

2 Bank note and deposit money

2.1 Learning outcomes

After studying this text the learner should / should be able to:

1. Describe the history of the goldsmith-bankers and the origin of bank note money.
2. Elucidate the origin on bank deposit money.
3. Discuss the significance in history of bank note convertibility into gold.

2.2 Introduction

We have discussed the origin of money up to when money was named-coins. We know that irrespective of the intrinsic value of coins, they circulated as the means of payments because they were *named*. This is why they could be debased and new coins created, adding to the amount of money in circulation.



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In this section we discuss the origin of bank note money and bank deposit money, the advent of which in the 17th century completed the components of money as we know them today. Originally (once money was thus comprised), the majority of money was coins. As time elapsed bank notes evolved in convenience (made out to bearer), and later bank deposits grew in volume as their expediency for payments was recognised. Today, bank notes and coins (N&C) are dwarfed by bank deposits (BD) in the components of money. To recapitulate what money is comprised of:

$$M = BD + N\&C.$$

In this section we also discuss the “natural” brake on money creation in the past: convertibility of notes into gold coin / bullion, and its later demise. Convertibility was the origin of the reserve requirement (RR), and the demise of convertibility had profound consequences. This section is arranged as follows:

- Bank note money.
- Bank deposit money.
- Bank note convertibility into gold.

2.3 Bank note money

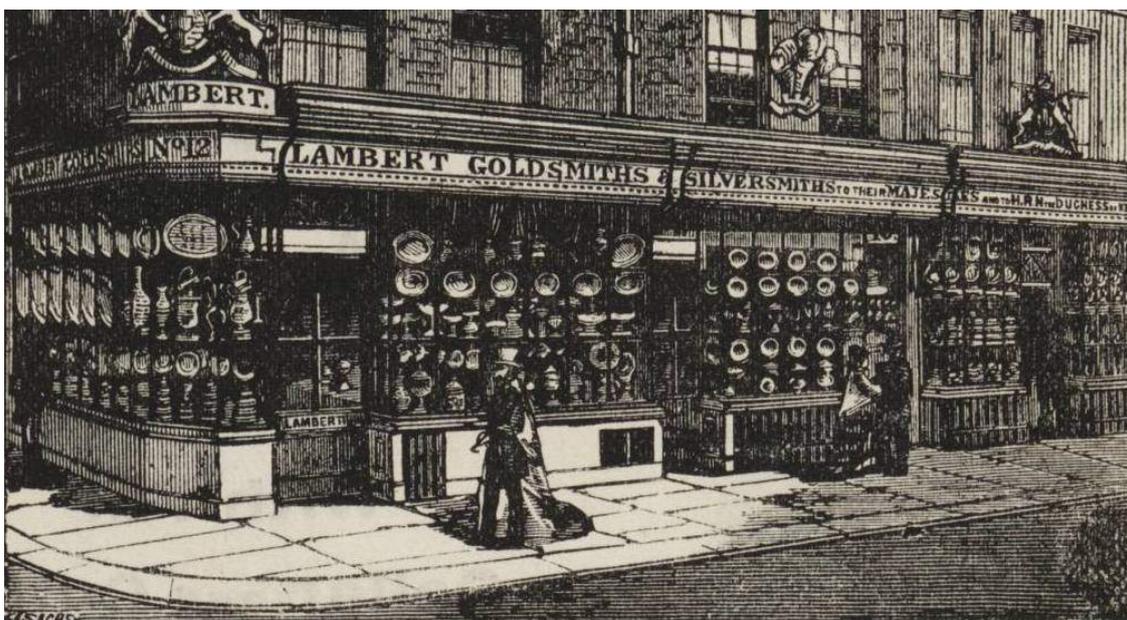
2.3.1 Introduction

It is often erroneously said that bank notes first appeared in London in the seventeenth century, starting with the receipts of the goldsmiths, which a little later morphed into bank notes. The accolade for the first bank notes actually goes to China, and they were printed on leather (of the indigenous deer). This transpired around 118 BC but it was short-lived.⁶¹ The backdrop to this phenomenon is unclear.

The next reference to note issues in China was about 900 years later and these notes were made of paper. It was to be a temporary substitute for the copper coins then circulating because of a shortage of copper. More and more issues took place in the ensuing years / decades and it is reported that by 1020 the total issue of notes had become so excessive that inflation resulted. This practice continued and more bouts of inflation came about. It is clear that the notes were convertible (in that they had a face value denominated in coins), but the amount of coins per bank note was lessening as note issues continued. It is also clear that, as the notes became steadily worthless, citizens attempted to convert the notes. This is gleaned from the fact that in 1294 a proclamation was issued imposing the death penalty on those who refused to accept the notes.⁶² It is possible that this could have been the genesis of the concept of legal tender.

In England, bank note money started life as the receipts issued by goldsmiths (which evolved into the first bankers in England) for deposits of precious metals (gold and silver). Because of their precious metal backing and convenience the receipts became to be used as a means of payment. These receipts were soon made even more convenient by smaller denominations and a bearer covenant (as opposed to the name of the depositor).

Box 1: Lambert goldsmiths, London



Source: www.925-1000.com

The goldsmith-banks soon discovered that they could make loans with these receipts (later known as bank notes) instead of precious metals: just by issuing new receipts to borrowers. Money creation in the true sense was born. The goldsmith-bankers had a self-imposed limit on bank note (i.e. money) creation: the need to maintain a healthy reserve of gold coins to meet bank notes being converted into gold coins (deposit withdrawals). As we will see, a number of goldsmith-bankers and country banks were not overly concerned with bank note convertibility and many went to the wall with the savings of many depositors.

2.3.2 Precious metal deposits with goldsmiths

For centuries, silver coin was the chief means of payments in England. Gold coins did exist alongside silver coins, but remained in the background because of the complications of bimetallism⁶³ (which was related to the relative valuation of the gold and silver coins).

Gold coins were introduced to England on the back of international trade and they were mostly used for large payments initially, and as bank reserves later. The volume of gold coins grew steadily over time and became the basis of the British monetary standard, as we shall see later. This started in the middle of the eighteenth century and persisted until 1931.⁶⁴

Bank notes as we know them today have their origin in the receipts for gold and silver coins deposited with the gold- and silversmiths for safekeeping (for the sake of brevity we call them goldsmiths from now on). They became London's first bankers, and are rightly called goldsmith-bankers by some authors. Their story in respect of the first bank notes and money creation in a new form is particularly interesting.

It began in the seventeenth century London. The business of the goldsmiths was the production and sale of silverware and traffic in silver and gold coin and bullion, including the exchange of foreign coins for local coins and vice versa (= foreign exchange dealers). As they had secure safe-boxes and were well-entrenched with some banking functions, they naturally were chosen by the wealthier public as a depository for the gold and silver coins. The goldsmiths eagerly embraced these banking functions.

The earliest goldsmith-banker receipt for a precious metal deposit is one issued by Lawrence Hoare in 1633 (see Box 2⁶⁵), and this is the year that is generally accepted as the year when banking actually started in London. Before this, banking activities, such as lending, transferring of money, discounting of bills, and so on, did exist and for a long period, but these functions were performed part-time by a variety of traders such as the wool brogger, the corn brogger, the tax farmer, the pawnbroker, the scrivener and the goldsmith⁶⁶.



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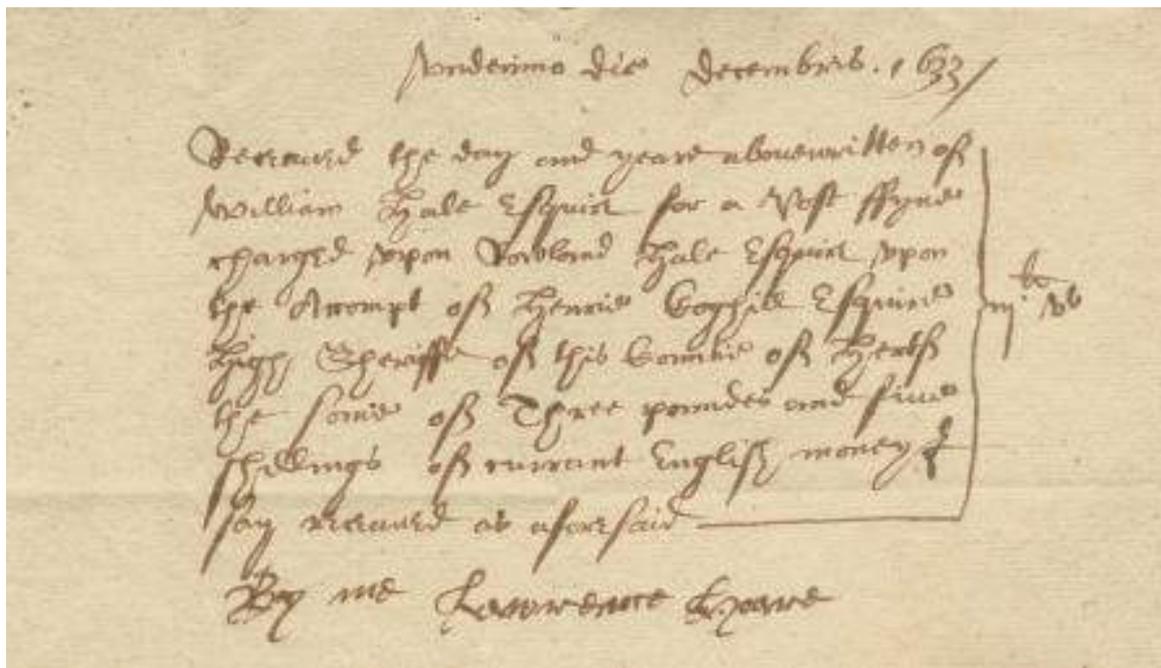
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Box 2: earliest surviving goldsmith-banker receipt (1633)



Undecimo die decembris 1633

Received the day and year abovesritten of William Hale Esquire for a Post Fyne charged upon Rowland Hale Esquire upon the Account of Henrie Coghill Esquire High Sheriff of this Countie of Hertf[ordshire] the Sume of Three pounds and five shillings of currant English money I say received as aforesaid.

By me Lawrence Hoare

Source: C Hoare & Co

Although deposits of precious metals were made with goldsmiths as early as 1633, most of the wealthy deposited their coins for safekeeping with the Mint in the Tower of London. However, when King Charles I appropriated 200 000 pounds worth of coins in 1640, the wealthy “...no longer trusting the government...resorted to the practice of depositing their money with goldsmiths...”⁶⁷ The goldsmiths’ new venture as bankers was born, a significant historical event.

They naturally issued receipts for the deposits. Jevons informs: “As acknowledgement of the possession of such sums of money, the goldsmiths gave receipts, and at first these documents were special promises...”⁶⁸

Allow me to present an example, as in Figure 1: Mr A deposited 100 one pound coins⁶⁹ with Goldsmith-banker A (by this stage the one pound coin was in existence) who issued a receipt for this amount. So Mr A’s total assets did not change; only the composition did. Goldsmith-banker A gained an asset in the form of gold coins and incurred a liability because the receipt he issued was convertible into gold on demand.

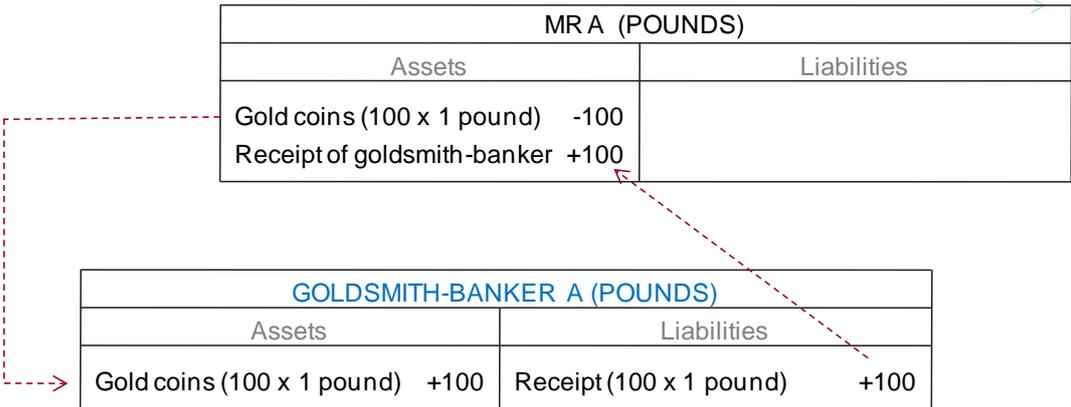


Figure 1: deposit of gold coins

2.3.3 Precious metal loans by goldsmiths

The goldsmith-bankers also eagerly embraced the business of providing credit. Because they over time became the custodians of many customers’ deposits of gold and silver coins, they could safely provide credit in the medium of exchange, coins, i.e. without running short of coins for those who wanted to withdraw their deposits. Let us assume that Mr B obtains a loan / credit of 20 one pound gold coins from Goldsmith-banker A. Their balance sheets change as indicated in Figure 2.

The loan / credit was granted at a rate of interest. This was a significant event. Although paying interest was nothing new, the goldsmith-banker could now afford to pay an attractive rate of interest to depositors, in the hope of attracting even more depositors – because gold deposits enabled the goldsmith-bankers to provide credit (in gold coins).

2.3.4 Goldsmith receipts as a means of payments

An epoch-making event took place just in the mid-seventeenth century, and this was that the deposit receipts of the goldsmith-bankers, which hitherto had been issued in the name of the depositor, were now being issued to bearer, i.e. *the receipts had started being used as a means of payment*. The receipt holders found it possible to use the receipts as a means of payment because they were backed by gold, and were convenient. Thus the recipient of the receipt had a claim on the goldsmith-banker for the amount of gold coins stated on the face of the receipt.⁷⁰

MR B (POUNDS)			
Assets		Liabilities	
Gold coins (20 x 1 pound)	+20	Loan from goldsmith-banker	+20

GOLDSMITH-BANKER A (POUNDS)			
Assets		Liabilities	
Gold coins (12 x 1 pound)	-20		
Loan extended (Mr B)	+20		

Figure 2: loan of gold coins

This practice became the norm for payments and depositors came later to demand of their goldsmith-bankers receipts in smaller denominations. For example, if Mr A deposited 100 one pound gold coins the goldsmith-banker would be asked for 100 receipts, each with a face value of one pound. These receipts became the principal means of payment, i.e. money. Thus at this stage the amount of money in circulation was the sum total of gold coins in circulation plus goldsmith-banker receipts in the possession of the public. [Note that the gold coins in the vaults of the goldsmith-bankers are not included – because they are represented by tokens – the receipts.]

This historical event is described by Jevons⁷¹: “The practice arose of transferring possession by delivery of these receipts, or ‘goldsmith’s notes’ as they were called.” Jevons⁷² adds that “Such notes are...referred to in...some statutes...they had become general and not special promises – mere engagements to deliver a sum of money on demand.”

2.3.5 Goldsmith loans by the issue of receipts

It did not take long for a goldsmith-banker to realise that if the goldsmith-bankers’ receipts were being used as the means of payment, then credit demand could be satisfied not by gold coins, but by the issue of new goldsmith-banker receipts. This was another historical event of momentous proportions and changed the economics of the world forever. The most significant event in banking – money creation by the new banks – was born, which endures to this day. It liberated economies from the often stifling shortage of precious metals from which money was struck.

Davies, quoting another⁷³, refers to this event as follows: “...some ingenious goldsmith conceived the epoch-making notion of giving notes [i.e. receipts] not only to those who had deposited metal, but also to those who came to borrow it, and so founded modern banking.” It is appropriate from here on we refer to goldsmith-banker receipts as *bank notes* and to the goldsmith-banker as *bank*.

MR B (POUNDS)			
Assets		Liabilities	
Bank notes of Bank A	+100	Loan from Bank A	+100

BANK A (POUNDS)			
Assets		Liabilities	
Loan extended (Mr B)	+100	Bank notes	+100

Figure 3: loan by issue of bank receipts / notes

An example is in order. Mr B is successful in borrowing 100 pounds from Bank A. Bank A issues bank notes to the value of 100 pounds. Bank A charges Mr B an interest rate of 3.0% per annum. The balance sheets of the parties to the deal change as indicated in Figure 3. Money (= bank notes) was created by the strokes of a pen and by the accompanying accounting entries by a bank!



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The earliest recorded English case of a bank note being used as a means of payment is the 29 February 1668 entry in the diary of Samuel Pepys, Secretary to the Navy. According to Davies, "...he casually mentions sending to his father a note for £600 – issued by the goldsmith Colvill."⁷⁴

2.3.6 Bankers’ reserves

It will be evident that prior to this major money creation event the proportion of gold coins underlying the notes of the bankers was 100%. As this new method of bank credit / loan provision increased over time the proportion of gold coins to notes in the collective books of the banks declined. An example may be useful. Let us assume that prior to the event, the bankers had on deposit 1 million one pound gold coins (see Figure 4: top balance sheet). Note that this is a stock – not a change – balance sheet.

BANKING SECTOR (POUNDS)			
Assets		Liabilities	
Gold coins	1 000 000	Bank notes	1 000 000

BANKING SECTOR (POUNDS)			
Assets		Liabilities	
Gold coins	1 000 000	Bank notes	1 500 000
Loans	500 000		

Figure 4: gold coin reserves

If the banks in aggregate had after the date of this balance sheet up to another date made loans of £500 000 by the issue of new bank notes to this value, the banking sector’s balance sheet would have appeared as in Figure 4 (bottom balance sheet – again a stock balance sheet). Each £1 bank note would then have been “covered” by gold to the extent of 67% ($1\,000\,000 / 1\,500\,000 = 0.66666$).

This new banking practice of providing credit in this manner of course rested on the principle that a certain *reserve* of gold coins had to be kept in the vault to ensure that gold deposit withdrawals could be met at all times. This was termed *convertibility*, i.e. the notes were convertible into gold to the extent of 100% of the face value (in the above example a one pound gold coin for each one pound bank note). The bank note would have stated something like (and persists in many cases to this day): “I promise to pay to the bearer on demand...”

The practice of keeping a reserve of gold heralded the banking system and central banking money creation control mechanism called the *fractional reserve system*, on which we will have much to say later on. The control mechanism rests on the fact that a certain proportion of reserves cannot not be exceeded, i.e. when the reserve proportion is at its minimum further bank loans cannot be granted. It is to be noted that many scholars are under the mistaken impression that this system still exists (albeit in a different form) in all countries, and that money creation exclusively revolves around it.

Not much data pertaining to the growth in bank note money in the period under discussion exist. However, Davies informs us that at the time of publication of Adam Smith's *Wealth of Nations* in 1776, bank money exceeded bank metallic money. *Bank money* by this time was not just *bank note money* but also a close substitute: *bank deposit money*, the subject following this. Its appearance is yet another landmark in banking history.

However, before we get there, *yet another* milestone in English banking and economics, which had major relevance to bank note and bank deposit money creation, and monetary policy much later, must be revealed: formation of the Bank of England. Foreign banks had for an extended time done mainly trade-related business in England, particularly the public banks of Italy, Sweden and Holland. It was also considered prudent to have a public bank to compete with the goldsmith banks, which were becoming much disliked because of their usurious activities (= charging high rates of interest). We are informed by Davies that: “[d]islike of the usurious practices of the goldsmith bankers was a prominent motive stirring on the projectors of potential new institutions.”⁷⁵ The public, joint-stock Bank of England was formed in 1694.

Box 3: Bank of England in 2010



Source: AP Faure

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2.4 Bank deposit money

2.4.1 Introduction

The major historical shift to the formation of deposit accounts for clients and the transfer of amounts from one account to another is a defining moment in the history of money and money creation. Bank deposit money and the transfer of money from one bank account to another can be traced back to Babylonian times. When England created the bank deposit in the seventeenth century it had many precedents, not only from ancient times but also from other European countries. However, there is no evidence of money creation in this money form. This emerged in England when the goldsmith-bankers created current accounts for customers called “running cashes”.

The way was paved for the next significant step in the history of money and money creation: deposit money creation by the banks through the making of loans to the public by simple credits to deposit accounts created for them (i.e. funding of these accounts). This was later refined to the creation of overdraft facilities. The Bank of England was formed in 1694 and was not slow to make loans to the government and to the private sector by credits to current accounts and the issue of new bank notes (on which it eventually had a monopoly).

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2.4.2 Historical backdrop

When this new practice entered English history, it had much history from other parts of the northern hemisphere as precedents. As mentioned, bank deposit money can be traced back to Babylonian times⁷⁶. The then primitive banking operations were carried out by the royal palaces and temples – because they could ensure the security of *deposits*. Deposits first consisted of grain (then regarded as a medium of exchange) deposits in “grain banks” and later other commodities, and even later, precious metals. As in England much later, receipts for the grain deposits were issued and were later used as a medium of exchange. As stated by Davies: “Receipts testifying to these deposits gradually led to transfers to the order not only of the depositors but also to a third party.” It is interesting to note that such non-coin-based business preceded coinage by some hundreds of years, that is, it was the reverse of later European advances in money.⁷⁷

The first banking firms of Babylon are unidentified. The oldest for which records do exist was the “Grandsons of Egibi” in seventh century BC Babylon. They performed a variety of business activities and banking. “...they accepted a wide range of deposits. ‘Customers could have current accounts with them and could withdraw the whole or parts of certain deposits with cheques.’” A second recorded banking firm was the “Sons of Maraschu”. It is notable that while the banking firms of Babylon (and elsewhere) were also engaged in lending, there is no evidence of the creation of money. Loans were made of the underlying assets of paper money but not of newly-created (that is, non-asset-backed) paper money or deposits (it seems).⁷⁸

Box 4: example of cuneiform tablet from Babylonian times



Hundreds of thousands of cuneiform tablets have been unearthed by archaeologists at various old city sites along the Tigris and Euphrates, particularly Babylon. Many of them were deposit receipts and monetary contracts, confirming the existence of simple banking operations. Source: www.ant3145-mesopotamia.wikispaces.com

One of the essential characteristics of banking is the transfer of deposits from one bank account to another bank account; as we know, this is the principal means of payments today. As seen above, bank accounts and bank account transfers date from Babylonian times. However, this system of transfer was regarded as a rudimentary one until the creation of an efficient giro system⁷⁹ of transfer of bank account balances in Ptolemaic Egypt (that is, in fourth century BC). Mainly because of a shortage of metal money, grain had for centuries possessed a medium of exchange status. By the time of the Ptolemies Egypt had a developed an efficient system of grain banks⁸⁰ and transfers of deposits, and Egypt is generally honoured as the mother one of the most significant financial innovations in banking history: a system “...that enabled a nationwide circulation and transfer of credit.”

An Egyptologist⁸¹ accounts for the efficient Egyptian payments system as follows: "...the payments were effected by transfer from one account to another without money passing." Not being a finance / economics man the Egyptologist did not grasp the significance of the efficient payments system in the history of money and later money creation: that the *balances* transferred from one account to another were the *means of payment*. And, underlying the deposit account balances was a commodity: grain. Thus, money creation was not an issue here.

Banking services for millennia included not only deposit transfers, but also foreign currency exchange, as well secured and unsecured lending. Heichelheim⁸² lists deposit banking, foreign exchange, giro, secured and unsecured lending, internally and externally, as having existed as banking products already as early as the third millennium BC. Notable here is that the function of bank lending that existed then is in danger of being accused as representing new money creation. It was not the case at that stage in history; loans of precious metal coins, grain, other commodities and so on were made, and not, as far as can be ascertained, the creation of new deposits from loans. This epochal step was to come later.

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2.4.3 Banking in Europe

Banking in Europe emerged later on the back of the shifting tides of power and of trade. After the demise of the Roman Empire (27 BC–476 AD) it is recorded that banking emerged again and that the means of payment in Italy was the bank deposit (in addition to coins). Morgan informs us that “...banking was being practised again in Italian cities, probably as early as the twelfth century, and transfers of bank deposits were again being used as a means of payment.” However, even though bank deposits were by then a means of payments (i.e. money) the system of transferring payments was not efficient. Morgan refers to it as a “clumsy” system, because the payer had to give the banker an oral instruction and the payee had to signify his agreement in the presence of witnesses. This practice was only improved in the later middle ages (approximately fifth century to sixteenth century) when a forerunner to the cheque emerged in the form of an order which was written and signed by the payer (debtor).⁸³

It is recorded that the use of bank deposits as a means of payments during the Middle Ages was not confined to Italy. It was practised in many of the cities of the Mediterranean. The European banks were in general running the business of giro (accepting deposit balances and transferring them from one account to another) and were not permitted to make loans. However, according to Morgan⁸⁴, in “...practice the temptation to indulge also in money-lending was too strong; bankers often made loans and sometimes they lost their depositors’ money, and were unable to pay them in coin on demand.”

It is important to point out here that the loans made were almost certainly made in the underlying commodities of the deposits (i.e. coins) and not in the creation of new deposits from which borrowers could pay debts. In other words new money creation was not taking place when these loans were made.

The temptation of lending by banks was widespread⁸⁵ and bad loans caused a number of banks to fail. This led to the call for the establishment of public giro banks, which call was heeded by the authorities. Among the best known of these public giro banks were the Bank of St George of Genoa (1408), the Banco della Piazza di Rialto of Venice (1587), and the Bank of Amsterdam (1609). It is recorded that in time these banks were also tempted to make loans and that the Bank of Amsterdam at one stage “...found itself unable to pay its depositors in coin.” (Recall that deposits were convertible into gold.)⁸⁶

According to Morgan, “By this time the merchants of Amsterdam had grown so used to the convenience of making payment through the bank that its deposits continued to circulate and to be accepted at their face value...This is one of the earliest examples of a quality of the means of payment on which most modern monetary systems have come to depend; the essential feature of any medium in which payments are made is not intrinsic value, but general acceptability. The vital thing for anyone receiving a payment is to be sure he can pass on whatever he receives in making payments of his own.”⁸⁷

What is the relevance of the above to the creation of money? It is that bank deposits over time became to be generally accepted as the, and later as the main, means of payment: money. And now we know also that bank account deposits were the medium of exchange a long time before the goldsmith-bankers created the current account in London – they thus had a number of long-standing precedents. The current account and an efficient payments system heralded in fine form the creation of money by simple bookkeeping entries.

2.4.4 Rise of deposit banking in England

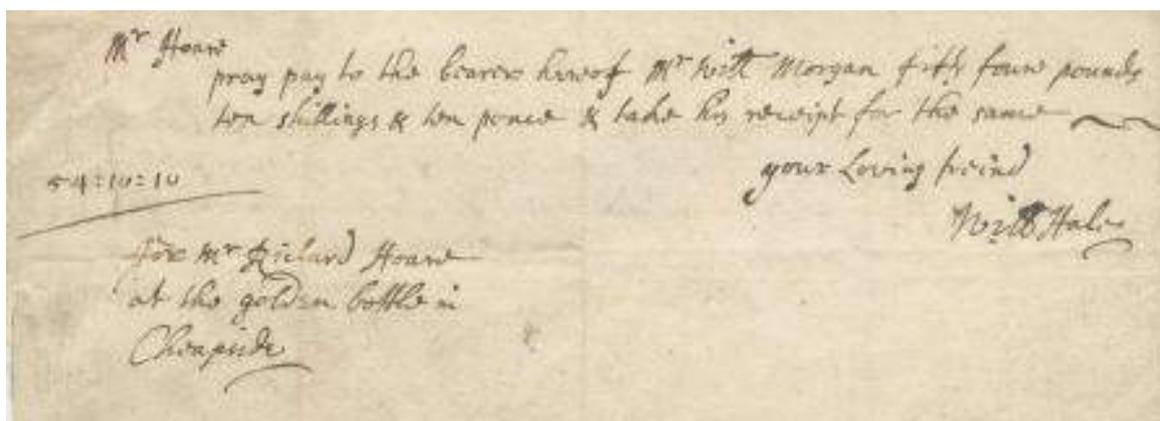
It will be recalled that once they had created the bank note and it became generally accepted as a means of payment, the bankers were able to create new money by making loans with new issues of their own notes. The next step, bank deposit money, was a logical inevitability. It also took place in the seventeenth century. Harrod⁸⁸ articulated this significant step (which was already established in many parts of the northern hemisphere) as follows:

“The client of a bank might say: ‘Look, I do not want those notes of yours; they will only get stolen. Can’t we just leave it that I am in credit with you for so much, and can draw upon you as and when I need to?’ A credit of this nature may be called a deposit. Eventually, to meet the requirement of such a client, the cheque book was devised. A cheque book may be thought of as tantamount to a bundle of notes, each divisible by a pair of scissors into small parts of various sizes. Payments could be made by this method otherwise than in round sums only. A claim in this form could not be so easily stolen as a bundle of notes, and it has the additional advantage that the whole amount does not have to be withdrawn from the bank at the outset, and that the bank might possibly allow interest on what was temporarily left on deposit.”

It seems reasonable to surmise that this development was customer-driven; whether the customer had the notes of the bank or a current account balance at the bank with a cheque book, s/he is in the same situation. S/he could settle debts, i.e. pay, for goods and services as easily with the one as with the other. In fact, with most payments it was more convenient to pay with a cheque, because the amount of the payment could be precise.

The bank deposit current account started life in the books of the goldsmith-bankers as “running cashes” and later became known as “current accounts”. As we have seen, with the current account the cheque emerged, and it quickly became acceptable as an *instrument* of the new medium of exchange: the *bank deposit*. The earliest English bank cheque to have survived is dated 1659 and is an order by a Nicholas Davies Vanacker addressed to London goldsmith-bankers, Morris and Clayton, to pay a Mr Delboe “or order” the sum of £400.⁸⁹

Box 5: example of an early cheque: front (1676)



Mr Hoare
 pray pay to the bearer hereof Mr Will[jam] Morgan fifty four pounds
 ten shillings & ten pence & take his receipt for the same
 your Loving friend
 Will[jam] Hale
 54-10-10
 For Mr Richard Hoare
 at the golden bottle in
 Cheapside

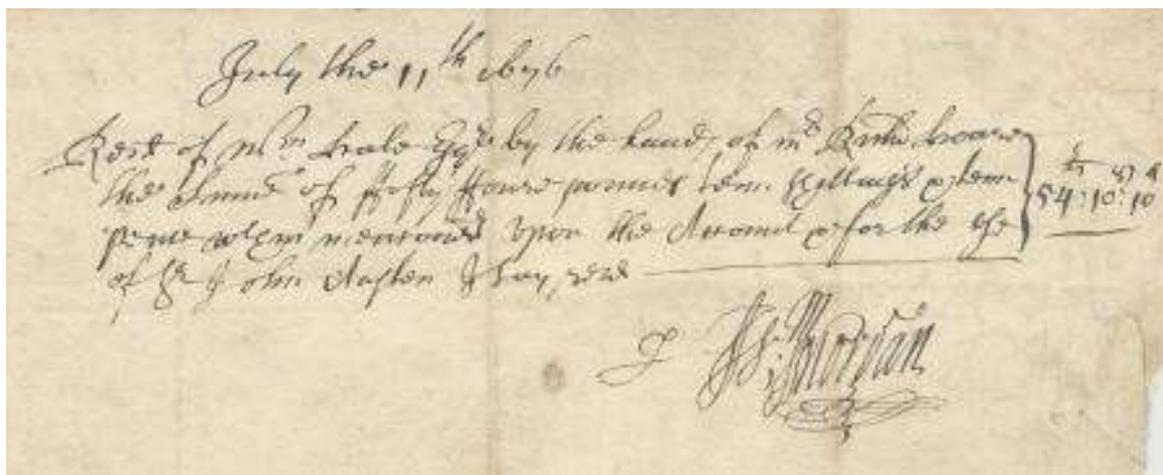
Source: C Hoare & Co

In Box 5 we present the obverse of a cheque issued in 1676, and in Box 6 the reverse of the same cheque is offered. The translations (of the company C Hoare & Co mentioned earlier) accompany the original text.

So, in the middle of seventeenth century England, bank deposits became generally accepted as a means of payment, and the cheque became the principal instrument for the transfer of deposits from one person to another. Money (M) was now comprised of: bank notes and coins (N&C) and bank deposit balances (BD) of the non-bank private sector:

$$M = N\&C + BD.$$

Box 6: example of an early cheque: back (1676)



July the 11th 1676
Rec'd of W'm Hale Esq're by the hands of Mr Rich'd Hoar
the Summe of Fifty Four pounds tenn shillings and tenn
pence when menconed upon the Account & for the use
of Sir John Clayton I say rec'd 54-10-10
W Morgan

Source: C Hoare & Co

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The way was now paved for the next significant step in the history of money and money creation, and this was *deposit money creation* by the banks through the making of loans to the public (and later government) by simple credits to deposit accounts created for them. This was later refined to the creation of the overdraft facility.

It is unfortunate that data on the relative size of the notes and coins in circulation and the stock of bank deposits are scarce. However, Morgan fills us in for 1914 in England: there were less than GBP 40 million of bank notes and about GBP 160 million coins in circulation, and bank deposits amounted to over GBP 1 000 million.⁹⁰

2.4.5 Money creation: household sector

Let us embark on some surmising on how money was created in these early years. Assume that the public in a year borrowed from the banks 11 million pounds; this was granted by the banks in two forms (see Figure 5, which assumes that the money was all borrowed at one time):

- One million pounds in bank notes (some borrowers still wanted this form of money).
- Ten million pounds in loans (credits to the borrowers’ current accounts).⁹¹

Messrs A, B & C did the borrowing to purchase goods from Messrs X, Y & Z to the value of 11 000 000 pounds over the year.

BANKING SECTOR (POUNDS)			
Assets		Liabilities	
Loans	+11 000 000	Bank notes	+1 000 000
		Deposits	+10 000 000
Total	+11 000 000	Total	+11 000 000

MESSRS A, B & C (POUNDS)			
Assets		Liabilities	
Bank notes	+1 000 000	Loans	+11 000 000
Deposits	+10 000 000		
Total	+11 000 000	Total	+11 000 000

Figure 5: money creation: bank notes & deposits

Messrs A, B & C pay to Messrs X, Y & Z £1 000 000 in bank notes by handing them over and instruct their bankers by cheque (this is what a cheque accomplishes) to transfer £10 000 000 to their current accounts at their bankers. The balance sheets changes are shown in Figure 6.

On a net basis Messrs A, B & C's balance sheet changes as indicated in Balance Sheet 1. The banks' collective balance sheet is unchanged from that shown in Figure 5: because the outstanding bank notes just changed hands and the deposit created was transferred from Messrs A, B & C to Messrs X, Y & Z. It will be evident that the amount of money in circulation (the money stock) increased by £11 000 000 and the balance sheet cause of change (BSCoC) was the increase in bank loans. As shown in detail later, when changes in the money stock and its BSCoC are calculated, only the banking sector's balance sheet is analysed.

MESSRS X, Y & Z (POUNDS)			
Assets		Liabilities	
Bank notes	+1 000 000		
Deposits	+10 000 000		
Goods	-11 000 000		
Total	0	Total	0

MESSRS A, B & C (POUNDS)			
Assets		Liabilities	
Bank notes	-1 000 000		
Deposits	-10 000 000		
Goods	+11 000 000		
Total	0	Total	0

Figure 6: payment for goods

BALANCE SHEET 1: MESSRS A, B & C (POUNDS)			
Assets		Liabilities	
Goods	+11 000 000	Loans from bank	+11 000 000
Total	+11 000 000	Total	+11 000 000

The actual cause was the demand for loans from Messrs A, B & C, and underlying this was the demand for goods ($\Delta C = \Delta GDE$) which was supplied Messrs X, Y & Z ($\Delta GDP = \Delta GDE$) who receive the money. This was made possible by the creation of new money by the banks to the extent of £11 00 000 in the form of new bank notes and new bank deposits, that is, the generally accepted means of payment. It will be evident that in the case of new bank notes issued an accounting entry was made and the physical notes were printed, whereas in the case of the bank deposits only the former was effected.

The creation of money by the goldsmith-bankers as described above is not fiction. It happened in this manner. However, up to now we have probably created the impression that money is created mainly by the banks' lending to the household sector. This is not the case at all. In high inflation times in the distant past the culprit on most occasions was government. We saw earlier how governments debased coin money, based on the fact that coin money was generally accepted by count. Later, governments were not slow to learn that money was to be relatively easily acquired by borrowing from the banks. In fact the creation of the Bank of England was founded on this experience, as we shall see.

2.4.6 Money creation: government sector

In the seventeenth century the banks were substantially engaged in deposit money creation resulting from loans to government in the form of the purchase of the first government bonds (all short-term). They were then called "Exchequer Orders"⁹² and essentially were "orders" by government for the Exchequer (= the government tax authority) to pay to the holder of the Exchequer Order an amount (i.e. the amount borrowed) on maturity plus interest on the amount borrowed at stipulated intervals or on maturity. Two points of interest here are the fact that these Exchequer Orders (now called government bonds) were issued against the proceeds of specific taxes at one stage and later against revenue in general⁹³, and that they were "assignable", meaning that could be "signed" over to a third party, that is, they were negotiable.



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It is also recorded that the goldsmith-bankers were the largest holders of government debt at that time and even “made a market” (that is, quoted buying and selling prices) in these securities.⁹⁴ This was a significant step in the history of the bond market.

BALANCE SHEET 2: BANKS (POUNDS)			
Assets		Liabilities	
Loans (bonds)	+1 000 000	Bank deposits	+1 000 000
Total	+1 000 000	Total	+1 000 000

The activity of market making on bonds by the goldsmith-bankers cannot be associated with money creation if their dealing took place in already-issued bonds. To the extent that they bought bonds *at issue* they would have created money, but it is not recorded how they paid government for the new issues. Thus, we can only surmise how this took place. If this was effected by credits to government’s accounts by the banks (assuming the banks bought the bonds) (as opposed to the issue of bank notes – although the result is the same) then the creation of money would have been manifested as indicated in Balance Sheet 2 (assuming a new issue of bonds to the extent of £1 000 000). Government’s balance sheet would have changed as indicated in Balance Sheet 3.

BALANCE SHEET 3: GOVERNMENT (POUNDS)			
Assets		Liabilities	
Bank deposits	+1 000 000	Bonds in issue	+1 000 000
Total	+1 000 000	Total	+1 000 000

Assuming government spent the funds on goods locally the relevant balance sheets would have changed as indicated in Figure 7 (a reminder: the non-bank private sector is indicated as NBPS).

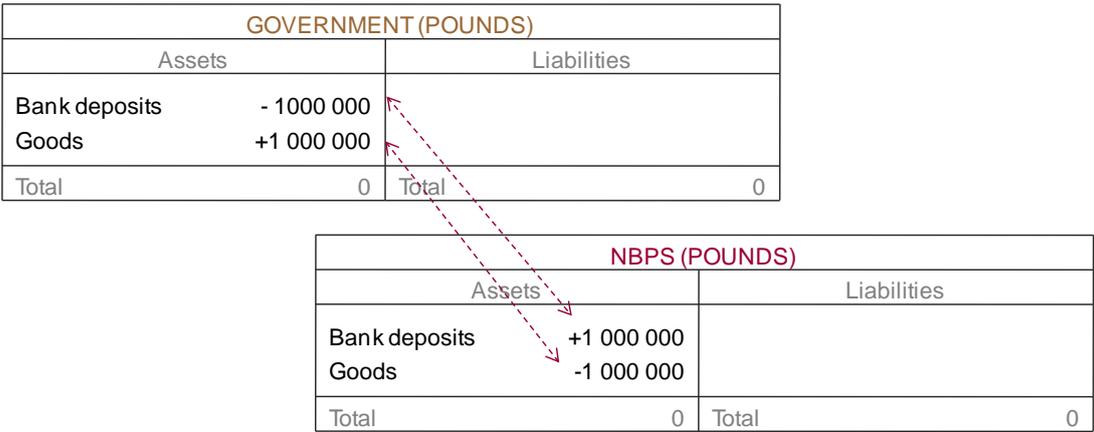


Figure 7: government spending

The amount of money in circulation (read from the balance sheets of the banks) increased by £1 000 000 million. The BSCoC of the change in money is an increase in bank loans to government, and actual cause is the demand for loans by government (for the purchase of goods).

2.4.7 Money creation: corporate sector

It is also recorded that the goldsmith-bankers' were engaged in the business of buying bills of exchange. The bill of exchange, then also called a "bill on London", was an instrument of lending to merchants. Tied to specific transactions it was a "self-liquidating" loan and also the forerunner of the trade bill and the bank acceptance of later years (which were at the heart of the early money market). A loan to a merchant in the form of buying a bill of exchange with a face value of £1 000 000 would also have resulted in the creation of money as indicated in Balance Sheet 4.

BALANCE SHEET 4: BANKS (POUNDS)			
Assets		Liabilities	
Loans (bill of exchange)	+1 000 000	Deposits (or notes)	+1 000 000
Total	+1 000 000	Total	+1 000 000

We now have two sources of money creation: the demand for loans / credit by the household and corporate sectors (the non-bank private sector – NBPS⁹⁵), and government, which together can be termed domestic loan extension (or DLE). We will later show that there is a third: the activities of banks in the foreign exchange market.

As we have stated a few times in this text, the "discovery" of deposit money creation was probably the most significant event in the history of banking, money and money creation. It liberated economies; Davies⁹⁶ puts it as follows: "The new forms of bank money brought a liberating, timely and essential extension to overcome the debilitating constraints of the metallic money supply, and...the bankers offered a range of new financial services beyond the ken of the Royal Mint."

An essential question now arises: was there an intrinsic brake on the monetary system to curb the excessive creation of money and thereby inflation? The answer, which is to be expected from an economist, is yes and no. The "yes" stems from the convertibility of bank notes into gold and the rise of central banking, and the "no" from certain bankers' avaricious disposition and the slow rise of central banking.

2.5 Bank note convertibility into gold

2.5.1 Introduction

It is reasonable to surmise that the slow rise in deposit money growth (deduced from the 1914 numbers mentioned previously) was a consequence of some factor that can be regarded as an intrinsic brake on excessive money creation at that time. What was this? Essentially it was that bank notes were convertible into gold coins.

Before we proceed with this significant issue it is important to elucidate the situation of bank deposits (as a later addition to money) in respect of money creation. The wonderfully rich literature on the history of money provides few clues as to what constituted the brake on the creation of *deposit money* in early history. We know that bank notes emerged from deposits of gold and silver coins, and that the volume of the latter therefore constituted an intrinsic brake (because of its natural scarcity).

However, bank deposits had a different history; so the question arises: what constituted an intrinsic brake on bank deposit creation? Historical texts are quiet on the issue, but there can be only one conclusion, and it is an obvious one: that bank deposits were convertible into bank notes (and still are), and bank notes were convertible into gold coins. Therefore, holders of bank deposits were in the same position as holders of bank notes: they could convert their bank notes and their bank deposits into gold coins.

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To elucidate this significant issue (of the curbing of money growth), which also constitutes a part of the history of monetary policy, we need to delve back into history.

2.5.2 Convertibility: past and present

We know of the emergence in seventeenth century England of what can be called *token* money, that is, bank notes and bank deposits that have no intrinsic value (as opposed to coins which, made of precious metals and therefore having an intrinsic value, were *real* money). These token monies were convenient for payments, and they were accepted as such because they were also what can be called *representative* monies. This means they were *representative tokens* which were fully convertible into coin money that had an intrinsic value.

This is a significant issue because convertibility gave rise to the need by banks to hold a *reserve of gold coins* so that public demands for the conversion of bank notes into gold were always met. The banks of the earlier centuries knew that not all depositors would arrive at the same time and demand gold for notes. Therefore, they could make loans by the issue bank notes and credits to current accounts (that is create money) up to a point – determined by a “comfortable” reserve of gold. It will be apparent that the larger the reserve of gold coins the higher is the likelihood of meeting demands for gold. Given the natural limit imposed on the supply of gold by the limits of gold ore supply and gold mining technology, there was an intrinsic limit to money creation.

What about modern money? We know that modern money is intrinsically almost valueless. Deposit money (= computer-based accounting numbers) has no intrinsic value at all. We also know that bank notes (= paper money) has no value except the value of the paper on which it is printed, and that coin money has little intrinsic value [= the value of the non-precious (base) metals used to make them]. We also know that modern bank deposit and bank note money is convertible into coin money, and that there is no value benefit to be had in this conversion⁹⁷. And yet we all accept all these forms of money unconditionally as a means of payment. What happened between the era when bank deposits and bank notes were convertible into precious metals and now when they are not?

In a nutshell the answer is twofold. Firstly, money creation and the loss of confidence at times in token money led to utilisation of the convertibility option, which led in turn to suspension of convertibility at times and eventually to permanent inconvertibility. Secondly, at the time of the introduction of permanent inconvertibility, the public had generally come to *completely* accept bank deposits, bank notes and coins by *count*, that is, by face value. Except for high-inflation countries, this is the case worldwide today. The three types of money (coins, notes and deposits) are money because they are generally accepted as a means of payment, and their underpinning is confidence. And herein lays a compelling responsibility: that of maintaining the value of the currency internally and externally. Because money can be created on demand by a borrower from a bank, a strict referee is required: the central bank in its role of implementation of monetary policy.

What led to the demise of bank deposit and bank note convertibility into gold? In order to answer this significant question we first need to cover the events that inter alia led to the formation of the Bank of England. This bank, which later morphed into a central bank, played a major role in the convertibility issue.

2.5.3 Bank of England

At the time of the early goldsmith-bankers in seventeenth-century London, a number of country banks sprung up and, taking a lead from London, made loans by the issue of bank notes and by creating bank deposits. Many of these banks were tempted to lend indiscriminately and failed when confidence in them caused runs on them. At more or less the same time the London goldsmith-bankers “...had reached a position in late 1671 of being so fully loaned up that they refused the king’s request for moneys urgently required for the navy.”⁹⁸

Box 7: Bank of England in the early days



Source: www.gutenberg.org

It is important to note that “fully loaned up” almost certainly meant that their reserves of gold were at dangerously low levels. It should be evident that, even though the total of gold reserves may have been stable, as the bankers’ loans increased the amount of gold per unit of note and deposit (say, per pound) would have decreased – because the increased loan amounts would have manifested in the increasing volume of bank deposits (the money stock). This is extremely significant because it is a reflection of the intrinsic brake on money creation referred to earlier.

The consequences of refusing to satisfy the king’s appetite for money were profound. In 1672 the king issued a Proclamation, which came to be known as the infamous “Stop of the Exchequer”, which meant that the king reneged on its debt which was held mainly by the goldsmith-bankers. Although many years later they were repaid about half the nominal (face) value of the debt, this spelt the death knell of many of the goldsmith-bankers which had invested heavily in government debt. Their notes became unacceptable as a means of payment, and they could not meet repayments of notes and deposits. Only a few survived, including Richard Hoare (now C Hoare & Co referred to earlier; recall that the bank still exists today).⁹⁹

This and other events (such as the need by government – William and Mary and Parliament – to borrow long-term, to fund the war against Louis XIV and the desire to break the monopoly of the remaining goldsmith-bankers) led to renewed calls for the establishment of a well-capitalised public bank, modelled on the public banks established a few years earlier in Italy and Amsterdam (and elsewhere) referred to earlier, which could play a role in stabilising and maintaining the stability of the monetary system. The Bank of England was formed in 1694, and over time was to perform the functions we now associate with central banking. However, this was not to be formalised until 1946. Before then it was a “normal” bank, but one which was to hold the confidence of the public – except on a few occasions, as we shall see.

A significant step in money history was the granting of a virtual monopoly of the bank note issue to the Bank of England; this occurred not long after its establishment. Other banks were permitted to issue notes only if they were partnerships that had less than six partners.¹⁰⁰ Presumably the government and the Bank of England reasoned that the Bank of England’s notes would become *the* means of payments in note form, and that the smaller banks would cease to issue notes because their notes would not be imbued with that essential requirement in banking: confidence.

They were correct. As the Bank of England’s notes were winning the confidence of the public most of the London goldsmith-bankers and the other smaller country banks ceased issuing bank notes. The Bank of England also *won the confidence of the goldsmith-bankers*. This was a momentous step in the history of money, money creation and monetary policy. It came to pass that the goldsmith-bankers held *reserves*, not only in gold and silver coins, but in the notes of and deposits with the Bank of England. These came to be known later as the *cash reserves* of the banks, the very epicentre of monetary policy for some time. However, we are getting ahead of ourselves; so back to the seventeenth century we go.

The first goldsmith-bankers to open accounts with the Bank of England were the firms of Richard Hoare (later C Hoare & Co, as we have seen) and Freame & Gould (the forerunner of Barclays Bank). They opened their accounts with the BOE in March 1695¹⁰¹, and in the course of time the other banks followed suit. This was a presaging of the Bank of England, in its later role of central bank, performing not only the function of *custodian of the reserves of banks*, but also the function of *lender of last resort*, about which we have much to say later.

It is interesting to note that when the right to issue notes was taken away from the banks, they lost a major source of revenue. This development led to another: increased activity of the banks' role of the transfer of deposits by cheque¹⁰² and development of the payments system. The payments system is an integral part of modern banking.

2.5.4 A note on the coins of old

The amount of bank notes in circulation was not as much as that of coins¹⁰³ and this persisted until the opening year of WWI (1914). So the main form of reserves for banks, including the Bank of England, was gold coins. The amount of gold coins in England, which were limited because of bimetallism inequalities and other issues / factors, began to increase toward the end of the seventeenth century at the expense of silver coins. The main reason was that the market price of silver metal was increasing relative to gold and thus became undervalued at the mint. The consequence was that silver coins were melted down and as a result silver ceased to be minted as coin money.



The gold coin in circulation at that time was the *guinea* (first minted in 1663) and the *sovereign* (from 1816). Its value was fixed in 1719 on the advice of Sir Isaac Newton (yes, the celebrated mathematician and physicist!), who was then Master of the Mint, at a value of 21 shillings (equivalent to a mint price for gold of £3 17s 10½d per ounce, fifteen-sixteenths fine). This price was maintained until 1939.¹⁰⁴ The literature is not forthcoming on the background and details of this price. A reasonable conclusion to be drawn is that the level of the price of gold was not a major issue; what was is the fact that the price of gold was *fixed* for a long period, thus ensuring that debasement by kings / governments could not take place. So money creation by re-coining coin money with a lower precious metal content and/or weight could not take place during this period.

In the meantime, another milestone in money history was emerging: that of coins of metallic content *way below their face value* being minted and used for small payments. The latter was a major problem for a long time and gold coins were only suitable for the settlement of large debts. This issue took final form after 1819 when the mint started producing “silver” and “copper” coin money with a metallic content way below their face value: token money. Very quickly these became to be generally accepted as a means of payments. This development is particularly significant because the way was paved for the general acceptability of token money, that is, *the money of the future*.

2.5.5 From convertibility to inconvertibility

We return from a branch to the stem of this text: convertibility of bank notes and deposits into gold. Given a fixed gold price of £3 17s 10½d per ounce, anyone with four one-pound bank notes could walk into the Bank of England’s banking hall in London and demand an ounce of gold, fifteen-sixteenths fine (and get some change). This could also be done with the other banks in London and in the country. However, this action was rare for long periods; the Bank of England note was becoming the accepted means of payments countrywide. The inconvertible bank note, another large step in the evolution of money, was for the future.

In the latter part of the eighteenth century and the first part of the nineteenth century many country banks sprouted; in the main they were partnerships of less than six partners. Many of them failed when they squandered the confidence of the public. Newlyn¹⁰⁵ informs that “...the country banks, being confined to partnerships, operated on a small scale and were highly unstable...in the first quarter of the nineteenth century 265 country banks went bankrupt.” The ones that did not fail generally had accounts with the larger London banks and/or the Bank of England and were able to meet withdrawals with Bank of England notes and/or gold coins.

Convertibility of bank notes and deposits into gold in England (and elsewhere) was suspended on two occasions and finally in 1931 when Britain left the “gold standard”. It is significant that during these times and after 1931 bank notes became mere tokens, that is, were accepted at their face value.¹⁰⁶ The first period referred to is 1797, when rumours of a French invasion were rife, until 1819. When the rumours emerged there were “runs” on all banks and parliament ordered the Bank of England to suspend payments of notes and deposits in gold coins.

The second period was from the outbreak of WWI in 1914 to 1925. From 1914 a revolution in money history in Britain took place: gold coins were gradually called in and replaced by Bank of England notes. From 1925 to 1931 notes were convertible (into gold bullion¹⁰⁷, not coins, at that stage) but, as this fact was not stated on the bank notes, few people took advantage of this. As noted, the gold standard was abandoned in 1931¹⁰⁸ and since then all forms of money have been used as token money, that is, according to face value and by count. The liabilities of banks¹⁰⁹, that is, bank notes and deposits and coins of little intrinsic value, without any backing of precious metals, had become the generally accepted means of payment: money.

The intrinsic brake on excessive money creation in the form of convertibility of bank notes and deposits was removed. Banks no longer had the need to hold a reserve of gold against bank note and deposit issues. It is this fact that causes some commentators on the monetary system of today to wax hysterical. As we shall see, the system of convertibility was replaced by another, a fiat system, which removes the constraint of precious metal availability on economic growth. The mammoth proviso, as we have mentioned, is that the system has to be managed in a non-promiscuous, responsible manner by the referee: the central bank.

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