

Nature of Money

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“Human reason finds itself constrained either to go beyond itself into a mystery or to fall back into contradiction. The mind is not made to adore itself but to give itself ; what transports and fascinates the minds of men, in the intuition and work of genius, in the stars of heavens, in anything which never wearies them, is the inexhaustible share of mystery they contain, a darkness more excellent and intoxicating than daylight, from which they return strengthened and elated. But to participate in a contradiction disturbs, injures and threatens the mind to the core. At a superficial glance the two sorts of darkness may seem alike, for both are removed from clear thought: but in opposite directions. It is the same with genius and madness, which both appear equally to flout the normal conventions of men. The darkness of mystery and the darkness of incoherence are the inevitable but opposite poles of thought : the more one of them seems desirable, the more the other seems hateful.”

Charles Journet;

The purpose of this article is to provide some clarity regarding the true meaning of the financial transactions that each of us use in our daily lives. It covers both commercial law and economics. That is, it seeks not only to evaluate the private law issues raised by various financial transactions, but also to examine the public issues raised by these transactions. Law can not be divorced from the underlying social and economic conditions. Sometimes laws are formed in response to social and economic conditions. At other times, laws will tend to create the social and economic interests under which people live.

It is a fundamental premise of this paper that financial transactions have both legal and economic consequences, affecting not only individuals, but national and international economies. As such, it seeks to overcome the limitations of economic thought that sees economics governed by some natural law that is totally independent of the financial transactions by which commerce actually takes place.

Financial transactions invariably involve the payment or agreement to pay money, and the article will begin with some comments on money. This will be followed by an examination of the early beginnings of our financial system. In examining financial transactions, it is important to understand that they can be used both to facilitate commerce as well as transfer wealth. Much of the conflict in the law has been an attempt to facilitate commerce, while limiting any harmful effects from transactions that do not seek to benefit commerce, but are promoted by self-seeking and the transfer of wealth from those involved in productive activity.

Since often the same technical financial transactions can be used for either (or both) purposes, the law has struggled in its attempt to foster the public good within the area of private law. Similarly, in analysing the public issues raised by these transactions, it is important to understand that the same technical transactions can have very different economic consequences.

Legal Nature of Money

What is the legal nature of money? There is no standard definition of money, and over time, money has meant different things to different people. However, from a legal perspective, a specific meaning of money is required within the context of any transaction giving rise to legal relations. Section 16 of the Personal Property Securities Act 1999 (New Zealand) says “‘money’ means currency authorised as a medium of exchange by the law of New Zealand or any other country.”

In *Moss v Hancock* [1899] 2QB 111 at 116, Darling J. said;

Money as currency, and not as medals, seems to me to have been well defined by Mr. Walker in “Money, Trade, and Industry” as “that which passes freely from hand to hand throughout the community in final discharge of debts and full payment of commodities, being accepted equally without reference to the character or credit of the person who offers it and without the intention of the person who receives it to consume it or apply it to any other use than in turn to tender it to others in discharge of debts or payment of commodities.”

In the book “The Legal Aspect of Money”, Dr F A Mann said that the characteristics or quality of money can be applied to, and only to:

- all chattels
- issued by authority of law in a state
- denominated with reference to a unit of account
- which are intended to serve as a universal medium of exchange in that state

Money must be distinguished from currency. Currency is that which is used in trade as a means of exchange. While money is a form of currency, currency is much broader. Money may be thought of as currency which is issued by authority of the state. Currency may be anything which either through custom or use is used in trade as a means of exchange. For example, a promissory note may be used as currency to effect exchanges of goods and services within a community. However, a promissory note is not issued under the authority of the state, is not a chattel, and being a debt, does not provide for a final discharge of debts. Since it is a debt, its acceptance depends on the character and credit of the person who made the promise to pay money. It has a dual purpose, it can be used to claim money from the issuer, or it can act as currency. Simply put, a promise to pay money is not money, though it may be used as currency.

The legal existence of money comes from an Act of Parliament. The Reserve Bank of New Zealand 1989 Act states;

S2 Interpretation – (1) In this Act, unless the context otherwise requires, ‘Bank note’ or ‘note’ means any negotiable instrument used or circulated, or intended for use or circulation as currency

S29) Making or issuing of other bank notes or coins

- 1) No person shall make or issue any bank note or coin, other than a bank note or coin issued under this Act

In Canada, the Bank of Canada Act, section 25, states

“The Bank has the sole right to issue notes intended for circulation in Canada and these notes shall be a first charge on the assets of the bank.”

For greater clarification, ‘Stroud’s Judicial Dictionary of Words and Phrases’ defines “Negotiable” as;

“It may be laid down as a safe rule that were an instrument is, by the custom of the trade, transferable, like cash, by delivery, and is also capable of being sued upon by the person holding it pro tempore, there it is entitled to the name of a negotiable instrument, and the property in it passes to a bona fide transferee for value, though the transfer may not have taken place in market overt. But if either of the above requisites be wanting- ie. If it be either not accustomedly transferable, or, though it be accustomedly transferable, yet, if its nature be such as to render it incapable of being put in suit by the party holding it pro tempore- it is not a negotiable instrument; nor (apart from the question of estoppel) will delivery of it pass the property of it to a vendee, however bonafide, if the transferor himself have not a good title to it and the transfer be made out of market overt (1Sm. L.c. 456, summarising Miller v. Race and its cognate authorities, and quoted with approval by Blackburn J., Crouch v. Credit Foncier of England L.R. 8 Q.B. 381,382). See further Taylor v. Kymer, 3B. & ad. 320

“The Dictionary of Canadian Law” defines ‘Bank-Note’

1. Includes any negotiable instrument (a) issued by or on behalf of a person carrying on the business of banking in or out of Canada, and (b) issued under the authority of Parliament or under the lawful authority of the government of a state other than Canada, intended to be used as money or as the equivalent of money, immediately on issue or at some time subsequent thereto, and includes bank bills and bank post bills.”

‘Blacks Law Dictionary’ defines “note”

1. A written promise by one party (the maker) to pay money to another party (the payee) or to bearer. A note is a two-party negotiable instrument, unlike a draft(which is a three-party instrument)

The only source of legal tender or money are notes and coins issued under the authority of these Acts. One issue that will be considered latter is whether these Acts also prohibit the use of alternate forms of currency or payment systems.

Economists have many definitions of money, but what they are really defining are various categories of currency, or assets that are easily convertible into currency. Consider the words of Allan Greenspan during testimony at the Humphrey-Hawkins hearings of February 17, 2000.

Mr. Greenspan: “Let me suggest to you that the monetary aggregates as we measure them are getting increasingly complex and difficult to integrate into a set of forecasts. The problem that we have is not that money is unimportant, but how we define it. By definition, all prices are indeed the “ratio of an exchange of a good for money.” And what we seek is what that is. Our problem is we used M-1 at one point as the proxy of money, and it turned out to be a very difficult indicator of any financial state. We then went to M-2 and had the similar problem. We have never done M-3 per se because it largely reflects the extent of expansion of the banking industry. And when in effect banks expand, in and of itself, it doesn’t tell you terribly much about what the real money is. So our problem is not that we do not believe in sound money. We do. We very much believe that, if you have a debased currency, that you will have a debased economy. The difficulty is in defining what part of our liquidity structure is truly money. We have had trouble ferreting out proxies for that for a number of years. And the standard we employed is whether it gives us a good forward indicator of the direction of finance and the economy.

Regrettably, none of those which have been able to develop, including MZM – has not done that. That does not mean that we think that money is irrelevant. It means that we think our measures of money have been inadequate. And, as a consequence of that, we, as I have mentioned previously, have downgraded the use of the monetary aggregates for monetary policy purposes, until we are able to find a more stable proxy for what we believe is the underlying money in the economy.”

Dr. Paul: “So it’s hard to manage something you can’t define?”

Mr. Greenspan: “It is not possible to manage something you can’t define.”

Alan Greenspan, Humphrey-Hawkins testimony, February 17,2000

In particular, economists focus on paper based currency issued by central banks and deposit based currency based on deposit accounts of supervised depository institutions. William J. McDonough, the President of the Federal Reserve Bank of New York, has stated;

Government – issued money is often viewed as being very special, and creating an electronic analogue in the private sector raises a number of public policy issues largely because historically paper-based currency has been issued by central banks and deposit-based money either by central banks, in the form of bank reserve accounts, or by supervised depository institutions in the form of demand deposits or NOW accounts. This arrangement developed for basic reasons: (1) to address the need for a safe medium of exchange, and (2) to provide a mechanism for the central bank to implement monetary policy... (The Transformation of the Retail Payments Business)

It should be mentioned that in principle, currency created by central banks under the authority of Parliament could be created as digital currency and not paper based.

For something to function as currency, it is desirable that it posse certain legal characteristics. For something to act as currency, the property, or ownership of this currency must be able to pass freely from person to person. As such, it is important to understand the legal limitations that the law generally imposes on property transfers. Property is generally considered to be real property (land), and personal property (other forms of property). Personal property consists of tangible personal property known as ‘choses in possession’ and intangible personal property known as ‘choses in action’. Choses in possession are material items which have a physical existence. Choses in action are property that does not exist in material shape, but is a right that can be claimed or enforced by an action in a court of law.

Personal property can be transferred in ownership. This requires the consent of the present owner, unless there is some overriding legal rule or principle based on special circumstances. Tangible personal property can be transferred by a formal written document called a deed, or by delivery of the material thing with intention that ownership is to be transferred by this act.

Intangible personal property can be transferred either by transfer or assignment. A transfer is a change of ownership of an instrument effected by delivery (sometimes with endorsement) without notice having been given to the person liable on the relevant instrument. Assignment generally means the change of ownership of an instrument can be effected only by completion of a separate form evidencing the change and giving notice to the party liable on it.

The principle that an owner's consent is required before his or her property is transferred has important consequences. A person can not lose his or her property by it being stolen, through carelessness or negligence, or by an unauthorised transaction. Even where there is the appearance of consent, it may be negated because it was induced by a misrepresentation, mistake, duress, forgery or fraud, or because the law considers the owner as not being capable of giving consent (such as a minor or mentally disabled person).

If a transfer of property is affected by a factor that means that the transfer has not been consented to by the owner, the property is subject to a defect in title in the hands of transferee. The transferee has no title to or ownership of the property and the property can be reacquired by the true owner. Should the transferee in turn transfer the property, the subsequent transferee will be subject to the same defect in title. The law governing who has title to an item of property gives rights that tend to travel with the property. The rights of the true owner are in a sense "proprietary".

In addition, parties may have personal rights, often called personal equities, which includes all legal rights to make claims against the other party to an immediate relationship. For example, if A purchases goods from B and promises to pay B in 90 days, B has a chose in action against A. However, B's property (a chose in action) may be subject to defences, set offs, and counterclaims. A may dispute his liability to B because the goods are defective, or possibly because A has a claim against B arising from a separate transaction. Should B transfer the chose in action to C, then C will also be subject to any defences, set offs, or counterclaims.

These basic rules inhibit anything being used as currency. If a person's property claim to currency is subject to any defects of title, or when choses in action are used as currency, additionally subject to defences, set offs or counterclaims, the usefulness of such property as currency is greatly diminished. In order that certain classes of property be able to function as currency, it was important to alter these basic rules.

To understand these issues, one must go back to the development of private currencies, firstly through bills of exchange, and latter through promissory notes. Such an

examination must consider the relationship between commercial law and commercial practice. However, the evolution of private law rules must be examined by reference to the social and economic conflicts that these private law rules attempted to deal with. A history of bills of exchange must examine the economic usefulness of such instruments, the role they have played in seeking personal gain, their evolution into a form of currency, and the effects such developments had on overall economic activity.

History of Bills of Exchange

The problem of making returns is common to all forms of trade. A journey from A to B must be balanced by a return journey from B to A. In the earliest form of trade organization, making returns meant simply carrying back the fruits of one's trading journeys. Merchants bought goods in one place, took them to a foreign market, sold them, bought other goods with the proceeds, and then returned home to sell the goods acquired in the foreign market. As trade developed, merchants would ship goods to agents in foreign lands, who would be responsible for their sale and the purchase of returns. Should the merchant not wish to purchase returns, he had the funds transfer problem of how to get money back from abroad.

Bills of exchange had their origins in a new mechanism of making returns that became possible with the transition to the regime of the sedentary merchant and the development of the commission merchant system. Suppose, for example, that an Italian merchant shipped spices from Italy to his representative in Flanders. Once the agent in Flanders had sold the spices, he would have funds in Flanders due to his principle in Italy. Suppose that another merchant in Flanders was in the business of buying English wool and shipping it to Italy. Once the Flemish wool merchant's agent in Italy had sold the goods, he would have funds in Italy due to his principle in Flanders. The problem of making returns could be solved by having the Italian spice merchant's factor in Flanders pay money to the wool merchant, and the Flemish wool merchant's factor in Italy pay money to the Italian spice merchant. In effect, the Flemish wool merchant's outward cargo would have become the Italian spice merchant's return cargo, and vice versa. ('The Early History of the Law of Bills and Notes' by J.S. Rogers p.33)

Such an exchange transaction would involve four parties. The Italian's agent in Flanders would deliver Flemish money to the Flemish wool merchant who would draw a bill of exchange on his agent in Italy instructing him to pay the Italian spice merchant Italian money.

It was however, finance, rather than simply funds transmissions, that were often the central element in exchange transactions. In the above example, the Italian merchant, having sold his spices in Flanders, could lend the Flemish money to a Flemish merchant wishing to purchase goods for sale in Italy. In return for the Flemish money from the agent of the Italian merchant, the Flemish merchant would draw a bill of exchange (bill) on the Flemish merchant's agent in Italy instructing his agent to pay the Italian merchant Italian money (from the proceeds of the goods shipped by the Flemish merchant to his Italian agent). The amount to be repaid in Italy would exceed the amount given in Flanders, with the difference being the interest paid by the Flemish merchant on the loan.

A money lender could benefit from both transactions. An Italian money lender could lend an Italian merchant Italian money to purchase goods for sale in Flanders. The Italian

merchant would draw a bill on his agent in Flanders instructing his agent to pay the agent of the money lender in Flanders. The money lender's agent in Flanders could then lend Flemish money to a Flemish merchant to purchase goods for sale in Italy. In return for the money, the Flemish merchant would draw a bill on his Italian agent to pay the Italian money lender Italian money. In early exchange transactions, a person borrowed money in one location, and instructed his representative in another location to repay the money to the representative of the person from whom the money was borrowed.

These exchange transactions were the subject of intense public controversy in the sixteenth and early seventeenth centuries, particularly as they related to usury and monetary policy. At least until the Reformation era, the Catholic Church condemned as usury any fixed charge for the use of money. No one disputed that simply money changing was both essential and legitimate. The problem was distinguishing the profits made for the mere use of the money, and profits derived from fluctuations in exchange rates which would be legitimate. In practice, since a higher charge was made for bills at double or triple usance than those payable for a shorter time, and the profits of the lenders were predictably large, it would appear that usury was a significant element in these transactions.

In particular, what came to be called 'dry exchange' and 'fictitious exchange' were universally condemned. Dry exchange was generally used to describe transactions in which the bill given for a loan was drawn on the lender's own representative abroad, with the understanding that instead of actually paying the bill, the lender's representative would simply redraw on the original borrower. Transactions in which the lender and borrower did not even bother to send bills back and forth, but used the exchange merely as a means of computing the charge for the loan, were called fictitious exchange. In 1571 Pope Pius V issued the bull *In eam* which condemned as usury all dry exchange.

In addition to questions of ethics, bills of exchange were seen as affecting monetary policy. With English coin evaluated in exchange transactions below mint par, those who needed to send money abroad would prefer to export gold bullion rather than deliver money in exchange contracts at unfavourable rates. Those needing to send money to London would be discouraged from doing so in bullion, as the transfer would be more advantageous by means of a bill of exchange. There was suspicion that unfavourable exchange rates were caused by manipulations of bankers and foreign merchants. The counter argument was that since imports exceeded exports, the net difference would necessarily come from England in bullion. An unfavourable exchange rate would reflect a greater demand for foreign money.

During this era, exchange was seen as a contract between the deliverer (lender) of the money and the taker (borrower), which happened to be carried out by means of a bill of exchange. Pleadings were based on the underlying contract. Legal obligations in exchange transactions were described as flowing from the delivery of money. Disputes such as non payment could be dealt with by the usual law relating to lenders and borrowers, with agency principles applied with regard to breaches by agents. However, after the mid-seventeenth century, both the commercial use and the private law relating to bills of exchange changed dramatically.

The common law had always held that debts could not be assigned. That is, the ownership of such a chose in action could not pass from person to person. It has been suggested that to purchase a debt and sue on it was a form of maintenance. Whatever the reason, such a rule excluded the use of debts as a form of currency. About the middle of the seventeenth century, the common law began to recognise the transfer of bills of exchange. The common law still did not recognise the transfer of promissory notes, and it was not until the Promissory Notes Act, 1704, that promissory notes were generally transferable.

By the seventeenth century, the view that a charge for the use of money was unethical or sinful, was displaced by a moral view that only large charges were unethical. Thus, one of the principal functions of early foreign exchange transactions, providing a means of finance in which the charge for the loan could be concealed, or justified, by reference to exchange rate fluctuations, had become essentially irrelevant. Bills began to be used in English domestic trade as well as in international commerce. Domestically, bills still provided a means of finance. A would lend money to B, and B would draw a bill of exchange on B's agent C to pay A's factor D. Since the money paid by A to B was less than that paid by C to D, such a transaction was clearly usurious, and without the cloak provided by exchange fluctuations, would have been unethical in the prior period. Additionally, should a person in the country have a need for money in London, such a person would give money to a merchant with credit balances in London. For a fee, the merchant would then write a bill of exchange on his London agent instructing the agent to pay money to whoever the person who advanced the money directed. Often these transactions would complement one another. A merchant in the country would sell a bill to tax collectors or others needing funds in London. The merchant would then lend the money received to others, who would give the merchant a bill of exchange they drew on their London agent, and payable to the merchant's London agent.

Bills also began to be used domestically as a payment mechanism. The pattern of trade began to change, with manufacturers shipping their goods to middlemen in London. Manufacturers would build up credit balances with these middlemen, and in paying their suppliers or creditors, would draw a bill on their London factor. If the bill was drawn, accepted, and paid after the factor had sold the goods and collected the proceeds, the transaction would be seen purely as funds transfer. If the bill was accepted prior to the sale of goods, then it was used as a means of finance. By lending his credit to the bill, the factor enhanced its value and the willingness for someone to accept the bill in exchange for supplies. If the bill was paid prior to the sale of goods by the factor, the transaction became a loan between merchant and factor. This form of acceptance finance became an important function of bills of exchange.

When bills of exchange became transferable, their use in credit transactions greatly expanded. A merchant would draw a bill on his London factor, and then sell the bill on credit. The person who bought the bill would then use the bill as currency. The merchant would profit from the difference between what he collected on the loan and the amount

paid on the bill. The merchant was earning interest, not by lending money, but by creating currency, and if he could structure both the bill and the loan to come due at the same time, would not actually need money. Should the bill be paid by the factor prior to the payment of the loan to the merchant, then the merchant's profit would be the difference between the interest earned on the loan, and the interest paid by the merchant to the factor.

Thus, while bills were used as a means of transferring funds as a payment mechanism, often they were created for the purpose of profit. However, the full developmental use of bills of exchange required some changes in the law relating to the transfer of promissory notes. As mentioned, the common law held that promissory notes could not be assigned. This began to change with Ways and Means Act, 1694 (U.K.). This Act, in attempting to finance a war against France, established the Bank of England. It authorised the Bank to create promissory notes which would be transferable. Section 29 said;

All and every Bill or Bills obligatory and of Credit under the Seale of the said Corporation made or given to any Person or Persons, shall and may, by Indorsement thereon under the Hand of such Person or Persons who shall voluntarily accept the same, and so by such Assignee, toties quoties, by Indorsement thereupon; and that such Assignment and Assignments, so to be made, shall absolutely vest and transfer the Right and Property in and unto such Bill or Bills obligatory and of Credit, and the Monies due upon the same; and that the Assignee or Assignees shall and may sue for, and maintain an Action thereupon in his own Name.

The purpose of this section was to allow the bank notes (promissory notes) created by the Bank to act as a form of currency. While Parliament imposed a limit on the amount of sealed notes which the Bank could use, there was no such limit in respect of the unsealed variety.

The advantage to the Bank of England should become apparent. Holders of bills of exchange were discounting these bills for money. However, it became common to discount these bills for bank notes, which began to be accepted as currency. By simply creating its own debt obligation, the bank would acquire a bill of exchange, and profit by purchasing the bill at a discount. If a person wanted to borrow money, and could be persuaded to take a bank note instead, the bank acquired a debt obligation by simply giving its own promissory note and profit from the interest differential between the two debt obligations. As long as the bank notes operated as a form of currency, the bank did not have to worry about having to meet the debt obligations created by these notes. With the passing of the Promissory Notes Act, 1704, others were able to profit simply by the creation of notes.

When bills of exchange, and latter promissory notes became transferable, their use in commerce greatly increased. Not only could they be used as a payment or financing instrument, but they became a way to create a currency, which began to displace money as a means of exchange. One method by which this was done was through "accommodation bills".

The trick was to create bills that looked like the kind of bills that arose out of the actual sale of goods in commerce. In one common scheme, a firm wishing to engage in such practices would find another firm or individual willing to assist- or 'accommodate' – it by accepting bills even though no goods had been sold

or shipped nor any other actual transaction had occurred between the firms. Firm A would draw a bill on Firm B in some odd amount that looked as though it might have been the amount due for goods shipped from Firm A to Firm B. Firm B would accept the bill, and Firm A could then use it to pay creditors or could discount it for cash. When the bill came due, Firm B would raise the funds to do so by repeating the process with the parties switched. Firm B would draw a bill on Firm A, Firm A would accept, and Firm B would discount the bill to get the money needed to pay off the first bill. ('The Early History of the Law of Bills and Notes' by J.S. Rogers p.225)

Often, the payees would be fictitious, and their endorsement forged, or the payee would be part of the scheme, who willingly endorsed the bill. In the case of *Walwyn v St Quintin* (1791) 1 Bos. & Pul. 652, it was the payee that was the principle debtor.

Thomas had prevailed upon Deane and St Quinton to assist him in raising money, the specific mechanism being that St Quintin drew a bill on Deane payable to Thomas, which was indorsed to Walwyn for value after acceptance by Deane. Thus, the reality of the transaction was that the payee was the principle debtor, and both the drawer and acceptor were acting for his accommodation. ('The Early History of the Law of Bills and Notes' by J.S. Rogers p.240)

Bills of exchange (including accommodation bills) could assist in the creation of currency in two ways. Firstly, the bills could function as currency in their own right, simply by creating a bill, and then have it circulate as a money substitute as a means of exchange. That is, a bill was created, and then given in exchange for some goods or services. Often, a bill would continue to be passed from person to person in payment of goods and services until paid or defaulted on.

Secondly, a bill could be discounted for a bank note, and the bank note would circulate as a money substitute as a means of exchange. In this transaction, a bill was created, and a bank note was created. These were then exchanged, with the bank profiting from the discount of the bill relative to the bank note, and the bank note adding to the 'currency' in circulation.

During this period, there was considerable debate regarding the economic consequences of these transactions. Adam Smith advocated the 'real bills theory', that if the banks confined their lending to the discount of real bills, that the paper currency created by the banks would be at the appropriate level.

What a bank can with propriety advance to a merchant or undertaker of any kind, is not either the whole capital with which he trades, or even any considerable part of the capital; but that part of it only, which he would otherwise be obliged to keep by him unemployed, in ready money for answering occasional demands. If the paper money which the bank advances never exceeds this value, it can never exceed the value of the gold and silver, which would necessarily circulate in the country if there was no paper money; it can never exceed the quantity which the circulation of the country can easily absorb and employ. When a bank discounts to a merchant a real bill of exchange drawn by a real creditor upon a real debtor, and which, as soon as it becomes due, is really paid by that debtor; it only advances to him a part of the value which he would otherwise be obliged to keep by him unemployed in ready money for answering occasional demands. (Wealth of Nations p 322-323)

During the first decade of the nineteenth century, the price of gold bullion rose relative to the mint rate, and the value of the pound fell significantly. Monetary writers known as the 'Bullionists' insisted that this was due to an over-issue of bank notes by the Bank of

England. The Bank Directors insisted that this was not possible as long as notes were issued only for the discount of real bills of exchange.

The Bank Directors, as well as some Merchants who have been examined, shewed a great anxiety to state to Your Committee a doctrine, of the truth of which they professed themselves to be most thoroughly convinced, that there can be no possible excess in the issue of Bank of England paper, so long as the advances in which it is issued are made upon the principles which at present guide the conduct of the Directors, that is, so long as the discount of mercantile Bills is confined to paper of undoubted solidity, arising out of real commercial transactions, and payable at short and fixed periods. (Bullion Report (1810), 46)

There are some logical problems with the 'real bills theory'. One of the authors of the Bullion Report noted that since the distribution of goods might result in one or dozens of bills, depending on the number of hands through which the goods passed and the credit terms of the sales, tying notes to real bills would not result in an automatic regulation of the volume of currency.

More importantly, the Bank's position rested on the notion that the demand for loans was completely independent of the cost of credit. The Bank directors contended that since no sane merchant would pay interest for a loan he did not need, no matter what the interest rate might be, no one would borrow unless the funds were truly needed to settle the transactions that had occurred in the regular course of economic activity. The Bullionists, by contrast, pointed out that whether firms borrowed depended on whether they expected to be able to earn a greater return than they had to pay for the funds borrowed. If the expected returns in trade or manufacture exceeded the interest rate charged by the Bank, there would be essentially no limit to the demand for loans, even those obtained on discount of bills arising out of real commercial transactions.

(‘The Early History of the Law of Bills and Notes’ by J.S. Rogers p.231)

Neither the Directors of the Bank of England or the Bullionists disputed that the discount of accommodation bills would destabilize the banking and monetary system. The bankruptcy of the firm of Livesey, Hargreaves & Co. of Lancashire in 1788 had shown the problems that could arise with accommodation bills. The debts of this firm were estimated at 1.5 million pounds (at this time, the entire note issue of the Bank of England was about 10 million pounds), with the firm financing its operations by repeated issuance and circulation of accommodation bills. The issue was whether restricting the bank note issue to real bills could somehow provide for a safe and stable banking and monetary system.

The debate is really about the economic consequences of using bank notes as currency. That is, when a debt obligation or 'chase in action' is used as currency, does this affect the safety and stability of the banking and monetary system? Moreover, the answer to this question must be seen within the broader question of an ethical analysis of money, including an economic and ethical analysis of usury.

The first point is that these transactions result in an increase in the claims on money without a corresponding increase in actual money. Since, in theory, these transactions can be repeated, virtually without limit, a very serious distortion can occur between actual money, and total claims on this money. The creation of a bill creates a claim for money to be repaid. Discounting the bill for a bank note creates an additional claim for money to be repaid. As the volume of these transactions increase, the total value of legal claims to

pay money will far exceed the level of money. Such a financial system will only function so long as there is not a legal demand to full-fill the contractual terms created by these transactions. Holders of bank notes must not ask for the repayment of money, but must circulate these notes as currency in lieu of money. Bills must be repaid with the issuance of new bills, either as substitution for the old bills, or by the discount of new bills for new bank notes. Since the contracts creating these transactions generally call for some payment of interest, what is due in the future will be greater than what was received. This creates a bias towards an acceleration of the increase in these debt obligations.

These transactions can also have significant macro-economic effects. When a bill is created and then discounted for a new bank note, this allows the holder of the note to acquire some goods or services in the community. These transactions create a demand for goods which would not have existed without these transactions. In essence, the creation of currency is a source of demand for goods and services, thus affecting economic activity, or what is now called Gross Domestic Product (GDP). Secondly, the repayment of the bill results in the person who repaid the bill forgoing expenditures on goods and services, and thus reducing economic activity or GDP. Another way of viewing the economic effect of these transactions is to consider a person who earns \$1000 from wages, and if the whole amount is spent, contributes \$1000 towards GDP. If this person in addition acquires new bank notes of \$200 for discounting an accommodation bill of \$210 to be repaid the following year, this person can spend \$1200 and contribute \$1200 towards GDP. However, when the bill is repaid the following year, this person can only spend \$790 (\$1000 income less \$210 bill repayment). This person only contributes \$790 towards GDP compared to \$1200 the previous year, contracting the economy.

Assuming the bill is repaid by bank notes, the transaction is one of set-off. The drawee's (or drawer's) liability under the bill is offset by the bank's liability under the bank note. Since the bill was obtained by the bank at a discount, the value of the bank notes so given will be less than the value of the bank notes that were returned when the liability under the bill was satisfied by this transaction of set-off. This effectively reduces the currency in circulation. From an economic perspective, the additional demand for goods or services created by the original discount of the bill, will be less than the reduction in demand for goods or services as the result of the repayment of the bill. Thus, in order to maintain economic activity at the previous level, each year the bank must discount new bills and issue new bank notes to a value that equals the value of the bills repaid. Under issuance will decrease, and over issuance increase economic activity. Due to the discount activity of the bank, for constant GDP, the unit value of the bills created must be greater than the unit value of the bills repaid.

A more detailed economic analysis of these transactions will be considered later, which will include the economic effects these transactions have on production and asset prices. For present purposes, it is sufficient to note that these financial transactions (the discount of bills for new bank notes);

- created a transfer of wealth to the banks
- created a system for a bias towards a continual expansion of these financial transactions

- were able to effect economic activity, both by expansion or contraction
- were a source of both economic and legal difficulties in that a) debt had to grow at a faster rate than income, and b) legal obligations to pay money as they grew over time, would far exceed the available money to full-fill these legal obligations.

Bills, whether created from real commercial transactions, or through accommodation, were essentially a financing device. Since it was the creation of bank notes that was in issue, the particular means by which bank notes were issued was not relevant. The same legal and economic effects would have occurred if persons had given the banks a promissory note in exchange for the banks promissory note (bank notes). The only difference between the bank getting a promissory note or bill of exchange in return for the issuance of bank notes, is that the bill called for someone other than the person who received the bank notes to pay the bank, while a promissory note called for the bank to be repaid by the person who received the bank notes.

The real problem with the “real bills theory”, was the failure to see that conceptually and legally, the creation of an accommodation bill, and the creation of bank notes shared similar characteristics and economic consequences. The only real differences between these instruments (which did not substantially alter their legal or economic nature), was that with bills, three parties were involved, while with bank notes, only two parties were involved.

The key to understanding these similarities is to first understand the distinction between a chose in action which is evidence of some underlying transaction, and a chose in action which is created in order to exchange for some other property. Traditionally, bills were used as a means of finance (the borrowing of money), or as a payment mechanism. If a bill was defaulted on, the plaintiff could sue on the underlying transaction. However, with accommodation bills, they represented no underlying transaction, and if defaulted on, there was no underlying transaction to sue upon. A person had simply created a debt obligation, treated it as property, and exchanged this property (an accommodation bill) for some other property.

A similar approach was involved with bank notes. If a person deposited (or lent) money to a bank, the bank could give the person a bank note as evidence of the debt. The bank was a creditor of the person who lent the bank the money, and the bank note was evidence of the debt. There is an underlying transaction (the lending of money to the bank), that forms the basis of the banks debt obligation under the bank note. However, when a bank note is simply created and exchanged for a bill, there is no underlying transaction in which the bank is a debtor. The bank has not entered into any transaction by which it is either a debtor or borrower. If the bank note is defaulted on, there is no underlying credit transaction that can be sued on. Like an accommodation bill, the bank has simply created a debt obligation, treated it as property, and exchanged this property (the bank note) for some other property (a bill).

Seen from this viewpoint, the ‘real bills’ theory lacks credibility.

Cheques and Financial Transactions

Cheques are a bill of exchange which are drawn on a bank and payable on demand. As such, they are not novel instruments. It is the use of this particular type of bill of exchange that is most interesting and shows the great versatility by which these instruments could be utilized.

There is ample evidence, therefore, to support the view that the cheque system was firmly established in our economic life before the close of the seventeenth century. The growth of the system was encouraged, albeit indirectly, by the Act of 1708 (7 Ann., c.7 (1708) Sect. 61) which made it illegal for any corporation (other than the Bank of England) or for any partnerships consisting of more than six members to issue notes. Deprived of this privilege, the larger banking firms began to concentrate on developing the cheque system.

(‘The History of Negotiable Instruments in English Law’ by J.M. Holden p.213)

As previously shown, the creation of bank notes was very profitable to the banks involved in this practice. The financial principles of these transactions were for the banks to acquire a debt obligation in return for its own debt obligation (the bank note), and profit on the effective interest differential on these two debt obligations. By utilizing a specific bill of exchange (a cheque), banks were able to duplicate these financial principles.

To facilitate these transactions, banks established ‘clearing houses’. Customers would bring their cheques into their bank for ‘collection’. What essentially happens is that the customer exchanges the cheque for a bank deposit. A bank deposit is a debt obligation of the bank, and the customer has effectively exchanged one chose in action (a cheque), for another chose in action (a bank deposit). The collecting bank, as holder of the cheque, then asks the drawee bank for payment. As cheques were exchanged amongst banks, only net differences needed to be settled.

Where three or more banks are indebted to each other, the accounts between them can be adjusted by a settlement of differences. Thus if Bank X owes 200 pounds to Bank Y in respect of cheques cleared, Bank Y owes 100 pounds to Bank X, and Bank Y owes 100 pounds to Bank Z, all these debts can be settled by one payment of 100 pounds by Bank X to Bank Z.

(‘The History of Negotiable Instruments in English Law’ by J.M. Holden p.214-215)

In these transactions, there are legal considerations whether the bank owns the cheque as holder, or is acting as an agent for the customer. These issues will be addressed later, but do not effect the technical effects of these transactions. Thus if customer A of Bank A gave his bank a cheque for 100 pounds drawn on customer B of Bank B (which B had given to A as payment for goods sold), and customer C of Bank B gave his bank a cheque for 100 pounds drawn on customer D of Bank A (which was also given in consideration of goods sold), the net effect is that Bank A would increase the bank deposit of customer A, and decrease the bank deposit of customer D both by 100 pounds. Similarly, Bank B would decrease the bank deposit of customer B and increase the bank deposit of customer C both by 100 pounds. If there should be a net difference owing between banks, only a small amount of money would have to be transferred between banks relative to the level of transactions. The modern practice is for banks to simply adjust inter-bank bank deposits, eliminating all need for money. Thus, by means of the cheque clearing system, bank deposits could be used as a means of exchange, with exchange transactions

completed by an adjustment in the relative level of bank deposits between different bank customers.

When such a clearing system developed, banks could then discount bills for bank deposits. A person would exchange a bill for a bank deposit. The customer would then issue a cheque drawn on the bank, which would be paid by an adjustment of bank deposits. In the modern usage, if customer A of Bank A obtained a new bank deposit of 100 dollars from Bank A and gave customer B of Bank A a cheque for 100 dollars in payment of some goods, which customer B deposited with Bank A, A's bank deposit would decrease and B's bank deposit increase by 100 dollars. If B dealt at Bank B, then Bank A would decrease A's bank deposit and increase Bank B's bank deposit (both with Bank A), while Bank B would increase B's bank deposit with Bank B. Bank A would profit from the income earned by discounting the bill less any interest paid on the bank deposits that were created. The same accounting applies when a customer would request a loan of money from the bank, and the bank instead would give the customer a bank deposit.

Bank deposits and bank notes are different forms of bank liabilities, and when banks were prevented from creating bank notes, they simply resorted to creating bank deposits in order to acquire debt obligations. The cheque clearing system was then utilized to adjust the relative level of bank deposits amongst individuals who utilized cheques in exchange transactions.

Electronic Funds Transfers

While the use of cheques and the adjustment of relative bank deposits continues to play a large role in exchange transactions, these are being displaced by electronic funds transfers. The accounting involving these transactions is very similar to the accounting involved in the cheque clearing system. Essentially the relative level of bank deposits between customers are adjusted in exchange transactions, but instead of using cheques, these adjustments are performed electronically.

Legal Questions

The use of cheque clearing systems and electronic funds transfers pose certain legal difficulties, both as regard to commercial law rules that govern the creation of legal obligations and transfer of property, and also with regard to Government Statutes which would appear to make illegal private currencies or payment systems. In addition, the practice of banks giving borrowers bank deposits when these borrowers contract to borrow money will be examined. Does this represent a failure of consideration, and do these transactions breach Government Statutes?

These issues must be considered in light of the broader issue of who should create the currency of a country. When governments create currency, they create the means to pay for government services without resorting to taxation or borrowing. When private individuals create currency by creating a chose in action, they profit from the interest rate

differentials between the returns received on assets acquired in exchange for the chose in action, and any expenses associated with the chose in action that they have created. On one level, the issue is whether the general community as represented by the government should profit from the creation of currency, or should the profits fall to private individuals. On a broader level, there are significant economic consequences as to the method of creating currencies, relating both to the effect on overall economic activity, and the stability of the financial and banking systems. These legal issues will now be examined.

It is not every promise that the law will enforce, but only promises for which some form of consideration has been given. In addition, the general common law rule is that the only person who can sue on a promise is the person from whom the consideration moves. With early exchange transactions involving bills of exchange, these basic rules posed no difficulties. During this era, exchange was seen as a contract between the deliverer (lender) of the money and the taker (borrower), which happened to be carried out by means of a bill of exchange. Pleadings were based on the underlying contract. Legal obligations in exchange transactions were described as flowing from the delivery of money. Disputes such as non payment could be dealt with by the usual law relating to lenders and borrowers, with agency principles applied with regard to breaches by agents.

However, after the mid-seventeenth century, both the commercial use and the private law relating to bills of exchange changed dramatically. The transferability of bills, and their use as currency did not fit within common law rules. In *Edgar v Chut* (1663) 1 Keb. 592,636, a butcher bought cattle from a Norfolk grazier. In order to pay the grazier, the butcher persuaded a parson to draw a bill of exchange on the parson's correspondent in London. The butcher gave the bill to the grazier as payment for the cattle. Essentially, the butcher bought the bill on credit, and then transferred the bill as payment to the grazier. The parson instructed his London correspondent not to pay the bill until the butcher had paid him the money, which did not happen as the butcher went bankrupt. The parson was held liable to pay the bill as drawer after the drawee refused to pay it. The parson had given the butcher a bill on the promise that the butcher should pay the parson money. The butcher reneged on his contractual obligations, which should have allowed the parson to renege on his promise to the butcher. Moreover, there was no contractual relationship between the grazier and the parson, and the grazier had provided no consideration to the parson. Normal common law rules would not have recognised any claim by the grazier against the parson.

For bills to function as a medium of exchange, the basic common law rules concerning contractual relations had to change. These common law rules did not change for all legal obligations, only the ones concerning the creation of private currencies.

Thus, if bills were to be acceptable as media of payment, it was essential that those who took bills be assured that execution of the bill in itself bound the drawer to pay if the drawee did not. ... Bills were usable as transferable media of exchange only once the execution of a bill itself created a legal obligation binding on the drawer, independent of any obligation that may have arisen in the underlying exchange transaction.

(‘The Early History of the Law of Bills and Notes’ by J.S. Rogers p.126)

There were practical benefits to the alteration of common law rules that further enhanced the use of bills as a means of exchange. If the bill had passed through many hands prior to being presented to the drawee, then it was likely that the various parties through whom the bill passed would not have known the facts on the underlying contract, and as such would be unable to prove the elements of a cause of action on the underlying contract. This problem did not arise once the execution of the bill itself created legal obligations.

Basic common law rules were also altered with respect to drawees who accepted the bill. Once a drawee had agreed to pay the bill, he was held liable to his promise, even when the drawee was not a party to the underlying contract, and had received no benefit.

At this point there was the manifestation in legal procedure of the separation of the bill of exchange and the exchange contract, and the creation of a body of law that can properly be called the law of bills of exchange.

The basic principle of the law of bills that developed in the seventeenth century was that people incur enforceable legal obligations merely by signing bills. The common law of private obligations provided little basis for such rules. Obligations acknowledged in formal sealed bonds were enforceable by actions in debt, but bills of exchange were not sealed bonds. Informal promises were enforceable in *assumpsit*, but only if the consideration for the promise was proven.

(‘The Early History of the Law of Bills and Notes’ by J.S. Rogers p.149)

Common law judges then introduced further changes to the laws concerning bills and bank notes that would enhance their use as a means of exchange. It is a basic common law rule, that in the transfer of any property, the transferor can not give a better title than he has. A thief who transfers property to a bona-fide purchaser can not pass title, and the true owner can recover the property from the bona-fide purchaser. This basic rule would inhibit any type of property as being used as currency, if to be assured of ownership, the bona-fide purchaser might have to trace the validity of all transfers of the property. To deal with this difficulty, the common law developed what is the cornerstone of negotiability, that a bona-fide holder for value could acquire a better title to the bill (or note) than that possessed by the transferor. The trilogy of cases starts with *Hussey v Jacob* (1696) 1 Comyns 4.

Hussey, the payee, sued Jacob, the acceptor, for non payment of a bill rendered void by the Gaming Act 1664. The significant point was an obiter dictum of Holt that if the bill was ‘given to the winner or order, and the winner indorsed it to a stranger for a just debt, and the person upon whom the bill was drawn accepts it in the hands of the stranger, the acceptor would be liable.’ The view was taken that the transferee could have a better title than the transferor.

One year later in *Anon.*(1697) 1 Comyns 43, C was the holder of a bill which had been assigned to him ‘for an honest debt’. The drawer sought to be excused of liability as the bill had been given without consideration. Lord Somers held that as C was an honest creditor and had ‘come by this bill fairly for the satisfaction of a just debt’, no relief would be given to the drawer.

The third case was decided by Holt in 1699 (*Anon.* (1699) 1 Salk. 126; 3 Salk 71; 1Ld. Raym. 738). A lost a Bank bill payable to A. This was an instrument issued by the newly established Bank of England. The Bank bill was found by a stranger and transferred to C for valuable consideration.

Holt held that A (the loser of the bill) could maintain an action of trover against the stranger 'for he has no title'; but that A could not maintain trover against C 'by reason of the course of trade, which creates a property in the assignee or bearer.'

Here, then, for the first time in history the Common Law Courts and the Court of Chancery recognised the claim of the bona-fide holder for value. A chariot had been driven through the hitherto impregnable lines of the common law maxim *nemo dat quod non habet*. The chariot was driven by Holt C.J. and by Somers L.C. and the motive power was simply 'the course of trade', in other words, the custom of merchants. ('The History of Negotiable Instruments in English Law' by J.M. Holden p.64-65)

Some, such as Professor Beutel (51 Harv. Law R. 842) have taken the view that Holt, in reaching his decision, must have relied on the statute which authorised the creation of the Bank of England- Sect 29 of the Ways and Means Act. 1694. Others, such as J. Milnes Holden hold that this section only means that the instruments specified by the section were transferable. Whatever view one takes, it is clear that the doctrine of bona-fide purchaser for value greatly assisted the new Bank bills being accepted as currency. If one was subject to the possible defects to title or personal equities attaching to the bill in the hands of the present or some past owner, then they would be less acceptable as currency. As previously stated, notes were issued by the newly formed Bank of England in exchange for some debt obligation such as a bill of exchange. Since what the Bank was doing was acquiring a debt obligation paying an effective yield greater than the yield the Bank was paying on the debt obligation issued by the Bank to acquire the bill, it was important to create a desire for people to enter into such a disadvantageous transaction. Such could be done if the debts created by the Bank could function as currency.

Under Lord Mansfield's tenure as Chief Justice of the King's Bench, the Court solidified the place of debts issued by the Bank of England functioning as currency. In the leading case of *Miller v Race* (1758) 1 Burr. 452, a Bank of England note had been stolen from the mail and passed to an innkeeper as payment for lodging. When the owner of the note became aware of the robbery, he asked the Bank to stop payment under the note which the Bank did. When the innkeeper presented the note to the Bank for payment, the Bank refused, and the court found in favour of the innkeeper. Lord Mansfield said:

Bank notes... are not goods, nor securities, nor documents for debts, nor are so esteemed: but treated as money, as cash, in the ordinary course and transaction of business, by the general consent of mankind; which gives them the credit and currency of money, to all intents and purposes.

Strictly speaking Bank notes are debts. The case before the court involved the Bank refusing to pay the debt obligation due under the note. However, the case really concerned the legal recognition of Bank notes as currency. Mansfield went on to say;

It has been quaintly said, 'that the reason why money can not be followed is, because it has no ear-mark:' but this is not true. The true reason is, upon account of the currency of it: it can not be recovered after it has passed in currency.

Thus Bank notes could not be recovered by the true owner after they had passed as currency, and a transferor could give better title than possessed by the transferor.

What is Banking?

The common law contains no standard definition of what is a bank, or what constitutes the business of banking. However, the rules governing the functioning of our financial system including the business of banking will be found in both the common law as well as statute. Present financial transactions engaged in by banks will be considered in light of these rules. An important feature of the contract between a customer and a bank is that its terms are not generally set out in writing. The contractual relationship is one founded upon the customs and usages of bankers. Where customs and usages have been recognised by the courts, they may be regarded as implied terms of the contract between bank and customer. This is an area of the law where implied terms are of great importance. In *Commissioners of the State Savings Bank of Victoria v Permewan Wright & Co. Ltd.* (1915) 19C.L.R. 457, Isaacs J. described the meaning of banking as follows;

The fundamental meaning of the term is not, and never has been, different in Australia from that obtaining in England. Various writers attempt various definitions, more or less discordant, and many of them referring to functions that are now very common and convenient, and even prominent, as if they were indispensable attributes. The essential characteristics of... banking are... the collection of money by receiving deposits upon loan, repayable when and as expressly or impliedly agreed upon, and the utilization of the money so collected by lending it again in such sums as are required. These are the essential functions of a bank as an instrument of society. It is, in effect, a financial reservoir receiving streams of currency in every direction, and from which there issue overflowing streams where and as required to sustain and fructify or assist commercial, industrial or other enterprises or adventures.

Atkin, L.J. in *Joachimson v Swiss Bank Corpn* [1921] 3 K.B. 110 at 127, widened this definition to the collection of bills for customer's accounts;

The bank undertakes to receive money and to collect bills for its customer's account. The proceeds so received are not to be held in trust for the customer, but the bank borrows the proceeds and undertakes to repay them.

In *United Dominions Trust v Kirkwood* [1966] 1 All E.R. 968 at 975, Lord Denning M.R. held that it was essential for a bank to honour customer cheques;

There are, therefore, two characteristics usually found in bankers today: (i) they accept money from, and collect cheques for, their customers and place them to their credit; (ii) they honour cheques or orders drawn on them by their customers when presented for payment and debit their customers accordingly. These two characteristics carry with them a third, namely, (iii) they keep current accounts, or something of that nature, in their books in which the credits and debits are entered.

In the same case, Diplock, L.J., agreed with Lord Denning, but added a qualification;

The requirement that his carrying on of the business of banking must be bona fide does, however, I think, involve two requirements. The first is that the banking transactions which he carries out in the course of

his business must not be negligible in size and number when compared with the rest of his business. The second is that the transactions relied on as constituting the accepting of deposits of money from customers on running account must be genuinely of this legal nature and not a mere disguise for transactions of a different legal nature. The court must look to the true nature of the transactions, not merely to their form.

To understand the concept of banking, it is necessary to consider these points in greater detail. To begin, it is necessary to consider what is 'a loan of money' or what is 'a deposit of money'?

The *Oxford English Dictionary* says;

A thing lent; something the use of which is allowed for a time, on the understanding that it shall be returned or an equivalent given; esp. a sum of money lent on these conditions and usually at interest.

In general terms, a loan of money is a contract where one person (the lender) pays a sum of money in consideration of a promise by another person (the borrower) to repay the money upon demand or at a fixed date. In *M.S.D. Spiers Ltd. v Fahey* [1973] 1 N.Z.L.R. 478, 479-480, Quilliam J., thought that for a loan of money, there must be an initial payment of money subject to a condition requiring repayment. Chitty said that a;

Contract of loan is a contract whereby one person lends or agrees to lend a sum of money to another, in consideration of a promise express or implied to repay that sum on demand or at a fixed or determinable future time, or conditionally upon an event which is bound to happen, with or without interest. (Chitty on Contracts, 23rd ed, 1983 at para. 3157)

It is important to distinguish a loan of money from other transactions that are of the form of debtor- creditor relationship. For example, a transaction where goods are purchased with payment due at a future date is not a loan of money. The relationship is that of debtor and creditor. In *Potts v I.R.C.* [1951] A.C. 443,465, the court held that the relationship of debtor and creditor was not also that of borrower and lender. There are many ways of financing business transactions which are not a loan of money. Legally, transactions acquire their character primarily by reference to their form. It is possible to achieve the same economic effects by a variety of routes. Often the same financial results can be achieved either by a loan of money, or some form of debtor-creditor relationship. Lord Devlin said;

The task of the court in such cases is clear. It must first look at the nature of the transaction to which the parties have agreed. If in form it is not a loan, it is not to the point to say that its object was to raise money for one of them or that the parties could have produced the same result more conveniently by borrowing and lending money. But if the court comes to the conclusion that the form of the transaction is only a sham and that what the parties really agreed upon was a loan which they disguised, for example, as a discounting operation, then the court will call it by its real name and act accordingly. (*Chow Yoong Hong v Choong Fah Rubber Manufactory* [1962] A.C. 209, AT 216-217)

What is a deposit of money? Section 5(1) of the Banking Act 1987 (U.K.) defines deposit as follows;

... in this Act 'deposit' means a sum of money paid on terms-

- (a) under which it will be repaid, with or without interest or a premium, and either on demand or at a time or in circumstances agreed by or on behalf of the person making the deposit and the person receiving it; and

(b) which are not referable to the provision of property or services or the giving of security

Section 5(3) says that a deposit does not include:

(1) a sum paid by the Bank or an authorised institution

In Canada, this concept of a bank deposit being a debt obligation of the bank is incorporated in statute. The Bank Act, section 461(2) states;

“The amount of any debt owing by a bank by reason of a deposit in a deposit account in the bank is payable to the person entitled thereto only at the branch of account and the person entitled thereto is not entitled to demand payment or to be paid at any other branch of the bank.”

The idea underlying the statutory concept of deposit is that of a loan. It is the essence of the legal relationship of banker and customer that the parties are in a position of lender and borrower, whatever the style of the account and whatever its state, whether it be in credit or debit. There are two major court cases often referred to as defining the customer-banker relationship as that of lender and borrower.

Lord Cottenham LC in *Foley v Hill* (1848) 2 HL Cas 28 at 36-37 said:

“Money, when paid into a bank, ceases altogether to be the money of the principle; it is the money of the banker, who is bound to return an equivalent by paying a similar sum to that deposited with him when he asked for it. The money paid into the bankers, is money known by the principle to be placed there for the purpose of being under the control of the banker; it is then the banker’s money; he is known to deal with it as his own; he makes what profit on it he can, which profit he retains to himself; paying back only the principle, according to the custom of bankers in some places, or the principle and a small rate of interest, according to the custom of bankers in some other places. The money placed in the custody of a banker is, to all intents and purposes, the money of the banker, to do with it as he pleases; he is guilty of no breach of trust in employing it; he is answerable to the principle if he puts it into jeopardy, if he engages in a hazardous speculation; he is not bound to keep it or deal with it as the property of his principle, but he is, of course, answerable for that amount because he has contracted, having received that money, to repay to the principle, when demanded, a sum equivalent to that paid into his hands. That has been the subject of discussion in various cases, and that has been established to the relative situation of banker and customer.”

Atkin LJ, in *Joachimson v Swiss Bank Corpn* [1921] 3 K.B. 110 at 126-127 said:

“The question seems to turn upon the terms of the contract made between the banker and customer in ordinary course of business when a current account is opened by a bank. It is said on the one hand that it is a simple contract of loan; it is admitted that there is added, or superadded, an obligation of the banker to honour the customer’s drafts to any amount not exceeding the credit balance at any time; but it is contended that this added obligation does not affect the main contract. The bank has borrowed the money and is under the ordinary obligations of a borrower to repay. The lender can sue for his debt whenever he pleases. I am unable to accept this contention. I think that there is only one contract between banker and customer. The terms of that contract involve obligations on both sides and require careful statement. They appear upon consideration to include the following provisions. The bank undertakes to receive money and to collect bills for its customer’s account. The proceeds so received are not to be held in trust for the customer, but the bank borrows the proceeds and undertakes to repay them. The promise to repay is to repay at the branch of the bank where the account is kept, and during banking hours. It includes a promise to repay any part of the amount due against the written order of the customer addressed to the bank at the branch, and as such written orders may be outstanding in the ordinary course of business for two or three days, it is a term of the contract that the bank will not cease to do business with the customer except upon reasonable notice. The customer on his part undertakes to exercise reasonable care in executing his written orders so as not to mislead the bank or to facilitate forgery. I think it is necessarily a term of such contract that the bank is not

liable to pay the customer the full amount of his balance until he demands payment from the bank at the branch where the current account is kept. Whether he must demand it in writing it is not necessary now to determine.”

The essence of a deposit of money is a loan of money from the customer to the bank. A customer does not own any money in a bank. The customer has a personal and not a real right. The same general characteristic that property in the money advanced lies with the borrower applies to all loans of money. This entitles the borrower to use the money as his own, with the lender retaining only a contractual right for repayment. In *Libyan Arab Bank v Bankers Trust Co.* (1989) 3 W.L.R. 314 at 333, Staughton J. said;

It is elementary, or hornbook law to use an American expression, that the customer does not own any money in a bank. He has a personal and not a real right. Students are taught at an early stage of their studies in the law that it is incorrect to speak of “all my money in the bank”

The issue that must now be considered is whether the financial transactions employed by banks fall within the banker – customer relationship as developed by statute and the common law, and consider the legal implications when the transactions fall outside of this relationship.

When a customer gives the bank money in return for a promise of the bank to repay the money, there is a lending of money from the customer to the bank. When the bank pays to the customer money in return for a promise by the customer to repay the money, there is a lending of money by the bank to the customer. Yet, a careful examination of financial transactions actually entered into by banks will show that these transactions seldom happen.

In most cases, when banks promise to lend money, they actually give customers a promise to pay the customer money instead. That is, in exchange by a person of a promise to pay the bank money, the bank gives the person a bank deposit, which is a legal obligation to pay the person money. The transaction simply involves the crediting of the bank account (or giving the person some other bank liability such as a bank cheque), while at the same time debiting the loan account of the person. In law books on this subject, very little is written about these transactions. One reference is by Michael Brindle and Raymond Cox in their book, “Law of Bank Payments”. On page 577, they state:

“In a loan, the customer is granted a given amount which is credited forthwith to his current account and stands at his disposal at any time. The amount so lent is debited to a loan account opened in the customer’s name.”

Michael Brindle and Raymond Cox are not technically correct. Firstly, these transactions do not involve any use or lending of money. Secondly, a credit to a bank deposit represents either a lending of money by the customer to the bank, or possibly the bank acquiring some other asset on credit terms. It can never represent the lending of money from the bank to the customer.

Bank deposits are debt obligations of banks, and like all debt obligations, are created whenever a bank acquires an asset or obtains a service, and promises to pay money for this asset or service at a latter time. The notes of customers are assets of a bank. They are a promise to pay the bank money. Like any asset acquired by a bank, these notes can be acquired by the payment of money, by exchanging some other asset owned by the bank for the note, or by the bank giving it's own promise to pay money (such as a bank deposit), in exchange for the promise by the customer.

Where a bank pays money for the customer's note, it is called a loan of money, and the relationship is that of borrower and lender. Where a bank exchanges some other asset for the customer's note, it is a sale by the bank of an asset on credit terms, and the relationship is that of debtor-creditor. Where a bank gives a bank deposit for a customer note, it is an exchange of mutual liabilities. This is a debtor-creditor relationship in which both bank and customer both become a debtor and creditor within the same transaction. Generally speaking, transactions involving the extension of credit or the borrowing of money involve an immediate transfer of purchasing power from one person to another for a temporary period. However, when transactions between a person and a bank involve the exchange of liabilities, there is not the transfer, but creation of purchasing power.

Use of bank deposits in this manner has certain similarities to the creation of accommodation bills. Under a normal banking-customer relationship, a bank deposit would be evidence of the lending of money from the customer to the bank. It would be evidence of an underlying contract. However, in this case there is no underlying contract, no money has been lent by the customer to the bank. The bank has simply created a credit obligation with which to exchange for and acquire an asset to the bank (a debt obligation from the customer). With accommodation bills, a similar process is involved. A credit obligation is created (the accommodation bill), which is used to acquire an asset. The only difference is that an accommodation bill is a credit obligation involving three parties, while a bank deposit is a credit obligation involving two parties. As such, the economic consequences of banks creating credit obligations in order to acquire assets are similar to the economic consequences of accommodation bills.

In any contractual relationship between a bank and customer, it will be a question of fact which of these three transactions were agreed to between the bank and customer. It will also be a question of fact regarding which transaction actually occurred. If the terms of the contract call for the bank to lend money and the bank does not lend money, but instead gives its own promise to pay money (a bank deposit), then the bank will have breached the terms of the contract. That is, does the terms of the contract between the bank and the customer call for the bank to lend the customer money, which means a transfer of the ownership of money from the bank to the customer, or does the contract call for the bank to merely promise to pay money in the future.

Put differently, when financial transactions between a customer and a bank involve the exchange of mutual promises, contract formation may be as follows:

- 1) Contract is expressed as a loan of money, and since no money is loaned, there is a breach of contract by the bank.

- 2) Contract is exchanged as an exchange of liabilities, but the borrower believes that the contract is a loan of money and the bank remains silent and seeks to take advantage of the misapprehension. It will be unconscionable for the bank to take advantage of the misapprehension. Given that most economic texts, legal texts and legal cases claim that the banks lend money, it would be reasonable to expect that people go to a bank to borrow money.
- 3) Contract is expressed as an exchange of liabilities with both parties fully aware of the terms of the contract, with the customer seeking to obtain a bank debt in order to use it as currency. This may be an illegal contract in that it appears to violate government statutes which give the sole power to create currency with governments or central banks. It may be a form of fraud, in that the purpose of these transactions is to obtain goods or services from the community with neither party being able to perform the legal obligations created by these transactions (which will be shown in the economic analysis that follows). Given the elaborate nature of mechanisms created by banks that facilitate the transfer of bank liabilities, it may be argued that banks never intended to honour the legal liabilities so created.

It will be a simple matter to determine which financial transaction has actually occurred. In a loan of money, the bank's liabilities will not change. The total amount of money held by the bank will decrease, and the amount of bank loans will increase by the same amount. Total bank assets will not change, though the composition of the assets has changed. Where there is a mutual exchange of liabilities, the bank's assets and liabilities will increase by the same amount. That is, the amount of bank loans and the amount of bank deposits will increase by the same amount. The amount of money owned by the bank will not change.

What legal implications may arise when the bank agrees to lend the customer money, and instead gives the customer a bank deposit? Does it matter that this is a transaction of debtor and creditor, and thus outside the banker-customer relationship of borrower and lender? Can the bank argue that while the parties have not carried out the agreement as called for in the contract, they have done so in an equivalent form, in that the bank deposit received by the customer has allowed the customer to obtain some asset or service in a manner similar to what would have been obtained by a loan of money?

This involves the analysis of two concepts. Firstly, is the giving of a bank deposit conceptually equivalent to the giving of money? Secondly, how can a bank deposit function as a means of exchange in order to acquire the asset or service intended by a loan of money, and does the use of a bank deposit in such a manner itself pose legal difficulties?

In *Olds Discount Co. Ltd. v John Playfair Ltd.* [1938] 3 All E.R. 275 at 280, Branson J said that the parties would have to agree to the contract being carried out in equivalent form.

Parties are perfectly entitled to carry out an agreement not in the exact form in which they contracted to do it, but in an equivalent form, so long as it is done by agreement between the parties, and the fact that a

simpler method of carrying it out is used in practice is not one, it seems to me, that the court ought to seize hold of in order to say that the document which has been entered into does not correctly represent the agreement between the parties.

Thus, if a bank sought to claim that the giving of a bank deposit and the giving of money were equivalent, they would have to adduce evidence that such an alteration was agreed to by the customer. However, are these functionally equivalent?

From the perspective of the bank, there are several advantages to giving of bank deposits, as opposed to the giving of money. Firstly, in most cases, because of the limited amount of money in existence, the banks do not have the money to lend. However, a bank, like any creditor, can give virtually an unlimited number of promises to pay money. Thus, by giving bank deposits instead of money, the bank will not be restricted (by actually needing to have the money to lend) in its pursuit of obtaining the debt obligations of customers in order to increase bank income. That is, the vast majority of lending contracts that the banks enter into would not be possible, if the bank actually lent money.

Secondly, from a financial perspective, the present value of money due in the future is less than money presently in possession. This is affected by the length of time over which the money is due, and the interest rate that could be earned by lending the money. While the debt created by the bank may be due on demand, in practice, these debts are seldom, if ever, repaid. From the bank's perspective, there is a significant difference in the consideration given.

From the perspective of the customer, there are several disadvantages when the bank gives a bank deposit instead of money. Most importantly, the primary obligation of the customer is to repay money to the bank. There must be actual money for the customer to be able to meet its legal obligation to the bank. If the bank lent the customer money, then there would be money for the customer to repay the bank. In transactions where banks give bank deposits in return for customer debt obligations, there is neither the money for the bank to give the customer, nor money for the customer to give the bank. In fact, two obligations are created to pay money for which no money actually exists. As the banks multiply these transactions, such a large discrepancy arises between the obligations to pay money, and the amount of money in existence, that neither the bank or the customer is capable of meeting the legal obligations created by these debt obligations. These difficulties are only enhanced by interest charges on loans, where the value of future obligations to repay money will always significantly exceed the present obligations created. That is, the breach of contract by the bank makes it more difficult, if not impossible, for the customer to perform his contractual obligation to the bank. Such a breach is of fundamental importance to the customer.

In practice, the way in which most customers attempt to meet their legal obligations to the bank is by way of set-off. The customer attempts to obtain a bank deposit, which is set-off against the loan. That is, the debt of the bank owing to the customer (bank deposit), and the debt of the customer to the bank are reduced by equal amounts. From a legal perspective, this method of the customer attempting to meet their legal obligations to the bank is speculate and outside the terms of the contract. Significantly, even by

using these set-off transactions, borrowers will be unable to meet their legal obligations to the bank. Due to the bank charging interest on loans, the total money the customer is legally required to repay to the bank will always be greater than the bank deposits created in these transactions.

In addition, as briefly mentioned, and will be examined later in greater detail, the use of a chose in action as currency has significant economic consequences. People generally attempt to meet their legal obligations to the banks from the income that they earn from employment. As a new bank deposit is created, and then used as currency, it increases the demand for goods and services, and has a favourable impact on employment. However, the repayment of a bank loan by way of set-off, will reduce the level of bank deposits, contract the amount of currency, reduce economic activity, and have a negative effect on employment. Thus, when a person meets their legal obligation to the bank by way of set-off, they reduce their own employment, and the ability to meet their legal obligations.

In most cases, a person goes to a bank to borrow money in order to obtain some good or service. Even when the bank gives a bank deposit instead of money, the person is often still able to obtain the good or service. This happens when the person selling the good or providing the service accepts a bank deposit in payment. As mentioned, a future obligation to pay money is worth less than money in possession, and the person giving the bank deposit has given less consideration than called for in the contract between the two parties. If a person negotiates a better deal, he should benefit from it. In this case, it is not the person who gave the bank deposit, but the bank that benefits from these transactions. It is a fundamental feature of the common law that one can not benefit from their own wrong, and a bank should not benefit from their breach of contract.

The next way a person is disadvantaged by the breach of contract by the bank is by an increase in overall taxation by the government. The creation of money by a government creates a source of paying for government services without resorting to taxation or borrowing. If the banks were not creating the currency of a country, then to meet the needs of commerce, the government would be required to increase the creation of money, which would reduce the need for taxation by the amount of money created.

Using bank liabilities as an universal means of exchange means these bank liabilities have a command over the resources of the community. Increasing these liabilities to certain individuals will give these individuals an increase in the command they have over the resources of the community. It can be considered to be either a fraud or a tax on the resources of the community. Even in law, it is not possible to maintain that a tax is only a tax when the levy is paid in money tokens, and that a levy paid directly in valuables is not a tax. Generally, only parliament has the right to levy taxes. For example, in Canada, under the British North American Act of 1867, section 53:
“Bills for appropriating any Part of the Public Revenue, or imposing any tax or Impost, shall originate in the House of Commons.”

A person is also disadvantaged by the breach of contract by the bank by the negative effects to the financial and banking system that results from the use of a chose in action as currency. This will be covered in more detail latter.

Are Bank Deposits Currency?

How are bank deposits utilized as a means of exchange? When commercial banks were prevented by law from creating promissory notes (bank notes) which were used as currency, they proceeded to develop the cheque clearing system. This system allowed them to use a bill of exchange (a cheque) as a means of effectively transferring bank liabilities (bank deposits) between people. When banks created bank notes, these notes were transferred between people as a means of exchange. Under the new system, the creation of a bank deposit did not independently (at least until the era of electronic funds transfers) create a bank liability that was used as currency. However, with the use of cheques and the cheque clearing system, the same financial effects were achieved.

Under a cheque clearing system, when person A writes person B a cheque, and B deposits the cheque with Bank B, the following transactions occur. If the cheque is drawn on Bank B (A and B are customers of the same bank), then Bank B will decrease the bank deposit of A, and increase the bank deposit of B. No money is used in this transaction, and as a means of A paying B for some good, A's bank deposit is decreased, and B's bank deposit is increased. If the cheque is drawn on Bank A, then Bank A will reduce A's bank deposit with Bank A, and Bank B will increase B's bank deposit with Bank B. Bank A now owes Bank B the amount of the cheque. There are three ways that Bank A could make settlement with Bank B. Bank A could give Bank B money. Bank A could give Bank B a cheque drawn on some other bank such as a central bank, which would reduce Bank A's deposit and increase Bank B's deposit with the other bank. Thirdly, and the most common method utilized today, is that Bank A will simply increase Bank B's deposit account with Bank A. Except in the first method of settlement (which is generally not used), no money is utilized in these transactions, and even in the first method of settlement, the amount of money required as it would be a net amount, would be a small amount compared to the total volume of transactions.

The legal implications of these transactions raise interesting questions. When B deposits the cheque, but can not draw on the funds until the cheque has cleared, the law holds that Bank B is acting as B's agent for the collecting of the funds. Where B is given use of the funds prior to the cheque clearing, Bank B is considered as holder of the cheque, with the cheque transferred to Bank B in consideration of the bank deposit to B. In the first situation (which is the most common), what are Bank B's duties as agent of B? The legal cases suggest that Bank B's duty as agent is to collect the money due on the cheque, and then lend this money to Bank B.

The essential characteristics of... banking are... the collection of money by receiving deposits upon loan, repayable when and as expressly or impliedly agreed upon, and the utilization of the money so collected by lending it again in such sums as are required.

Commissioners of the State Savings Bank of Victoria v Permewan Wright & Co. Ltd. (1915) 19C.L.R. 457, Isaacs J.

The bank undertakes to receive money and to collect bills for its customer's account. The proceeds so received are not to be held in trust for the customer, but the bank borrows the proceeds and undertakes to repay them.

Atkin, L.J. in *Joachimson v Swiss Bank Corp* [1921] 3 K.B. 110 at 127

These cases would suggest that when Bank B does not collect the money due on the cheque, but instead uses the cheque for its own purpose as a means of adjusting the relative balance of bank deposits to effect exchange transactions, that it is acting in breach of trust. When Bank B uses the cheque to acquire property (a bank deposit from Bank A), it is using the cheque for its own benefit. While both methods result in B obtaining a bank deposit, there are important reasons why B would want Bank B to actually collect the money on the cheque. Firstly, it would mean that Bank B would have money that could be used to repay Bank B's debt to B. Secondly, it would prevent bank deposits being used as currency. Indirectly, it would also prevent the practice of Bank B giving a bank deposit instead of money when a customer requests a loan of money from the bank. When a borrower is given a bank deposit, and then writes a cheque on the bank, banks utilize the cheque clearing system to adjust relative bank deposits as a means of payment. This results in a similar practical effect to the borrower obtaining money, and then using the money as currency.

Since it is likely that an individual does not understand the legal meaning of these transactions, the individual is unlikely to know that the bank is acting in breach of contract or breach of trust. Moreover, books on banking law or economics, while they will discuss the transactions when banks lend money, seem to ignore the legal and economic consequences of these transactions that do not involve the lending of money, but the mutual creation of liabilities or choses in action.

These transactions can also be viewed from the legal nature of transfers of property. The cheque is the property of B, which B transfers to Bank B as agent for B. Bank B uses the cheque, either to reduce the liability of Bank B to A (when the cheque is drawn on Bank B), or to increase the debt obligation of Bank A to Bank B (when the cheque is drawn on Bank A). In effect, Bank B is using the cheque for its own benefit, in breach of the agency relationship by which it obtained the cheque. If Bank B was using the cheque for the benefit of B and not for its own benefit, Bank B would have collected the money which it could give to B, or with appropriate authorization, could have borrowed the money from B. In order for Bank B to be able to use the cheque for its own benefit, the cheque must be transferred to Bank B so that ownership of the cheque vests in or is transferred to Bank B, and the cheque is not held as the agent for B.

It must also be asked if the cheque clearing system violates Government Statutes regarding the creation of currency. As discussed, the cheque clearing system allows banks to create the same economic effects as were achieved by the banks creating bank notes, are made illegal by these acts. Consider the following Acts.

The Reserve Bank of New Zealand 1989 Act states;

S2 Interpretation – (1) In this Act, unless the context otherwise requires, 'Bank note' or 'note' means any negotiable instrument used or circulated, or intended for use or circulation as currency

S29) Making or issuing of other bank notes or coins

- 2) No person shall make or issue any bank note or coin, other than a bank note or coin issued under this Act

In Canada, the Bank of Canada Act, section 25, states

“The Bank has the sole right to issue notes intended for circulation in Canada and these notes shall be a first charge on the assets of the bank.”

In a cheque clearing system, banks use cheques (a negotiable instrument) as a means of transferring bank deposits in exchange transactions. Thus, a negotiable instrument is utilized in a manner that allows bank deposits to function as currency.

We now turn to consider the legal consequences of exchange transactions effected by the use of electronic fund transfers. As Michael Brindle and Raymond Cox stated in their book, “Law of Bank Payments” on page 25:

“ A giro transfer involves the transfer of a credit balance from one bank account to another which is brought about by the adjustment of the balances of the payer’s and payee’s accounts, whether at the same or separate banks...

The debt owed to the payer by his bank is extinguished or reduced pro tanto by the amount of the ‘transfer’ to the payee, whilst the debt owed to the payee by his bank is increased by the same amount.”

With an electronic funds transfer (EFT), there is a direct transfer of bank liabilities without the use of the cheque clearing system. When person A and person B deal with the same bank (Bank A), then in an EFT, with A paying B for some good or service, A’s bank deposit is reduced, and B’s bank deposit (both with Bank A). That is, the debt owed by Bank A to A is reduced, and the debt of Bank A to B is increased by equal amounts. When the banks created bank notes, from an accounting viewpoint, this would be the same as A transferring to B a bank note created by Bank A.

When B deals with Bank B, the accounting is more involved. In this case, the bank deposit of A with Bank A is reduced, the bank deposit of B with Bank B is increased, and Bank B’s bank deposit with Bank A is increased. That is, the debt of Bank A to A is reduced, the debt of Bank A to Bank B is increased, and the debt of Bank B to B is increased.

While these transactions are relatively simple from an accounting viewpoint, the legal nature of these transactions is more complicated. In the first situation, where A and B deal with Bank A, it appears that A’s debt obligation from Bank A has been transferred to B. A no longer has a property interest against Bank A, which can only be lost by a transfer of the property interest to a third party (B), or by Bank A fulfilling its legal obligations to A (by paying A the money owed). In this case, the property interest has been transferred to B. From B’s perspective, B has a claim against Bank A without entering in a contractual relationship with Bank A. If this was not a transfer of debt obligations, but the creation of new legal obligations, then Bank A’s legal obligation to B would be without consideration and not legally enforceable. Moreover, it is generally not possible to create new legal obligations without entering into a contract. Since it appears

that the transaction involves a transfer of property, is the transfer of property subject to the normal common law rules with respect to property transfers (that is, is the transfer subject to any defects in title, or set-offs or counter-claims), or is the transfer to the common law rules of negotiability developed for property transfers involving property used as currency?

If B has been informed of the transfer, the transfer becomes irreversible. This was decided by Webster J in *Royal Products Ltd v Midland Bank Ltd* [1981] 2 Lloyd's Rep 194. In *Momm and Others v Barclays Bank International Ltd.*, [1977] 1 Q.B. 790 at 799, Kerr J. said;

... a payment has been made if the payee's account is credited with the payment at the close of business on the value date, at any rate if it is credited intentionally and in good faith and not by error or fraud. Secondly, I think that they would say that if a payment requires to be made on a certain day by debiting a payor customer's account and crediting a payee customer's account, then the position at the end of that day in fact and in law must be that this has either happened or not happened.

Kerr J. rejected any need for the payee to be informed of the credit, as such a rule would create all sorts of commercial difficulties, and put into question at what point a bank could renege on its promise. What is important to note from these cases is that all parties (and the courts) agreed that once a bank had agreed to be liable to a customer then the bank was legally bound. The only question of contention before the courts was the timing of the precise moment that the bank was legally bound by its promise.

This implies that common law rules of negotiable instruments would apply, and B's right against Bank A is not affected by any defects in title, set-offs, or counterclaims. This ruling may also imply that a mere volunteer (such as one who receives the bank deposit as a gift), could get the benefit of negotiability, as opposed to the present doctrine that negotiability only applies to a bona-fide purchaser for value.

When B deals with Bank B, the legal issues become more difficult. Since B obtains a debt obligation from Bank B, can it be argued that A has transferred the property he had against Bank A? As Staughton J observed in *Libyan Arab Foreign Bank v Bankers Trust CO* :

The credit balance of the Libyan Bank with Bankers Trust constituted a personal right, a chose in action. At bottom there are only two means by which the fruits of that right could have been made available to the Libyan Bank. The first is by delivery of cash, whether dollar bills or any other currency, to or to the order of the Libyan Bank. The second is the procuring of an account transfer. (I leave out of account the delivery of chattels, such as gold, silver or works of art, since nobody has suggested that Bankers Trust were obliged to adopt that method. The same applies to other kinds of property, such as land.)

An account transfer means the process by which some other person or institution comes to owe money to the Libyan Bank or their nominee, and the obligation of Bankers Trust is extinguished or reduced pro tanto. "Transfer" may be a somewhat misleading word, since the original obligation is not assigned (notwithstanding dicta in one American case which speaks of assignment) a new obligation by a new debtor is created.

Any account transfer must ultimately be achieved by means of two accounts held by different beneficiaries with the same institution. In a simple case the beneficiaries can be immediate parties to the

transfer. If Bankers' Trust held an account with the A bank which was in credit to the extent of at least \$131m., and the Libyan Bank also held an account at the A bank, it would require only book entries to achieve an account transfer. But still no property is actually transferred. The obligation of Bankers' Trust is extinguished, and the obligation of A bank to Bankers' Trust extinguished or reduced; the obligation of A bank to the Libyan Bank is increased by the like amount.

Under this view, an account transfer does not involve the transfer of property (in this case the transfer of a chose in action). However, it is difficult to see the transactions as a series of promises. B has not entered into a contract with Bank B under which Bank B owes B money, nor has B provided Bank B any consideration for Bank B's promise to pay B money. Under normal common law rules, B can not legally enforce the promise of Bank B. The promises of banks are no different than the promises of any other person, to be legally enforceable they must be supported by consideration. Either one must hold that an account transfer does involve a transfer of property, that the common law rules relating to consideration no longer apply, or that the promise is not legally enforceable. In order for B to be able to be legally enforce the debt obligation of Bank B, the law would have to adopt the same rules as for bills of exchange, that one becomes liable only as result of making a promise. That is, to facilitate the creation of private currencies, the normal rules of the common law must be altered.

Again, the law is in conflict with attempts to do justice in an individual situation, and the interests of the broader community. While one can see some justice in holding Bank B liable to B, the interests of the broader community, which is greatly harmed by these transactions that create private currencies, hold that the law should not give legal recognition to these transactions, and so discourage their use. This is not to say that B would be without recourse, but B's claim against Bank B would not likely be civil, but more likely under a criminal statute. These are the same type of issues the courts were dealing with in regard of accommodation bills arising out of the bankruptcy of Livesey, Hargreaves & Co.. In *Gibson v Minet* (1791) 1 Bl. H. 569 at 618-619, Chief Baron Eyre, speaking in dissent said;

I take the interests of commerce to be deeply concerned to support fair, and to discountenance false credit. I take it that the interests of gentlemen who trade in the discount of paper money, and the interests of commerce are not exactly the same. I apprehend that the commerce of the kingdom may receive a deep wound from the failure of a capital house for half a million, when the persons who have been discounting the paper of such a house shall not receive not less than twenty shillings in the pound, by proving their debts under twenty commissions of bankrupt. That gentlemen of this description should loudly complain of any check or interruption given to the circulation of fictitious bills of exchange, I can conceive... That the merchant should join in the complaint, is to me incomprehensible. He ought not to forget the original and true use of bills of exchange; that they are bottomed in real mercantile transactions, that they are the sign of valuable property and equivalent to specie, enlarging the capital stock of wealth in circulation, and thereby facilitating and increasing the trade and commerce of the country. Such are the bills of exchange which the usage and custom of merchants originally introduced into the commercial world, and intended to protect. Let the merchant contrast such bills of exchange with the false coinage of base paper money which has been of late forced into circulation; the use of which is to encourage a spirit of rash extravagance and fraud of every kind, to the ruin and destruction of those whose credulity can be practised upon by a false appearance of regular trade, carried on upon a solid bottom; and then let him say whether he dreads the reversal of this judgement.

I confess I thought that a fortunate occasion did now present itself, for interposing a most salutary check to a growing evil; an evil already swollen to a most enormous bulk, the weight of which must necessarily cramp and depress every man who trades upon his own capital, and which threatens to overwhelm the fair

trader. Let us not deceive ourselves. There is but one remedy for the evil. If such bills may be recovered upon, if they may be proved under commissions of bankrupts, there are persons enough interested to give them circulation, let the hindmost fare as he may. To check them, and oblige men to deal fairly, as far as real names go to constitute fairness, the recovery must be stopped. If the real parties can keep back their own names by using fictitious names, they can cover this false credit in impenetrable darkness.

Unfortunately, such advice was rejected.

Another way of viewing the legal nature of bank deposits is to contrast the difference between a receipt or IOU and a promissory note. A receipt or IOU is simply an acknowledgement of the promise and the obligation in the underlying transaction. It does not create any new separate rights but merely provides convenient evidence of the right created by the underlying transaction. A promissory note is a separate contract promise from the underlying transaction which generated it and which may contain a similar promise to the immediate party to that underlying transaction. The promise must be written so as to provide evidence of the promise. Whether an instrument is a promissory note depends on the intention of the person creating it. Some promises such as bank notes and accommodation bills are not created by any underlying transaction, but are created in order that these promises can be used as currency and exchanged for goods or services in the community.

The creation of most bank deposits is of this nature, especially bank deposits that are created and exchanged for the debt obligation of a customer under the pretence of lending money. In these circumstances, the bank deposit has not been generated by any underlying transaction. The bank deposit has not been generated by the bank being in debt to any person. Bank deposits created by EFT's are of a similar nature. The person in whose name the deposit is created has not lent the bank any money, or entered into any agreement with the bank which would make the bank a debtor of the person.

As most bank deposits are not generated by an underlying transaction, they clearly are not of the legal nature of a receipt or IOU. Banks intend to be liable for a bank deposit simply by creating the obligation. The promise is recorded electronically and is transferred from person to person electronically. In form and substance it is an electronic version of a promissory note created to function as currency. Many countries have enacted statutes based on model laws developed by the United Nations Commission on International Trade (UNCITRAL), which clarify that an electronic record is "writing", and the basis for electronic signatures. In New Zealand, these transactions would be covered under the Electronic Transaction Act 2002.

It must be asked if the creation of bank deposits and use of EFT's are contrary to Section 29 of the Reserve Bank of New Zealand 1989, or Section 25 of the Bank of Canada Act. However one defines these transactions, bank deposits have taken on the features of negotiability, and are transferred as currency in exchange transactions. It is the real effect and intention of these transactions that must be considered.

In New Zealand, what is a negotiable instrument has not been defined by statute. At common law, an instrument was negotiable if it was ;

- 1) transferable
- 2) the person who currently owned the rights represented by the instrument could sue in their own name
- 3) the transfer was not subject to defects of title or personal equities. That is, the transferee did not set into the shoes of the original party that acquired a right, and so acquired an assignment of the contractual right of the chose in action. The transferee's right was independent of, and had nothing to do with the underlying transaction.

As mentioned, these legal rules were at odds with the general common law regarding property transfers.

In *Peacock v Rhodes* (1781) 2 Doug. 633 at 636, Lord Mansfield said;

The holder of a bill of exchange, or promissory note, is not to be considered in light of an assignee of the payee. An assignee must take the thing assigned, subject to all the equity to which the original party was subject. If this rule applied to bills and promissory notes, it would stop their currency. The law is settled, that a holder coming fairly by a bill or note, has nothing to do with the transaction between the original parties; unless perhaps in the single case, (which is a hard one, but has been determined,) of a note for money won at play.

In *Collins v Martin* (1797) 1B. & P. 648., bills were given to a bank to hold until they became due, and then collect for the payee. The bank then pledged the bills as security for a loan to the bank. While the plaintiff agreed that the sale of the bills would have conferred good title, it was argued that in pledging of the bills, title to the bills could not be given to a party that took the bills as an assignment for security. Eyre Ch. J. said;

For the purpose of rendering bills of exchange negotiable, the right of property in them passes with the bills. Every holder with the bills takes the property, and his title is stamped upon the bills themselves. The property and possession are inseparable. This was necessary to make them negotiable, and in this respect they differ essentially from goods of which the property and possession may be in different persons. The property passing with the possession, it is admitted that a banker who receives indorsed bills from his customer to be got when due, and carried to his account, may discount or sell them. Why may he not pledge them? Either is a breach of the confidence reposed in him. He may sell because the property has been entrusted to him, and he may pledge for the same reason; for he who has the property has a disposing power, and the law has not limited it to be used in any particular manner. Perhaps the confidence reposed in bankers may be abused, and it might be wished that they could be restrained from abusing their trust. But an arbitrary restriction cannot be imposed: any restriction would possibly check the facility of negotiation. As in cases of other property we say caveat emptor, so in this particular case we may say to the customer who prefers to entrust his banker with his bills and his cash, rather than to be at the trouble of doing his own business, caveat.

In *Swan v The North British Australasian Co.* (1863) 2 H.&C. 73 at 77 Byles J. said;

The object of the law merchant, as to bills and notes made or become payable to bearer, is to secure their circulation as money; therefore honest acquisition confers title.

In *Crouch v The Credit Foncier Of England, Limited* (1873) L.R. 8 Q.B., the court held that two parties to an instrument, by the wording of the instrument, could not make the instrument into a negotiable instrument, and that what was a negotiable instrument was a question for the general law. Blackburn J. said;

We have already intimated our opinion that it is beyond the competency of the parties to a contract by express words to confer on the assignee of that contract a right to sue in his own name. And we also think it beyond the competency of the parties by express stipulation to deprive the assignee of either the contract or the property represented by it, of his right to take back his property from anyone to whom a thief may have transferred it, even though that transferee took it bona fide and for value.

In support of his decision, Blackburn J. cited with approval *Dixon v Bovill* (1856) 3 Macq. 1. In this case, Lord Chancellor Cranworth said;

The law does not either in Scotland or England enable any man by a written engagement to give a floating right of action at the suit of anyone into whose hands the writing may come, and who may thus acquire a right of action better than the right under whom he derives title.

Both of these decisions were effectively over-ruled in *Goodwin v Roberts* (1875) L.R. 10 Ex 76. In this case, it was held that if on the face of it, an instrument was intended to function as a negotiable instrument, then the law would recognise it as a negotiable instrument. Lord Selborne said;

there was no other contract than this, that in exchange for his money, he should receive this document as an instrument intended to give title, not to himself as an original creditor of that Government, nor to any other person as deriving title under him by assignment, but directly and immediately to any one who might happen to be the bearer when the time for delivery of the bond should arrive. The value and marketable quality of the scrip depended on its having this particular nature and character, and to have this nature and character it was necessary that it should be capable of passing from hand to hand as a negotiable instrument. That such was the intention of the Government which issued it cannot admit of doubt; and the Plaintiff (whose own title was so acquired), and every other holder, must be taken to have acceded and to have become a party to the representation made upon the face of the document, by virtue of which it did in fact obtain general currency in the English markets, and also in the markets of Europe.

With EFT's, bank deposits are used as currency. In consideration of some good or service, one person's bank account is decreased and another person's bank account is increased by equal amounts. In order for bank deposits to function as currency, it is important for the person who has received the bank deposit to be able to sue the bank in his own name, even though the person is not in a contractual relationship with the bank and has provided no consideration. In addition, it is necessary that this promise not be subject to any equities involving the underlying transactions that created the promise. In our example, if Bank A reneged on its promise to pay Bank B, this would not allow Bank B to renege on its promise to B. These are the essential characteristics of negotiability. In every day practice, this is how bank deposits are treated, and *Royal Products Ltd v Midland Bank Ltd* [1981] 2 Lloyd's Rep 194 supports this view.

Bank deposits, functioning as currency, have taken on the characteristics of negotiability, which appears to breach Section 29 of the Reserve Bank of New Zealand 1989. What is a negotiable instrument must be determined by substance, and not necessarily by a precise form.

Do EFT's not involve the transfer of property as stated by Staughton J in *Libyan Arab Foreign Bank v Bankers Trust CO* ? In these transactions, one party loses the right to a chose in action, while another party obtains the right to a chose in action. A property right appears to have been transferred within the banking system. It is not the method of transfer but the substance of transfer that is important.

The Role of Public Authorities and Creation of Money

In examining the role of public power in governing the functioning of the financial system, regard must be given both to the creation of money by governments, creation of currency by banks and other financial institutions, as well as the financial transactions by which national debts have been created.

“The State theory of money is the necessary consequence of the sovereign power or the monopoly over currency which over a long period of history the State has succeeded in assuming and which modern constitutional law almost invariably establishes. To permit the circulation of money that is not created or at least authorized by the state would be tantamount to a denial of the state's monetary prerogative.
‘The Legal Aspect of Money’ by F.A. Mann Fifth Edition p14

This government monopoly over the creation of money is generally defined in the Bank Acts of different States. For example, the ‘Reserve Bank of New Zealand 1989’ states;
“2. Interpretation-(1) In this Act, unless the context otherwise requires,-
“Bank note” or “note” means any negotiable instrument used or circulated, or intended for use or circulation, as currency.
29. Making or issuing of other bank notes or coins-
(1) No person shall make or issue any bank note or coin, other than a bank note or coin issued under this Act.”

In Canada, the “Bank of Canada Act”, section 25, states “The Bank has the sole right to issue notes intended for circulation in Canada and these notes shall be a first charge on the assets of the bank.”

Bank Acts may also direct public officials as to how powers are to be exercised. The preamble to the Bank of Canada Act is quite specific.

“Whereas it is desirable to establish a central bank in Canada to regulate credit and currency in the best interests of the economic life of the nation, to control and protect the external monetary unit and to mitigate by its influence fluctuations in the general level of production, trade, prices and employment, so far as may be possible within the scope of monetary action, and generally to promote the economic and financial welfare of Canada.”

In New Zealand the function of the Reserve Bank of New Zealand is as follows:

S8) The primary function of the Bank is to formulate and implement monetary policy directed to the economic objective of achieving and maintaining stability in the general level of prices.

S10) In formulating and implementing monetary policy the Bank shall:

A) Have regard to the efficiency and soundness of the financial system:

S68) The powers conferred on the Governor-General, the Minister, and the Bank by this Part of this Act shall be exercised for the purposes of-

- a) Promoting the maintenance of a sound and efficient financial system; or
- b) Avoiding significant damage to the financial system that could result from the failure of a registered bank.

Financial transactions involving the borrowing of money and the creation of national debts are covered by the following statutes. In Canada,

Section 91(4) of the British North American Act of 1867 allows:
“The borrowing of money on the Public Credit”

Under the “Bank of Canada Act”, section 18; the Bank of Canada can
c) buy and sell securities issued by Canada or provinces
j) make loans to the Government of Canada

In New Zealand, these transactions are covered by sections 46, 47, and 48 of Public Finance Act 1989.

46. Crown not to borrow except under statute---Except as provided by any Act, it shall not be lawful for the Crown to raise a loan or for any person to lend money to the Crown.

47. Minister may raise loans---(1) The Minister, on behalf of the Crown, may from time to time, if it appears to the Minister to be necessary or expedient in the public interest to do so, raise a loan from any person, organization, or government, either within or outside New Zealand on such terms and conditions as the Minister thinks fit.

(2) Except as otherwise provided in any Act, the proceeds of any loan raised under this Act shall be paid into the Crown Bank Account.

(3) Notwithstanding anything in the State Sector Act 1988, the Minister may not delegate the Minister's powers under this section.

48. Power to raise a loan by issue of series of similar securities---The authority to raise a loan conferred by section 47 of this Act shall include authority to borrow money by way of the issue of public securities such as Treasury bills or commercial paper in one or more series, and where such borrowing is made pursuant to a single loan agreement (as such agreement may be modified or amended from time to time) between the Crown and one or more specified banks, financial institutions, or security dealers.

Judicial review is inherent in the historical role of the superior courts to uphold the rule of law. Courts require administrative bodies to act within the bounds of the powers they have been given. Any power is confined by the purpose for which the statute conferred the

power. Unfettered discretion cannot co-exist with the rule of law and constitutional government.

The principle grounds of judicial review are illegality, irrationality and procedural unfairness. An administrative decision is illegal if :

- 1) it contravenes or exceeds the terms of the power which authorises the making of the decision; or
- 2) it pursues an objective other than that for which the power to make the decision was made.

If a power is given for one purpose and is exercised for a different purpose, the power is not valid. A power is exercised fraudulently if its repository intends to achieve an object other than that which he claims to be seeking.

Illegality may be pleaded primarily in two situations. The deciding body may enter an inquiry beyond its statutory purpose (error of law at the outset), or it may commit a procedural error on fail to address mandatory relevant considerations or be influenced by irrelevant ones (error of law on the course of its inquiry). An authority which errors for any of these reasons is said to have acted "unreasonably" within the first of Lord Greene's meanings of that term in *Associated Provincial Picture Houses v Wednesbury Corp* [1948] 1 K.B. 223. It does not matter whether the holder of the statutory discretion has acting in good faith or bad faith (though bad faith, being motivated by malice, or fraudulent or dishonest motive may be ground for review in and of itself).

In addition, intentionally or knowingly to misapply a public power may also give arise to liability for damages under the tort of misfeasance in public office.

Statutory powers are never "at large" and the courts have rejected any idea of unfettered discretion.

"Parliament must have conferred the discretion with the intention that it should be used to promote the policy and objectives of the Act, the policy and objectives of the Act must be determined by construing the Act as a whole and construction is always a matter of law for the court". (*Padfield v Ministry of Agriculture, Fisheries and Food* [1968] AC 997)

In interpreting a statue, courts will presume that Parliament did not intend to imperil the welfare of the State or its citizens. Statues will be interpreted so as to avoid injury and the deprivation of property rights. Public policy requires that no one can benefit from their own wrong.

In the words of Lord Reid (*Anisminic v Foreign Compensation Commission* (1969) AC 147 p171), an administrative authority commits a review able error of law if "It may have given its decision in bad faith. It may have made a decision which it had no power to make. It may have failed in the course of the inquiry to comply with the requirements of natural justice. It may in perfect good faith have misconstrued the provisions giving it power to act so that it failed to deal with the question remitted to it and decided some question which was not remitted to it. It may have refused to take into account something, which it was required to take into account, or it may have based its decision

on some matter, which, under the provisions setting it up, it had no right to take into account.”

When an authority is entrusted with discretionary power, discretion must be brought to bear in every case. An authority must not:

- a) Adopt a fixed rule of policy.
- b) Act under the dictation of another.
- c) Fetter its discretion by contract or representation.
- d) Refuse or fail to exercise its discretion; or
- e) Sub delegate its powers

An authority abdicates its statutory function if it does any of these things without the Legislatures authorization. A body entrusted with duties or with discretionary powers for the public benefit effectively may not avoid its duties or fetter itself in the discharge of its powers (including duties to exercise its powers free from extraneous impediments).

In *Minister of Energy v Petrocorp Exploration Ltd.*, the Privy Council held that a commercial contract entered into by a Minister of the Crown would be unenforceable if it was incompatible with the exercise of the Minister's statutory powers. Public powers are conferred for the public good and the courts might also refuse to enforce a public sector contract that was unconscionable or contrary to the natural interest.

An authority may unlawfully abdicate its statutory function by refusing or failing to act (*Padfield v Minister of Ag.*)

In *RV Secretary of State for the Home Dept.; Ecp Fire Brigades Union*, the House of Lords held that a failure to exercise a power in order to achieve a purpose that was incompatible with the statutory objects amounted to an unlawful abdication of power.

The concept of irrationality is a more problematic ground for judicial review. It can be difficult to articulate a particular standard of unreasonableness, and often the court, have insisted that decision be outrageous or perverse before intervening. This is sometimes called "Wednesbury unreasonableness"

Lord Diplock said a decision is irrational if it is "so outrageous in its defiance of logic or of accepted moral standards that no sensible person who had applied his mind to the question to be decided could have arrived at it ". More recently, courts have considered different degrees of unreasonableness, depending on the intensity of the subject matter.

One must consider three decisions of government, and ask if these decisions may be subject to judicial review, and if so, if a private individual has suffered special damage (such as an increase in tax burden, or suffering or death from inadequate health treatment due to "lack of money").

- 1) Has the failure of governments to create a sufficient means of exchange, causing economic dysfunction and loss of government revenue caused special damage?
- 2) Has the government allowing private organizations to obtain sizeable incomes and assets by creating the means of exchange caused special damage? This special damage occurs when the government allows specific individuals to engage in financial transactions that create the currency of a nation, and which is the duty of the government to engage in, resulting in a dysfunctional financial and banking system and loss of government revenue. By failing to effectively utilize the power to create money, has the government allowed private individuals to obtain some economic advantage that by law should be for the benefit of the government and by implication all of the citizens? In addition, has economic loss occurred due to fluctuations in price levels as a result of the creation of currency by private individuals?
- 3) Have the financial transactions that have created national debts been authorised by Parliament? Do these transactions result in the transfer of wealth from taxpayers to private individuals, and is this a purpose of these transactions?

The errors that we are concerned with involve three primary enquiries.

- 1) Have these errors resulted in a transfer of wealth or allowed transactions that have allowed a transfer of wealth? Would these transfers been prevented by a) proper use of discretionary power b) proper enforcement to ensure that others did not act contrary to statute. Can the government claim that it has delegated its power to create the means of exchange to the banks?
- 2) The second line of enquiry concerns the effects that these errors have on the soundness of the financial system.
- 3) The third enquiry concerns the effects that these errors have on the economic life of a nation. It is an enquiry as to how these errors influence and control the general levels of production, trade, prices, employment, and the external value of the national monetary unit.

The transfer of wealth will now be considered. Wealth can be transferred in two ways. The first way is by a direct transfer of wealth due to specific financial transactions. The second way is through the manipulation of production, trade, employment and prices. In particular, in the following economic analysis, it will be shown that by controlling the means of exchange, prices can be manipulated either upwards or downwards, depending in whether the means of exchange is being increased or decreased, allowing effective speculation in various assets classes by those controlling the creation of the means of exchange.

Specific financial transactions that effectively transfer wealth will be considered. The first issue involves the loss of government revenue. To governments, the creation of money is an important (and virtually costless) source of income. By allowing private

organizations to create the means of exchange, the government forgoes this income. By deliberately reducing income, this necessitates both the increase in taxes, and reduction in services (i.e. Healthcare). The government forgoes this income so that banks may benefit from creating the means of exchange. In New Zealand, with bank deposits totaling \$100 Billion and government note totaling only \$2 Billion, by not exercising its discretion to effectively create the means of exchange (and allowing banks to exercise this function), the New Zealand government has forgone income of \$100 Billion. Moreover, if one assumes that a 3% increase in the means of exchange is desirable for general economic prosperity, the government is forgoing an additional income of \$ 3 Billion per year.

It is submitted that the government has acted illegally by committing a procedural error in failing in a meaningful manner to create the means of exchange while allowing private interests to exercise this function, and that this error has cost the New Zealand taxpayers at least \$100 Billion.

The financial transactions which have created national debts will now be considered. When governments spend more than they tax, there are three primary ways of financing the spending.

1) Governments can borrow the money. In these transactions, the governments exchange a government bond for government currency. The government currency can then be used as a means of exchange in conducting government business. With the creation of the national debt, it is a question of fact whether these transactions have occurred. It is submitted, that in the creation of national debts, money is almost never borrowed. On a practical level, there is so little money in relation to, A), the size of government debt and private debts, and B), the need to use money as a means of exchange, that even if desired, the borrowing of money by government would be practically impossible.

2) Governments can exchange government bonds for bank deposits (bank liabilities). It is submitted that the vast majority of government debt is created in this manner. In these transactions, the banks balance sheet adjusts as follows.

Assets	Liability
Bonds +1000	Deposits +1000

There is an exchange of liabilities. In exchange for it's debt obligation, the government has obtained a debt obligation from the bank. Again, the bank deposit serves a dual purpose, acting as evidence of debt as well as a means of exchange.

The government having exchanged a government bond for a bank deposit now uses the newly created bank deposit as a means of exchange in conducting government business. The interest rate on the liability the government has given to the banks will generally be greater than the interest rate on the liability the bank has given to the government, resulting over time, in the transfer of wealth from taxpayers to the banks. This process results in:

- the future liability of the government to repay principle and interest.
- a transfer of wealth from taxpayers to banks

3) The government could print up government notes (money). It may also be possible for the government to digitally create government notes. The government could then use the newly created money as a means of exchange in conducting government business. This process results in :

- No transfer of wealth from taxpayers to banks (interest differential)
- No future obligation to repay.

It is noteworthy to contrast examples (2) and (3) above.

If the government in (3) deposited this newly created money into the bank, the banks balance sheet adjusts

Assets	Liability
Government notes +1000	Deposits +1000

For the moment, considering an economy using bank liabilities as a means of exchange, both the financial transactions in (2) and (3) above have resulted in bank assets and liabilities increasing by equal amounts, and the newly created bank deposits being used by government as a means of exchange. The only difference is the composition of the assets held by the bank. Government bond pay interest, government notes do not. # 2 results in the transfer of wealth (interest differential) between taxpayers and banks, #3 does not. #2 results in the future obligation of the government to repay debt, #3 involves no future obligation to repay debt.

However, both transactions result in the creation of new bank deposits used as a means of exchange. Those people who claim that the creation of money by governments can sometimes lead to inflation, seem to ignore the fact that the exchange of debt obligations between banks and customers (under the pretence of loaning money) results in a similar increase in the means of exchange.

The claim that the Government is borrowing money from banks when banks purchase Government Bonds is a misrepresentation of facts. No money is borrowed. The financial transactions are as follows. The Government exchanges a bond for a bank draft. A bank draft is a liability of the bank's, and the transaction is an exchange of liabilities. The bank's liability to the government increases by the amount of the draft, and the governments liability to the bank increases by the amount of the bond. When the government deposits the draft into it's bank account, it is exchanging liabilities of the bank's. Instead of a bank draft, the government now has a bank deposit. This transaction could also occur electronically, with the bank simply crediting the governments account upon receipt of the bond. The government now has an increased liability of the bank, which it uses as a means of exchange in transacting government business.

It is also submitted that such actions would quality as irrational under the second meaning of unreasonable given in " Associated Provincial Picture Houses v Wednesbury Corp ". In the words of Lord Diplock, such an action is "so outrageous in its defiance of logic or of accepted moral standards that no sensible person who had applied his mind to the question to be decided could have arrived at it."

It is clear that the government can borrow money. In the creation of the national debt, it will be a question of fact whether the government borrowed money, or if the financial transactions involved in the creation of the national debt involved the exchange in liabilities. If only an exchange of liabilities is involved, then the government has acted outside parliamentary authorization, and it is clear that the sole purpose of these transactions is to defraud the tax-payers. It appears that these transactions, being based on a misrepresentation with intention to defraud may have violated the criminal code. (Canadian criminal code; Chapter C-46 380(1); New Zealand, S245, and 246 Crimes Act 1961 would appear to be breached.)

These transactions would also appear to violate government statute, in that they result in the bank creating a note (bank deposit) used or intended to be used as a means of exchange.

It would appear that the government, when it claims to be borrowing money when it exchanges liabilities is:

- 1) Misrepresenting what it is doing to the legislature.
- 2) Acting outside the power that is given to it by the legislature.
- 3) Deliberately acting, not in the best interests of taxpayers and citizens, but in a manner that transfers the wealth of taxpayers and citizens to private organizations.
- 4) Entering into illegal contracts which breach government statute in that these contracts create bank notes used as a means of exchange.

It is a basic legal principle that a person can not benefit from their own wrong. (Riggs v Palmer 115 NY 506, 22 NE 188 (1889))

Taxpayers are disadvantaged by banks by at least two means. Firstly, the creation of the means of exchange through illegal contracts by banks results in a substantial loss of income to governments and represents a tax over the resources of the community. Secondly, the direct payment of principle and interest on Government bonds to banks represents a transfer of funds from taxpayers through the government to banks based on illegal contracts. Government ministers have entered into financial transactions without the consent and contrary to the intentions of parliament. In these transactions, they have deceived or attempted to deceive both parliament and citizens. The purpose of these transactions is to fraudulently transfer wealth from the citizens to private organizations. Based on this deception, government ministers have had parliament authorize the taxation of citizens in order to transfer these funds to these private organizations.

Based on the principle that a person can not benefit from their own wrong, the payment and collection of income tax would appear to be illegal, until the government stopped these fraudulent transfers to banks, and prevented banks from entering into contracts that increased the means of exchange.

In today's world, most exchange involves the transfer of bank deposits (liabilities) as a means of exchange. However, this runs contrary to the state theory on money, which

holds that the creation of the means of exchange (and the profits generated by such creation) is the sole responsibility of the state.

Even if it could be argued that the creation of bank liabilities and using these as a means of exchange is not a violation of the statutes (though there does not appear to be any logical basis for such an argument) it is clear that the legislature has given the government the (through the Central Banks) power to create the means of exchange. These acts infer:

- 1) a negative obligation on others not to create the means of exchange ("No person shall make; "sole right")
- 2) positive obligation of government to act:
 - a) Important for the proper function of the economy and general benefit to society that there be a sufficient means of exchange. The creation of money by the state contributes to a stable banking and financial system. The creation of currency by the banks results in an unstable and dysfunctional banking and financial system.
 - b) Issuing of money is a tremendous source of income to the state.

The present situation in New Zealand is that the total value of government currency is about \$3.2 billion, while the value of bank liabilities is about \$213 Billion. The first point is that since a bank liability is an obligation to pay money, if the banks possess all the money in the country, at best they could meet about 1.5% of legal obligations.

Secondly, it appears that the government has not properly exercised its discussion under these acts (that is, it has allowed private entities to create the means of exchange. This has resulted in the direct loss of income of about \$213 Billion to the New Zealand government (resulting in the loss of benefits or increase in taxes of this amount). In addition, as will be covered under the economic model, using the liabilities of a private business as a means of exchange as opposed to government currency creates a dysfunctional economy, which necessitates losses to economic members.

The extent of the loss to taxpayers is not insignificant as illustrated by possible solutions to deal with these illegal transfers. In New Zealand, the government could print up government currency of approximately \$213 billion and purchase the assets of the banks. This would restore the stability of the banking system, with each dollar in deposits now backed by a dollar in government currency. This would also result in the government obtaining approximately \$213 billion in financial assets, sufficient to repay the national debt, using the balance to fund government expenditures in lieu of taxes. Secondly, since many of the existing bank deposits are likely represent the proceeds of crime in the hands of those involved in this financial fraud, these could also be transferred to the government.

In a country like Canada, these fraudulent transfers would likely exceed \$ 1 trillion dollars.

It could be argued that the government, by (1) failing in a meaningful way to exercise its discretion under this act, and (2) allowing private entities to operate in violation of these acts, has resulted in an error of law which private individuals may seek damage. Generally, it is considered sufficient that a public wrong causes special damage to a private individual for an individual to claim damages.

Courts must not abdicate responsibility for insuring Acts of Parliament conferring public powers are complied with both in the letter and the spirit. This is anchored to the parliamentary intention, which does not envisage public authorities acting irrationally or unfairly, or beyond statutory limits.

It is perverse for the government to say that it lacks money and so needs to tax residents, when it fails in its constitutional duty to create money and allows private individuals to create the means of exchange.

It is perverse for governments in the creation of national debts to enter into financial transactions outside of parliamentary authorisation designed to transfer the wealth of taxpayers to these same individuals.

The enquires concerning the soundness of the financial system and the manipulation of the economy will be dealt with more fully within the economic analysis. Essentially, it will be shown that when a financial system is based on the exchange of bank liabilities, a financial system develops that requires debt to grow at a rate faster than income. Since debt is to be repaid from income, greater and greater distortions develop between the level of debt and the ability to repay debt. Given the interrelationship between debt and income, if debt does not grow, income will decrease, again leading to distortions between income and debt. With relation to the banking system, bank deposits are both evidence of debt and a means of exchange. Should individuals demand repayment of these bank deposits, given the distortion between the amount of bank deposits and the means to repay these bank deposits (i.e., in New Zealand, total bank liabilities total about \$213 billion while the total amount of money to repay this debt is about \$3.2 billion of which banks own \$.6 billion), this will collapse the banking system.

Since bank deposits are the primary means of exchange, if the banking system collapsed, and the Central Bank did not provide an alternate means of exchange, the economy would collapse without an effective means of exchange. Has the government acted illegally by failing to exercise its discretion and allowing a dysfunctional financial system to be created? Governments have a statutory duty to promote and maintain a sound and efficient financial system. It is submitted that a financial system that creates severe economic distortions within the economy, and results in a banking system that would collapse if the banks were asked to repay as little as 1-1.5% of their legal obligations is not sound or efficient.

The question must be asked whether governments have conspired with the banks to defraud the citizens of the countries in which they operate. Conspiracy requires a combination of persons to act in concert with the intention of injuring the plaintiff, and occurs generally in two circumstances. If the means used are lawful, then the predominate purpose must be to injure the plaintiff. If the means used are unlawful, then it is only necessary that a purpose must be to injure the plaintiff.

Quinn v. Leatham,(1901) A.C. 495. In giving his judgement in that case Lord Brampton said, at 528:

“A conspiracy consists of an unlawful combination of two or more persons to do that which is contrary to law, or to do that which is wrongful and harmful towards another person. It may be punished criminally by indictment, or civilly by an action on the case in the nature of conspiracy if damage has been occasioned to the person against whom it is directed. It may also consist of an unlawful combination to carry out an object not in itself unlawful by unlawful means. The essential elements, whether of a criminal or of an actionable conspiracy, are, in my opinion, the same, though to sustain an action special damage must be proved.”

The essential elements of the tort of conspiracy generally were discussed by Estey J. in the Supreme Court of Canada decision of *Can. Cement LaFarge Ltd. V. B.C. Lightweight Aggregate Ltd.*; *B.C. Lightweight Aggregate Ltd. v. Can. Cement LaFarge Ltd.*, (1983)...145 D.L.R. (3d)385...at pp. 398-99

- 1) whether the means used by the defendants are lawful or unlawful, the predominant purpose of the defendants conduct is to cause injury to the plaintiff; or,
- 2) where the conduct of the defendants is unlawful, the conduct is directed towards the plaintiff (alone or together with others), and the defendants should know in the circumstances that injury to the plaintiff is likely to and does result.

Batshaw, J. in *R. v. Abitibi Power & Paper Co. Ltd. et al* (1960), 36 C.P.R. 188 AT 195
“When direct evidence of an agreement or a conspiracy is not available, the conspiracy may be inferred from a proven course of conduct.”

“A conspiracy may be proved by proof that the parties accused actually met together and entered into an alleged agreement or it may be inferred by proof of a course of conduct”.
:R. v. Northern Electric Co. Ltd. et al. (1955), 24 C.P.R. 1 AT P.5

When governments and banks exchange liabilities in financial transactions creating the national debt, one of the purposes is to create a new bank liability to be used by the government as a means of exchange. However, from the bank’s prospective, the primary purpose of these transactions is to have the wealth of taxpayers transferred to the banks. Even if these transactions were not in themselves illegal, a case for conspiracy could be made out.

However, given that these transactions are illegal (creation of a means of exchange in violation of government statute; no parliamentary authorization for these transactions), conspiracy should be established.

In *Aylesford (Earl) v. Morris* (1872) 8 Ch App 484... Lord Chancellor Selborne, at p.490, said:

Fraud does not here mean deceit or circumvention; it means an unconscientiously use of the power arising out of these circumstances and conditions; and when the relative position of the parties is such as prima facie to raise this presumption, the transaction cannot stand unless the person claiming the benefit of it is able to repel the presumption by contrary evidence, proving it to have been fair, just, and reasonable.

There can be no doubt that both the Banks, and the Government have power far above the average citizen or taxpayer. The Banks and the Government have entered into a financial agreement (the mutual exchange of liabilities), that results in taxpayers being deprived of money or other forms of wealth, which is transferred to the Banks. Unless the banks and governments can prove that these transfers that arise as result of the exchange of mutual liabilities are “ fair, just, and reasonable”, no payment of income tax to provide the funds for these transfers is justifiable.

We might also ask if any Government Official has broken the Statutes of Canada; Chapter F-11

80; “Every officer or person acting in any office or employment connected with the collection, management or disbursement of public money who

c) Conspires or colludes with any other person to defraud Her Majesty, or makes opportunity for any person to defraud Her Majesty

Other Legal Matters

Banks and customers enter into contracts in which the banks are to lend money, but instead of lending money, banks often give the customer a bank debt (bank deposit). Does the giving of a bank debt under the pretence of lending money constitute a criminal offence, and are there civil remedies available to the customer?

Misrepresentations can have significant consequences from both a criminal and civil law viewpoint. In New Zealand, from a criminal standpoint, S245, and 246 Crimes Act 1961 would appear to be breached.

S246 Obtaining by false pretence-(1) Everyone is liable to imprisonment for a term not exceeding 7 years who, with intent to defraud or cause loss to any person by any false pretence, causes or induces any person to execute, make, accept, endorse, or destroy the whole or any part of any valuable security, or to write, impress, or affix any name or seal on any document in order that it may afterwards be made or converted into or used or dealt with as a valuable security.

(2) Every one who, with intent to defraud by any false pretence, either directly or through the medium of any contract obtained by the false pretence, obtains possession of or title to anything capable of being stolen, or procures anything capable of being stolen to be delivered to any person other than himself, is liable

There are four core elements to the offence;

1) a false pretence

- 2) intent to defraud
- 3) an obtaining of title or possession, or a procurement of delivery
- 4) causation or reliance

A false pretence is defined in s245. It consists of (1) a misrepresentation which is known to be false, or (2) a promise which the promisor intends not to perform, which in either case is (3) made with fraudulent intent to induce reliance. In borrowing contracts in which the borrower obtains a bank deposit, there is a clear misrepresentation. Clearly, no money has been borrowed. The financial transactions involved are simply an exchange of promises, or an exchange of liabilities.

Even considering the promise that the bank does make (to pay the deposit holder money), it could be argued that the bank does not intend to keep this promise. In New Zealand, where bank deposits total about \$100 billion, while the total of all money is only about \$2 billion (much of which is in circulation and not owned by the banks), it would be difficult for the banks to maintain that they actually intend to perform their promise of paying the money. It is physically impossible for the banks to meet their legal obligations.

A major purpose for banks to give new promises (give new bank deposits) is so that banks will obtain new promises from borrowers that will return more money than the promises created by the banks. Should deposit holders require the banks to meet their legal obligations and repay the money that is owed, the banking system will collapse.

The second element of intent to defraud is also readily established. The bank is seeking to transfer money from the borrower to the bank. While two liabilities have been created, the interest rate on these two liabilities differ, and it is on the basis of unequal interest payments that wealth is fraudulently transferred to the bank. However, it is now well established that intent to defraud does not necessarily require an intent to inflict a pecuniary or economic injury or have to result in loss of that nature. What is required is an attempt by the fraudster to gain an advantage for themselves (with detriment or prejudice to someone else often a secondary outcome, although contemplated or predictable). See Privy Council decision of *Wai Yu-tsang v R* [1992] 1 AC 269; Supreme Court of Canada in *Reg. V Olan, Hudson, and Hartnett* (1978) 41 C.C.C.(2d) 145,150; and in New Zealand see *R V Firth NZLR 1978 1 513*.

The third element of inducing another to deal with a valuable security is also established. On the basis of the misrepresentation by the bank, the borrower has executed a promissory note to the bank.

Causation or reliance is also established, for the misrepresentation by the bank has induced the borrower to enter the contract and execute the promissory note in favour of the bank.

Some may argue that while the borrower has not obtained a loan of money, and has obtained a bank deposit, that the borrower could now exchange the bank deposit for money. However, this misses the point that one must first consider the legality of the financial transaction that created the bank deposit in the first place. Once the bank deposit

has been created, the legal consequences of any dealings with the bank deposit, while important, are secondary issues.

It is also somewhat of an illusionary reference to state that a borrower could exchange the bank deposit for money. As mentioned, in New Zealand, total bank deposits exceed total money by about 50 times. Based on the amount of money actually owned by the banks, it is likely that they could meet between 1/2 to 1 per cent of their legal obligations. The whole banking system depends on deposit holders not demanding the payment of money, and while a small percentage of deposit holders could have money repaid for their bank deposits, the vast majority could not.

In Canada, the Canadian criminal code; Chapter C-46 380(1) states;

“Every one who by deceit, falsehood or other fraudulent means, whether or not it is a false pretence within the meaning of this Act, defrauds the public or any person, whether ascertained or not, of any property, money or valuable security

a) Is guilty of an indictable offence and liable to imprisonment for a term not exceeding ten years, where the subject-matter of the fraud is a testamentary instrument or where the value thereof exceeds two hundred dollars.”

From case law; “Two essential elements of fraud are dishonesty and deprivation, the latter being satisfied on proof of detriment, prejudice, or risk of prejudice to the economic interests of the victim”. It is submitted that if banks have represented the exchange of liabilities to be a loan of money, it may be guilty of deceit and falsehood falling under the act.

If the conduct is deliberately dishonest and the victim suffers injury as a result thereof, there is fraud.

These contracts, represented as the lending and borrowing of money, but in reality being the exchange of liabilities resulting in the creation of currency, may also violate the criminal law by breaking government statutes which give the government a monopoly over the creation of currency.

With respect to the civil law, the bank has misrepresented the expressed or implied terms of the contractual relationship. The borrower has approached the bank to borrow money. In each case, it will be a question of fact whether the borrower obtained a loan of money, or merely received a bank liability such as a bank deposit or a bank cheque. If a bank deposit or some other bank liability was obtained, a serious misrepresentation of the expressed or implied contractual terms has occurred. Such a misrepresentation will likely cause the contract to be void, though the situation must be assessed in relation to the laws of each nation state.

In New Zealand, the effect of a misrepresentation is covered under the Contractual Remedies Act 1979 and Fair Trading Act 1986.

Section 6, CRA states;

6.Damages for misrepresentation (1) If a party to a contract has been induced to enter into it by misrepresentation, whether innocent or fraudulent, made to him by or on behalf of another party to that contract-

He shall be entitled to damages from that other party in the same manner and to the same extent as if the representation were a term of the contract that has been broken;

Section 7 of the Act provides that the contract may be cancelled for misrepresentation in cases where the misrepresentation is in respect of some essential matter, or has substantial consequences for the innocent party.

Section 9, The Fair Trading Act 1986 states;
No person shall, in trade, engage in conduct that is misleading or deceptive or is likely to mislead or deceive.

Section 43 allows court to make a number of remedies including voiding the contract or paying damages.

These contracts, represented by banks to be the borrowing and lending of money, but in reality being only the exchange of liabilities, resulting in a transfer of wealth from customers to bankers, would appear to be also illegal under contract law, even if the customers were fully aware of the nature of the transactions they were entering into.

. From "The Law of Contract", by G.H.Treitel 10th edition:
Page 395, "*A contract is illegal where its object is the deliberate commission of a civil wrong. Thus contracts to assault or defraud a third party are illegal*"

Prior to the completion of the loan contract, neither the customer or the bank could purchase a product or service (the means of exchange to do so did not exist). However, these transactions which result in creating a new bank liability (deposit), which is used in place of money as a means of exchange, now allows the borrower to have a claim on the goods of the community, which did not exist prior to the transaction, effectively defrauding the community.

It must be stressed that these transactions where bank deposits are created under the pretense of lending money create a fraud on society as they create bank deposits that are claims on the resources of the community for which no value has been given. It is a form of counterfeiting.

In addition, since these contracts create notes used as a means of exchange in violation of government statutes, they would be considered illegal contracts.

Page 402, "*A contract which does not involve the commission of a legal wrong may prove illegal because its tendency is to bring about a state of affairs of which the law disapproves on the grounds of public policy. A contract is illegal for this reason only if its harmful tendency is clear, that is, if injury to the public is its probable and not merely its possible consequence.*"

As will be shown, loan contracts that create deposits, result in a financial system that is based on a financial pyramid, and will eventually provide tremendous destruction to the economic well being of the community when the financial system collapses. These contracts produce two problem situations. As has already been mentioned, they create legal claims on money which does not exist, ensuring the collapse of the financial system

when sufficient claims are made for the repayment of money. In New Zealand, with total bank liabilities of \$213 billion, and total money of only \$3.2 billion, a financial pyramid should be quite apparent.

The second problem concerns the effects these contracts have on economic activity. The detailed financial analysis that follows, will show that as a result of these contracts, in order for the economy to grow, the total value of these contracts must grow at an accelerating rate. This results in debt growing faster than income, causing eventual default on the debt. Should the rate of increase in debt slow, the economy will begin to contract, leading again to the default on the debt. While individual debtors may repay their debt, as a whole, these debts are mathematically impossible to repay.

We should also consider the ability of the parties to fulfil their contracts, and if they enter into these contracts with any intention of fulfilling them.

Clearly, by creating claims on itself for money which does not exist, banks are incapable of meeting their obligations. In having the community use these liabilities as a means of exchange, it is the bank's intention that they are never required to meet their liabilities. The "loan customer" is required to pay in money which does not exist, clearly an impossible task. Even where the bank may be willing to accept its own liabilities as a repayment of the customer's agreement, since the customer must pay principle and interest, these sums will always exceed the amount of the bank's liability created with these contracts.

Thus, it would appear that the bank is entering into a contract, which it knows the customer cannot fulfill the customer's obligation, and on which it has no intention of fulfilling its obligation. The primary purpose of these contracts is the transfer of wealth from the customer to the bank.

These contracts would also appear to violate legislation concerning pyramid selling schemes. For example, the New Zealand Fair Trading Act 1986, section 24

"Pyramid selling schemes (1) No person shall promote or operate a pyramid selling scheme

(2) For the purpose of this section, the term "pyramid selling scheme" means-

(a) A scheme-

(i) That provides for the supply of goods and services or both for reward; and

(ii) That, to many participants in the scheme, constitutes primarily an opportunity to sell an investment opportunity rather than an opportunity to supply goods and services, and

(iii) That is or is unlikely to be unfair to many of the participants in the scheme in that

(A) The financial rewards of many of those participants are dependant on the recruitment of additional participants (whether or not at successively lower levels) ; and

(B) The number of additional participants in the scheme that must be recruited to produce reasonable financial rewards to participate in the scheme is not attainable or is not likely to be attainable by many of the participants in the scheme.

Bank lending contracts, while presented as a loan of money (supply of a good), is in fact an investment opportunity (a debt obligation of the bank in that the participant receives a bank deposit). This investment is to be paid over time under the terms of the loan contract, the terms of which are not possible to meet. Since the payment of interest on these contracts in almost all cases greater than possible benefits, participants are clearly

disadvantaged, but are enticed by the allure of obtaining some goods of the community . In order for early participants to meet the terms of their contracts, new participants must be brought into the scheme (an increase in these borrowing contracts). Once the supply of new participants falls, the whole scheme collapses as will be shown in a very detailed analysis.

Bank loan contracts are based on misrepresentation and fraudulent transfer, are illegal under contract law in that they defraud third parties, represent a tax on the community, and are harmful to public policy, are illegal under government legislation concerning pyramid schemes, and violate government statutes covering the creation of notes or instruments intended to be used as currency.

It may also be asked if those that assist banks may be liable, either civilly or criminally. In New Zealand, s66 Crimes Act 1961 states;

66. Parties to offences- (1) Every one is a party to and guilty of an offence who-

- (a) Actually commits the offence; or
- (b) Does or omits an act for the purpose of aiding any person to commit the offence; or
- (c) Abets any person in the commission of the offence; or
- (d) Incites, councils, or procures any person to commit the offence.

(2) Where 2 or more persons form a common intention to prosecute any unlawful purpose, and to assist each other therein, each of them is a party to every offence committed by any one of them in the prosecution of the common purpose if the commission of that offence was known to be a probable consequence of the prosecution of the common purpose.

It may be asked if lawyers who assist banks in the completion of these transactions may be considered to be parties to the offence. Lawyers, who simply prepare loan documents, not knowing that they will be used for an illicit purpose may not be at fault. However, lawyers involved in the actual financial transactions , or knowing the documents will be used for an illicit purpose may be guilty as parties to the offence.

In addition, it should be stated that if property is obtained by fraud, the owners of the property are held to be constructive trustees of the property, and may be liable as well for any profits earned with property obtained by fraud. Once an equitable trust has been established, others can be implicated as constructive trustees for either “Knowing Assistance” (Royal Brunei Airlines v Tan [1995] 2 AC 378; Twinsectra v Yardley [2002] UKHL 12) or for “Recipient Liability” (Baden v Societe Generale pour Favoriser le Developpement du Commerce et de l’ industrie en France SA (1982) [1992] 4 All ER 161). In this way, those who have committed wrongs will be liable to return the property improperly obtained. This liability may extend not only to banks, but their shareholders, lawyers, accountants, and government officials.

From what has been said, it should be clear that bank deposits are not money in the strictest sense. While bank deposits are used as a means of exchange, being a liability, they are not a unit of account or a store of value. In the analysis that follows, the use of government notes will be contrasted with the use of bank deposits as a means of

exchange. Government notes are an asset (though somewhat intangible), while bank deposits are a liability. Most of what follows will examine how the creation of liabilities, and their subsequent use as a means of exchange, not only facilitates a transfer of wealth, but also how this process affects primary production and general economic activity. What we are about to analyze, is the individual transactions that affect the level of bank deposits, and then to consider the effect that this process has on the economy.

The Dynamics of Banking on Economic Activity

The dynamics of banking on economic can be best understood by examining the balance sheet of a bank, and the affect that financial transactions will have on this balance sheet. Typically, some of the assets of the bank will consist of loans, bonds, government notes, deposits held at the central bank, other securities, and capital assets (land, buildings etc.). Some of the liabilities will consist of deposits, loans (borrowings by the bank), and owners equity.

Assets

Loans
Bonds
Government Notes
Deposits at Central Bank
Other Securities
Interest-bearing accounts at other banks
Derivative Related Amounts
Capital Assets

Total

Liabilities

Deposits
Borrowings by Bank
Obligations related to securities sold short
Obligations related to assets sold under repurchase agreements
Interest-bearing accounts at other banks
Derivative Related Amounts
Owners Equity

Total

Any financial transaction will affect any two items on the Balance Sheet, and when these financial transactions affect “deposits”, this by definition must affect the total amount of

deposits (conventional economics would say that these transactions affect the currency supply).

Some financial transactions that reduce deposits are as follows:

- 1) In the payment of bank service charges or fees, the customers deposit account is debited (reduced), while the banks equity account is credited (increased).
- 2) In the payment of interest on loans, the customers deposit account is debited (reduced) while the banks equity account is credited (increased).
- 3) In the purchase of newly issued bank shares, the customers deposit account is debited (reduced), while the banks equity account is credited (increased)
- 4) In the principle payment of a loan, the customers deposit account is debited (reduced), while the banks loan account is credited (reduced).
- 5) In the sale of a bond to a non-bank entity, the customers account is debited (reduced), while the bond account is credited (reduced).
- 6) In the sale of capital assets, the customers account is debited (reduced), while the capital account is credited (reduced)
- 7) In the short sale of securities, the customers account is debited (reduced), while “obligations related to securities sold short” is credited (increased).

Some financial transactions that will increase deposits are as follows:

- 1) In the payment of bank operating expenses including wages, the banks equity account is debited (reduced), while customer deposit accounts are credited (increased).
- 2) In the payment of interest on deposit accounts, the banks equity account is debited (reduced), while customers deposit accounts are credited (increased).
- 3) In the payment of a dividend to the shareholders of a bank, the banks equity account is debited (reduced), while customers deposit accounts are credited (increased).
- 4) In the creation of a new loan, the banks loan account is debited (increased), while the customers deposit accounts are credited (increased).
- 5) In the purchase of a bond, the banks bond account is debited (increased), while customers deposit accounts are credited (increased).
- 6) In the purchase of capital assets, the banks capital asset account is debited (increased), while the customers deposit account is credited (increased).

Some financial transactions that will not affect deposits are as follows:

- 1) In the write off of bad loans, the banks loan account is credited (reduced), while the banks equity account is debited (reduced).
- 2) In the sale of a bond to a central bank, the banks deposit at the central bank increases, while the bonds held decreases.

There are several financial transactions that will affect the total level of bank deposits, and whether bank deposits are increasing or decreasing will depend on the sum total of all of these financial transactions. Normally, the creation or repayment of loans and

bonds, as well as the payment of loan interest, will tend to have the largest affect on the total amount of deposits.

For simplicity, we assume that there is only one bank, which is the same as considering the banking system as a whole.

1) The Bank Accepts a Cash Deposit

A customer deposits \$1000 in cash (Government Notes) into his checking account

Community

Assets		Liabilities & Net
Worth		
Cash	-\$1000	
Checking account	+\$1000	

Bank

Assets		Liabilities & Net
Worth		
Government Notes	+\$1000	
+\$1000		Checking Deposits

There is no change to the total means of exchange (currency supply). Currency in circulation has decreased by \$1000, while checking deposits have increased by \$1000. Government Notes held by the bank are not part of the currency supply.

2)The Bank Extends a Loan

The bank extends a loan to a customer for one year at 10% interest

Community

Assets
Worth

Liabilities & Net

Checking Deposits +\$1000

Loans +\$1000

Bank

Assets
Worth

Liabilities & Net

Loans +\$1000

+\$1000

Checking Deposits

The money supply has increased by \$1000. In extending a loan, the bank creates both a loan, and an equal deposit.

3)The Loan is Repaid After One Year

One year later when the loan matures, the customer pays the bank \$1100, \$1000 principle and \$100 interest

Community

Assets
Worth

Liabilities & Net

Checking Deposits -\$1100
\$1000

Loans -

Net Worth -\$100

Bank

Assets Worth		Liabilities & Net
Loans	-\$1000	Checking Deposits -
\$1100		Net Worth
+\$100		

The currency supply has decreased by \$1100. The \$1000 principle payment has reduced the currency supply by \$1000, and the \$100 interest payment has reduced the currency supply by \$100. The net worth of the customer has decreased by \$100, while the net worth of the bank has increased by \$100. This transfer of net worth is the result of the bank being able to create deposits through accounting entries.

4)The Bank Purchases a Government Bond (from the government)

The bank buys a \$1000 government bond from the government which matures in one year paying 10% interest.

Government

Assets Worth		Liabilities & Net
Checking Deposit	+\$1000	Bonds
+\$1000		

Bank

Assets Worth		Liabilities & Net
Bonds	+\$1000	Checking Deposits
+\$1000		

Technically, when banks purchase government bonds, they will issue a bank “official check” to the government. This increases both the banks assets (bonds), and liabilities (“official check general ledger”), by an equal amount. When the government deposits the check, deposits are credited (increasing liabilities), while the “official check general ledger” is debited (decreasing liabilities).

The currency supply increases by \$1000, the monetary effects is the same as when a bank loan is given.

5)The Government Bond Matures and is Repaid

The government pays the bondholder (the bank), \$1000 principle plus \$100 interest.

Government

Assets Worth	Liabilities & Net
Checking Deposits	-\$1100
	Bonds -\$1000
	Net Worth -\$100

Bank

Assets Worth	Liabilities & Net
Bonds	-\$1000
\$1100	Checking Deposits -
	Net Worth +\$100

The currency supply has decreased by \$1100. The repayment of a bond held by a bank is functionally the same as the repayment of a bank loan on its monetary effects. Again, we see that as a result of the bank being able to create checking deposits through accounting entries, the governments net worth decreases by \$100, while that of the bank increases by \$100.

By similar examples, it can be shown that when a bank purchases a government bond from the community, checking deposits (currency supply) will increase, and if the bank were to sell the bond to the community, checking deposits will decrease.

6)The Bank Purchases a Fixed Asset

The bank purchases land on which to build a new Bank Building for \$100,000

Community

Assets Worth	Liabilities & Net
Checking Deposits \$100,000	+\$100,000 Land -

Bank

Assets Worth	Liabilities & Net
Land +\$100,000	+\$100,000 Checking Deposits

The currency supply has increased by \$100,000. When banks purchase assets, they create the deposits required to finance these transactions. Technically, the bank could pay by direct deposit, or buy issuing a bank “official check”, in which case the accounting is the same as when a bank purchases a bond.

7) The Bank Pays Operating Expenses

The bank pays \$100 in operating expenses such as wages and salaries or interest on deposit accounts.

Community

Assets Worth	Liabilities & Net
Checking Deposits	+\$100
+\$100	Net Worth

Bank

Assets Worth	Liabilities & Net
Checking Deposits	+\$100
	Net Worth -\$100

The currency supply increases by \$100. Again, it does not matter if bank expenses are paid by direct deposit, or by the bank issuing a bank “official check”.

8) The Bank Pays a Dividend to its Shareholders

The bank pays a dividend of \$100 to its shareholders.

Bank Shareholders

Assets Worth	Liabilities & Net
Checking Deposits	+\$100
	Net Worth +\$100

Bank

Assets Worth	Liabilities & Net	
	Checking Deposits	
+\$100	Net Worth	-\$100

The payment of dividends to the shareholders of the bank results in total checking deposits (currency supply) increasing. It does not matter if this is done by issuing a bank “official check” or by direct deposit. The payment of a dividend increases the net worth of the banks shareholders, and decreases the net worth of the bank by an equal amount. Thus we see the process whereby when a bank creates deposits through accounting entries, it allows for net worth to be transferred first from the community and the government to the banks, and then through dividends, from the banks to their shareholders.

This is not meant to be an exclusive example how banks are able to effect the currency supply, but covers most of the major types of transactions. Later in this paper, we will examine inter-bank transactions, central banking, as well as the role of reserve requirements or capital adequacy requirements on bank operations. While these transactions or requirements increase the complexity of banking transactions, they do not affect the manner in which banks create or de-create deposits.

The Equity Position of Banks

It is useful to reflect on how the banks equity position affects the banks ability to make loans or purchase assets. Does the increase in equity through profits or share offerings affect the banks ability to create loans or purchase assets? While it may be useful that a banks equity be at a certain level to satisfy some outside financial regulator, technically, it has no bearing on the creation of loans or the purchase of assets. Since each time a bank purchases an asset or creates a loan, an equal and offsetting deposit is created, these transactions can continue to occur regardless of the equity level of the bank. In the granting of a loan, it is also wrong to think of a bank re-lending money (as some conventional economic theory teaches), for this is not what happens. In the process of giving a loan, the bank both creates the loan and the deposit, both being balancing entries on it’s balance sheet. This really has nothing to do with the existing assets or liabilities of the bank.

This is the first problem with letting banks create the means of exchange, the transfer of wealth to those that control the financial system. The second problem is the amount of currency that is created, and how this currency is used, both of which fall under the control of bankers. This allows them to control or fuel economic expansions, and create financial bubbles in specific areas. This gives them the knowledge to speculate at the right time in the right investments, and effectively transfer real resources into their control.

How Currency Creation and Destruction Affects the Economy

We must remember that the key to controlling the world is the creation and control of economic contractions. It is here that the majority of wealth is transferred to the money people. Moreover, it is at these times that these same people bring about political change. As destructive as the banks ability to create currency(bank deposits) is, it is their ability to destroy currency that is even more frightening. We will now consider how a fractional reserve banking system affects the economy.

When we discuss currency, it is important to remember that currency is used both to increase the currency holdings of the owner, as well as a medium of exchange. That is, some people hold currency as a preference to holding some tangible asset such as real estate. In this case, currency is held to earn interest, that is, it is used to increase the currency holdings of the owner. Currency is also used as a medium of exchange; it is used as a means of payment for goods or services. The total amount of currency therefore consists of the total amount of currency used to increase the currency holdings of the owner plus the total amount of currency used as a medium of exchange. It is useful to think of the currency supply as consisting of two separate currency supplies. First there is a supply of currency used to exchange currently produced goods and services. Secondly, there is a currency supply that people hold in lieu of holding either real or financial assets in order to earn interest. Neither money supply is static. People are continuously exchanging currently produced goods and services for currency. In addition, people are continually exchanging real and financial assets for the currency that makes up this second currency supply. Most importantly, there are flows between these two currency supplies, depending if people are saving or dis-saving. When people who earn currency decide not to spend it on consumption, it is considered to be savings. When people spend currency that they have not currently earned, but held as savings, it is called dis-savings. As we will explore, when currency changes from one use to the other, it will have a direct effect on the economy, as well as on the prices of tangible or financial assets.

When we discuss economic growth, we must distinguish between the nominal or dollar valuation of an economy, and the real number of goods or services produced. This is governed by the equation;

$GDP = (\# \text{ units produced}) * (\text{price/unit})$ where GDP is the Gross Domestic Product of an economy.

Thus, it is possible that GDP could remain the same when the number of units produced increases, if the price/unit decreases. What is important to remember is that two factors determine nominal GDP, both the number of units produced and the price/unit.

The other equation that must be considered is;

$$\text{GDP} = (\text{amount of currency}) * (\text{velocity of currency})$$

Here, when we talk of “amount of currency”, we are referring to the amount of currency used as a medium of exchange. Some may prefer to consider the “amount of currency” as the total combined amount of currency, and so a smaller velocity of currency would be shown. I have chosen to separate the amount of currency as to its uses, as this is more precise, as well as to show the effects of the changes between the different uses of currency. Put Mathematically, to consider the relationship between these velocities;

MT = Total currency supply

ME = currency supply circulating in the business economy

MI = currency held as an alternative to existing assets

V = velocity of currency where VME would be the velocity of currency circulating in the business economy

$$\text{ME} * \text{VME} = \text{GDP}$$

$$\text{MT} * \text{VMT} = \text{GDP}$$

$$\text{ME} * \text{VME} = \text{MT} * \text{VMT}$$

$$\text{ME} * \text{VME} = \text{ME} * \text{VMT} + \text{MI} * \text{VMT}$$

$$\text{VME} = \text{VMT} (1 + \text{MI} / \text{ME})$$

In most of our discussion, we will assume that the velocity of currency remains constant in order to consider the relationship between the other variables. Moreover, unless we can show that the velocity of currency is affected by either the amount of currency, or the number of units produced, or the price/unit, it is the only logical assumption that we can make. This is further supported by the restraint placed on the spending of currency, in that economic units are generally restricted to spending what they earn or borrow. This thus gives us the equation;

$$(\text{amount of currency}) * (\text{velocity of currency}) = (\text{\# units produced}) * (\text{price/unit})$$

This represents the Quantity Theory of money, which basically says that economic activity is an exchange of currency for goods and services and that the two sides of the equation must at all times be equal.

With the amount of currency remaining constant, an increase in the number of units produced will not effect nominal GDP; it will only decrease the price per unit. This follows with conventional economic thought that says when supply increases, prices will fall. An increase in production will lead to a fall in price/unit, and with costs remaining constant, will see profit margins decrease. Since the greater the increase in production, the greater the fall in price, an economy that continually increases production will eventually see the price/unit fall to or below the cost/unit, making production uneconomic and leading to production shut downs. If however, the currency supply was increased at the same rate as the increase in production, the price/unit would remain constant and the profit margins would not be affected. This clearly points how the manipulation of the currency supply will affect profitability and ultimately production. The above analysis is true of all financial systems, though effects will be very different in different systems.

In discussing the effects of loans on GDP, I will consider three types of loan growth, for they all impact the economy in different ways. Specifically, we will consider loans that increase expenditures, loans that increase production capacity, and loans that are used to purchase existing assets. I might add here, that the effect of loans on the economy has been largely ignored by the economic community. This follows from the belief that “for the community as a whole the increase or decrease of the aggregate creditor position is always equal to the increase or decrease of the aggregate debtor position” (p.75, *The General Theory of Employment, Interest, and Money*, John Maynard Keynes). Failure to understand the effects of loans on the economy may be the most significant error of economic thought. In a 100% reserve banking system, loans represent a transfer of purchasing power (currency) from one person to another. Moreover, conventional analysis has failed to understand how different types of loans will have different effects on the economy.

When discussing the effect of loans on economic activity, one must distinguish between actual loans, where money is transferred from one person to another under a contract of loan, and those contracts though they may be stated to be a contract of loan, in reality are the creation and exchange of mutual liabilities, with the liability of one party to the contract being utilized as currency. Contracts of the first type represent a transfer of money from the lender to the borrower. From an economic perspective, this is simply a transfer of purchasing power, and since what one has received, another has given, may have more limited effects on economic activity. One party has given up spending, in order that another party may increase spending, and the total amount of currency has not been affected. Contracts of the second type represent an increase in currency or purchasing power, thus having a direct effect on economic activity. The party that has obtained the newly created currency (bank deposit), is able to exchange it for goods and services within the community. This party is able to increase GDP, which the party would have been unable to do without the transaction that created the currency (bank deposit).

GDP AND FLOW OF FUNDS

Economic analysis is really the study of two distinct systems, and while totally distinct, through the process of the price function, there is an equality. The first system is the study of the real goods and services produced in an economy, and how these are distributed to the members of the economy. The second system is a study of financial flows. This analysis on money is a study of financial flows.

GDP represents a flow of funds, the sum of all purchases of goods and services within an economy. It can thus be understood best by looking at all sources of possible funds. Some of these sources of funds are generated within the economy, while some are external to the economy.

Wages and profits are a source of funds generated within the economy. When wages and profits are spent on consumption or investment, they maintain GDP at the level of the previous year. When they are not spent on consumption or investment, GDP will be less than the previous year.

New currency creation that is spent on consumption or investment is also a source of funds. Bank deposits created by consumption or investment loans would be a source of funds. Bank deposits created by the payment of interest on bank deposits or by banks paying dividends that are spent on consumption or investment would also be a source of funds. Deposit de-creation that withdraws funds from consumption or investment will act to decrease GDP. This occurs when loan payments (either principle or interest) are paid from wages or business income.

Governments can create money by printing up new notes. When these new notes are spent directly by the government on consumption or investment, or transferred to others who spend them on consumption or investment, they will increase GDP. Money de-creation occurs when the government withdraws notes from circulation and destroys them. When the source of these deposits was a tax on wages or profits, this represents a withdraw of funds which will reduce GDP. When currency is created by banks under the pretence of loan, the contractual terms of repayment result in a decrease in currency. By contrast, there is no requirement that governments ever reduce the money in circulation.

Currency (both bank deposits or money) that are not presently used within the transaction economy, which are then spent on consumption or investment are also a source of funds that will increase GDP. This can occur in two ways. Firstly, owners of this currency that were holding the currency as an investment, can spend the currency directly on consumption or investment. Secondly, the owner of this currency can lend them to a borrower who then spends them on consumption or investment. Funds that are currently utilized within the transaction economy, but are withdrawn from it represent a reduction in GDP. This occurs when income from wages or business sales is used to repay bank loans (principle or interest). It also occurs when funds from wages or profits are not spend but held as savings.

Consider what happens when a person decides to spend less than he earns, and uses his savings to earn additional money through compound interest. In our example, we will assume an income of \$10,000, consumption expenditures of \$9,000, an interest rate of 10%, and assume no principle payments. By consuming only \$9000 of income, this person causes GDP to be decreased by \$1,000. He uses the \$1,000 that he has not spent, and lends it to a person who wishes to consume more than his income. This causes GDP to increase by \$1000. The overall effect of saving \$1,000 and then lending these funds are thus neutral on GDP. The next year, the borrower transfers \$100 in interest to the lender and must reduce his consumption by \$1100 (the first year, he spent his wages plus \$1,000, now all that he can spend are his wages less \$100 interest). The lender, if he again decides to spend only \$9,000 of his wage income of \$10,000, must then find a person willing to borrow \$1,100 (the \$1000 savings from wages and \$100 interest income received), if GDP is to be maintained at a constant level. (The level of spending by the lender has remained constant at \$9000. The decrease in spending by the first borrower of \$1100 must be countered by an increase in spending of \$1100 by the second borrower.) Thus a situation has developed where loans and interest costs are increasing, with GDP being constant. The lender is developing a system where he has a permanent source of income from other peoples earnings, and can exert significant control over the economy.

If the process of savings, and then lending both savings and interest earnings continues for an extended period of time, both loans and interest payments will grow relative to income. Should at some time, the lender decide not to re-lend the interest payments received, then this will contract GDP, and since interest payments continue on an annual basis, this contraction will continue on an annual basis. Why would a lender act in such a manner? Perhaps it is only because he sees the interest payments becoming a higher and higher portion of the wages of the borrowers, and fears for the safety of his loans. Perhaps it is because he really wishes to exchange financial assets for tangible assets. By contracting the economy, the lender can trigger a default on loan payments, and acquire the tangible assets securing the loans on a more favourable basis as borrowers attempt to sell assets to repay loans. However, governments can counter any negative effects to GDP by creating money, the spending of which will increase GDP.

Bank loans that result in the creation of currency affect the economy somewhat differently. Since the source of funds is not savings, but new bank deposit creation, the lender (bank) is not restricted to lending what has been saved, but simply creates sufficient deposits to meet the demand of those seeking additional deposits. The creation of currency by these transactions will cause GDP to increase. No party has given up the use of currency, which occurs when money is actually lent. Assuming no principle repayments, in subsequent years, just the payment of interest on these loans will contract GDP, leading to a situation developing that loans must increase by interest payments to maintain GDP. Thus, loans and interest payments will grow faster than GDP. The lender has developed a situation where he has a permanent source of income from other peoples wages, and can exert significant control over the economy. The manipulation of the economy can both be positive (when loan growth exceeds interest payments), and negative (when interest payments exceed new loan growth). This is in contrast to loans where money is actually lent (and the transactions do not affect the currency supply), where loans cannot expand the economy, and the manipulation of the economy by lenders is restricted to creating economic contractions. Financial transactions where currency is created under the pretence of loan can create both economic expansions and contractions. Again, governments can counter any negative effects to GDP by creating money, the spending of which will increase GDP.

A macro-economic approach illustrates how the creation of currency under the pretence of loan affects economic activity. This new currency is spent and increases GDP by the amount of the increase in currency multiplied by the velocity of currency. When a loan and a new bank deposit are created, this allows the borrower to increase expenditures or consumption, which will effect GDP, since consumption is a major part of GDP. Secondly, the creation of a loan also results in the borrower having to make payments of interest and principle the following year. Loan payments of principle or interest reduce the disposable income of a person or firm (Here consider a person earning \$1000 per month. If the person has no loan payments, then the whole \$1000 is available to consume or invest. If the person has loan payments of \$200 per month, then only \$800 is available to consume or invest) which causes expenditures to be reduced, which again affects GDP. The payment of either principle or interest will reduce the amount of currency held by the borrower, and since the amount of currency held by all other people has not changed, this

must reduce the amount of currency. (When a principle payment is made, both loans and bank deposits decrease by the same amount. When an interest payment is made, bank deposits are decreased and the banks equity account is increased by the same amount). The next year, new loans must increase by interest costs plus principle loan payments just to maintain GDP at last years levels (this maintains a constant currency supply). Put mathematically;

If "new loans" = NL; "interest payments" = IP; "principle payments" = PP; and "r" = interest rate; MS= "amount of currency"; and VL= "velocity of currency", then we have the following nominal values for GDP (we will assume that the velocity of currency remains constant)

$$\begin{aligned} \text{GDPy1} &= \text{MSy1} * \text{VLy1} \\ \text{GDPy2} &= \text{MSy2} * \text{VLy2} \\ \text{GDPy2} &= (\text{MSy1} + \text{NLy2} - \text{Ipy2} - \text{PPY2}) * \text{Vly2} \\ \text{GDPy2} &= (\text{MSY1} * \text{VLY2}) + ((\text{NLY2} - \text{IPY2} - \text{PPY2}) * \text{VLY2}) \\ \text{GDPY2} &= \text{GDPY1} + ((\text{NLY2} - \text{IPY2} - \text{PPY2}) * \text{VLY2}) \end{aligned}$$

If we consider a financial system where loans are first introduced in Year 2, then we have the following;

$$\begin{aligned} \text{GDPy2} &= \text{GDPy1} + (\text{NLy2} * \text{VL}) \\ \text{GDPy3} &= \text{GDPY2} + ((\text{NLy3} - (r * \text{NLy2}) - \text{PPy3}) * \text{VL}) \\ \text{GDPy4} &= \text{GDPY3} + ((\text{NLy4} - (r * (\text{NLy3} + \text{NLy2} - \text{PPy3}) - \text{PPy4}) * \text{VL}) \\ \text{GDPyn} &= \text{GDPym} + ((\text{NLyn} - (r * (\text{sum}(\text{NLYm} : \text{NLy2}) - \text{sum}(\text{PPym} : \text{PPy3}))) - \text{Ppyn}) * \text{VL}) \end{aligned}$$

For simplicity, if we assume that no principle payments are ever made, then;

$$\text{GDPyn} = \text{GDPym} + (\text{NLyn} - (r * (\text{sum}(\text{NLYm} : \text{NLy2})))) * \text{VL}$$

Thus, for GDP to remain constant, loan growth in Yn must equal the total amount of interest paid. That is the reduction in aggregate demand caused by interest payments, must be offset by an increase in aggregate demand caused by new loans in order for GDP to be constant. For GDP to increase, loan growth must increase by an amount greater than the interest paid.

The problem that develops, is that GDP and wage income are constant, while loans and interest payments continue to grow on an accelerating basis. Over time, interest payments will equal and then exceed wage income, with the wage earner entirely dependant on new loans to finance his entire existence. In all likelihood, long before this happens, banks will eliminate new loans and may ask for loan repayments, reducing GDP, business profits, and wages, thus reducing debt repayment capacity. With NL=0, GDP will contract by the amount of interest paid times the velocity of currency. This will continue on an annual basis until GDP approaches 0.

Now it can be argued that the above analysis is not complete, as it does not include the bank paying interest on deposits and dividends on profits, funds which can be used to

increase aggregate demand. If we assume that the bank pays out all interest income received in deposit interest, and that these newly created funds are spent on consumption or investment, they are a source of demand, and our equation becomes

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - IP + DI) * VL$$

Where DI = deposit interest.

With IP=DI, N_{lyn} could be 0 and a steady state would exist with $GDP_{yn}=GDP_{ym}$

An increase in NL will also increase GDP, which will increase wages. If we assume a velocity of currency of 1, an increase in NL will increase wages by less than NL. However, as long as the wage increase exceeds the increase in loan payments, we continue to have a steady state. As long as wages increase faster than loan payments, credit can expand indefinitely.

When the bank increases deposits by paying interest on deposits or dividends, those people that receive the increase in deposits can do two things. They can decide to spend this newly created deposits on consumption or investment. In this case, these newly created deposits are a source of demand, and the following equation applies:

$$GPY_{yn} = GDP_{ym} + N_{lyn} * VL$$

People can also decide not to spend these newly created deposits on consumption or investment, but allow them to increase through compound interest within the banking system. Generally, banks pay the highest interest on deposits withdrawn from the transaction economy, thus encouraging this to happen. When people do not spend these newly created deposits, they do not effect GDP and the following equation applies

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - IP) * VL$$

When currency is created through new loans, it is generally because people have insufficient deposits for the consumption and investment they desire, thus having a direct effect on GDP. When currency is created through paying deposit interest, it is generally given to people with a surplus of currency, and so may not be used to finance consumption or investment, and thus not effect GDP

It is most probable that some of the deposits created due to deposit interest will stay within the banking system to increase further due to compound interest, and some will be spent on consumption or investment. If "X" is the percentage spent on consumption or investment, then the economy is shown by the equation

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - IP + DI * X) * VL$$

And since we have IP=DI

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - IP(1-X)) * VL$$

This again is an unstable situation. If we assume that GDP and wage income remain constant,

then $N_{lyn} = IP(1-X)$,

meaning that loans and interest payments will increase on an accelerating basis, and that interest payments will eventually exceed wages. The time span that this occurs will depend on X, with a larger X increasing the time span. What is evident, is that IP will eventually approach wage income, and that someday before this happens, banks will stop advancing NL and may ask for loan repayment (NL turns negative). If $N_{lyn} = 0$, then GDP will fall by $IP(1-X)*VL$, and will continue to fall by the same amount on an annual basis. Thus, while loans outstanding remain constant, GDP and wage income will approach 0.

While this clearly shows the instability of a banking system where currency is created under the pretence of loan, there is a further element that must be considered. The economy is made up of people that have a shortage of deposits to fund their consumption and investment, and people that have a surplus of deposits. The question of the stability of such a banking system must be thus broken down to examining the ability of the borrower to continually meet their borrowing obligations. That is, even if a system appears stable, if the borrowers are unable to meet their obligations, the system is unstable.

Consider the economy operating under the equation:

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - IP)*VL$$

With interest paid to depositors not being spent, but increasing due to compound interest within the banking system. Initially, NL will exceed IP and GDP and wages (W) will increase. However, the real purchasing ability of the borrower is $W-IP$. That is why the shortfall in purchasing ability must be offset by an increase in NL to maintain GDP and wages. As the sum of total loans increases over time, IP increases, resulting in $W-IP$ decreasing. The real share of GDP that borrowers can obtain is not set by W, but by $W-IP$, and this share will diminish on an annual basis.

On the deposit side of the banks balance sheet, the counter entries are increasing levels of DI and total deposits. These represent potential claims on GDP, which increase over time. As IP approaches W, DI will also approach W, with the potential claim over the resources of the community being transferred from borrowers to depositors. Once $NL < IP$, the economy and wages will contract, resulting in the default on loans. In our analysis, we are assuming that all of W is available to pay interest on loans. However, as some wage earners are deposit holders, and some are borrowers, the wages available to pay interest is less than we have shown, and accordingly, the system is even more unstable than presented. Only the wages earned by the borrowers are available to pay interest.

This analysis only changes by a matter of degree when we consider the more realistic equation of

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - IP(1-X))*VL$$

While loans are an intangible liability, they are often secured with tangible security, which will result in tangible assets being claimed by the bank, and eventually transferred to deposit holders. Thus, not only is such a banking system unstable, it is an effective way of transferring wealth from borrowers to deposit holders.

Next, we will examine how an increase or decrease in consumer loans effects both business profitability (and the ability of business to repay business loans) as well as wages paid to consumers (and the ability of consumers to repay loans). We will also examine if it is possible to repay loans, or if it is possible for loans to increase indefinitely without creating financial stress.

For most businesses, profits are governed by the following equations:

Sales – Cost of Sales = Gross Profit

Gross Profit – Fixed Costs = Profit

Where “Cost of Sales” refers to the direct cost of each sale, and “Fixed Costs” refer to the costs of operating the business which will occur regardless of the level of sales.

An increase in consumer loans, creating currency (bank deposits), will cause sales to increase as these bank deposits are exchanged for goods and services, and assuming that both the price and cost of each sale remains constant (profit margin being the ratio between sales and cost of sales remain constant), total gross profit will increase. Assuming that fixed costs remain constant, this will lead to an increase in total profits. It is possible that an increase in aggregate demand (sales) due to an increase in consumer loans will also lead to an increase in the price level. With the costs of the business remaining constant, this will lead to an increase in both the profit on each sale, as well as increasing total sales, with both factors acting to increase profitability.

Remembering that business loans are repaid from profits, and not sales, an increase in consumer loans will act to increase business profitability, and the ability of the business to repay it’s own debt. The increase in sales will also raise employment income, adding to the ability of the consumer to repay debt.

A decrease in consumer loans will cause sales to decrease. Assuming profit margins remain constant, this will lead to a decrease in gross profit and total profits. Should a decrease in sales lead to price reductions, gross profit and total profit would be further decreased.

Thus a decrease in consumer loans will act to decrease business profitability, and reduce the ability of business to repay debt. A decrease in consumer loans, causing a decrease in sales will also cause employment to decrease, reducing the ability of the consumer to repay loans. Some factors to consider would include the level of loans in businesses in any particular industry when a decrease in consumer loans causes sales to decrease. Profits may decrease below the level needed to repay the loans of the business, threatening the business with bankruptcy. A non indebted firm could function with a

lower profit level, but a highly indebted firm can not. The only possible option for the highly indebted firm is to increase its share of sales in a falling market by lowering price, hoping that an increase in sales will offset a falling profit margin. Should many of the firms be forced to attempt the same strategy, it could threaten the viability of the entire industry.

All of these factors are best seen within a spreadsheet program. Here we will assume that loans expand each year sufficient to increase sales (GDP) by 10 units, an interest rate of 10%, 30% of deposit interest spent on consumption or investment, wages receiving 90% of GDP, with 80% of wage borrowers borrowing. Sales, wages, and profits show a constant increase, which would appear to be stable, but interest costs have reached 103% of borrower wages by year 55. Clearly, long before this point, banks will stop advancing loans.

Gross Domestic Profit and Consumer Loan Growth

	Interest Rate	Loan Amortization	% Deposit Interest Spent	% GDP to Wages	% Wages to Borrowers	New	Total	% Sales due	Wage Depos		
						Prin	Loan	due	Depos		
						Pmt	Pmt	Wage	s		
	Sales	Wages	Profits	Loans	Loans	Int	Loans	Dep	Int s		
Year 1	100.00	90.00	10.00						0.90	0.00	
Year 2	110.00	99.00	11.00	10.00			10.00		0.90	0.00	
Year 3	120.00	108.00	12.00	10.70	0.00	1.00	20.70	1.00	1.00	0.89	0.00
Year 4	130.00	117.00	13.00	11.45	0.00	2.07	32.15	2.07	2.07	0.88	0.00
Year 5	140.00	126.00	14.00	12.25	0.00	3.21	44.40	3.21	3.21	0.88	0.00
Year 6	150.00	135.00	15.00	13.11	0.00	4.44	57.51	4.44	4.44	0.87	0.00
Year 7	160.00	144.00	16.00	14.03	0.00	5.75	71.53	5.75	5.75	0.86	0.00
Year 8	170.00	153.00	17.00	15.01	0.00	7.15	86.54	7.15	7.15	0.86	0.00
Year 9	180.00	162.00	18.00	16.06	0.00	8.65	102.60	8.65	8.65	0.85	0.00
Year 10	190.00	171.00	19.00	17.18	0.00	10.26	119.78	10.26	10.26	0.85	0.00
Year 11	200.00	180.00	20.00	18.38	0.00	11.98	138.16	11.98	11.98	0.84	0.00
Year 12	210.00	189.00	21.00	19.67	0.00	13.82	157.84	13.82	13.82	0.83	0.00
Year 13	220.00	198.00	22.00	21.05	0.00	15.78	178.88	15.78	15.78	0.83	0.00
Year 14	230.00	207.00	23.00	22.52	0.00	17.89	201.41	17.89	17.89	0.82	0.00
Year 15	240.00	216.00	24.00	24.10	0.00	20.14	225.50	20.14	20.14	0.82	0.00
Year 16	250.00	225.00	25.00	25.79	0.00	22.55	251.29	22.55	22.55	0.81	0.00
Year 17	260.00	234.00	26.00	27.59	0.00	25.13	278.88	25.13	25.13	0.80	0.00
Year 18	270.00	243.00	27.00	29.52	0.00	27.89	308.40	27.89	27.89	0.80	0.00
Year 19	280.00	252.00	28.00	31.59	0.00	30.84	339.99	30.84	30.84	0.79	0.00
Year 20	290.00	261.00	29.00	33.80	0.00	34.00	373.79	34.00	34.00	0.78	0.00

Year 21	300.00	270.00	30.00	36.17	0.00	37.38	409.95	37.38	37.38	0.78	0.00
Year 22	310.00	279.00	31.00	38.70	0.00	41.00	448.65	41.00	41.00	0.77	0.00
Year 23	320.00	288.00	32.00	41.41	0.00	44.87	490.06	44.87	44.87	0.76	0.00
Year 24	330.00	297.00	33.00	44.30	0.00	49.01	534.36	49.01	49.01	0.75	0.00
Year 25	340.00	306.00	34.00	47.41	0.00	53.44	581.77	53.44	53.44	0.74	0.00
Year 26	350.00	315.00	35.00	50.72	0.00	58.18	632.49	58.18	58.18	0.73	0.00
Year 27	360.00	324.00	36.00	54.27	0.00	63.25	686.76	63.25	63.25	0.72	0.00
Year 28	370.00	333.00	37.00	58.07	0.00	68.68	744.84	68.68	68.68	0.71	0.00
Year 29	380.00	342.00	38.00	62.14	0.00	74.48	806.98	74.48	74.48	0.70	0.00
Year 30	390.00	351.00	39.00	66.49	0.00	80.70	873.47	80.70	80.70	0.69	0.00
Year 31	400.00	360.00	40.00	71.14	0.00	87.35	944.61	87.35	87.35	0.68	0.00
Year 32	410.00	369.00	41.00	76.12	0.00	94.46	1020.73	94.46	94.46	0.67	0.00
Year 33	420.00	378.00	42.00	81.45	0.00	102.07	1102.18	102.07	102.07	0.66	0.00
Year 34	430.00	387.00	43.00	87.15	0.00	110.22	1189.33	110.22	110.22	0.64	0.00
Year 35	440.00	396.00	44.00	93.25	0.00	118.93	1282.59	118.93	118.93	0.63	0.00
Year 36	450.00	405.00	45.00	99.78	0.00	128.26	1382.37	128.26	128.26	0.61	0.00
Year 37	460.00	414.00	46.00	106.77	0.00	138.24	1489.13	138.24	138.24	0.60	0.00
Year 38	470.00	423.00	47.00	114.24	0.00	148.91	1603.37	148.91	148.91	0.58	0.00
Year 39	480.00	432.00	48.00	122.24	0.00	160.34	1725.61	160.34	160.34	0.57	0.00
Year 40	490.00	441.00	49.00	130.79	0.00	172.56	1856.40	172.56	172.56	0.55	0.00
Year 41	500.00	450.00	50.00	139.95	0.00	185.64	1996.35	185.64	185.64	0.53	0.00
Year 42	510.00	459.00	51.00	149.74	0.00	199.64	2146.10	199.64	199.64	0.51	0.00
Year 43	520.00	468.00	52.00	160.23	0.00	214.61	2306.32	214.61	214.61	0.49	0.00
Year 44	530.00	477.00	53.00	171.44	0.00	230.63	2477.76	230.63	230.63	0.46	0.00
Year 45	540.00	486.00	54.00	183.44	0.00	247.78	2661.21	247.78	247.78	0.44	0.00
Year 46	550.00	495.00	55.00	196.28	0.00	266.12	2857.49	266.12	266.12	0.42	0.00
Year 47	560.00	504.00	56.00	210.02	0.00	285.75	3067.52	285.75	285.75	0.39	0.00
Year 48	570.00	513.00	57.00	224.73	0.00	306.75	3292.24	306.75	306.75	0.36	0.00
Year 49	580.00	522.00	58.00	240.46	0.00	329.22	3532.70	329.22	329.22	0.33	0.00
Year 50	590.00	531.00	59.00	257.29	0.00	353.27	3789.99	353.27	353.27	0.30	0.00
Year 51	600.00	540.00	60.00	275.30	0.00	379.00	4065.29	379.00	379.00	0.27	0.00
Year 52	610.00	549.00	61.00	294.57	0.00	406.53	4359.86	406.53	406.53	0.23	0.00
Year 53	620.00	558.00	62.00	315.19	0.00	435.99	4675.05	435.99	435.99	0.20	0.00
Year 54	630.00	567.00	63.00	337.25	0.00	467.50	5012.30	467.50	467.50	0.16	0.00
Year 55	640.00	576.00	64.00	360.86	0.00	501.23	5373.16	501.23	501.23	0.12	0.00

If we consider the same assumptions, but have loan growth stop during year 20, we get the following result. The economy contracts, decreasing profits and wages. Loans become un-payable. This highlights one of the major problems with a economy based on a such a banking system. There is a direct relationship between GDP and loans, with loan payments(either principle or interest) contracting GDP, thus destroying the ability to repay loans. GDP can only increase if banks continue to advance loans without regard to their future repayment. Over the last 50 years, the developed world has seen a strong economic expansion, fuelled by massive growth of loans by consumers, corporations, and governments. Financial difficulties have been dealt with by increasing loans, many of

these to governments. What this model is saying, is that this loan growth is unsustainable, and once loan growth stops, a major economic contraction will develop that can destroy much of the worlds economy.

Gross Domestic Profit and Consumer Loan Growth

	Interest Rate	0.1											
	Loan Amortization	0											
	%Deposit Interest Spent	0.3											
	%GDP to Wages	0.9										% Sales	
	%Wages to Borrowers	0.8	New	Total								%Sales due	
			Prin	Loan								depos	
	Sales	Wages	Profits	Loans	Pmt	Int Pmt	Loans	Pmt	Dep Int s			s	
Year 1	100.00	90.00	10.00									0.90	0.0
Year 2	110.00	99.00	11.00	10.00			10.00					0.90	0.0
Year 3	120.00	108.00	12.00	10.70	0.00	1.00	20.70	1.00	1.00			0.89	0.0
Year 4	130.00	117.00	13.00	11.45	0.00	2.07	32.15	2.07	2.07			0.88	0.0
Year 5	140.00	126.00	14.00	12.25	0.00	3.21	44.40	3.21	3.21			0.88	0.0
Year 6	150.00	135.00	15.00	13.11	0.00	4.44	57.51	4.44	4.44			0.87	0.0
Year 7	160.00	144.00	16.00	14.03	0.00	5.75	71.53	5.75	5.75			0.86	0.0
Year 8	170.00	153.00	17.00	15.01	0.00	7.15	86.54	7.15	7.15			0.86	0.0
Year 9	180.00	162.00	18.00	16.06	0.00	8.65	102.60	8.65	8.65			0.85	0.0
Year 10	190.00	171.00	19.00	17.18	0.00	10.26	119.78	10.26	10.26			0.85	0.0
Year 11	200.00	180.00	20.00	18.38	0.00	11.98	138.16	11.98	11.98			0.84	0.0
Year 12	210.00	189.00	21.00	19.67	0.00	13.82	157.84	13.82	13.82			0.83	0.0
Year 13	220.00	198.00	22.00	21.05	0.00	15.78	178.88	15.78	15.78			0.83	0.0
Year 14	230.00	207.00	23.00	22.52	0.00	17.89	201.41	17.89	17.89			0.82	0.0
Year 15	240.00	216.00	24.00	24.10	0.00	20.14	225.50	20.14	20.14			0.82	0.0
Year 16	250.00	225.00	25.00	25.79	0.00	22.55	251.29	22.55	22.55			0.81	0.0
Year 17	260.00	234.00	26.00	27.59	0.00	25.13	278.88	25.13	25.13			0.80	0.1
Year 18	270.00	243.00	27.00	29.52	0.00	27.89	308.40	27.89	27.89			0.80	0.1
Year 19	280.00	252.00	28.00	31.59	0.00	30.84	339.99	30.84	30.84			0.79	0.1
Year 20	256.20	230.58	25.62	0.00	0.00	34.00	339.99	34.00	34.00			0.77	0.1
Year 21	232.40	209.16	23.24	0.00	0.00	34.00	339.99	34.00	34.00			0.75	0.1
Year 22	208.60	187.74	20.86	0.00	0.00	34.00	339.99	34.00	34.00			0.74	0.1
Year 23	184.80	166.32	18.48	0.00	0.00	34.00	339.99	34.00	34.00			0.72	0.1
Year 24	161.00	144.90	16.10	0.00	0.00	34.00	339.99	34.00	34.00			0.69	0.2
Year 25	137.20	123.48	13.72	0.00	0.00	34.00	339.99	34.00	34.00			0.65	0.2
Year 26	113.40	102.06	11.34	0.00	0.00	34.00	339.99	34.00	34.00			0.60	0.3
Year 27	89.61	80.64	8.96	0.00	0.00	34.00	339.99	34.00	34.00			0.52	0.3
Year 28	65.81	59.23	6.58	0.00	0.00	34.00	339.99	34.00	34.00			0.38	0.5
Year 29	42.01	37.81	4.20	0.00	0.00	34.00	339.99	34.00	34.00			0.09	0.8
Year 30	18.21	16.39	1.82	0.00	0.00	34.00	339.99	34.00	34.00			-0.97	1.8
Year 31	-5.59	-5.03	-0.56	0.00	0.00	34.00	339.99	34.00	34.00			6.98	-6.0

We will now show how the economy would be assuming that all of the interest paid on deposits was spent on consumption or investment. While a perpetual income has been created for deposit holders simply through the manipulation of bank accounting records, the economic system would appear to be stable.

Gross Domestic Profit and Consumer Loan

Growth

Interest Rate 0.1

Loan Amortization 0

%Deposit Interest 1

Spent

%GDP to Wages 0.9

%Wages to

Borrowers 0.8

New

Total

%Sales due

Prin

Loan

dueWage Depos

Sales

Wages

Profits

Loans

Pmt

Int Pmt

Loans

Pmt

Dep Int s

s

Year	Sales	Wages	Profits	Loans	Pmt	Int Pmt	Loans	Pmt	Dep Int s	s	
Year 1	100.00	90.00	10.00						0.90	0.00	
Year 2	110.00	99.00	11.00	10.00			10.00		0.90	0.00	
Year 3	120.00	108.00	12.00	10.00	0.00	1.00	20.00	1.00	1.00	0.89	0.00
Year 4	130.00	117.00	13.00	10.00	0.00	2.00	30.00	2.00	2.00	0.88	0.00
Year 5	140.00	126.00	14.00	10.00	0.00	3.00	40.00	3.00	3.00	0.88	0.00
Year 6	150.00	135.00	15.00	10.00	0.00	4.00	50.00	4.00	4.00	0.87	0.00
Year 7	160.00	144.00	16.00	10.00	0.00	5.00	60.00	5.00	5.00	0.87	0.00
Year 8	170.00	153.00	17.00	10.00	0.00	6.00	70.00	6.00	6.00	0.86	0.00
Year 9	180.00	162.00	18.00	10.00	0.00	7.00	80.00	7.00	7.00	0.86	0.00
Year 10	190.00	171.00	19.00	10.00	0.00	8.00	90.00	8.00	8.00	0.86	0.00
Year 11	200.00	180.00	20.00	10.00	0.00	9.00	100.00	9.00	9.00	0.86	0.00
Year 12	210.00	189.00	21.00	10.00	0.00	10.00	110.00	10.00	10.00	0.85	0.00
Year 13	220.00	198.00	22.00	10.00	0.00	11.00	120.00	11.00	11.00	0.85	0.00
Year 14	230.00	207.00	23.00	10.00	0.00	12.00	130.00	12.00	12.00	0.85	0.00
Year 15	240.00	216.00	24.00	10.00	0.00	13.00	140.00	13.00	13.00	0.85	0.00
Year 16	250.00	225.00	25.00	10.00	0.00	14.00	150.00	14.00	14.00	0.84	0.00
Year 17	260.00	234.00	26.00	10.00	0.00	15.00	160.00	15.00	15.00	0.84	0.00
Year 18	270.00	243.00	27.00	10.00	0.00	16.00	170.00	16.00	16.00	0.84	0.00
Year 19	280.00	252.00	28.00	10.00	0.00	17.00	180.00	17.00	17.00	0.84	0.00
Year 20	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 21	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 22	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 23	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 24	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 25	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 26	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 27	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 28	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00
Year 29	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.00

Year 30	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.0
Year 31	280.00	252.00	28.00	0.00	0.00	18.00	180.00	18.00	18.00	0.84	0.0

Since the sustainability of loan growth rests entirely with the percentage of deposit interest spent on consumption and investment, we might ask what is really happening in the economy. When 100% of deposit interest is spent on consumption or investment, both GDP and loan growth will grow at a constant rate. When this is not the case, loans will be growing faster than GDP, with this trend continuing to accelerate.

Business loans will affect GDP in a similar way to consumer loans, being represented by the equation.

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - IP(1-X)) * VL$$

Where X represents the percentage of interest paid on bank deposits that is spent on consumption or investment. However, these loans will impact the physical production of goods in a different manner than consumer loans, as they act to increase both the amount of goods produced when investment spending occurs, as well as increasing the productive capacity. This relationship is shown by the following equations

Let Z be the increase in production for every \$1 increase in new loans (NL)

Let UP be the number of units produced

Let P/U be the price per unit

$$GDP_{yn} = GDP_{ym} + (N_{lyn} - PP_{yn} - IP_{yn}) * VL$$

$$UP_{yn} * P/U_{yn} = UP_{ym} * P/U_{ym} + (N_{lyn} - PP_{yn} - IP_{yn}) * VL$$

$$\text{Since } UP_{yn} = UP_{ym} + (N_{lyn} * Z)$$

$$P/U_{yn} = P/U_{ym} * UP_{ym} / (UP_{ym} + N_{lyn} * Z) + (N_{lyn} - PP_{yn} - IP_{yn}) * VL / (UP_{ym} + N_{lyn} * Z)$$

The price level ($P/U_{yn} < P/U_{ym}$) will turn negative prior to the currency supply turning negative ($N_{lyn} < PP_{yn} + IP_{yn}$). As we have already described, for any constant NL, $PP + IP$ will eventually exceed NL even if $PP = 0$.

Like consumer loans, business loans result in an unstable financial system. Interest costs will increase faster than profit growth, and over time interest costs will approach, and then exceed profits. Once $NL = 0$, GDP will contract and will continue to do so each year.

In an economy operating below its productive capacity, it should be expected that the initial loan will result in more production, and will have only a limited effect on the price level. Once the new capacity is in operation, this will lower the price level. Thus, we would expect these loans to have only a minimal initial increase on the price level, soon to be reversed by a downward trend. Are there negative effects to a fall in prices? As a society, are we not more concerned about the number of units produced, and not the relative level of the price level? To answer this question, we must examine how rigid costs are compared to prices. If in response to falling prices, costs, at least in the short term do not fall, then prices will eventually fall below costs resulting in business closures.

More importantly, payments of principle and interest are in nominal terms and can not fall. Thus, even if all other costs freely fall with prices, a falling price level will severely impact the financial viability of a business. This may also be a factor in the ability of different costs to fall in response to a fall in prices. Rent costs may not be able to be lowered due to the level of mortgage payments on the building. Workers may not survive a fall in wages due to high personal loan payments.

These relationships are also shown in the equation;

$GDP = (\text{amount of currency}) * (\text{velocity of currency}) = (\# \text{ units produced}) * (\text{price/unit})$

Where $(\text{amount of currency})_{yn} = (\text{amount of currency})_{ym} + N_{Lyn} - I_{Pyn} - P_{pyn}$

An increase in the amount of currency will increase nominal GDP, which will increase the number of units produced or the price/unit or both. Should an economy be operating below its productive capacity, then it is likely that most of the increase in the amount of currency will result in higher production. If the economy is operating near its productive capacity, then most of the increase in currency will result in higher unit costs.

Some Comparisons Between Currency Creation By Banks and Currency Creation By Governments

Consider what happens when a government decides to spend \$1000 more than tax receipts. The government could sell a \$1000 bond to the bank which creates a \$1000 deposit to finance the purchase. The banks balance sheet expands with assets (government bonds) and liabilities (deposits) increasing by \$1000. The government exchanges the \$1000 bank deposit for goods and services, increasing aggregate demand and thus GDP.

Alternatively, the government could print up \$1000 in government notes. The government spends the \$1000 on goods and services, increasing aggregate demand and thus GDP.

The initial effects on the economy is the same in either case, and both actions will increase the total amount of currency by equal amounts. However, what happens in subsequent years will vary greatly. In subsequent years, with currency created by the government, the currency supply will remain constant, and there is no direct effect on bank profits.

When the bank creates currency under the pretence of loaning money, the bond creates a requirement for principle and interest to be paid. The payment of principle causes the government to take tax revenue to repay the principle. This transaction causes the bank balance sheet to contract with deposits and bonds reducing by an equal amount. The payment of interest causes the government to take tax revenue to pay the interest. The banks balance sheet adjusts with deposits decreasing and owners equity increasing (the banks assets do not change). Thus we see the payments of principle and interest causing a decrease in the currency supply and a contraction in aggregate demand and GDP. There is also a direct effect on bank profits, increasing them by the amount of interest charged.

Under either method of currency creation, the increase in the currency supply will increase aggregate demand and GDP, and a decrease in the currency supply will reduce aggregate demand and GDP. When banks create currency, an increase in the currency supply due to a new bank loan or new bond purchase creates a future requirement to reduce the currency supply, and in fact, a requirement to reduce the currency supply by an amount greater than the initial creation(due to interest charges).

Banks can also create currency by several types of other financial transactions such as the payment of interest on deposits, or the payment of dividends to shareholders. The creation of currency in these transactions may or may not affect GDP. When currency is created through new loans, it is generally because people have insufficient deposits for the consumption and investment they desire, thus having a direct effect on GDP. When currency is created through paying deposit interest, it is generally given to people with a surplus of currency, and so may not be used to finance consumption or investment, and thus not effect GDP

The creation of money through deposit interest or dividend payments through the bank will enter the transaction economy and effect GDP only if these deposits are spent on consumption or investment. If these deposits are not spent on consumption or investment, but through compound interest, are used to increase the currency holdings of the owner, they will not affect the economy. The effect will be the same as if these deposits were not created, but remained within the owners equity of the banks balance sheet from where they came.

Thus a situation can develop with interest payments on loans destroying currency and reducing GDP with currency created through deposit interest and dividends having no effect on GDP. Total deposits may appear stable, though the economy is contracting. Here we see two uses of currency. In the first case, currency is used to facilitate exchange of goods and services between people. In the second case, currency is transformed into an end in itself, currency is used to create currency, with resulting negative effects on the transaction economy.

Under a 100% reserve banking system, deposits do not pay interest. Savers, those who do not require present use of deposits, are thus encouraged to lend these deposits to those who wish to use the deposits. This tends to keep all deposits being used within the transaction economy. Most bank deposits earn interest, with the highest interest generally paid to those deposits that are withdrawn from use in the transaction economy, thus encourages people to withdraw deposits from the transaction economy.

Comparison of Consumer Loans

We will now consider the effects of consumer loans when governments create currency. The source of funds for consumer loans in a 100% reserve banking system would be

deposits presently not used within the transaction economy (the source of funds for consumer loans in a fractional reserve banking system is new deposit creation). However, the transfer of deposits from those not utilized within the transaction economy to those utilized within the transaction economy is a source of new demand, and will increase GDP in the same way as consumer loans in a fractional reserve banking system. While the source of funds is different under the different banking system, under either system, consumer loans will increase deposits utilized in the transaction economy, and thus impact GDP in a similar manner.

To obtain currency to finance consumer loans under a financial system where governments create the currency, currency must be first withdrawn from use in the transaction economy which will reduce GDP. When the currency is then lent, the borrower has a new source of demand, which will increase GDP. The net effect of saving and lending currency is neutral and does not effect GDP. Only the creation of currency by the government will increase GDP. Under a financial system where banks create the currency, bank deposits are created, which does not negatively affect GDP, and thus a loan which results in the increase in currency, will increase GDP. It is this difference of the source of funds which affects GDP differently under the two systems.

Do consumer loans in a financial system where governments create the currency create a stable system? Assuming a constant money supply, and that no loan payments (principle or interest) are spent by their recipients, GDP will only remain constant if principle and interest payments received are re-loaned for new consumer loans. That is, new consumer loans must increase on an annual basis by the interest paid to maintain a constant GDP. Thus a situation develops that consumer loans must increase on an annual basis just to maintain GDP. Consumer loans and interest costs are increasing on an annual basis while wages are constant, meaning that interest costs will eventually equal, and then exceed wage income. It is likely that new loans will no longer be given long before interest costs equal wages. Whenever this happens, the economy will contract by the amount of loan payments multiplied by the velocity of money. This contraction will continue on an annual basis as long as loan payments are made. The mathematical equations governing consumer loans under such a financial system would thus be similar to those of a financial system where banks create the currency, and assuming no principle payments would be:

$$GDP_{yn} = GDP_{ym} + (Nlyn - IP(1-X))*VL$$

Where X represents the percentage of interest earned on loans that is spent on consumption or investment.

Under either system, a stable financial system is only possible under two conditions. Firstly, if $IP=0$, or no interest is charged. While this is not generally mentioned in economic theory, with many people holding an opposing view, it is not that difficult to understand. In a transaction economy, deposits are utilized to facilitate the exchange of goods and services. However, when deposits are utilized not to facilitate these exchanges of goods and services, but are used to create income, this process then creates negative effects within the transaction economy. In a financial system where banks create the

currency, in order for a person to obtain deposits to lend at interest, he must not spend some of his wages which will reduce GDP. When these deposits are lent at interest as a consumer loan, they will increase GDP by a similar amount. However, the next year, payments of principle plus interest will reduce GDP, and unless new loans are given that equal the principle and interest payments, GDP will contract. This eventually leads to increasing interest costs relative to income, which will cause financial collapse when $NL = 0$ due to the financial condition of the borrower.

Under a financial system where banks create the currency, since the source of funds for a consumer loan is new deposit creation, there is not the negative effect on GDP of having to reduce consumption or investment in order to obtain a deposit to lend. However, in subsequent years, GDP will decrease by any principle and interest payments, which again leads to increasing interest costs relative to income as credit grows over time. Eventually, when $NL = 0$ due to the financial condition of the borrower, we will see a financial collapse. Only by setting interest at 0, will the negative effects of interest payments on the transaction economy be avoided.

The second condition that would allow for financial stability would be for X to equal 1. Under a financial system where banks create the currency, all interest earned on deposits would be spent on consumption or investment. Under a financial system where governments create the currency, all money earned from lending deposits would be spent on consumption or investment. With X equal to one, deposits are no longer used so as to create additional deposits for the deposit holders, but to provide an annual source of revenue to fund consumption and investment.

Under a financial system where governments create the currency, the creation of currency by the government will be an additional source of demand, allowing the government to stabilize any negative effects to GDP as the result of withdrawing deposits from the transaction economy. In addition, under this system, since in order to lend, currency must first be obtained, it is more difficult for lenders to manipulate the economy.

In a certain sense, it is wrong to think of everyone being in debt to the bank. It is more meaningful to think of our banking system as the mechanism that effects the transfer of wealth between people. In granting the loan, the bank creates both a deposit and a loan. Each year, the bank also transfers currency from the borrowers (interest payments) to depositors (deposit interest) and shareholders (dividends). These are not true loans, in the sense that the lender has given anything up. This transfer of wealth occurs as a result of the manipulation of the banks accounting records.

Actually, the same result will even occur when interest is charged on loans, in which the lender has given up currency (as opposed to creating currency). Even here, the lender is attempting to use currency to create currency. When we understand how currency is actually created, and the reason for its creation, the concept of using currency to create more currency is contrary to reason. Currency was invented to help us obtain the necessities, and even luxuries of life. If there is insufficient currency to allow this to

happen, it is part of the duty of the ruler to create additional currency. When we attempt to create currency with currency by the charging of interest, all we are doing is effecting the transfer of wealth. Even worse, since this process withdraws, or takes currency from the transaction economy which is its real function, it has a negative effect on assisting people with obtaining the necessities and luxuries of life.

Consumption Functions

Now a brief comment on consumption functions. Consumption is the sum of the consumption of all the households in the economy. It is thus the sum of all individual consumption functions of each household, and unless each household acts in exactly the same manner (which in a real world situation they do not), the consumption function can not be shown by a single function. Moreover, since any consumption function we choose, by definition, must equal our flow of fund statement, it is really the flow of fund statement that we must analyse. This is not say that consumption functions are unimportant, we are always making assumptions about households. However, as long as we know the flow of funds, we can analyse the effect of this flow of funds on the economy without knowing the individual consumption functions of each household. The same rational holds true for investment functions.

I am attaching spreadsheets to demonstrate this economic model. There are six spreadsheets, covering consumer loans, investment loans, and a combination of investment and consumer loans under both systems where banks or governments create the currency. Even in an economy where banks create the currency, loans created outside of the banking system will affect the economy in a similar way to loans in a financial system where governments create the currency, so knowledge of both systems is necessary in analyzing an economy. Viewing the spreadsheet covering consumer loans under a financial system where banks control the currency, it is basically a simple flow of funds model, saying that Sales, or GDP is the sum of wages spent plus profits spent, plus new consumption loans, less interest payments, less principle payments, plus interest received on bank deposits spent. Wages and profits are earned in one period, and spent in the next, with other sources or leakages of funds affecting spending in the current period. I have shown it over a time series, to see how it changes with time. While I have included various assumptions, any of these can be changed, and the model will change accordingly. Briefly, some of the inputs that can be changed are as follows

Cell C2 – interest rate

Cell C3 – loan amortization

Cell C4 – percentage of deposit interest received that is spent on consumption or investment

Cell C6 – percentage of GDP that is allocated to wages

Cell C7 – percentage of wage earners that borrow

Cell G2 – percentage of wages that are spent

Cell G3 – percentage of profits that are spent

Cell G4 – velocity of money

Cell G6 – percentage of GDP that is allocated to profits

Cells C6 AND G6 must sum to 1

The consumption function enters the model in column E, new loans, as well as affecting some of the variables in the model such as Cell G2 and C4. The amount of loans required to finance consumption is the difference between total consumption, and the flow of funds generated available for consumption. In this example, I have assumed that 50% of the households will spend only 80% of their income, investing the difference in bank term deposits, while 50% of the households will consume 20% more than they earn, financing the spending with bank loans. Since, interest costs must be paid after year 2, it is assumed that loans are increased to cover any loan payments to keep expenditures 20% above income. I have set Cell G2 to reflect that only 90% of the wages earned are spent. Firms spend 100% of their profits. I have assumed that deposit interest is not spent, but reinvested. To vary the model, one could have deposit holders spending a percentage of the interest received.

Viewing the model, and just looking at GDP, wages, and profits, one could say that things look stable. However, if we look at column M, the percentage of interest paid on loans compared to the wages of the borrowers keeps rising, and by year 25, interest costs exceed borrower wages. Some time before this happens, under the leadership of either the bank or the borrower, the consumption function is going to change. If you go to column E (new loans) and change this to 0 for all years after a certain point, you will see the total collapse of GDP, wages, and profits after this point.

Two key points from this model are, that if the consumption function is set so that new loans are less than interest payments, sales, wages, and profits will fall. Secondly, the growth rate of the interest costs of the borrower exceed the growth rate of the borrowers wages, meaning that some time in the future, the consumption function must change to restrict new loans.

If we change the model to have deposit holders spend 30% of interest income, this extra demand gives us a growth situation. We see GDP, wages, and profits all rising. In fact, wages are increasing faster than interest costs. However, the interest costs are still rising faster than the borrowers wages, meaning a negative adjustment to the consumption function in the future. Anytime we set new loans to zero, we will get a contraction in the economy, which will continue until loans increase. Does this explain why financial crisis is generally solved by increasing debt levels? As we vary the percentage of deposit interest spent, we find that the system becomes more stable, the greater the percentage of deposit interest that is spent. We also find that the system becomes more stable, the lower the interest rate

Considering the above analysis, it might be useful to reflect on the thoughts of C.H. Douglas and his views on monetary reform. Douglas thought in terms of “lack of purchasing power”, that because industry incurred debt in any expansion, and had to include the expense of repaying this debt in the pricing of it’s products, that the wages generated in actually producing the products would not be sufficient to actually buy all

the products produced because of this additional expense (hence lack of purchasing power).

Due to this lack of purchasing power, unless new firms were expanding, and thus increasing purchasing power prior to actual production, the economy would slump, with the business cycle attributed to these timing differences. In order to address the problem of always needing new investment to keep adding purchasing power, Douglas proposed that the government issue to each person, sufficient debt free money to cover the “lack of purchasing power”. Douglas’s ideas were thus quite different from those that concur with “Say’s Law”, which states that the process of producing goods automatically distributes sufficient purchasing power to buy all the goods produced.

In the context of Douglas’s example, it is true that wages and profits alone would be insufficient to purchase all the goods produced because of the need to increase prices to cover debt repayments. However, the interest and principle payments distributed by industry also become purchasing power, and would equal any funding gap if they were spent on consumption or investment. However, if interest and principle payments received were not spent on consumption or investment, then a shortfall of aggregate demand would be experienced as has been indicated. Considering bank loans under a financial system where banks create the currency, since payments result in the decrease in deposits, these will cause a shortfall on aggregate demand. However, new loans and deposit interest payments can increase demand when these newly created deposits are spent on consumption or investment. Thus we see that both Douglas and those that followed “Say’s Law” were incorrect, as they failed to account for the manner in which financial transactions affect aggregate demand.

Douglas’s proposal to distribute debt free money must be seen in a positive light, for it would have been a source of aggregate demand, and thus helped maintain the stability of the system.

While Douglas appeared to intuitively know that there was something wrong with the financial system, and attempted an explanation of what it was, it appears that he did not fully understand the consequences of allowing banks to create the means of exchange. More importantly, it appears that he failed to understand the consequences of debt on aggregate demand (being able to both increase and decrease aggregate demand). It is this ability to contract aggregate demand through interest and principle payments that creates economic contractions, and not some “timing differences”.

A point should also be made that any effects of technological growth are reflected in this financial model by a change in the “# of units produced”. With currency remaining constant, an increase in production through technical advancement will see prices fall. Currency is created or destroyed through loan growth or repayment regardless of technological advancement. Perhaps it is important to touch on a point not well understood. People believe that there must be economic growth to earn currency to repay loans. This is the same as saying that we get currency from economic activity, which can then be used to repay loans. These statements are false. No economic activity has ever created any currency. Currency is only created by within the banking system, or through

the issue of government notes. By way of comparison, consider the following statement by Irving Fisher:

"For, under the 10% system it is true, as we have seen, that an increase in business, by increasing commercial bank loans, and so increasing the circulating medium, tends to raise the price level. And, as soon as the price level rises, profits are increased and so business is expanded further. Thus comes a vicious circle in which business expansion and price expansion act each to boost the other- making a "boom"ⁱ. Reversely if business recedes, loans and prices also recede, which reduces profits and so reduces business volume- again causing a vicious circle, making a "depression". But take away the 10% system and you take away these unfortunate associations between business and the price level." (p.164 100% Money)

Irving Fisher felt that the expansion of bank lending would lead to booms, and the contraction of bank lending lead to depressions, mainly due to the change of the price level as a result of lending activities. He thus desired to move away from a financial system where the level of money was determined by the amount of bank loans which he saw as being unstable (though he felt that the 10% system(fractional reserve banking) combined with a stabilization plan would work better than an unmanaged 100% system). Strictly speaking, the above statement by Irving Fisher, while containing elements of truth is incorrect. It does not consider that the economy may be operating below capacity, with some expansion possible without affecting the price level. It does not consider what affect that the extra production will have on the price level (lowering it), and it does not consider the effects of interest payments on the price level (through the reduction in the money supply). If we consider the equation:

$$(\text{amount of currency}) * (\text{velocity of currency}) = (\# \text{ units produced}) * (\text{price/unit})$$

it is only considering how the (amount of currency) is influenced by changes in commercial loans, and not by the payment of interest. It does not consider that an increase in (amount of currency) may lead only to an increase in (# units produced), nor does it consider how an increase in (# units produced) due to an increase in productive capacity will affect the price level for any given money supply. This shows the error of those that take the view that price fluctuations are the cause of the business cycle. Most importantly, it failed to understand the direct effect that financial transactions have on aggregate demand.

As I have shown, over time, loans that increase productive capacity must eventually be deflationary as the inflationary effects of creating currency through new loans are counterbalanced by the deflationary effects of the destruction of currency through increasing interest payments as well as increases in the (# units produced). Continual business expansion will lead to eventual bankruptcy as business incomes fall below costs. Even if operating costs fall in proportion to the fall in prices, interest costs will eventually exceed profits. Should business stop expanding, then new loans stop, and with interest payments continuing, currency supply will continue to contract, with the same result, a continual drop in the price level, and income falling below costs. Due to interest destroying currency, such a system is not self-sustaining.

A financial system with currency based on debt, or allows interest to be charged on loans, will be unstable and eventually implode, regardless of how efficient or technologically advanced an economy is.

Impact of Speculative Debt on the Economy and Financial System

Let us now consider the effects on both GDP and the financial system as a result of this investment or speculative debt. To begin with, let us consider a closed system consisting of 10 units of currency, 10 units of loans, and 10 units of land. An equilibrium exists where people are equally happy to hold either 1 unit of land or 1 unit of currency, and thus the value of one unit of land is one unit of currency. Some people wish to purchase some of the land, and through the banking system, 10 units of currency and 10 units of loans are created. We now have a closed system of 10 units of land, 20 units of currency, and 20 units of loans. The equilibrium value of 1 unit of land would be 2 units of currency. Assume now that the creation of new loans stop and repayments begin to repay loans over a 5-year period or 4 units per year plus interest. Assuming a 10% interest rate, we have the following table.

	Currency (start)	Loans(start)	Currency(end)	Loans(end)	Land value(start)	Land value(end)
Year 1	10.00	10	10.00	10	1/unit	1/unit
Year 2	20.00	20	14.00	16	2/unit	1.40/unit
Year 3	14.00	16	8.40	12	1.40/unit	.84/unit
Year 4	8.40	12	3.20	8	.84/unit	.32/unit

After reaching a high of 20, the currency supply has fallen to 3.20, which has reduced the price of land from 2/unit to .32/unit

In our examples, we have assumed that currency was either only used as a medium of exchange in economic production or consumption, or as a medium of exchange in purchasing existing assets. Since currency is used for both of these, we will show the interaction between both of these systems.

Consider an open economy that has 10 units of land, 50 units of currency, 50 units of loans, and an equilibrium price of land at 1 unit of land = 1 unit of currency. Here it is assumed that people are equally happy owning 1 unit of currency or 1 unit of land, and that 40 units of currency circulate within the economy. Again, assume that 10 units of currency and 10 units of loans are created in which to purchase land. What is the effect on the economy and land prices? The answer is that it all depends. Should people decide that they wish to maintain the same number of units of land that they own, the price of land will rise to \$2 per unit. Should the people who sell land decide not to own land at all, the price will not change. Generally, the net result will be somewhere between these

extremes. What is the effect on the economy? Again, if the price of land rose to \$2/unit, there would be no immediate effect on the economy. However, if the price of land did not increase, extra 10 units of currency would be spent on the economy. People who sell land have an option of using the currency to finance expenditures (increase GDP) or holding on to the currency. Should they decide not to spend this currency, then as in the first example, the amount of currency relative to the units of land will increase and the price of land will increase. Should this currency be spent, the GDP will increase by the amount of currency spent. If the price of land increased to \$1.50/unit, extra 5 units of currency would be spent in the economy. We thus see that the results of investment borrowing will increase GDP by the difference between loans created and the increased value of land.

While this may be a theoretical truism, in a world that is constantly changing, with people's perceptions of value subject to change and manipulation, over a certain period of time what we can observe is something quite different. Price changes occur at the margin, generally representing a small percentage of the whole yet affecting the perceived value of the whole.

In our above example, should only 4 units (of the 10) of land be available for sale, and the holders of the new 10 units of money wish to exchange this for land, the value of the land would need to increase to more than 1 unit of land = 2` units of money. Carrying on with this example, over the short term, expectations of price movements tend to be based more on historical trends than on economic fundamentals. Perhaps this is based on the human tendency to view what is observable and not search for the forces and actions creating our perceived reality.

In any case, in most cases, the following generalities will be observed.

When new loans (and currency) are created to purchase existing assets

- prices of the asset class will increase
- some of the newly created currency will be spent in the general economy, thus increasing GDP
- there is an equilibrium price between currency and the asset class, though in the short term, there may be a substantial distortion between the market price and equilibrium price.

Mathematically, we are again seeing the following equation

$$\text{GDP} = (\text{amount of currency}) * (\text{velocity of currency}) = (\# \text{ units produced}) * (\text{price per unit})$$

When the amount of currency is increased to purchase existing assets, if the velocity of currency decreases (people decide to hold on to the currency from the sale of their asset), then GDP will remain constant. However, if people decide to spend the currency from the sale of assets (velocity of currency remains constant), then GDP will increase. It is important to reflect on factors that affect the velocity of currency and the effect on GDP. When earnings are spent to purchase existing assets, and not expenditures, then GDP will fall which is reflected in a decline in the velocity of currency. When people receive currency from the sale of assets, if they spend this currency on expenditures, then GDP

will increase which is reflected in an increase in the velocity of currency. If people receiving currency from the sale of assets decide also to purchase assets with this currency (or hold the currency as an asset), then GDP is unaffected. Put differently, it is best to think of $MT=ME+MI$, where;

MT= total money supply

ME = money used in business economy

MI = money held as an alternative to existing assets

And $GDP= ME*VME$

Should people or firms spend less than they earn, then there is a transfer of the use of currency from ME to MI, thus reducing GDP and increasing asset prices. Conversely, if people or firms spend the currency that they were holding as an investment, ME increases, MI decreases, with GDP increasing and asset prices falling. A shift to ME from MI will raise income while lowering asset prices. The combination of a lower price and greater income will increase investment returns, and encourage currency to flow back from ME to MI, and so we see a natural equilibrium between these two supplies of money. Similarly, a movement to MI from ME will lower GDP while raising asset prices, thus reducing investment returns. This will encourage currency to flow back to ME, thus maintaining a natural equilibrium.

If we consider an increase in MI, (say from loans to purchase real estate), this will increase the price of assets while leaving GDP unchanged, thus reducing investment returns. This will encourage currency to flow from MI to ME, thus increasing income (GDP), and reducing asset prices until equilibrium is reached. Similarly, an increase in ME, (say from new loans to purchase automobiles), will increase income without changing asset prices. This will increase investment returns, and currency will flow from ME to MI until the equilibrium is re-established. The reverse of these flows is also true, when currency is reduced from payments of principle or interest.

The above analysis can be used to provide a greater understanding of the factors affecting the U.S. stock market. This market has increased due to a large amount of currency flowing into the market. If this currency had come from reducing expenditures, this would produce a negative effect on GDP. If this currency was created through new loans, then this would not affect GDP. If people decide to sell some assets to increase expenditures, this will increase GDP and reduce the value of these assets. If people decide to borrow against the value of these assets to finance expenditures, this will increase GDP while maintaining the value of the assets.

Impact of Repayment of Loans

Now let us consider the effects when new loan creation stops, and repayment begins. The first point to remember is that new currency is created by the amount of new loans created. However, currency is destroyed by the amount of loans repaid plus the amount of interest paid. That is, even if the total amount of loans outstanding remained the same, each year currency would be destroyed by the amount of interest paid.

There are two sources of repayment of loans. Either currency circulating in the economy can be reduced, or some currency held in lieu of property can be reduced, or some combination of both. In the first case, GDP will fall as the currency circulating in the economy falls. In the second case, the price of land will fall, as there is now less currency held in lieu of land. In reality, some combination of these two is likely to occur. This will change the rising price trend to a falling one and will alter future expectations. Should market values have risen substantially above any equilibrium price, they will now start to fall towards the equilibrium price, mindful that the equilibrium price is also falling as the currency supply is falling. The effect on GDP is to decrease GDP by the amount of principle and interest paid as a result of reducing expenditures multiplied by the velocity of currency.

A point should be made here about the stability of the banking system. Loans are generally secured by collateral (land) and repaid by income. As the granting of loans will increase both land values, and GDP, this will have a positive effect on both collateral values, and income repayment ability. However, once credit creation stops, both collateral values and income will fall. A relatively large credit expansion will increase GDP while increasing land values substantially above equilibrium values. When such an expansion stops, and land values fall back to equilibrium values, many loans will be left unplayable, especially those made in the latter days of the credit expansion. As banks are highly leveraged businesses, this could easily lead to significant bankruptcies in the banking industry.

If we consider debt that is created to purchase existing assets, the creation of this debt is likely to partially increase GDP and partially increase asset prices, though the creation of debt is likely to have a much smaller impact on GDP than debt created to fund expenditures. Repayment of this debt can come from the sale of assets purchased, or by reducing expenditures in the economy. Should none of the existing assets be sold to repay debt, then all of the payments of principle and interest must be made by reducing expenditures, which will reduce GDP, by the amount of principle and interest payments multiplied by the velocity of currency.

In this way, the creation of a credit asset bubble can have a very negative effect on GDP. In this case, ever increasing amounts of debt will cause a substantial increase in asset prices. This propels prices of these assets far above the real value and we generally see the interest costs on these loans far exceed investment returns. Once credit expansion stops, asset prices will fall to a fair value, which will leave loan balances far above asset prices. New loans cannot be repaid at all from the sale of assets, and can only be repaid from a reduction of expenditures, which will reduce GDP, by the amount of payments of principles and interest.

Again, to emphasize the mathematics of these three loan types:

- 1) Loans to purchase existing assets will increase these asset prices in a model where the newly created currency is not spent in the productive economy. As the prices of these assets rise, the value of investment returns fall given that the investment return has

remained constant. In extreme cases, loan growth and asset valuations will be such that loan payments far exceed investment returns. When such a credit expansion stops, asset values will fall to a level that reflects their investment return. Loan values will then be far in excess of asset values and loans cannot be repaid from the sale of assets or from investment income.

- 2) Loans to finance consumption expenditures will result in loans increasing at a much faster rate than the wages of the borrowers, and will eventually see interest costs exceed the wage income of the borrowers. When such a credit expansion stops, the resulting decrease in expenditures will significantly decrease GDP, which will decrease incomes, which will further decrease GDP, creating a downward spiral. With loans and debt repayment remaining constant, and income falling, loan repayment is impossible.
- 3) Loans to finance increased production will lead to falling unit prices, which will decrease investment returns. Thus, the greater the increase in loans, the greater is the fall in unit prices and the ability to repay these loans. Even if production costs were to fall with a falling price level, interest costs will eventually exceed profits. When such a credit expansion stops, the absence of new loans as well as loan payments will decrease GDP. This will further reduce either the number of units produced or the price/unit of both, further reducing the ability of business to repay loans. Again, once the credit expansion stops, loan repayments are impossible.

In any economy, all three types of loans will have a cumulative effect, and in the short term this effect will appear to be positive. Credit growth that finances both increased expenditures (either by consumers or governments) as well as business investment will both increase GDP. In addition, the deflationary effects of the business expansion will provide a balance to any inflationary effects of expenditure expansions. Credit growth that finances existing assets will increase asset values. As asset prices rise, they will provide security for increased borrowing while providing the justification for lowering the savings rate.

However, once credit expansion stops, the financial system will implode. When the productive economy is intimately connected to the financial system, the effects will be most traumatic.

One of the policy points in this exercise of examining a debt-currency based economy, is that it is deflation, not inflation, which is the cause for concern. It would also appear that a deflationary spiral would be difficult to stop. In an economy financing the increase in productive capacity, prices will turn negative while loan growth and currency supply growth are still positive. This will lead to a contraction in demand for loans to increase production, which further reduces prices, and so a downward spiral is created. A decrease in interest rates will reduce the total interest paid, which will have a positive affect on the currency supply and the price level. However, this is only temporary, as for any given interest rate, the total interest paid will again start to increase over time.

Whenever debt (and currency creation) stops increasing, the economy will enter a downward spiral. Thus, the only way for such an economy to continue operating is an ever-increasing level of debt (and currency).

Is There a Maximum Level of Debt?

The question must now be asked if there is a maximum level of debt, and what factors could influence future debt increases. Since the creation of debt (and bank deposits) is a simple bookkeeping entry, these can be increased without limit, and so there is no maximum level of debt. However, with each type of debt creation, there are factors that will tend to restrict new debt (unless these factors are ignored). For debt created to increase expenditures, loan growth will exceed any income growth. It then follows that the value of loan payments will increase faster than income, and at some future date, loan payments will exceed what can be repaid from income. Even here, people can continue to borrow, and banks continue to lend, if they ignore the repayment of loans.

For debt created to finance production increases, the continual increase in production will eventually lead to falling prices. This will continually reduce profit margins and eventually make the business unprofitable. Here again, it is still possible for banks to continue to finance losses, and even increase production further.

For loans to purchase existing assets, this will lead to rising prices for these assets. This will lead to lower investment returns for these assets. Eventually, interest costs will exceed investment returns, but even here this does not mean that loans will stop, with new loans to pay interest expense and further purchase of assets.

In order for the economy to grow, the currency supply must increase. In a financial system where banks create the currency, this means that loans must continue to grow. As we have shown, there must come a time when new loans do not make logical sense if we consider that loans have a requirement to be repaid. When something happens that causes people to stop borrowing, or stops banks from lending, then the economy will begin to implode. The greater the extremes of credit creation, the more powerful will be the implosion. There is another factor that must be maintained for this system to continue to operate. Not only must people continue to borrow, or bankers continue to lend, but also depositors must leave their deposits within the banks, even knowing that the loans securing these deposits can never be repaid. This can hardly be considered to be a stable financial system. It should be noted, that in a practical sense bank deposits are a closed system. While banks have a legal obligation to repay the debt with money, the reality is that total bank debt (deposits) exceeds the total amount of money to such a degree that banks are able to meet only a small percentage of their legal obligations. Deposit holders cannot get money out of the banking system. Bank deposits can only be exchanged amongst deposit holders.

Moreover, a financial system based on banks creating the currency is not self-stabilizing. People and firms tend to borrow in good economic periods when profits and incomes are strong, and not to borrow in poor economic times when profits and incomes are weak. In poor economic periods, there are not as many profitable areas to invest in, and in fact many businesses may be losing money. In poor economic times, since their incomes are reduced, people see themselves as unable to repay new debt. This leads to a rising currency supply in good economic periods, and a falling currency supply in poor

economic periods, which is the exact opposite of what is required in order to have stable economic growth.

“All that is necessary is to have a system of creating new money if the price-level tends to fall and unsaleable goods to stack up, and to destroy it if they get scarcer and prices tend to rise. This is quite impossible under the existing banking system, but quite possible under a rational, scientific, and national system, designed in accordance with the physical realities to which production and consumption of wealth must conform. To imagine otherwise is to attempt to preserve a system in which money is issued not to distribute wealth, but as a source of revenue. If there is one lesson that the history of money enforces, it is that when its issue is used as a means of enriching the issuer, whether the issuer be the State, the bank or the counterfeiter, it is the most disintegrating and dangerous power ever created by man.” Frederick Soddy

Currency is the lifeblood of our financial system, and in order for economies to continue to expand, the currency supply must continue to grow. One of the major problems with an economy based on a debt-currency system is that such a system both creates currency as well as destroys currency. What is required is a financial system where currency grows at the same rate as the productive economy. We must move away from a system where growth cannot occur without the increase of debt. In the words of Frederick Soddy;

“The invention of a new currency, as a debt to the issuing bank which could never after be repaid, because repayment destroyed the currency and the means of payment, put the whole wealth-producing system of the world in pawn to the banker. Ever after the world was in his absolute power... It is bad enough to be put in the grip of the money-lender who does lend money, but it is a million times worse to be in the grip of the pretend money-lender who does not lend his own money but creates it to lend and destroys the means of repayment just as fast as the debtors succeed in repaying it. This is a surrender of the powers of life and death over the nation’s economic life into the hands of irresponsible imposters.” Frederick Soddy

We will now consider the effects of other financial transactions of the banks on the level of bank deposits (currency), and consider how this affects the economy.

As we have shown, the payment of bank operating expenses will decrease the banks equity account and increase bank deposits. When this newly created currency is spent in the economy, it will have a direct affect on GDP.

When banks purchase of non-financial assets (such as office equipment or vehicles), this will increase bank assets and deposits. When these assets are newly created, this will have a direct effect on GDP. When they are existing assets, there will not be a direct effect on GDP. The payment of interest on deposit accounts will reduce equity and increase deposit accounts. When deposit holders spend this currency on consumption or investment, it will increase GDP. Otherwise, it will not have a direct effect on GDP.

The payment of bank dividends will decrease the banks equity and increase the deposit accounts of the shareholders. When the shareholders spend this currency on consumption or investment, it will increase GDP. When shareholders decide not to spend this currency (leaving it to increase through compound interest), or use it to purchase an existing asset, it will not affect GDP. We have also identified the financial audit trail whereby vast sums of currency can be transferred to the shareholders of a bank. Loans, being simple financial transactions without physical limit are created in vast amounts with a corresponding increase in deposits. Interest payments on these loans reduce the deposit accounts of the borrowers while increasing the equity of the bank. Dividends are then

paid to shareholders, decreasing the equity of the bank and increasing the deposit accounts of the shareholders.

“Psychologically, the economic aim of the individual is, always has been, and probably always will be to secure a permanent revenue independent of further effort... Economic and social history is the conflict of this human aspiration with the laws of physics, which make such a per-petuum mobile impossible, and reduces the problem merely to the method by which one individual may get another individual or the community into its debt and prevent repayment, so that the individual or community must share the produce of their efforts with their creditor.” Frederick Soddy

“Unlike wealth, which is subject to the laws of thermodynamics, debts do not rot with old age and are not consumed in the process of living... For sufficient reason, the process of compound interest is physically impossible, though the process of compound decrement is physically common enough. Because the former leads with passage of time ever more and more rapidly to infinity, which, like minus one, is not a physical, but a mathematical quantity, whereas the latter leads always more slowly towards zero, which is, as we have seen, the lower limit of physical quantities.” Frederick Soddy

This concept of compound interest sends both the deposits of the creditor, and the loans of the debtor towards infinity, which while mathematically possible, is physically impossible in the sense that currency is a claim on the real assets of the community. Now, let us consider the wealth transfer process. Interest on bank loans is paid to the bank, which increases its equity. Now let us assume that all bank profits are paid as dividends into the accounts of the shareholders, and these funds are not spent, but grow due to compound interest. This causes the money supply that is used in the transactions economy to be governed by the equation $Mey_2 = Mey_1 + NL - PP - IP$. The net result is that while the economy is constant or growing, both the loans of the debtors and the deposits of the shareholders will both be growing and approaching infinity. Once IP (interest payments) exceed NL (new loans) (assuming no principle payments), the Me (money used in transactions) money supply will begin to implode, causing income to fall with loans continuing to rise. (The deposits of the bank shareholders also continue to rise.) Eventually, the economy collapses, loans are defaulted, and the bank shareholders use their deposits to effect a major wealth transfer.

Many monetary reformers have claimed that in creating a loan, not enough currency is created to repay both the principle and interest. While this is true, bank deposits can be created by other transactions. As we have shown, paying expenses and deposit interest, purchasing non-debt assets, or paying dividends, all increase bank deposits (currency), without increasing debt.

However, in order for borrowers to obtain any of this “non-debt” currency which they require to repay loans, they must be willing to sell tangible assets or valuable services for currency that was created through bookkeeping entries. Moreover, should shareholders decide not to spend dividends, but let their deposits compound towards infinity, it is impossible for borrowers to obtain sufficient deposits to repay loans.

This does not represent an exclusive list of transactions that will affect the amount of deposits on a banks balance sheet. Any transaction that affects deposits will change the total currency supply. Here we will mention, that “obligations related to securities sold short”, “obligations related to assets sold under repurchase agreements”, and “other liabilities”, will also affect total deposits.

A financial system where banks create the currency also gives bankers the capacity to create severe financial distortions. At the heart of today's bubble is a massive credit expansion. As noted, increasing loans increases spending, which increases incomes, profits, and government tax revenues, all of which have a positive effect on GDP. However, with a creation of such a bubble, there are forces that tend to counterbalance this bubble. In a consumer driven economic bubble such as we find in America, increases in consumer demand will lead to an increase in imports. This in turn leads to a decrease in the exchange rate, which in turn leads to higher inflation. Generally speaking, this increase in inflation in an economy experiencing a credit expansion will lead to higher interest rates which will tend to decrease demand and counterbalance the expansion. Should central banks attempt to keep interest rates low, thus creating an environment of low or negative real interest rates, there will be additional downward pressure on the exchange rate, as investors will seek to exchange the deposit accounts of the currency with lower interest rates for the deposit accounts of currencies with higher interest rates.

Thus, in order for the bubble to intensify, measures must be developed to counter the effects of an increasing trade imbalance. This has been accomplished through what is called the "Yen Carry Trade". The "yen carry trade" is a series of financial transactions within the Japanese banking system that has not only allowed the American financial bubble to be created, but has added greatly to its rise. Within the Japanese banks, offsetting bookkeeping entries have created vast amounts of new loans and new Yen deposits. These new Yen deposits are then exchanged for U.S. dollar deposits in sufficient quantity to not only offset the effects of a trade imbalance, but also significantly increase the value of the U.S. dollar. This Japanese created liquidity has had a significant effect on America, providing funds not only to finance the trade imbalance, but also funds for the purchase of U.S. government bonds (thus holding down long term interest rates) and investments in the U.S. stock markets (thus helping to fuel the speculative fever). It must be stressed that the creation of such a large financial bubble in America would not be possible without the "Yen Carry Trade". It truly attests to the power given to bankers to manipulate the world economy through the creation of currency, even to the point of creating currency in one country to control the economy of another.

For the purpose of this article, I will discuss the events that will occur, should the loans involved in the "Yen Carry Trade" be repaid. The United States has a large and growing trade deficit. In addition, as the world's largest debtor nation, there is a significant capital account deficit. Offsetting these outflows has been large capital inflows into the U.S., such as the "Yen carry trade". As these capital inflows slow, due to the large current account deficit, we will notice a fall in the value of the U.S. dollar. As the dollar continues to fall, there will be pressure on many of the investors in the "Yen carry trade" to sell their U.S. assets and repay their Yen loans. This will first involve a major sell off on the U.S. bond and stock markets to convert to U.S. dollar deposits. Then, this massive sale of U.S. dollar deposits (to convert into yen deposits to repay yen loans) at a time when there is a large current account deficit will accelerate the decline in the value of the U.S. dollar. This will add greatly to future inflation expectations, further accelerating the

sell-off of the bond and stock markets. Consumers, seeing the value of their savings fall, will further accelerate the fall as they sell to meet margin calls or salvage their savings before further falls. More importantly, there will be a major reduction in consumption due to rising interest rates, a falling dollar and stock market, all creating a negative wealth effect. In effect, what we will observe is a severe contraction in credit growth. This will put the economy into a major downward spiral with falling employment, profits, and government tax revenue further diminishing demand. It is important to note that a major source of government tax revenue is due to capital gains income, and that once taxpayers start claiming capital losses, the change in tax revenue will be severe. The banks will now be re-evaluating how new loans are given, paying greater attention to the ability of the consumer to repay loans from income. Due to the fall off of income and the major credit expansion over the last few years, very few new loans will be given. In addition, it will be much more difficult to use stock margin accounts to fund consumer purchases.

Without new loans to help repay old ones and finance consumption, consumers will now face a major decline in consumption. For example, if loan payments equal 14% of current income, in the absence of new loans, consumption will decrease by over 14%.

Corporations, facing rising interest costs and collapsing demand, will see profits greatly diminished. This will be another factor driving down the stock market. Layoffs and insolvency's will be commonplace as corporations attempt to deal with falling demand, tightening profit margins (as over capacity leads to more competitive pricing), and rising interest costs.

Without elaborating further on events occurring in such a nightmare scenario, it must be understood that when a credit contraction does occur, based on logical reasoning, the above events will happen. It must be also be understood, that the solution to the financial Armageddon described above lies first in understanding how our present financial structure operates, and finding the political will to alter this structure.

What can be done? First we must understand that our financial system is a mathematical man-made construct. We simply must replace our present financial structure, which enslaves us all, with an alternate financial structure that is equitable and personally liberating. Most of the Banks assets, consisting primarily of bonds and loans were acquired through illegal contracts. One possibility is for the government to print up government notes equalling the total assets of the banks (in Canada, about \$1.4 trillion) and purchase the assets of the banks. This would first stabilize the financial system, as now each dollar in deposits would be secured by a dollar in government notes. This would not affect the currency supply, as it would not affect either currency in circulation or bank deposits. The government now owns \$1.4 trillion in revenue producing assets, the payments on which will repay all national debt, and fund most government expenditures for many years. Income taxes could be greatly reduced. This massive reduction in taxes, and stability of our financial system would greatly reduce the stress that each one of us feels.

Alternatively, the present financial system could be allowed to collapse, wiping out both loans and deposits. The government could then create and distribute sufficient government notes (these could be digitally created) for the proper functioning of the economy. A national dividend could distribute a specific number of notes to each person. Businesses and individuals requiring more could borrow from the government. Payments on these loans could then fund government operations in lieu of taxes. With personal, corporate, and government debt eliminated, the government in control of money creation, and a national dividend of money given to all people, financial stress would be eliminated, and the economy would function in a much more efficient manner.

Future loans would require the banks to first borrow surplus money and then re-lend them (this is how most people believe that the current system operates). The creation or repayment of loans would no longer affect the currency supply. Should it be decided that due to the growth of the economy, the currency supply should be expanded, then new government notes could be issued to each person as a national dividend. Alternatively, the government could target areas of economic expansion by lending the newly created money to specific industries. Another option would be for the government to spend these newly created government notes in lieu of taxation. These are policy decisions for the appropriate government officials to make.

Money creation would be tied to the living capital of the nation. What does living capital mean? This includes our human, social and natural capital of the community, in other words our overall well-being. The community, through government, would maintain a living capital “balance sheet” that could track changes in the health and sustainability of all living capital assets of the community. Money creation should be performed by government for the good of all society, including the careful and sustainable stewardship of our environment, the health of our households, and the well-being of the whole community. Only enough money would be created by the government, accountable and payable to the people (households) in community, to fulfill its proper function as a means of exchange of time and physical resources (real wealth). Money would thus be returned to a noble place as a medium of exchange of real or living wealth.

There is a better way. This must come first by recognizing the flaws and inequities of the current money system and then by creating a new and more sustainable system; one which celebrates that which makes life truly worthwhile.

As a special case, all debts to the third world country's can be eliminated. Some of the assets purchased from the banks will include their loans to third world countries, either directly or through their loans to the World Bank or IMF. As an expression of our concern that debt enslavement has caused the people of these countries, this debt could be simply forgiven. This will not affect the money supply of any nation, and since this debt was acquired for only the cost of printing up government notes, it will not cost any nation to do so.

It is estimated that 1.2 billion people exist on about \$1 per day, which results in the deaths of millions of people each year through disease and starvation. We must ask how

long we must put up with a financial system that marginalizes and defrauds the most vulnerable, while concentrating wealth and power amongst a global elite.

“The proposal, therefore, is that the Government should issue the necessary money to the banks in exchange for the borrowers collateral, so that henceforth these borrowers owe, not the banks, but the nation which, not the banks, has supplied the goods.” Frederick Soddy

Change to a 100% Reserve Banking System

The following illustrates in a simple manner, how a country would change from a fractional reserve banking system to a 100% reserve banking system. We will consider Canadian banks, with about \$1.4 trillion in assets.

As a simplified example, we will consider that the only assets of the banks are bonds and loans, and the only liabilities are deposits and owners equity.

Fractional Reserve Balance Sheet

Assets

Loans

Bonds

\$1.4 Trillion

Liabilities

Deposits

Equity

\$1.4 Trillion

The government now prints up \$1.4 Trillion in government notes, and purchases the assets of the banks. The banks balance sheet adjusts as follows:

100% Reserve Balance Sheet

Assets

Gov. Notes

\$1.4 Trillion

Liabilities

Deposits
Equity

\$1.4 Trillion

The government is now the holder of \$1.4 Trillion in revenue producing assets, which it uses to repay the national debt (eliminating all government interest costs), with the balance of funds used to fund government expenditures, further reducing taxes.

The benefits to the community:

- 1) The monetary base is stable. The money supply can no longer be manipulated (either increased or decreased) by private interests, nor used as a source of revenue by these interests.
- 2) Financial distortions and the resulting misuse of human and environmental capital will be greatly reduced.
- 3) A major source of the fraudulent transfer of real wealth, and the concentration of economic and political power will be eliminated
- 4) All government debt is repaid, saving the community both the payment of principle and interest payments.
- 5) The government will have a major source of revenue outside the tax base; further allowing taxes to be reduced.

Summary of Concerns when Banks Create the Currency of a Nation

In summary, the major concerns when banks create the currency of a nation are;

- 1) Banks are able to create loans and deposits by means of the exchange of mutual liabilities, and due to the interest differential on these offsetting liabilities; they are able to transfer significant amounts of real wealth into their hands.
- 2) Banks, by being able to create loans and deposits at will, can create severe financial distortions as they direct this newly created money into specific areas. The “Yen-carry trade” is a good example of this.
- 3) As banks create loans and deposits, this will be seen to have a positive effect on GDP. However, as loan growth stops, this will lead to a contraction of GDP. By being able to create and control periods of economic expansion as well as economic contraction, bankers are able to effectively speculate in the economy, further concentrating wealth and power within their control.
- 4) It is a classic pyramid scheme. It is based on fraud and deceit, is not self-sustainable, and will implode. As bankers attempt to maintain their pyramid scheme by ever increasing amounts of loans, as previously shown, financial distortions are created that will eventually implode the financial system.

Again, it must be stressed, that even with all of the benefits of a financial system where governments create the currency, instability will be introduced into this system, if interest is charged on loans. Simply put, currency must be used as a means of facilitating the exchange of goods and services and increasing production in a sustainable manner. Currency must not be used as a source of revenue.

We should think of currency as a community utility, a utility that will be used to enhance the well being of every person, especially the most marginalized. As an economist, we would determine the optimum level of currency in an economy, and the level of annual increase in currency that would most benefit the economy. As a policy maker, we would have to consider who should benefit from the annual increase in the currency supply. A centralist would have all the benefits remain with the government, which would distribute according to its policy's. A decentralist, would have an annual payment made to all citizens.

The key point that I am making is that what currency is, and how it is created, will create very different economic effects. In today's financial system, currency is either created through the printing of Government Notes, or in the banking system by the creation of bank deposits. With Government Notes equalling about 2% of bank deposits, most currency is created through deposit creation by the banks. While we consider both Government Notes and bank deposits to both be currency, we must understand that they are very different, and it is in understanding how they are different that we are able to more fully understand how our economic structures operate.

A point should be made about other models of the business cycle. Real-business cycle models omit monetary disturbances as a source of the business cycle. Thus, the inability of a person to get a new car loan should not affect consumption, or having to make loan payments should not affect the ability of a person to consume the whole of his earnings. Such models are not true on a microeconomic level, and by expansion on a macro-economic level.

Keynesian theory also lacks microeconomic foundations. It gives current income an important role in determining consumption, yet does not consider how consumption is affected by new loans (increasing it) or by loan payments (decreasing it). Nominal currency supply is considered set by the government, totally ignoring the role of banks in creating currency. The role of currency in determining interest rates is seen as affecting investment, but the effects of creating currency on the economy are ignored.

Classical economists claim that a lack of currency has no effect in the long run, because prices are assumed to adjust to however little currency is around.

This is a false assumption, which is contrary to history and simple logic. A falling price level will reduce the income of a business. Even if costs adjust as well (and in the short term, they may not), profits will fall. Loans and loan payments do not adjust, but remain constant. With a falling price level, profits will eventually fall below what is required for debt repayment, often resulting in bankruptcy and the wind-up of the business.

Throughout history, whenever the currency supply has contracted, so has the economy.

In addition, in order for the currency supply to fall, the banks must contract their balance sheets, that is total bank deposits must decrease. While several factors could contract total deposits, the major factor would be a reduction in bank loans. While an increase in bank loans will increase bank deposits, increasing demand and GDP, a decrease in bank loans will decrease bank deposits, decreasing demand and GDP.

A falling currency supply (decrease in bank deposits) will thus result in both a decrease in demand, as well as profit margins, leading to bankruptcies and a contracting economy.

How this event, (the contraction in bank deposits), with substantial immediate and negative short term effects will have no long term effect, I will leave to classical economists to explain. It will certainly continue to impact those that have lost their jobs and their assets. All this statement (a lack of currency has no effect in the long run) does, is justifies the transfer of wealth and real resources that results from a contraction in bank deposits.

From an outside point of view, it seems that all of the logical contradictions and false economic theories taught at universities are designed to obscure what really happens in an economy and cover up a fraud now totalling tens of trillions of dollars on a world wide basis.

By comparison, this economic model has started with the basic truism of the Quantity Theory of money. It has considered how financial transactions affect this equation. I have considered the views of other monetary reformers such as Douglas or Fisher, and have shown that while they attempted to bring monetary considerations in their understanding of the business cycle, that their ideas, while presenting worthwhile alternatives, fell short of a complete understanding.

As I mentioned at the start of this article, the understanding of our present financial system is crucial in economic analysis. While some have understood that the creation of bank loans also creates currency, and the repayment of bank loans destroys currency, none have applied this understanding to the Quantity Theory of money. Most importantly, it does not appear that many others have understood that the payment of bank loan interest also destroys currency, and that this has a most profound and major affect on the business cycle. It is this fact alone that ensures a total economic collapse. The financial transactions that I have shown at the start of this article covering banking transactions are very basic. However, what I have attempted to do is to provide a detailed analysis of what these transactions mean, and how they affect aggregate demand and GDP.

Conclusions

This paper represents an economic viewpoint that may be unique in its understanding, and is certainly directly opposite conventional economic thought. The question that one must ask is what is the truth? Is not every work subject to the criticism of those who are unable to commit themselves to understanding it in depth? In my writings, I have argued that mankind seems to have lost the ability to distinguish reality from illusion, mainly because he has lost his ability to distinguish good from evil. He has lost the ability to trust his reason to know the truth and is so swayed into various false doctrines. Those same people, who do not take into account decisive arguments in favor of the truth, will latter follow doctrines and opinions without foundation. Indeed, it is our failure to understand sound economic doctrine that ultimately will lead to our enslavement.

We have just left a century where many have identified it according to their personal point of view. International capitalism has been pitted against materialistic socialism, with few people having the understanding that both are controlled by the same forces, who respect no frontiers and play equally well on both sides. Both powers pretend to give people a total solution to their problems while enclosing them in their nets.

The ultimate test of any theory is its ability to predict and explain actual events. My writings, using logical arguments and sound mathematics have shown that unless we change our financial system, and eliminate the creation of currency by the banks, that we will see the collapse of world stock markets, bond markets, currency's and economies. Mankind must once again seek the truth, and once found live by this truth. The consequences of living a lie will be most traumatic under the light of revealed truth.

John Kutyn
March 16, 2005

Keynes and the Classics, a criticism

“The central error of all present economic thought, is its failure to understand money from its microeconomic foundation”

A few points should be made about the two major present economic camps, the Keynesians and the Monetarists. In these comments, it is assumed that we are operating under a fractional reserve banking system.

First we will consider Keynesian views starting with the Aggregate Demand (AD) and Aggregate Supply (AS) curves. Aggregate Demand represents what all the entities in the economy would buy at different price levels assuming that all other factors affecting aggregate demand remain constant. It is assumed to be downward sloping with demand rising as prices fall. The basic problem with this concept is that price is not an independent variable, that a change in price will change other factors, or will be caused by a change in other factors. To talk about price changing while other factors remain constant then presents itself as a logical contradiction. For example, consider the equation:

$$\text{GDP} = (\# \text{ units produced}) * (\text{price/unit}) = (\text{amount of currency}) * \text{velocity}$$

A rise in the price level, with currency remaining constant, will reduce the # units produced. Alternatively, if we assume that real production remains constant (as Keynes would suggest), then currency supply must increase in order for prices to rise. Under a financial system where banks create the currency, currency is increased when loans increase, and since this currency creation is a source of demand that increases income; it becomes totally illogical to say that all things are remaining constant.

Another problem with AD curves, and in fact with most graphs used in the Keynesian presentation is that they are never strictly definable. In addition, they make an assumption of how people or firms will act, and when people or firms act in a different manner than this assumption, the whole model breaks down.

The AD and AS curves are treated as independent, with a change or a shifting out of the AS curve having no effect on the AD curve. A shifting out of the AS curve will increase production and hence employment income at any given price level. Keynesian analysis assumes that this increase in income will not affect demand, that demand is determined by price and not income. In truth, demand is not determined by price, but by purchasing power. Demand is a function of what is earned plus what is borrowed less loan payments less savings plus dis-savings. It is interesting to note that in the presentation of Keynesian AD and AS curves, it is thought that income will not affect demand, while in analyzing the Keynesian consumption function; it is held that income does affect demand.

The Aggregate Supply curve (AS) represents the quantity of goods and services that businesses are willing to produce and sell at any given price level and again assumes that other determinates of aggregate supply are held constant. It is upward sloping indicating that as prices fall, production will decrease, and with prices rising, production will

increase. The use of the AS curve presents the same logical contradictions as using the AD curve, namely that price is not an independent variable, and a changing price level will be caused by other factors changing or will cause other factors to change.

It assumes that firms will act in some specified manner and when they do not, the model breaks down. For example, a government may encourage production regardless of profitability, with firms financing losses through borrowing.

Now let us consider the LM and IS curves used in Keynesian presentations.

The “LM curve” is a representation of the monetary equilibrium condition and specifies the level of income, which, for different rates of interest makes the demand for currency equal to the supply of currency. The currency supply consists of demand (chequing) accounts at banks and government notes and is considered constant. The demand for currency is considered a combination of the transaction demand and the speculative or liquidity demand. It is assumed that with higher rates of interest, that there will be less demand for speculative money, thus increasing the currency available for transactions, which will then support a larger volume of transactions (a higher level of GDP). Lower interest rates will increase the liquidity or speculative demand for currency, decreasing the currency available for transactions, thus supporting a lower level of transactions (a lower GDP).

The first problem is that the whole question of analyzing currency from its micro-economic foundations is ignored. Today, virtually all transactions are handled through the banking system and it is this system that we must understand in order to evaluate the “LM curve”. Transactions are completed through an exchange of deposits, one deposit is credited, and another debited. Total deposits are increased whenever a new loan is given. Total deposits are reduced with the payment of either principle or interest on a loan. Banks create different deposit types and may restrict the liquidity or use of some deposits. By this we mean the ability to transfer funds from one account to another. For example, funds in a term deposit may not be available to be transferred until a certain date. Deposits are used for a wide variety of purposes; to buy currently produced goods and services, to buy existing real assets such as real estate, to buy financial assets, and to act as a store of value or savings.

The Keynesian “LM curve” fails because it considers only one type of deposit, assumes its value does not change, and assumes it is only used to purchase currently produced goods and services or as a store of value. While the concept of liquidity preference makes some sense, one must ask if liquidity preference is not met by the various choices of the deposits offered. After all, all deposits could be placed in chequing accounts, and the fact that they are not must indicate some sort of liquidity preference is involved. Liquidity preference is determined by a substitution of deposit accounts, and not a crowding out of the transaction use of money. What the Keynesian theory is saying, is that because interest rates are low, I am going to want to hold onto the money in my chequing account and will therefore reduce my consumption. Such a statement is so illogical that I doubt that you will find one person who will adhere to it. In fact, it is the opposite that will happen. With higher interest rates, future consumption will be more valuable, so I will be

inclined to transfer money from a chequing account into a savings account, reduce my current consumption in return for a greater future consumption. This will reduce the transaction demand for money.

The “IS curve” is a representation of the product market equilibrium condition, and it shows the level of income that will yield equality of intended investment and savings at different possible interest rates. It assumes that a fall in the rate of interest will imply a higher level of investment and therefore greater income (GDP).

The model assumes that investment is dependant on the interest rate, that $\text{Investment} = \text{Savings}$, that there is a definite relationship between savings and income, and that if we know the savings rate, we can determine the equilibrium income. There are several problems with this approach. Firstly, savings are not equal to investment. If we consider savings to be that part of earnings that is not spent on current consumption, then what a person saves he has available to invest. If he chooses not to invest, then these funds are withdrawn from the transaction use of money and become part of the speculative component. Should a person borrow to finance investment, then new deposits are created, with these deposits increasing the transaction component of money. These are totally independent events. Should all savings be used for investment, then investment will exceed savings by the amount of any borrowings. Even the definition of savings may not be correct. If a person is making loan payments, then savings would equal earnings less current consumption less loan payments.

One of the most important relationships in Keynesian theory is the consumption function, which shows the level of consumption expenditures and the level of disposable income. It is based on the hypothesis that there is a stable empirical relationship between consumption and income. It infers that as income rises, that consumption will rise but at a smaller amount. While economists can plot historical relationships between income and consumption, this does not imply an empirical relationship. While there is a definite relationship between income and consumption, consumption is also positively affected by new loans, and negatively affected by loan payments. Both of these are excluded in Keynesian thought, which makes income the sole factor determining consumption. Moreover, the claim of an empirical relationship between consumption and income is not strictly definable, nor is it supported at all times by what is actually observed. For example, the U.S. population, currently earning more income than any people in history has a negative savings rate. On the other hand, the Chinese people, with a fraction of the income, have a much higher savings rate. The Keynesian model relies on people acting on how Keynes thought that they should act, and when they act in a different manner, the models totally break down.

Keynesian theory assumes that altering the currency supply has no direct effect on current income, that there is only an indirect effect, with changes in currency supply affecting interest rates, which influence investment. It is felt that the transaction motive is relatively insensitive to changes in the rate of interest, so that the effect of changes in the quantity of currency upon the speculative motive is the major basis upon which monetary management rests its case for control of interest rates. Since the currency supply is

increased when new loans are given, and since the proceeds of these loans are generally spent on consumption or investment (though they can be spent to purchase financial assets or existing real assets in which case they have no direct effect on income), these loans have a direct effect on income, again contradicting Keynesian thought. Currency supply is decreased through interest or principle payments, and since these payments reduce the funds available for consumption or investment, the decrease in the currency supply will also affect income.

While we have already discussed the errors of Keynesian thought regarding the speculative or liquidity demand for currency, we should discuss those factors affecting the demand and supply of currency. The demand for bank deposits and the supply of bank deposits do not have a direct relationship, so it is inappropriate to think of a pricing mechanism such as interest rate that will equate the demand and supply. Deposits are increased whenever loans are increased, and decreased whenever payments of principle or interest are made. The demand for deposits is a result of the transactions demand (which is affected by the overall level of economic activity) as well as deposits held as a store of value (the speculative or liquidity demand). However, an increased demand for deposits will not affect the supply. Should loans stop growing, deposits will contract and approach zero by virtue of interest paid on loans. Alternatively, a continual acceleration of loan growth will continually expand deposits. Severe distortions between the demand for and supply of deposits can be created, and no pricing mechanism will be able to correct these imbalances. If interest rates are not set by the demand or supply of deposits, what then affects interest rates? Here I would suggest that the bond market or central bank policy would be the major determining factors.

This is not meant to be an exhaustive criticism of Keynesian thought, but is sufficient to totally discredit a theory so full of logical contradictions, errors, and over simplifications that we must wonder how it was ever taken seriously. What Keynesian thought did do, was to provide the theoretical justification for massive increases in government spending, thereby increasing government control over individuals and the economy. The massive increases in government debt, both in the third world and industrialized nations have enslaved billions of people, and delivered them into the hands of the banking community.

Classical economists hold that “supply creates its own demand”, that currency makes no difference than frictionally, and that consumption is limited to production. Milton Friedman argued that nominal variables such as currency supply or inflation could not permanently affect real variables such as output or employment. Real variables were determined by real forces.

Say’s law has been stated as follows;

- 1) supply creates its own demand
- 2) since goods are exchanged against goods, money is but a veil, and plays no independent role
- 3) in the case of partial overproduction, which necessarily implies a balancing underproduction elsewhere, equilibrium is restored by competition, that is, by the price mechanism and the mobility of capital.

- 4) Because aggregate demand and supply are necessarily equal, and because of the equilibrating mechanism, output can be increased indefinitely and the accumulation of capital proceed without limit.

Keynes is said to have refuted Say's law, while Douglas has said that it is wrong because prices must be raised to cover loan payments, and thus demand is insufficient. To understand the forces that shape demand, we must understand the cash flow statement for a company.

Sales
Less Funds paid to other firms
Less wages
Less principle loan payments
Less interest loan payments
Equal funds available to owners

When we consider the economy as a whole, that is the sum of all firms, "funds paid to other firms" becomes nil, so we have;

Sales
Less wages
Less principle loan payments
Less interest loan payments
Equal funds available to owners

We are dealing with a simple equation, a truism, that states the following:

Sales distribute sufficient purchasing power, such that, if wages, principle loan payments received, interest loan payments received, and funds available to owners are spent, then supply and demand are equal.

$$\text{Sales} = \text{wages} + \text{principle loan payments} + \text{interest loan payments} + \text{owners funds received}$$

What this equation does not tell us, is if there are other sources of demand, and if wages, loan payments received, and funds available to owners will actually be spent. That is, it does not give us a complete model of demand. We will now examine each component.

Does wages received = currency spent by wage earners?

Personal expenditures are governed by the following equation;

$$\text{Wages received} + \text{deposits created from new loans} = \text{currency spent on consumption or investment} + \text{loan payments} + \text{increase (decrease) in bank deposits (savings)}$$

We see that "currency spent on consumption or investment" or demand, is dependant on four factors, of which "wages received" is only one factor. Particularly, in a financial system where banks create the currency, new loans are not the result of savings, but new currency creation, they are an important source of demand. As loan payments are not distributed to anyone, but simply cause currency to disappear, they are a significant cause

of a deficit in demand. Personal savings result in wage income not being redistributed (lowering demand), while dis-savings results in demand greater than wage income.

Does “loan payments received” = currency spent by those receiving loan payments? This depends on the type of loans involved. Drawing on the above comments, the payments on bank loans will not redistribute currency, but simply cause currency to disappear. This is a significant cause of deficit demand. Other loans, will redistribute currency (currency does not disappear or change), but this could still cause some deficit demand if those receiving the loan payments do not spend it.

Does owners funds received = currency spent by owners?

Again, this is governed by the following equation; Owners funds received + deposits created from new loans = personal spending by owners + investment + increase (decrease) in bank deposits + loan payments.

Considering demand (personal spending by owners + investment), it is affected by four separate items, of which “owners funds received” is only one. Again, where new loans are not a result of savings, but of currency creation, they are a significant factor in demand. This again demonstrates, that when banks create currency, unless new loans are greater than or equal to principle plus interest loan payments, that this will cause a significant deficit in demand.

With deficit demand being the primary cause of business downturns, and surplus demand being the primary cause of business expansions, this analysis, by focusing on the factors affecting demand, also provides a greater understanding of the factors involved in the business cycle. It is important to note that most of these are financial factors (new loans and currency creation, loan payments, savings), and that financial factors will have different affects, depending on the financial system (depending on whether the banks or the government is creating the currency).

The above analysis shows the effects of financial factors on demand assuming the firms continue to exist. Should financial factors affect profitability so that firms cease to exist, then the results will be more traumatic. On a microeconomic level, this analysis has also failed to examine the overall balance of loans in anyone firm, and this can also have a significant affect on production. For example, a firm may have too much short term debt, and too little long term debt, which will restrict working capital and the firms ability to produce. The microeconomic analysis of firms and debt, (both to the structuring of this debt, as well as amount required), and the effects that this will have on overall production, is presently lacking within the economic community.

It is hoped that this analysis will show the errors of Classical or Monetarist economists, who failed to understand the microeconomic foundations of money

John Kutyn
February 4, 2000

The Role of Reserve and Equity Requirements in Fractional Reserve Lending

Reserve requirements are generally viewed as having a major role in the process of currency creation. A typical example has a deposit of \$1000 in government notes being made, which increases reserves by \$1000. With a 10% reserve requirement, the bank, now having excess reserves, will lend out \$900 of these excess reserves, which on being deposited, allows another loan to be given, and so on until \$9000 in new loans are created. Such an example is technically incorrect.

What happens is that the initial deposit of \$1000 in government notes increases both deposits (liabilities), and government notes held (assets) of the bank by \$1000. There is no extra money, as assets continue to equal liabilities, having increased by equal amounts. With the bank paying interest on deposits, this will result in expenses increasing with revenues remaining constant. Bank reserves (government notes held) have increased which will allow the bank to technically increase total assets. The bank then creates new loans totaling \$9000, which also results in deposits increasing by \$9000. The net result is that assets increase by \$10,000 (\$9000 in loans and \$1000 in government notes), and liabilities increase by \$10,000 (\$10,000 increase in deposits). To earn a profit, interest income on loans of \$9000 must exceed interest expense on deposits of \$10,000.

The same is true when banks increase reserves by increasing deposits with the central bank. In this case, the bank sells the central bank a government bond for \$1000. The banks assets and liabilities remain constant, with the bank substituting one asset (a government bond), for another (a deposit at the central bank). This results in the income of the bank decreasing, as deposits at the central bank do not pay interest. However, since reserves are now increased, the bank can create new loans of \$10,000, which will also increase deposits by \$10,000. To earn a profit, the interest earned on \$10,000 in loans less the interest lost due to the \$1000 sale of government bonds must exceed the interest paid on \$10,000 in deposits.

To the banks, since reserves do not pay interest, this results in a loss of profit, and so they seek to have reserve requirements decreased. This has occurred in many countries, and in some like Canada, there are no longer any reserve requirements. The claim that reserve requirements provide a restriction on total bank lending is more illusionary than real. For example, a bank can purchase a government bond which increases both deposits and bonds. The government bond is then sold to the central bank, which increases the banks deposits held at the central bank (its reserves), which then allows it to multiply lending. This process can be repeated whenever the bank gets close to its reserve requirement. Of course, with reserve requirements of 0%, even this accounting step is unnecessary for the creation of additional loans. The claim that reserve requirements affect or restrain total lending is thus shown to be false, as banks can always increase reserves by simply expanding their balance sheet.

Capital adequacy requirements of the banks have no direct affect on bank lending. The creation of a loan creates an equal deposit, which can occur regardless of the level (positive or negative) of the equity of the bank. The only time when a banks equity will

affect lending, is when an outside regulator forbids any new loans due to the banks lack of capital. Should outside regulators ignore any capital adequacy requirements, then insolvent banks can continue to create loans and deposits.

Even where regulators carefully monitor the capital of banks, their skill with creative bookkeeping allows them to increase equity in order to maintain credit expansion. By earning vast profits on loans created by exchanging liabilities, banks equity is increased allowing the bank to further expand assets. Should this prove insufficient, banks will issue new shares (resulting in deposits decreasing and equity increasing), again allowing for a further expansion in assets.

Even when their financial pyramid has started to collapse, banks will increase equity through creative bookkeeping, as shown by recent events in Japan. Here, an insolvent government issues new bonds that are purchased by the banks. This increases the banks assets (government bonds), and liabilities (deposits).

The government then uses the currency (bank deposits) they received for the bonds to purchase bank equity. This results in deposits decreasing and equity increasing. The net result is that assets have increased by the amount of the bonds purchased, and liabilities have increased by the increase in equity.

Inter-Bank Transfers, Government Notes, and Central Banking

Government notes, inter-bank dealings, and central banking will now be examined in order to provide a more complete understanding of our financial system. It will be shown that while government notes, inter-bank dealings, and central banking will affect the deposits of individual banks, it does not affect any of the analysis that we have examined.

We will first consider the introduction of government notes into a financial system where banks create the currency. Government notes are generally issued by the central bank, and are a liability of the central bank. They are introduced into the financial system generally by the purchase by the central bank of a government bond. Government notes are created, and used to purchase a government bond, thus increasing both assets (bonds), and liabilities (government notes) of the central bank by an equal amount. This creates positive income for the central banks, as bonds pay interest, while no interest is payable on bank notes. As with any bank, this income stream can be paid as a dividend to the shareholders of the central bank.

When the central bank purchases newly issued government bonds with government notes, this increases total government notes in circulation, as the government spends these government notes. Should a commercial bank purchase bank notes from the central bank, it will not affect government notes in circulation, as the commercial bank has only substituted one asset (deposits held at the central bank) for another asset (government notes). Now, we will examine the interrelationship between government notes held by the commercial banks, and bank notes in circulation.

When a customer deposits a government note into a commercial bank, the banks assets (government notes), and liabilities (deposits), increase by equal amounts. Similarly, when

a customer withdraws a government note, the banks assets (government notes), and liabilities (deposits), decrease by equal amounts. Government notes held by commercial banks do not circulate as currency, as they are not used in any transactions. If we consider currency to be government notes in circulation, as well as non-inter-bank bank deposits, then the total amount of currency will not be affected by these transactions, as a deposit of government notes will increase bank deposits, while decreasing government notes in circulation by an equal amount. Similarly, a withdrawal of government notes will increase government notes in circulation, while decreasing deposits by an equal amount.

Central banks operate the same as any commercial bank, and are capable of creating or de-creating currency through the same accounting transactions. Consider what happens with the purchase of a new government bond by the central bank.

Government

Assets Worth	Liabilities & Net
Checking Deposits At Central Bank	+\$1000
+\$1000	Bonds

Central Bank

Assets Worth	Liabilities & Net
Bonds	+\$1000
+\$1000	Checking Deposits

The government now pays for \$1000 in services by issuing a check on its account with the central bank, with the check being deposited in a commercial bank.

Commercial Bank

Assets Worth	Liabilities & Net
Deposits at Central Bank +\$1000	Checking Deposits
+\$1000	

Central Bank

Assets Worth	Liabilities & Net
\$1000	Government Deposits -
+\$1000	Commercial Bank Deposits

Commercial bank deposits have increased by \$1000, thus increasing the currency supply. When central banks purchase government bonds, it has the same effect on the currency supply, as occurs when commercial banks purchase government bonds. However, any interest earned on these bonds results in income to the central bank. When governments own the central bank, this income can be returned as a dividend back to the government. When commercial banks purchase new government bonds, interest earnings accrue to the commercial banks and are distributed to their shareholders through dividends. Thus, while the purchase of government bonds, by either the commercial or central banks will have the same effect on the currency supply, the level of taxes paid in a country will be different depending on which method is chosen. For example, in Canada in 1999, \$42 billion was paid on the debt of the Federal Government. Had the central bank purchased the government bonds, this \$42 billion expense would be returned to the government as a dividend from the central bank, and taxes could have been reduced by \$42 billion.

We will now consider inter-bank transactions.

Let us first consider the affects of a customer of Bank B depositing a check written by a customer of Bank A. Let us first consider Bank A. Bank A's customer deposits have been reduced by \$10,000, but it also owes Bank B \$10,000 for which it must make settlement. This can be done in two ways. Firstly, Bank A can write Bank B a check for \$10,000 drawn on its account with the central bank. This will reduce Bank A's assets (funds held at the central bank), by \$10,000, with the overall affect to reduce both assets (funds held at central bank), and liabilities(deposits) by equal amounts. Should Bank A have

insufficient funds with the central bank to cover this check to Bank B, it can arrange a loan with the central bank. For example, if Bank A also arranged a \$10,000 loan with the central bank, then its deposits with the central bank would increase by \$10,000 as well as loans due to the central bank would increase by a similar amount. In this case, the net affect on Bank A would be to leave assets unchanged (deposits held at the central bank would be decreased by the check written to Bank B, while on the liability side, customer deposits are reduced by \$10,000, and loans owing the central bank are increased by \$10,000, thus leaving total liabilities also unchanged

While this is sometimes what may happen, what really happens is that banks simply create inter-bank loans, or more specifically, inter-bank deposits. Thus Bank A, owing Bank B \$10,000, will simply credit Bank B's account with Bank A the sum of \$10,000, and pay Bank B interest on this deposit. This avoids the use of the central bank, and any changes in bank deposits held at the central bank. For Bank A, the advantage is that its bank reserves are not reduced. For Bank B, the advantage is one of income. A deposit at the central bank does not pay interest, while a deposit with Bank A does. Examining the balance sheets of some of the banks in Canada, these inter-bank deposits can be significant, representing 5-15% of total assets, and well over 100% of equity. Now, examining the affects on Bank A, by writing the check, the deposit account of the customer of Bank A is reduced by \$10,000. Bank A, now owing Bank B \$10,000, simply credits Bank B's deposit account with Bank A by \$10,000. Thus total deposits at Bank A have remained constant.

Now let us consider Bank B. Bank B's customer deposits a check for \$10,000, thus increasing the customers deposit by \$10,000. Now Bank A owes Bank B \$10,000. As above, Bank A can give Bank B a cheque drawn on its account with the central bank, which Bank B deposits into its account with the central bank. The overall affect on Bank B is that liabilities (deposits), and assets(funds on deposit at the central bank) have both increased by \$10,000. However, what generally happens is that Bank A credits Bank B's deposit account with Bank A by \$10,000. The net affect is that Bank B's liabilities (deposits), and assets (deposits held at Bank A), have both increased by \$10,000. It should be noted, that the affect of a customer of Bank A giving a check to a customer of Bank B, and this resulting in Bank A crediting Bank B's account with Bank A, will result in total deposits increasing in the banking system(Bank A deposits remain the same, while the deposits at Bank B increase). This should point to the need to exclude any inter-bank deposits from our definition of the currency supply. These inter-bank deposits, while grouped together with all other deposits on the banks balance sheet, result simply as a result of balancing the flow of inter-bank transfers (either by cheques or electronic fund transfers).

Customer of Bank A gives a Customer of Bank B a Check

Bank A

Assets
Worth

Liabilities & Net

Checking Deposits -\$10,000

Deposit of Bank B +\$10,000

Bank B

Assets
Worth

Liabilities & Net

Deposit Held Bank A +\$10,000

+\$10,000

Checking Deposits

What I have written describes the inter-bank relationship whenever the customer of one bank, gives the customer of another bank a check, and the reason that the check was given is not material to these transactions. Moreover, these transactions have nothing to do with any loan transactions. Regardless of how the customer of Bank B increased his deposit account, if this customer makes a principle loan payment, the customers deposit account is debited(decreased), and the loan account is credited(decreased). Put differently, when a deposit in Bank A is used to repay a loan in Bank B, the net affect is that total non-inter-bank bank deposits are decreased (Bank A's deposits are decreased) and loans are decreased(Bank B's loans are decreased), by equal amounts. This transaction will create an inter-bank liability which is generally settled in one of the ways we have just mentioned.

Similar reasoning is used when a customer makes a loan payment with government notes in circulation. The first step is the deposit of government notes into the bank, increasing both assets(government notes), and liabilities (deposits), of the bank, while reducing government notes in circulation. The second step is the repayment of the loan, with assets

(loans), and liabilities (deposits) decreasing by equal amounts. The net effect is that bank assets and liabilities have remained constant, while government notes in circulation have reduced. Since our definition of currency supply consists of government notes in circulation plus non-inter-bank bank deposits, total currency supply has been reduced by the amount of the loan payment. It does not matter if we exclude the in and out transaction through the deposit account. A loan payment made with government notes, will not affect deposits, and only result in an exchange of assets (government notes increase while loans decrease). However, it will result in a decrease in government notes in circulation, resulting in a decrease in total currency supply.

Inflation

The concept of inflation and its causes continue to be a mystery that is not well understood. Central banks often have an inflation target, without any defined concept as to exactly why this is important. In this analysis, I will consider inflation to represent a rise in prices, and deflation to represent a fall in prices. We must remember that currency can be used to purchase either newly produced goods and services, or existing assets, so it is important to consider what prices that we want to measure, and the interrelationship between these two areas.

Let us first consider newly produced goods and services. These are governed by the equation:

$$\text{GDP} = (\# \text{ units produced}) * (\text{price/unit}) = (\text{amount of currency}) * (\text{velocity of currency})$$

From this equation, we see that several factors are involved in determining the price/unit, and in any economy, it is the cumulative effect of these factors that will determine any change in the price/unit. For example, new loans (which increase the amount of bank deposits or currency) used to increase the amount of production, will be both increasing price/unit due to an increase in the currency supply, and decreasing the price/unit due to increasing the # of units produced. As I have previously explained, over time, these types of loans must have a deflationary effect, with an increase in the amount of currency in fact leading to a deflation (as has happened in Japan and S.E. Asia).

Even if we consider new government or consumer loans, it is not necessary that even these will lead to an increase in the price/unit, if instead they result in an increase in the # units produced in an economy operating below its capacity.

Inflation can also occur due to factors not related to a change in the currency supply. Commonly called cost-push inflation, prices can rise as a result of monopoly pricing in either the product or labor markets. Oil prices tripling within a short period of time would be a good example. A rise in the price/unit with currency supply constant will reduce the # units produced. The correct policy to such an event would be to expand the currency supply to restore real production. Attempting to control inflation by reducing the currency supply will only contract real production further. An increase in the currency supply will increase prices or # units or both, and since in a financial system where banks

create the currency, currency supply is increased through loan growth, there is a direct relationship between debt and the price level.

Now let us consider the prices of existing assets, say real estate or company stocks. At any time there is equilibrium between people owning currency, or people owning existing assets. In a closed system, a loan(which increases the currency supply) , will increase the price of existing assets. As I have explained, while in the long term, we would expect to see a proportionate increase in the price of existing assets relative to the increase in the currency supply, this may not necessarily happen in the short term.

Now, let us consider the interrelationship between these two systems. It may be best to think of two different currency supply's, currency that is held in lieu of existing assets, and currency used to transact business, with the total currency supply being the total of these two. First, let us consider the interrelationship between these two systems. If people take some of the currency that has been circulating in the business economy, and use it to purchase existing assets, this will lead to an increase in the price of existing assets. The decrease in the amount of currency in the business economy will result in a decrease in the price/unit, a decrease in the # units produced, or some combination of both. Should people decide that they no longer wish to own existing assets, then this will cause a fall in their prices while increasing the currency in the business economy, resulting in either an increase in the price/unit or the # units produced or some combination of both. Thus we see that new loans to purchase existing assets will increase the value of existing assets, but will only affect prices in the business economy if there is a flow of currency out of existing assets and into the business economy(and here again, only if the # units produced remains constant).

Thus we see a very complicated relationship, and unless we know how the new currency (deposits) is being spent, how this will affect production, and how this will affect peoples attitudes towards owning existing assets, we are unable to predict how an increase in the currency supply will affect prices. Equally important, is defining which prices we will use in determining the amount of inflation.

It becomes apparent, that inflation targeting any specific group of prices is quite meaningless.

Other Legal Considerations

We will now examine some of the financial transactions of the banks, with the view that they may be against the Criminal Code of Canada, or not authorized under the Bank Act.

Consider sections 380 and 383 of the Criminal Code

380. (1) Every one who, by deceit, falsehood or other fraudulent means, whether or not it is a false pretence within the meaning of this Act, defrauds the public or any person, whether ascertained or not, of any property, money or valuable security or any service,

(a) is guilty of an indictable offence and liable to a term of imprisonment not exceeding ten years, where the subject-matter of the offence is a testamentary

instrument or the value of the subject-matter of the offence exceeds five thousand dollars; or
(b) is guilty

(i) of an indictable offence and is liable to imprisonment for a term not exceeding two years, or
(ii) of an offence punishable on summary conviction,

where the value of the subject-matter of the offence does not exceed five thousand dollars.

Affecting public market

(2) Every one who, by deceit, falsehood or other fraudulent means, whether or not it is a false pretence within the meaning of this Act, with intent to defraud, affects the public market price of stocks, shares, merchandise or anything that is offered for sale to the public is guilty of an indictable offence and liable to imprisonment for a term not exceeding ten years.

R.S., 1985, c. C-46, s. 380; R.S., 1985, c. 27 (1st Supp.), s. 54; 1994, c. 44, s. 25; 1997, c. 18, s. 26.

383. (1) Every one is guilty of an indictable offence and liable to imprisonment for a term not exceeding five years who, with intent to make gain or profit by the rise or fall in price of the stock of an incorporated or unincorporated company or undertaking, whether in or outside Canada, or of any goods, wares or merchandise,

(a) makes or signs, or authorizes to be made or signed, any contract or agreement, oral or written, purporting to be for the purchase or sale of shares of stock or goods, wares or merchandise, without the bona fide intention of acquiring the shares, goods, wares or merchandise or of selling them, as the case may be, or

(b) makes or signs, or authorizes to be made or signed, any contract or agreement, oral or written, purporting to be for the sale or purchase of shares of stock or goods, wares or merchandise in respect of which no delivery of the thing sold or purchased is made or received, and without the bona fide intention of making or receiving delivery thereof, as the case may be, but this section does not apply where a broker, on behalf of a purchaser, receives delivery, notwithstanding that the broker retains or pledges what is delivered as security for the advance of the purchase money or any part thereof.

Onus

(2) Where, in proceedings under this section, it is established that the accused made or signed a contract or an agreement for the sale or purchase of shares of stock or goods, wares or merchandise, or acted, aided or abetted in the making or signing thereof, the burden of proof of a bona fide intention to acquire or to sell the shares, goods, wares or merchandise or to deliver or to receive delivery thereof, as the case may be, lies on the accused.

R.S., c. C-34, s. 341.

With respect to Section 383, the applicable case law would be *James Richardson & Sons v. Gilbertson* (1917), 39 O.L.R. 423, 28 C.C.C. 431, 39 D.L.R. 56(H.C.)

Here we must examine the derivatives held or issued by the banks or their subsidiaries. The key issue is if these derivative products were entered into with the intent of purchasing or selling the underlying securities, undertakings, or commodities, or were they entered into with the intent of profiting on the change in value of the underlying securities, undertakings or commodities. If it is the latter, then these activities are illegal and a criminal offence.

Consider the 1999 Financial Statement of the Bank of Montreal, Note 21, Derivative Financial Instruments

“We enter into interest rate, foreign exchange, equity and commodity contracts to enable customers to manage risk, and for asset/liability management purposes where we manage our on- and off- balance sheet positions.

Customer trading derivative transactions are comprised of sales and other activities. Sales activities include the structuring and marketing of derivative products to customers to enable them to transfer, modify or reduce current or expected risks. Other activities include market-making, positioning and arbitrage activities. Market-making involves quoting bid and offer prices to other market participants with the intention of generating revenues based on spread and volume. Positioning involves managing market risk positions with the expectation of profiting from favourable movements in prices, rates, or indices. Arbitrage activities involve identifying and profiting from price differentials between markets and products.”

Also, consider the 1999 Financial Statement of the Royal Bank of Canada, Note 13: Derivative financial instruments

“Derivative financial instruments are financial contracts whose value is derived from an underlying interest rate, foreign exchange rate, equity or commodity instrument or index...”

Derivatives Held or Issued For Trading Purposes

Most of the bank’s derivative transactions relate to sales and trading activities. Sales activities include the structuring and marketing of derivative products to customers at competitive prices to enable them to transfer, modify or reduce current or expected risks. Trading involves market-making, positioning and arbitrage activities. Market-making involves quoting bid and offer prices to other market participants with the intention of generating revenues based on spread and volume. Positioning involves managing market risk positions with the expectation of profiting from favourable movements in prices, rates or indices. Arbitrage activities involve identifying and profiting from price differentials between markets and products. The bank does not deal, to any significant extent, in leveraged derivative transactions. These transactions contain a multiplier which, for any given change in market prices, could cause the change in the transaction’s fair value to be significantly different from the change in fair value that would occur for a similar derivative without the multiplier”

It would appear to be very clear from the bank’s own financial statements, that these derivative contracts are intended to “transfer, modify or reduce current or expected risks” (profit from the change in value of the underlying securities), and are not intended to acquire the underlying securities, undertakings or commodities. Further proof of this apparent illegal activity would be examining these derivative contracts to see if they result in the sale or purchase of the underlying securities, undertakings or commodities, with any that did not being illegal.

Are there any risks to these derivative contracts? Again, according to the 1999 Financial Statements of the Royal Bank of Canada, “Credit risk from derivative transactions is generated by the potential for the counterparty to default on its contractual obligations when one or more transactions have a positive market value to the bank...The use of collateral does not currently represent a significant credit mitigation technique for the bank in managing derivative-related credit risk.”

As of October 31, 1999, outstanding derivative contracts at the Bank of Montreal were \$1,170,533,000,000 and at the Royal Bank of Canada were \$1,455,685,000,000. A loss of less than 1% on the nominal value of these derivative contracts, would wipe out the equity base of these banks. A systematic collapse of the securities underlying these derivative contracts could imperil the entire deposit base of these banks.

Referring to the Criminal Code of Canada, Section 380 (2), it must also be asked if these transactions are intended to not only speculate on the change of value of the underlying security, undertaking, or commodity, but are also used to affect the market price of these securities, undertakings or commodities. For example, is the purpose of a company writing put options on its own stock done primarily for the purpose of increasing its share price? Is this done to increase the value of management stock s or options, or those of majority owners?

Here it must be stressed that the rapid growth in derivative products over the last five years corresponds with a rapid increase in the valuation of stocks and growth of credit markets.

Considering the Bank Act, section 409 covers the business of banks.

Main business

409. (1) Subject to this Act, a bank shall not engage in or carry on any business other than the business of banking and such business generally as appertains thereto.

Idem

(2) For greater certainty, the business of banking includes

- (a) **providing any financial service;**
- (b) **acting as a financial agent;**
- (c) **providing investment counselling services and portfolio management services;**
and

- (d) **issuing payment, credit or charge cards and, in cooperation with others**

including other financial institutions, operating a payment, credit or charge card plan.

Nowhere in the Bank Act does it state that Banks can purchase securities, or more importantly, to sell short securities. As of October 31, 1999, the Royal Bank of Canada reported "Securities Sold Short" of \$18,740,000,000 which would appear to be in contravention of the Bank Act.

Banks and their Subsidiaries are involved in the trading of securities for their own account. Each security purchase is financed not with the banks own capital, or with the money of depositors, but with the creation of a bank deposit (being a liability to pay money at a latter date). This manipulates both the monetary base of the country as well as the value of these securities. Here, I would argue that the manipulation of the monetary base would be illegal under Section 449 of the Criminal Code, with manipulation of securities illegal under Section 380(2) of the Criminal Code. While Section 449 deals with counterfeiting Bank of Canada Notes, the counterfeiting of Bank of Canada Notes, or the creation of new bank deposits has the exact same affect on the monetary base, and in a similar manner defrauds the community. In any case, banks have no authority to manipulate the monetary base under the Bank Act.

Here I must caution, that many governments consider that they are the supreme law, and can alter laws so as to make what is illegal to be legal, and what is legal to be illegal. These laws are not driven by what is right or wrong, but by the interests of those who most influence the law makers.

John Kutyn
April 25, 2000

Monetary Reform and the Social Teachings of the Catholic Church

"Because the happiness and moral rectitude of the present life have as end the happiness of heaven, it belongs to the ruler to procure the common good of the people in such wise as to enable them to obtain celestial happiness. Accordingly, he ought to command what leads thereto and, as far as

possible, forbid what is opposed to it. The road that leads to true happiness and the obstacles to be encountered thereon are made known to us by divine law, and it is the office of the priests to teach that law. The Ruler, therefore, instructed in the divine law, should make it his chief aim to see that the people subject to him should be able to live a good life... Now that a man may lead a good life two things are required. The chief requisite is virtuous action... The other requisite, which is secondary and quasi-instrumental in character, is a sufficiency of material resources, the use of which is necessary for virtuous action”

St. Thomas Aquinas “De Regimine Principum”

In the “Summa Theologica”, St. Thomas points out that private ownership is morally necessary in order that the sufficiency of goods be obtained. This was necessary to preserve the common good from being violated by the wicked.

Economics studies the personal relations which constitute the family, and secondly, the relations of these persons to external goods. Etymologically, economy is the government of the home and the family. Our nature brings us into relation with earthly resources, which we have to transform into real wealth capable of satisfying our corporal needs. As St. Thomas has said, a sufficiency of material goods is necessary for virtuous life, and so a dignified place is assigned to the science of production, distribution and exchange of natural wealth, and to the auxiliary art of the proper utilization of money, or artificial wealth. The art of manipulating money, according to St. Thomas, is meant to be in close dependence on genuine economic and political science.

“Natural wealth is that by which natural wants are supplied, for example, food, drink,, clothing, vehicles, dwellings, and such like. Artificial wealth is that which is not a direct help to nature, as for instance, money. This was invented by the art of man, for the convenience of exchange by serving as a common measure of things salable.”

St. Thomas further adds; “Those things cannot considered as real wealth which, if man’s sentiments happen to change, are no longer of any value or utility for the satisfaction of human needs. Such is the case with coins or token wealth, which are worth nothing, if those who use them change their minds. They become useless for all the purposes of life, if the ruler of the community decrees that they are without value.”

“Money and all forms of wealth are instruments of Economics,” writes St. Thomas, the true matter of Economic Science being the inter-relations of the human beings themselves who make use of the different forms of wealth. Money was invented precisely to facilitate the exchange of goods. By means of it, families can procure, by the process of exchange, far more easily than by the more primitive form of barter, that sufficiency of nature’s goods required for a virtuous life. Thus, for St. Thomas, money was to serve production, as production was to serve the family. This was to assist people in obtaining their supreme end, the Vision of God in Three Divine Persons.

St. Thomas saw that money could be dealt with in three ways. Money, or a medium of exchange, became indispensable when things began to be exchanged between people living at a great distance from one another. As foreign trade developed, so did the art of money changing, the exchanging of the currency of one country for the currency of

another country. Thus developed two ways in dealing in money, exchanging money for goods, and exchanging money for money.

The first of these ways of dealing in money- exchanging money for goods- is the servant of economics, for it facilitates the acquisition of what is necessary or useful for human life. As St. Thomas says, acquiring money by the sale of goods and keeping it until the need for other purchases is required results in the proper use of money, “This form of exchange is not reserved to merchants or traders. It is more especially carried on by the heads of households or by rulers of states in view of providing families or states with the necessaries of life.”

With respect to the second way of dealing with money, exchanging the currency of one country for that of another, St. Thomas said that if this is done “not on account of the necessities of life, but for profit... it panders to the greed for gain which knows no limit and tends to infinity... If, however, anyone seeks that moderate profit which he makes in trade for the upkeep of his family or even to help the poor or if anyone engages in the business of money-changing for the public good, in order that his country may be provided with the necessaries of life, and so does not make gain the end at which he aims but simply looks upon it as the reward of his labor, then such trading is quite legitimate.”

Cardinal Cajetan says, “ Since it is evident from experience that many States would lack many necessaries unless there were merchants to supply them, and since these merchants could not carry on business without money-changing, it is needful and right that the art of money-changing should be allowed to be exercised in States, not indeed for its own sake, but inasmuch as it ministers to Economics and Politics. Thus money-changers not only may guard themselves against loss in the exercise of their trade but may even make a profit as a reward for their industry, for they carry on a business that is both lawful and useful to the state.”

The third way of dealing in money is called usury, by which money begets money, which St. Thomas most justifiably condemns, as it is contrary to nature. When money is employed in exchange, the ownership of it is given away by that very fact, and therefore no other compensation can be allowed in justice for money thus exchanged, except the strict equivalent of the sum handed over. In the first or primary use, money is destroyed- in the sense that it no longer belongs to the person who lends it. Therefore he who demands something simply for lending money, asks something for the use of money which does not belong to him. He wants something for nothing. As St. Thomas says, “Money has, according to Aristotle, been invented principally in order to facilitate the process of exchange. Accordingly, its special and distinctive end is to be consumed, that is to say, expended, as in the case of buying and selling. On this account it is in itself unjust to receive payment for the use of money which has, through a loan, become the property of another. This is what is called usury. And one is obliged to restore to its owner whatever has been received in usury, just as in the case of other goods unjustly acquired.”

Thus, according to St. Thomas, it is usurious and, as such, forbidden by the seventh commandment, to sell money with the agreement that a larger quantity of money shall be

returned for it; “Money may not be sold for a sum exceeding that handed over.” “ The usurer wishes in a single transaction to exchange 100 for 105. This is the wrongness that the Church has seen to be forbidden by God’s natural law and justice. Is it a single transaction? Yes. Just as buying goods and paying money for them months after is a single exchange, so borrowing and paying is a single exchange; and in both transactions, equal must be exchanged for equal.” Father McLaughlin

Money by its nature is meant to facilitate exchanges of goods in view of the development of personality through ordered human living. It is by nature a means not an end. In the transactions that have been characterized as usurious, money from being a means is transformed into an end.

“What is most disconcerting for the author of the Politics (Aristotle) in such transactions is probably not what has been so often said, namely, that money should beget progeny, but that token wealth which is destined to aid us to satisfy our material needs should become an end, so that it is no longer a means but the object towards which all striving is directed. This is for him something anti-natural and absurd. This perversion is all the more menacing , because of the readiness with which exchanges can be multiplied by means of money and also because of the temptation to which it gives rise to go on making additional profits with the money one has already amassed.” G. Lefevre

St. Thomas points out that nature imposes a certain limit on instinctive desires, which are always for something finite and determined, and always aim at maintaining the order required for life. When reason, however, instead of controlling passions, puts itself at their service, it will introduce infinity, in a certain way, into craving for satisfaction and make them absolutely insatiable, so sacrificing the good of the whole being in a vain attempt to make the finite infinite. Reason can set up as an end what is only a means. Money and all forms of wealth are only means intended to satisfy the needs of life. If the amassing of money is made the end of commercial transactions, then St. Thomas says, “he who longs for riches can desire them, not merely up to a certain point, but he can simply aspire to be as rich as ever he can.” St. Thomas further adds that as the end is desired for its own sake and not merely to a certain degree, “he who fixes the end of life in amassing wealth will have a longing for riches ‘ad infinitum’; whereas a man who desires wealth just for the needs of life wants only enough to satisfy these needs.”

St. Thomas goes on to explain why some desires are finite, and some are infinite; “The desire of the end is always infinite, for the end is always sought after for itself. Hence, better health is more desirable and so on indefinitely... The desire of that which is a means to the end is not infinite, if it is regulated by what is suitable for the attainment of the end. So the man for whom money has become the end, has an insatiable desire for it, whereas the man who desires money in view of the needs of life desires sufficient for his needs, but not beyond. And the same holds for the desire of other things.” St. Thomas further adds, “ The desire for natural riches is not unlimited, because they suffice for nature in a certain measure. But the desire for artificial wealth is unlimited, for it is the slave of disordered concupiscence.”

Usury is, therefore, profit that is unjustly received from a loan, it consists in taking something simply for the act of lending. Pope Benedict XIV condemned the taking of interest even on a productive loan, declaring; “that kind of sin, which is called usury, and which has its proper seat in the contract of loan, consists in this, that anyone should, on the ground of the loan itself, which from its nature demands that only so much be repaid as was received, insist on getting back more than (the borrower) received, and so contend that, in consideration of the loan itself, a certain gain is due to him, over and above the principle. Accordingly, all gain of this sort, which exceeds the principle, is illicit and usurious. Nor may anyone for the sake of exonerating himself from that guilt, avail himself of the pretext, that the gain itself was not exorbitant and excessive but moderate, not great but very small; or that the person from whom he demanded that gain solely by reason of the loan, was not poor but rich, or that he did not propose to allow the borrowed sum to lie idle, but intended to invest it most profitably, in order to increase his wealth or to purchase new estates, or to conduct gainful enterprises.” This encyclical (*Vix pervenit*) written in 1745, was originally sent only to the Bishops of Italy. In 1836, Pope Gregory XVI made it binding on the Universal Church.

There may be a legitimate reason for receiving money in a greater amount to that lent, because of some incidental cost to the lender, such as possible loss, expense, labor, risk, etc. Also, money may be used for the purpose of trade or investment where the ownership is retained. Here, the owner has a right to share either the profits or losses from the business. For St. Thomas, the difference between a non-interest bearing loan, and an income earning investment is the axiom that a thing bears fruit for its owner. Since the ownership passes to the borrower in a non-interest loan, no interest can be charged, whether the loan be for production or consumption. In an investment, income may be taken, because the ownership of the money is retained by the investor.

It must be stressed, is that not only is the charging of interest on a loan, even a productive loan, a sin and against the seventh commandment, it is also contrary to nature and opposed to the very reason that money was created. As we have said, our nature brings us into relation with earthly resources, which we have to transform into real wealth capable of satisfying our corporal needs. Assuming the price we receive for our production reflects its true value, and the costs of production reflect the true value of inputs required for production, then the decision to produce or not to produce will depend on whether what is produced is of more value than the inputs. Is our production adding value or detracting value from the community?

When interest is charged on a productive loan, a cost is added to production, which does not come from nature, which will affect our production decision. Thus money, instead of assisting production, becomes a hindrance to production, and usurps the function of money.

“The first(use of money), exchanging money for things useful for human life, is natural, for in it dealing in money is subject to Economics, the science of the well-being of the household or family. The second, exchanging money for money, is very liable to perversion, for it can easily become the slave of disordered self-seeking and thus be turned against right order. A very great deal of what is termed speculation in modern

times, if not all, is a perversion of this second mode of making money. Those who engage in it pursue merely unlimited personal gain instead of trying to advance the Common Good by facilitating the production and distribution of what people need. It is also true that this second mode of dealing in money can render service to society by aiding States and families to procure that sufficiency of material goods required for the virtuous life of their members. This is especially the case, for example, where the ideal of self-sufficiency, so much insisted upon by St. Thomas in his treatise on Government, given certain conditions, can be quite legitimate. The third mode, however, can never be lawful. This method of trafficking in money, namely, breeding money by means of money”
Rev. Denis Fahey

When moral theologians speak of money, they suppose it to have an existence independent of the lender and the borrower. When bankers grant loans or purchase bonds, they bring exchange-medium into existence, they issue their own debt obligations under the pretence that these debts are money. This process, is not only immoral, it appears to be criminal in nature, and results in the total perversion of our economic system.

“Property means control of wealth. The three factors required for the production of wealth are labor (which is not wealth), Land (which is not wealth), and Capital (which is wealth). According to the way in which control has been and is exercised over these three factors, three forms of society have successively appeared in history. Ancient Greece and Rome were servile states, in which the material means of production were the property of men who also owned the human agents of production. Under the influence of the Catholic Church, the servile state was replaced by the distributive state, in which the material means of production were owned by the free human agents of production: property had passed from the hands of the few to the many. The rending of the Mystical Body in the sixteenth century gave birth to the capitalist state, in which the material means of production are again the property of a few, while numerous human agents of production are politically free, but without property. We have seen that even those who control the material means of production in the capitalist state are themselves largely at the mercy of those who manipulate finance. Now the reaction against the capitalist state will be guided by the Catholic Church, and then we shall see a rebirth of the distributive state, incorporating the elements of material progress achieved in modern times into harmonious subordination to the Mystical Body of Christ. The formal principle of ordered life grasped in the Middle Ages will thus be applied to new matter. Or the reaction will be guided by the financial forces, which rule the world, in the direction of Communism, in which all the means of production will be owned nominally by the State, in practice by those who control the Communist party. The result will be worse than the pagan servile state, for it will mean the definite rejection of our Lord, True God and True Man, and subjection to the Natural Messiah looked forward to by the descendants of those who crucified Him. Human beings who have cut themselves adrift from the humanity of Jesus Christ are on the way to become more dehumanized than those to whom He has not been made known.”
Rev. Denis Fahey

“The case of governments, is much the same as that of individual; they also must run into fatal issues, if they depart from the way... Let Jesus be excluded, and human reason is left without its greatest protection and illumination; the very notion is easily lost of the end for which God created human society, to wit: that by help of their civil union the citizens should attain the natural good, but, nevertheless, in a way not to conflict with that highest and most perfect and enduring good which is above nature. Their minds, busy with a hundred confused projects, rulers and subjects alike travel a devious road: bereft, as they are, of safe guidance and fixed principle.”
Pope Leo XIII, Encyclical “On Christ our Redeemer” 1900

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ⁱ Irving Fisher. *100% Money*. 1934.

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