

Øksendal, Lars Fredrik

Working Paper

The Origins of a Paper Money Economy - the Case of Norway

Working Paper, No. 2009/25

Provided in Cooperation with:

Norges Bank, Oslo

Suggested Citation: Øksendal, Lars Fredrik (2009) : The Origins of a Paper Money Economy - the Case of Norway, Working Paper, No. 2009/25, ISBN 978-82-7553-531-1, Norges Bank, Oslo, <https://hdl.handle.net/11250/2497615>

This Version is available at:

<https://hdl.handle.net/10419/209941>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/4.0/deed.no>

2009 | 25

Working Paper

Norges Bank's bicentenary project

The origins of a paper money economy - the case of Norway

by Lars Fredrik Øksendal

Working papers fra Norges Bank, fra 1992/1 til 2009/2 kan bestilles over e-post.

servicesenter@norges-bank.no

eller ved henvendelse til:

Norges Bank, Abonnementservice

Postboks 1179 Sentrum

0107 Oslo

Telefon 22 31 63 83, Telefaks 22 41 31 05

Fra 1999 og fremover er publikasjonene tilgjengelig på www.norges-bank.no

Working papers inneholder forskningsarbeider og utredninger som vanligvis ikke har fått sin endelige form.

Hensikten er blant annet at forfatteren kan motta kommentarer fra kolleger og andre interesserte.

Synspunkter og konklusjoner i arbeidene står for forfatterens regning.

Working papers from Norges Bank, from 1992/1 to 2009/2 can be ordered by e-mail:

servicesenter@norges-bank.no

or from Norges Bank, Subscription service

P.O.Box. 1179 Sentrum

N-0107Oslo, Norway.

Tel. +47 22 31 63 83, Fax. +47 22 41 31 05

Working papers from 1999 onwards are available on www.norges-bank.no

Norges Bank's working papers present research projects and reports (not usually in their final form) and are intended inter alia to enable the author to benefit from the comments of colleagues and other interested parties.

Views and conclusions expressed in working papers are the responsibility of the authors alone.

ISSN 1502-8143 (online)

ISBN 978-82-7553-531-1 (online)

The origins of a paper money economy – the case of Norway

Lars Fredrik Øksendal*

Abstract

This article sketches the origins of paper money in Norway back to the last half of the 18th century and asks why there was no circulation of full-bodied coins even after notes had become convertible into silver at par in 1842. The argument put forward is that the choice of fiat paper money reflected the relative economic backwardness of the country. Although Gresham's law also applied for Norway, the most important reason paper money caught on and maintained that position as the most important part of the money stock was the chronic shortage of means of payment. In such a situation, bad money was not that bad after all. Moreover, times of war and political havoc besides, paper money managed to stay fairly stable and fulfil an essential function as a store of wealth. With time, paper money became institutionalised in the Norwegian economy, overwhelmingly dominating the domestic circulation and functioning as the key monetary reference (unit of account). Thus, convertibility in 1842 linked the domestic currency with international money at fixed rates, but had hardly any bearing on the domestic function of money.

JEL codes: E42, E58, N23

Keywords: Banknotes, bullion standard, convertibility, Gresham's law, paper money

Introduction

Throughout the 19th century, despite being on bullion standards from 1842 to 1914, the Norwegian economy was dominated by the circulation of notes. Under the silver standard, full-bodied coins played only a minor role as means of payment. With the coming of the gold standard in 1874, the role of full-bodied coins in the domestic circulation became negligible. With the exception of the widespread circulation of token silver coins, silver and later gold were for all practical purposes used almost exclusively for backing the note issue of the central bank and settling persistent balance of payments deficits.

* Post doctor at the Department of Economics, Norwegian School of Economics and Business Administration and special adviser to the Norges Bank bicentenary project 1816–2016. E-mail: Lars.Oksendal@nhh.no.

The combination of adherence to bullion standard monetary regimes and no circulation of full-bodied coins is something of a puzzle both in view of the monetary theories of the time and in comparison with other countries. Under a bullion standard, notes from a theoretical point of view, were not money, but mere representatives of money, i.e. full-bodied coins. Many contemporary theorists held that coin circulation was necessary to remind the public of this fact and impose sufficient discipline on the note issuer.¹ In important core gold standard countries like England and France, the circulation of full-bodied coins was widespread and in fact supported by the monetary authorities' issuing of high denomination notes only. In England, with the half crown (2s 6d) as the highest value token silver coin in widespread use and five pounds as the lowest denominated bank note, gold sovereigns and half sovereigns were in demand in the domestic circulation. In the case of France there was an additional tradition of gold hoarding, particularly in rural areas. However, the experiences of the core countries were not replicated in gold standard peripheries like Norway.²

In isolation, the Norwegian experience indicates a very strong faith on the part of the public in the credibility of the monetary authorities to maintain stable currency values and the gold convertibility of notes. This might hold true with regard to the last decade of the silver standard regime and the whole of the gold standard regime, where the convertibility commitment of the central bank was never at risk and public confidence accordingly high. However, at the time of the establishment of *de facto* silver convertibility in 1842, both the inflationary paper money havoc of the later part of the Napoleonic wars and the long post-war period of bullion and bullion-denominated bills commanding a premium, were still in the very close past and an important point of reference. Thus, faith alone cannot explain why no major circulation of full-bodied silver coins developed when the right to convert notes into *specie* at par was granted in 1842.

This puzzle is the point of departure for the present study. In this article I will trace the origins of paper money in Norway and put forward an understanding of why Norway continued to be a paper money economy even after the introduction of a stable currency convertible into *specie*.

¹ Norwegian parliamentary papers: Ot.prp. no. 45 (1869) Om myntvesenet. Innstilling 28. mai 1867. Beretning fra den i Paris avholdte internasjonale myntkonferanse, avgitt av Prof. O. J. Broch (Report by Professor Broch from the international monetary conference in Paris).

² Sweden and Denmark displayed much the same pattern as Norway.

Paper money – the Dano-Norwegian experience until 1807

Until 1814, Norway was ruled by the Danish king. Although formally a kingdom, the country was governed more like a set of Danish provinces than as the junior partner in the dual monarchy of Denmark-Norway. No central institutions of note existed in times of peace and Copenhagen was in fact the administrative nucleus of Norway, with the provincial governors reporting directly to the royal government there.

Although the country was under Danish rule, Norway was different from Denmark. First, the riches that nature provided gave an altogether different economic structure with a less important role for agriculture and a more important role for fisheries, forestry and mining. Moreover, the strength of the cod fish and timber exports, in combination with a level of food production lower than domestic consumption, made Norway more of an open economy. Secondly, Norway lacked the feudal characteristics of Denmark. By the late 18th century, the nobility was almost extinct. Moreover, Norway's topography was in any case less than ideal for organising agriculture along continental lines. Thus, free-holding farmers owned much of the arable land and enjoyed strong legal protection. And, in contrast to Denmark, no feudal obligations applied to the rural population.

Norway under Danish rule was still very much a preindustrial society. People lived in the countryside and off the land. In 1801 less than ten per cent of the population lived in urban areas and the cities were all very small. In 1801, the biggest city, Bergen, counted only 17 000 souls.³ With the exception of mining and some prototype industries, the economy was very much dominated by primary industries – agriculture, fisheries and forestry. Despite the scattered settlement patterns, agriculture was not dominated by subsistence farming. Most farming areas and farms suffered from a grain deficit and households had to engage in trade to supplement their own production. The deficit was lowest in parts of eastern and central Norway, higher in the west and particularly high in the north. A typical pattern for rural households in the “old Norway” was that they relied on more than one economic pillar. In coastal districts, the combination of fishing and farming was widespread; in the west fishing augmented farming, while in the north it was the other way around. In eastern Norway, but also elsewhere, forestry supplemented farming income. Some farmers had additional income from seasonal work at saw mills, for mining companies and in the late 18th century in the prototype industries.

³ Dyrvik, Ståle, *Den lange fredstiden 1720-84*, Volume 8 in Mykland, Knut (ed.) *Norges historie*, Cappelen 1978, pp. 219-22.

Households, even in the most remote parts of the country, took part in the exchange of goods and could be considered part of an embryonic market economy, although households still produced most of the food and goods that they consumed. However, the market economy of 18th century Norway functioned on a thin film of money. Money, in the strict sense of fine coins, was in short supply. Fundamentally, Norway was an economy dominated by barter, credit and debtor dependency. A farmer would typically bring his surplus to the nearest city and exchange it for grain, necessities and manufactured goods. Often the merchant would advance goods on to the farmer *in lieu* of future deliveries and would also undertake to pay his taxes. Although these credits made it possible to smooth out the impact of a failed harvest or bad year, the debt relationship made the farmer dependent on *one* merchant and thus limited competition. The same type of relationship existed between the northern fishermen and the merchants of Bergen, the most important market for dry cod. Each year the catch was sent to Bergen and fishermen received goods in return. In this case, the dependency created by debts was even more pronounced and is regarded as the key characteristic of the 19th century northern fisheries economy. In rural areas the bailiff, the royal tax collector, would accept payments in kind and might often undertake to defer tax payments against future deliveries. However, debts created dependency and limited competition. This economic structure, partly based on money, but hinging on bills of exchange and other credit instruments, also characterised the higher echelons of merchants, their suppliers and foreign importers of Norwegian goods.⁴

To discuss Norwegian monetary history before 1814 as a history different from the Danish case is challenging. Most of the sparse monetary data that exist apply to the dual monarchy as a whole. Moreover, even the duchies of Schleswig and Holstein are sometimes included in the data. Nevertheless, I believe there were aspects which made the Norwegian experience significantly different, but not totally alienated, from the Danish. One such aspect is Denmark's proximity to Hamburg and the German states, with the accompanying circulation of coins of German origin and the risk of drainage of Danish coins. Being more remote, this was not the case for Norway. Moreover, although Hamburg was important for Norwegian commerce as well, given its westward export orientation, there was more likelihood of finding English than German coins in circulation. A second aspect, supported by the argument discussed above of the Norwegian market economy functioning on a thin film of money in the strictest sense, is that the shortage of coins was probably greater in Norway than

⁴ Dyrvik, Ståle, Norsk historie 1625-1814, Samlaget 1999, pp. 118-22.

in Denmark. A third aspect is that the peripheral role of Norway, in relation to the Copenhagen financial nucleus as seat of the only note-issuing bank, resulted in Norway receiving less than its fair share of the available lending resources. In sum it might be right to argue that the Norwegian shortage of cash – both in terms of coin and notes – was more severe than for Denmark.

Norway witnessed the first experiment with paper money already in 1695 and ahead of Denmark. Faced with liquidity troubles, a major Bergen merchant, ship-owner and industrialist Jørgen Thormøhlen was given a royal warrant to issue one hundred thousand *riksbankdaler* in notes. However, the notes failed to win public confidence and the experiment was abandoned the subsequent year.⁵ This notwithstanding, by the late part of the 18th century paper money would come to play a very significant role in the Norwegian exchange of goods and services.

When Denmark-Norway first issued notes, the catalyst was war. In response to the strained financial circumstances of the Great Northern War, the government issued a total of one million *riksdaler* (*Danish Courant*) from 1713 to 1717.⁶ The notes were legal tender in all private and later also most public affairs, but with one important caveat, namely that the legal tender status only applied to payments where at least half the amount in question was rendered in solid coin. Moreover, private and public debt undertaken with a contractual obligation to settle in coin still had to be honoured in coin. Coins soon commanded a premium over notes; the sparse quotations for 1716-20 indicate a premium of between 25 and 60 per cent. However when peace was restored in 1720, the government started to withdraw notes from circulation at a rapid rate. By 1724, four-fifths of the stock had been withdrawn and the premium paid on coins until the last notes were recalled in 1728 ranged between four and eight per cent.⁷

The breakthrough for paper money in Denmark-Norway came with the establishment of the *Courantbank* in 1737. Established as a private institution, the notes of the bank were from the outset only legal tender for payments to the government. No rules were given for the metallic backing of the issue and no limits were set for the size of the issue. The bank soon found itself in dire straits, with notes circulating at a discount. In 1757 the obligation to

⁵ Mykland, Knut, *Gjennom nødsår og krig 1648-1720*, Volume 7 in Mykland, Knut (ed.) *Norges historie*, Cappelen 1977, p. 303. For more on Jørgen Thormøhlen see also: Fossen, Anders Bjarne, *Herren til Møhlenpris: "Saa stor var min Lykke, saa dyb er min Sorg"*, Clioto 2003.

⁶ The economic situation during the war is covered in: Schmidt, J. Boisen, *Studier over statshusholdningen i kong Frederik IV's regeringstid 1699 – 1730*, Gyldendal Copenhagen 1967.

⁷ Svendsen, Knut Erik and Hansen, Svend Aage, *Dansk pengehistorie 1700-1914*, Danmarks Nationalbank 1968 pp. 16-18.

honour notes in coin, which had probably been illusory even before that, was withdrawn and was not to be reinstated. Moreover, five years later the bank started to issue small denomination notes of one riksdaler in addition to the previous issues of ten riksdaler and above. By 1760, the government was responsible for more than half the bank's lending, and in 1773 the bank was nationalised.⁸

In the last fifty years of Danish rule, notes became an important element in the circulation of means of payment, but how important? Although data on note issue, note withdrawal, minting and re-coining exist, determining the exact ratio of notes to coin in the circulation is difficult. In particular, we lack solid balance of payments data. So what remains is an idea of the importance of notes. Out of a money stock of somewhere between 16 and 20 million riksdaler in 1787, the authors of *Dansk pengehistorie* (Danish monetary history) calculate that the note stock comprised 14.3 million riksdaler and folio deposits 1.2 million.⁹ These calculations indicate a note issue in the range of 70 to 90 per cent of the money stock. If these estimates hold true, notes were not only important, but constituted the main means of cash payment. The image of Denmark and in particular Norway as countries stripped of coins is confirmed by a contemporary account written by a German, Carl Gottlob Kuttner, about his travels in Norway in 1798:

The Danish (or Norwegian) coins of eight, ten and twenty-four shillings, and one third species and one riksdal species, which are almost the only coins to be seen in Hamburg and Lübeck, are in Denmark exceedingly rare and in Norway quite unknown. I had kept on me a couple of pound sterling worth of such monies and it is literally true that the peasants refused to accept *foreign money*. I tried to pass the coins on a number of occasions, but each time the result was the same; nobody knew them. A nation must be quite backward when the coin of their regent is unknown. They only know of *paper* and small change shilling coins (1, 2 and 4 shilling).¹⁰

Thus, according to contemporary observation, by 1787 the domestic monetary circulation was dominated by token coins with a very low silver content and bank notes. Even if the assessment of an economy virtually without familiarity with the full-bodied coins of the realm might be something of an exaggeration, the observation at least qualifies as an indication of scarcity. Moreover, the reference to Danish-Norwegian coins dominating the

⁸ Rygg, Nicolay, *Norges Bank*, Volume I, Kristiania 1918, p. 16.

⁹ Svendsen and Hansen, *Dansk pengehistorie 1700-1914*, p. 30.

¹⁰ Kuttner, Carl Gottlob, *Reise durch Deutschland, Danemark, Schweden Norwegen und ein Theil von Italine inden Jahren 1796, 1798, 1799*. Theil I-IV. Leipzig 1801. Quoted from Rønning, Bjørn R., *Den kongelige mynt 1628-1686-1806*, Cappelen 1986 p. 240.

circulation in the two German cities mentioned, in combination with domestic scarcity, points to a very strong outflow of full-bodied coins.

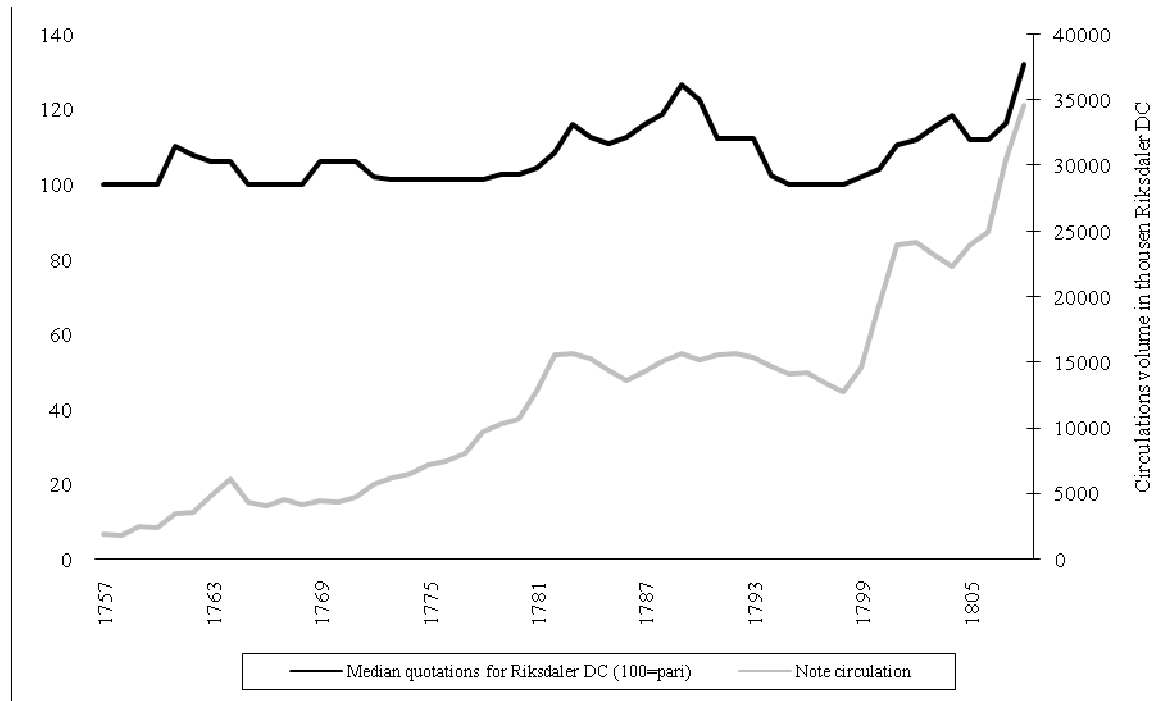


Chart 1: Median quotations for Riksdaler DC (100=par) and note circulation, 1757-1808.
 Source: The Norwegian Wedervang price archive, Norwegian School of Economics and Business Administration

Chart 1 illustrates the development of note circulation. When notes became legal tender and unconvertible in 1757, the note issue constituted some two million riksdaler. No solid data for the coin circulation exist, but clearly it would have been above the level of the note volume. An informed guesstimate based on the Danish Monetary history would be a coin circulation five to six times the level of the note issue. Hence it was after 1757 that notes gained predominance in domestic circulation. The development of the note stock is charted above. The first years of inconvertibility witnessed a strong increase, peaking with the impact of the one riksdaler issue in 1762-63, a strong withdrawal the year after and a stable level throughout the 1760s. The 1770s and early 1780s, coinciding with the government takeover of the Courantbank, saw strong expansion, particularly in the later years. After a period of stability, even a reduction in the note volume from 1792-98, the note issue skyrocketed with the onset of the new century. After 1807 the expansion continued at an even higher rate as Denmark-Norway was drawn into the orbit of great power politics and the Napoleonic wars.

For the whole period from 1757 to 1808, the note stock increased at an annual average growth rate of 4.7 per cent. This is way beyond both the growth rate of the population and of the real economy. Increased prices might have been an explanation, but only for the period after 1799. Although displaying strong volatility, the overall annual average increase in the consumer price index 1757 to 1798 was only 0.1 per cent.¹¹ Moreover, the correspondence between these volatile movements and the patterns of note expansion is very weak. Some of the growth undoubtedly reflected increased monetisation of the economy, but the strongest source of expansion must be the replacement of coins by notes in the domestic circulation.

A remarkable feature of the Dano-Norwegian experience is the market value of the notes. Given the fact that these were not convertible on demand, the strength of expansion of the issue and the general scarcity of full-bodied coins, one would expect that notes circulated only at hefty discounts. The annual median silver quotations for notes 1757 to 1808 is mapped in Chart 1. Although silver frequently commanded a premium, the most striking characteristic is the long periods where notes were quoted at par or only traded at modest discounts. Until 1783, silver commanded a premium of more than ten per cent in one year only, 1761. In the same period the note issue increased eightfold. From 1783 to 1793, the premium was above ten per cent every year and even reached more than twenty per cent in 1789-90. Nonetheless, even this level of premium cannot be seen as excessive when one takes into account that this was after all the price of nonredeemable paper money. However, monetary authorities at the time regarded developments in 1789-90 with concern. In order to restore monetary stability, the Courantbank was closed for further loans in 1791, although the notes of the bank were still in circulation. In place of the old bank, a new private institution, the Danish-Norwegian *Speciebank*, was chartered. The bank was to issue notes backed by silver and honour their notes either in coin or in the notes of the Courantbank according to the market value of these in Hamburg. The Speciebank met some initial success. The circulation of Courantbank notes went down and the premium on silver was strongly reduced and even disappeared altogether for the years 1795 to 1798. However, the combined issue of notes, i.e. both of the Speciebank and the Courantbank, increased. One important reason for this stability was the impact of the much improved balance of payments due to the economic benefits of neutrality enjoyed by Denmark-Norway in a time of general European wars. Nonetheless, from 1799 an outflow of bullion started to cripple the Speciebank. Under the principles of fraction reserve banking, its

¹¹ Grytten, Ola H., A consumer price index for Norway 1516-2003, Chapter 3 in Eitrheim, Øyvind, Klovland, Jan Tore and Qvigstad, Jan F. (eds.), Historical Monetary Statistics for Norway 1819-2003, *Norges Bank Occasional Papers* no. 35, Oslo, 2004.

notes had to be withdrawn *en masse* and the issuing of unbacked Courantbank notes skyrocketed. By 1801, the Speciebank was largely irrelevant.¹²

From the late 1790s silver started to command an increasing premium over the notes of the Courantbank, reaching more than 20 per cent in December 1807. Moreover, from 1798 to 1807 the note stock expanded by a factor of two and half. In contrast to earlier periods, this note expansion is closely associated with a period of increasing prices; over the ten years in question, the Norwegian consumer price index increased by 93 per cent.¹³

The fifty years following 1757 had turned Norway into a paper money economy. Bank notes were the circulating medium of exchange and the point of monetary reference. This development can undoubtedly be seen in the light of the classical mechanism associated with Gresham's law, bad money driving good money out. In this case full-bodied silver coins represented good money, unbacked bank notes bad money. Silver coins were hoarded or exported and replaced in the circulation by notes. Although Gresham's law obviously came into force, there is more to the question of the paper money economy than just this classical observation. In the Danish and in particular in the Norwegian case, there was a shortage of means of payment even before the massive increase in paper money after 1757. Book credit and other credit instruments continued to play a pivotal role in the domestic exchange of goods and services. Thus, although paper money was bad money relative to silver, it remains to be answered how bad paper notes were. Judging from the Danish-Norwegian experience, up to the late 1790s they were not that bad at all. Although the note issue expanded strongly, the price level remained stable over time despite strong variations in the short run. These variations are not associated with the movements in the note stock, but reflected changing economic cycles, political tension and the overall importance of the harvest. Moreover, for long periods the discount on notes over silver was quite modest and never alarming – compared with what was to come. One reason that paper remained a fairly stable currency is the chronic lack of cash means of payment. In such a situation the choice is not between “bad” or “good” money, but between “bad” or “no” money. Thus, it seems that paper money, until the start of the war and monetary inflation, fulfilled the basic requirement of money: medium of exchange, unit of account and storage of wealth. The latter function, of course was seriously challenged after the turn of the century.

¹² Svendsen and Hansen, *Dansk pengehistorie 1700-1914*, p. 68-83.

¹³ Grytten, A consumer price index for Norway.

Paper money in times of war 1807-1813

Until 1807 Denmark-Norway had managed to stay outside the Napoleonic wars. In addition to avoiding military conflict, Norway in particular had benefitted enormously from the increased demand for timber, pig-iron and shipping services. For timber merchants and the owners of iron works, these were “the golden years”. However, this was not to last. The strategies of the major powers caught up with Denmark-Norway in a way that was to have a devastating economic impact on the junior partner and eventually led to dissolution of the dual monarchy. With the pre-emptive British strike on Copenhagen in September 1807, bombarding the capital and capturing the Danish-Norwegian fleet, the country found itself entangled in the general European war on the side of Napoleon.

For Norway the war of 1807 to 1813 turned out to be one of bleakest periods in modern history. Although skirmishing with Sweden along the eastern borders resulted in few casualties and soon ended in a ceasefire, being at war with the mightiest naval power in the world had a severe impact. With the Royal Navy blockading the high seas, Norway was in effect isolated both from the rest of the Danish realm and from her overseas trading partners. Subsequently, crucial timber exports went from boom to bust. The merchant navy suffered heavily too; ships were seized in British ports, on the open sea by the Royal Navy or stayed put in foreign ports out of fear of being captured by the Royal Navy or British privateers. In 1807 alone, 553 ships, or more than a third of the merchant navy, were lost in this manner. Later into the war, shipping and timber exports experienced something of a new bonanza, sailing at high freight rates under a system of British licenses. The gravest consequence of the embargo for the population as a whole was the deteriorating supply of grain, leading to food shortages and malnutrition. In the worst year of the blockade, 1809, the mortality rate for the age group 10 to 60 was more than double the level of the previous year. Moreover, with the communication with Copenhagen impaired, the king had no other option than to leave the governing of the kingdom to a provisional commission situated in Norway, the first central political body with broad powers in the country for close to three hundred years.

The first casualty of war is financial and monetary discipline. The war of 1807-13 was no exception. Faced with increasing defence expenditures and a dwindling income flow, in particularly reflecting how war hampered trade and thereby customs revenues, the Danish government turned to printing money. What followed was a classical example of war-induced monetary expansion and inflation. While the note circulation in Denmark-Norway was at 25 million riksbankdaler in the last year of peace, by the end of 1813 it had reached 145 million

riksbankdaler, a third of which was Danish treasury notes and assignation certificates issued by the provisional government commission in Norway. In similar vein, the Norwegian consumer price index increased from 100 in 1806 to 1119 in 1812. However, the dramatic increase in Norwegian prices was not purely a monetary phenomenon. The year 1812 – witnessing more than a tenfold hike in prices since 1806 – was a year of an extremely difficult supply situation in combination with a failed harvest. Reflecting this, prices from 1812 to 1813 were reduced by two thirds.¹⁴

In effect, Denmark-Norway had been on a paper money standard since 1757. However, although circulating at a discount, bank notes had maintained fairly stable values in terms of international money, i.e. silver. With the advent of war, this was to change in a most dramatic fashion. In Chart 2 below I have mapped the end-of-quarter quotations for Courantbank notes from 1800 to 1813. Until 1807, the premium paid on silver had fluctuated between five and twenty per cent. During the war, the value of the notes in silver went down a slippery slope until it troughed in the third quarter of 1813. At that time Danish-Norwegian notes were worth less than one per cent of the pre-war value in terms of silver.

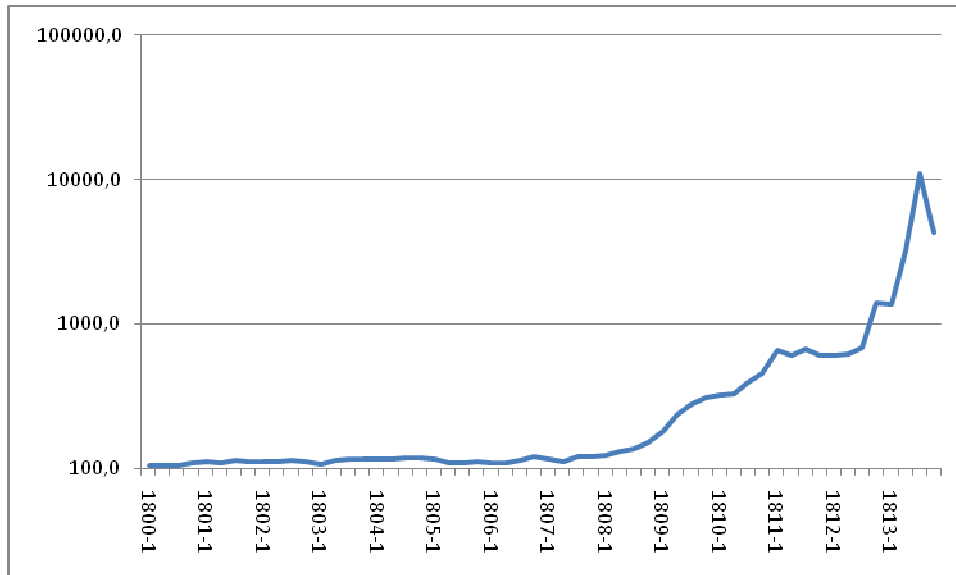


Chart: 2 End of quarter quotations for Courantbank notes, 1800:1-1813:4 (silver parity=100, logarithmic scale): Source: Dansk pengehistorie, p. 89

The observant reader will note the discrepancy between the strength of the domestic monetary expansion and the international value of the domestic currency. While the note issue

¹⁴ Grytten, A consumer price index for Norway.

increased close to six-fold, the value of notes in silver went down by more than 96 per cent. Moreover, consumer prices, despite the surge in 1812, rose only threefold between 1806 and 1813. Thus, although the domestic impact of monetary expansion and reduced purchasing power was strongly felt, the really dramatic consequence was the tremendous fall of the domestic currency in terms of international purchasing power. This undoubtedly both reflected strong domestic demand for full-bodied coins for hoarding in times of uncertainty and the quite understandable lack of credibility in international markets for the Danish-Norwegian commitment to stable monetary values.

The war economy and inflation had a different impact on different groups. According to the contemporary Norwegian economist Christen H. Pram, the groups worst hit were those with fixed salaries, such as civil servants, rentiers, two thirds of farmers, all crofters, rural servants and anybody that depended on fisheries and shipping for their livelihood. He argues that 78 per cent of the population suffered a net loss, compared with only eight per cent in Denmark. The groups that did not lose out were merchants in the city, manufacturers, urban artisans and their servants, farmers with a grain surplus to sell and casual labour. Although the merchants had suffered during the embargo, this was more than counterbalanced by the bonanza caused by the system of licence trade and the riches gained from privateering. Urban artisans gained from reduced foreign competition and casual labour was in short supply due to military conscription.¹⁵

In 1813, Denmark-Norway introduced a new paper currency backed by first-priority mortgages on all real estate in the kingdom. The new currency, the riksbankdaler, had a nominal silver value of two speciedaler (or 5/8 riksdaler Danish courant) and was to replace the notes of the Courantbank at the conversion rate of six Courantbank daler for one Riksbankdaler, thus in reality representing a sovereign default. Even the new bank did not convert notes into silver at the nominal silver value, but only against a hefty discount. However, the following year Denmark-Norway as a common monetary area ceased to exist.

The record of paper money during the war years was poor. Paper failed to maintain its crucial function as a store of wealth as the public saw both domestic purchasing power and the value of silver plummet. Paradoxically, the poor record strengthened the paper money character of the Norwegian economy even further as bad money drove good money out. Jacob Aall, writing in November 1815 observed that “*in recent years, silver has almost disappeared*

¹⁵ Pram's analysis is discussed in Dyrvik, Ståle and Feldbæk, Ole, *Mellom brødre 1780-1830*, Volume 7 in Helle, Knut (ed.), *Aschehoughs Norges historie*, Oslo 1996, pp. 122-3; Pram, Christen H., *Tale paa Kongens Fødselsdags-Høitid 1811 med oplysende Anmærkninger*, Copenhagen 1811.

from the circulation altogether, only paper and simple token coins serve the needs of commerce".¹⁶ What was left of solid full-bodied coins was hoarded. Nonetheless, probably the strongest impact of the paper money avalanche was its bearing on the public mindset. Rygg argued, invoking A. M. Schweigaard:

People lost the habit of using money. Notes had entered the blood and one counted in notes. People could only orient themselves in notes and meant notes both in counting and speech, to paraphrase Schweigaard.¹⁷

Thus, paper had become the standard monetary reference and thereby the *de facto* standard unit of account.

Monetary restoration, 1816-1842

The outcome of the Napoleonic wars created a situation where the future of Norway was at stake. At the Treaty of Kiel in December 1813, the Danish king had to cede Norway to Sweden. In the political vacuum before Sweden could seize control, Norway declared independence, elected a constituent assembly and drew up a constitution. After a short period of war, the Norwegians accepted defeat and entered into a union with Sweden under a common head of state, but with the 1814 constitution intact and with autonomy in all domestic questions.

One of the areas in which the constitution granted Norway full sovereignty was the question of currency. Thus, monetary restoration in the years after the war had a double edge. On the one hand, it dealt with the economic necessity of establishing a stable domestic currency after years of inflation and monetary havoc. On the other hand, it dealt with the political necessity of establishing a national currency independent of the major union partner and avoiding being absorbed into the Swedish monetary sphere.

Establishing a stable currency turned out to be an uphill struggle that would end with the introduction of silver convertibility at par almost three decades later. In the first years after 1814, much of the monetary chaos remained. While plans for a future bank of issue were discussed, older Danish notes, notes of the independent regency government of 1814 and the temporary Riksbank issue, circulated.

¹⁶ Quoted from Rygg, *Norges Bank*, p. 24.

¹⁷Rygg, *Norges Bank*, p. 24.

In 1816, Norges Bank was chartered and issued with a note-issuing monopoly. Contrary to the experience of the past sixty years, the issue of the new bank was to be backed by silver and eventually become convertible into silver at demand. At the same time, a new currency, the *speciedaler*, was introduced. The *speciedaler* was worth two Danish riksbankdaler or 1¼ riksdaler Danish Courant. Strict rules for the relationship between silver reserves and note issue were also established; for every *speciedaler* in silver in its vault, Norges Bank could issue two *speciedaler* in notes.

A silver fund of some two to three million *speciedaler* was needed to establish the bank. However, the attempt to raise this amount by share subscription failed. With the advent of peace, the economic cycle turned to the worse and money was less loose. Moreover, the magnitude of the capital needed and the considerable risk involved made investors hesitate. Instead, the minimum silver fund deemed necessary, two million *speciedaler*, was raised through the so-called “silver tax” levied on personal wealth. Tax-payers in turn, rather involuntarily, found themselves shareholders in the new bank. Although in theory a private bank, the owners had no influence. Both the board of directors and the supervisory board were elected by parliament. The owners had to settle for the annual dividend and their role in the bank was more that of bondholders than stockholders.

Collecting the tax took time. The economic situation did not ease the process and the tax was met by considerable resentment. As late as by the end of 1822, around ten per cent of the levied tax was still outstanding. However, Norges Bank opened for lending already in September 1818, assessing the strength of the silver fund to be sufficient for the purpose. Nonetheless, the time was still not ripe for silver convertibility.

Instead of a swift move to convertibility, a more gradual strategy was chosen. In 1822 the bank started to exchange silver for notes, but at a hefty discount (47 per cent). Over the next decades, this discount was progressively reduced. In these years the management of Norges Bank maintained a prudent policy stance, in some respects arguably an overly prudent stance. With the experience of the previous decade in close memory, the note issue was wisely kept within the limits dictated by the very strict legal relationship between notes and silver reserves. This provided for a stable currency which over time gained public trust, and notes continued to overwhelmingly dominate the domestic circulation. The overly prudent approach became manifest in the somewhat mercantilist manner parliament and bank management regarded the silver fund. The fund was established through considerable national sacrifice and was the basis of the note issue. Any policy that might put the fund at risk, such as early or premature convertibility, had to be avoided. One way of doing this was to issue

low denomination notes. Although the 24 shilling (one English shilling) and the half speciedal (one English half-crown) notes were withdrawn in the early 1820s, the one speciedal note valued at silver parity was still twenty times smaller than the lowest denominated Bank of England note. Moreover, exchanging notes into silver was from the onset only possible at the head office in Trondhjem, a city more than five hundred kilometres away from the far more important trading cities of Bergen and Christiania. This policy can of course be regarded as a way to increase the silver points by creating practical obstacles. Furthermore and most importantly, Norges Bank aimed at setting the exchange rate, i.e. the discount at which it exchanged notes into silver, above the prevailing market rate at the Christiania bourse. In this manner the bank aimed to avoid having to pay out in silver, thus protecting the fund, while at the same time establishing a floor for how far the notes could depreciate in silver value.

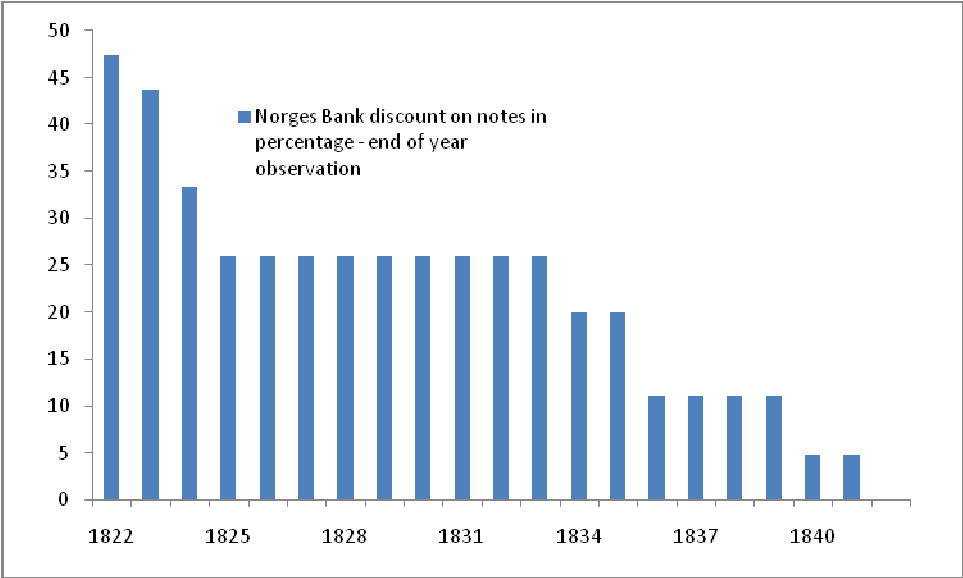


Chart 3: Discount on Norges Bank's notes in per cent of face value, 1822-1842 (end of year). Source: Jahn p. 46

The chart above shows the discount on notes when they were presented for exchange into silver in Norges Bank for the period 1822-1842. Silver or silver-equivalent trade bills were in this period almost exclusively sought after by those engaged in international trade. In general, the Norges Bank discount on notes was higher than the prevailing market rate, thus protecting the silver fund and leaving the business of foreign exchange to the trading interests. As observable in the chart, the discount remained stable at approximately 25 per cent for eight years from 1825 onwards. The background is straightforward: Lured by the up to then rapid reduction in the discount, demonstrating both increased credibility for the domestic currency

and the good fortune of the foreign trading sectors, the discount was set at 25 per cent. At that time, the discount paid in the market was only ten per cent and the margins comfortable *in lieu* of the bank's objective of avoiding silver payments. However, with the coming of the international financial crisis in 1825 and the following recession, Norwegian exports were harmed and the discounts paid in the market began to exceed those offered by the bank. Politically, it was difficult to step back and increase the discount. Silver outflows followed, contrary to the policy objective. These outflows increased the caution of the bank. The laggard approach demonstrated continued even after the policy of gradual reduction in the discount was resumed in 1834.

The policies implemented up to 1842 have been regarded by some as deflationary measures. In the sense that there was a conscious policy objective of increasing the external value of the domestic currency, this harbours some truth. However, although the consumer price index indicates a fall in nominal prices of 40 per cent between 1822 and 1842, this was not the result of a deflationary policy pursued by Norges Bank. The Bank's domestic lending increased at annual average of 4.5 per cent and the note issue at a rate of 2.5 per cent in the same period, both above the growth rate of the economy. Falling prices were thus more of a result of the prevailing business cycles and the deflationary impact of imports being paid in an appreciating currency than of a domestic monetary phenomenon.

How should we assess the monetary regime from 1816 to the introduction of silver convertibility in 1842? Before 1816, the domestic currency was obviously based on fiat. After 1842, it fell squarely within the bullion fixed exchange rate type of regime. The regime between 1816 and 1842 was neither. It is obviously misguided to equate the system with pure *fiat* money. Certainly, in the early years after 1816, characterised by post-war depression, limited central bank reserves and uncertainty over the future of the new state, the element of *fiat* must have been strong. In fact, the establishment of Norges Bank itself must be seen as an act of political fiat, backed only by the political necessity of establishing a national currency independent of Sweden, the major country in the dual monarchy, in the hope that it would be possible to get the citizens to contribute, by way of forced subscription, to the reserves of the bank. However, throughout the 1820s and 1830s the element of fiat was strongly reduced due to the policy of Norges Bank to honour notes in silver at a decreasing discount.¹⁸ Thus, the commitment created a floor for how far the value of notes could fall in terms of bullion. Arguably, the system after 1822 was a bullion standard; the note issue was backed by notes

¹⁸ Rygg, *Norges Bank*, 181-210.

and it was possible to exchange notes into silver, although as often as not the price paid was less favourable than the market rate. A fixed exchange rate was not established until 1842, but at that time a stable currency both in domestic and international terms had been in place for years. Moreover, in these years the paper money character of the domestic economy for all practical purposes became institutionalised. Notes overwhelmingly dominated the circulation, and with the steady appreciation of the value of notes, assuring the public of paper money's value as a store of wealth, the incentives for silver hoarding were reduced and even reversed. Silver proper, or rather silver denominated bills of exchange, was of interest mostly for those engaged in foreign trade. To some degree, although one ought to be cautious not to stress the point too far, there was a divide between domestic and foreign currency despite the common linkage through silver.

A bank note economy under the bullion standard, 1842–1914

The introduction of a fixed exchange rate system and silver convertibility in 1842 did not alter the paper money character of the economy. Convertibility did not *per se* induce the public to change their habitual preference for notes and increase the circulation of full-bodied coins. If anything, convertibility contributed to further strengthening the credibility that bank notes had gained over the preceding two decades. Moreover, with the development of a well-functioning financial sector in the last half of the 19th century, bank deposits became an important part of the money supply and bank instruments – cheques, drafts and transfers – increasingly important as means of payment. In the face of a credible currency and a more mature financial sector, full-bodied coins became increasingly inconvenient both as a means of payment and as a store of wealth.

The composition of the circulating money stock is not decided exclusively by the preferences of the public. By issuing only high denomination notes, a bank of issue can foster the circulation of full-bodied coins. Conversely, a bank can promote note circulation by issuing low denomination notes as well. In the Norwegian case, Norges Bank continued to issue bills of one speciedaler after 1842 and five kroner after the move to the gold standard in 1874. Thus, while the smallest note issued by the Bank of England was worth five times the highest-value commonly circulating gold coins, the smallest Norwegian note was worth half of the smallest minted gold coin.

In choosing to issue small notes, Norges Bank obtained a number of advantages. First,

smaller notes tended to stay in circulation and represented less of a risk of being presented for exchange into bullion than bigger notes. Second, with no coin circulation, the overall need for bullion was reduced and the bank became *de facto* the sole guardian of the country's bullion reserves. Third, this enabled Norges Bank to preserve its bullion for note-backing purposes and settling persistent balance of payments imbalances. Fourth, by fostering a credible paper money economy, the risk of a public run on the bank decreased. In sum, Norges Bank continued the pre-1842 policy of husbanding its silver and later gold reserves. However, the old, somewhat mercantilist, notion of defending the nation's silver was replaced by more practical considerations. The circulation of full-bodied coins was costly and suited countries that were more advanced than Norway.

It is a testimony to the paper money character of the Norwegian economy that the only run on Norges Bank under the gold standard before the outbreak of World War I, in the very tense political situation after the unilateral Norwegian repeal of the union with Sweden in June 1905 and under threat of war, was not a run for gold, but for notes.¹⁹ Norwegians kept and trusted their notes.

Discussing the origins of a paper money economy

In the last half of the 18th century, paper money became the primary medium of exchange and unit of account in Norway. By 1814, Norwegians “talked and counted” in notes. Although paper had failed utterly as a store of value during the years of war-induced monetary expansion from 1807 onwards, for most of the Danish era paper maintained fairly stable values in terms of silver, at least when the unbacked status of the issue is taken into account. During the long period of monetary restoration and limping silver backing until 1842, notes regained their function as a store of value.

I discussed earlier the forces that gave unbacked paper its strength in Norway. Although bad money obviously drove good money out, Gresham's law alone is not sufficient to understand why paper money caught on in Norway and continued to enjoy persistent dominance in the long run. The key to understanding this, I believe, is that there was an unmet demand for ready means of payment in 18th century Norway. In what was fundamentally a credit and barter economy functioning on a thin film of fine full-bodied coins, any kind of money was of value. Although not proper money in the strict contemporary understanding of

¹⁹ Norges Bank – Annual Report 1905.

the concept, paper nevertheless answered an apparent need for means of payment. In this perspective, paper was not that bad after all. By fulfilling the basic functions of money, i.e. being a circulating medium of exchange, unit of account and store of value, paper in fact became money regardless of what monetary theorists of the time believed.

That fiat money caught on early in Norway reflected the relative backwardness and weakness of the domestic economy. Even before notes drove silver coins out, there had been a shortage of silver. Although silver had been extracted since 1624, most of the minted silver coins were required to meet the needs of the central government in Copenhagen. Moreover, the silver mine had problems making ends meet.²⁰ With only a small and unreliable domestic supply, building up a circulating money stock consisting of silver coins depended on an inflow from abroad. Although Norway probably enjoyed a surplus, the balance of trade was never strong enough over time to acquire the necessary silver to maintain a huge circulating mass of silver coins. Moreover, even Norway's foreign trade did not involve great volumes of coins, but rested on book credit and bullion-denominated bills of exchange. In a nutshell, Norway was not rich enough to keep herself with such a costly medium of exchange as silver and opted for fiat instead. The fact that the backwardness led to forms of money, i.e. fiat and credit, which the present would regard as superior to the contemporary obsession with precious metal is something of a paradox.

For contemporary observers, fiat was a poor substitute for real money, i.e. coins of precious metal. Although the concept of money widened over the next two hundred years, the conviction that paper money had to be backed by something tangible proved to be very tenacious. Only with the demise of the gold dollar standard of Bretton Woods' fame in the early 1970s was the last link between precious metals and money broken. Although very few today, with the notable exception of some fringe monetarists, would argue the case for gold, monetary historians are still guided by the divide between fiat and backed money. To some extent this is justified; after all historians have to take the mindset of the time into account to understand the past. This notwithstanding, monetary history has probably much to gain from moving beyond this divide and placing more emphasis on how money functioned and how well the fundamental requirements of money were met. In this sense, the question of whether some kind of monetary rules – in a wide sense – guided policy is more important for understanding monetary systems. Fiat regimes in advanced economies are today of course guided by some policy principle, for instance fixed exchange rate adherence or inflation

²⁰ Moen, Kristian, *Kongsberg sølvverk 1623-1957*, Universitetsforlaget 1967.

targeting. Even before 1914, some countries successfully adopted a fixed exchange rate commitment without formally adhering to the gold standard, thus in essence remaining *de jure* a fiat regime. The evidence presented here suggests that in times of peace the Danish-Norwegian authorities managed to restrict their own misuse of the bank of issue so that paper money fulfilled the requirements of money, while in times of war they opted for inflation financing at the expense of these requirements, notably so for money's role as a store of wealth. With the restoration of the domestic money system, and in particular after 1822, Norwegian monetary authorities were clearly guided by monetary rules, confining the issue to the legal maximum and gradually lowering the premium paid on silver.

During the Danish reign, paper money became institutionalised in the Norwegian economy. With the coming of political autonomy after 1814, there existed a strong desire to establish a stable domestic currency linked to silver, but no desire to replace paper money with full-bodied coins. The Norwegians had become used to notes, and heavy coins seemed impractical. Here the interests of the public and the monetary authorities coincided. With a very limited coin circulation, silver was reserved for the purpose of establishing a silver fund to back the issue, and Norges Bank promoted the status quo by issuing low denomination notes.

Until 1842 Norway had, in a sense, a dual currency system: on the one hand, paper money served as a domestic currency; on the other, silver was the currency for those engaged in international trade. The relationship between the two was decided by market forces, although Norges Bank from 1822 onwards *de facto* introduced a floor for how far the domestic currency could depreciate in terms of silver. In 1842 these systems were united in a domestic currency convertible into silver. However, by then notes as a means of payment were so rooted in Norwegian society that no impetus for coin circulation was achieved.

Literature

Dyrvik, Ståle, Den lange fredstiden 1720-84, Volume 8 in Mykland, Knut (ed.) Norges historie, Cappelen 1978

Dyrvik, Ståle and Feldbæk, Ole, Mellom brødre 1780-1830, Volume 7 in Helle, Knut (ed.), *Aschehoughs Norges historie*, Oslo 1996

Dyrvik, Ståle, Norsk historie 1625-1814, Samlaget 1999

- Fossen, Anders Bjarne, *Herren til Møhlenpris : "Saa stor var min Lycke, saa dyb er min Sorg"*, Clioto 2003
- Grytten, Ola H., A consumer price index for Norway 1516-2003, Chapter 3 in Eitrheim, Øyvind, Klovland, Jan Tore and Qvigstad, Jan F. (eds.), *Historical Monetary Statistics for Norway 1819-2003, Norges Bank Occasional Papers* no. 35, Oslo, 2004
- Kuttner, Carl Gottlob, *Reise durch Deutschland, Danemark, Schweden Norwegen und ein Theil von Italine inden Jahren 1796, 1798, 1799*. Theil I-IV. Liepzig 1801
- Moen, Kristian, *Kongsberg sølvverk 1623-1957*, Universitetsforlaget 1967
- Mykland, Knut, Gjennom nødsår og krig 1648-1720, volume 7 in Mykland, Knut (ed.) *Norges historie*, Cappelen 1977 Fossen, Anders Bjarne, *Herren til Møhlenpris : "Saa stor var min Lycke, saa dyb er min Sorg"*, Clioto 2003
- Pram, Christen H., *Tale paa Kongens Fødselsdags-Høitid 1811 med oplysende Anmærkninger*, Copenhagen 1811
- Rygg, Nicolay, *Norges Bank*, Volume I, Kristiania 1918
- Rønning, Bjørn R., *Den kongelige mynt 1628-1686-1806*, Cappelen 1986
- Schmidt, J. Boisen, *Studier over statshusholdningen i kong Frederik IV's regeringstid 1699 – 1730*, Gyldendal, Copenhagen 1967
- Svendsen, Knut Erik and Hansen, Svend Aage, *Dansk pengehistorie 1700-1914*, Danmarks Nationalbank 1968