The Role of Gold in the Monetary System

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SUMMARY

The great period of gold in the monetary system lasted from the 1870s to the outbreak of World War I. During this period a global fixed-exchange-rate system was established, based on a fixed definition of each currency vis-à-vis gold, together with unequivocal rules for gold convertibility and gold coverage.

As gold was a scarce resource, its use as a direct means of transaction, i.e. as coins, was limited. Instead, banknotes gained ground, so that the convertibility of banknotes into gold came to play a leading role in the system and the gold standard evolved into a so-called gold exchange standard.

During the inter-war years some countries sought to stretch their gold reserves by introducing a gold bullion standard, whereby only amounts equivalent to whole gold bars could be converted into gold. For individual citizens gold thus played a limited role, but it was still the foundation of the monetary system. At the beginning of the 1930s more and more countries had to abandon the gold standard.

After World War II the Bretton Woods system was established. It was based on an implicit pegging to gold, i.e. currencies were pegged either to the dollar or to gold directly. In general, only central banks had access to convertibility into gold. The Bretton Woods system collapsed in 1971 as gold had outlived its central role in the international monetary system.

Today, gold is still part of most central banks' foreign-exchange reserve, although gold's share of the total foreign-exchange reserves has declined.

INTRODUCTION OF THE GOLD STANDARD

At the beginning of the 18th century Britain defined its currency in relation to a certain amount of gold, i.e. 123.274 grains, corresponding to 7.988 grammes, per pound. This marked the de facto introduction in Britain of a gold standard which lasted – albeit interrupted for certain periods – until the outbreak of World War I in 1914.
In contrast to Great Britain, throughout the 19th century most other countries in Europe defined their currencies in relation to silver, although some had a bimetallic standard whereby the value of the currency was defined in relation to both gold and silver. The result was an official fixed parity between gold and silver. In the most important bimetallic country, France, this parity was 15½:1. The amount of silver required for one franc was thus 15½ times higher than the amount of gold required. The value in the market fluctuated around this parity until the 1870s, cf. Chart 1.

The role of gold was determined by the limited amount available worldwide, but in the 1850s considerable gold strikes were made in Australia and California, cf. Chart 1. For a short period this led to a weakening of the price of gold. In the 1860s gold production fell, while silver production rose and the value of silver thus fell relative to gold. This caused concern in the silver-standard countries, among other things because citizens could buy silver at lower prices in the market and have it minted. At the same time the amount of gold in Europe rose because the USA financed a substantial share of its civil-war expenditure (1861-65) by lifting the convertibility into gold and selling its gold reserves. The stage was thus set for gold to play a new, more prominent role in the international monetary system.

The growing importance of gold in the international monetary system became clear in 1865 on the establishment of the Latin Currency Union consisting of France and a number of other European countries. The

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<th>Year</th>
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<th>Price of Gold in Relation to Price of Silver (right-hand axis)</th>
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<td>1801-50</td>
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Latin Currency Union was officially on a bimetallic standard, but gold played a far more prominent role than silver, which was widely perceived as a step towards a gold standard. The official parity between silver and gold continued to be 15½:1. Two of the world's most important currencies - the French franc and the pound sterling - were thus both based on gold.

The German states had traditionally adhered to a silver standard. After France was defeated in the Franco-Prussian war in 1871 Germany received five billion gold francs as war indemnity. This amount of gold provided for a rapid transition to a gold standard. It constituted the basis for a new pan-German currency which was proposed in December 1871. As a result of Germany's transition to the gold standard, it was likely that large amounts of silver would be released on the free silver market once gold had replaced silver coins in circulation. An increase of this magnitude in the supply of silver to the market would cause the price of silver to plummet, and the silver-standard countries, whose units of payment were defined in terms of a fixed amount of silver, would be flooded with cheap silver for minting. As a consequence of Germany's planned transition to the gold standard its neighbouring countries, including the Scandinavian countries, came under pressure to make a quick transition to the gold standard, cf. p. 22. However, for various reasons the gold standard in Germany was not applied until 1876.

The USA had been on a bimetallic standard from 1792 to 1861 and introduced convertibility into gold in 1879. The gold standard was not formally introduced in the USA until 1900.

The period from the beginning of the 1870s to the mid-1890s was characterised by prolonged deflation. One explanation is based on the limitation which the volume of gold reserves imposes on the growth in the money supply. This limitation prevented growth in the money supply from keeping up with the growing need for money for transactions generated by world production. This led to deflationary pressure. As from the mid-1890s new gold strikes meant that the deflationary pressure was replaced by an inflationary tendency.

**Gold as a form of commitment**

By the end of the 19th century most leading countries defined their currencies in relation to gold, and their central banks had committed themselves to unlimited purchase and sale of gold at the fixed exchange rate. At the same time, rules were fixed for the proportion of banknotes in circulation that were to be covered by the gold reserves held by the central banks. Among the other explanations for the falling prices are lower production and transport costs, see Hansen (1976) for further details.
central banks. This created a worldwide system whereby the individual currencies, via their gold parity, were implicitly defined in relation to each other. Gold thus constituted the nominal anchor of the international monetary system. For example, a Danish krone contained 0.403 grammes of gold, while the pound sterling contained 7.32 grammes of gold, so the parity of the pound sterling was $7.32/0.403 = \text{kr. 18.16}$ per pound sterling. However, in practice there were minor deviations in the actual exchange rate due to such factors as the costs of transporting the gold between countries and external imbalances.

Besides the convertibility into gold the system comprised a set of "rules of the game" which central banks were expected to adhere to. In the event of an outflow of gold as a result of an external imbalance the central bank had to raise its interest rate in order to reduce the domestic money supply and demand, while at the same time the higher interest rate would attract foreign capital. Similarly, in the event of an inflow of gold, the central bank had to lower the interest rate. This passive interest-rate adjustment restored the external balance and brought the exchange rate back to parity. Together with free trade in gold this interest-rate adjustment had a stabilising effect on the system.

The clearly defined rules pertaining to the classical gold standard made it a binding mechanism which contributed a high degree of credibility to the system. The classical gold standard coincided with the period in which Great Britain was at the zenith of its power, and London was the gold capital of the world. Great Britain's long adherence to the gold standard was the cornerstone of the system and many countries on a gold standard held sterling as a foreign-exchange reserve. Holding sterling was perceived as equivalent to holding gold, and sterling was a more appropriate means of transaction. The classical gold standard lasted until 1914.

**DENMARK MOVES FROM SILVER TO GOLD**

The establishment of the Latin Currency Union in 1865 stimulated Denmark's interest in moving from a silver to a gold standard. Prior to this, Denmark, Sweden and Norway had discussed the possibility of forming a currency union. The currencies of all three countries were based on a silver standard, and their coins had an almost identical silver content and were in circulation in all three countries.

In the deliberations on the introduction of the gold standard it was first considered to introduce the gold franc as the currency unit in Scan-

1 See Bordo and MacDonald (1997) for further details.
dinavia, but after Germany defeated France in the Franco-Prussian war in 1871, and in view of Germany's planned transition to the gold standard, the idea of the gold franc was abandoned. Interest in the gold standard for Denmark grew when Germany decided to introduce the gold standard, since this would mean that the two most important trading partners, Britain and Germany, would now be on the gold standard. In view of the risk of a strong drop in the price of silver the Scandinavian countries, as already stated, came under pressure to adopt the gold standard without delay. Already in 1872 agreement was reached on a Scandinavian currency system based on gold.

On 23 May 1873 King Christian IX signed the new Currency Act according to which gold would be introduced as legal tender in Denmark by 1 January 1875 at the latest. A transition period of maximum 4 years was allowed, after which the rigsdaler would no longer be legal tender. The Currency Act set the value of 1 kg of fine gold at kr. 2,480, i.e. kr. 1 was equivalent to 0.403 grammes of fine gold. The new krone coin was exchanged at a rate of kr. 2 to 1 rigsdaler.

The Currency Act also adopted the Convention on the Scandinavian Currency Union, which entered into force in 1875 for Denmark and Sweden, while Norway joined the Currency Union in 1877. The Scandinavian Currency Union introduced the gold standard and the same unit of account (the krone) in all three countries. In the early days of the Currency Union only coins were accepted at par by the central banks. In 1894 Sweden and Norway agreed to accept each other's banknotes at par without restrictions. Denmark's acceptance of the joint circulation of banknotes in 1901 marked the full establishment of the Scandinavian Currency Union. However, full union lasted only until 1905 when Norway gained independence and restrictions on the joint circulation of banknotes were imposed.

Although Denmark was not involved in World War I in 1914 many people wished to convert their banknotes into gold on the outbreak of the war. This was perceived as a serious threat to the Nationalbank's gold reserve. The convertibility into gold was therefore suspended in August 1914, followed by a ban on gold exports.

THE INTER-WAR YEARS

The gold standard system was reintroduced in the inter-war years. In this period the international monetary system differed from the classical gold standard in a number of respects. One significant difference was that gold was withdrawn from circulation and placed as reserves with the central banks. A case in point was Great Britain which in 1925 rein-
troduced the convertibility into gold at the gold parity from before World War I. Sterling was overvalued, which led to pressure on the gold reserves, and Britain therefore introduced a gold bullion standard. Under the classical gold standard the central bank was obliged to convert every single banknote on demand. Under the gold bullion standard the central bank was only obliged to issue whole bars of gold, i.e. to convert amounts corresponding to the value of one whole bar of gold. This made it possible to economise on gold holdings and less gold cover was required. This also reduced the role of gold as a means of transaction and took gold out of the hands of citizens.

Another important difference from the earlier period was that Britain had lost its role as an economic and political leader. As a result, sterling's importance in the international monetary system diminished, while the dollar was increasingly used as the reserve currency. Finally, prices and wages were less flexible than before and new considerations governed the management of currency flows. This was e.g. due to increased pressure from trade unions and political parties, which now played a greater role than was the case before World War I. A failure of cooperation, a protectionist policy and the absence of a de facto leader undermined the system. The absence of mechanisms to ensure equilibrium meant that the system was never as stable as the classical gold standard.

With the depression of the 1930s, the gold standard system of the inter-war years collapsed. Britain abandoned gold in 1931, and the USA in 1933. However, already in 1934 the USA reintroduced the gold standard at a devalued exchange rate of 35 dollars per ounce of gold\(^1\). Apart from a few months during World War II the USA maintained the pegging of the dollar to gold. The gold peg and the USA's economic influence provided a sound foundation for the dollar's future role as an international reserve currency.

**Reintroduction of the gold standard in Denmark**

After World War I a declared objective of Denmark's economic policy was to reintroduce the gold standard and to restore the convertibility into gold. However, it was considered more important to ensure an acceptable level of economic activity, so the decision to return gradually to the gold parity was not adopted until 1924. On 1 January 1927 the convertibility into gold was reintroduced at the previous gold parity, i.e. kr. 2,480 per kilo of fine gold. The "honest krone" had thus been reestablished. As in Britain, a gold bullion standard was introduced, initially for a period of three years. One gold bar was worth approximately kr. 28,000, today

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\(^1\) 1 troy ounce = 31.1034768 grammes.
equivalent to approximately kr. 700,000. At the end of both 1929 and 1930 the gold bullion standard was extended for one year.

The depression put pressure on Denmark's foreign-exchange reserve due to such factors as the repatriation of assets from abroad. On 22 September, the day after Britain abandoned the gold standard, Denmark imposed a ban on gold exports. During the period 21-29 September an amount of kr. 7.5 million was converted into gold at a deliberately slow pace. On 29 September 1931 the Rigsdag (Parliament) decided to abandon the gold bullion standard.

THE BRETTON WOODS SYSTEM

In 1944, in Bretton Woods, USA, the Western powers established a new international monetary system. The two principal countries – the USA and Britain – generally disagreed on the design of the system and on the future role of gold.

Britain had exhausted its gold and currency reserves during the war and therefore called for a system which gave access to international liquidity in which gold thus played only a minor role. A major contributing factor was that Britain was severely affected by recession when it returned to the gold standard during the inter-war years. The USA, on the other hand, which had maintained its gold peg since 1934, had substantial gold reserves and called for a fixed attachment to gold.

At the negotiations the British delegation was headed by the economist J.M. Keynes, and its proposal was based on a principle of clearing between the countries. A key element of the plan was to create a new reserve currency, the bancor, which would be freely available to countries with a capital-account deficit for payments to countries with a surplus. This proposal would have removed gold completely from the international monetary system. However, the American proposal, based on a close pegging to gold, was adopted.

The countries in the system could choose to peg their currencies either directly to gold, or indirectly by pegging to the dollar, which had been defined in relation to gold (35 dollars per ounce of gold). It was thus possible to hold foreign-exchange reserves in both dollars and gold. Most countries chose to peg their currencies to the dollar. The USA was obliged to buy and sell gold in order to maintain the gold price, while the other countries in the system were obliged to keep their exchange rates within a margin of +/-1 per cent of the agreed parities by buying and selling dollars.

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1 Officially, sterling was also an intervention currency, but in reality it played a very limited role.
Under the Bretton Woods system the convertibility into gold, which had been a fundamental element of the classical gold standard and was still an important element of the inter-war system, was limited to apply to central banks only. Ordinary citizens thus no longer had general access to the gold reserves. Most central banks chose to hold the reserves in dollars since dollar-denominated assets could be placed in interest-bearing US government bonds. In contrast to the previous gold standard systems, realignment of exchange rates was possible under the Bretton Woods system, although the major participant countries were reluctant to devalue, even though economic policy did not show the degree of convergence necessary to maintain a fixed-exchange-rate system.

Speculative buy-up of gold at the beginning of the 1960s caused a number of countries to establish a gold pool for intervention in the gold market. The intervention of the gold pool kept the market price close to the official price of 35 dollars per ounce, making the gold market more a place of distribution than a price setter.

In November 1967 the devaluation of sterling against the dollar undermined confidence in the system's stability and in the dollar. This was followed by speculative demand for gold in the market. During the first months of 1968 the central banks, especially the Federal Reserve, were forced to sell gold for 3 billion dollars. In March 1968 it was decided to dissolve the gold pool and disconnect the central banks' gold stock from the world market. This was achieved by the central banks committing themselves not to supply gold to or receive gold from the world market. Those central banks that did so would be excluded from buying gold from other central banks. This gave rise to two gold prices: the official price of 35 dollars per ounce for trading among central banks and a market price, which quickly rose.

The Bretton Woods system became more and more unstable due to the ever-growing volume of short-term dollar assets outside the US relative to the USA's gold reserves. France wished to solve the problem by returning to a true gold standard. This wish was in part also motivated by a desire to reduce the economic power of the United States. As from 1965 France consistently exchanged its dollar assets for gold. France's preference was not supported by other countries and in 1968 an international reserve currency, Special Drawing Rights, SDR, was created. SDR were to ensure sufficient international liquidity, while at the same time reducing holdings of dollar assets outside the USA. SDR were reminiscent of the proposed bancor and were defined as 35 SDR = 35 dollars = 1 ounce of gold.

1 Calculated at 35 dollars per ounce.
The use of SDR as from 1969 could not prevent the collapse of the system since the economic policies of the leading countries in the system continued to diverge. Despite several attempts to contain the crisis the Bretton Woods system collapsed in August 1971 on the announcement by President Nixon that the dollar could no longer be exchanged for gold. SDR were still formerly defined in relation to gold until 1976 when gold was replaced by a currency basket. Gold had thus outplayed its central role in the international monetary system.

There are numerous different explanations for what happened in the Bretton Woods system.

One explanation was offered by Robert Triffin in 1960\(^1\). According to Triffin, demand for international reserves would grow faster than the supply of gold, creating a global shortage of liquidity, which would lead to monetary contraction. This could only be avoided by a sustained current-account deficit in the USA. The problem with a permanent deficit was that this would undermine the dollar’s credibility as a reserve currency since the ratio between the outstanding volume of dollars and the USA’s gold reserve would rise. The system would collapse if the rest of the countries in the Bretton Woods system demanded the exchange of their dollar holdings for gold. A possible solution to the Triffin dilemma was the establishment of a new reserve currency such as SDR.

Another possible explanation applies to currency systems comprising two currencies with a fixed mutual exchange rate, where the central banks are willing to exchange currency at the fixed exchange rate. Should the circulating volume of one of the two currencies, e.g. the dollar, be excessive in relation to the other currency, e.g. gold, the market value of gold (measured in dollars) will rise, as will private demand for gold. Since the authorities are willing to convert at the fixed exchange rate, gold, which has a higher value in the market than in the monetary system, will disappear from the monetary system, to be used for private purposes instead (e.g. industrial use and jewellery). The dollar will thus replace gold. This is a rough outline of what happened in the 1960s. The volume of dollars rose far more than the supply of gold. The gold pool established by the central banks maintained a constant gold price, but had to supply the required amount of gold to the market. Consequently, the central banks’ total gold stocks fell by 18 per cent from 1960 to 1970. In the same period the total reserves increased by 5 per cent. Gold had thus begun to disappear from the monetary system before the latter’s collapse in 1971.

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\(^1\) Triffin, (1960).
THE NATIONALBANK’S GOLD STOCK

In 1936, when the Danmarks Nationalbank Act was prepared, a return to the gold standard at a later stage was anticipated. The Act stipulates that the Nationalbank shall own a gold fund which shall cover at least 25 per cent of notes in circulation. The Danmarks Nationalbank Act provides for a dispensation from the gold coverage requirement. Since 1939 the gold coverage requirement has been suspended. Hereafter gold has only played a role as part of the foreign-exchange reserve.

Until 1969 the Nationalbank’s gold stock was entered to the balance sheet at the krone’s gold value according to the Coin Act of 1873. From 1969 to 1978 the gold stock was booked at the parity notified to the IMF, and from 1979 to 1987 at an exchange rate calculated on the basis of the market price. As from 1988 the market price has been used.

The Nationalbank’s gold stock fluctuated considerably under the Bretton Woods system in step with the need to buy or sell gold in order to adjust the amount of liquid reserves. The gold stock has been almost constant since 1970, cf. Chart 2. The fluctuations in the gold stock during the 1970s primarily reflect transactions with the IMF, while the small

1 The parity as notified to the International Monetary Fund was used in the compilation of Denmark’s international liquidity during the same period.
2 The most recent considerable fluctuations in the gold stock took place in 1969-70 when gold was sold in order to increase the amount of liquid reserves after the foreign-exchange crisis up to May 1969.
increase since 1987 can be attributed to revenue from gold lending by the Nationalbank, cf. Box 1, p. 30.

By tradition gold is an asset of the central bank, and is used for certain transactions among central banks. In the event of Danish membership of the Economic and Monetary Union, EMU, the Nationalbank would for example have to transfer foreign-exchange reserves to the European Central Bank, ECB, of which 15 per cent must be in gold, equivalent to almost 24 per cent of Denmark’s gold stock.

The Nationalbank’s gold stock is relatively small. As Chart 3 shows, gold constitutes a considerably smaller proportion of the total reserves in Denmark than is the case for the EU other member states, Switzerland, the USA and Japan. Only Ireland’s gold stock makes up a smaller proportion of the total reserves.

**The location of the Nationalbank’s gold stock**

For many years the Nationalbank’s gold stock was held for safekeeping at various locations all over the world, e.g. Switzerland, the UK, Canada and the USA.

The gold was placed in a number of countries for security reasons and to ensure that the risk was spread. At the same time the gold was held at locations where it was easy to divest. Just before World War II, from November 1939 to February 1940, Denmark transported a large share of its gold stock to the Federal Reserve Bank in New York. The gold was
shipped via Bergen in Norway. This was gold held for safekeeping in Denmark, Sweden and Norway. In total 19.6 tonnes of gold were shipped in this way.

In view of the political and military situation in Europe at that time the USA was considered a safe place to store the Nationalbank’s gold. Moreover, this would make it possible to continue to purchase goods in the USA, provided that imports from the USA were still feasible. During the occupation years the gold held for safekeeping in the USA was administered by the Danish legation in Washington which sold some of the gold in order to make interest payments on the national debt.

Since the Nationalbank had moved almost its entire gold stock to the USA there was no gold left for the occupying forces to seize from the Nationalbank during the occupation, as they did in several other countries, e.g. Belgium and the Netherlands.

In 1987 the Nationalbank began to lend gold to foreign banks against interest paid in gold, cf. Box 1. This made it necessary to move the gold to London. In August 1999 62.7 tonnes of the Nationalbank’s 66.6 tonnes of gold was in London, corresponding to a share of 94 per cent.

1 However, the primary source of financing of interest payments was the sale of cryolite from Greenland.
Almost 99 per cent, or 93 per cent of the Nationalbank’s total gold stock, had been lent.

SALE OF GOLD BY CENTRAL BANKS

In 1998 global gold production amounted to more than 2,500 tonnes and the world’s total gold stock was estimated at 137,400 tonnes at the end of 1998, of which the central banks held 26.3 per cent.\(^1\)

By tradition central banks hold considerable gold reserves, but the proportion held by central banks has diminished gradually due to the reduced role of gold in the monetary system. In March 1999 gold’s share of the total official foreign-exchange reserves was 15.2 per cent, which is considerably less than in earlier years, cf. Chart 4\(^2\). Several central banks have sold gold reserves in recent years. Since 1988 Banque Nationale de Belgique has reduced its gold stock by 74 per cent, while De Nederlandsche Bank has sold 26 per cent of its gold stock since 1992. The underlying reasons included the wish to bring gold’s share of the total reserves closer to levels in other EU member states. Other central banks have also sold gold in recent years, including the central banks of Argentina, Australia and Canada.

At 2,590 tonnes Schweizerische Nationalbank holds one of the world’s largest gold reserves. The large reserve is a consequence of the continued close relationship between the Swiss franc and gold. The value of the Swiss franc is thus defined in relation to gold, and the gold coverage of banknotes in circulation is laid down in the Swiss Constitution. In 1997 a group of experts was established to prepare a new basis for the Swiss central bank, including the pegging to gold. On the basis of the group’s conclusions and a referendum in April 1999 the gold coverage requirement will be removed from the Constitution as from 1 January 2000. The abolition of the gold parity awaits approval by parliament. As a result of the abolition of the gold parity Switzerland is considering selling 1,300 tonnes of gold over a period of several years.

In May 1999 the UK Treasury and the Bank of England announced their intention over a period of several years to sell almost 60 per cent of the gold stock, corresponding to 415 tonnes of gold, as an element of the restructuring of the foreign-exchange reserve. The intention is to achieve a better balance between risks and returns on the foreign-exchange reserve. In 1999-2000 125 tonnes of gold will be sold. The first auction took place on 6 July 1999.

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1 Including the International Monetary Fund and the Bank for International Settlements.
2 The value of the gold reserves in 1960 and 1970 is compiled at 35 dollars per ounce and at the market price as from 1980.
At the G7 meeting in Cologne in June 1999 it was agreed to sell a proportion of the IMF's gold in order to finance initiatives in support of debt-ridden poorer countries. The proceeds from the sale would be placed in interest-bearing assets and the return used to finance such
initiatives. This sale was strongly opposed by a number of gold-producing countries, including South Africa, and by the US Congress where the proposal is awaiting approval.

The current plans to sell gold can be viewed as a continuation of the sales of gold by several central banks in recent years.

After the UK’s announcement of sale of its gold the gold price has dropped by 11 per cent in three months, cf. Chart 5. Since the gold price peaked in 1980 it has fallen by 70 per cent to 256.45 dollars per ounce on 9 August 1999. However, it is important to bear in mind that most of the present gold reserves were purchased before 1971 at 35 dollars per ounce.

**CONCLUSION**

Although gold no longer plays a central role in the monetary system, it has retained its traditional role as a store of value in many countries, especially in Asia. Even in countries where gold plays a lesser role, it will continue to hold a significant symbolic value which distinguishes it from other metals, due to its central role in the history of the monetary system.
Andersen, Poul Nyboe, From Gold Standard to Clearing (in Danish), Nyt Nordisk Forlag-Arnold Busck, Copenhagen, 1942.


Danmarks Nationalbank, Annual Report and Accounts (various issues), Copenhagen.


International Monetary Fund (IMF), International Financial Statistics (various issues), Washington D.C.


Hansen, S. Aa. and Svendsen, K.E., Danish Monetary History, Volume 1, Danmarks Nationalbank, Copenhagen, 1968.
Hansen, Svend Aage, Economic Growth in Denmark (Volumes I and II), Akademisk Forlag, Copenhagen, 1976.

Hoffmeyer, Erik and Olsen, Erling, Danish Monetary History, Volume 2, Danmarks Nationalbank, Copenhagen, 1968.

Lidegaard, Bo, In the Name of the King (in Danish), Samleren, Copenhagen, 1996.


Nielsen, Axel, The Scandinavian Currency Union (in Danish), Børsens Forlag, Copenhagen, 1917.


