INTERNATIONAL BANKING AND EURODOLLAR MARKETS

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INTERNATIONAL BANKING AND EURODOLLAR MARKETS G A WALKER

The post-WWII period had been dominated by the growth of the Eurodollar markets through the 1960s and then the further innovation and expansion that occurred following the collapse of the Bretton Woods system of organised currency arrangements in 1970-73. The Eurodollar markets initially developed as US dollar deposit markets in London held either by US bank branches or non-US banks. These funds may or may not be online to other borrowers. As other currencies were used, the term Eurodollar was extended to apply to any form of deposit or lending carried in a country other than the country of issuance of the underlying currency.[1]

A separate Eurobond market grew in the early 1950s followed by a syndicated lending market in the late 1960s. The debt market was then characterised by the development of floating rather than fixed rate instruments and then shorter duration notes and then later paper of a duration of up to one year. Various forms of Euro derivatives would then emerge in the 1970s following the substantial expansion of new forms of derivatives following the collapse of the fixed rate currency system under Bretton Woods.

International finance in the 19th and early 20th century was characterised by lending or the issuance of bonds in the local currency of the financial centre concerned. While there was some limited Euro market activity in the 1920s and 1930s, the issuance of debt in a foreign currency only substantially developed in the 1960s following the restoration of currency convertibility within Europe in 1958. A number of borrowers sought to insulate their dollar balances from US authorities by moving them to European banks and specifically in the City of London. Brown Shipley & Co Ltd also sought to attract dollar balances of British insurance companies from the London clearing banks. Substantial dollar holdings were moved from New York to London after the Treasury block of the transfer of $20 million of gold in 1948 by Czechoslovakia with other Middle Eastern countries moving deposits after the Treasury freeze of $62 million of Egyptian government assets in 1956. Substantial dollar holdings were moved from New York to London after the Treasury block of the transfer of $20 million of gold in 1948 by Czechoslovakia with other Middle Eastern countries moving deposits after the Treasury freeze of $62 million of Egyptian government assets in 1956.

Regulatory burdens also stimulated growth in the market especially with the Federal Reserve's Regulations Q and D in the US. Regulation D imposed a ceiling on the amount of interest payable on dollar deposits by US banks between 1968 and 1980 and with only withdrawn in stages under the Depository Institution Deregulation and Monetary Control Act (DIDMCA) 1980. Regulation D attached a 3% reserve on transaction accounts (between US$0-40.5 million) and 12% on larger accounts (over US$40.5 million) which was held as a non-interest bearing deposit with the Federal Reserve. The US authorities would later attempt to attract Eurodollar activity back to New York in the 1970s although this was of limited success.

London emerged as the natural centre for the Eurodollar market after the war with its open and liberal economic climate. The policy was supported by the Bank of England including by its Governor, Lord Cromer. Other UK

[1] G A Walker, *International Banking Regulation – Law, Policy and Practice* (Kluwer Law London 2001) Ch 1.

measures restricted the use of sterling for the financial of international trade which further stimulated growth in the Eurodollar market. London effectively became the offshore financial centre for dollar debt during the 1960s onwards. Subsequent growth in the market was substantial. The euro syndicated lending market expanded 20 times during the 1970s with total Eurocurrency loans growing from $4.7 billion in 1970 to $459 billion by 1988. While the total volume of euro lending fell a quarter during the early 1980s, the Eurobond market expanded by an equivalent amount.

Banks operating in the Eurodollar markets shared a number of common objectives beyond simple profit. Institutions sought to diversify into investment banking, including through underwriting and dealing, generate earnings from surplus funds, acquire international access, experience and reputation, develop linkages with other institutions, such as through consortia banks, obtain access to foreign exchange markets and spread risk.[2] Eurodollar banks would develop a number of specific areas of activity with regard to deposit acceptance, exchange dealing, lending, loan roll-overs, managing bond or equity issues, arranging placements, sourcing corporate finance, trade finance, portfolio management, lease financing, project financing and export financing.[3] The Eurodollar market grew at a compound annual rate of 26.7% between 1970 and 1978 to $502 billion by December 1978.[4] Twenty five percent of these funds were on-lent to non-bank customers in the lending and syndicated lending market. Total Eurodollar issues were estimated to be around $890 billion by end 1978.[5] London emerged as the natural centre for the Eurodollar market having over double the number of banks than either New York or Hong Kong by the end of the 1970s.[6] The Eurodollar market was worth $2.2 trillion by mid 2004.[7]

The Eurodollar markets would become the largest lending and investment markets in the world supported by their deregulated status. The markets are not subject to any external, direct, official regulation. The rights and duties of participants are governed by the terms of standard private law contractual documentation with credit decisions, pricing, liquidity, reserves and settlement being managed on a market basis. The Eurodollar markets

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[2] See, for example, Steven I Davis, *The Euro-Bank. Its Origins, Management and Outlook* (Macmillan London 2ed 1980) ch 2.

[3] Banks would fund their activities through the taking of call, short or fixed dated, Euro currency deposits possibly for up to a number of years. Currency dealing would be carried out on a spot and forward basis, loans could be rolled-over on a committed or best efforts basis. Eurobond and Euro equity activity would involve origination, management, underwriting and selling. Corporate financing would cover project structuring, corporate restructuring and mergers and acquisitions. Trade financing could be carried out on a correspondent banking basis using letters of credit, acceptance finance, money transfers and collection. Davis (n) 39-40.

[4] BIS, *49th Annual Report* (March 1979) 118.

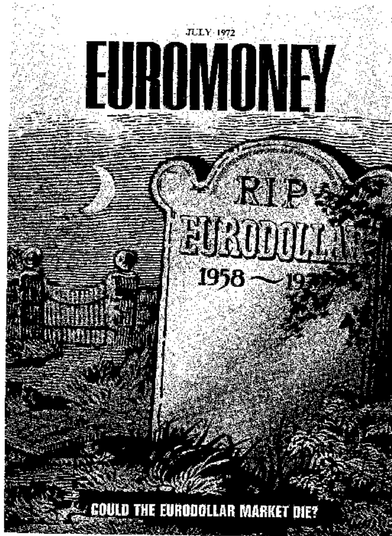
[5] Morgan Guaranty Trust Co, *World Financial Markets* (New York 1979).

[6] London had 425 banks (83 representative offices, 62 subsidiaries, 209 branches and 71 multi-national affiliates), New York 202, Hong Kong 199, Singapore 140, Tokyo 121, Sao Paulo 110 with all other centres having less than 100. 'Who is Where in World Banking' *The Banker* (January 1979).

[7] Marcia Stigum and Anthony Crescenzi, *Stigum's Money Market* (McGraw-Hill New York 4ed 1978) 218.

were substantially unaffected by the global financial crisis in 2008-2009 which occurred principally in new wholesale capital markets including such structured finance sectors as for collateralised debt obligations (CDOs). Few significant changes had to be made to the standard documentation used in the markets following the crisis.

The principal Eurodollar markets consist of the Euro deposit, Euro loan and Eurobond markets with the shorter note and paper and more recent financial derivatives markets.



1. Eurodollar Deposits

The Eurodollar markets are based on an underlying deposit or interbank market. Substantial amounts of US dollars were deposited in Europe during the reconstruction period following the war. $13 billion were deposited by 1953 with a further $8 billion of US private investment being made. The US balance of payments deficit led to further amounts being earned by European firms and placed in European accounts.

The Eurodollar market was also referred to as the placement market. Placement covers banks lending funds to other banks through depositing with borrowing by other banks being referred to as taking. Funds may be placed in the Eurodollar deposit market by large domestic, foreign or multinational corporations, central banks and other government bodies as well as supranational institutions.[8] Substantial funds were placed by oil producing countries or corporations in the 1970s and 1980s. Fixed rate time deposits are referred to as TDs[9] although banks may also hold money on call or repayment.[10]

Eurodollar deposits can be created either by the movement of funds from US banks to US bank branches within Europe or other European banks or through the payment of funds from US accounts to European bank accounts.[11] Substantial amounts of dollar bills may have been transferred from America either through trade, tourism or central bank activity.[12] The largest amount of dollar transfers were nevertheless through account movements. US dollar deposits could be easily moved to a US dollar account with a London bank.

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[8] See, for example, Stigum (7) 242.
[9] Goodfriend (n) 58.
[10] Stigum (n 7) 242.
[11] See, for example, Stigum and Crescenzi (n 2) Ch 7. See also Dufey and Giddy; and Dobbs-Higginson.
[12] Many central banks retransferred dollar bills to the US under the Bretton Woods agreement and exchanged dollar bills for gold. Walker (n 1).

Transfers could be made by Telex or later by SWIFT from 1973.[13] This provides for the transfer of payment orders which are settled through the correspondent accounts of individual banks. Different books explained the mechanics of the market in different ways.[14] One of the early leading papers was written by Milton Friedman.[15] A number of corrections were later made to Friedman's paper.[16] Eurodollar transfers involve the crediting an

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[13] The Society for Worldwide Interbank Financial Telecommunication (SWIFT) was set up in 1973 in Brussels. 518 banks from 22 countries were initially involved with operating and rules of procedure being set up in 1975 and the system coming into operation in 1977. SWIFT provides secure messaging services through two key data centres in the Netherlands and the US with a third centre being set up in Switzerland in 2009. The network previously operated using the X.25 standard protocol for packet switched wide area network (WAN) communication and later SWIFTNet network between 2001 and 2005 with this being migrated to a new SWIFTNe2 phase 2 infrastructure in 2007-2008. This requires banks to use a Relationship Management Application (RMA) rather than the earlier Bilateral Key Exchange (BKE) system. SWIFT maintains a number of International Organisation for Standardisation (ISO) standards including the 1994 banking telecommunication messages and identifier codes (ISO 9362) and 2003 securities and related financial instruments codes for exchanges and market identification (MIC) (ISO 10383). Over 10,000 financial institutions and corporations in 212 countries use SWIFT with over 20 million messages being sent per day. Messaged peaked at 22,640,162 on 20 December 2013. Messages consist of around 50% payments, 44% securities, 5% treasury and 0.8% trade. 'SWIFT in figures' (December 2013). http://www.swift.com/

[14] This can create substantial confusion especially with the use of different terms and definitions, in particular, with regard to money, deposit, funds transfer and credit.

[15] Milton Friedman, 'The Euro-Dollar Market: Some First Principles' Graduate School of Business University of Chicago ( ) Selected Papers No 34; reproduced Federal Reserve Bank of St Louis [July 1971] 16-24. Friedman attributed the source of the $30 billion Eurodollar deposit and US domestic $400 billion deposit market as being 'a bookkeeper's pen'. Friedman defines Eurodollars as 'deposit liabilities, denominated in dollars, of banks outside the United States.' Friedman states that these are the same as domestic 'Chicago dollars'. Eurodollar banks and Chicago banks were part of the fractional reserve banking system.

A worked example of the transfer of $1 million deposits from New York to London is developed. Eurodollar creation is distinguished from the Eurodollar multiplier which is explained which could theoretically increase the deposit by ten times through the repeated re-deposit of the funds less a prudential reserve of 10%. While the potential multiplier would be infinite if no reserves were retained, the actual multiplier would be close to unity or one due to on-lending. Leakage refers to funds withdrawn from the Eurodollar system and not re-deposited. Even where dollars were converted into sterling, the Bank of England would be expected to purchase Treasury bills which would restore any loss of reserves to the US banking system. Friedman considers that the Eurodollar market has increased the world's nominal money supply and the world price level. [Growth was also stimulated by the direct and indirect exchange controls imposed for balance of payments purposes.]

[16] See, for example, Fred H Klopstock, 'Money Creation in the Euro-Dollar Market – A Note on Professor Friedman's Views' Federal Reserve Bank of New York *Monthly Review* [1970] 12-15. Klopstock notes that Federal Reserve Board Chairman, Martin noted that 'we do not fully understand the 'wiring' of the Euro-dollar market.'[16] Friedman stated that the 'market is the latest example of the mystifying quality of money creation to even the most sophisticated bankers, let alone other businessmen' and that it is 'almost complete nonsense' to explain the source of Eurodollar deposits to US balance of payments deficits which were only $9 billion for the previous five years. The 'major source' of Eurodollar deposits 'is as a bookkeepers' pen' and that the key to understanding the market was that 'Euro-dollar institutions are part of a fractional reserve banking system' with the failure to understand 'the magic of fractional reserve banking' as being the principal source of misunderstanding.

Klopstock distinguishes money creation within the domestic and Eurodollar systems. Deposit leakage is described as 'massive' and that the expansion of the market 'must lie in monetary processes other than deposit creation' within the system. Klopstock distinguished between deposits that can act as a means of payment

debiting of a number of accounts across all of the banks concerned with ultimate clearing and settlement taking place across the accounts held by the correspondent US banks with the Federal Reserve.[17] The effect of all of this from a legal perspective is that the original dollar deposit liabilities due by the US banks are replaced by equivalent liabilities in the London bank accounts which credits can be transferred to any other bank operating in the Eurodollar market, through interbank deposits or placements, or the bank accounts of any borrower or end user. Each of these banks will maintain a corresponding banking relationship and a nostro (our) account with a US correspondent bank with final netting and settlement being made across the reserves accounts held by the US banks with the Federal Reserve. This simply involves the transfer of financial claims between the banks and end users involved in sophisticated chains or networks of claims.[18]

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within the domestic banking system and Eurodollar deposits with most Euro banks being 'essentially time deposit intermediaries in inter-bank deposit markets.' 3. Klopstock argues that Euro banks have been able to divert local currency cash reserves of banks and non-banks in many countries and 'drained huge balances from major foreign money and loan markets' with several central banks also placing 'large parts of their monetary reserves in Euro-banks.' 3. Contrary to Friedman, he argues that this does involve a recycling of funds received through US balance of payments transfers. Klopstock does not comment directly on the small relative size of the US deficits of £9 billion with the $30 billion size of the Eurodollar deposit market. (n).

[17] For worked examples using T-accounts (showing changes in assets and liabilities), Friedman (n) 4-6. See also Stigum (n) 209-218. See also Anatol B Balbach and David R Resler, 'Eurodollars and the U.S. Money Supply' in Gerald D Gay and Robert W Kolb (eds), *International Finance – Concepts and Issues* (Reston Virginia) ch 7, 89-93. [Balbach and Resler state that the Eurodollar system can expand credit by reserves multiples but cannot create money since its liabilities are not generally acceptable as a means of payment as with domestic banks. 88-89. This appears to confuse savings and time deposits with demand deposits although loan proceeds are generally available for use and do not have to be converted 'into currency or demand deposits at a commercial bank.' Balbach and Resler (n8).] [The BIS defines Eurodollars as dollars that have been 'acquired by a bank outside the United States and used directly or after conversion into another currency for lending to a nonbank customer, perhaps after one or more re-deposits from one bank to another.' BIS, *1964 Annual Report* (1965) n27.] [Data on the size of the Eurodollar markets are compiled by Morgan Guaranty Trust Company of New York in its *World Financial Markets* publication.] [On Eurodollar time deposits (TDs), Euro certificates of deposit (and 'Tap CDs' and 'Tranche CDs'), Eurodollar Floating Rate CDs (FRCDs) and Eurodollar Floating Rate Notes (FRNs), Marvin Goodfriend, 'Eurodollars' in Gay and Kolb (n) ch 5.

[18] Foreign bank branches operating in the US were required to hold reserves with the Federal Reserve under the International Banking Act 1978. The small daylight overdraft facility made available was slightly extended under the Gramm Leach Bliley Act 1999 although the size of this still meant that most banks maintained correspondent banking relationships with other US banks for clearing and settlement purposes. Stigum (n) 216. [Settlement in US dollar money and bond markets is generally made through the Federal Reserve's Fedwire (Funds Service) system which provides real-time gross settlement for large value domestic and international payments. Fedwire provides for the transfer of funds between Federal Reserve Bank accounts between 9pm and 6.30pm the following day with around 7,300 participating institutions. http://www.federalreserve.gov/ paymentsystems/fedfunds_about.htm.

Eurodollar settlement is generally carried out through the private US Clearing House Interbank Payments Systems (CHIPS). With 47 member participants making over 250,000 interbank payments worth $1.5 trillion each day. CHIPS operates on a net basis generating clearing house funds rather than Fed Funds. CHIPS moved from following day to same day settlement in October 1981 and then immediate payment in 2001. Stigum (n) 217-218. CHIPS transfers are cheaper than Fedwire. http://www.chips.org/home.php.

[This is the equivalent of using *nostro* accounts in foreign exchange settlement. In foreign exchange transactions, sterling payments are made through UK bank accounts with the foreign currency element being made across correspondent bank accounts. Bank accounts held for own dealing purposes with other banks are referred to as *nostro* accounts with client and other service accounts being referred to as *vostro* accounts. Automated bilateral netting in foreign exchange markets has been available since 1987 through FXNET which operates on a netting by novation basis. FXNET is managed by FXNET Ltd which is an OTC online FX and commodities broker regulated by the Cyprus Securities and Exchange Commission (CySEC). http://www.fxnet.com. The foreign exchange market was worth $5.3 trillion per day in 2012 with the largest participants being Deutsche Bank (12.4%), UBS (12.1%), Citigroup (11.7%), Barclays (10.5%) and JPMorgan (6.2%). The market grew 14% in 2012. 77% of transactions were carried out through electronic platforms with electronic systems used by retail aggregators increasing to 98%. The largest four firms managed 46.7% of the market which was down slightly from around 53%. Greenwich Associates, '2014 Greenwich Leaders: Global Foreign Exchange Services' (March 2014). It was expected that trade in foreign exchange futures would grow substantially as foreign exchange swaps and forwards were caught by new derivatives regulatory responses. Greenwich Associates, 'The Futurization of FX Derivatives' (January 2014).] [Electronic foreign exchange in

2. Euro Loans

The Euro loan market refers to the syndicated lending market that developed in the 1960s. This provided for the provision of funds by more than one bank, rather than a single bank, to increase the total amount available and spread the credit risk between the participating institutions. The Euro loan market emerged after the Eurobond market. Syndicated credits grew to provide over half of medium to long term financing in international markets with Eurobonds and foreign bonds providing the balance.[19] Around a half of Euro currency lending is provided on a syndicated basis with the other half provided by individual banks on shorter maturities to private institutions or trade financing or other international business loans.[20] Eighty five percent of lending to developing countries and 98% to centrally planned economies during the 1970s were provided through Euro lending.

Eurodollar term credits are generally provided on a floating basis at a margin over LIBOR.[21] Countries of governments with good credit standing can often borrow at rates below LIBOR through the Eurobond, note or paper market.[22] Loans are rolled over at three or six monthly intervals with banks possibly allowing higher standing customers an annual rollover. Currency adjustments may be provided on rollover. Some fixed term lending is provided. Funds are provided during an availability period with separate drawdowns being possible. Repayment is generally on an amortisation basis, with the principal repaid over time, although some bullet repayment is permitted. Parallel fixed and revolving facilities may be made available. Eurodollar lending is generally provided under the Loan Market Association (LMA) standard documentation which provides common terms and conditions across the industry.

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commodity platforms included Deutsche Bank's Autobahn, UBS FX Trader Plus, Barclays' institutional BARX and retail Margin FX platforms and HSBC's HSBCnet FX and MM (money market) Trading System.]

[19] Goodfriend (n) 66.

[20] Goodfriend (n) 67.

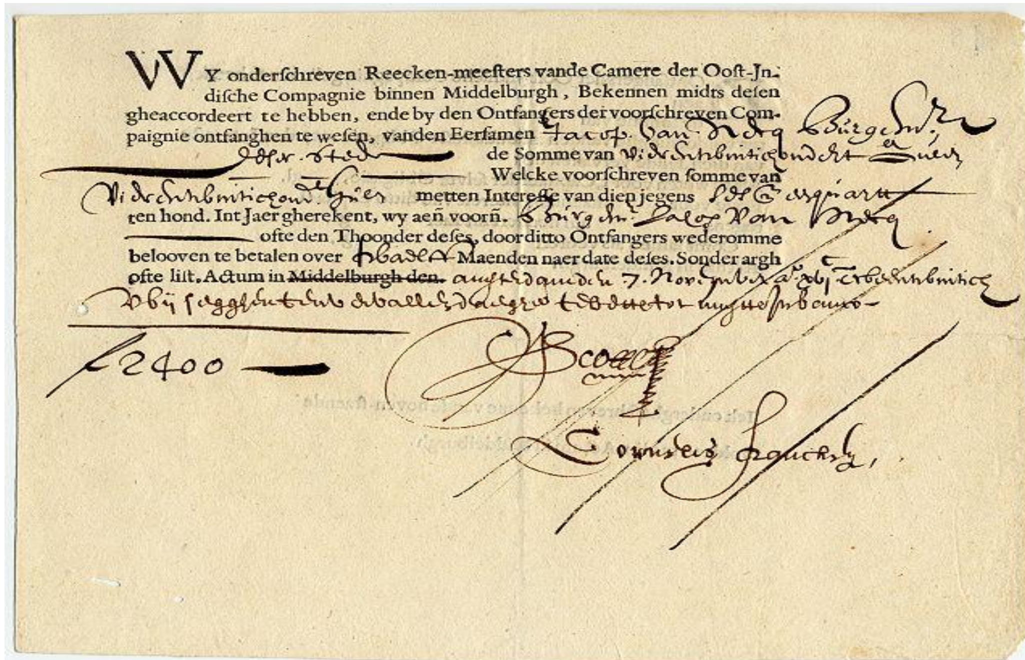
[21] Stigum notes that a good corporate credit may only have to pay 10-15 BP over LIBOR on a 3-5 year loan for general corporate purposes. Stigum (n) 245.

[22] Stigum (n 2) 247.

Euro lending grew from $4.7 billion in 1970 to US$459 billion in 1988.[23] Syndicated lending grew substantially during the 1990s and had increased by three times by 2003 to $1.6 trillion.[24] The first fully syndicated Euro loan was the US$15 million facility for the Hungarian aluminium industry in June 1968 which was managed by the Bank of London and South American (BOLSA) with eight banks participating in the syndicate and the loan guaranteed by the National Bank of Hungary.[25] Syndicated lending increased from US$2 billion in 1968 to $11 billion in 1972, US$25 billion by 1975 and $180 billion by 1981.

The market was initially led by UK merchant banks and US investment and money centre banks. US corporations[26] were early borrowers although European public entities, corporations and sovereign states became significant borrowers. Activity declined in 1973-75 and 1977-79 following the oil price shocks although it recovered again during the early 1980 before the Third World debt crisis.

The Bank of England confirmed in the late 1970s that Euro currency lending should be carried out on a 15-20 to 1 gearing basis with any higher levels being separate justified. Appropriate risk weighted capital should also be maintained. A minimum 12.5% of sterling deposit liabilities liquidity ratio was applied with assets being held in the form of cash reserves at the Bank, discount money market at call or government securities.[27]


WY onderschreven Reecken-meesters vande Camere der Oost-Indische Compagnie binnen Middelburgh, Bekennen midts desen gheaccordeert te hebben, ende by den Ontfangers der voorschreven Compaignie ontfanghen te wesen, vanden Eersamen ... de Somme van ... Welcke voorschreven somme van ... metten Interesse van dien jegens ... ten hond. Int Jaer gherekent, wy aen voorn. ... ofte den Thoonder deses, doorditto Ontfangers wederomme belooven te betalen over ... Maenden naer date deses. Sonder argh ofte list. Actum in Middelburgh den. ...

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23 Walker (n 1) n13.

24 Stigum (n 2) 248. [The largest banks in the Eurodollar markets end 2004 were Citigroup, JPMorgan Chase, HSBC, Bank of America, Crédit Agricole Groupe, Royal Bank of Scotland, Mitsubishi Tokyo Financial Group, Mizuho Financial Group, HBOS and BNP Paribas with a number of these having assets of over $1 trillion. Stigum (n) 237-238.]

25 Robert P McDonald, *International syndicated loans* (Euromoney Publications 1982) 31.

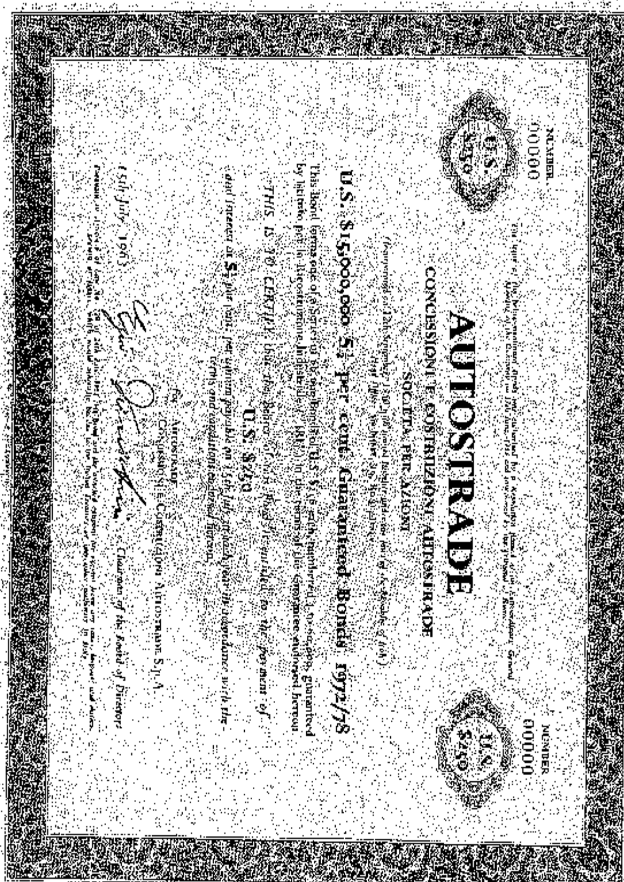
26 Eurodollars were attractive to US companies in the late 1960s due to high domestic interest rates and limited funds with corporations returning to the US in the early 1970s with a lowering in interest rates, a loosening of monetary tightening and a 7.9% devaluation of the dollar under the Smithsonian Agreement in December 1971. McDonald (n 19) 33.

27 Davis (n) 42. On asset management, Davis (n) ch 3, on liability management and capital adequacy ch 4, fee earning and other activities ch 5 and financial performance ch 6.

3. Eurobonds

The Eurobond and Euro loan markets emerged as alternative means of providing funds for government or corporate borrowers. Eurobonds create debt in the form of a transferrable security instrument while loans are personal debt obligations between the borrower and bank or group of banks involved. Bonds are evidenced by the earlier certificate with many issues now being carried out in a purely electronic or dematerialised form. Loans are evidenced by the loan agreement entered into between the parties. The advantage of bonds is that they are issued in an inherently transferrable form which increases market liquidity. This allows borrowers with betting standing to obtain funds at finer rate while investors can dispose of the securities at any time in the secondary markets. Loan commitments can only be transferred by way of legal or equitable assignment, novation participation or sub-participation.[28]
The first Eurobond was issued by the Italian highways company, Autostrade, in July 1963 to construct Italian motorways. These were 5.5% guaranteed bonds for $50 million maturing 1972-78 backed by SG Warburg & Co with each bond being for $250 and with an annual coupon attached.[29]

Euro-Deutschmark bonds were issued after Germany imposed a 25% coupon tax with Euro-Swiss Franc bonds and the first convertible debentures on behalf of Canon Cameras in 1963. The first bonds with equity warrants were issued in 1964 and first major project finance facility for US$27.5 million for the Trans-Alpine oil pipeline between Italy and West Germany in 1966.[30]


NUMBER 00000

U.S. $250

AUTOSTRADE

CONCESSIONI E COSTRUZIONI AUTOSTRADE

SOCIETÀ PER AZIONI

U.S. $15,000,000 5½ per cent. Guaranteed Bonds 1972/78

U.S. $250

15th July 1963

Chairman of the Board of Directors

NUMBER 00000

U.S. $250

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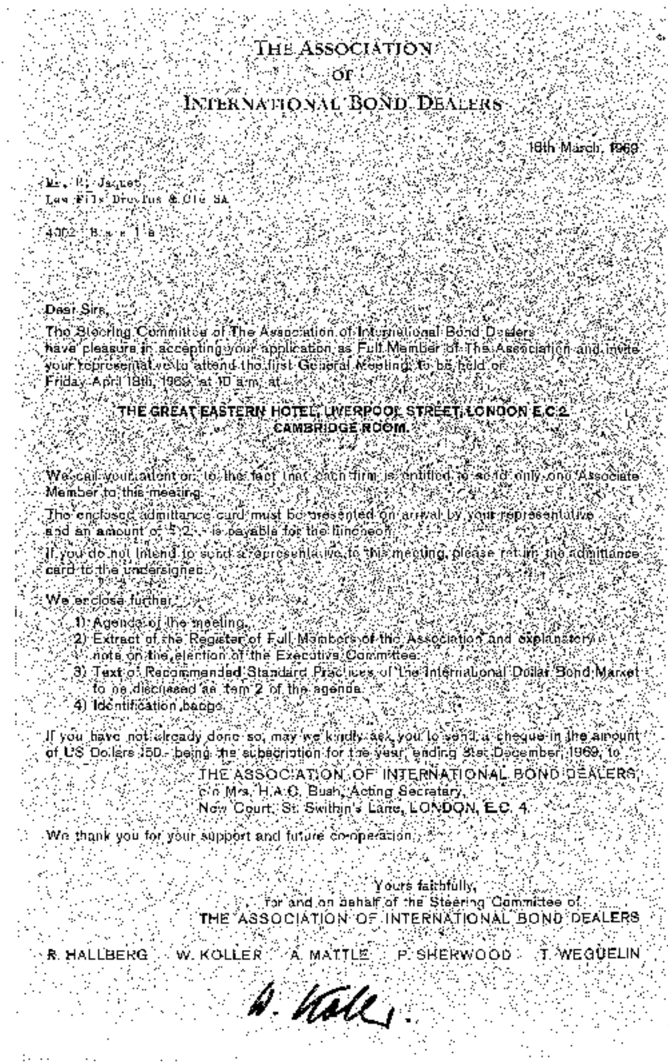
28 Walker (n 1).

29 George Dosoo, *The Eurobond Market* (Woodhead-Falkner, Hemel Hempstead 1992) 26.

30 Dosoo (n 22) 26.



THE ASSOCIATION
OF
INTERNATIONAL BOND DEALERS

18th March, 1969

Mr. P. Jaquet
Les Fils Dreyfus & Cie SA

4002 Basel

Dear Sirs,

The Steering Committee of The Association of International Bond Dealers have pleasure in accepting your application as Full Member of The Association and invite your representative to attend the first General Meeting, to be held on Friday April 18th, 1969, at 10 a.m. at

THE GREAT EASTERN HOTEL, LIVERPOOL STREET, LONDON E.C.2
CAMBRIDGE ROOM.

We call your attention to the fact that each firm is entitled to send only one Associate Member to this meeting.

The enclosed admittance card must be presented on arrival by your representative and an amount of £ 2.- is payable for the luncheon.

If you do not intend to send a representative to this meeting, please return the admittance card to the undersigned.

We enclose further:

1) Agenda of the meeting,
2) Extract of the Register of Full Members of the Association and explanatory note on the election of the Executive Committee.
3) Text of Recommended Standard Practices of the International Dollar Bond Market to be discussed as item 2 of the agenda.
4) Identification badge.

If you have not already done so, may we kindly ask you to send a cheque in the amount of US Dollars 150.- being the subscription for the year ending 31st December, 1969, to

THE ASSOCIATION OF INTERNATIONAL BOND DEALERS,
c/o Mrs. H.A.C. Bush, Acting Secretary,
New Court, St. Swithin's Lane, LONDON, E.C. 4.

We thank you for your support and future co-operation.

Yours faithfully,
for and on behalf of the Steering Committee of
THE ASSOCIATION OF INTERNATIONAL BOND DEALERS

R. HALLBERG W. KOLLER A. MATTLE P. SHERWOOD T. WEGUELIN

Bond market rules and standard documentation were initially prepared by the Association of International Bond Dealers (AIBD) which was set up in 1969 and renamed the International Securities Market Association (ISMA) in 1992 with a separate International Primary Market Association (IPMA) being established in 1984. The ISMA and IPMA merged in July 2005 to create the International Capital Market Association (ICMA).[31]

Eurobond issues were managed through the custodians Euroclear and Cedel which acted as central custodians. Most large issues were on a immobilised basis with the certificates always being held with the custodians and transfers made across their books. Euroclear was set up in Brussels in December 1968 by Morgan Guaranty Trust Company of New York. Cedel was established in Luxemburg in 1971 by 92 banks and was subsequently

31 http://www.icmagroup.org.

renamed Clearstream in January 2000 with the merger of Cedel International with Deutsche Börse Clearing. Deutsche Börse acquired the whole of Clearstream in July 2002. Euroclear managed over €24 trillion in securities in 2013 with over 170 million netted transactions being carried out with over €570 trillion in transactions being settled.[32] Clearstream held over $11 trillion in assets during 2012 with over 126 million transactions being processed for over 2,500 customers in 110 countries.[33]

[32] Euroclear, 'Euroclear Reports a record EUR 24.2 trillion in asset under custody' (28 February 2014). https://www.euroclear.com/en.html

[33] Clearstream, *Clearstream Snapshot 2012* (October 2012).

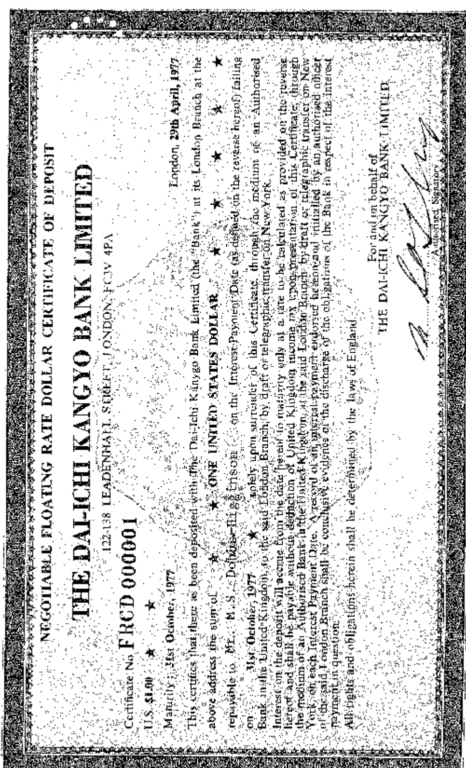
4. Euro Notes and Commercial Paper

Eurobonds were initially issued in a fixed and then floating rate basis. The evolution of the Eurobond market can be characterised in terms of the development of shorter maturity, smaller denomination and more specialist debt instruments over time. Eurobonds were generally issued for 10 to 20 years, or possibly more, with Euro term lending and syndicated lending being inherently flexible. Investors in the Eurobond market became interested in holding shorter duration debt with borrowers being attracted by the increased flexibility that this could provide.

Floating rate notes (FRNs) were introduced in the early 1970s to enable companies to obtain floating rather than fixed rates funds with rising interest rates during the early 1970s. The first FRN was for the Italian national energy agency, Ente Nazionale per L'Energia Elettrica (ENEL) and was for US$50 million at 75 VPS above LIBOR. Pepsico borrowed US$75 million in February 1970 with the first US$100 million note programme being issued by Esso Overseas Finance NV in March 1971.[34] Euroyen issues and the first floating rate certificates of deposit (FRCDs) were issued in 1977 with a grey market being created to replace the earlier discounting with managers quoting prices before issues were officially priced.[35]

Shorter 5-7 year duration Euro notes were introduced in the late 1970s. The first Euro note was New Zealand Shipping Corporation in 1978 with the market growing to over US$40 billion by 1987 before even shorter commercial paper was introduced.[36] Euro notes are issued under a Note Issuance Facility (NIF) for amounts of US$500,000 or more which allows companies to reissue notes on a rolling basis. Revolving underwriting facilities (RUFs) were created in 1982 and tender panels in 1983.

Euro medium-terms notes (Euro-MTNs) were created in 1985 based on the US note market. US MTNs had been developed in the 1980s to bridge corporate bonds and short one year duration commercial paper. MTNs can be issued between 9 months and 15 years on a revolving basis.[37]



NEGOTIABLE FLOATING RATE DOLLAR CERTIFICATE OF DEPOSIT

THE DAI-ICHI KANGYO BANK LIMITED

122-138 LEADENHALL STREET, LONDON, EC3V 4PA

Certificate No. FRCD 000001

U.S. $1.00 ★ ★

Maturity: 31st October, 1977 London, 29th April, 1977

This certifies that there as been deposited with The Dai-Ichi Kangyo Bank Limited (the "Bank") at its London Branch at the above address the sum of ★ ★ ONE UNITED STATES DOLLAR ★ ★ ★ ★ ★ repayable to Mr. M. S. Dobbie-Higginson on the Interest Payment Date (as defined on the reverse hereof) falling on 31st October, 1977 ★ solely upon surrender of this Certificate, through the medium of an Authorised Bank in the United Kingdom, to the said London Branch, by draft or telegraphic transfer on New York.

Interest on the deposit will accrue from the date hereof to maturity only at a rate to be calculated as provided on the reverse hereof and shall be payable without deduction of United Kingdom income tax upon presentation of this Certificate, through the medium of an Authorised Bank in the United Kingdom, at the said London Branch by draft or telegraphic transfer on New York, on each Interest Payment Date. A record of an interest payment endorsed hereon and initialled by an authorised officer of the said London Branch shall be conclusive evidence of the discharge of the obligations of the Bank in respect of the interest payment in question.

All rights and obligations herein shall be determined by the laws of England.

For and on behalf of
THE DAI-ICHI KANGYO BANK LIMITED

Authorised Signatory

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34 Ian Kerr, *A History of the Euro Bond market* (Euromoney Publications London 1985) 36.

35 Kerr (n 27) 110-111.

36 Dosoo (n 22) 73.

37 Dosoo (n 22) 78; and Arun Kumar Sarwal, *International Handbook of Financial Instruments and Transactions* (Butterworths London 1989) 202.

Euro commercial paper developed on the model of the US paper market. US companies had attempted to raise funds through the sale of bankers' acceptances of commercial paper to avoid McFadden Act restrictions.[38] Sterling commercial paper (SCP) was introduced in April 1986 to allow UK companies to issue paper up to one year without breaching the need for a deposit-taking licence under the Banking Act 1979 and 1987 and then FSMA 2000.[39] US companies used commercial paper in the 1970s with the first Euro commercial paper (ECP) issued in 1985.[40] Global commercial paper (GCP) and global notes were introduced subsequently.[41] Commercial paper is generally issued in minimum denominations of around $100,000 with maturities of between 2 and 365 days.

Issue facilities can be mixed with a number of different funding options being provided under a multiple option facility or multiple option funding facility (MOF or MOFF). Sovereign MOFFs were introduced in 1984 to provide flexible borrowing with currency and interest rate protection. Funding options may include a short-term multi-currency advance, swing-line facility, domestic or Euro commercial paper programme, bankers' acceptance and medium-term note (MTN) programme. This may involve a mixture of committed and uncommitted facilities.[42]

5. Financial Derivatives

Financial derivatives have always been available in the form of forward contracts. A forward is a contract to purchase or sell a specific asset at a future volume, date and price with all of the terms being confirmed at the outset. Forwards are bilateral and entered into on a non-standardised basis. Financial derivatives provide for a number of exchange and non-exchange products and contracts that can be used for hedging or speculative purposes on a forward basis. Financial derivatives derive their value from other assets or indices. Derivatives are treated as a sub-set of off-balance sheet contingencies and commitments including such credit substitutes as acceptances, guarantees, letters of credit, forward asset purchases and general commitments to lend.[43]

Modern derivatives markets were developed during the early 1970s following the collapse of the Bretton Woods arrangements and the substantial currency and interest rate volatility that followed. Foreign exchange forwards were introduced with exchange traded currency and interest rate futures as well as bilateral foreign exchange swaps. Early transactions were entered into on a matched basis between clients although firms would later take opposing positions or warehouse exposures themselves as increasingly large derivatives books were constructed. Risk would be managed on a net rather contract basis.

(a) Form

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[38] Sarwal (n 31) 78-79.
[39] Walker (n).
[40] Dosoo (n 22) 73; and Sarwal (n 31) 81.
[41] Sarwal (n 31) 82-83.
[42] Sarwal (n 31) 131-132.
[43] Walker (n 1).

Financial derivatives principally consist of futures, options and swaps. A future is an obligation to buy or sell an item at a specific volume, price and time. An option is the right to buy or sell the item at an agreed volume, price and time. A swap is an exchange of assets or commitments such as foreign currency, commodities or interest rates. Swaps developed out of back-to-back or parallel loans in the 1970s which could be used to avoid exchange and foreign investment controls with straight currency swaps emerging in the 1980s.[44] The World Bank issued a $219 million fixed rate Eurobond with IBM and Salomon Brothers in August 1981 supported by a Swiss franc and deutsche mark swap.[45]

The first formal futures market in currencies was created on the Chicago Mercantile Exchange (Merc) in 1972.[46] The Merc was originally created as the Chicago Butter and Egg Board in 1898, formally part of the Chicago Board of Trade (CBOT), and renamed in 1919. Mortgage futures were introduced on the Chicago Board of Trade (CBOT) in 1975 and currency options on the Philadelphia Stock Exchange in 1982.[47] The CBOT had been established in 1848 to buy and sell commodities with exchange traded forward contracts being introduced in 1864. The Merc and CBOT merged in July 2007 to create the CME Group. The Philadelphia Stock Exchange (PHLX) was originally founded in 1790 and acquired by the NASDAQ in November 2007. Options were introduced in Philadelphia as commodity options had been prohibited in Chicago since 1934.[48]

Exchange traded futures include bond futures, currency futures, oil futures and commodity futures. Eurodollar futures are traded on the CME which operate as derivatives on the interest on the underlying deposit with contracts in minimum denominations of £1 million. Swaps include currency swaps, interest rate swaps, equity swaps and commodity swaps as well as TRS, CSS and CDS. Options include bond options, stock options, currency options commodity and gold options. Interest rate caps provide for a maximum payment and floors a minimum payment with a caller locking in maximum and minimum liability. A swaption is an option on swap. Other forms of energy and weather derivative are also available.

(b) Market Size

The total notional size of the global OTC derivatives market was $693 trillion end June 2013 which rose from $633 trillion end 2012. This only represents the total notional amount against which payments are calculated with replacement cost only $20 trillion down from $25 trillion and net exposure after netting $3.9 trillion end June 2013. By 2006, China was separately the largest holder of dollars outside the US with almost $1 trillion in reserves. Japan was the largest holder of US Treasuries with $636.6 billion.[49]

The BIS noted that the amounts had increased as contracts doubled with the use of central counterparties (CCPs) with both sides of the deal being reported. Interest rate contracts remained the largest segment with total notional amounts of $577 trillion. Foreign exchange contracts comprised $81 trillion, equity linked contracts $7 trillion, commodity contracts $2.7 trillion and $28.4 trillion in credit derivatives.[50] Exchange traded derivatives increased from $23 trillion in December 2011 to almost $26 trillion in December 2013.[51] The figures compare with a total global market in financial services worth around $225 trillion.[52] Global financial markets have been

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[44] P Goris, *The Legal Aspect of Swaps – An Analysis Based on Economic Substance* (1994) ch 2.

[45] Dosoo (n 22) 197.

[46] Millman (n) 107-110.

[47] Millman (n) 111-117.

[48] Dispute had arisen between the SEC and CFTC in the US over the regulation of financial derivatives. It was agreed under the Futures Trading Act 1982 and the Shad-Johnson Accord that CFTC would regulate futures contracts and options on futures with the SEC options on currencies, including on the Philadelphia Stock Exchange as options were securities even though currencies were commodities. Millman (n) 1-5.

[49] BIS, *OTC Derivatives statistics at end-June 2013* (November 2013).

[50] [Foreign exchange trading reached $5.3 trillion per day in April 2013 up from $3.3 trillion in April 2007 and $4 trillion in April 2010. The figure included $2 trillion per day in foreign exchange swaps 87% of trades were in US dollars and 33% in euro which fell from 39% in April 2010 due to the euro sovereign debt crisis. BIS, *Triennial Central Bank Survey – Foreign exchange turnover in April 2013* (September 2013).

[51] $14.25 trillion was in North America, $8.534 trillion in Europe and $2.23 trillion in Asia Pacific. BIS, *Exchange Traded Derivatives statistics* (9 March 2014).

[52] McKinsey Global Institute (MGI), *Financial globalisation: Retreat or reset?* (March 2013).

worth around $194 trillion but fell to $172 trillion following the financial crisis.[53] Global capital flows fell 60% from $11.8 trillion in 2007 to $4.6 trillion in 2012.[54] Fifty percent of this involved central bank transfers.

(c) Credit Derivatives

Credit derivatives form a relatively new although substantial part of the derivatives market. Credit derivatives developed in the early 1990s to provide protection against credit or payment default on a contract or asset by a third party without the need to transfer the asset. Credit derivatives are distinct from insurance in that they do not compensate for loss in the event of a contingent event arising and there is no need for an insurable interest. CDS were strongly criticised during the global financial crisis although they worked effectively. Development of credit derivatives is attributed to Peter Hancock at JPMorgan in 1993.[55] Credit derivatives grew from $1.95 trillion in 2002 to $24.845 trillion end 2013 having fallen from a peak of $55.095 trillion in 2007 and $31.416 trillion in 2010.[56] The three principal types of credit derivatives are total return swaps (TRSs),[57] credit spread swaps (CSSs)[58] and the most commonly used instrument now credit default swaps (CDSs).[59] The only significant difficulty that had arisen was that AIG had become the principal seller of credit protection and was overcommitted with a $1.8 trillion portfolio which was three times its market capitalisation.[60] CDSs now constitute the most commonly used form of credit derivative.[61]

(d) Terms and Conditions

Exchange traded derivative contracts are subject to the terms and conditions applicable to the particular market. This will generally include providing initial margin and then additional margin following any further calls as positions on the exchange vary. Margin is a form of collateral either in the form of cash or security which covers a percentage of the risk on the exchange.

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53 MGI, .

54 MGI, *Financial globalisation: Retreat or reset?* (March 2013). Cross-border lending had reduced from $5.6 trillion dollars in 2007 to $1.7 trillion in 2012. Commercial banks had sold $722 billion in assets and operations since 2007 most of which consisted of foreign operations. Emerging markets were relatively stable during the financial crisis although development was halted from 2008 onwards.

55 'AIG – America's Improved Giant' *The Economist* (2 February 2013). The origin is also attributed to Blythe Masters at JPMorgan. Falloon states that the first credit derivatives were used in 1991-92 to reduce credit risk in the secondary loan market using total return swaps. William Falloon, 'Freudian Analysis' *Risk* (December 1997) 60-62.

56 BIS, *OTC derivatives statistics at end-June 2013* (November 2013) 5.

57 Total return swaps provide for the investor (total return receiver) to be paid by the dealer (total return payer) interest on an underlying bond or note in return for a floating rate interest payment calculated at LIBOR plus a margin. This operates on a form of pass through basis. Das, *Credit Derivatives and Credit Linked Notes* (2000) Ch 1.

58 Credit spread swaps provides for a payment equal to the credit spread on the underlying security calculated as the yield on a bond or loan less the yield on a corresponding risk free asset. Das (n) 18.

59 Credit default swaps provide for payment in the event of a default on an underlying security on a contingent basis in return for a periodic fee paid by the protection buyer to the protection seller. Das (n) [30].

60 AIG received $182 billion in support from the US authorities which it was able to repay by 2013. AIG reduced it credit derivatives portfolio to $158 billion. 'America's Improved Giant' *The Economist* (2.2.2013).

61 CDS consisted of $24.47 trillion of the $24.85 trillion of credit derivatives end 2013 including $13.211 trillion dollars of single name instruments and $11.259 trillion in multi name instruments. A single name CDS is tied to a particular reference obligation or issuer with a multi name including more than one reference entity, asset or issuer. CDS values peaked at $45.179 trillion in 2007 and $31 trillion in 2010. BIS (November 2013) 5.

OTC derivatives generally use standard documentation prepared by the International Swaps and Derivatives Association (ISDA) which was initially set up in 1985 as the International Swap Dealers Association. ISDA provides standard documentation as well as collects legal opinions from the principal jurisdictions in the world confirming the enforceability of netting contracts. The ISDA documentation architecture is principally based on the use of master agreements, such as the 2002 Master Agreement which is the most commonly used document in the derivatives area. This provides for continuous payment netting under section 2(b) and closer netting on termination under section 6(f). Parties can make certain adjustments to the terms of the master agreement only in the schedule and then sign the agreement and schedule. Confirmations or contract notes are then entered into to give effect to each individual contract which incorporate the terms of the master agreement and schedule. Short form confirmation can be used where ISDA has prepared a separate set of definitions governing the particular type of contact. Section 1(c) of the master agreements provides that the agreement and all confirmations are to form a single agreement. Separate collateral deeds and annexes are provided to govern security taken either with or without delivery. ISDA also provides protocols for the multilateral amendment of documents, and bridges to link sets of documents.

Financial derivatives can either be used on their own for hedging or trading purposes or as part of larger transactions. Repackaging refers to the restructuring of an older financing such as through a single syndicated loan or bond and substituting this for a combination of new instruments to provide additional flexibility and security such as with shorter dated instruments and derivatives. Repackaging became common during the late 1980s and 1990s. Structured finance involves the design of more complex funding structures using a combination of instruments within a single scheme. This is distinct from repackaging as it is designed upfront and not restructured. It is separate from an MOFF as this uses a combination of separate unconnected facilities. Structured finance creates new forms of package products often including embedded elements such as credit derivatives. A credit linked note (CLN) is a floating rate note with an embedded credit derivative which reduces the risk of default and increases the rating of the security.[62]

(e) Securitisation and Structured Finance

Securitisation is often described as constituting a form of structured finance although this predates the structured finance market. Securitisation simply provides for the pooling of a group of common or homogenous credit assets, such as credit cards, mortgages or commercial loans which are sold to a special purpose vehicle (SPV) with the proceeds of the sale being generated by the issuance of new notes by the SPV. This then converts a credit into a security asset and securitises the underlying credit pool. Structured finance involves the secondary or re-securitisation of the income streams from securities. The underlying assets are then used as collateral to guarantee payments on the due notes which are generally issued in a number of tranches to produce a range of high, medium and low risk assets for professional investors.

A collateralised debt obligation (CDO) is a re-securitisation of a number of underlying securitisations with income streams from each of the separate SPVs created on the initial securitisations being transferred to a new central SPV.[63] A number of supporting devices are used to ensure that most of the note tranches are triple-A rated including through over collateralisation, payment priority using payment waterfalls, guarantees and other forms of payment support. The effect is theoretically to reduce the risk of default on the triple-A rated securities. The difficulty that arose during the crisis is that small amounts of higher risk sub-prime lending was incorporated into larger CDOs the value of which were then damaged by the more general collapse in investor confidence despite the theoretically minimum nature of the risk of loss involved.[64]

The significance of the Global Financial Crisis was that it arose in these new wholesale markets rather than in the more traditional intentional finance markets including the Eurodollar markets. Most of these other markets continued to operate without any major difficulty with the standard documentation used in the market proving to be very successful and well drafted with few significant revisions required following the crisis. These markets continue to be among the most important in the world although residual concerns do arise in the separate 'Shadow Banking' markets which replicate the principal banking markets but operate on a largely unregulated basis.

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[62] Das (n 57).

[63] Das (n 57).

[64] Walker (n 1).