', under which borrowing banks obtained short-term funds from abroad by discounting part of their domestic bill portfolio with foreign banks under repurchase agreements at the same exchange rate.

[53] See Eichengreen, *Globalising Capital*, pp. 51–72. Also Einzig, *The Fight for Financial Supremacy*, pp. 94–101; and United Nations, *International Capital Movements* (New York, 1949), pp. 21–3.

The 1920s also saw the emergence of modern forward markets to cover against increased risk in trade and financial transactions. Throughout the nineteenth century merchants and bankers had covered this by means of bills of the same maturity.[54] This required a large turnover of short-term lending and borrowing transactions and became increasingly costly as the volume of business requiring cover increased. The organisation of systematic and standardised markets for forward exchange transactions helped lower cost and improve efficiency. Nonetheless, progress was slow and controversial. Due to high confidence in gold parities, exchange risk was generally perceived as modest and foreseeable – at least for 'core' currencies. Consequently, uncovered interest arbitrage was considered the rule under the classical gold standard. Transactions were covered in the forward market only during periods of exchange uncertainty or when currencies of doubtful reputation were involved (such as the ruble and the Austrian crown).[55]

British importers and exporters, as well as their bankers, had little need to require forward exchange facilities since they usually made and received payments in sterling. Foreign importers and exporters efficiently covered exchange risk in sterling forward markets that rapidly developed at all major financial centres.[56] The emergence of forward exchange markets was also delayed by widespread distrust - within public opinion and the press - of what was often regarded as a mere speculative device.

Many organisational and technical experiments failed. Special clearing houses were unsuccessfully tested in Paris and Amsterdam after 1918, and special 'put and call' forward contracts were introduced in New York only to be soon abandoned. A critical boost to developments came from the currency turmoil of the early 1920s, which induced even the most conservative banks to meet their customers' growing demand for forward facilities. By the general return to gold during the second half of the decade, modern forward exchange markets, based upon telephone networks linking foreign-exchange departments of most large commercial and 'universal' banks, were operating in all major financial centres. Covering against exchange risk on commercial transactions and the banks' own net positions in foreign exchange was extended to all currencies and became ordinary business practice.

Strictly related to modern forward dealings was the emergence, under the interwar gold-exchange standard, of a further major innovation - systematic international interbank borrowing of key-currencies, based upon 'swap' contracts. These

[54] A merchant or a banker with payments due in foreign currency in an overseas centre usually bought foreign bills of the required maturity. Similarly, a merchant or a banker expecting future payments in foreign currency used to hedge against the risk of depreciation by drawing and selling a bill denominated in that currency and of the required maturity.

[55] Bloomfield, *Short-Term Capital Movements*, pp. 38–43. This also helps explain why forward transactions before 1914 were relatively less developed in London than on the continent (especially in Vienna and Berlin, whereby the functioning of forward markets was reported from the 1880s as a side-facility to intense stock arbitrage): see Einzig, *A Dynamic Theory*, pp. 31–60.

[56] Einzig, *History of Foreign Exchange*, pp. 181–3; and more extensively, idem, *A Dynamic Theory*, pp. 5-32.

allowed central banks, as well as commercial banks, of soft-currency countries – mainly in central and eastern Europe but also in France and Latin America – to obtain temporary holdings of sterling and dollar deposits, often subject to automatic renewal. Lenders, primarily British and American banks, could earn very high profit margins with no exchange risk.[57] At the same time, the London money market's facilities were integrated by the development of a limited market in short-term currency-denominated deposits and loans, which allowed banks to borrow and lend in dollars or Reichmarks with virtually no restriction.[58] These practices can be legitimately held as the closest historical antecedent of the Eurodollar market that shaped postwar international banking.

In international investment banking, innovations were fundamentally a response to the 1890 crisis. The most important was the adoption of underwriting syndicate arrangements.

The period between the 1890s and the 1920s recorded the peak in capital outflow from Western countries, measured as a percentage of GDP, mainly comprising portfolio investment.[59] Investors in surplus countries, such as the United Kingdom (from 1860), France and Germany (from 1880), and the United States (from the mid-1890s to 1905, and again during the 1920s), purchased long-term international securities. These were primarily fixed-interest bonds and debentures (75 per cent of the aggregate capital called during the pre-1914 period in the British case). They were issued principally by central and local governments and railway companies, with yields generally higher than those on domestic substitutes.[60] As usual, capital

[57] In foreign exchanges, a swap contract implies a purchase (or sale) of a currency in the spot market against a simultaneous sale (or purchase) in the forward market. The swap rate is the difference between the spot and the forward rate at which the currency is traded. The exchange risk is covered since the forward rate is assumed to reflect possible depreciation or revaluation expectations. Einzig refers to such practice as 'swap-and-deposit' transactions. The terms of the contracts depended on whether local commercial banks acted either as principals or as mere intermediaries between foreign banks and the central bank. Einzig also describes a number of cases in which central banks in Europe and Latin America used swap transactions as a means of acquiring foreign exchange resources: see P. Einzig, *History of Foreign Exchange*, p. 242; and idem, *A Dynamic Theory*, pp. 422–3, 441–4, 460–3. See also P. Cottrell (with C. J. Stone), 'Credits, and deposits to finance credits', in P. L. Cottrell, H. Lindgren and A. Teichova (eds), *European Industry and Banking Between the Wars: A Review of Bank-Industry Relations* (Leicester, 1992); and T. Balderston, 'The banks and the gold standard in the German financial crisis of 1931', *Financial History Review*, 1 (1994).

[58] Einzig, *The Fight for Financial Supremacy*, p. 46.

[59] Recent statistical evidence in Bordo, Eichengreen and Kim, 'Was there really', p. 37.

[60] The classic work on the subject remains H. Feis, *Europe: The World's Banker* (New Haven, 1930). For a general quantitative picture, A. Bloomfield, *Patterns of Fluctuation in International Investment Before 1914*, Princeton Studies in International Finance, 21 (Princeton, 1968); and A. Green and M. C. Urquhart, 'Factor and commodity flows in the international economy of 1870–1914: a multi-country view', *Journal of Economic History*, 36 (1976). Figures of capital exports from Britain (originally collected by G. Paish, L. Jenks and M. Simon) and their geographical and functional distribution have undergone a number of revisions: see D. C. M. Platt, *Britain's Investment Overseas on the Eve of the First World War. The Use and Abuse of Numbers* (London, 1986); and I. Stone, *The Global Export of Capital from Great Britain, 1865–1914: A Statistical Survey* (London, 1999). A review

raising by foreign sovereign and corporate borrowers on the industrialised countries' financial markets occurred in waves – from the early 1890s to the war and, again, during the short-lived period of the gold-exchange standard of the 1920s – each followed by an insolvency crisis and, ultimately, default.[61] Each 'boom-and-bust' cycle resulted in *ex post* charges against bankers of excessive loan pushing and disaster-myopia,[62] and complaints over investors' irrational behaviour.

The Baring crisis marked the beginnings of a structural change in the 'issuing industry'. The dominant position enjoyed by a few merchant banks and *haute banques* (based on large international networks of agents, 'friends' and 'allied' private bankers and other institutions) was increasingly challenged. As in other business fields, this came from the rising power of commercial banks in the United Kingdom and on the continent. The allotment of foreign bonds began to rely less on the placing power of individual banks' networks than underwriting syndicates, managed by smaller merchant competitors and encompassing a large number of banks, financial institutions (trustees, debenture and insurance companies, dealers) and foreign banks.[63]

The importance of syndicates was hardly a novelty; their first appearance can be traced to the Napoleonic wars, although the practice was abandoned in Britain to such an extent that, as Chapman observes, in City mythology they were regarded as a peculiarly American and German invention. Their role increased again with the 'boom-and-bust' issuing cycle of the late 1880s. The Baring crisis (in which default on Argentinian loans was a demonstration of the rising risk on the traditional practice of independent single-house management of issues) contributed. Furthermore, substantial losses of market share persuaded even the elite market leaders (such as Rothschilds, Barings and Schroders), who had tended to consider syndication as a last resort practice. During the renewed 'issuing fever' of the early twentieth century, therefore, the reputation and marketability of foreign bonds depended very much on the placing power guaranteed by large international

of available estimates for France and Germany is in K. E. Born, *International Banking in the 19th and 20th Century* (Leamington, 1983), pp. 119–35; and Platt, *Britain's Investment Overseas*, pp. 131–9.

[61] See B. Stallings, *Banker to the World. US Portfolio Investment in Latin America, 1900–1986* (Berkeley, 1987), pp. 58–83; B. Eichengreen and R. Portes, 'After the deluge: default, negotiations and readjustment during the interwar years', and E. Jorgensen and J. Sachs, 'Default and renegotiation of Latin American bonds in the interwar period', both in B. Eichengreen and P. Lindert (eds), *The International Debt Crisis in Historical Perspective* (Cambridge, MA, 1989), pp. 13–85; and D. H. Aldcroft, 'International lending, debtor countries and the Great Depression', in idem, *Studies in the Interwar European Economy* (Aldershot, 1997).

[62] That is, technical inability to evaluate accurately both borrowers' and banks' exposure to external shocks: see J. M. Guttentag and R. J. Herring, 'Disaster myopia in international banking', *Essays in International Finance*, 164, International Finance Section, Princeton University (1986).

[63] R. Cameron, 'The growth of international banking to 1914', in K. L. Holtfrerich (ed.), *Interactions in the World Economy* (London, 1989), pp. 204–5.

syndicates. Their characteristics had increasingly evolved from *ad hoc* combinations towards more formal and comprehensive arrangements.[64]

Recent studies emphasise the crucial role performed by merchant bankers as information providers (through their networks of foreign agents, commission representatives and emissaries) to overcome information barriers. Without official regulation over the production and dissemination of financial information by issuers, it is argued that banks not only provided information to investors and signalled borrowers' creditworthiness – sometimes even by establishing rating departments – but also developed functions of monitoring loans and preventing free riding.[65] However, a question arises over the extent to which such a conceptual scheme can be applied to a period of increasing competition and diffusion of underwriting syndicates. Syndicates were meant to guarantee borrowers against the risk of adverse market conditions and to allow banks, acting as residual buyers and thus bearing a fee-earning contingent liability risk, to share credit and default risk and reduce it by means of diversification. Large-scale syndication and underwriting contracts represented, therefore, a protective financial innovation, based upon mutual insurance and aimed at maximising business volume and minimising contingent liability risk (and the related need of additional liquid resources) assumed individually by participants.[66] These institutional arrangements can also be interpreted as a response of banks, often new entrants, to difficulties in solving the problems of asymmetric information due to rapidly growing business volume, poor information available (especially for new borrowers), and fierce competition.

In prewar London, financial commentators complained about falling quality standards in foreign bond business, the general decline of 'the old prudence and caution' and the 'old regard for the public interest' typical of long-established financial houses.[67] These sentiments reflected the swarm of new underwriters and the enlargement of syndicates to embrace discount houses, joint-stock banks and foreign banks which simply created 'an illusion of security', merely instrumental in 'puffing' issues to a premium. Cases of issues unloaded on to investors only at high discount or returned to underwriters and held in their portfolios were reported to have mushroomed, while requiring a growing provision of short-term loans by

[64] Cottrell, 'Great Britain', pp. 37–40; and Chapman, *The Rise*, pp. 88–103 and 155–61. On the international connections of British, French and German banks see also Born, *International Banking*, pp. 115–59.

[65] Bordo, Eichengreen and Irwin, 'Is globalisation today', pp. 33–5. The role of banks in financial systems characterised by asymmetric information is emphasised by F. S. Mishkin, 'International capital movements, financial volatility and financial instability', *NBER Working Paper*, 6390 (1998). According to Bordo, Eichengreen and Kim, 'Was there really', pp. 15–18, asymmetric information account for investments concentrating on securities issued by entities with highly tangible and transparent assets. Similarly, bonds allowed investors to overcome agency problems.

[66] See Davis and Lewis, *Domestic and International*, pp. 346–7.

[67] 'The result is that men have ceased to feel individual responsibility, each is but one of a set, and is only to a comparatively small extent liable either in purse or in reputation for what is done': *The Statist* (1888), quoted in Chapman, *The Rise*, pp. 157–8.

commercial banks to avoid intolerable liquidity strain.[68] Similarly, during the 'lending fever' of the 1920s, triggered by the 'false feeling of security and stability created by the stabilisation of a number of countries', bankers were accused of unduly 'pushing' the explosive growth of foreign capital issues in New York[69] and London, thus privileging volume rather than quality.[70] Many blamed as ill-fated the transformation of investment banking into a cut-throat competitive business. It was apparently based upon aggressive marketing strategies – a feature largely absent from the prewar collusion-biased arrangements – with little regard paid for either the benefit of borrowers (especially in the case of default-prone developing countries) or the security of investors.[71] American bankers' performance in monitoring and commitment was generally felt to have been poor, especially when compared to what was perceived as a much more careful scrutiny of foreign issues by the unofficial syndicate of London issuing houses.[72] The British interwar experience (with relatively few default cases) was, therefore, regarded as a case of informal cooperative management that had enhanced information circulation and collective monitoring, thus limiting risk and preventing major losses.

III

During the post-1945 'golden age' of Western capitalism, the revival of international banking, motivated by increasing international economic interdependence, had to overcome the *longue durée* of the reforms of the 1930s and 1940s that had made banking in all major countries an over-regulated sector. A number of factors contributed to reduce the scope for growth in domestic banking. These included central banks' control over monetary policy through market-oriented or administrative constraints (reserve requirements, ceilings on interest rates and credit expansion,

[68] Platt, *Britain's Investment*, pp. 141–5. He reports also that hints of evasion and fraud were often circulated by the financial press.

[69] Competition was brought about by American banks, that had developed syndicating networks with bondholders to sell war-effort Treasury bonds, and regarded international banking and multinational expansion as a solution to declining domestic business and adverse institutional developments. On the evolution of the US banking system after the Federal Reserve Act, see E. N. White, *The Regulation and Reform of the American Banking System, 1900–1929* (Princeton, 1981); and Cleveland and Huertas, *Citibank*.

[70] 'Loans were granted to provinces whose very existence was unknown until their names appeared on the prospectus. Every device of supreme salesmanship was made use of in order to place foreign bonds with an ignorant and indiscriminate investing public': see P. Einzig, *World Finance 1914–1935* (New York, 1935), pp. 148–9; and idem, *The Fight for Financial Supremacy*, pp. 52–4.

[71] See M. De Cecco, 'The international debt problem in the interwar period', *EUI Working Paper*, 103 (1984); B. Eichengreen and R. Portes, 'Debt and default in the 1930s: causes and consequences', *European Economic Review*, 30 (1986); and A. Fishlow, 'Lessons from the past: capital markets during the nineteenth century and the interwar period', *International Organisation*, 39 (1985).

[72] On sentiments prevailing among contemporary observers, see M. Winkler, *Foreign Bonds. An Autopsy* (Philadelphia, 1933); and J. Madden, M. Nadler and H. Sauvain, *America's Experience as a Creditor Nation* (New York, 1937).

directives for discriminatory credit allocation, capital-to-asset ratios). This went along with 'fiscal dominance' brought about by military defence and the welfare state, banking laws setting legal boundaries between specialised activities and the general prevalence of oligopolistic structures in banking systems.

In many European countries specialised public institutions were established to provide trade finance services and support exports. Transnational expansion was also hindered by scarce enthusiasm for foreign banks' entry into national systems, justified by the necessity to protect domestic oligopolies from competition, or to reinforce the effectiveness of monetary policy. A common trend towards relaxation of regulatory discrimination in all OECD countries only emerged during the 1970s but restrictive attitudes were far from uncommon among Western monetary authorities and continued to prevail in many developing countries.[73] Similarly, foreign borrowers' access to national capital markets was subject to strict regulation – major exceptions being Zurich before 1961 and New York before 1963[74] – while foreign-exchange and capital controls prevented investors in many countries from purchasing foreign securities.

How was it that international banking re-emerged from such an adverse environment to experience during the 1970s what is usually referred to as its 'golden era'? The rationale for its powerful expansion from the 1960s lay in the ability of large commercial banks of Western countries to exploit the regulatory asymmetries that developed within the international system. A strong incentive was the rapidly expanding demand for services that stemmed from the sustained growth of trade and multinational corporations' substantial foreign direct investments.[75] The emergence of the Eurodollar (and other Eurocurrencies) market,[76] a truly international money market for time deposits denominated in foreign currencies, laid the foundations for the ensuing explosion of international lending, either as medium-term bank loans or long-term bond issues.

A crucial factor was the gradual relaxation of foreign-exchange controls after the return to external convertibility by all major Western currencies at the end of 1958. This allowed banks greater flexibility in their management of exchange treasuries and foreign portfolios, and revived the 'correspondent banking' system, frozen since the 1930s. International institutions (such as Bank for International Settlements), and the monetary authorities of some European surplus countries (Bundesbank and Bank of Italy), actively encouraged commercial banks to expand their activity in

[73] On multinationalisation of banking in OECD countries, see R. M. Pecchioli, *The Internationalisation of Banking. The Policy Issues* (Paris, 1983), pp. 68–84. On developing countries, see United Nations Centre on Transnational Corporations, *Transnational Banks: Operations, Strategies and Their Effects in Developing Countries* (New York, 1981).

[74] See P. Einzig, *Foreign Dollar Loans in Europe* (London, 1965), pp. 33–40.

[75] See R. C. Bryant, *International Financial Intermediation* (Washington, DC, 1987), pp. 58–73.

[76] Eurodollars are time deposits of short maturity denominated in dollars and held with banks outside the USA (including foreign branches of US banks), initially mainly in Europe. Analogously, Eurocurrencies are time deposits denominated in any given currency and held with banks outside that currency's country. Eurocurrency markets are therefore 'external' markets.

foreign currencies. They made available part of their dollar reserves for these purposes through swap contracts, in order to improve international liquidity, offset the expansionary impact of payment surpluses upon the domestic monetary base, as well as to allow cheap trade finance to national industry.[77] Finally, the willingness of the British authorities to revive London's heyday as an international financial centre created a deregulated enclave that acted as a powerful magnet to attract international banking back to the City. The free entry of foreign banks was allowed, with no regulation over the business conducted in foreign currencies (since it did not affect directly domestic monetary conditions).[78]

The emergence of rapidly growing 'external' money and capital Euromarkets critically enhanced financial integration amongst all major OECD countries. It made national monetary conditions increasingly interdependent and short-term capital flows channelled by commercial banks more sensitive and elastic to profit opportunities stemming from interest-rate and currency arbitrage. During the late 1960s, under the Bretton Woods system of 'adjustable exchange-rate peg' (that actually imposed adjustment through parity changes on reluctant governments), monetary authorities in the United States and continental Europe were induced to introduce new capital controls and regulatory devices on banks. This was in an attempt to sterilise the consequences of financial interdependence upon the balance of payments, domestic monetary conditions and exchange parities.[79] It, in turn, further motivated banks to 'externalise' international business in Eurocurrency centres and to devise new financial innovations to circumvent regulations and constraints. It was a 'regulatory dialectic' that boosted the Euromarkets' growth until the late 1970s, when all major Western countries (the United States, United Kingdom and West Germany) began to lift controls and regulations.

The new upsurge of international banking coincided with the Eurocurrency system. It was a true revolution that had, as Podolski has argued, an impact

[77] Dollars made available through swaps from central banks were placed with foreign banks, or used to finance international trade of domestic customers. Italian banks were also reported to bid actively for currency deposits with European correspondents to finance international trade of their national customers at cheaper conditions than those prevailing domestically. See O. L. Altman, 'Foreign markets for dollars, sterling, and other currencies', *IMF Staff Papers*, 4 (1961); and idem, 'Recent developments in foreign markets for dollars and other currencies', *IMF Staff Papers*, 1 (1963).

[78] See J. H. Forsyth, 'Financial innovation in Britain', in M. De Cecco (ed.), *Changing Money. Financial Innovation in Developed Countries* (London, 1987), pp. 144–9; E. Helleiner, *States and the Reemergence of Global Finance. From Bretton Woods to the 1990s* (Ithaca, NY, 1994), pp. 83–91; and G. Burn, 'The state, the City and the Euromarkets', *Review of International Political Economy*, 6 (1999). A partial exception was represented by UK clearing banks, whose foreign currency business was subject to discriminatory reserve requirements until 1971.

[79] See M. Bordo, 'The Bretton Woods international monetary system: a historical overview', and M. Obstfeld, 'The adjustment mechanism', both in Bordo and Eichengreen, *A Retrospective*. On capital controls and regulation on international banking, see R. H. Mills, 'The regulation of short term capital movements in major industrial countries', *Board of Governors of the Federal Reserve System, Staff Economic Studies*, 74 (1972); and OECD, *Regulations Affecting International Banking Operations of Banks and Non-Banks* (Paris, 1978).

'comparable to that of coke smelting in the development of iron and steel, the steam engine in the development of railways, and the computer in information processing'.[80] Eurobanking's development can be analysed as a process of financial innovation based upon functional, self-reinforcing interrelationships between three international markets – Eurocurrency, Eurocredit and Eurobond. These encompassed deposit and loan facilities from short-term to long-term, and were connected through the pervasive multinational expansion of commercial banks. Eurobanking is defined by its distinctive features of scale, institutional framework and location. It was a wholesale development,[81] operating external intermediation,[82] not subject to costly regulation[83] and mainly located in offshore financial centres.[84]

The concentration of dollar deposits in London was favoured by political as well as conjunctural factors.[85] Due to the strict regulation of American commercial banks' domestic time deposits, British merchant and overseas banks, as well as foreign banks (including branches of American banks), could offer higher interest rates.[86] Originally, the Eurodollar was mainly considered an alternative means of financing trade. First-rank banks with stronger attracting power stockpiled Eurodollar deposits. They employed part in trade finance by means of letters of credit, bill discounting and 'forfaiting',[87] and invested excess liquidity through

[80] Podolski, *Financial Innovation*, p. 113.

[81] Wholesale banking (as opposed to retail banking) deals with large deposit and loan transactions between banks and large customers (corporate and sovereign).

[82] External intermediation (cross-currency and cross-border at one time, i.e. foreign currency denominated transactions with foreign customers) is the key-concept adopted by BIS and IMF in order to provide a statistical measure of Eurobanking. A detailed discussion of Eurocurrency statistics is in G. Dufey and I. H. Giddy, *The International Money Market* (Englewood Cliffs, NJ, 1978), pp. 21–34, and R. B. Johnston, *The Economics of the Euro-Market. History, Theory and Policy* (London, 1983), pp. 35–55.

[83] The term 'unregulated' can be misleading and needs qualification. Eurobanking in fact was unregulated (that is, not subject to reserve requirements, deposit insurance and control over interest rates and credit allocation) when considered from the point of view of the attitude of monetary authorities in Eurocurrency centres towards currency business of foreign banks with non-residents. But Eurobanking activity of banks outside Eurocurrency centres (that is, their access to the Eurocurrency markets) was generally subject to binding regulation from the second half of the 1960s and throughout the 1970s.

[84] Financial centres with relative advantages in term of regulation and taxation of financial activities.

[85] A major though somehow overemphasised factor was the willingness by countries of the Soviet bloc to hold their international dollar reserves in London rather than in New York, where the political risk of Cold War leading to 'freezing' enemy resources was considered too high. Oil exporter countries were motivated by similar worries to move funds to London after the Suez crisis of 1956. Also the ban on the use of sterling to finance third-party trade, introduced by British monetary authorities in 1957, is often mentioned as a factor that motivated British banks to resort to the dollar to finance international trade.

[86] From the 1930s Regulation Q set ceilings to interest payable on time deposits by American banks.

[87] 'Forfaiting' was an innovative technique of financing trade of capital goods with East European, Middle Eastern and Latin American countries, based on the discounting of promissory notes and bills with medium-term maturities.

lending to other banks in London and elsewhere. Soon a market for dollar deposits developed, based upon a network of telephone and telex lines, arising from the brokerage functions performed by London agents as well major banks' dealing rooms created within foreign-exchange departments. Market imperfections and transaction costs, stemming from uncertainty as to creditworthiness, availability of funds and possible outlets, were rapidly overcome. By the early 1960s, traditional bilateral practice, often based on reciprocity arrangements, had evolved into a true international money market, closely interconnected to the foreign-exchange market (where banks covered exchange risk forward). It quoted autonomously-determined interest rates (though characterised by a strong covariation with rates prevailing on the American money market due to the largely dominant role of Eurodollars).[88]

Traditionally measured as outstanding external positions (i.e. foreign currency liabilities or assets vis-à-vis non-residents) of reporting banks in 15 OECD countries and other selected Eurocurrency offshore centres, the Eurocurrency market's gross size grew at an annual average compound rate of 26 per cent over the period from the mid-1960s to the mid-1980s. This was more rapid than domestic banking, international trade and world output,[89] thanks to the competitive stance of Eurodeposits relative to all major national money markets. It came about through the attraction of wholesale liquid funds of banks, central banks, industrial companies and private wealth-holders to the Euromarket.

A fundamental characteristic of the market was the large share represented by interbank dealings (up to 50 per cent of total Eurocurrency transactions). The interbank market was based upon a hierarchical structure – with large New York multinational banks at the top – reflecting differentials in creditworthiness and riskiness among participating banks. Due to the large number of banks, high standardisation of products and procedures, the lack of regulatory costs and low information and transaction costs, the market was also extremely competitive and operated on very narrow margins. It has been considered by economists as a remarkable case of a near-perfect market,[90] whose efficiency was critically enhanced during the 1970s by the establishment of international, interconnected private clearing systems and new advanced information and quoting services offered by agencies such as Reuter and Telerate.[91] These have further enabled the interbank market to

[88] On the emergence of the Eurodollar market, see P. Einzig and B. S. Quinn, *The Euro-Dollar System. Practice and Theory of International Interest Rates* (London, 1977); and M. S. Mendelsohn, *Money on the Move. The Modern International Capital Market* (New York, 1980); new historical evidence in C. R. Schenk, 'The origins of the Eurodollar market in London: 1955–1963', *Explorations in Economic History*, 35 (1998).

[89] See Bryant, *International Financial*, pp. 58–73. The market grew from $20b. to $2,600b. equivalent (at current prices and exchange rates) – a striking performance, even after adjusted in order to allow for double-counting arising from interbank operations.

[90] Analyses of the economics of the Eurocurrency markets draw heavily on transaction cost economics: see Johnston, *The Economics*; and H. D. Gibson, *The Euro-Currency Markets, Domestic Financial Policy and International Instability* (London, 1989).

[91] E. Sarver, *The Eurocurrency Market Handbook* (New York, 1988), pp. 207–21.

perform its fundamental functions of smoothing, transferring and globally redistributing international liquidity.[92] Like other interbank wholesale markets, it can also be interpreted as an informal institutional arrangement enabling banks to monitor each other (with information included in the spread), and to share liquidity and credit risk through mutual insurance.[93]

The existence of an efficient interbank Euro-money market was a crucial prerequisite for the rapid growth of international medium-term lending during the second half of the 1960s. Initially for medium-term loans, individual banks (either commercial banks or specialised subsidiaries or joint-ventures) extended it to corporate borrowers. After 1973, with the 'recycling' of the dollar surpluses of oil-exporting countries deposited in the Eurodollar market, it recorded an explosive growth in the form of medium- and long-term international lending to foreign governments.

The Eurocredit market was closely linked to the Eurocurrency market since banks secured in the latter a large amount of funds used to finance their Euroloans portfolio, while borrowers temporarily re-deposited part of loan proceeds, pending use, in the Euro-money market.[94] Eurolending triggered both product and process innovations. Fixed-interest loans with medium-term maturity (two to three years) provided by individual banks during the market's early phase – an adaptation of American-style term corporate lending – soon gave way to innovative flexi-rate roll-over credits. These were longer-term loans (up to eight years), granted at a floating rate - determined as a fixed spread over the costs of funding in the market and periodically adjusted to the prevailing short-term Eurodollar interbank rate (LIBOR).[95] The move to 'cost-plus' contracts was propelled by the increased

[92] Liquidity smoothing implies a reduction of transaction costs thanks to the economisation of the volume of precautionary balances held by banks; liquidity transfer offsets concentration of primary deposits with top names through interbank lending to lower standing banks; global liquidity redistribution compensates for excess demands and supplies between Eurobanking centres and the global network of local markets): see BIS, 'The international interbank market. A descriptive study', *BIS Economic Papers*, 8 (1983), pp. 9–17.

[93] In wholesale banking, stochastic-based insurance in the form of reserve holding (as in retail banking) is impossible, since the small number of very large depositors and borrowers inhibits the functioning of the law of large numbers and satisfactory risk diversification, which only very big banks could afford. By lending part of deposits received to other banks in the interbank market the risk that deposits can be withdrawn at short notice is spread across a number of banks. See Davis and Lewis, *Domestic and International*, pp. 108–10.

[94] Most Eurocredits (over 90%) used to be provided in dollars, at least initially, in the 1960s and 1970s. Many contracts, however, gave borrowers the right of choosing other currencies for each roll-over period (provided that banks were able to obtain the currencies in the market for the periods required).

[95] In fact Eurobanks committed themselves to grant to borrowers a succession of short-term loans over a medium-term period. A revolving commitment provides therefore a standby or insurance facility against future uncertainties and long-term fluctuations in cash flows: see P. Einzig, *Rollover Credits. The System of Adaptable Interest Rates* (London, 1973), pp. 22–4; and Mendelsohn, *Money on the Move*, pp. 71–86.

instability of interest rates and enabled banks to 'unbundle' liquidity risk from interest risk, shifting the latter entirely to borrowers (indeed, turning short-term interest risk into medium-term default risk).[96] Similarly, in response to foreign-exchange volatility, multi-currency option 'cost-plus' contracts were sometimes attached to roll-over loans, allowing borrowers to draw down funds in major Eurocurrencies at LIBOR adjusted for conditions prevailing in the forward exchange market.[97]

Whether Eurolending was to be considered a mere liquidity-distributing or a liquidity-creating phenomenon has been debated among economists. In spite of statistical evidence for substantial positive maturity mismatching by London banks active in Eurobusiness, some argued that the data could be biased towards over-estimating mismatching, whereas liquidity distribution in fact largely prevailed. The debate focused upon the nature of roll-over credits and the basic features of over-draft contracts. The former were usually categorised according to the period up to the loan's ultimate maturity date, not to the next short-term roll-over date, and the latter were increasingly used in Eurobanking and considered long-term assets, irres-pectively that repayment could have been agreed also at short term.[98] However, studies of contractual arrangements have confirmed that roll-over credit generally implied true long-term commitment. This was because banks customarily guaran-teed automatic renewal at roll-over date and had no option to recall credits by demanding early repayment.[99] Such practice actually insured borrowers against the risk of repayment during commitment periods in exchange for a premium (the spread) against this 'insurance' service.[100] This further reinforced the consensus view that funding Euroloans by short-term borrowing in the Eurocurrency market implied, in fact, extensive liquidity creation.[101]

From the early 1970s, with rapidly growing average size, longer maturities and keener competition, banks increasingly resorted to syndicating arrangements to manage

[96] A necessary qualification is that within the renegotiating period, banks face a limited, but potentially profit-eroding interest-rate risk. It is, however, a matter of unsettled debate whether borrowers are better able to bear such risk than banks, that is whether 'cost-plus' contracts provide an efficient distribution of risk bearing.

[97] Dufey and Giddy, *The Evolution of Instruments*, pp. 25–6.

[98] See J. Niehans, *International Monetary Economics* (Baltimore, 1984), pp. 189–90.

[99] Repayment usually took the form of single payment ('lump sum') at maturity date. Other methods included instalments at dates fixed in the contract, as well as options to repay the credit partially or entirely after some minimum time.

[100] It was such insurance that made a roll-over credit more attractive to borrowers relative to periodical piecemeal borrowing on shorter terms. If contracts included early repayment option, borrowers would have found themselves exposed to the risk to be called upon to raise cash to repay their debts at unfavourable terms or in difficult times. As a consequence, banks have to be seen as carrying default risk for the entire commitment period, not for the period up to the next renewal: see Einzig, *Rollover Credits*, pp. 54–5; and Davis and Lewis, *Domestic and International*, pp. 99–101.

[101] For a comprehensive review of the debate on liquidity creation in Eurobanking, and a critical discussion of available data and alternative methodologies to measure maturity mismatching, see Gibson, *The Eurocurrency Markets*, pp. 146–59.

increased risk. This practice, under the coordination of one or more manager banks, was well established in international capital markets (as has been remarked), and already experimented with by American banks for domestic loans. It provided an efficient institutional arrangement – akin to coinsurance contracts – that allowed banks, even of medium size, to compete, internationalise loan portfolios, spread market risk, downgrade individual exposure and manage non-systematic risk by diversifying into a spectrum of different borrowers.[102] Syndicate contracts, originally based on simple 'best effort' arrangements with very little risk borne by manager banks,[103] became rapidly standardised and highly formalised. This was because banks required increasingly complex documentation (including covenants, restrictive clauses and tighter default clauses), to protect themselves against risk. In part, it also arose as a consequence of American banks' dominant influence, they having a tradition of high formalisation in contractual design relative to the informal attitude of British banks.[104]

However, the efficiency of syndicated lending in risk management has been repeatedly questioned. As Davis and Lewis observe, risk-sharing implies converting individual risks into system risks which, in turn, should advocate collective monitoring arrangements.[105] The post-1973 'boom and bust' cycle of international lending, triggered by fierce competition in lending to developing countries for financing temporary payments imbalances, led in 1981–83 to the worst international debt crisis since the Great Depression. It ended in the wearisome process of renegotiation and rescheduling. Events suggest that banks' propensity to develop collective monitoring arrangements was scarce at best.[106] Indeed, studies of international banks'

[102] Systematic or market risk measures how an asset covaries with the market's return; as such, it is not diversifiable. Non-systematic risk is independent of the market, and can be diversified away in large portfolios. Davis and Lewis, *Domestic and International*, pp. 102–13, insist on similarities between strategies adopted by international wholesale banks and insurance companies through coinsurance and reinsurance.

[103] Under a 'best effort' loan, the manager was prepared to take up its amount (usually only a portion of the total required by the borrower) only in the case of successful syndication. In the case of unsuccessful syndication, the borrower got nothing. The main purpose was therefore to set such conditions (rate and fees, maturity, amortisation, grace period and convenants) as the market could agree to participate in the loan. Managers and agents had sometimes to pass on part of their return from commissions and fees (earned from advising, contract negotiating, marketing and monitoring) to other participants. For details on contractual arrangements and possible conflicts of interest in syndicated lending, see T. H. Donaldson, *Lending in International Commercial Banking* (London, 1988), pp. 70–117.

[104] For a description of the protective clauses, financial covenant and ratios included in standard Euroloan contracts, see ibid., *Lending in International Commercial*, pp. 118–35; and, more extensively, J. A. Donaldson and T. H. Donaldson, *The Medium Term Loan Markets* (London, 1982).

[105] Lewis and Davis, *Domestic and International*, pp. 14–19.

[106] See United Nations Centre on Transnational Corporations, *Transnational Banks and the International Debt Crisis* (New York, 1991), pp. 7–47. The study identified 3 groups of banks with a role of managers and co-managers of international loans in 1974–82: the 5 largest US banks with dominant positions (the 'leaders'), 10 relatively smaller and particularly aggressive banks from USA, Canada and Europe (the 'challengers'), and a group of 'followers', mainly from Europe and Japan, relatively less active in the organisation of syndicates.

behaviour during that period, primarily focused upon Latin America, confirm that they tended to over-lend to sovereign borrowers (including governments and public sector companies). This was undertaken to promote accelerated asset and profit growth. Not least, it was a consequence of keener competition that allowed 'challengers' to engage successfully in price competition (with narrowing spreads partially compensated by larger volumes) for creditworthy clients, so partially displacing 'leaders' from safer towards higher-return lending to riskier countries and markets. Risk-sharing and risk-diversification through syndicated loans proved ultimately to be not much more than a 'fiction' since three-quarters of the net floating rate syndicated debt outstanding in 1982 was concentrated in just four countries (Mexico, Brazil, Argentina and South Korea).[107]

In this respect, international banks' Eurolending behaviour has been charged with conscious overlending, undue risk-taking, and 'dysaster myopia'. That is with an inability to evaluate fully the long-term consequences of roll-over floating rate techniques, which inflicted upon borrowers repeated interest-rate shocks and rapidly backfired on banks in the form of transfer shocks. Observers have also emphasised the limits of international banks' ability to monitor borrowers and the level of general exposure in the interbank market.[108] Commentators similarly pointed to their responsibility for adopting collusive pricing practices with borrowers, such as 'disguising' credit and default risk in higher fees and commissions (on which scant information was available), instead of signalling it in the spread.

The third Eurobanking pillar was the Eurobond market. Technically, Eurobonds were not a novelty. As seen, dollar and sterling-denominated bonds had been previously placed and circulated internationally. Throughout the 1950s and early 1960s, foreign governments, corporations and international organisations raised capital by issuing bonds, mainly in Zurich[109] and New York, where Swiss and American authorities allowed liberal access. Nonetheless, Eurobonds,[110] first issued in 1963, represented a product innovation. They were designed by British merchant banks to enable European companies and EEC institutions to issue dollar-denominated debt to European investors,[111] while also lowering the cost of borrowing by minimising government interference, taxes and other regulatory costs. Eurobonds were given a critical boost by the Interest Equalisation Tax, a new

[107] See Davis and Lewis, *Domestic and International*, pp. 357–8.

[108] See Guttentag and Herring, 'Disaster myopia', pp. 5-26.

[109] Foreign borrowing in Zurich capital market was stopped by Swiss monetary authorities in 1961 because of domestic monetary policy considerations.

[110] Foreign bonds are issued by foreign borrowers in a single country, denominated in the currency and underwritten and sold by a group of banks or issuing houses of the lending country. Eurobonds are bonds denominated in dollars or (to a lesser extent) in other currencies, issued by both corporate and sovereign borrowers mainly in London and Luxembourg, offered for sale in various countries, simultaneously, through international syndicates.

[111] See I. M. Kerr, *A History of the Eurobond Market. The First 21 Years* (London, 1984), pp. 11–16; and K. Burk (ed.), 'Witness seminar on the origins and early development of the Eurobond market', *Contemporary European History*, I (1992).

regulatory device introduced by the American authorities in 1963 to curb the outflow of portfolio capital and constrain European resort to the 'yankee bond' market.[112] It gave sovereign and corporate borrowers (including many American multinationals, barred by capital controls from raising capital domestically, to fund overseas investment) a push to turn to the Eurobond market. Increasing flexibility of facilities available was also a strong incentive for borrowers to approach the market. These included multiple-currency, parallel and convertible bonds[113] and substantial deregulation, namely the absence of controls and registration procedures, relatively low interest rates and underwriting fees, less detailed information requirements, tolerance over disclosure and lower transaction costs than those incurred by raising capital piecemeal in each individual country. At the same time, virtually total tax exemption (as bearer bonds were exempted from withholding and income tax on interest receipts) gave Eurobonds success with international investors. These included Swiss trustees and investment funds that managed liquid resources of international private wealth-holders (stereotyped in the figure of 'the Belgian dentist'), financial institutions and corporate companies.[114] However, inflation and high interest rates from the late 1960s and throughout the 1970s made fixed income securities unattractive and constrained the expansion of new issues on the Eurobond market. They were largely outpaced by the explosive growth of more flexible (and even more secretive) syndicated Euroloans. The secondary market, based upon unofficial, over-the-counter dealings transacted by telex or telephone,[115] was slow to deepen. An efficient clearing system only developed during the early 1970s, when Euroclear in Brussels and Cedel in Luxembourg eliminated the need for physical movements of bonds for most transactions. Furthermore, the Association of International Bond Dealers (AIBD) disciplined Eurobond secondary trading by introducing standard methods for calculating yields and provided regular market information.[116] The market suffered also from a few defaults – on bonds issued by

[112] The IET – actually a currency control in disguise – placed a tax on US purchases of foreign long-term securities, thus increasing the cost of foreign borrowing in the US and equalising interest rates on long-term financing in the US and abroad. Borrowers from Canada and developing countries were exempted from IET. The tax was gradually reduced in the early 1970s and eventually lifted in 1974.

[113] Beyond multiple-currency bonds, other innovative products were offered, such as currency-option-clause bonds, denominated in a single national currency but with option of repayments in another currency in order to strengthen the exchange guaranty for the investor. Parallel bonds were multinational issues composed of several loans floated simultaneously among various countries, with each participating country raising one loan in its own currency, at terms and conditions as uniform as possible. A survey of Eurobond products is in P. Gallant, *The Eurobond Market* (New York, 1988), pp. 24–9.

[114] In a number of European countries exchange and capital controls prevented domestic investors from purchasing foreign securities. The British Foreign Exchange Control, for example, allowed subscription of foreign securities only through the use of investment dollars.

[115] Eurobonds in fact were listed at stock exchanges (mainly London and Luxembourg) only to enable institutional investors to side-step regulation that forbade purchases of unquoted securities.

[116] On AIBD, Euroclear and Cedel, see Kerr, *A History*, pp. 91–102.

companies controlled by Investors Overseas Service (IOS), the largest international fund manager and a major Eurobond subscriber which collapsed in 1969–70 after speculation and the misappropriation of funds.

Therefore, the heyday of Eurobonds only began during the late 1970s. The market took off in the early 1980s, under the influence of conjunctural factors (deflation, global recession, international debt crisis) and structural changes ('flight to quality', more prudential attitudes by international banks, and the general displacement of international-bank credit by mounting 'securitisation').[117] Previously, however, significant changes had occurred in the techniques of international syndication and risk management. During the 1960s, manager banks (led by German universal banks, such as Deutsche Bank and Dresdner Bank, and innovative American and British merchant banks such as Morgans, White Weld, Warburgs, Hambros and N. M. Rothschild) had 'naturalised' the American-style model of syndicate within the European environment.[118] Managers and co-managers, beyond providing advice services related to an issue, established underwriting syndicates (committed to purchase a portion of the issue, usually 'à la parisienne') and large selling groups, including banks, insurance companies, stock-exchange firms and institutional investors. Underwriters as well as secondary market makers financed part of their temporary commitments by borrowing in the Eurodollar and other Eurocurrency markets,[119] while borrowers, adopting a liquidity-stockpiling approach, channelled some funds raised back to the Eurocurrency market in the form of short-term deposits.

During the early period, syndicate contracts were designed to minimise the risk actually assumed by managing and underwriting banks. In fact, the Eurobond market was essentially a 'placement market', whereby, in the absence of public issue and bond rating, bonds were allocated privately. The underwriting contract between managers and the borrower was usually formalised only after market-testing – involving an open pricing period of variable duration (to determine the final price of a successful placement) - during which large blocks of the issue were allocated and terms negotiated between syndicate members. In the case of prospective failure, the syndicate could refuse to sign the contract, adopt evasive measures – raise the coupon, price the issue at larger discount, cut the size and lengthen the selling period – or resort to 'market-out clauses'. Banks enjoyed, therefore, a strong position over borrowers, reinforced by very limited competition and the prevalence of collusive behaviour. Ponderous underwriting and selling syndicates (based sometimes on random selection and allotment) tended to incorporate correspondent relationships and reciprocity factors, such as cross-ownership, as well as traditional

[117] For a concise history of trends in the market, see F. G. Fisher, *Eurobonds* (London, 1988), pp. 5–29.

[118] See P. Einzig, *Foreign Dollar Loans in Europe* (London, 1965), pp. 13–14.

[119] This proved especially true when low short-term interest rates in the Eurodollar or Eurocurrency markets created wide yield curves and large profit opportunities on Eurobond investments. Banks were therefore induced to borrow extensively in the short-term market to finance their voluntary holdings of Eurobonds.

relationships and alliances, irrespective of actual distribution strength and origination activity. Syndicates could encompass up to 200 financial institutions, some earning underwriting fees in spite of modest distribution capability and little genuine investor demand.[120]

Oligopolistic and collusive behaviour only began to fade during the late 1970s and the early 1980s. This arose from booming Eurobond issues, shortening average maturities (from ten to 20 years, common before 1974, to five to seven years prevailing during the early 1980s), increased professional sophistication of bond brokers, and keener competition by aggressive specialised American investment banks and Japanese securities houses. Competition brought about a higher propensity on the part of manager banks to take risk in order to gain market share. Innovations, such as pre-priced and auction-based bought deals, shifted market power from banks to borrowers, made Eurobond investment banking a far more challenging business for banks. It required an ability to anticipate market conditions and match underwriting syndicates with actual placing power.[121]

The introduction of 'grey-market' trading – through which the discounted prices of issues, either officially priced or simply announced, were circulated – formalised bond price discounting, improved market transparency and filled the gap between the primary and the secondary markets. However, it was a practice sometimes strongly opposed by syndicates of managers.[122] In the new system, which increasingly moved towards 'price banking', large and often inefficient syndicates were replaced by small, aggressive syndicates, whose members also acted as secondary market makers while having been selected on the basis of geographical specialisation. As a consequence, competition-oriented banks resorted to new practices of risk management. Banks allocated more capital and medium-term liabilities to the business against the risk of adverse market conditions, unsuccessful syndication and discounted prices in primary markets, let alone increasing the illiquidity of bonds in the secondary market.[123] They also improved their ability to monitor the

[120] For institutional details of Eurobond contracts, see Y. S. Park, *The Eurobond Market. Function and Structure* (London, 1974), pp. 44–9 and 90–103.

[121] In pre-priced deals, lead manager and a small managing group priced and underwrote the whole issue, thus anticipating market conditions before entering the deal. In bought deals, borrowers invited few banks to tender for the deal and choose the cheapest offer; aggressive investment bankers quoted the final price, underwrote the whole transaction and took responsibility to arrange a syndicate, often resorting to pre-arranged informal clubs of major underwriters.

[122] Debt and equity warrants gave investors the option to convert the warrant into a debt instrument or an equity under agreed conditions at an agreed time in the future. Currency warrants gave the investor the right to buy an amount of a currency at an agreed exchange rate at a predetermined time in the future. Bonds with warrants attached usually reduced the all-in cost to the borrowers. Zero coupons were designed to turn income from bonds into a capital gain - particularly attractive to some investors for tax avoidance reasons.

[123] As a rule, given the high number of issues and their larger average size, trading in the secondary market proved increasingly difficult. The life cycle of a successful bond at the end of the 1980s was expected to head towards increasing illiquidity shortly after its issue.

performance of participants in underwriting syndicates to prevent the risk of wholesale selling and dumping of bonds.[124] To achieve such challenging tasks, they could resort to active asset and liability management – an innovative technique that marked the most important structural change in the recent history of banking.

The rise of Eurobanking over the 1960s and 1970s triggered two fundamental, long-lasting structural changes: the ultimate multinationalisation of commercial banking; and the transition towards innovative management techniques. Eurobanking provided a most powerful incentive for large commercial banks of Western countries expanding their transnational activities to an unprecedented extent.[125] Internationalisation became a pervasive phenomenon in both industrialised and developing economies, so marking a definite discontinuity with the legacy of the era of nationalistic retrenchment. Banking at the end of the 1950s had still been a world of closed and disintegrated national systems, dominated by regulation, oligopolistic structures, collusive behaviour, barriers to entry, market segmentation and lack of innovation. Two decades later, it had turned into a continually expanding unregulated enclave of wholesale business, based upon international integration, generally free access, keen market competition and advanced technological as well as financial innovation. Eurobanking from the 1970s represented, therefore, to large commercial banks of Western countries their opportunity of growth. To fully exploit it, however, banks were forced towards a path of deep structural and managerial change.

The dynamic of banking multinationalisation during the 1960s and 1970s can be conceptualised as a self-reinforcing interaction between derived demand and regulation arbitrage. Relationship banking provided a particularly strong incentive to expand multinational branch networks in order to supply services to corporate customers with large international and multinational activities. Foreign-branch networks established in Europe by American and Japanese commercial banks from the 1960s provided a classic case of 'follow- (or accompany-) the-customer' strategy, whereby ownership-specific and internalisation advantages were used to surmount the potential competition of local banks and, sometimes, to gain market share in local retail business. At the same time, growth and profit opportunities related to Eurobanking provided strong incentives to locate foreign branches within Eurocurrency centres in order to exploit location-specific advantages and differentials (as to interest rate, regulation and tax system).[126] American money-centre

[124] For a detailed description of the evolution of Eurobond syndication and distribution techniques since the 1960s, see Kerr, *A History,* pp. 103–11; and more extensively, Gallant, *The Eurobond Market*, pp. 20–44 and 116–43. Morgan Stanley, White Weld and Credit Suisse First Boston are regarded as the first banks to introduce aggressive competition and sophisticated professionalism into the market.

[125] A general picture of strategies and implications of multinational banking is in Pecchioli, *The Internationalisation*, pp. 51–84.

[126] See R. Dale, *The Regulation of International Banking* (Cambridge, MA, 1984). The crucial role of regulation is also emphasised by R. Weston, *Domestic and Multinational Banking* (London, 1980).

banks, through foreign branches and Edge-Act subsidiaries,[127] circumvented domestic regulation on interest-rate ceilings and exploited competitive advantages in attracting Eurodollar deposits. Foreign branches also enabled parent banks to bypass domestic capital controls (by granting loans to finance American multinationals' foreign investments). Furthermore, they partially offset domestic monetary policy (by channelling funds raised abroad back home, as during the credit crunches of 1966 and 1969), and allowed diversification towards international investment banking, thus circumventing Glass-Steagall Act.[128] In a similar fashion, continental banks – especially German and Italian – were induced to establish branches and subsidiaries in London or Luxembourg to evade regulation and controls imposed by their monetary authorities on Eurobanking activities (for purposes related to monetary and balance-of-payments policy) carried out from home-based headquarters. At the same time, European banks were strongly motivated to enter Eurobanking, expand foreign-branch networks and provide innovative international services to defend their corporate customer bases from American competition.[129]

As a consequence, growth opportunities created by Euromarkets have been exploited by 'externalising' Eurobanking in offshore financial centres, either large 'entrepôt', fully functional centres of international (London) or regional relevance (Luxembourg, Singapore, Hong Kong), or mere booking centres such as the Caribbean tax heavens. In 1981 a 'duty-free' banking enclave was created by American monetary authorities under International Banking Facilities (IBFs) – a deregulation device that attracted part of Eurocurrency business from Caribbean offshore centres back to the United States.[130] The consolidation of offshore and other foreign branches into an integrated network allowed transnational banks to provide efficiently innovative services – such as global cash management and quick international funds transfer – and to internalise function, such as interest and currency arbitrage or distribution of international liquidity. Indeed, since the early 1970s the share of 'inter-office' dealings (i.e. between branches of the same bank)

[127] Edge Act Corporations were federally chartered subsidiaries of bank members of the Federal Reserve system, created for the purpose of engaging in international banking operations. Relative to domestic commercial banks, Edge Act corporations enjoyed the privilege of being allowed to hold stock in non-banking companies, and to provide a variety of investment banking services (including underwriting, distributing and dealing in debt and equity securities) in foreign countries.

[128] See J. Kelly, *Bankers and Borders. The Case of American Banks in Britain* (Cambridge, MA, 1977); D. R. Kane, *The Euro-Dollar Market and the Years of Crisis* (London, 1983); and M. De Cecco, 'Inflation and structural change in the Eurodollar market', in idem and J. P. Fitoussi (eds), *Monetary Theory and Economic Institutions* (London, 1987), pp. 188–94. On the credit crunches of 1966 and 1969, see Wojnilower, 'The central role'.

[129] On British banks' reaction to American competition in the 1970s, see D. Channon, *British Banking Strategy and the International Challenge* (London, 1977). See also Jones, *British Multinational*, pp. 320–35.

[130] Under IBFs, all US banks were permitted to establish special units (in fact a separate set of books) to conduct from the USA Eurocurrency borrowing and lending operations without incurring reserve requirements and interest-rate regulation.

within the Eurocurrency interbank market has never stopped rising.[131] Virtually all big-league Western commercial banks entered joint-ventures. This was to establish (mainly in London) 'consortium banks', international banks functionally and geographically specialised in the provision of international payment and Eurobanking services to assist corporate customers of member banks in their multinational expansion in emerging countries in Asia and Latin America. However, their success was short-lived, with the scope for their growth often restrained by conflict of interests when shareholders' individual strategies of growth in Eurobanking challenged those of the consortia.[132] Many large European and Japanese banks also established branches and subsidiaries or acquired local American banks in order to create a stable dollar deposit base, reduce or eliminate the cost of hedging against exchange risk and partially compensate for the competitive advantage enjoyed by American banks.[133]

Even more important, all major transnational banks developed multiple functions. They conducted foreign-exchange operations, engaged in Eurocurrency trade financing and Eurolending, acquired control of or merged with investment banks, and managed or participated in Eurobond underwriting syndicates. As a whole, therefore, large growth-oriented transnational banks moved towards universal banking. Innovative liquidity management was thus required to perform liquidity creation and manage risk efficiently. Eurocurrency borrowing by banks (apart from American prime-takers) usually relied upon small 'core deposits' and was extensively financed in the interbank market. Liquidity management functions on a cash-flow basis became necessary to ensure that maturing deposits were repaid from the proceeds of maturing assets or replaced by fresh borrowing. This caused the emergence of 'asset and liability management'.

It was institutionalised by banks in order to deal more efficiently with the uncertainty arising from withdrawals of short-term deposits, draw-downs of loan commitments and variations in loan repayments. It was based essentially upon the ability to manipulate the volume, composition and cost of fund raising on the international money market to finance positions taken in the asset side of the balance sheet – a process referred to also as 'marketisation' of banking.[134] Initially, 'liability management' meant essentially developing an efficient dealing-room

[131] Large multinational banks tended to privilege inter-office business and resorted to interbank market only when the latter could offer better conditions. Others used some foreign branches to centralise control of their interbank business and redistribute funds internally: see BIS, 'The international interbank', pp. 15–17.

[132] See D. Ross, 'European banking clubs in the 1960s: a flawed strategy', *Business and Economic History*, 27 (1998).

[133] In fact, before 1978 foreign banks in the USA were not subject to reserve requirements and prohibition of interstate branching: see S. H. Kim and S. W. Miller, *Competitive Structure of the International Banking Industry* (Lexington, 1983), pp. 25–45.

[134] The concept of 'marketisation' of banking is used in a OECD study by G. Bingham, *Banking and Monetary Policy* (Paris, 1985). On liability management techniques, see R. Harrington, *Asset and Liability Management by Banks* (Paris, 1987).

function to access borrowing in the interbank market. From the late 1960s, however, international banks successfully promoted financial innovations that multiplied 'securitised' asset and liability management instruments. Negotiable Euro-Certificates of Deposits (Euro-CDs), a financial 'technology transfer' from the American money market (where negotiable CDs had been pioneered by Citibank in 1961), brought about substantial cost advantages relative to fixed time deposits of equivalent maturity. This was due to additional liquidity guaranteed by the existence of a secondary market, developed in London by specialised dealers.[135] During the 1970s banks also resorted extensively to the issue of Euronotes (Floating Rate Notes – FRNs), medium-term securities similar to Eurobonds with floating interest rates periodically reset and adjusted to LIBOR. This helped strengthen the medium-term component of their liability sides and kept maturity mismatching under control. In fact, Euronotes guaranteed long-term availability of funds at a cost varying periodically with market rates, thus unbundling 'funding risk' from 'interest rate' risk.[136] Since Euro-CDs and Euronotes were largely subscribed for by banks, their markets acquired some characteristics of interbank markets.

On the asset side, the most significant innovation emerged during the late 1970s with Note Issuance Facilities (NIFs), a sophisticated form of commitment banking. It enabled banks to expand their businesses at only marginal risk and limited additional pressure on capital ratios. Under NIFs contracts, corporate borrowers were allowed to raise medium-term funds through a stream of short-term notes at set maturities (actually the equivalent of flexi-rate roll-over Euroloans with guaranteed renewal). Banks, in turn, individually or through a syndicate, organised placing arrangements. These took the form of tender panels, backed by an underwriting clause committing them to act as residual buyers of unsold notes at price and conditions specified in the contract. This was an arrangement that actually reduced maturity mismatching and risk, and enhanced the overall liquidity of international banks' loan portfolios.[137]

The adoption of asset and liability management in Eurobanking represented a sea-change. It marked a strong discontinuity with the past through implying a radical change in the nature of bank liquidity. As seen, prewar international banking was based upon a traditional concept of liquidity as a portfolio of liquid assets that could be turned into cash at short notice and on predictable terms (by redemption, sale or use as collateral for borrowing). With Eurobanking and its innovative interactive management of assets and liabilities, a new concept of liquidity emerged. This was based upon banks' ability to compete in financial markets by issuing liabilities at market rates and to arbitrage efficiently among the cost of different funding

[135] Euro-CD was defined as 'the first new negotiable instrument created under English Law since 1896', quoted by Dufey and Giddy, *The Evolution*, p. 21.

[136] Actually Euronotes were issued for the first time in 1969 by corporate borrowers as a means of disintermediating bank lending and tapping funds directly from investors in the market.

[137] On Euronotes, NIFs and other financial innovations see Davis and Lewis, *Domestic and International*, pp. 320–39.

sources. It was portfolio behaviour pioneered by American banks from the late 1960s, both domestically and internationally,[138] and increasingly adopted by Western banks thereafter.[139]

IV

The 90 years between the Baring crisis and the international debt crisis of 1981 witnessed the rise, peak and transmutation of commercial banks' leadership in international financial intermediation. During the decades before 1914, continental *universalbanken* and British joint-stock banks reacted to incentives stemming from a rapidly expanding international economy successfully to challenge the dominance of specialised institution in all trade-related banking services. This reached its mature phase during the 1920s, when commercial banks intensified their multinational expansion, internalised functions in trade finance, foreign exchange and interbank transmission of liquidity – previously performed mainly through markets and specialised brokers – and integrated the functioning of foreign-exchange departments into their domestic activity. They also increasingly moved into investment banking to participate, as managers, underwriters and sellers, in international syndicates for placing foreign bonds issued in major financial centres. In their rise to international leadership, commercial banks enjoyed ownership-specific competitive advantages in terms of size, relationships with internationally-oriented corporate customers and managerial resources. They were also able to exploit economies of scale and scope and technological innovations to cut information and transaction costs. Financial process and organisational innovations, such as the 'nostro' account system, modern spot and forward exchange dealings, interbank borrowing and lending and international syndicates, fostered the functional evolution of correspondent banking. They became pillars of a new international financial architecture, based upon cooperative networks and informal mutual insurance arrangements for reciprocal monitoring and risk sharing.

Gradually re-emerging from interwar and postwar nationalistic retrenchment, with the relaxation of foreign-exchange controls and the return to external convertibility in the late 1950s, commercial banks de-frosted, reactivated and enlarged their cooperative international networks. With little scope for expansion in either over-regulated and oligopolistic domestic banking or traditional trade-related international business, they successfully exploited regulatory asymmetries and the benign attitude of monetary authorities to launch into 'external' intermediation. The rapid

[138] See E. J. Kane, 'The three faces of commercial bank liability management', in M. P. Dooley et al. (eds), *The Political Economy of Policy-Making* (Beverly Hills/London, 1979), pp. 149–74. On US banks' portfolio behaviour, see L. L. Kreicher, 'Eurodollar arbitrage', *Federal Reserve Bank of New York Quarterly Review*, 7 (1982), pp. 10–23.

[139] See OECD, *Trends in Banking in OECD Countries*, Report to the Committee on Financial Markets (Paris, 1985), pp. 24–37.

growth of the Eurodollar (and other Eurocurrency) market, and its 'core' interbank component, created breathtakingly a growing system of global liquidity redistribution offering enormous opportunities for growth and creating scope for unbridled competition. Commercial banks were strongly motivated to 'externalise' international business in financial 'entrepôt' and offshore centres to exploit regulatory and tax advantages. They rapidly expanded their networks of branches in major global and regional centres from the late 1960s. With the emergence of the Euro-credit and Euro-bond markets, Eurobanking became a system characterised by high growth, keen competition and increasing international liquidity creation. Unregulated and low-cost 'external' intermediation not only provided additional business volume but also became a profitable substitute for 'traditional international' and 'domestic' intermediation. These factors, along with financial instability from the late 1960s, further brought about the explosion of creative financial thinking, often pioneered by aggressive, growth-oriented American commercial banks. Financial innovations, such as flexi-rate roll-overs, NIFs, underwriting syndicates, Euro-CDs and Euronotes, implemented by increasingly sophisticated contractual arrangements, were designed to share, shift and unbundle risk, and to impart higher liquidity to both primary and secondary assets and liabilities. Asset and liability management eventually emerged to mark a strong historical discontinuity that, within the deregulating international environment of the 1980s, also began to feature in domestic banking and so pave the way for a true revolution in commercial banking.[140]

However, the general consequences of this process of continuous microeconomic re-optimisation are open questions. Throughout the period, the prevalence of institutional arrangements akin to mutual insurance tended to turn individual risk into systemic risk, calling for collective monitoring and management. In this respect, performances during the 1920s, as well as over the 1960s and 1970s, have been, at best, controversial. Failure in the collective management of international liquidity, under circumstances of increasing financial interdependence, led to systemic failure in 1931 and in 1971. Individual and collective 'disaster myopia' seemed to prevail in each 'boom-and-bust' cycle of international lending. More specifically, the prevalence of syndicates as coinsurance arrangements, designed to share risk during periods of intense competition and rapid business growth, seems not only to have failed to allow true diversification but also to have affected adversely incentives to efficient monitoring and market transparency. A reaction appears to have occurred during the early 1980s, favoured by recession, consolidation and rationalisation of international markets, the emergence of securitisation, and the enormously enhanced capacities in information and risk processing allowed by communication and computer technologies. Thanks also to more effective monitoring and prudential supervision by national monetary authorities and international institutions, a

[140] See E. Ballarin, *Commercial Banks Amid the Financial Revolution* (Cambridge, MA, 1986); and J. Canals, *Competitive Strategies in European Banking* (Oxford, 1993).

more selective attitude on the part of banks has eventually emerged towards profitability and asset quality, capital-to-asset ratios and risk assumed. This has arisen by mainly privileging fee-generating off-balance sheet business, such as financial derivatives and commitment banking.[141]

[141] See OECD, *Trends in Banking in OECD Countries*, Report to the Committee on Financial Markets (Paris, 1985); and BIS, *Recent Innovation in International Banking* (Report prepared by a Study Group established by G10 Central Banks) (Basle, 1986).