

The Riksbank and government debt 1668-2003

Klas Fregert

Department of Economics, Lund University

Roger Gustafsson

The National Board of Housing, Building and Planning

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Corresponding author:

Klas Fregert

P.O. Box 7082

SE-220 07 Lund

Sweden

Email: klas.fregert@nek.lu.se

1 Introduction

The causes and consequences of financing government expenditures through borrowing at the central bank have long been important issues for macroeconomists. Here we present data on government borrowing at the Riksbank from 1668 until 2003. To put the Riksbank holdings of government debt in perspective, we also present it as a proportion of total government debt for the period 1719-2003. The data have been constructed as part of a larger project on government finances 1719-2003, presented in Fregert and Gustafsson (2007).

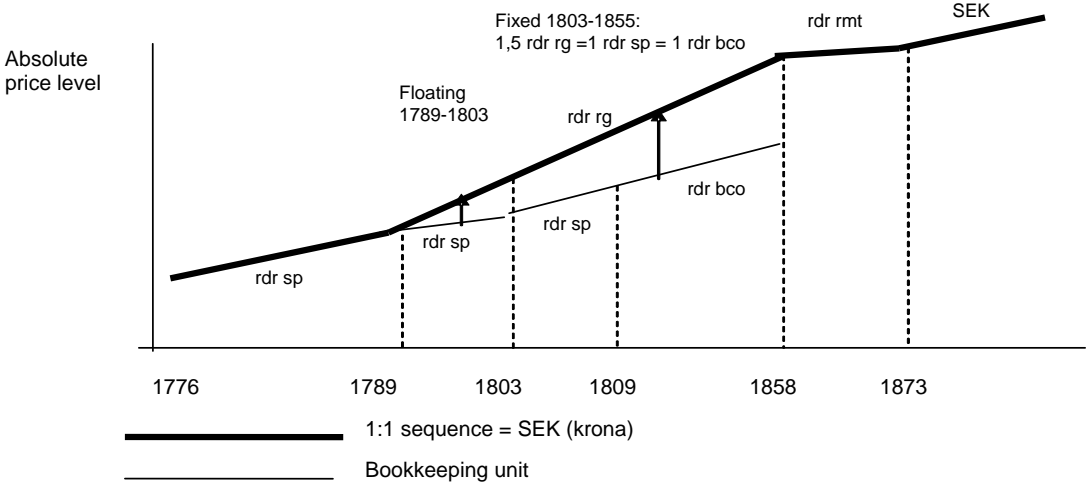
2 Conversion to a common currency unit

We present nominal amounts in thousands of SEK (*krona*), the currency unit used in Sweden since 1873. It is possible to construct a series that links previous monetary units between 1777 and 1873 to SEK at a one-to-one basis as described in Heckscher (1942, p. 19) and in Figure 1. Amounts given in riksdaler specie (a silver currency) between 1777 and 1788 are linked one-to-one to riksdaler riksgälds from 1788 as their exchange rate was one-to-one when they were introduced in 1788. Likewise riksdaler riksgälds are linked one-to-one to riksdaler riksmünt in 1855. Riksdaler riksmünt were relabeled kronor (SEK in 1873). The amounts before 1777 are given in *daler silvermynt* (dsm), which have been multiplied by 6 as implied by the currency reform of 1777. These units were the main currency units and are used in Åmark's so-called unreduced price index.

The amounts given in the sources described below are, however, given in the currency units riksdaler specie and riksdaler banco between 1789 and 1855. We have translated these figures to the SEK-sequence between 1789 and 1803 by multiplying the riksdaler specie figures with the floating exchange rate between riksdaler specie and riksdaler riksgälds. From 1803, the riksdaler specie figures have been multiplied by the 1.5 as implied by the currency reform in 1803, when 1.5 riksdaler riksgälds became redeemable to 1 riksdaler specie. The currency unit riksdaler banco refers to the Riksbank notes, which were convertible to riksdaler specie until 1809. The Riksbank figures are given in riksdaler specie until 1829 and thereafter in riksdaler banco until 1856. We interpret the figures given in riksdaler specie between 1803 and 1829 as "riksdaler specie in banknotes", that is, actually in riksdaler banco. The riksdaler

banco notes fluctuated in value against silver from 1809 until 1830, when they were made convertible to silver at a devalued rate relative to riksdaler specie in silver. It is reasonable to assume that the bank used the denomination riksdaler specie until the official devaluation in 1830, which is confirmed by the closeness of the figures given for 1829 in riksdaler specie and for 1830 in riksdaler banco.

Figure 1: The evolution of monetary units after 1776



Abbreviations: rdr sp = riksdaler specie, rdr rg = riksdaler riksgälds, rdr bco = riksdaler banco, rdr rmt = riksdaler riksmünt.

3. Sources

3.1 Borrowing from the Riksbank

The sources and the actual headings are summarized in Table 1. The figures on the debt to the Riksbank between 1668 and 1840 are available from the bank’s yearly balance sheet on the asset side published in *Sveriges Riksbank. Dess tillkomst och historia*, (1918, part I, Table 4. ”Utlåning länebanken”, pp. 12-15 and 1931, part V, ”Riksbankens tillgångar och skulder”, pp. 2-33). During the 1780-1807 period, the Riksbank did not hold any central government debt

apart from the non-interest bearing riksgäldssedlar. They were initially issued by the National Debt Office, but transferred to the Riksbank in 1803. We include them from 1789.

For the 1840-1908 period, the data come from the official records of the parliament sessions (*Riksdagens revisorers berättelse*) and for the period 1909-2003 from the Riksbank yearbooks.

For the periods 1829-1840, 1985-1996, 1997-2000; Swedish government bills and bonds appear under Swedish bills and bonds generally. After controls, we have established that the amounts refer only to government bonds.

Table 1. The central government's debt to the Riksbank: sources and headings.

Period	Heading	Source
1668-1718	Kammarkollegium, Kronans yngre lån	Sveriges Riksbank, del I
1719-1789	Fordringar av Kronan	Sveriges Riksbank, del V
1789-1828	Fordringar av Kronan + Riksgäldssedlar	Sveriges Riksbank, del V Åmark (1961)
1829-1840	Räntebärande obligationer	Sveriges Riksbank, del V
1841-1909	Riksgäldens skuld till Riksbanken, Tillgång Riksbanken	Riksdagens revisorer
1910-1919	In- och utländska statspapper - utländska statspapper	Riksbankens årsbok
1920-1943	Svenska statspapper	Riksbankens årsbok
1944-1974	Svenska värdepapper: Skattkammarväxlar + statsobligationer	Riksbankens årsbok
1975-1984	Inhemska tillgångar: statspapper	Riksbankens årsbok
1985-1996	Svenska statspapper och obligationer	Riksbankens årsbok
1997-2000	Värdepapper i svenska kronor utgivna av hemmahörande i Sverige	Riksbankens årsbok

3.2 Interest payments on government debt to the Riksbank

For the period 1722 to 1743 the interest payment figures are calculated from debt service figures in Åmark (1961). The Riksbank debt service is obtained by subtracting from the total debt service in Table 16, other creditors' debt service given by Åmark (1961, p. 602) and debt service to the Krigsmanshuskassor (military pension funds). The remaining debt service consists entirely of interest payments to the Riksbank as there was no amortization.

For the period 1744 to 1780, we multiply the interest rates given in Åmark (1961, p. 611-616, (6 percent 1743-1755, 3 percent 1756-1768 and 1772-1777) with the Riksbank debt. During 1769-1771 no interest payments were made at all (Åmark, 1961, p. 611-616). Since the Riksbank did not own any government debt during 1780-1807 there are no interest payments during this period. For the period 1809 to 1833 the interest payments are calculated as the product of the interest rate 4 percent and the Riksbank holdings of government debt. This is only an approximation since we do not know the interest rate before 1834 when it was set at 4 percent.

From 1834 we calculate the interest payments as the share of government debt to total debt multiplied by total interest income. The data are taken from the Riksbank balance sheets given in *Sveriges Riksbank*, del V (1931). The exact headings and calculations are given in the excel file of the calculations.

3.3. Central bank transfers to the government

These transfers started in 1824 but did not become regular until the mid-1860s. For the period up until 1911 the data is taken from Sveriges Riksbank (1924) and from 1911 from the state budget. These transfers were made to the National Debt Office until 1877 and from 1878 to the government proper (*statsverket*).

3.4. Seigniorage

The pure resource flow from the central bank to the central government, so-called fiscal seigniorage, S , is calculated as the sum of: 1) new central government borrowing from the central bank minus the increase in government deposits at the central bank, and 2) transfers from the central bank to the central government net of government interest payments to the central bank.¹ (Total seigniorage would also include capital gains and losses on government debt due to unexpected interest changes.)

Data sources

Åmark, K., 1961. *Sveriges statsfinanser 1719-1809*, (Swedish government finances 1719-1809), Norstedt & Söners förlag, Stockholm.

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¹ Fiscal seigniorage can also be expressed as the sum of: 1) new high-powered money minus central bank purchases of domestic non-government bonds and foreign bonds, and 2) interest income on non-government bonds, and other net inflow to the central bank. If the central bank does not buy domestic non-government bonds or foreign bonds and if the other net inflow of the central bank is zero, seigniorage is equal to the flow of new high-powered money, a common empirical measure. Fregert and Gustafsson (2007) show how these seigniorage expressions can be derived from the consolidation of the central government and central bank accounts.

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- Heckscher, E. F., 1942. *De svenska penning-, vikt och måttsystemen*, (The Swedish monetary, weight, and length measurement systems.) P.A . Norstedt och Söner, Stockholm.