

7.

From appreciation to depreciation – the exchange rate of the Swedish krona, 1913–2008

Jan Bohlin

7.1. Introduction

In this chapter, monthly exchange rates of the Swedish krona are presented for the period 1913–2008. The exchange rates are the prices quoted in Stockholm for currencies, in other words, how many Swedish kronor (SEK) equalled a given unit of a foreign currency. The monthly exchange rates are calculated as monthly averages of daily quotations, except for the period 1952–1974, when the monthly rate is the average of the highest and lowest daily quotations in that particular month. During the Second World War and its aftermath, international trade was to a large extent characterised by bilateral trading arrangements and for many currencies there was no active exchange market. Accordingly, the same exchange rate was used for many years and daily quotations are lacking for most currencies. In the 1930s, after the break-up of the Gold Standard, and during the Second World War and its aftermath, clearing exchange rates were often used in international transactions. In most cases, however, the clearing rates closely tracked the official market exchange rates, and the latter are used in this chapter.^{1 2}

To get a better overview of the evolution of the Swedish exchange rate, an exchange rate index has been constructed with the aims of including the currencies of

1 Monthly exchange rates and annual averages of monthly exchange rates are in Appendix A7.1. A more comprehensive dataset can be downloaded from Sveriges Riksbank's website for historical monetary statistics. For the period after 1995, exchange rate data may also be downloaded from Sveriges Riksbank's website.

2 The sources used for constructing monthly exchange rates are given in Appendix A7.1.

countries whose share of Swedish foreign trade (exports + imports) amounted to at least one per cent and of covering at least 80 per cent of Swedish foreign trade. Due to a lack of data, this could not be achieved for some years and some countries. Moreover, the availability of unbroken series of data led to the inclusion in the index of the currencies of some countries whose shares in Swedish foreign trade were less than one per cent in particular years. An obvious example is the Swiss franc. Trade weights have been constructed with the use of official Swedish foreign trade statistics.³

Countries' trade shares shift over time and political changes lead to the disappearance of some states and the (re-)birth of new ones. In constructing an exchange rate index, we therefore need to adjust weights periodically. Weights have been adjusted every five years, and an exchange rate index has been calculated for each five-year period. In some cases, political changes, currency reforms and data availability have led to periods being a little longer or shorter.⁴

When interpreting the evolution of the exchange rate index, it is important to take into consideration the evolution of the international monetary system in the 20th century. Several regime shifts have occurred and the evolution of the Swedish exchange rate must be viewed against the background of those changes. The following sections contain an account of the evolution of the Swedish exchange rate under the varying regimes of the international monetary system in the 20th century.

7.2. The First World War and the demise of the classical gold standard

7.2.1. Swedish exchange rate policy during and after the First World War

From 1873 until 1914 Sweden was on the gold standard. The fully-fledged gold standard rested on a few central pillars: the unit of account was tied to a certain amount of gold; gold coins circulated domestically and banknotes could be converted into gold on demand; there were no legal restrictions on the melting of gold coins into bullion; and there were no obstacles to the export of gold.⁵ When these rules were adhered to, exchange rates between countries on the gold standard were fixed. They could only vary between the 'gold points', which mirrored the cost of transporting gold between countries. The First World War put an end to the classical gold standard. Governments to a large extent financed war efforts by printing

3 SOS Handel (from 1961 SOS Utrikeshandel). From 1977 the trade weight data derive from the website of Statistiska Centralbyrån (Statistics Sweden): www.scb.se.

4 Table A7.19 in Appendix A7.2 documents the chosen sub-periods, the base year for each period and the countries included. It also shows the included countries' shares of total Swedish foreign trade (exports + imports) in the chosen base years.

5 Kenwood and Lougheed (1985, p. 117).

money and the rate of inflation rose. From 1915, many central banks ceased to honour their obligation to exchange banknotes for gold and banned the export of bullion and gold coins. Accordingly, exchange rates started to deviate from the gold parities and there was no longer any mechanism for bringing them back. The only country that stuck to a fully-fledged gold standard during the war was the United States.

When gold started to flow out of Sweden following the outbreak of war, the Riksbank (Sweden's central bank) decided on 2 August, 1914 that banknotes would no longer be convertible into gold.⁶ Then, on November 25, 1914, the Riksbank decided to ban the export of gold. This meant that in practice Sweden had left the gold standard. The immediate consequence was a loss of exchange rate stability. Between the autumn of 1914 and March 1915 the krona depreciated by 6–8 per cent against currencies such as sterling, the US dollar and the French franc, while it appreciated against the German mark.

In the spring of 1915 the depreciation of the German mark against the krona accelerated and from April 1915 the krona started to appreciate against 'high-valued currencies' such as sterling and the US dollar. The Riksbank's gold reserves increased again, as did the supply of sterling and US dollars when Swedish export income rose after Swedish timber was removed from the German list of contraband goods. Since gold backing was more than sufficient, the Riksbank reintroduced the convertibility of banknotes for gold at the turn of 1915. However, as the gold export ban was still in force, the Swedish exchange rate could deviate from the old gold parities. In the early months of 1916 the Swedish krona rose above the old parities. Since gold could flow into Sweden and the Riksbank was committed to exchanging banknotes for gold, one might have expected that the krona would be driven down towards the gold parities. However, this did not happen because, according to Heckscher, the gold standard did not function properly; it was no longer a 'bona fide gold standard'.⁷ Wartime conditions severely obstructed private shipments of gold to Sweden.⁸

For the Riksbank, being obliged to exchange banknotes for gold at the old parities was bad business, especially since the gold reserves were now deemed to be more than sufficient. Thus, a month or so after it had been reinstalled, gold convertibility was again abandoned on February 8, 1916. However, some remnants of the old gold standard were still in place, since the Scandinavian currency union was still in operation. Accordingly, Norwegian and Danish firms and citizens could still use their own countries' gold coins in Sweden. The currency union prevented the Swedish krona from deviating all that much from the Danish and Norwegian krona. After a meeting of representatives of the Scandinavian central banks at the end of February 1916,

6 The following account of the evolution of Swedish exchange rate policy 1914–24 is based on Heckscher (1926) and Östlind (1945).

7 Heckscher (1926, p. 44).

8 Östlind (1945, p. 38).



A queue outside the Riksbank to exchange notes for gold at the outbreak of the First World War in 1914.

Source: Stockholm City Museum.

Norway and Denmark also prohibited the export of gold. In mid April 1916, the central banks of Denmark and Norway also abolished their obligation to exchange gold for banknotes. At the same time, the three Scandinavian central banks all withdrew the right for citizens of their countries to mint gold coins. After this, the only remnant of the old gold standard that still existed was the central banks' possibility of settling debts in gold coins. In this respect the Scandinavian currency union was still in force.

When the Danish and Norwegian krona started to fall against the Swedish from the summer of 1916, gold coins started to be exported from Norway and Denmark to Sweden. The Norwegian central bank used gold coins to settle its liabilities with Sveriges Riksbank. Despite the flow of gold coins to Sweden from Denmark and Norway, the Swedish krona appreciated against its Scandinavian neighbours, since the export of gold coins from the Danish and Norwegian central banks did not affect the valuation of the currencies in the hands of the general public. Gold coins did not circulate and the central banks refused to exchange gold for banknotes. For Sveriges Riksbank, the inflow of gold coins from Denmark and Norway was unwelcome since the appreciation of the Swedish krona meant that gold could be bought more cheaply elsewhere. After negotiations between the Scandinavian central banks in the spring of 1917, the ban on exports on gold was extended to include gold coins.

Despite the gold embargo, gold continued to flow into Sweden. Sweden ran a substantial trade surplus in these years and part of it was regulated with gold payments. The Riksbank willingly converted some of the gold into banknotes because the regulations were such that an increased circulation of banknotes required an increase in the Bank's gold reserves.⁹ Another part of the Swedish export surplus was arranged by extending credit to foreign buyers. Swedish exporters were prepared to extend credit to foreign customers denominated in their currencies since the currencies were expected to return to the old gold parities soon after the end of the war, whereupon exporters would earn a nice profit. To understand the financing of the Swedish export surplus during the war years, it must be born in mind that since the middle of the 19th century Sweden had imported massive amounts of capital. Financial assets which Swedish borrowers had pledged to foreigners could now be mobilized to pay for Swedish exports and were accordingly repatriated to Sweden. Especially in Germany this arrangement was a common way of paying for imports from Sweden.¹⁰

After the Scandinavian gold embargo in April 1916 there was no limit to the krona's appreciation above the old gold parities. Strong appreciation up to November 1917 was followed by depreciation, so that a year later the krona had returned to approximately the same level as two years earlier. The period of depreciation was apparently a result of expectations that the war would soon end and exchange rates would then return to the old gold parities.

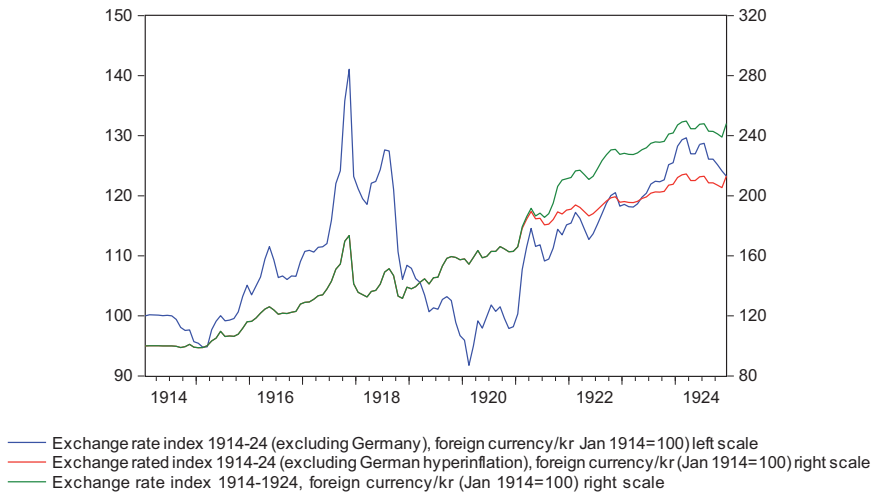
Even after its depreciation at the end of 1917, the krona was still above the pre-war gold parities, particularly against the German mark but also against sterling and to a lesser extent the US dollar. In 1919–20 the krona's exchange rate followed that of sterling and it accordingly depreciated against the dollar. The dollar's exchange rate against the krona rose above the old gold parities. However, as other currencies depreciated more against the dollar, the krona still appreciated against a trade-weighted average of other currencies.

Economists considered that the gold export ban was responsible for the krona's depreciation against the dollar. In a newspaper article on March 11, 1920, a leading economist, Eli Heckscher, urged the Swedish public to exert their right to exchange banknotes for gold in the Riksbank. His aim was to push the Riksbank into raising the discount rate and thereby help to curb the rate of inflation, which was rising. The immediate effect was that the Riksbank cancelled its obligation to exchange gold for banknotes on March 17.¹¹ The Riksbank also raised the discount rate and kept it at a high level even when the business cycle turned downwards in the autumn of 1920 and prices started to fall precipitously. In late 1920 the krona started to appreciate again against the dollar; two years later it had returned to the old gold parities and then stabilized at that level. When the ban on gold exports was abolished and the

9 Östlind (1945, pp. 47–48).

10 Schön (2000, pp. 280–81).

11 Heckscher (1926, pp. 112–13).

Figure 7.1: Exchange rate index, 1914–24 (January 1914=100)

Source: See Appendices A7.2, Table A7.20 to A7.22.

Riksbank again undertook to exchange gold for banknotes, on 1st April 1924 the krona was also formally back on the gold standard.

The return to the gold standard had been preceded by an intense discussion among economists about the goals of monetary and foreign exchange rate policy. The well-known economist Knut Wicksell advocated severe deflation and a return to the price level from 1914, which for him also meant abandoning the gold standard, whereas most economists favoured more lenient deflation and a return to the gold standard. The primary goal for a majority of Swedish economists was price stability, while a return to the price level from 1914 was considered unrealistic. The return to gold was seen as necessary in order to anchor the price level to a fixed norm.

7.2.2. The Swedish exchange rate 1914–24

This section presents a summary view of the Swedish exchange rate during and after the First World War up to the restoration of the gold standard in 1924. Figure 7.1 shows the path of the Swedish krona's exchange rate against a trade-weighted average of Sweden's trading partners in the period 1914–24. Given Germany's large weight in Sweden's foreign trade, the German hyperinflation of 1921–23 has a large impact on the exchange rate index. A separate index that excludes the German hyperinflation has therefore been calculated for these years. The broad picture is nevertheless the same, with and without German hyperinflation. The exchange rate excluding German hyperinflation shows an appreciation of the krona by roughly 100 per cent between 1914 and 1924, which means that in 1924 a Swedish citizen had to pay



A woman feeding a stove with old German marks in 1923. The inflation notes burned for longer than the firewood that people could buy for the same amount of money.

only half as many kronor as in 1914 for a trade-weighted basket of foreign currencies. The sharp fluctuations in the krona's exchange rate in 1917–18 are also clear. After the war, the krona continued its upward float until the restoration of the gold standard in the mid-1920s.

Even before the German hyperinflation in 1921–23, the krona's appreciation is to a large extent driven by the depreciation of the German mark; between 1914 and 1920 the mark fell more than 90 per cent from its gold parity of 0.89 to 0.07. It is therefore of some interest to calculate an exchange rate index where Germany is excluded altogether in the period 1914–24. According to such an index¹² (see Figure 7.1, left scale) the krona appreciated by 20–30 per cent between 1914 and 1924; much of this appreciation occurred between the end of hostilities and the restoration of the gold standard in 1924.

Did the krona also appreciate in real terms? In other words, did the krona's purchasing power increase in terms of foreign goods? To answer that question we must look at the evolution of the price level in Sweden and among Sweden's trading part-

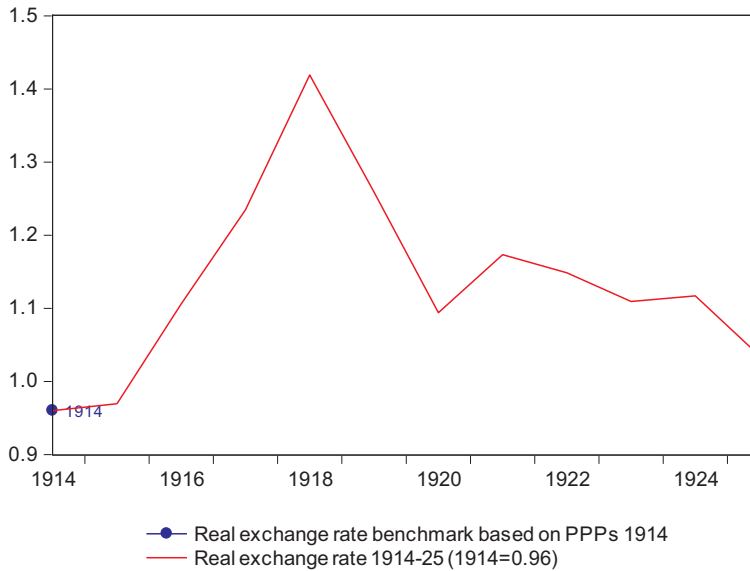
¹² The same weights (excluding Germany) as in the other indices have been used.

ners. Before doing so, we must discuss the concept of real exchange rates and its relationship to the purchasing power parity doctrine.

The purchasing power parity (PPP) doctrine is an influential theory in international economics on what determines exchange rates.¹³ It is based on the law of one price, which states that an identical commodity must fetch the same price everywhere. If, for example, the dollar price of wheat of a given quality is lower in the US than in Sweden, dealers would make a profit by buying wheat in the US and selling it at the higher price in Sweden. This arbitrage would last until the dollar price of wheat is the same in both countries. What applies to a single commodity applies to a bundle of commodities. In its absolute form, the PPP doctrine for exchange rate determination states: $e = P_h/P_f$; where P_h is the price for a bundle of goods in the home country, P_f is the price for the same bundle of goods in a foreign country, and e is the exchange rate (how many units of their own currency home country citizens have to pay for a unit of foreign currency). Because of transport costs and other obstacles to trade, such as tariffs, the PPP doctrine cannot be expected to hold in its absolute version. More common is the relative version of the PPP doctrine, which states that the percentage change in the exchange rate between two countries equals the difference in the percentage rate of price level changes between the two countries, i.e.: $\hat{e} = \hat{P}_h - \hat{P}_f$; where the caret stands for growth rates. This was the version of the PPP doctrine espoused by the Swedish economist Gustaf Cassel, who is often credited with being the originator of the PPP doctrine. When testing the relative version of the PPP doctrine, economists commonly use price index numbers for the various countries, for instance GDP deflators, consumer price indices or wholesale price indices. An obvious problem here is that commodity baskets differ between countries. Moreover, many commodities do not enter international trade. We would therefore not expect commodity arbitrage to directly bring exchange rates into line with changes in price levels. It has been shown that countries at a lower level of development, with tradable sector wages that are lower than in developed countries, also have lower wages and therefore prices in the non-tradable sector compared to developed countries. Their general price level is therefore lower than in more highly developed countries; as this is not mirrored in their exchange rates, their currencies are undervalued.

Another reason why we cannot expect the PPP doctrine to apply directly is that changes in wages and prices are more sluggish than changes in exchange rates. The latter are asset prices and therefore to a large extent governed by expectations. In financially deregulated economies, with high cross-border mobility of finance, exchange rates deviate from what we would expect from the PPP doctrine. Data show that exchange rates can diverge for decades from what would be expected from PPP levels, even for countries at a similar level of development.

13 For an overview of the PPP doctrine, see Sarno (2008).

Figure 7.2: Real exchange rate index 1914–24 (1914=0.96)

Sources: Exchange rates (Appendix A7.1); consumer price indices (Mitchell 2003b; Mitchell 2003a); purchasing power parities 1914 (Williamson 1995).

Note: Williamson's PPP data pertain to 1905 except for the US and Sweden, for which they pertain to 1909 and 1914. They have been recalculated to 1914 values by means of consumer price index numbers derived from Mitchell. The real exchange rate index is a trade-weighted average (1915 weights) of the real exchange rates of the krona against the currencies of Denmark, Norway, UK, USA and France.

Economists often calculate the real exchange rate, RER, according to the following formula: $RER = P_h/P_f e$. If RER is unity, the currencies are 'fairly' valued. If it is larger than unity, the exchange rate is overvalued, meaning that the home country's citizens have more purchasing power abroad than at home. If it is lower than unity, the exchange rate is undervalued. In practice, RER calculations are done with price index numbers that are set to unity in a common period. From that period we can calculate RERs forwards and backwards, but we do not know whether its value in the period set to unity is 'fair' in the sense that PPPs are equalised. Without such a reference point we cannot tell whether exchange rates are 'overvalued' or 'undervalued' at a certain point in time; at best we can only tell in which direction RERs are headed.

Statistical agencies, such as Eurostat and the OECD, publish PPP benchmarks for recent decades. For earlier periods we have to rely on the efforts of economists and economic historians. The various available PPP benchmarks are not directly comparable with respect to coverage and methods of calculation. They therefore give us only some general idea of the extent of a currency's over- or undervaluation at a point in time. According to a PPP benchmark for 1914, the Swedish krona was slightly

undervalued, with a PPP of 0.96.¹⁴ I have accordingly scaled the Swedish RER to 0.96 for 1914. For the following ten years the RERs have been calculated from annual averages of our monthly exchange rates and consumer price index numbers for the various countries. Because of the distorting effects of the extraordinary German depreciation and hyperinflation, Germany was excluded from the calculations for the period 1914–24.

As shown by Figure 7.2, the exchange rate of the krona seems to have been greatly overvalued at the end of the First World War; by roughly 40 per cent according to our calculation. That the krona was overvalued at that time was also the opinion of contemporary economists.¹⁵ The deflation that followed in 1921–23 was extraordinarily harsh in Sweden, which led to a fast fall in the Swedish RER in the first half of the 1920s; in 1925 it was nearly back at unity, indicating that at that time the krona was possibly only slightly overvalued.

7.3. The restoration and fall of the inter-war gold standard

7.3.1. *Overview of the international monetary system, 1924–39*

After the First World War, currencies continued to float.¹⁶ The inflationary conditions during the war continued in the first post-war years. In some countries, such as Germany, Austria and Hungary, high inflation developed into hyperinflation. In those countries, the stabilization of the price level entailed the creation of new monetary units backed by gold. Austria reconstructed its monetary unit in that way in 1923, Germany and Poland in 1924 and Hungary in 1925.¹⁷ In other countries, among them Sweden and the UK, a combination of a sharp economic downturn and harsh deflationary policies broke inflation in 1921–23, when the price level fell precipitously. Economists, and politicians taking advice from them, argued for a return to the gold standard. A monetary system founded on gold was considered to be the only guarantee of price stability. Countries like Sweden and the UK, where inflation had been contained, went back to gold in 1924 and 1925 at the old parities. Britain's return to gold prompted other countries, such as Australia, the Netherlands and South Africa, to follow suit.¹⁸ Re-establishing the old gold parities took longer in Denmark and Norway; Denmark went back to gold in January 1927, Norway in the

14 Calculated from trade weighted RERs for the Swedish krona against the currencies of Denmark, Norway, Great Britain, USA and France. For later periods Germany is also included in the calculated RER indices. PPP data come from Williamson (1995). The trade weights are from 1915.

15 Östlind (1945, p. 329–30).

16 The following overview of the international monetary system in the inter-war period is largely based on Kenwood and Lougheed (1985, Ch. 12–13) and Eichengreen (1996, Ch. 3).

17 Eichengreen (1996, p. 47).

18 Eichengreen (1996, pp. 47–48).

autumn of 1927.¹⁹ France stabilized its currency at about the same time as Denmark²⁰ but did so at a fifth of the pre-war gold parity. Like France, Belgium and Italy experienced inflation in the 1920s which was not followed by sharp deflation, as it was in Britain and the Scandinavian countries; they went back to gold in 1925 and 1927, respectively.

By 1927, all the major countries' currencies were convertible into gold at fixed parities. Capital flowed freely across national borders. Everything appeared to be back to normal but in fact the gold standard only lasted another five years. Many factors exerted a strain on the interwar gold standard and caused it to function less smoothly than before the First World War. First, there was the problem of insufficient gold reserves with which to back currencies. The world's gold reserves grew much more slowly than output. The Genoa conference in 1922 therefore decided that central banks should be allowed to hold reserves not only in gold but also in convertible currencies. The interwar gold standard was accordingly a gold exchange standard. An additional problem was the unequal distribution of the available gold reserves. Gold tended to accumulate in just a few countries. The USA possessed almost half of the available gold reserves and in Europe it was France that accumulated gold. The French franc was clearly undervalued at the new parities, while the UK struggled with persistent current-account deficits, apparently because of an overvalued pound. In the context of political democracy it was difficult for the British to pursue deflationary policies, while the French did not permit the price level to rise. The asymmetry in the interwar gold standard was exacerbated by international capital flows in the late 1920s. The USA was the major lender in that decade, while Germany and East European states were the main borrowers.²¹ A large part of the international lending was short-term. When the US Federal Reserve raised the interest rate in 1928 to curb the Wall Street boom, the supply of finance to these countries dried up. In the middle of a deep economic crisis, German governments were now forced to adopt deflationary policies to defend the gold standard.

Signs that the gold standard was beginning to crumble first appeared in 1929. Peripheral countries dependent on exporting prime commodities were hard hit by declining export revenues at the same time as capital imports diminished. Argentina, Brazil, Uruguay and other Latin American countries limited gold convertibility in 1929, as did Australia and New Zealand. Canada introduced an embargo on gold exports.²² The strains on the inter-war gold standard grew when in November 1931 an Austrian bank, Credit Anstalt, was on the brink of default and was bailed out by the government. The banking crisis led to capital flight that spread to Hungary and Germany. To stem the tide, both countries installed exchange controls that prohib-

19 Klovland (1998, p. 31).

20 France stabilized its currency in late 1926 and went back de jure to the gold standard in June 1928 (Eichengreen 1996, p. 47).

21 Feinstein et al. (1997, Ch 5).

22 Eichengreen (1996, p. 49).

ited the free cross-border flow of capital. Thereby these countries de facto left the gold standard.

The British balance of payments deteriorated sharply in the summer of 1931. Financial capital fled from Britain. Despite interest rate hikes by the Bank of England, arresting the capital flight and defending the gold parity of sterling proved impossible. On September 19, 1931, the Bank of England suspended gold convertibility and devalued the pound by roughly 30 per cent against the gold currencies. Britain's decision was followed by the countries in the British colonial empire and dominions, as well as by the Scandinavian countries, Finland and some other countries, such as Portugal.²³

After the events of 1931, the international monetary system disintegrated into three blocs. Exchange controls in Austria, Germany and countries in Eastern Europe under German influence prohibited the free cross-border movement of capital. Although their currencies were backed by gold, the use of exchange controls signified that they had left the gold standard. To trade with these countries, governments had to arrange bilateral agreements. The Sterling Bloc consisted of the countries that followed Britain in suspending gold convertibility and pegged their exchange rates to sterling. The remaining gold countries – the USA and the remaining European countries, notably France, Belgium, Switzerland, the Netherlands, Poland and Czechoslovakia – tried to adhere to the gold standard and formed the Gold Bloc. In 1933 the USA devalued the dollar and suspended gold convertibility²⁴, and in 1934–36 various European gold bloc countries also devalued their currencies. By the mid 1930s there was not much left of the gold standard.

7.3.2. *The Swedish exchange rate in the 1930s*

When the UK left the gold standard in mid-September 1931, Sweden followed suit a week later because the Riksbank's foreign currency reserves were dwindling rapidly.²⁵ It was disclosed that a considerable part of these reserves consisted of dollar bills of exchange issued by various Krueger enterprises, which were now of dubious value. A policy declaration stated that the primary goal of monetary policy would now be to keep the krona's purchasing power stable. This entailed abandoning the fixed exchange rate regime so the exchange rate could be used to stabilize the price level. The Riksbank did not intervene in the foreign exchange market immediately after Sweden had left the gold standard. The krona started to appreciate against sterling, which fell below 17 kronor, after which the krona started to depreciate again and was back to the old parity at 18.16 in November 1931. The Riksbank then decided to peg the krona to sterling at the old gold parity, a decision that was at odds with the

23 Feinstein et al. (1997, pp. 151–4)

24 Eichengreen (1996, p. 87)

25 The following account of Swedish exchange rate policy in the 1930s is based on Jonung (1979) and Berg and Jonung (1999).

monetary policy declaration two months earlier that the goal of a fixed exchange rate would be abandoned. The peg at the old parity could not be maintained for long. After the Krueger crash in March 1932 the krona depreciated against sterling, which rose above 19.50 kronor in the summer of 1932.

From the spring of 1932 it was abundantly clear that the international depression had hit the Swedish economy and that deflationary forces were building up. This allowed the Riksbank to let the krona depreciate without importing inflation and risking the stated monetary policy goal of price stability. After the US left the gold standard in the spring of 1933, the international currency market became less volatile and the exchange rates of sterling and the US dollar stabilised. In June 1933 the Riksbank decided to peg the krona to sterling at 19.40. The peg was maintained until the outbreak of the Second World War.

Figure 7.3, showing the evolution of our trade-weighted exchange rate index, gives an overview of the Swedish exchange rate in the period 1924–39. After the major currencies had returned to gold in the mid 1920s, the krona was more or less stable until its depreciation in 1931–32; by 1934 its value had fallen by roughly 25 per cent. From the level in 1934 it appreciated slightly up to 1937, mainly due to devaluations in gold bloc countries. Nevertheless, despite a slight appreciation between 1934 and 1937, at the outbreak of the Second World War the krona had depreciated more than 20 per cent compared to the situation before Sweden left the gold standard in 1931.

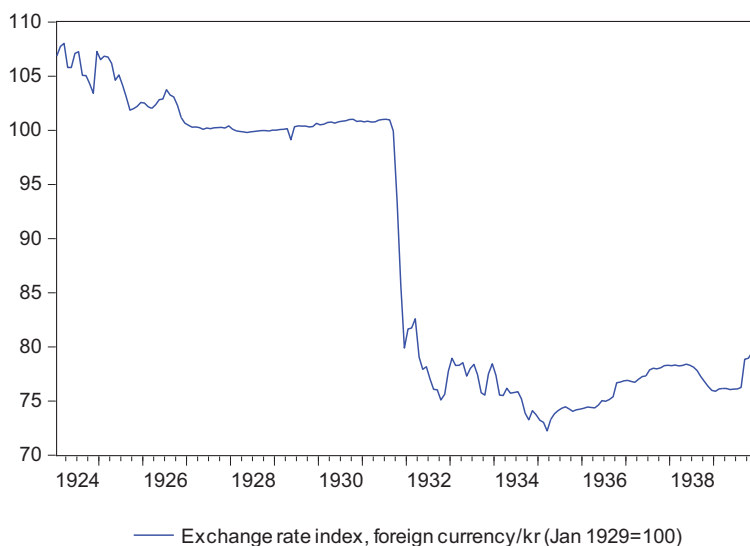
Did the krona also depreciate in real terms? Swedish economic historiography considers that the krona did depreciate in real terms in the 1920s, since deflation in Sweden was more severe than in most other countries.²⁶ Furthermore, following the depreciation in 1931–32, the krona's real exchange rate fell even more in the early 1930s.²⁷ The inter-war depreciation of the Swedish real exchange rate is evident in Figure 7.4. However, the depreciation in the 1920s must be seen in the light of the krona's clear overvaluation in the early 1920s as a result of its appreciation during the First World War. If our real exchange rate index for Sweden against six major trading partners is set at 0.96 for 1914, based on a PPP benchmark for that year, the value for 1926 is close to unity, indicating a 'fair value' for the krona, in which case the depreciation in 1932 led to an undervaluation of the krona by 10–15 per cent in the 1930s. Starting instead from a PPP benchmark for 1927²⁸, which indicates a 12 per cent overvaluation of the krona in that year, the 1931–32 depreciation only brought it back to a 'fair value'.

In sum, it seems obvious that the krona did depreciate in real terms in the inter-war period. The extent to which it was 'overvalued' or 'undervalued' during parts of

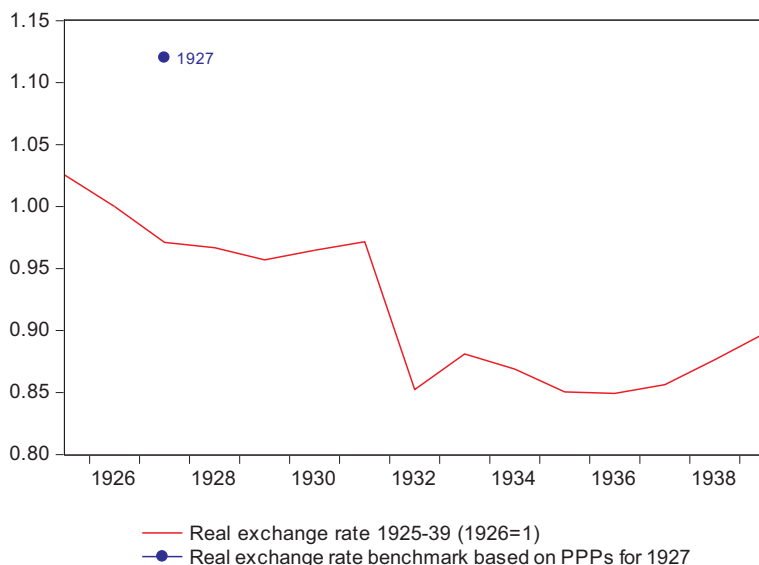
26 Lundberg (1983).

27 That the devaluation of the Swedish krona as well as the Danish and Norwegian krona also corresponded to a real depreciation has been pointed out by Klovland (1998, pp. 318–21).

28 Calculated from PPP benchmarks 1927 for Sweden, Denmark, Norway, UK, USA, Germany and France as given in Williamson (1995).

Figure 7.3: Exchange rate index, 1924–39 (January 1929=100)

Sources: See Appendix A7.2, Table A7.20.

Figure 7.4: Real exchange rate index 1925–39 (1926=1)

Sources: Exchange rates (Appendix A7.1); consumer price indices (Mitchell 2003b; Mitchell 2003a); purchasing power parities 1927 (Williamson 1995).

Note: The real exchange rate index is a trade-weighted average (1930 weights) of the real exchange rates of the krona against the currencies of Denmark, Norway, UK, USA, Germany and France.

this period is more difficult to determine, given the difficulty of establishing reference points of 'fair value' against which to measure this. An enduring trade surplus may indicate undervaluation. Sweden had a surplus of 1–2 per cent of GDP during the 1920s²⁹ whereas the surplus was smaller in the 1930s, when the krona depreciated most markedly in real terms. The latter may perhaps be explained by the fact that the krona did not depreciate against the sterling area, while trade with Germany, against which the krona depreciated sharply, was conducted via bilateral negotiations.

7.4. The reshaping of the international monetary system after the Second World War: the Bretton Woods system

7.4.1. *An overview of the international monetary system in the Bretton Woods era*

In July 1944, delegates from 44 allied nations convened in Bretton Woods, New Hampshire, to draw up the guidelines for a new international monetary system.³⁰ The conference had been preceded by proposals for the functioning of a new international monetary system from Keynes, who headed the British delegation, and Dexter White, the leader of the US delegation. Keynes argued for a system where countries could adjust their exchange rates, in other words an 'adjustable peg system', to achieve external balance. He also suggested the creation of an international clearing system with extensive credit facilities for the participating countries and a new international unit of account which he called *bancor*. Dexter White's proposal was closer to the old gold standard. He foresaw a system of fixed exchange rates where each national currency was pegged to gold. Exchange rate adjustments would be allowed only after consultations with a new 'International Stabilization Fund'. To support countries with external deficits, Dexter White suggested the creation of credit facilities, the size of which was dependent on quotas paid in gold or in the countries' own currencies to the 'International Stabilization Fund'. The result of the Bretton Woods proceedings was a compromise between the proposals of Keynes and Dexter White, with the latter clearly exerting more influence, corresponding to the USA's leading role in the international economy.

The Bretton Woods system was a fixed exchange rate system. Each country's currency would be pegged to the dollar at a fixed rate, but a deviation of one per cent up or down from this rate would be allowed. The dollar in turn was pegged to gold and exchangeable for it at the rate of 35 dollars per ounce. Only in a situation of 'fundamental disequilibrium' in the external balance was a country allowed to devalue its

29 Krantz and Schön (2007); Edvinsson (2005).

30 The following account of the international monetary system in the period 1944–1973 is primarily based on Eichengreen (1996) and Kenwood and Lougheed (1985).

currency by up to ten per cent after consultation with the International Monetary fund, IMF, a new international agency set up to monitor the system. Through the IMF, the participating countries were also granted a certain amount of credit facilities, dependent on and financed by country quotas, of which 25 percent was to be paid in gold or 'convertible currencies' (meaning the dollar) and the rest in national currency. The size of the quotas reflected each country's economic strength and also determined the country's voting rights in the IMF. To promote economic development, the International Bank for Reconstruction and Development, also called the World Bank, was set up to provide loans to developing countries.

The Bretton Woods system established the dollar as the world's leading reserve currency. In practice, the international monetary system was now based on a dollar standard. Although the dollar was exchangeable for gold, the Bretton Woods system was fundamentally different from the old gold standard. Firstly, it was an 'adjustable peg system'. In other words, it was possible to devalue a currency instead of being obliged to follow a deflationary monetary policy to restore competitiveness. Secondly, countries were allowed to use capital controls to avert volatile capital flows. Thirdly, a new international agency, the IMF, was created to monitor the system. The IMF could also extend credit to countries in trouble and had the right to sanction governments who did not play by the rules.

The new international monetary system agreed upon in Bretton Woods was supposed to become fully operational after five years, when all currencies would be fully convertible. In fact, fifteen years passed before all the major currencies became fully convertible in December 1958. European reconstruction after the Second World War required enormous resources. Countries had difficulties in exporting enough to earn the dollars they needed to pay for goods from the US. A lack of export revenue and a shortage of dollars made it hard for European countries to restore the convertibility of their currencies. A case in point was the British attempt to restore the gold convertibility of sterling in 1947; international reserves diminished so rapidly that after only six weeks the Bank of England was forced to re-suspend gold convertibility in August 1947.

When the US economy went into recession in 1948–49, European countries found it even harder to earn sufficient export revenue. To strengthen their competitiveness, they devalued their currencies by 30 per cent against the dollar in September 1949. The European Recovery and Relief Plan, also called the Marshall Plan, which was put into effect in 1947, helped to alleviate the dollar shortage. To administer this Plan, the Organization for European Economic Cooperation, OEEC, was founded and the European Payment Union, EPU, was set up under its auspices. The EPU was a clearing arrangement for facilitating trade between West European countries. The countries taking part agreed to work towards current account convertibility and also adopted a 'code of liberalization' which mandated the removal of restrictions on currency conversion for trade purposes. Under the EPU, trade restrictions were abolished more quickly among European countries than on imports from the

USA. European countries also used exchange controls to alleviate balance of payments problems; moreover, France resorted to a devaluation in 1957.

In December 1958 Western European countries restored the convertibility of their currencies, which signified that the Bretton Woods system was in full operation. The system lasted for another fifteen years. It soon became apparent that the main problem with the international monetary system had ceased to be insufficient dollar liquidity and was rather a 'dollar overhang'. In 1961, for the first time since the Second World War, other countries' combined reserves of gold and hard currencies exceeded the US gold and currency reserve. Although the USA still had a positive trade balance, its balance of payments had shown a deficit since 1958 as a result of investment and military expenditures abroad. The situation worsened in the 1960s as the US surplus on merchandise trade was gradually undermined by the increasing competitiveness of other industrial nations. The architects of the Bretton Woods system had not foreseen the rapid growth of world trade in the 1950s and '60s. The supply of gold grew much more slowly than world trade and it became increasingly clear that the gold reserves of the US would not suffice if countries with a trade surplus were to insist on exchanging their dollar reserves for gold at official parities. The French president de Gaulle pointed out that the international monetary system gave the US seigniorage privileges that were not available to other countries and on many occasions he threatened to exchange the French dollar reserves for gold. The lack of gold reserves also threatened to drive up the price of gold to well above the official parities. In 1961, eight countries among the Group of Ten created a Gold Pool in order to preserve the official price of gold at 35 dollars per ounce by means of market interventions. This worked until 1967, when sterling came under pressure. France left the Gold Pool in 1968 and was soon followed by Britain. From 1968 a two-tiered system emerged, where the free market price of gold rose high above the official price.

The crisis in the Bretton Woods system in the late 1960s was manifested in the realignment of exchange rates. The fixed rates that had been set in the 1950s were becoming increasingly outdated because countries differed in the development of productivity and hence of competitiveness. For example, West Germany ran persistent current-account surpluses, which indicated that the D-mark was undervalued, while the UK tended to have continual trade deficits, which suggested that sterling was overvalued. In November 1967 sterling was devalued by 15 per cent and two years later, in October 1969, the West German mark was revalued by 10 per cent. Two months earlier, France had devalued the franc by the same amount after a year of student protests and rampant labour unrest.

Critical observers, among them the Belgian monetary economist Robert Triffin, pointed out that the Bretton Woods system had a built-in contradiction. US deficits supplied the world economy with liquidity, since the dollar was the reserve currency, at the same time as growing US deficits undermined the dollar's stability. The US deficits represented a dilemma for countries, such as West Germany, that ran a cur-

rent-account surplus. A devaluation of the dollar would deprive them of some of their savings; if, however, they continued to accumulate dollar reserves they risked inflation since dollars could be exchanged for local currency at a fixed rate. The latter problem was exacerbated by the growing Eurodollar market, which increased liquidity in the banking system outside the control of central banks. To lessen the need for more dollar liquidity, countries in the IMF agreed to create additional credit facilities. The Group of Ten (the central banks in the ten leading countries), had already entered a 'General Agreement to Borrow' in 1962. As of 1970, moreover, countries could accumulate reserves in the form of Special Drawing Rights, which were allocated to countries in relation to their quotas in the IMF.³¹

The Special Drawing Rights and other credit facilities were clearly insufficient to replace the dollar as an international reserve currency. The built-in contradiction of the Bretton Woods system – that the international reserve currency was also a national currency whose stability was being undermined by mounting US deficits – remained. In the spring of 1971 dollars flowed to Western Europe in a steady stream. The Dutch and West German central banks permitted their currencies to float upwards. The US trade balance turned into a deficit in 1971; on August 13 that year the US President, Richard Nixon, announced that the US had suspended the dollar's convertibility into gold and imposed a 10 per cent surcharge on merchandise imports.

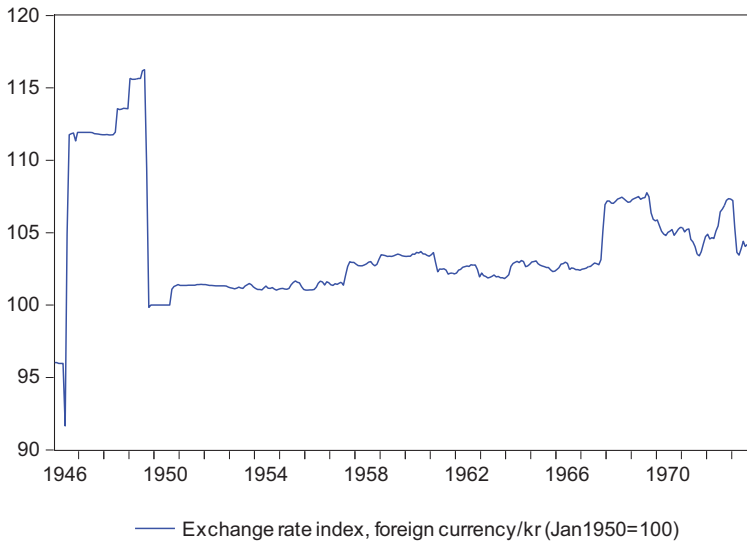
The suspension of gold convertibility removed a central pillar of the Bretton Woods system. In the following months, central banks discussed how the international monetary system could be reformed. At a meeting at the Smithsonian conference centre in New York in December 1971, participants from the Group of Ten countries signed the Smithsonian Agreement. The US 10 per cent import surcharge was rescinded and the dollar was devalued by 8 per cent, while the German, Swiss and Benelux currencies were revalued. Moreover, the band within which exchange rates were allowed to float without requiring central bank intervention was widened to $\pm 2\frac{1}{4}$ per cent. Despite Nixon's claim that the Smithsonian Agreement was 'the most significant monetary agreement in the history of the world', nothing really changed. The US dollar continued to be a weak currency. A second devaluation of the dollar, by 10 per cent, against major European currencies was negotiated in 1973 but this time West Germany and other European countries decided to let their currencies float. This put an end to the Bretton Woods fixed exchange rate system.³²

7.4.2. *Sweden and the Bretton Woods system*

In the aftermath of the Second World War, an important issue in Swedish economic policy was the prevention of inflation, which was increasing. To stem price increases for imported goods, which spilled over to the home market and fostered inflation,

31 Kenwood and Loughheed (1985, pp. 279–80).

32 Eichengreen (1996, pp. 128–34).

Figure 7.5: Exchange rate index, 1946–73 (January 1950=100)

Sources: See Appendix A7.2, Table A7.20.

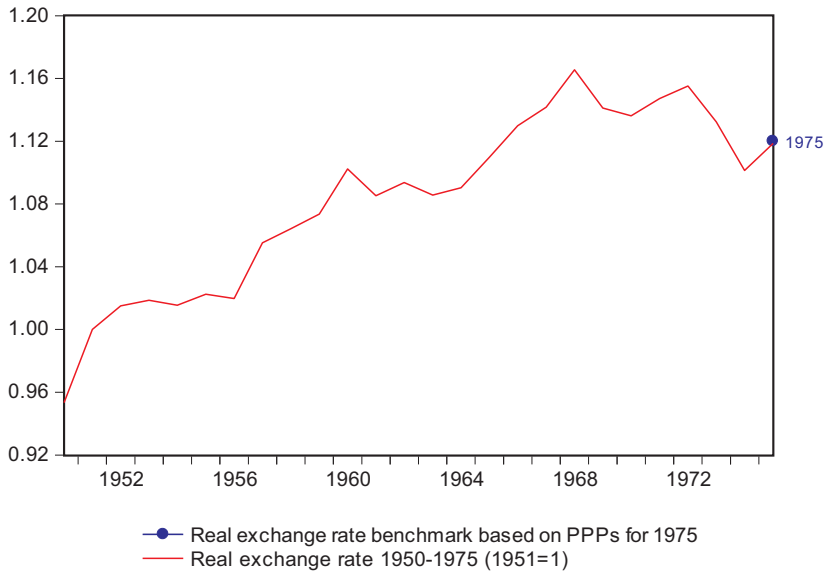
the krona was revalued by 14 per cent in 1946.³³ This had the drawback of weakening the competitive position of Swedish producers. When sterling was devalued by 30 per cent against the US dollar in September 1949, the krona followed suit along with many other European currencies.

Sweden did not at first participate in the Bretton Woods system since it was considered incompatible with Swedish neutrality in foreign policy. However, Sweden did join in August 1951; the immediate reason seems to have been that the GATT agreements, which Sweden had ratified, presupposed membership of the Bretton Woods institutions. The history of the Swedish exchange rate from adherence to the Bretton Woods system up to its demise in 1973 is intertwined with that of other West European countries. In the 1950s Sweden participated in the EPU and in 1958 the Swedish krona became fully convertible along with other European currencies. The Swedish exchange rate against the dollar was stable from 1949 to 1971. When, at the time of the Smithsonian agreement, the dollar depreciated by 10 per cent against the German mark and other strong currencies, such as the Japanese yen, it depreciated by only 6 per cent against the krona; in other words, Sweden's currency depreciated against the German mark and the Japanese yen.³⁴

Figure 7.5 gives an overview of the evolution of the Swedish exchange rate in the

33 The following account of Swedish exchange rate policy under the Bretton Woods system is primarily based on Wihlborg (1993). For Sweden and the Bretton Woods institutions, see also Ahlström and Carlsson (2006).

34 Wihlborg (1993)

Figure 7.6: Real exchange rate index 1950–75 (1951=1)

Sources: Exchange rates (Appendix A7.1); consumer price indices (Mitchell 2003b; Mitchell 2003a); purchasing power parities 1975 (Williamson 1995).

Note: The real exchange rate index is a trade-weighted average (1975 weights) of the real exchange rates of the krona against the currencies of Denmark, Norway, UK, USA, Germany and France.

period 1946–73, as measured by our trade-weighted exchange rate index. The revaluation in 1946 and the devaluation in 1949 are clearly visible.³⁵ The krona was then quite stable in the 1950s, with a tendency to appreciate slightly in 1957 and 1958 due to the devaluation of the French franc in these years. The increasing turbulence in international currency markets towards the end of the 1960s is also clearly visible in the graph. The krona appreciated in 1967 due to the devaluation of sterling in 1967 and then depreciated slightly in 1969 due to a revaluation of the West German mark in the autumn. The net result of the exchange rate realignment in late 1971 was a slight appreciation of the krona. Early in 1973, Sweden joined the European snake arrangement, after which the krona floated along with other European currencies.

Figure 7.6 shows the development of the krona's real exchange rates against six main trading partners 1950–75. A PPP benchmark from 1975 indicates that at that time the Swedish krona was overvalued by 12 per cent against a trade-weighted aver-

35 It has been argued (Wihlborg 1993, p. 205) that the 30 per cent devaluation in 1949 was of no great importance since it was done against the US dollar and the Swiss franc, both of which had relatively small weights in Swedish foreign trade. However, our trade-weighted exchange rate index fell by 14 per cent following the devaluation, a not insignificant amount.

age of six main trading partners.³⁶ In other words, for a Swedish citizen abroad, the krona's purchasing power was on average 12 per cent higher than at home. It was mainly in the 1960s that the krona appreciated in real terms when it revalued nominally against the pound at the same time as the rate of inflation in Sweden (and many other West European countries) was markedly higher than in Germany and the US. All this signifies that the krona appears to have been overvalued when the Bretton Woods system collapsed.

7.5. After Bretton Woods, 1973–2008

7.5.1. *Overview of the international monetary system after the break-up of the Bretton Woods system*

The demise of the Bretton Woods system was a watershed in the history of the international monetary system. The system was no longer anchored to a metallic currency. To safeguard price stability, central banks had to rely on monetary policy, which now could be pursued without regard for its effect on exchange rates.³⁷

Currencies now 'floated' against each other. In other words, exchange rates were determined by market forces, without central banks being obliged to intervene in order to stabilize them at some predetermined rate. In practice, however, governments and central banks did not completely disregard the evolution of exchange rates. In many respects, the post-Bretton Woods international monetary system can be characterized as a regime of 'managed floating'.

European central banks tried to limit fluctuations among European currencies that were involved in various forms of European monetary cooperation, while the US and Japan let their currencies float, initially without regard to their value. In the second half of the 1970s the US dollar depreciated against the Japanese yen and the German mark, and sterling weakened even more; this reflected the higher rates of inflation in the US and the UK. After a shift in economic policy doctrine around 1980, both the US and the UK gave priority to combating inflation. The central banks in both countries raised interest rates and their currencies appreciated. Foreign capital was attracted by high interest rates in the US, which led to an even larger appreciation of the dollar.³⁸ By 1985 many observers were worried that exchange rates were 'misaligned', i.e. they did not reflect economic fundamentals, which led to

36 As before, the real exchange rate index is calculated with respect to Denmark, Norway, Great Britain, Germany, France and the USA. Trade weights derive from 1975. Extrapolating backwards from a level of 1.12 for the real exchange rate in 1975 (according to a PPP benchmark from 1975), gives a value close to unity for 1951. We have therefore scaled the real exchange rate index to unity for this year.

37 The following overview of the international monetary system since 1973 is primarily based on Eichengreen (1996, Ch. 5) and Kenwood and Lougheed (1985, Ch. 16, 18)

38 Eichengreen (1996, pp. 146–47)

central bank agreements to rectify them by means of market interventions. When the G5 finance ministers and central bank governors met at the City Plaza Hotel in New York in September 1985, they agreed to press for 'an orderly appreciation of non-dollar currencies' in order to fend off rising protectionist sentiments in the US Congress caused by the dwindling competitiveness of US firms due to the high value of the dollar. After the Plaza accord, the US dollar depreciated rapidly and the Europeans and the Japanese raised concerns that the dollar depreciation had gone too far. At a G7 summit in Louvre in February 1987 it was agreed to stabilize exchange rates at the current levels.³⁹ These examples show that while the currencies of the major economic powers floated against each other in the 1980s, there were still attempts to realign exchange rates by means of policy coordination.

After the demise of the Bretton Woods system, European countries decided to continue with monetary cooperation in a regime of managed floating. If exchange rates were permitted to drift apart unduly, that could jeopardize the goals of a European economic union, for which a common currency was a central pillar. European monetary cooperation had started after the Smithsonian agreement in 1971, when countries were permitted to let their currencies fluctuate within a band of $\pm 2\frac{1}{4}$ per cent against the dollar. Theoretically this made it possible for the exchange rate gap between two European currencies to widen by nine percent, namely if one currency depreciated by $4\frac{1}{2}$ per cent against the dollar while another country appreciated by the same amount. To prevent such a drifting apart of exchange rates, European countries agreed that their exchange rates should not deviate by more than $\pm 2\frac{1}{4}$ per cent against each other, implying a maximum change of $4\frac{1}{2}$ per cent in the exchange rate between any two currencies. This arrangement was named 'the snake in the tunnel'. When the US dollar started to float freely and the tunnel broke up in 1973, European countries decided to continue their commitment to limit mutual exchange rate variations to $\pm 2\frac{1}{4}$ percent. The arrangement, now named just 'the snake', or 'the snake in the lake', since there was now no tunnel, meant that the European currencies taking part floated as a group against other currencies, such as the dollar and the yen. Apart from the original EEC countries, other European countries, among them Sweden, also participated in the arrangement. The snake countries established short-term credit facilities to member countries with weak currencies and set up a European Monetary Cooperation Fund, whose board was made up of representatives for the national central banks, to monitor monetary policies. However, varying rates of inflation and varying fiscal and monetary policies among the European countries made the snake arrangement difficult to uphold. There were occasional devaluations and revaluations of currencies and countries withdrew and re-joined the snake. For example, France withdrew in January 1974, re-entered in July 1975 and withdrew again in March 1976. The end result was that in the troubled macroeconomic environment of the late 1970s the European countries failed to keep fluctuations in their

39 Eichengreen (1996, pp. 149–50)

mutual exchange rates within the narrow band stipulated by the snake arrangement.⁴⁰

In 1979, European exchange rate collaboration was renewed through a French initiative by setting up the European Monetary System (EMS). The original six EEC countries and the new members Denmark and Ireland participated, while the UK stayed outside. As with the snake, it was agreed that participating countries should strive to keep mutual exchange rate variations within a band of $\pm 2\frac{1}{4}$ percent, though Italy was granted a wider band of ± 6 percent. None of the original participating countries left the EMS in the 1980s but exchange rates were frequently 'realigned', especially in the first half of that decade. Over the course of the 1980s the German mark appreciated against the Italian lira by more than 60 per cent, against the French franc and the Irish pound by more than 40 per cent, and against the Belgian/Luxembourg franc and the Danish krona by more than 30 per cent.⁴¹

7.5.2. The Swedish krona after the fall of the Bretton Woods system

Sweden joined the European snake arrangement in March 1973 and for the next two years the krona's exchange rate against the German mark was quite stable. From the mid-1970s Sweden was hard hit by structural crises in manufacturing and a loss of competitiveness due to rising unit labour costs. In October 1976, the Frankfurt realignment of European exchange rates entailed a devaluation of the krona by 3 per cent against the mark. Even so, in 1976 the Swedish exchange rate appreciated against a weighted average of Sweden's trading partners, due to the decline of the US dollar and sterling. In April 1977, the krona was devalued by 6 per cent against the snake currencies. Another devaluation, by 10 per cent, followed in August that year. At the same time, Sweden decided to withdraw from the European currency cooperation in the snake. From now on the Swedish krona was pegged to a basket of 14 currencies, each weighted for its share in Sweden's foreign trade, with a double weight for the US dollar. Further loss of competitiveness and concern over current-account deficits led to another 10 per cent devaluation against the currency basket in September 1981.⁴² While the devaluations in 1977 and 1981 might be considered defensive, in the sense that they were undertaken to 'rectify' an alleged overvaluation of the krona, manifesting itself in current-account deficits, the next devaluation, in October 1982, was presented as an 'offensive' measure. The new Social Democrat government motivated it as a means to strengthen the profitability and competitiveness of manufacturing and to kick-start the economy. The devaluation's obvious 'beggar thy neighbour' nature was criticized by the IMF and also raised concern among Sweden's Nordic neighbours.

In the course of the 1980s Sweden's unit labour costs rose faster than many of its

⁴⁰ Eichengreen (1996, pp. 152-59).

⁴¹ Eichengreen (1996, p. 164).

⁴² Wihlborg (1993, pp. 226-28).



Bengt Dennis, Governor of the Riksbank at the time of the EMS crisis in 1992.

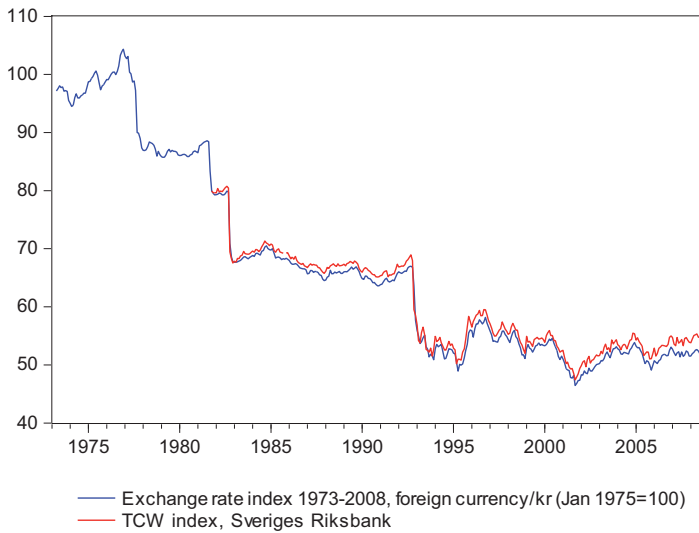
Source:<http://www.riksbank.se/templates/Page.aspx?id=4231>

competitors', which eroded the benefits that the Swedish manufacturing industry had obtained from the devaluation in 1982. The Swedish central bank, the Riksbank, declared that there would not be a devaluation this time round. Instead, the krona was tied to the European Currency Unit in May 1991. In the EMS crisis in 1992 the krona was one of the currencies that came under speculative attacks. The Riksbank tried in vain to defend the exchange rate by raising the marginal rate of interest to three digit levels and by purchases in the currency markets. According to the Bank of International Settlements, the Riksbank's reserve losses amounted to more than 10 per cent of Sweden's Gross National Product.⁴³ On 19 November the Riksbank had to abandon its defence of the krona. Sweden has had a floating exchange rate regime ever since.

The break-up of the Bretton Woods system inaugurated a long period of depreciation of the Swedish krona. This is clear from our exchange rate index for the period 1973–2008, Figure 7.7.⁴⁴ The krona drifted upwards in the first few years, mainly due to the depreciation of the US dollar and sterling. Thereafter it was taken down by a series of three devaluations in 1977–82, all of which are clearly visible in the graph. The end result was a depreciation of the krona by 30–35 per cent from the situation at the break-up of the Bretton Woods system.

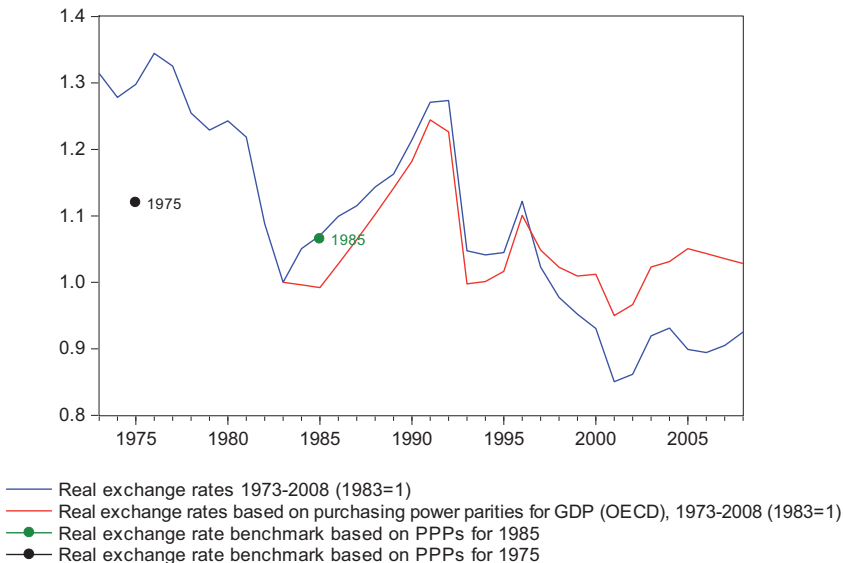
⁴³ Eichengreen (1996, p. 174).

⁴⁴ From October 1981 the Riksbank publishes an exchange rate index, the TCW index. It is based on fewer currencies and different (fixed) weights from our index. Nevertheless, as can be seen from Figure 7.7, its long-run evolution is similar to our index.

Figure 7.7: Exchange rate index, 1973–2008 (January 1975=100)

Sources: Exchange rate index see Appendix A.7.2, Table A7.20; TCW index, Sveriges Riksbank's website.

Note: The TCW index starts in October 1981, at which date it has been scaled to the same number as our exchange rate index.

Figure 7.8: Real exchange rate index 1973–2008 (1983=1)

Sources: Exchange rates (Appendix A7.1); consumer price indices, OECD web site; purchasing power parities 1975 (Williamson 1995); purchasing power parities 1985 (Maddison 1991); purchasing power parities for other years, OECD website.

Note: The real exchange rate index is a trade-weighted average (1985 weights) of the real exchange rates of the krona against the currencies of Denmark, Norway, UK, USA, Germany and France.

The devaluation in the autumn of 1982 was followed by a period of relative stability until the EMS crisis in 1992. When the Riksbank then abandoned the defence of the fixed exchange rate, initiating the current period of floating exchange rates, the krona fell by about 30 per cent, which meant that the value of the krona in the spring of 1993 was roughly half of what it had been when the Bretton Woods system collapsed 20 years earlier. The floating exchange rate system since 1992 has brought a sharp increase in the volatility of the exchange rate, hitherto without any clear trend.⁴⁵

The basic reason for the decline in the value of the Swedish krona was of course that the price level in Sweden rose faster than in its trading partners. The real exchange rate was more stable. From 1995 the OECD has computed Purchasing Power Parities (PPP) for all OECD countries for the years 1995, 1999, 2002 and 2005. Eurostat has constructed PPP data for European countries for the years 1995–98, 1999, 2002 and 2005.⁴⁶ Before 1995, PPPs supplied by the OECD and Eurostat are backcasted by means of the implicit GDP price deflator for each country. PPP benchmarks from 1995 onwards make it possible to compute real exchange rates directly, based on relative prices for a given basket of commodities, as shown in Figure 7.8. The krona's real exchange rate against a weighted average of six main trading partners⁴⁷ is more or less stable from 1993 to 2008 when computed directly from PPPs and nominal exchange rates. A real exchange index constructed instead from the consumer price indices of the various countries and nominal exchange rates shows a marked depreciation after 1993. The main difference between the two indices is the period 1995–2000, when the information obtained from consumer price indices deviates from the implicit price evolution mirrored by PPPs.⁴⁸ As always, it is difficult to fix a point in time when the krona can be said to have been 'fairly' valued. From the OECD and Eurostat PPP data from 1985 it would appear that the krona was approximately 'fairly' valued⁴⁹ in 1983 after the 1982 devaluation.⁵⁰ We have

45 At the time of writing in February 2009, it remains to be seen whether the current sharp fall in the krona, initiated towards the end of 2008 and ongoing in the first two months of 2009, will be permanent, or whether the krona will bounce back.

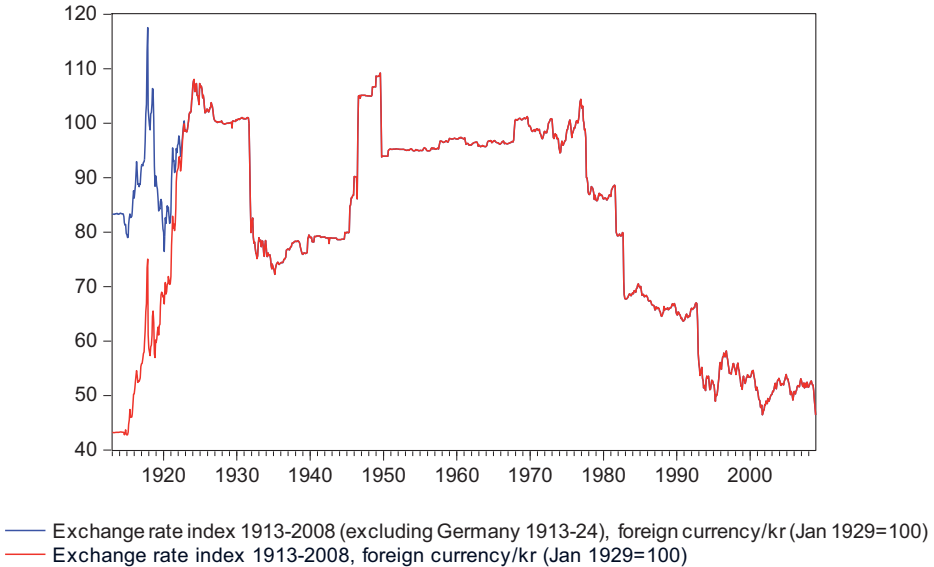
46 PPP data can be downloaded from the OECD's website.

47 The real exchange rate index is calculated with respect to the same six countries as before: USA, UK, Germany, France, Denmark and Norway.

48 No matter how we calculate, the krona seems to be wildly undervalued at the time of writing in February 2009.

49 That the krona was 'fairly valued' in 1983 is based on a real exchange rate of 1.06 in 1985 (calculated from PPP data) for Sweden against a trade-weighted average of six countries (Maddison 1991, p. 197).

50 In 1982, though, the common opinion among observers seems to have been that the krona was undervalued after the devaluation, as measured for example by unit labour costs (Nordin 1991), see also Wihlborg (1991), while it was 'fairly' valued just before the 1982 devaluation. Also, the real exchange rate backcasted by means of price index data from a level of unity in 1983 leads to a much higher overvaluation of the real exchange rate in the mid-1970s than is shown by, for example, the 1975 PPP benchmark, see Figure 7.8. This example illustrates the problems involved in extrapolating by means of price index numbers between benchmark levels.

Figure 7.9: Exchange rate index 1913–2008 (January 1929=100)

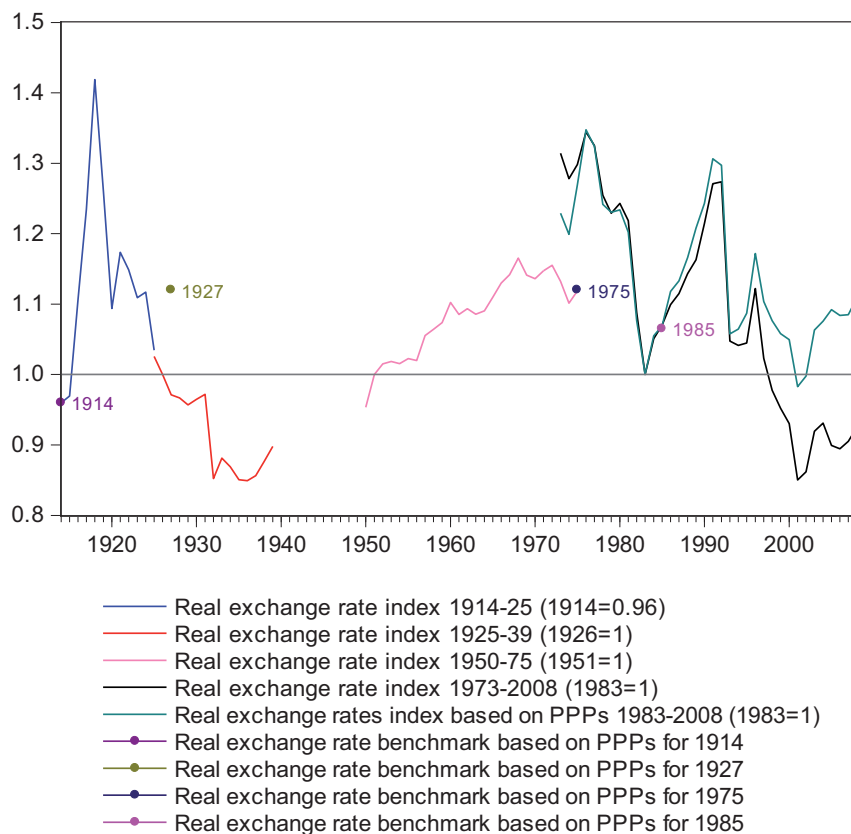
Sources: See Appendices A7.1 and A7.2.

therefore set the real exchange rate index to unity in 1983. From this perspective, the krona was clearly overvalued at the onset of the EMS crisis in 1992. After the depreciation in 1992–93 it became ‘fairly’ valued again. Its subsequent evolution is, as we have pointed out, dependent on which measure we adopt for the real exchange rate.⁵¹

7.6. A bird’s-eye view of the krona’s exchange rate, 1913–2008

The history of the Swedish exchange rate since the First World War can be summed up by noting that there were two periods when the value of the krona changed markedly. One was from 1915 to early 1924, when the krona appreciated. The other was 1977–93, when the krona depreciated in several steps. Between 1924 and 1977 there was no long-run change in the value of the krona, even though the depreciation in the 1930s and the appreciation in the aftermath of the Second World War were sig-

51 There is also a large difference in 1973–83 between the real exchange rate calculated from consumer price indices or from PPP data from the OECD. This is strange since the OECD data are supposedly backcasted by means of price indices, namely GDP deflators. The difference would be approximately the same with PPPs based on private consumption backcasted by means of consumer price indices.

Figure 7.10: Real exchange rate indices, 1914–2088

Sources: See Figures 7.2, 7.4, 7.6 and 7.8.

Note: The real exchange rate index is a trade-weighted average of the real exchange rates of the krona against the currencies of Denmark, Norway, UK, USA, Germany and France, except for 1913–23 when Germany is excluded from the index.

nificant episodes in the history of the Swedish exchange rate. As can be seen from Figure 7.9, showing the long-run evolution of the krona's exchange rate against a trade-weighted average of Sweden's trading partners, the depreciation of Sweden's krona in 1977–92 has brought its value back to much the same level as before the First World War. However, this picture is heavily dependent on the sharp depreciation of the German currency in the period 1913–23. If Germany is excluded from the index for those years, the krona's appreciation during and after the First World War is less pronounced. In this case, since 1913 the krona has depreciated by roughly 40 per cent against a weighted average of trading partners.

The evolution of the Swedish krona's exchange rate must be put in perspective by relating it to regime shifts in the international monetary system. In the periods of fixed exchange rates, i.e. the interwar gold standard and the Bretton Woods system 1951–73, the krona's nominal exchange rate shows only minor fluctuations. For Sweden this was also the case in the periods 1931–51 and 1973–92, when the Riksbank had a target for the exchange rate by pegging the krona to other currencies: sterling in the 1930s and a basket of currencies in the 1970s and 1980s. The major exchange rate realignments that did take place in the period 1931–92 were a result of discretionary decisions by the Riksbank, in other words devaluations or revaluations. In the periods of free floating, i.e. 1915–24 and since 1992/93, the fluctuations were also larger than in other periods. Both periods also signify major changes in the value of the krona; appreciation during the First World War and depreciation after 1992/93. During and after the Second World War there was no functional international monetary system and the krona's exchange rate was pegged to major currencies, such as sterling and the US dollar.

Whether the exchange rate was adjusted by the Riksbank's discretionary decisions or by the interplay of market forces during a period of floating exchange rates, its long-run evolution was connected to the buying power of the krona. Figure 7.10 shows a trade-weighted average of the real exchange rate against six other currencies⁵² for various sub-periods. The real exchange rate has been set to unity in a year in which the nominal exchange rate seems to have been close to 'fair value', based on information from PPP data. A value larger than unity indicates overvaluation of the krona, while a value below unity indicates undervaluation. Given that PPP benchmarks are error-prone, as are the price indices used to backcast or forecast from PPP levels, the exact magnitude of the measured real exchange rate should obviously be taken with a pinch of salt. We can be more certain about long-run trends. A first conclusion is that there is no long-run trend in the evolution of the real exchange rate. Real exchange rates can drift in one direction for as long as two decades. Because of the rather long periods during which exchange rates can deviate from what would be predicted from varying inflation rates, many economists have concluded that the purchasing power parity doctrine is of limited value for the determination of exchange rates in the short or medium term. However, as illustrated by Swedish data, over the very long run, real exchange rates do sooner or later mean-revert.

Secondly, there are clearly periods of real appreciation or depreciation, in which a previous period of overshooting/undershooting in the value of the krona is corrected. The appreciation of the krona during the First World War was also a real appreciation. The krona subsequently depreciated in real terms but this should be seen against the background of its high overvaluation in the early 1920s. The devaluation in 1931 also led to a depreciation in real terms, which strengthened the competitiveness of Swedish producers. The krona was probably undervalued in the 1930s, following the 1931 devaluation. During the Bretton Woods period the krona appreciated in real terms against our group of six major trading partners. The devaluations in 1977–81

⁵² Denmark, Norway, USA, UK, Germany, France. As mentioned, Germany is excluded from the index for the period 1914–24.

addressed a problem of overvaluation of the krona and strengthened the competitiveness of Swedish industry. The same can be said for the depreciation of the krona in 1992/93. Thereafter the krona has depreciated in real terms. Most economists agree that in terms of 'fundamentals' the krona is undervalued today (at the time of writing in February 2009). The depreciation of the krona since the autumn of 2008 is a vivid illustration of the extent to which prices of financial assets are governed by expectations of the future.

Appendix A7.1: Monthly exchange rates 1913–2008

A7.1.1 Sources

The exchange rates are the currency prices quoted in Stockholm, i.e. the sum in Swedish kronor (SEK) that was equivalent to a given unit of a foreign currency.

In collecting monthly exchange rate data, the following sources have been used:

For the period 1913–19 the monthly exchange rates for sterling, the German reichsmark, the French franc and, from 1915, the US dollar derive from information in *Sveriges riksbank årsbok* (Yearbook of the Swedish Central Bank). All other exchange rates for this period derive from information on monthly exchange rates collected in the archives of Sveriges Riksbank (Sweden's central bank). For the period 1920–79 the exchange rate data derive from *Sveriges riksbank årsbok*, from 1978 *Sveriges riksbank statistisk årsbok* (Statistical Yearbook of the Swedish Central Bank). In this source we lack data on the exchange rate between the Swedish krona and the Japanese yen before 1977. For the period 1960–77 the monthly exchange rates between the Japanese yen and the Swedish krona have been calculated from monthly exchange rates between the Norwegian krona and the Japanese yen and between the Norwegian krona and the Swedish krona as reported on the Norwegian Central Bank's website of exchange rates: <http://www.norges-bank.no/english/statistics/exchange/>.

For the period 1980–99 the exchange rate data derive from information collected in the archives of *Sveriges riksbank* (Sweden's central bank) except for the Swiss franc and the Icelandic krona in 1980, where the data derive from *Sveriges riksbank statistisk årsbok*. For the period from 2000 onwards the exchange rate data derive from the website of *Sveriges riksbank* (Sweden's central bank): <http://www.riksbank.se/templates/stat.aspx?id=15882>.

Table A7.1. Monthly exchange rates on UK. SEK per GBP 1913–2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	18.26	18.26	18.26	18.26	18.25	18.23	18.25	18.23	18.20	18.24	18.26	18.23
1914	18.22	18.18	18.19	18.21	18.24	18.22	18.26	18.37	18.67	18.77	18.48	19.20
1915	19.26	19.41	19.40	18.70	18.38	18.13	18.33	18.24	18.11	17.87	17.25	16.94
1916	17.27	17.02	16.69	16.09	15.69	16.14	16.71	16.71	16.88	16.78	16.82	16.41
1917	16.16	16.14	16.05	15.87	15.88	15.76	15.14	14.34	14.04	12.68	11.99	13.93
1918	14.23	14.50	14.61	14.07	14.01	13.78	13.40	13.44	14.28	16.07	16.89	16.46
1919	16.58	16.94	17.04	17.38	18.08	17.95	17.86	17.38	17.10	17.27	17.85	17.87
1920	17.84	18.23	18.31	18.01	18.21	18.13	17.74	17.63	17.44	17.68	18.02	17.88
1921	17.57	17.45	17.23	16.73	16.96	16.89	17.27	17.30	17.12	16.85	17.11	16.95
1922	16.93	16.70	16.75	16.97	17.30	17.25	17.14	16.95	16.77	16.66	16.70	17.09
1923	17.34	17.65	17.64	17.48	17.37	17.38	17.28	17.15	17.11	17.14	16.68	16.57
1924	16.28	16.39	16.33	16.40	16.40	16.27	16.43	16.91	16.78	16.87	17.19	17.41
1925	17.75	17.68	17.73	17.81	18.15	18.16	18.11	18.08	18.08	18.08	18.12	18.11

Table A7.1 (cont.). *Monthly exchange rates on UK. SEK per GBP 1913–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1926	18.14	18.16	18.13	18.16	18.17	18.16	18.16	18.16	18.16	18.15	18.17	18.15
1927	18.18	18.18	18.15	18.14	18.16	18.12	18.13	18.12	18.10	18.09	18.10	18.09
1928	18.14	18.16	18.18	18.19	18.19	18.19	18.15	18.14	18.13	18.14	18.15	18.13
1929	18.14	18.16	18.17	18.16	18.15	18.12	18.10	18.10	18.10	18.14	18.15	18.09
1930	18.14	18.13	18.11	18.10	18.11	18.10	18.10	18.12	18.10	18.10	18.10	18.10
1931	18.14	18.15	18.14	18.15	18.14	18.15	18.15	18.16	17.63	16.94	17.93	18.03
1932	17.91	17.95	18.32	19.66	19.64	19.52	19.52	19.48	19.50	19.35	18.80	18.31
1933	18.38	18.78	18.92	19.08	19.45	19.46	19.41	19.40	19.40	19.40	19.40	19.40
1934	19.40	19.40	19.40	19.40	19.41	19.41	19.40	19.40	19.40	19.40	19.40	19.40
1935	19.40	19.41	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40
1936	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.40
1937	19.40	19.40	19.40	19.41	19.40	19.40	19.40	19.40	19.40	19.40	19.40	19.41
1938	19.41	19.41	19.42	19.41	19.40	19.40	19.40	19.40	19.40	19.42	19.42	19.43
1939	19.43	19.42	19.42	19.41	19.42	19.43	19.42	19.29	16.99	16.95	16.60	16.70
1940	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95
1941	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95
1942	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95
1943	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95
1944	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95
1945	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95	16.95
1946	16.96	16.95	16.95	16.95	16.94	16.92	15.47	14.50	14.50	14.50	14.50	14.50
1947	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
1948	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
1949	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
1950	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
1951	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50
1952	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.50	14.52	14.56
1953	14.59	14.59	14.60	14.60	14.54	14.52	14.51	14.47	14.46	14.44	14.47	14.50
1954	14.51	14.53	14.55	14.57	14.54	14.52	14.53	14.52	14.51	14.54	14.56	14.54
1955	14.52	14.53	14.55	14.56	14.53	14.47	14.43	14.40	14.42	14.44	14.50	14.53
1956	14.54	14.54	14.54	14.55	14.55	14.50	14.43	14.41	14.43	14.47	14.42	14.45
1957	14.49	14.52	14.49	14.51	14.49	14.46	14.47	14.44	14.47	14.49	14.51	14.50
1958	14.51	14.53	14.54	14.53	14.50	14.48	14.44	14.44	14.47	14.50	14.49	14.50
1959	14.53	14.54	14.57	14.58	14.57	14.57	14.56	14.55	14.52	14.53	14.53	14.51
1960	14.52	14.53	14.54	14.52	14.52	14.48	14.51	14.50	14.53	14.53	14.55	14.54
1961	14.51	14.49	14.47	14.47	14.43	14.42	14.40	14.48	14.56	14.56	14.57	14.54
1962	14.54	14.53	14.51	14.50	14.49	14.46	14.46	14.45	14.45	14.45	14.49	14.56
1963	14.54	14.60	14.55	14.56	14.54	14.53	14.53	14.55	14.53	14.54	14.54	14.54
1964	14.53	14.51	14.43	14.40	14.40	14.37	14.37	14.33	14.33	14.37	14.37	14.37
1965	14.35	14.37	14.36	14.40	14.43	14.43	14.43	14.44	14.47	14.51	14.52	14.51
1966	14.51	14.50	14.43	14.43	14.41	14.41	14.42	14.42	14.43	14.45	14.45	14.45
1967	14.45	14.45	14.45	14.45	14.43	14.39	14.38	14.38	14.38	14.40	13.47	12.48
1968	12.44	12.46	12.41	12.43	12.36	12.34	12.36	12.35	12.34	12.37	12.36	12.35
1969	12.36	12.39	12.39	12.38	12.36	12.38	12.37	12.35	12.35	12.36	12.40	12.40
1970	12.42	12.48	12.53	12.53	12.51	12.46	12.42	12.39	12.41	12.40	12.39	12.38
1971	12.44	12.51	12.50	12.50	12.51	12.51	12.51	12.51	12.54	12.52	12.45	12.38

Table A7.1 (cont.). *Monthly exchange rates on UK. SEK per GBP 1913–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1972	12.41	12.49	12.52	12.51	12.44	12.00	11.53	11.60	11.55	11.31	11.19	11.16
1973	11.20	11.12	11.11	11.21	11.25	10.86	10.31	10.32	10.21	10.17	10.41	10.57
1974	10.69	10.74	10.72	10.55	10.31	10.50	10.45	10.41	10.41	10.31	10.10	9.80
1975	9.57	9.55	9.51	9.44	9.15	8.97	9.02	9.14	9.28	9.06	9.02	8.93
1976	8.90	8.88	8.59	8.16	8.01	7.88	8.00	7.88	7.55	7.00	6.92	6.99
1977	7.23	7.28	7.25	7.48	7.50	7.61	7.51	7.77	8.48	8.51	8.74	8.83
1978	9.05	9.03	8.82	8.53	8.48	8.48	8.62	8.64	8.67	8.63	8.59	8.72
1979	8.73	8.77	8.91	9.11	9.06	9.18	9.55	9.46	9.24	9.05	9.02	9.20
1980	9.40	9.57	9.60	9.69	9.72	9.76	9.80	9.91	10.00	10.14	10.33	10.34
1981	10.70	10.59	10.30	10.24	10.24	10.01	9.74	9.67	9.86	10.23	10.44	10.59
1982	10.61	10.66	10.56	10.49	10.49	10.59	10.62	10.62	10.68	12.16	12.27	11.92
1983	11.55	11.41	11.17	11.55	11.82	11.86	11.76	11.82	11.82	11.67	11.71	11.57
1984	11.54	11.53	11.29	11.16	11.24	11.17	10.98	10.99	10.82	10.61	10.67	10.55
1985	10.25	10.22	10.56	11.16	11.23	11.35	11.70	11.53	11.47	11.33	11.25	11.15
1986	10.85	10.57	10.62	10.85	10.88	10.88	10.68	10.31	10.19	9.84	9.93	9.93
1987	9.97	9.94	10.22	10.30	10.45	10.35	10.38	10.37	10.50	10.56	10.79	10.88
1988	10.77	10.65	10.89	10.05	11.05	10.87	10.82	11.01	10.85	10.90	11.02	11.12
1989	11.13	11.09	10.96	10.84	10.71	10.40	10.50	10.45	10.39	10.25	10.12	10.05
1990	10.18	10.41	10.03	10.02	10.17	10.42	10.76	10.99	10.86	10.99	10.94	10.85
1991	10.91	10.89	10.78	10.72	10.63	10.61	10.66	10.66	10.65	10.61	10.55	10.45
1992	10.40	10.44	10.39	10.47	10.58	10.53	10.37	10.26	9.93	9.26	9.51	10.68
1993	11.12	10.84	11.29	11.36	11.50	11.22	11.90	12.01	12.22	12.05	12.24	12.46
1994	12.16	11.80	11.80	11.68	11.61	11.90	11.99	11.94	11.78	11.66	11.69	11.72
1995	11.76	11.62	11.63	11.82	11.58	11.58	11.45	11.34	11.13	10.79	10.32	10.20
1996	10.28	10.57	10.28	10.19	10.30	10.31	10.32	10.26	10.35	10.45	11.01	11.33
1997	11.72	12.02	12.29	12.51	12.53	12.73	13.05	12.82	12.32	12.36	12.76	12.94
1998	13.10	13.24	13.23	13.08	12.59	13.03	13.13	13.27	13.29	13.29	13.28	13.45
1999	12.92	12.94	13.31	13.41	13.63	13.59	13.31	13.26	13.34	13.50	13.54	13.69
2000	13.89	13.85	13.74	13.81	13.71	13.20	13.48	13.81	13.84	14.47	14.37	14.12
2001	14.01	14.16	14.50	14.63	14.74	15.09	15.21	14.85	15.52	15.34	15.23	15.20
2002	14.96	15.02	14.71	14.87	14.68	14.16	14.52	14.55	14.54	14.45	14.25	14.18
2003	13.96	13.68	13.50	13.28	12.85	12.96	13.13	13.21	13.01	12.91	12.98	12.85
2004	13.20	13.56	13.75	13.79	13.58	13.77	13.80	13.73	13.35	13.11	12.89	12.94
2005	12.96	13.17	13.12	13.42	13.44	13.85	13.71	13.63	13.78	13.83	14.08	13.90
2006	13.58	13.67	13.64	13.44	13.67	13.45	13.39	13.60	13.74	13.75	13.51	13.43
2007	13.69	13.75	13.67	13.61	13.51	13.82	13.62	13.75	13.49	13.18	13.11	13.10
2008	12.63	12.48	12.14	11.77	11.76	11.84	11.93	11.85	11.97	12.51	12.20	11.96

Table A7.2 (cont.). *Monthly exchange rates on USA. SEK per USD 1913–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1959	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.18	5.19
1960	5.19	5.19	5.18	5.17	5.18	5.17	5.17	5.16	5.17	5.17	5.17	5.18
1961	5.18	5.18	5.17	5.17	5.17	5.17	5.17	5.17	5.18	5.18	5.18	5.18
1962	5.18	5.16	5.16	5.15	5.15	5.15	5.15	5.15	5.16	5.16	5.18	5.20
1963	5.19	5.19	5.20	5.20	5.20	5.19	5.19	5.20	5.20	5.20	5.20	5.20
1964	5.20	5.19	5.16	5.15	5.15	5.14	5.15	5.15	5.15	5.17	5.16	5.15
1965	5.15	5.14	5.14	5.15	5.16	5.17	5.17	5.18	5.17	5.15	5.18	5.18
1966	5.18	5.18	5.16	5.17	5.16	5.17	5.17	5.17	5.18	5.18	5.18	5.18
1967	5.18	5.17	5.17	5.16	5.16	5.16	5.16	5.16	5.17	5.17	5.18	5.17
1968	5.17	5.17	5.18	5.18	5.17	5.17	5.17	5.17	5.17	5.18	5.18	5.18
1969	5.18	5.18	5.17	5.17	5.18	5.18	5.17	5.17	5.18	5.17	5.17	5.17
1970	5.17	5.19	5.20	5.21	5.21	5.20	5.19	5.19	5.21	5.19	5.18	5.18
1971	5.17	5.18	5.17	5.17	5.17	5.17	5.17	5.12	5.07	5.03	4.99	4.91
1972	4.84	4.80	4.78	4.79	4.76	4.75	4.74	4.74	4.74	4.75	4.75	4.75
1973	4.73	4.59	4.49	4.51	4.44	4.22	4.08	4.15	4.22	4.19	4.34	4.54
1974	4.76	4.71	4.55	4.39	4.29	4.40	4.38	4.44	4.49	4.41	4.34	4.20
1975	4.05	3.99	3.93	3.99	3.95	3.93	4.13	4.33	4.45	4.41	4.40	4.42
1976	4.39	4.38	4.41	4.41	4.42	4.46	4.48	4.42	4.36	4.26	4.22	4.17
1977	4.22	4.26	4.22	4.35	4.36	4.42	4.36	4.46	4.86	4.80	4.80	4.76
1978	4.67	4.65	4.61	4.61	4.66	4.62	4.55	4.45	4.43	4.30	4.38	4.39
1979	4.35	4.37	4.37	4.40	4.40	4.35	4.23	4.23	4.20	4.21	4.23	4.19
1980	4.15	4.18	4.35	4.37	4.22	4.18	4.13	4.18	4.16	4.20	4.31	4.42
1981	4.45	4.62	4.62	4.69	4.90	5.06	5.19	5.31	5.43	5.55	5.49	5.55
1982	5.63	5.77	5.84	5.92	5.78	6.02	6.12	6.14	6.23	7.16	7.51	7.36
1983	7.33	7.44	7.48	7.49	7.50	7.64	7.69	7.87	7.88	7.79	7.92	8.06
1984	8.18	8.02	7.74	7.84	8.09	8.11	8.31	8.36	8.58	8.69	8.58	8.85
1985	9.07	9.32	9.43	8.97	9.01	8.86	8.50	8.31	8.40	7.96	7.81	7.69
1986	7.60	7.41	7.24	7.25	7.16	7.22	7.07	6.94	6.92	6.89	6.97	6.92
1987	6.61	6.51	6.42	6.32	6.25	6.35	6.44	6.49	6.38	6.36	6.08	5.96
1988	5.98	6.06	5.96	5.89	5.91	6.09	6.34	6.48	6.45	6.28	6.09	6.08
1989	6.26	6.32	6.38	6.37	6.60	6.69	6.48	6.55	6.61	6.46	6.43	6.23
1990	6.19	6.12	6.17	6.13	6.06	6.10	5.96	5.78	5.77	5.65	5.57	5.62
1991	5.65	5.54	5.89	6.13	6.15	6.43	6.48	6.34	6.18	6.16	5.94	5.75
1992	5.74	5.87	6.03	5.96	5.84	5.69	5.40	5.29	5.37	5.58	6.22	6.88
1993	7.25	7.53	7.74	7.44	7.33	7.41	7.96	8.05	8.02	8.01	8.26	8.36
1994	8.14	7.98	7.91	7.88	7.72	7.81	7.76	7.74	7.54	7.26	7.35	7.52
1995	7.47	7.39	7.27	7.34	7.29	7.26	7.18	7.23	7.14	6.84	6.60	6.63
1996	6.72	6.88	6.73	6.72	6.80	6.68	6.64	6.62	6.64	6.60	6.62	6.81
1997	7.06	7.40	7.65	7.68	7.67	7.74	7.81	8.00	7.70	7.57	7.56	7.78
1998	8.00	8.08	7.97	7.82	7.69	7.91	7.99	8.13	7.91	7.85	7.99	8.05
1999	7.82	7.95	8.22	8.32	8.44	8.51	8.46	8.26	8.22	8.15	8.34	8.48
2000	8.47	8.65	8.69	8.72	9.09	8.74	8.93	9.27	9.66	9.96	10.08	9.66
2001	9.47	9.74	10.03	10.20	10.33	10.78	10.77	10.33	10.61	10.56	10.60	10.56
2002	10.44	10.56	10.34	10.31	10.05	9.56	9.34	9.46	9.35	9.28	9.07	8.95
2003	8.64	8.49	8.53	8.44	7.92	7.81	8.08	8.28	8.09	7.70	7.68	7.36
2004	7.25	7.26	7.52	7.65	7.61	7.53	7.49	7.54	7.45	7.26	6.94	6.70

Table A7.2 (cont.). *Monthly exchange rates on USA. SEK per USD 1913–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2005	6.90	6.98	6.88	7.08	7.25	7.61	7.83	7.60	7.62	7.84	8.11	7.95
2006	7.70	7.82	7.82	7.61	7.31	7.29	7.26	7.19	7.28	7.34	7.07	6.84
2007	6.98	7.02	7.02	6.84	6.81	6.96	6.70	6.85	6.69	6.45	6.33	6.47
2008	6.42	6.35	6.06	5.95	5.99	6.03	6.00	6.27	6.65	7.41	7.96	8.00

Table A7.3a. *Monthly exchange rates on Germany. SEK per 100 mark 1913–1921, SEK per 1 million mark January 1922 to September 1923, and SEK per 1 trillion mark October 1923 to December 1924.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	89.07	89.15	89.32	89.17	89.15	89.19	89.14	89.13	89.10	89.10	89.03	88.92
1914	88.90	88.90	88.97	88.95	88.99	89.03	89.01	89.20	89.24	87.72	84.93	87.21
1915	87.44	85.93	83.41	80.36	78.97	77.69	78.58	78.61	79.29	78.34	74.66	69.36
1916	67.71	65.70	62.51	61.79	61.77	62.52	63.49	62.71	62.40	61.82	60.87	56.76
1917	57.00	56.86	54.16	52.08	51.41	47.32	45.39	42.58	41.17	37.06	37.72	53.56
1918	58.38	58.86	59.94	58.46	57.87	54.80	48.97	46.65	46.00	51.59	48.63	42.24
1919	42.91	39.48	35.42	30.70	30.99	27.39	26.69	21.29	17.34	15.52	11.47	9.98
1920	8.40	5.67	6.23	7.92	10.49	12.09	11.71	10.34	8.75	7.61	7.00	7.13
1921	7.40	7.47	7.12	6.79	6.99	6.58	6.25	5.70	4.55	3.09	1.75	2.21
1922	21388	18654	14012	13518	13643	12771	8231	3963	2746	1396	2368	523
1923	294.62	154.58	185.40	165.21	91.00	40.60	15.77	2.90	0.0500	1275	1.500	0.996
1924	0.943	0.888	0.873	0.898	0.898	0.905	0.900	0.896	0.898	0.898	0.889	0.884

* October 11, 1924: 1 Reichsmark = 1,000,000,000,000 Papiermark.

Table A7.3b. *Monthly exchange rates on Germany. SEK per 100 reichsmark 1924–1945.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1924											88.90	88.41
1925	88.40	88.39	88.40	88.16	89.03	88.98	88.75	88.71	88.94	89.04	89.12	89.01
1926	89.01	88.99	88.89	88.98	89.03	88.90	88.97	89.02	89.11	89.11	89.05	89.09
1927	88.91	88.86	88.71	88.56	88.64	88.52	88.72	88.74	88.62	88.69	88.71	88.57
1928	88.71	88.96	89.11	89.14	89.21	89.13	89.16	89.11	89.12	89.13	89.18	89.09
1929	88.95	88.84	88.86	88.81	93.35	89.13	88.96	88.94	88.95	89.03	89.07	88.85
1930	89.01	89.04	88.89	88.85	88.98	88.88	88.83	88.88	88.69	88.71	88.86	88.92
1931	88.87	88.83	88.92	88.97	88.82	88.61	88.52	88.87	91.09	102.22	115.17	127.79
1932	124.21	124.11	121.41	125.65	128.42	127.97	131.24	134.20	134.44	137.09	137.30	134.07
1933	130.75	133.70	131.90	130.77	136.04	135.89	139.39	141.56	148.04	148.41	145.19	142.30
1934	145.54	150.93	151.92	149.60	150.68	148.53	148.22	151.61	156.79	159.48	156.84	158.18
1935	159.53	160.10	162.35	162.34	160.48	159.61	158.41	158.23	158.81	159.59	159.09	158.79
1936	158.65	158.54	158.32	158.32	157.81	156.23	156.29	155.72	155.08	159.71	160.36	159.80
1937	159.53	160.00	160.33	159.39	158.35	158.10	157.60	157.31	157.65	157.79	157.35	157.11
1938	156.94	157.01	157.30	157.25	157.46	158.10	158.71	159.89	161.99	163.74	165.83	167.42

Table A7.3b (cont.). *Monthly exchange rates on Germany. SEK per 100 reichsmark 1924–1945.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1939	167.59	166.99	166.82	166.89	167.16	167.00	167.00	167.03	168.50	168.68	169.00	169.00
1940	169.00	169.00	169.00	169.00	168.65	168.50	168.50	168.50	168.50	168.50	168.50	168.50
1941	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50
1942	168.50	168.50	168.50	168.50	168.50	168.50	168.60	168.50	168.50	168.50	168.50	168.50
1943	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50
1944	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50	168.50
1945	168.50	168.50	168.50	168.50	168.50							

* 21 June 1948: 1 DEM = 1 reichsmark for essential currency such as wages, payment of rents, etc, and 1 DEM = 10 reichsmark for the remainder in private non-bank credit balance.

Table A7.3c. *Monthly exchange rates on Germany. SEK per 100 DEM 1950–2002.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1950									123.30	123.30	123.30	123.30
1951	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30
1952	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30	123.30
1953	123.30	123.30	123.30	123.30	123.68	124.08	124.10	123.83	123.78	123.63	123.73	124.03
1954	124.18	124.20	124.20	124.15	123.85	123.53	123.93	124.03	123.75	123.88	123.83	123.75
1955	123.70	123.53	123.48	123.65	123.75	123.63	123.48	123.25	123.33	123.35	123.68	123.95
1956	124.05	124.10	124.15	124.13	124.10	124.10	123.75	123.48	123.48	123.75	123.50	123.53
1957	123.65	123.60	123.48	123.53	123.43	123.55	123.95	123.80	123.78	123.40	123.33	123.35
1958	123.43	123.70	123.73	123.88	123.93	123.90	123.80	123.63	123.83	124.10	123.98	124.00
1959	124.03	123.98	123.90	123.88	123.93	124.03	123.90	123.83	123.85	124.03	124.30	124.40
1960	124.43	124.35	124.35	124.05	124.13	124.03	123.98	123.83	123.95	123.95	124.00	124.15
1961	124.10	124.05	127.33	130.35	130.18	130.18	130.00	129.55	129.68	129.50	129.33	129.58
1962	129.55	129.20	129.10	128.98	128.98	129.05	129.28	129.00	129.00	128.85	129.13	130.00
1963	129.48	129.70	130.08	130.28	130.43	130.53	130.30	130.48	130.58	130.73	130.80	130.88
1964	130.68	130.63	129.85	129.53	129.45	129.48	129.63	129.48	129.58	130.05	129.88	129.71
1965	129.40	129.35	129.38	129.60	129.48	129.40	129.28	129.08	129.00	129.35	129.55	129.50
1966	129.15	128.98	128.78	128.70	128.50	129.03	129.60	129.70	129.83	130.10	130.30	130.43
1967	130.25	130.28	130.18	129.95	129.88	129.60	129.08	129.05	129.15	129.33	129.85	129.78
1968	129.20	129.23	129.75	129.90	130.03	129.50	129.23	129.35	130.13	130.15	130.25	129.88
1969	129.45	129.00	129.03	129.38	130.33	129.50	129.55	129.63	132.38	138.45	140.20	140.60
1970	140.40	140.75	141.58	142.78	143.63	143.08	143.08	142.80	143.38	143.08	142.78	142.23
1971	142.18	142.63	142.35	142.18	145.15	146.43	148.53	151.25	151.35	151.38	150.30	150.03
1972	149.63	150.98	150.68	150.65	149.83	150.78	150.03	148.68	148.33	148.00	148.33	148.63
1973	148.83	153.38	158.88	159.58	158.90	164.90	171.75	172.50	173.63	173.38	169.50	171.38
1974	170.93	173.20	174.50	174.45	173.70	173.75	171.43	169.80	168.85	169.60	172.38	171.33
1975	171.24	171.29	169.77	167.69	167.79	167.72	167.53	167.97	170.11	170.49	169.92	168.40
1976	168.48	171.11	172.33	173.86	172.59	172.92	173.76	174.71	174.77	175.35	175.08	174.67
1977	176.40	176.85	176.48	183.26	184.83	187.78	190.67	192.20	209.17	210.93	214.13	221.06
1978	220.77	223.96	226.81	225.75	221.27	221.55	221.37	222.60	224.73	233.14	230.20	233.33
1979	235.43	235.54	235.05	232.14	230.63	230.62	231.79	230.98	233.83	235.68	238.46	241.38

Table A7.3c (cont.). *Monthly exchange rates on Germany. SEK per 100 DEM 1950–2002.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1980	240.82	239.03	235.34	233.52	235.51	236.07	236.44	233.48	232.51	228.10	224.47	223.70
1981	221.60	214.95	218.81	217.65	213.79	212.87	212.71	212.31	230.53	246.44	246.75	245.71
1982	245.29	243.80	245.39	246.99	250.61	248.32	248.32	248.07	248.98	283.30	294.10	303.97
1983	306.72	306.50	310.68	307.45	304.11	299.81	297.47	294.19	295.50	299.44	295.27	293.57
1984	291.37	296.37	298.17	296.93	294.16	296.25	291.97	289.77	283.96	283.39	287.27	285.72
1985	286.41	283.25	285.32	291.30	289.37	289.43	291.32	297.98	296.11	301.29	301.28	305.54
1986	311.46	317.28	320.06	318.81	321.03	322.80	328.37	336.18	338.91	343.58	344.04	347.03
1987	356.29	356.51	350.12	348.90	350.30	348.96	348.76	349.59	352.14	352.71	361.32	363.85
1988	361.57	356.93	354.85	352.28	348.92	347.58	344.37	343.44	345.29	344.88	348.34	346.74
1989	341.95	341.41	342.26	340.75	337.84	337.73	341.90	339.80	338.73	345.82	351.32	361.60
1990	364.93	364.40	361.83	362.86	364.64	361.97	363.25	368.12	367.65	370.45	374.73	376.67
1991	373.70	374.54	367.79	359.63	358.69	360.63	361.84	363.08	363.96	364.57	365.03	365.82
1992	364.09	362.98	362.72	361.65	360.25	361.02	362.62	364.22	369.79	377.12	392.11	435.16
1993	449.02	459.16	469.52	466.43	456.64	449.73	463.99	474.65	494.22	489.48	483.78	488.99
1994	467.05	459.40	467.45	464.14	465.49	478.68	494.29	494.90	485.97	477.63	477.56	478.91
1995	487.57	491.81	516.48	533.36	518.36	518.12	516.93	500.65	488.75	483.53	465.98	460.07
1996	460.08	469.43	455.69	446.70	443.63	437.48	441.35	446.63	441.33	432.00	438.29	439.34
1997	440.02	442.22	450.95	449.31	450.73	448.77	436.41	433.89	430.56	430.99	436.58	438.03
1998	441.19	445.30	436.38	431.28	433.46	441.36	444.30	454.56	464.26	479.02	475.49	482.79
1999	464.45	455.54	457.34	455.88	458.97	451.67	447.31	447.81	441.40	446.30	441.27	439.16
2000	439.49	435.17	429.23	422.84	421.24	424.98	429.89	429.29	430.10	435.96	441.10	442.93
2001	454.86	458.81	466.57	465.80	462.91	470.44	473.24	475.69	494.26	489.81	481.29	482.85
2002	471.88	469.72										

Table A7.4a. *Monthly exchange rates on France. SEK per 100 (old) franc 1913–1959.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	72.39	72.38	72.45	72.51	72.48	72.27	72.29	72.24	72.11	72.18	72.17	72.07
1914	72.20	72.18	72.17	72.36	72.49	72.50	72.48	73.30	74.00	74.68	76.08	77.46
1915	77.48	77.60	77.01	73.64	72.01	69.93	68.91	66.81	65.85	65.30	62.22	61.54
1916	62.08	60.77	59.20	56.49	55.63	57.42	59.54	59.46	60.59	60.63	60.70	59.20
1917	58.29	58.16	57.87	58.29	58.43	57.89	55.46	52.14	51.05	46.20	43.96	51.54
1918	52.59	53.58	53.76	51.94	51.79	50.83	49.47	50.12	54.98	61.89	65.52	63.76
1919	63.95	65.34	64.18	63.86	61.65	60.72	58.05	52.13	48.47	48.39	46.69	44.03
1920	41.80	38.21	35.89	28.62	32.63	36.45	37.59	35.12	33.67	35.36	31.72	30.49
1921	30.44	32.52	31.35	30.88	36.01	36.23	37.28	36.89	33.83	31.69	31.10	31.89
1922	32.74	33.44	34.55	35.55	35.56	34.09	31.83	30.27	29.07	27.82	25.66	26.93
1923	25.11	23.17	23.74	25.17	25.03	23.89	22.27	21.55	22.12	22.70	21.13	20.11
1924	18.03	17.01	17.87	22.05	22.05	19.92	19.41	19.97	20.08	19.77	19.78	20.13
1925	20.13	19.67	19.29	19.35	19.37	17.95	17.64	17.60	17.17	16.66	14.93	14.12
1926	14.18	13.82	13.48	12.77	11.94	11.15	9.47	10.69	10.85	11.12	12.92	14.89
1927	14.91	14.78	14.68	14.67	14.70	14.66	14.67	14.65	14.65	14.64	14.65	14.65
1928	14.67	14.70	14.70	14.70	14.70	14.69	14.67	14.65	14.64	14.65	14.65	14.64
1929	14.64	14.64	14.65	14.66	14.65	14.64	14.66	14.65	14.64	14.68	14.69	14.64

Table A7.4a (cont.). *Monthly exchange rates on France. SEK per 100 (old) franc 1913–1959.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1930	14.67	14.63	14.61	14.61	14.64	14.64	14.66	14.66	14.64	14.64	14.66	14.65
1931	14.68	14.67	14.64	14.63	14.62	14.63	14.68	14.68	15.17	17.45	19.09	21.23
1932	20.66	20.62	20.11	20.89	21.35	21.43	21.86	22.22	22.23	22.76	22.72	22.02
1933	21.50	21.66	21.82	21.97	22.77	22.65	22.84	23.20	24.20	24.30	23.76	23.32
1934	24.01	25.03	25.17	24.97	25.20	25.43	25.43	25.58	26.01	26.13	25.69	25.95
1935	25.96	26.31	27.00	26.55	26.22	26.06	26.02	25.93	25.98	26.11	26.02	26.04
1936	25.98	25.99	25.96	25.92	25.75	25.53	25.64	25.49	25.33	18.81	18.51	18.50
1937	18.50	18.51	18.34	17.82	17.66	17.57	15.01	14.70	14.00	13.25	13.25	13.25
1938	13.07	12.81	12.30	12.20	11.11	11.00	10.99	10.98	11.00	10.96	10.95	11.03
1939	11.05	11.05	11.05	11.05	11.05	11.05	11.05	10.99	9.75	9.74	9.52	9.52
1940	9.60	9.61	9.12	8.55	7.94	8.94	9.59	9.75	9.80	9.88	9.51	9.00
1941	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
1942	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
1943	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
1944	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00			
1945						8.48	8.48	8.48	8.48	8.48	8.48	7.82
1946	3.53	3.53	3.53	3.53	3.53	8.58	3.23	3.08	3.03	3.03	3.03	3.03
1947	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
1948	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03	3.03
1949	1.38	1.38	1.38	1.37	1.33	1.33	1.33	1.33	1.38	1.49	1.49	1.49
1950	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
1951	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
1952	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
1953	1.49	1.49	1.49	1.49	1.48	1.48	1.49	1.49	1.49	1.48	1.48	1.49
1954	1.49	1.49	1.49	1.49	1.49	1.48	1.49	1.49	1.49	1.49	1.49	1.49
1955	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.48	1.48	1.49
1956	1.49	1.49	1.49	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48	1.48
1957	1.48	1.48	1.48	1.48	1.48	1.47	1.48	1.35	1.24	1.23	1.23	1.24
1958	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.23	1.15
1959	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06

*January 1, 1960: 1 new franc = 100 old francs.

Table A7.4b. *Monthly exchange rates on France. SEK per 100 franc 1960–2002.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1960	105.80	105.75	105.80	105.58	105.65	105.58	105.60	105.53	105.58	105.38	105.63	105.70
1961	105.70	105.70	105.68	105.65	105.53	105.63	105.65	105.33	105.43	105.38	105.45	105.75
1962	105.68	105.50	105.40	105.30	105.28	105.25	105.25	105.23	105.35	105.35	105.70	106.10
1963	105.93	106.00	106.15	106.23	106.18	106.03	105.98	106.15	106.10	106.18	106.18	106.20
1964	106.10	105.95	105.35	105.13	105.08	105.05	105.25	105.13	105.18	105.55	105.45	105.28
1965	105.13	105.08	105.05	105.25	105.35	105.58	105.65	105.75	105.65	105.70	105.80	105.80
1966	105.70	105.70	105.50	105.53	105.43	105.53	105.70	105.58	105.28	105.00	104.90	104.73

Table A7.5a (cont.). *Monthly exchange rates on Belgium. SEK per 100 (old) franc 1913–1926.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1917												
1918												
1919												
1920	41.82	39.32	37.55	30.62	34.26	38.40	40.11	37.63	35.89	35.40	33.78	32.30
1921	32.01	34.30	32.90	31.93	44.34	36.07	36.62	35.92	33.32	31.28	30.18	30.87
1922	31.52	31.92	32.50	32.89	32.59	32.00	30.27	28.83	27.51	26.01	23.80	24.88
1923	23.03	20.50	20.74	21.88	21.68	20.55	18.55	17.70	18.58	19.55	18.24	17.59
1924	16.23	14.90	14.96	18.54	18.54	17.34	17.25	18.99	18.80	18.21	18.17	18.55
1925	18.90	18.96	18.90	18.89	18.89	17.73	17.36	17.02	16.80	17.02	17.06	17.03
1926	17.02	17.05	16.06	13.88	11.85	11.21	9.31	10.45	10.32	10.53		

* October 25, 1926: 1 Belga = 5 Old Francs.

Table A7.5b. *Monthly exchange rates on Belgium. SEK per 100 belgas 1926–1944.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1926										52.25	52.26	52.20
1927	52.15	52.20	52.05	51.98	52.03	51.97	52.02	51.94	51.88	51.80	51.89	51.93
1928	51.72	51.96	52.03	52.09	52.13	52.11	52.10	52.06	52.05	52.05	52.05	52.03
1929	52.05	52.06	52.05	52.04	52.01	51.94	51.95	51.96	51.72	52.10	52.10	51.98
1930	51.98	51.98	51.96	51.98	52.09	52.03	52.06	52.06	51.97	51.99	52.03	52.11
1931	52.15	52.13	52.08	51.99	51.96	52.00	52.18	52.16	53.83	61.57	67.59	74.90
1932	73.17	72.96	71.29	74.03	75.49	75.29	76.83	78.34	78.46	80.19	80.39	78.13
1933	76.26	77.24	77.81	78.21	81.07	80.80	81.60	83.03	86.60	86.97	84.73	83.02
1934	85.33	88.82	89.37	88.65	89.55	90.32	90.24	91.28	92.71	92.81	91.18	92.25
1935	93.01	93.46	93.66	68.70	67.67	67.20	66.78	66.41	66.73	66.96	66.88	66.75
1936	66.70	66.65	66.77	66.75	66.58	65.74	65.89	65.43	65.45	67.18	67.71	67.42
1937	67.11	67.25	67.41	67.02	66.75	66.75	66.25	66.03	66.37	66.27	66.35	66.36
1938	66.04	65.99	66.04	66.10	66.19	66.67	66.92	67.54	68.65	69.41	70.16	70.55
1939	70.73	70.25	70.13	70.28	71.00	71.00	70.86	70.79	72.80	71.79	70.33	70.75
1940	71.58	71.88	71.65	71.43	70.72	70.60	70.60	69.52	68.01	67.85	67.21	67.21
1941	67.21	67.40	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50
1942	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50
1943	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50
1944	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50	67.50			

Table A7.5c. *Monthly exchange rates on Belgium. SEK per 100 BEF 1945–2002.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1945						9.60	9.60	9.60	9.60	9.60	9.60	9.60
1946	9.60	9.60	9.60	9.60	9.60	9.60	8.77	8.23	8.23	8.23	8.23	8.23
1947	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23
1948	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.23
1949	8.23	8.23	8.23	8.23	8.23	8.23	8.23	8.87	10.37	10.37	10.37	10.37
1950	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37
1951	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37
1952	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37	10.37
1953	10.37	10.38	10.39	10.38	10.37	10.39	10.39	10.36	10.34	10.34	10.35	10.38
1954	10.41	10.42	10.42	10.39	10.36	10.35	10.38	10.41	10.40	10.42	10.44	10.43
1955	10.43	10.43	10.43	10.42	10.41	10.38	10.37	10.38	10.39	10.39	10.41	10.43
1956	10.43	10.43	10.44	10.43	10.43	10.43	10.41	10.39	10.39	10.39	10.37	10.35
1957	10.35	10.35	10.33	10.33	10.32	10.33	10.36	10.40	10.39	10.37	10.38	10.39
1958	10.41	10.43	10.42	10.43	10.42	10.41	10.41	10.41	10.43	10.42	10.41	10.42
1959	10.39	10.38	10.38	10.40	10.41	10.39	10.40	10.39	10.38	10.38	10.39	10.39
1960	10.41	10.42	10.41	10.40	10.40	10.39	10.37	10.32	10.37	10.40	10.43	10.45
1961	10.42	10.39	10.40	10.36	10.35	10.38	10.42	10.42	10.43	10.42	10.42	10.43
1962	10.43	10.40	10.39	10.38	10.38	10.38	10.38	10.39	10.39	10.39	10.42	10.46
1963	10.44	10.44	10.45	10.46	10.44	10.43	10.42	10.44	10.43	10.44	10.45	10.46
1964	10.45	10.44	10.38	10.36	10.36	10.35	10.37	10.37	10.39	10.43	10.43	10.40
1965	10.39	10.39	10.39	10.41	10.42	10.44	10.45	10.46	10.44	10.45	10.46	10.45
1966	10.44	10.43	10.40	10.39	10.39	10.40	10.42	10.43	10.40	10.38	10.39	10.39
1967	10.39	10.42	10.42	10.41	10.42	10.41	10.41	10.42	10.43	10.45	10.46	10.44
1968	10.42	10.44	10.44	10.43	10.43	10.40	10.38	10.36	10.32	10.31	10.34	10.35
1969	10.34	10.35	10.32	10.33	10.33	10.31	10.33	10.33	10.32	10.37	10.43	10.44
1970	10.43	10.47	10.51	10.51	10.51	10.49	10.48	10.47	10.51	10.49	10.46	10.45
1971	10.44	10.46	10.44	10.44	10.45	10.42	10.43	10.49	10.67	10.75	10.82	10.81
1972	10.90	10.97	10.91	10.89	10.86	10.86	10.83	10.82	10.80	10.77	10.80	10.79
1973	10.81	11.08	11.41	11.32	11.31	11.32	11.43	11.33	11.43	11.47	11.35	11.30
1974	11.28	11.46	11.47	11.38	11.42	11.52	11.55	11.50	11.43	11.44	11.48	11.41
1975	11.44	11.48	11.46	11.34	11.30	11.25	11.24	11.31	11.37	11.32	11.28	11.20
1976	11.18	11.22	11.25	11.33	11.30	11.25	11.28	11.34	11.36	11.43	11.43	11.45
1977	11.51	11.54	11.52	11.98	12.09	12.27	12.30	12.56	13.59	13.58	13.65	14.09
1978	14.26	14.41	14.59	14.50	14.20	14.14	14.07	14.16	14.28	14.80	14.68	14.76
1979	14.94	14.96	14.87	14.65	14.41	14.37	14.48	14.44	14.56	14.62	14.72	14.83
1980	14.83	14.73	14.54	14.56	14.67	14.75	14.78	14.61	14.50	14.24	13.98	13.91
1981	13.79	13.34	13.36	13.30	13.12	13.03	12.99	13.00	14.10	14.76	14.71	14.52
1982	14.42	14.08	13.18	13.09	13.28	13.07	13.03	12.97	12.94	14.62	15.16	15.51
1983	15.65	15.61	15.79	15.44	15.24	15.01	14.87	14.69	14.66	14.71	14.54	14.44
1984	14.29	14.49	14.58	14.54	14.46	14.54	14.41	14.36	14.10	14.02	14.24	14.23
1985	14.32	14.12	14.20	14.47	14.39	14.37	14.47	14.74	14.65	14.87	14.90	15.00
1986	15.25	15.51	15.64	15.65	15.73	15.81	15.96	16.24	16.37	16.56	16.57	16.69
1987	17.17	17.23	16.91	16.85	16.90	16.85	16.84	16.85	16.97	16.96	17.28	17.40
1988	17.30	17.08	16.97	16.85	16.72	16.63	16.46	16.40	16.48	16.47	16.64	16.56
1989	16.34	16.30	16.35	16.29	16.15	16.15	16.35	16.26	16.20	16.48	16.75	17.22
1990	17.42	17.48	17.44	17.56	17.69	17.62	17.65	17.91	17.88	18.00	18.17	18.21

Table A7.6 (cont.). Monthly exchange rates on Switzerland. SEK per 100 CHF 1915–2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1944	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80
1945	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.80	97.65
1946	97.65	97.65	97.66	97.65	97.65	97.85	89.28	83.70	83.70	83.70	88.70	83.70
1947	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70
1948	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70
1949	83.70	83.70	83.70	83.70	83.70	83.70	83.70	83.70	94.18	118.50	118.50	118.50
1950	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50
1951	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50
1952	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50	118.50
1953	118.50	118.50	118.53	118.75	118.88	119.03	119.25	119.00	118.85	118.75	118.68	118.73
1954	118.93	119.18	119.23	119.25	119.00	118.85	119.10	119.15	119.05	119.10	119.03	118.93
1955	118.78	118.75	118.73	118.70	118.78	118.55	118.63	118.53	118.58	118.48	118.68	118.83
1956	118.88	118.88	118.93	118.80	118.75	118.80	118.63	118.53	118.38	118.50	118.23	118.23
1957	118.38	118.35	118.30	118.35	118.30	118.43	118.73	118.85	118.93	118.45	118.38	118.38
1958	118.53	118.48	118.55	118.65	118.65	118.53	118.50	118.43	118.70	118.83	118.58	119.38
1959	120.13	120.13	119.90	119.90	119.90	120.15	120.20	120.13	119.90	119.50	119.48	119.98
1960	120.00	119.73	119.63	119.33	119.68	119.90	119.88	119.85	119.95	120.05	120.15	120.38
1961	120.25	119.83	119.80	119.75	119.43	119.65	119.90	119.88	120.13	119.78	119.80	120.08
1962	120.00	119.55	119.05	118.75	119.05	119.45	119.43	119.28	119.40	119.45	119.95	120.40
1963	119.90	120.05	120.05	120.23	120.25	120.15	120.10	120.40	120.50	120.55	120.50	120.60
1964	120.45	120.08	119.28	119.18	119.28	119.28	119.30	119.15	119.33	119.75	119.73	119.50
1965	119.20	118.90	118.50	118.60	118.80	119.38	119.68	120.03	119.90	120.00	120.00	120.08
1966	119.75	119.48	119.10	119.40	119.63	119.83	119.98	119.70	119.63	119.63	119.88	119.93
1967	119.60	119.43	119.43	119.53	119.73	119.58	119.48	119.15	119.10	119.38	119.95	119.88
1968	119.20	118.95	119.65	119.48	119.90	120.30	120.53	120.43	120.33	120.48	120.60	120.68
1969	120.15	120.13	120.30	119.93	119.78	120.08	120.13	120.25	120.50	120.08	119.80	120.08
1970	120.00	120.78	120.93	121.08	120.93	120.55	120.68	120.68	121.00	120.00	120.03	120.15
1971	120.20	120.53	120.35	120.33	123.78	126.38	126.33	127.88	127.93	126.75	125.88	125.48
1972	124.25	124.78	124.10	124.35	123.48	126.00	125.98	125.33	125.13	125.13	125.40	126.08
1973	128.53	137.38	140.75	139.70	140.70	138.73	144.75	140.93	140.30	138.10	137.70	141.50
1974	143.70	148.40	148.93	146.03	148.05	147.05	148.13	148.83	150.45	152.25	157.90	159.73
1975	160.47	161.07	158.93	155.69	157.36	157.35	158.26	161.32	164.35	165.23	165.73	167.43
1976	168.50	170.56	171.96	174.42	177.61	180.45	180.15	178.18	176.27	174.22	173.00	170.16
1977	169.48	168.89	165.40	172.28	172.98	177.66	180.62	185.32	204.57	210.89	218.26	229.06
1978	235.36	244.20	243.34	242.31	237.46	244.83	252.35	266.80	281.99	279.46	262.17	261.67
1979	260.68	261.08	260.17	256.38	254.79	255.55	256.73	255.14	260.12	259.35	256.84	261.71
1980	260.71	255.23	247.21	249.33	253.77	255.37	257.20	253.07	253.85	249.33	253.77	255.37
1981	244.80	236.85	239.96	238.72	237.55	244.25	247.67	244.95	268.16	294.25	307.57	305.61
1982	304.87	305.04	309.45	302.26	297.35	290.39	292.04	291.70	291.64	330.38	342.26	358.40
1983	372.39	369.21	363.06	364.83	364.19	361.70	363.58	363.77	364.47	369.19	365.10	367.36
1984	366.05	363.16	360.56	358.51	356.70	355.50	345.41	345.90	343.47	344.40	348.58	346.30
1985	341.61	333.39	335.72	347.28	343.97	344.73	351.64	362.83	359.98	367.45	367.00	365.25
1986	367.78	378.85	379.77	381.02	386.13	391.71	404.93	417.30	418.44	419.60	413.27	414.37
1987	424.60	422.24	417.72	422.74	426.41	420.82	419.68	422.25	425.06	425.12	439.66	446.77
1988	444.29	435.34	429.40	425.98	418.99	417.71	414.52	409.50	409.07	407.46	415.08	411.86

Table A7.6 (cont.). Monthly exchange rates on Switzerland. SEK per 100 CHF 1915–2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1989	402.36	401.44	397.80	387.05	380.61	391.17	397.00	394.31	391.35	395.67	397.28	401.61
1990	406.53	412.80	408.12	411.66	427.03	427.75	427.73	441.38	441.77	440.83	443.07	440.38
1991	443.49	437.83	425.69	425.22	423.16	420.36	417.57	416.41	416.29	416.61	412.90	413.22
1992	409.76	403.84	399.55	393.52	391.64	398.36	405.32	406.75	419.53	425.28	435.54	483.93
1993	490.88	496.61	508.77	509.89	506.18	503.92	525.14	537.52	564.95	556.54	553.75	570.60
1994	552.98	547.15	553.06	547.84	546.07	566.93	585.78	587.14	583.12	574.06	567.74	565.72
1995	579.87	581.23	619.98	647.73	625.28	626.70	621.07	604.57	600.89	596.89	577.58	569.37
1996	570.15	562.70	551.35	551.35	542.28	531.65	538.12	550.43	539.65	524.82	519.85	514.41
1997	507.14	509.47	521.89	526.05	536.49	537.47	527.32	527.80	523.17	521.49	537.48	541.21
1998	543.26	551.66	535.74	519.91	520.31	529.37	527.57	543.74	563.84	586.86	577.63	593.04
1999	565.97	557.31	560.89	556.66	560.11	554.03	545.38	547.32	538.98	547.67	537.71	536.47
2000	533.70	529.65	523.17	525.45	529.30	532.68	542.06	541.37	549.68	563.48	567.05	572.38
2001	581.70	584.38	594.16	595.93	590.19	604.21	611.50	614.33	647.99	647.25	641.96	640.06
2002	625.94	621.79	616.90	623.00	633.00	619.59	633.80	632.35	626.17	621.56	618.69	618.61
2003	627.67	623.58	627.77	612.48	604.26	592.11	594.17	599.57	586.16	581.95	576.42	580.01
2004	583.43	583.67	589.22	590.08	592.48	601.93	602.22	597.53	589.43	587.30	591.55	584.95
2005	585.27	586.14	586.69	592.30	595.11	601.70	605.07	601.58	602.79	608.45	619.06	609.84
2006	601.31	599.48	599.10	592.48	599.87	592.00	587.37	583.76	585.45	582.13	571.83	566.03
2007	562.12	566.32	576.59	564.39	557.80	564.28	554.53	569.13	563.95	549.45	563.10	568.05
2008	582.02	582.32	598.57	587.40	573.67	580.99	584.43	579.73	599.58	647.74	668.37	694.15

Table A7.7. Monthly exchange rates on Netherlands. SEK per 100 NLG 1913–2002.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	150.85	150.95	150.49	150.64	150.43	150.17	150.31	150.25	150.29	150.63	150.67	150.46
1914	150.81	150.72	150.56	150.66	150.73	150.53	150.60	150.84	155.57	160.57	161.03	161.90
1915	161.27	163.58	162.20	155.18	152.56	151.85	154.41	155.93	156.66	156.87	155.18	153.85
1916	159.99	151.66	149.01	144.43	136.44	141.55	146.09	145.01	145.62	144.85	144.75	140.59
1917	138.56	137.72	136.43	136.17	137.27	136.66	139.35	126.12	124.35	115.49	111.32	127.48
1918	130.07	135.13	140.70	140.24	146.11	147.21	145.81	145.64	144.87	145.73	148.85	146.69
1919	146.33	146.82	147.09	151.06	153.91	152.22	152.69	151.54	152.89	156.23	164.10	177.60
1920	182.87	201.36	182.42	169.84	172.90	166.70	160.60	160.32	155.45	157.19	158.71	158.52
1921	154.69	154.05	151.93	148.14	151.94	149.04	151.47	147.36	146.02	145.81	150.78	148.59
1922	147.42	144.39	145.06	146.09	150.29	150.27	149.59	147.57	146.87	146.42	146.56	148.15
1923	147.62	148.90	148.69	147.24	147.10	147.83	148.06	148.13	148.30	148.53	145.08	144.85
1924	143.04	143.10	141.40	141.37	141.37	141.29	142.88	146.08	144.89	147.18	149.46	150.09
1925	150.06	149.16	148.26	148.45	150.25	150.13	149.47	149.95	150.15	150.23	150.52	150.21
1926	150.20	149.82	149.57	149.95	150.35	150.03	150.07	150.00	149.98	149.79	149.94	149.79
1927	149.84	149.99	149.67	149.45	149.71	149.58	149.70	149.48	149.21	149.35	150.00	149.88
1928	150.17	150.10	150.05	150.23	150.42	150.37	150.37	149.97	149.91	150.02	150.22	150.16
1929	150.10	149.92	150.03	150.39	150.51	150.10	149.80	149.64	149.76	150.06	150.22	149.74
1930	149.93	149.57	149.41	149.56	149.98	149.79	149.73	149.90	149.99	150.14	150.05	150.15
1931	150.38	150.00	149.78	149.97	149.96	150.20	150.55	150.79	155.30	176.70	194.53	217.03
1932	210.49	210.20	204.58	212.93	217.75	217.37	222.05	226.34	226.40	231.38	231.46	217.36

Table A7.7 (cont.). *Monthly exchange rates on Netherlands. SEK per 100 NLG 1913–2002.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1933	220.31	221.56	222.68	224.71	233.34	231.88	235.04	239.21	249.38	250.44	244.27	239.11
1934	245.60	255.61	257.31	255.94	258.77	261.53	261.41	262.62	267.03	268.50	263.41	260.67
1935	268.16	269.50	277.07	271.41	269.12	267.37	266.89	265.30	266.31	268.38	267.74	267.28
1936	267.24	267.11	267.29	266.87	264.37	262.17	263.62	262.66	257.23	213.28	214.87	216.26
1937	217.03	217.25	217.97	216.77	216.39	216.70	215.72	215.23	216.50	216.94	215.93	216.56
1938	216.76	217.08	217.08	217.10	216.80	217.09	217.19	217.57	218.54	222.19	224.79	226.72
1939	226.46	222.96	220.66	221.01	223.01	221.34	221.53	222.86	225.13	224.30	221.00	224.20
1940	224.73	224.28	223.57	323.50	333.50	333.50	323.50	223.50	223.50	223.15	223.97	222.97
1941	222.97	223.32	223.50	223.60	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50
1942	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50
1943	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50
1944	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50	223.50			
1945											157.75	157.75
1946	158.50	158.50	158.50	158.50	158.50	158.50	144.94	135.90	135.90	135.90	135.90	135.90
1947	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90
1948	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90
1949	135.90	135.90	135.90	135.90	135.90	135.90	135.90	135.90	136.12	136.55	136.55	136.55
1950	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55
1951	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55
1952	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.55	136.53
1953	136.48	136.90	137.20	136.95	136.83	137.18	137.25	136.98	136.45	136.28	136.25	136.63
1954	136.93	137.05	136.98	136.90	136.90	136.75	136.95	136.98	136.90	137.08	137.25	137.30
1955	137.30	137.25	137.13	137.03	136.98	136.35	136.00	136.05	136.40	136.38	136.75	137.08
1956	137.10	136.98	136.83	136.75	136.58	136.23	135.93	135.70	135.93	136.33	136.13	136.03
1957	136.08	136.23	136.10	136.35	136.10	135.88	136.10	135.98	136.33	136.50	136.63	136.88
1958	137.20	137.03	136.93	136.93	137.00	136.93	136.85	136.80	137.10	137.28	137.10	137.10
1959	137.28	137.33	137.28	137.35	137.35	137.40	137.35	137.25	137.18	137.30	137.38	137.55
1960	137.60	137.58	137.53	137.23	137.35	137.23	137.18	137.03	137.10	137.23	137.15	137.43
1961	137.20	136.68	140.33	144.05	143.90	144.05	144.03	143.68	143.50	143.68	143.83	143.78
1962	143.63	142.95	142.98	143.28	143.40	143.38	143.45	143.08	143.25	143.28	143.63	144.48
1963	144.13	144.23	144.55	144.83	144.70	144.33	144.10	144.10	144.10	144.45	144.48	144.50
1964	144.28	143.95	143.13	142.70	142.50	142.23	142.48	142.50	142.73	143.45	143.78	143.50
1965	143.30	143.20	143.03	143.23	143.38	143.53	143.73	143.93	143.78	144.00	143.90	143.68
1966	143.33	143.00	142.85	142.43	142.33	141.78	143.50	143.35	143.18	143.18	143.30	143.33
1967	143.45	143.38	143.20	143.05	143.28	143.23	143.33	143.60	143.73	144.03	144.15	143.98
1968	143.63	143.45	143.55	143.23	143.08	143.05	143.03	142.55	142.33	142.45	143.20	143.65
1969	143.35	143.08	142.85	142.58	142.30	142.35	142.43	143.08	143.45	143.85	143.68	143.15
1970	142.53	142.78	143.38	143.43	143.63	143.53	143.85	144.13	144.68	144.55	144.13	143.88
1971	143.93	144.15	143.90	143.65	145.68	145.58	145.53	148.15	149.40	149.95	150.88	149.50
1972	150.23	151.18	150.28	149.20	148.35	149.50	149.20	147.60	146.80	146.73	147.30	147.33
1973	148.18	152.75	154.98	153.48	153.60	155.35	157.50	156.88	162.55	166.48	163.18	162.78
1974	163.90	166.23	166.53	165.23	165.33	165.55	166.73	166.30	165.60	165.93	166.15	165.00
1975	164.88	165.58	165.88	164.43	163.97	163.04	162.10	163.76	165.90	165.64	165.55	164.36
1976	164.16	164.55	163.94	164.15	162.80	162.75	164.03	165.12	167.10	167.28	167.65	167.57
1977	168.60	169.31	169.16	176.04	177.53	178.54	178.62	183.47	197.43	197.30	198.50	204.23

Table A7.7 (cont.). Monthly exchange rates on Netherlands. SEK per 100 NLG 1913–2002.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1978	206.01	208.86	212.16	211.38	206.91	206.56	205.07	205.60	206.95	214.33	212.75	215.30
1979	218.09	218.13	217.76	214.70	211.74	210.27	210.62	210.45	212.44	212.45	214.07	218.22
1980	218.22	216.81	214.49	212.78	213.81	215.22	216.22	214.49	213.83	210.30	207.18	206.07
1981	203.94	197.35	197.78	196.32	192.33	191.49	191.22	191.25	207.85	223.07	224.98	224.38
1982	223.82	222.34	223.04	222.67	225.55	224.65	224.83	225.46	227.31	259.78	269.72	275.53
1983	278.59	277.98	279.11	272.97	270.45	267.52	265.89	263.04	264.23	266.90	263.48	261.66
1984	259.29	262.74	264.17	263.27	261.44	262.89	258.76	256.92	251.84	251.30	254.69	253.18
1985	253.54	250.16	252.34	257.60	256.33	256.76	258.78	264.93	263.28	267.20	267.48	271.36
1986	276.34	280.89	283.50	282.81	285.11	286.68	291.43	298.23	300.22	304.07	304.56	307.08
1987	315.85	315.86	310.03	309.26	310.78	309.83	309.85	310.33	312.85	313.48	321.10	323.40
1988	321.81	317.94	315.94	314.07	311.43	309.27	305.36	304.22	306.07	305.96	308.91	307.29
1989	303.00	302.50	303.44	302.08	299.72	299.86	303.23	301.41	300.47	306.32	311.40	320.45
1990	323.51	323.39	321.37	322.36	324.24	321.57	322.35	326.76	326.20	328.65	332.19	333.93
1991	331.48	332.34	326.33	319.19	318.37	321.18	321.18	322.18	322.98	323.33	324.30	324.61
1992	323.30	322.54	322.24	321.51	320.04	320.45	321.60	323.08	328.38	335.08	348.57	387.26
1993	399.42	407.96	417.68	415.07	407.11	401.00	412.62	421.85	440.08	435.51	433.24	436.52
1994	417.15	409.68	415.97	413.33	414.75	427.05	440.68	440.75	433.48	426.33	426.07	427.19
1995	434.94	438.73	460.61	476.30	463.09	463.06	461.47	447.05	436.29	431.70	416.07	410.90
1996	410.85	419.22	407.03	399.45	396.82	390.58	393.24	398.16	393.69	385.08	390.77	391.56
1997	391.85	393.67	400.73	399.52	400.78	398.89	387.55	385.23	382.31	382.53	387.35	388.71
1998	391.48	395.07	387.17	383.09	384.62	391.57	394.10	403.09	411.57	424.74	421.71	428.38
1999	412.20	404.30	405.89	404.60	407.34	400.86	396.99	397.44	391.75	396.10	391.63	389.76
2000	390.05	386.22	380.95	375.28	373.86	377.17	381.54	381.00	381.73	386.92	391.48	393.11
2001	403.69	407.20	414.09	413.41	410.84	417.52	420.00	422.18	438.67	434.71	427.15	428.53
2002	418.80	416.88										

Table A7.8. Monthly exchange rates on Denmark. SEK per 100 DKK 1913–2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1914	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1915	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.62	99.08	98.10
1916	99.46	99.93	100.00	100.00	100.00	100.00	100.00	99.02	97.47	96.60	95.88	94.19
1917	93.28	93.47	96.45	95.57	95.83	96.18	93.69	91.71	91.06	86.13	86.43	93.11
1918	92.88	93.45	94.16	92.87	92.28	90.21	88.33	88.30	90.52	92.82	95.02	92.72
1919	92.40	92.76	93.03	93.88	93.72	92.46	91.19	88.66	89.84	88.97	90.67	87.60
1920	85.88	80.41	83.99	82.10	79.17	77.24	75.26	72.84	69.43	71.03	70.31	76.24
1921	84.81	83.79	76.73	77.33	77.34	76.97	75.39	76.72	81.54	82.63	79.97	79.85
1922	80.32	79.11	80.96	81.74	83.36	84.14	83.20	81.97	79.94	76.02	75.47	76.84
1923	74.07	71.91	72.32	71.13	70.13	67.86	66.30	68.55	68.29	66.62	65.70	67.95
1924	65.13	61.25	59.82	64.02	64.02	63.45	60.53	61.08	63.83	66.05	65.56	65.56
1925	66.23	66.17	67.08	68.58	70.39	71.40	79.59	87.09	92.04	92.16	93.22	93.02
1926	92.83	95.10	97.56	97.89	98.04	98.96	99.06	99.30	99.39	99.56	99.84	99.81
1927	99.89	99.93	99.67	99.68	99.85	99.80	99.89	99.91	99.69	99.62	99.62	99.38

Table A7.8 (cont.). *Monthly exchange rates on Denmark. SEK per 100 DKK 1913–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1928	99.72	99.83	99.89	99.95	100.01	99.99	99.89	99.79	99.74	99.77	99.79	99.78
1929	99.80	99.82	99.82	99.85	99.76	99.57	99.46	99.44	99.45	99.72	99.74	99.56
1930	99.72	99.79	99.73	99.65	99.66	99.69	99.70	99.77	99.67	99.69	99.71	99.73
1931	99.89	99.95	99.92	99.93	99.92	99.94	99.93	99.95	98.41	96.22	99.84	99.70
1932	98.86	99.04	101.04	108.16	107.80	106.90	105.86	104.15	101.38	100.94	98.25	95.42
1933	93.01	84.13	84.66	85.42	87.06	87.09	87.02	86.98	86.75	86.75	86.85	86.85
1934	86.85	86.85	86.85	86.85	86.85	86.85	86.86	86.85	86.85	86.85	86.85	86.85
1935	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85
1936	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85
1937	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.85	86.72	86.74
1938	86.75	86.77	86.79	86.75	86.75	86.75	86.75	86.75	86.75	86.83	86.80	86.81
1939	86.84	86.79	86.81	86.79	86.80	86.83	86.77	86.72	81.24	81.25	81.25	81.25
1940	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25
1941	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25	81.25
1942	83.02	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90
1943	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90
1944	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.90
1945	87.90	87.90	87.90	87.90	87.90	87.90	87.90	87.78	87.55	87.55	87.55	87.55
1946	87.55	87.55	87.65	87.55	87.55	87.55	80.05	75.05	75.05	75.05	75.05	75.05
1947	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05
1948	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05
1949	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05
1950	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05
1951	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05
1952	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05	75.05
1953	75.05	75.05	75.05	75.05	75.05	75.13	75.13	74.93	74.85	74.68	74.73	74.90
1954	75.08	75.13	75.05	75.05	74.90	74.75	74.95	74.98	74.85	74.95	75.05	75.08
1955	75.08	75.13	75.20	75.18	75.00	74.78	74.69	74.63	74.73	74.93	75.18	75.33
1956	75.40	75.38	75.30	75.25	75.10	75.00	74.80	74.65	74.73	74.98	74.75	74.78
1957	74.90	74.93	74.80	74.75	74.67	74.67	74.90	74.83	74.93	74.98	75.00	75.05
1958	75.13	75.20	75.28	75.18	75.10	75.03	74.85	74.85	74.98	75.08	75.05	75.08
1959	75.18	75.18	75.28	75.33	75.25	75.33	75.28	75.25	75.23	75.25	75.23	75.20
1960	75.20	75.18	75.23	75.13	75.03	74.95	75.08	75.03	75.20	75.18	75.20	75.23
1961	75.10	74.98	75.00	74.90	74.70	74.73	74.70	74.98	75.28	75.25	75.23	75.40
1962	75.30	75.10	75.03	74.90	74.80	74.80	74.75	74.60	74.58	74.60	74.90	75.35
1963	75.18	75.28	75.38	75.45	75.35	75.30	75.25	75.28	75.38	75.40	75.38	75.45
1964	75.30	75.10	74.75	74.68	74.60	74.50	74.58	74.38	74.40	74.70	74.60	74.58
1965	74.48	74.45	74.40	74.58	74.68	74.68	74.68	74.70	74.90	75.20	75.25	75.30
1966	75.25	75.10	74.93	74.95	74.75	74.75	74.88	74.78	75.00	75.15	75.03	75.13
1967	75.03	74.83	74.88	74.83	74.70	74.58	74.50	74.50	74.63	74.75	72.10	69.53
1968	69.48	69.45	69.58	69.55	69.40	69.30	69.05	68.88	68.98	69.10	69.10	69.25
1969	69.15	69.00	69.05	68.93	68.83	68.93	68.90	68.83	68.93	68.93	69.15	69.20
1970	69.18	69.38	69.60	69.50	69.48	69.43	69.35	69.23	69.55	69.43	69.25	69.28
1971	69.23	69.33	69.23	69.15	69.10	69.10	69.08	69.25	69.68	69.45	69.18	68.88
1972	68.90	68.85	68.78	68.68	68.45	68.38	68.13	68.50	68.60	68.85	69.13	69.45
1973	69.20	71.08	73.25	73.05	72.30	72.43	73.25	73.13	73.95	74.13	73.15	73.65

Table A7.8 (cont.). Monthly exchange rates on Denmark. SEK per 100 DKK 1913–2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1974	72.75	73.35	73.60	73.10	73.35	73.68	74.10	73.65	72.60	73.33	73.73	73.10
1975	72.34	72.23	72.51	72.31	72.40	72.40	72.49	72.73	73.48	73.26	72.99	72.03
1976	71.34	71.50	71.85	73.10	73.07	72.86	72.73	72.80	72.82	72.42	71.62	71.51
1977	71.75	71.97	72.05	72.87	72.68	73.31	73.20	74.07	78.80	78.71	78.58	80.14
1978	81.14	82.02	82.56	82.22	81.91	81.96	81.27	81.01	81.63	83.98	83.40	83.81
1979	84.95	85.09	84.34	83.46	81.76	80.13	80.72	80.24	80.94	80.67	80.52	78.04
1980	77.20	76.64	75.48	75.01	75.40	76.04	76.43	75.60	75.23	74.17	73.14	73.03
1981	72.15	69.86	69.71	69.24	68.05	67.84	67.95	67.64	73.58	76.87	76.72	75.87
1982	75.17	74.13	72.77	72.70	73.92	72.39	71.82	71.28	70.92	80.50	83.98	86.34
1983	87.17	86.85	86.94	86.64	85.34	83.85	82.87	81.79	82.28	82.84	81.98	81.19
1984	80.55	81.35	81.47	80.91	80.44	80.83	79.92	79.57	78.44	78.49	79.60	79.77
1985	80.23	79.25	79.84	81.19	80.60	80.72	81.15	82.39	81.73	83.14	83.34	84.32
1986	85.05	86.17	86.73	86.50	86.88	87.21	87.89	89.44	89.68	91.28	91.28	91.92
1987	94.03	94.51	93.11	92.63	93.19	92.78	92.07	91.29	91.51	91.91	93.72	94.48
1988	94.25	93.45	92.79	91.85	91.21	91.49	90.67	89.92	90.01	89.61	90.38	89.91
1989	88.41	87.87	87.92	87.69	86.88	86.88	88.09	87.56	87.26	88.85	90.56	93.17
1990	94.25	94.69	94.58	95.27	95.81	95.20	95.54	96.40	96.38	97.20	97.86	97.83
1991	97.21	97.45	95.91	94.09	93.86	93.76	93.58	93.91	94.18	94.35	94.11	94.02
1992	93.83	93.65	93.48	93.40	93.26	93.71	94.21	94.44	95.59	97.68	101.80	112.51
1993	116.40	119.54	122.27	121.45	118.83	117.48	119.93	116.50	120.69	120.99	122.12	124.69
1994	120.21	117.84	119.31	118.34	118.90	122.13	125.83	125.16	123.28	122.03	122.00	122.04
1995	123.75	124.60	128.97	135.30	132.41	132.76	132.70	129.13	126.05	124.53	120.25	118.79
1996	118.95	121.35	117.95	115.77	114.94	113.43	114.48	115.53	114.55	112.67	114.11	114.79
1997	115.37	115.94	118.22	117.94	118.36	117.86	114.58	113.90	113.09	113.19	114.70	115.01
1998	115.83	116.84	114.48	113.12	113.74	115.88	116.55	119.34	121.89	125.98	125.06	126.91
1999	122.05	119.83	120.34	119.96	120.76	118.88	117.62	117.76	116.13	117.44	116.06	115.44
2000	115.44	114.32	112.73	111.01	110.49	111.41	112.73	112.58	112.73	114.49	115.71	116.17
2001	119.19	120.24	122.25	122.07	121.35	123.43	124.33	124.97	129.91	128.82	126.43	126.86
2002	124.17	123.65	121.90	122.85	124.04	122.67	124.76	124.58	123.51	122.56	122.22	122.44
2003	123.47	123.11	124.17	123.34	123.29	122.76	123.70	124.25	122.11	121.26	120.89	121.17
2004	122.68	123.22	123.91	123.21	122.72	122.97	123.68	123.60	122.28	121.82	121.16	120.79
2005	121.69	122.05	122.02	123.02	123.50	124.37	126.42	125.25	125.19	126.28	128.25	126.60
2006	124.89	125.14	125.97	125.08	125.22	123.85	123.50	123.40	124.29	124.14	122.11	121.24
2007	121.83	123.19	124.81	124.00	123.51	125.39	123.46	125.23	124.70	123.12	124.56	126.34
2008	126.61	125.66	126.14	125.65	124.88	125.68	126.82	125.97	128.17	132.07	135.93	143.87

Table A7.9. Monthly exchange rates on Norway. SEK per 100 NKK 1913–2008.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1914	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1915	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.70
1916	99.56	99.98	100.00	100.13	100.41	100.00	100.00	99.95	99.15	98.26	97.98	96.10
1917	95.15	95.05	98.52	98.07	98.04	97.60	94.93	92.01	91.32	86.19	86.95	95.90
1918	97.02	96.43	95.70	93.87	92.68	91.33	89.03	88.81	92.45	94.66	97.61	96.62

Table A7.9 (cont.). *Monthly exchange rates on Norway. SEK per 100 NKK 1913–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1919	97.15	97.41	96.19	96.49	98.31	97.95	96.48	94.71	94.56	94.59	96.80	95.80
1920	93.27	93.18	88.84	90.96	87.83	80.61	75.92	72.83	69.40	70.46	70.14	75.65
1921	82.87	80.56	71.70	68.04	67.37	65.43	63.84	62.00	59.33	55.16	61.28	62.32
1922	63.09	63.83	67.72	71.68	72.05	66.70	64.49	65.45	63.58	67.25	68.68	70.38
1923	69.71	69.93	68.42	67.13	62.18	62.78	61.21	60.78	60.69	58.91	56.00	56.83
1924	53.99	50.95	51.65	52.44	52.44	51.07	50.59	52.19	52.14	53.73	54.94	56.01
1925	56.75	56.65	57.20	60.00	62.93	63.55	67.41	70.16	77.09	75.82	76.18	76.04
1926	76.16	78.03	80.36	80.94	81.02	82.57	82.01	82.01	82.05	88.57	94.99	94.75
1927	95.76	96.80	97.49	96.78	96.35	96.65	96.61	96.84	98.14	97.92	98.44	98.67
1928	99.03	99.23	99.43	99.69	99.89	99.87	99.85	99.79	99.74	99.75	99.78	99.70
1929	99.75	99.82	99.88	99.89	99.78	99.60	99.49	99.47	99.47	99.73	99.75	99.50
1930	99.64	99.66	99.69	99.65	99.72	99.72	99.70	99.74	99.64	99.69	99.71	99.72
1931	99.89	99.91	99.94	99.94	99.93	99.94	99.93	99.97	99.80	96.41	99.22	98.75
1932	97.84	97.75	99.17	100.36	99.06	97.09	97.30	97.98	98.32	98.30	96.34	94.69
1933	94.79	96.52	97.20	97.89	99.24	98.57	97.79	97.94	97.75	97.75	97.75	97.75
1934	97.67	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60
1935	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60
1936	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60	97.60
1937	97.60	97.60	97.60	97.60	97.65	97.65	97.65	97.65	97.65	97.65	97.61	97.64
1938	97.65	97.66	97.69	97.65	97.62	97.60	97.60	97.60	97.60	97.70	97.69	97.70
1939	97.74	97.68	97.70	97.65	97.70	97.73	97.66	97.48	96.00	96.00	96.00	96.00
1940	96.00	95.93	95.54	95.55	95.55	95.55	95.55	95.55	95.55	95.55	95.55	95.55
1941	95.61	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65
1942	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65
1943	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65
1944	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65	95.65
1945	95.65	95.65	95.65	95.65	90.52	84.65	84.65	84.65	84.65	84.65	84.65	84.65
1946	84.65	84.85	84.65	84.85	84.65	84.65	77.39	72.55	72.55	72.55	72.55	72.55
1947	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55
1948	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55
1949	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55
1950	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55
1951	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55
1952	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55
1953	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55	72.55
1954	72.65	72.75	72.80	72.90	72.80	72.65	72.75	72.70	72.63	72.73	72.88	72.78
1955	72.65	72.73	72.85	72.88	72.73	72.43	72.22	72.15	72.25	72.38	72.65	72.78
1956	72.83	72.80	72.83	72.85	72.85	72.60	72.33	72.25	72.35	72.53	72.43	72.63
1957	72.75	72.73	72.68	72.70	72.60	72.50	72.55	72.43	72.68	72.73	72.68	72.58
1958	72.63	72.73	72.78	72.70	72.60	72.50	72.38	72.35	72.48	72.63	72.55	72.55
1959	72.70	72.73	72.78	72.88	72.85	72.90	72.85	72.83	72.70	72.73	72.70	72.65
1960	72.65	72.60	72.68	72.65	72.65	72.50	72.53	72.50	72.63	72.63	72.68	72.70
1961	72.60	72.50	72.48	72.45	72.28	72.23	72.20	72.48	72.83	72.83	72.78	72.80
1962	72.70	72.60	72.50	72.43	72.35	72.28	72.25	72.20	72.20	72.23	72.48	72.80
1963	72.68	72.75	72.83	72.88	72.85	72.78	72.68	72.78	72.68	72.73	72.70	72.75
1964	72.68	72.55	72.18	72.10	72.08	72.03	72.05	71.93	71.98	72.20	72.15	72.10

Table A7.9 (cont.). *Monthly exchange rates on Norway. SEK per 100 NKK 1913–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1965	71.98	72.00	71.95	72.15	72.25	72.30	72.38	72.48	72.48	72.60	72.60	72.60
1966	72.58	72.48	72.30	72.28	72.23	72.28	72.38	72.45	72.50	72.55	72.55	72.60
1967	72.48	72.43	72.38	72.33	72.28	72.28	72.25	72.30	72.33	72.45	72.55	72.55
1968	72.50	72.50	72.60	72.58	72.53	72.55	72.53	72.43	72.48	72.58	72.65	72.63
1969	72.58	72.60	72.60	72.60	72.60	72.68	72.63	72.48	72.55	72.43	72.48	72.55
1970	72.50	72.73	72.98	73.00	72.90	72.83	72.80	72.70	72.98	72.83	72.65	72.70
1971	72.53	72.65	72.55	72.60	72.73	72.80	72.88	73.65	73.98	73.68	73.15	72.80
1972	72.35	72.28	72.53	72.75	72.55	73.18	72.93	72.63	71.95	72.10	72.05	72.13
1973	72.00	74.38	76.25	76.60	76.80	77.45	77.50	75.95	76.48	76.65	78.00	80.73
1974	81.05	81.35	81.33	80.55	81.15	80.63	81.43	81.15	81.10	80.20	79.70	79.25
1975	79.45	79.80	80.23	80.03	79.84	80.23	79.75	79.32	79.61	79.80	79.78	79.63
1976	79.05	79.46	79.63	80.35	80.55	80.46	80.20	80.33	80.35	80.27	80.24	80.08
1977	80.09	80.57	80.48	82.42	82.77	83.79	82.99	84.20	88.74	87.70	88.12	90.83
1978	90.96	88.43	86.80	86.02	85.72	85.57	84.41	84.68	85.11	87.33	86.62	86.33
1979	86.03	85.91	85.89	85.60	84.89	84.37	83.92	84.08	84.36	84.90	84.34	84.20
1980	84.60	85.62	86.24	86.43	86.00	86.02	85.83	85.97	86.08	85.77	86.01	85.51
1981	85.07	85.31	85.56	85.94	86.57	85.72	85.15	85.98	91.09	93.93	94.47	96.06
1982	96.04	96.72	97.01	97.41	97.10	97.48	96.45	92.12	90.42	99.92	103.82	104.91
1983	104.07	104.69	104.39	105.05	105.60	105.34	105.15	105.50	106.22	106.46	106.20	104.60
1984	104.05	104.19	103.29	103.31	103.61	103.81	101.34	100.85	99.75	98.11	98.73	98.84
1985	99.02	98.77	99.64	100.86	100.65	100.59	100.63	101.03	100.90	100.84	100.30	100.64
1986	100.75	101.80	101.66	101.45	96.42	94.88	94.75	94.43	94.41	93.79	92.67	91.98
1987	92.40	92.99	92.81	93.45	94.14	94.69	95.47	95.66	96.15	96.05	94.80	93.40
1988	94.27	94.52	94.15	95.02	95.66	95.68	94.73	94.21	93.40	93.16	92.87	93.53
1989	94.02	94.22	94.11	93.90	93.65	93.24	93.24	93.09	92.91	93.22	93.33	94.02
1990	94.52	94.60	93.71	93.63	94.14	94.31	94.64	95.18	95.16	95.56	96.07	96.20
1991	95.67	95.85	94.34	92.61	92.22	92.53	92.78	92.90	93.01	93.06	93.01	92.90
1992	93.64	92.58	92.46	92.38	92.34	92.35	92.32	92.35	92.48	92.44	96.17	103.43
1993	105.56	107.97	110.42	109.95	107.94	106.36	108.92	109.37	113.25	111.89	111.85	112.68
1994	108.37	106.48	107.68	107.01	107.40	110.25	113.03	112.83	110.77	109.69	109.27	109.68
1995	111.47	112.02	115.80	118.71	115.92	116.41	116.30	114.07	111.63	109.66	105.63	104.30
1996	104.77	107.46	104.73	103.52	103.41	102.29	102.95	103.28	102.88	101.76	104.25	105.38
1997	109.55	111.73	112.44	110.27	108.69	107.54	105.05	104.82	105.26	107.04	107.16	107.43
1998	107.00	106.93	105.14	103.93	103.28	104.45	104.77	105.42	104.44	105.68	107.30	106.22
1999	105.11	103.00	105.09	107.17	108.97	108.13	107.02	105.98	104.99	105.34	105.32	106.01
2000	105.81	105.09	103.47	101.46	100.48	100.81	102.80	103.66	104.74	106.53	107.97	106.54
2001	108.02	109.33	111.85	112.29	113.22	115.93	116.14	115.53	120.93	119.78	118.79	118.05
2002	116.49	117.97	117.35	119.71	122.70	122.99	125.14	124.48	124.57	124.02	123.99	124.58
2003	125.05	121.31	117.62	116.99	116.21	111.73	110.83	111.73	110.61	109.38	109.65	109.69
2004	106.33	104.59	108.11	110.50	111.26	110.41	108.54	110.30	108.78	109.98	110.57	109.15
2005	110.18	109.22	111.01	112.06	113.70	117.28	118.94	118.02	119.65	120.24	122.25	118.35
2006	115.86	115.92	117.79	119.00	119.75	117.65	116.06	115.23	112.29	110.28	110.42	110.76
2007	109.80	113.56	114.37	113.84	113.11	115.83	115.77	116.84	118.62	119.30	117.04	117.52
2008	118.58	117.82	118.05	117.69	118.37	117.33	117.53	117.83	117.38	114.60	114.85	114.46

Table A7.10a (cont.). *Monthly exchange rates on Finland. SEK per 100 (old) mark 1913–1962.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1959	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
1960	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63	1.63
1961	1.63	1.63	1.63	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
1962	1.62	1.62	1.62	1.62	1.62	1.61	1.61	1.61	1.61	1.61	1.62	1.62

* January 1, 1963: 1 new markkaa = 100 old markkaa.

Table A7.10b. *Monthly exchange rates on Finland. SEK per 100 (new) mark 1963–2002.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1963	161.10	161.25	161.50	161.63	161.58	161.43	161.38	161.55	161.58	161.63	161.68	161.80
1964	161.80	161.68	160.88	160.28	160.10	160.00	160.10	159.90	160.10	160.80	160.95	160.55
1965	160.30	160.23	159.98	160.15	160.35	160.60	160.85	160.88	160.78	161.00	161.03	161.00
1966	160.88	160.93	160.50	160.58	160.48	160.53	160.85	160.80	160.85	161.00	160.95	160.95
1967	160.93	160.83	160.75	160.45	160.50	160.35	160.38	160.48	160.63	142.28	123.88	123.48
1968	123.28	123.53	123.80	123.95	123.90	123.90	123.90	123.80	123.75	123.90	124.08	124.05
1969	123.95	124.00	123.90	123.93	123.65	123.33	123.13	123.05	123.20	122.98	123.25	123.45
1970	123.60	124.15	124.70	124.90	124.98	124.63	124.70	124.53	125.00	124.80	124.38	124.28
1971	124.18	124.35	124.13	124.03	123.63	123.38	123.80	123.08	122.18	121.20	120.30	118.50
1972	116.93	116.13	115.55	116.08	115.33	115.00	114.68	114.75	114.78	114.70	114.28	114.05
1973	113.70	115.40	115.88	116.73	115.55	112.88	112.75	113.93	114.18	113.55	116.78	118.85
1974	121.15	120.65	119.85	117.85	116.63	119.63	120.00	118.65	117.90	116.28	116.28	115.95
1975	114.57	114.44	112.48	112.00	111.25	111.33	112.90	114.48	115.74	113.99	114.01	114.42
1976	114.36	114.55	114.89	114.77	114.29	114.40	115.32	113.88	112.50	110.60	110.13	109.75
1977	111.07	111.42	111.12	108.10	107.06	108.58	108.63	109.23	116.67	116.11	115.27	115.68
1978	116.58	113.88	110.81	110.25	109.29	108.11	108.33	108.38	109.03	109.39	109.55	109.66
1979	110.06	110.28	110.18	109.96	109.95	109.92	110.14	110.31	110.20	111.83	111.87	112.43
1980	112.49	112.47	113.03	114.63	114.37	114.60	114.53	114.46	114.18	113.98	114.02	114.36
1981	114.70	113.77	113.62	113.47	113.73	114.06	114.49	115.03	120.93	125.69	126.45	127.20
1982	127.84	128.02	127.95	128.56	128.57	129.01	129.54	129.44	129.85	133.70	136.06	137.71
1983	138.01	138.37	138.13	138.08	138.11	138.10	137.86	137.94	138.25	138.22	137.94	137.92
1984	137.90	138.44	138.03	139.01	139.21	139.42	138.29	138.02	136.96	136.54	137.34	137.47
1985	136.87	136.30	137.74	139.45	139.30	139.36	139.59	140.11	139.82	140.31	140.32	140.41
1986	140.54	141.22	141.48	141.71	140.41	139.22	139.71	140.69	140.95	140.98	140.83	141.24
1987	142.96	143.15	142.75	143.28	144.01	143.75	143.93	144.43	145.57	146.23	147.19	147.49
1988	148.34	147.38	147.28	147.35	146.99	146.63	145.10	145.40	145.95	145.99	147.17	147.43
1989	147.67	147.44	148.77	152.14	151.79	151.29	151.71	150.95	150.01	151.16	151.23	152.95
1990	154.25	155.14	153.53	153.52	154.50	154.24	155.28	156.28	155.81	156.23	156.55	156.20
1991	155.08	154.43	153.80	153.45	152.51	152.42	150.93	149.60	149.45	149.65	142.33	134.79
1992	133.73	132.95	132.97	132.74	132.64	132.55	132.55	132.63	122.05	118.85	123.32	134.10
1993	134.00	129.58	129.59	132.89	133.82	133.73	137.72	138.09	138.63	139.39	142.38	145.32
1994	142.79	143.01	143.04	143.61	142.73	144.00	149.25	150.65	151.62	155.26	155.81	155.03
1995	157.67	159.03	165.93	172.12	169.03	169.00	169.00	168.10	163.45	160.22	155.65	153.11
1996	151.40	151.24	146.36	142.11	143.02	143.03	144.75	147.80	146.34	144.38	145.59	147.03
1997	147.98	148.79	150.88	149.80	149.41	149.75	147.25	145.13	143.86	143.77	144.91	144.96

Table A7.12. *Monthly exchange rates on euro. SEK per EUR 1998–2008.**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1998	8.71	8.79	8.65	8.55	8.54	8.72	8.78	8.96	9.13	9.44	9.35	9.48
1999	9.08	8.91	8.94	8.92	8.98	8.83	8.75	8.76	8.63	8.73	8.63	8.59
2000	8.60	8.51	8.40	8.27	8.24	8.31	8.41	8.40	8.41	8.53	8.63	8.66
2001	8.90	8.97	9.13	9.11	9.05	9.20	9.26	9.30	9.67	9.58	9.41	9.44
2002	9.23	9.19	9.06	9.13	9.22	9.12	9.27	9.25	9.17	9.11	9.08	9.09
2003	9.18	9.15	9.22	9.16	9.15	9.11	9.19	9.24	9.07	9.01	8.99	9.02
2004	9.14	9.18	9.23	9.17	9.13	9.14	9.20	9.19	9.10	9.06	9.00	8.98
2005	9.05	9.08	9.09	9.17	9.19	9.26	9.43	9.34	9.34	9.42	9.57	9.44
2006	9.32	9.34	9.40	9.33	9.34	9.23	9.21	9.21	9.27	9.26	9.10	9.04
2007	9.08	9.18	9.30	9.24	9.20	9.34	9.19	9.32	9.29	9.18	9.28	9.42
2008	9.43	9.37	9.40	9.37	9.32	9.37	9.46	9.40	9.56	9.84	10.12	10.72

* 1 Euro = 13.7603 Austrian schillings = 40.3399 Belgian francs = 2.20371 Dutch guilder = 5.94573 Finnish markka = 6.55957 French francs = 1.95583 German Mark = 0.787564 Irish pounds = 1936.27 Italian lire = 40.3399 Luxembourg francs = 200.482 Portuguese escudos = 166.386 Spanish pesetas = 340.750 Greek drachmas.

Table A7.13. *Monthly exchange rates on Japan. SEK per 100 JPY 1960–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1960	1.45	1.45	1.46	1.44	1.45	1.45	1.46	1.45	1.46	1.46	1.45	1.46
1961	1.46	1.46	1.46	1.44	1.44	1.44	1.44	1.44	1.45	1.44	1.44	1.45
1962	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.45	1.45	1.46	1.46
1963	1.46	1.46	1.46	1.45	1.45	1.45	1.44	1.45	1.45	1.45	1.45	1.45
1964	1.45	1.44	1.44	1.43	1.43	1.43	1.43	1.43	1.44	1.44	1.44	1.45
1965	1.45	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.45	1.45	1.45
1966	1.45	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44
1967	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.45	1.44
1968	1.44	1.44	1.45	1.44	1.44	1.45	1.45	1.45	1.46	1.46	1.46	1.46
1969	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.45	1.46	1.46	1.46	1.46
1970	1.46	1.46	1.47	1.47	1.46	1.46	1.46	1.46	1.47	1.47	1.46	1.46
1971	1.46	1.46	1.46	1.46	1.46	1.46	1.46	1.48	1.54	1.56	1.56	1.56
1972	1.57	1.59	1.59	1.60	1.58	1.59	1.59	1.59	1.58	1.59	1.59	1.59
1973	1.59	1.68	1.72	1.72	1.70	1.63	1.56	1.59	1.61	1.59	1.59	1.64
1974	1.64	1.63	1.64	1.61	1.56	1.56	1.53	1.48	1.52	1.49	1.46	1.41
1975	1.37	1.38	1.38	1.38	1.37	1.35	1.41	1.47	1.50	1.47	1.47	1.46
1976	1.45	1.47	1.48	1.49	1.49	1.51	1.53	1.53	1.53	1.48	1.44	1.43
1977	1.47	1.51	1.52	1.60	1.59	1.63	1.66	1.69	1.83	1.90	1.98	1.99
1978	1.96	1.95	2.01	2.09	2.08	2.17	2.29	2.38	2.35	2.35	2.30	2.26
1979	2.22	2.20	2.14	2.04	2.03	2.00	1.96	1.95	1.90	1.84	1.74	1.75
1980	1.75	1.72	1.76	1.76	1.86	1.92	1.88	1.87	1.95	2.01	2.03	2.11
1981	2.21	2.25	2.22	2.19	2.23	2.27	2.24	2.28	2.37	2.40	2.47	2.55
1982	2.51	2.46	2.43	2.43	2.45	2.41	2.41	2.38	2.38	2.65	2.85	3.04
1983	3.15	3.16	3.15	3.16	3.20	3.19	3.20	3.22	3.25	3.35	3.37	3.45
1984	3.50	3.44	3.44	3.49	3.51	3.48	3.43	3.46	3.50	3.53	3.53	3.58

Table A7.13 (cont.). *Monthly exchange rates on Japan. SEK per 100 JPY 1960–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1985	3.58	3.59	3.65	3.57	3.58	3.56	3.52	3.51	3.55	3.71	3.84	3.80
1986	3.80	4.01	4.06	4.14	4.29	4.31	4.46	4.51	4.48	4.42	4.28	4.26
1987	4.29	4.25	4.24	4.43	4.46	4.40	4.29	4.41	4.46	4.44	4.50	4.63
1988	4.69	4.69	4.69	4.72	4.74	4.80	4.77	4.85	4.80	4.87	4.95	4.93
1989	4.93	4.96	4.90	4.83	4.77	4.65	4.61	4.64	4.56	4.55	4.48	4.39
1990	4.26	4.18	4.03	3.87	3.95	3.97	4.00	3.93	4.17	4.35	4.33	4.22
1991	4.22	4.26	4.30	4.47	4.46	4.60	4.69	4.63	4.59	4.71	4.58	4.48
1992	4.56	4.58	4.54	4.47	4.47	4.76	4.30	4.19	4.38	4.61	5.02	5.55
1993	5.80	6.23	6.61	6.63	6.64	6.91	7.39	7.76	7.61	7.50	7.66	7.62
1994	7.30	7.50	7.53	7.63	7.45	7.60	7.87	7.75	7.63	7.37	7.50	7.51
1995	7.49	7.52	8.01	8.79	8.01	8.58	8.23	7.65	7.11	6.79	6.47	6.51
1996	6.37	6.51	6.36	6.27	6.40	6.14	6.08	6.14	6.05	5.88	5.90	6.00
1997	5.99	6.02	6.25	6.12	6.47	6.78	6.78	6.78	6.38	6.26	6.04	6.01
1998	6.18	6.43	6.18	5.93	5.70	5.62	5.68	5.61	5.88	6.49	6.64	6.86
1999	6.92	6.82	6.87	6.97	6.93	7.05	7.07	7.29	7.67	7.69	7.96	8.27
2000	8.07	7.91	8.16	8.28	8.41	8.24	8.28	8.58	9.05	9.19	9.25	8.62
2001	8.11	8.38	8.28	8.24	8.48	8.82	8.64	8.51	8.94	8.71	8.66	8.32
2002	7.88	7.91	7.89	7.88	7.96	7.74	7.91	7.95	7.75	7.49	7.46	7.32
2003	7.27	7.11	7.20	7.04	6.76	6.60	6.81	6.97	7.03	7.03	7.03	6.82
2004	6.81	6.82	6.94	7.11	6.79	6.88	6.85	6.83	6.77	6.66	6.62	6.46
2005	6.68	6.65	6.54	6.60	6.79	7.00	6.99	6.87	6.86	6.83	6.85	6.71
2006	6.67	6.64	6.67	6.50	6.55	6.37	6.28	6.20	6.22	6.18	6.03	5.84
2007	5.80	5.83	5.99	5.76	5.64	5.68	5.51	5.87	5.82	5.57	5.70	5.77
2008	5.95	5.93	6.01	5.80	5.75	5.64	5.62	5.74	6.24	7.41	8.21	8.77

Table A7.14. *Monthly exchange rates on Czech Republic. SEK per 100 CSK 1922–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1922	6.70	7.18	6.70	7.65	7.64	7.56	8.57	11.15	12.15	12.58	12.00	11.65
1923	10.83	11.20	11.24	11.29	11.26	11.36	11.36	11.15	11.36	11.36	11.16	11.23
1924	11.18	11.18	11.18	11.18	11.18	11.12	11.18	11.21	11.22	11.31	11.27	11.30
1925	11.25	11.06	11.10	11.11	11.19	11.15	11.12	11.10	11.16	11.17	11.19	11.18
1926	11.15	11.15	11.15	11.13	11.15	11.13	11.10	11.10	11.13	11.15	11.15	11.15
1927	11.15	11.15	11.15	11.15	11.15	11.15	11.15	11.13	11.09	11.07	11.10	11.05
1928	11.08	11.10	11.10	11.10	11.10	11.08	11.11	11.15	11.15	11.15	11.15	11.13
1929	11.12	11.13	11.13	11.12	11.12	11.11	11.10	11.10	11.10	11.07	11.06	11.06
1930	11.07	11.07	11.07	11.06	11.09	11.10	11.08	11.07	11.08	11.08	11.09	11.09
1931	11.10	11.09	11.10	11.10	11.08	11.09	11.10	11.11	11.46	13.37	14.52	16.28
1932	15.84	15.75	15.51	16.05	16.31	16.47	16.74	16.99	17.07	17.52	17.47	16.93
1933	16.59	16.63	16.69	16.85	17.55	17.53	17.58	17.88	18.72	19.98	18.38	17.93
1934	18.58	17.82	16.25	16.07	16.32	16.53	16.37	16.59	16.83	16.97	16.78	16.93
1935	16.87	17.01	17.50	17.34	17.06	16.73	16.69	16.55	16.62	16.76	16.67	16.62
1936	16.64	16.60	16.60	16.60	16.49	16.37	16.40	16.26	16.19	15.09	14.27	14.23
1937	14.06	14.10	14.10	14.03	14.00	13.97	13.84	13.80	13.87	13.88	13.76	13.75
1938	13.75	13.77	13.82	13.81	13.72	13.73	13.77	13.86	14.07	14.21	14.30	14.45
1939	14.52	14.50	14.50	14.50	14.50	14.40	14.40	14.41	14.60	14.60	14.60	14.60

Table A7.14 (cont.). *Monthly exchange rates on Czech Republic. SEK per 100 CSK 1922–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1940	14.60	14.57	14.49	14.50	14.50	14.50	14.50	14.50	14.50	16.23		
1998	22.63	23.43	23.44	23.20	23.61	23.71	24.96	25.32	25.81	26.73	26.75	26.86
1999	25.47	23.64	23.55	23.49	23.81	23.77	23.91	23.98	23.69	23.74	23.73	23.82
2000	23.58	23.84	23.56	22.78	22.53	23.10	23.61	23.75	23.74	24.18	24.93	24.87
2001	25.32	25.90	26.39	26.37	26.33	27.10	27.33	27.33	28.30	28.55	28.27	29.01
2002	28.81	28.90	28.84	30.09	30.18	30.07	31.22	30.05	30.37	29.69	29.53	29.19
2003	29.14	28.94	29.05	28.94	29.16	29.02	28.85	28.62	28.02	28.17	28.13	27.93
2004	27.90	27.95	28.00	28.20	28.52	28.89	29.16	29.05	28.78	28.79	28.78	29.28
2005	29.87	30.31	30.53	30.43	30.39	30.83	31.24	31.57	31.84	31.75	32.67	32.58
2006	32.45	32.87	32.82	32.75	33.02	32.56	32.39	32.65	32.65	32.73	32.49	32.52
2007	32.63	32.53	33.14	33.01	32.59	32.71	32.39	33.47	33.71	33.56	34.74	35.89
2008	36.20	36.89	37.35	37.42	37.13	38.53	40.19	38.68	39.11	39.71	40.24	41.14

Table A7.15. *Monthly exchange rates on Poland. SEK per 100 zloty 1930–39 and per PLN 1998–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1930	41.94	41.93	41.89	41.85	41.90	41.89	41.85	41.88	41.89	41.88	41.88	41.87
1931	41.97	41.93	41.95	41.94	41.86	41.90	41.95	42.00	43.30	49.89	54.60	60.88
1932	59.46	58.85	57.95	59.57	60.84	60.93	62.34	63.48	63.64	65.06	65.22	63.72
1933	62.10	62.26	62.76	63.64	65.92	65.63	65.80	66.96	69.88	70.65	68.90	67.52
1934	69.27	72.37	72.73	72.12	72.64	73.25	73.50	73.88	75.16	75.48	74.14	74.62
1935	75.59	75.78	77.76	76.39	75.23	74.85	74.71	74.35	74.40	74.84	74.64	74.53
1936	74.53	74.58	74.46	74.25	73.94	73.42	73.75	73.21	73.08	75.34	75.25	75.25
1937	75.25	75.43	75.72	75.46	75.00	75.00	74.59	74.10	74.50	74.50	74.15	74.00
1938	74.00	74.00	74.18	74.50	74.30	74.37	74.53	75.23	76.83	77.46	78.16	79.11
1939	79.37	78.77	78.57	78.65	78.50	78.50	78.50	78.44	81.00	81.00	81.00	81.00
1998	2.27	2.28	2.30	2.28	2.25	2.27	2.31	2.29	2.20	2.25	2.32	2.32
1999	2.22	2.10	2.08	2.09	2.15	2.15	2.18	2.09	2.02	1.99	1.96	2.04
2000	2.07	2.08	2.12	2.07	2.02	1.99	2.07	2.13	2.15	2.15	2.21	2.23
2001	2.30	2.38	2.47	2.53	2.60	2.71	2.57	2.44	2.51	2.56	2.59	2.63
2002	2.57	2.52	2.50	2.54	2.49	2.37	2.27	2.27	2.25	2.25	2.30	2.28
2003	2.25	2.20	2.13	2.13	2.12	2.05	2.07	2.12	2.03	1.96	1.95	1.94
2004	1.94	1.90	1.94	1.93	1.93	1.99	2.06	2.08	2.08	2.10	2.11	2.17
2005	2.22	2.28	2.26	2.21	2.20	2.28	2.30	2.31	2.38	2.40	2.41	2.45
2006	2.44	2.46	2.42	2.38	2.40	2.30	2.31	2.36	2.34	2.37	2.38	2.37
2007	2.34	2.36	2.39	2.42	2.43	2.45	2.44	2.45	2.45	2.48	2.54	2.62
2008	2.61	2.62	2.66	2.72	2.74	2.78	2.90	2.86	2.84	2.76	2.72	2.27

Table A7.16. *Monthly exchange rates on Latvia. SEK per 100 lats 1930–40 and per LVL 1998–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1930	71.89	71.93	71.94	71.90	71.93	71.94	71.90	71.88	71.90	71.87	71.84	71.83
1931	71.96	71.97	71.99	72.00	71.96	71.95	71.98	72.12	72.13	77.63	90.20	
1932												
1933												
1934												
1935												
1936												
1937											77.35	77.35
1938	77.35	77.42	77.50	77.50	77.50	77.50	77.50	77.50	77.56	77.96	77.75	77.75
1939	77.75	77.75	77.75	77.75	77.75	77.75	77.75	77.41	76.93	79.02	79.50	79.50
1940	79.50	79.30	78.47	78.68	79.83	80.00	80.00	80.00	80.00	80.00	80.00	80.00
1998	13.51	13.74	13.52	13.24	13.05	13.28	13.36	13.48	13.37	13.60	13.78	14.01
1999	13.70	13.77	14.00	14.10	14.26	14.24	14.06	13.95	14.00	14.06	14.24	14.48
2000	14.46	14.53	14.63	14.70	14.99	14.62	14.87	15.27	15.69	16.01	16.05	15.48
2001	15.35	15.72	16.06	16.20	16.39	16.98	16.97	16.54	17.13	17.04	16.96	16.86
2002	16.42	16.46	16.27	16.31	16.13	15.61	15.57	15.69	15.51	15.30	15.10	15.04
2003	14.81	14.68	14.74	14.57	14.08	13.91	14.20	14.43	14.21	13.89	13.89	13.62
2004	13.63	13.71	13.99	14.11	13.93	13.93	13.94	13.96	13.76	13.54	13.24	13.02
2005	13.00	13.05	13.05	13.17	13.21	13.30	13.55	13.42	13.41	13.53	13.74	13.55
2006	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	13.39	12.95
2007	13.02	13.12	13.12	13.13	13.21	13.41	13.18	13.36	13.24	13.05	13.25	13.51
2008	13.51	13.44	13.49	13.44	13.34	13.33	13.45	13.35	13.54	13.88	14.27	15.13

Table A7.17. *Monthly exchange rates on Estonia. SEK per 100 krooni 1930–40 and per EEK 1998–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1930	99.58	99.48	99.41	99.30	99.33	99.27	99.23	99.39	99.37	99.29	99.35	99.33
1931	99.46	99.56	99.63	99.60	99.56	99.45	99.49	99.77	99.83	107.67	125.17	
1932												
1933												
1934												
1935												
1936												
1937											107.25	107.25
1938	107.25	107.25	107.25	107.25	107.25	107.25	107.25	107.25	107.25	107.25	107.25	107.35
1939	107.50	107.50	107.42	107.35	107.50	107.50	107.50	107.33	100.60	101.00	101.00	101.00
1940	101.00	101.00	101.00	101.00	101.00	101.00	101.00	101.00	101.00	101.00	101.00	101.00
1998	0.55	0.56	0.55	0.54	0.54	0.55	0.56	0.57	0.58	0.59	0.59	0.60
1999	0.58	0.57	0.57	0.57	0.57	0.56	0.56	0.56	0.55	0.56	0.55	0.55
2000	0.55	0.54	0.54	0.53	0.53	0.53	0.54	0.54	0.54	0.54	0.55	0.55
2001	0.57	0.57	0.58	0.58	0.58	0.59	0.59	0.59	0.62	0.61	0.60	0.60

Table A7.17 (cont.). *Monthly exchange rates on Estonia. SEK per 100 krooni 1930–40 and per EEK 1998–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2002	0.59	0.59	0.58	0.58	0.59	0.58	0.59	0.59	0.59	0.58	0.58	0.58
2003	0.59	0.58	0.59	0.59	0.59	0.58	0.59	0.59	0.58	0.58	0.57	0.58
2004	0.58	0.59	0.59	0.59	0.58	0.58	0.59	0.59	0.58	0.58	0.58	0.57
2005	0.58	0.58	0.58	0.59	0.59	0.59	0.60	0.60	0.60	0.60	0.61	0.60
2006	0.60	0.60	0.60	0.60	0.60	0.59	0.59	0.59	0.59	0.59	0.58	0.58
2007	0.58	0.59	0.59	0.59	0.59	0.60	0.59	0.60	0.59	0.59	0.59	0.60
2008	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.60	0.61	0.63	0.65	0.69

Table A7.18. *Monthly exchange rates on Lithuania. SEK per 100 litas 1932–40 and per LTL 1998–2008.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1932												56.12
1933	55.50	55.61	55.76	55.40	59.08	58.83	58.89	59.66	62.56	62.73	61.29	60.09
1934	61.69	64.21	64.71	64.16	64.80	65.37	65.29	65.70	67.02	67.06	65.96	66.35
1935	67.34	67.51	69.17	68.25	67.23	66.86	66.70	66.38	66.40	66.96	66.83	66.71
1936	66.77	66.68	66.59	66.50	66.08	65.42	65.75	65.54	65.45	67.26	67.75	67.50
1937	67.50	67.50	67.59	67.45	67.25	67.25	66.76	66.30	66.46	66.74	66.35	66.25
1938	66.25	66.25	66.25	66.25	66.31	66.49	66.91	67.11	68.85	69.62	70.17	70.66
1939	70.78	70.31	70.37	70.50	70.50	70.50	70.42	70.25	70.88	71.25	71.25	71.25
1940	71.25	71.32	71.70	71.70	71.98	72.00	72.00	72.00	72.00	72.00	72.00	72.00
1998	2.00	2.02	1.99	1.96	1.92	1.98	2.00	2.03	1.98	1.96	2.00	2.01
1999	1.96	1.99	2.05	2.08	2.11	2.13	2.11	2.06	2.06	2.04	2.08	2.12
2000	2.13	2.16	2.14	2.15	2.27	2.23	2.23	2.32	2.40	2.49	2.52	2.42
2001	2.37	2.43	2.51	2.55	2.58	2.69	2.69	2.58	2.65	2.64	2.65	2.64
2002	2.61	2.66	2.63	2.65	2.67	2.64	2.68	2.68	2.66	2.64	2.63	2.63
2003	2.66	2.65	2.67	2.65	2.65	2.64	2.66	2.68	2.63	2.61	2.60	2.61
2004	2.65	2.66	2.67	2.66	2.64	2.65	2.66	2.66	2.63	2.62	2.61	2.60
2005	2.62	2.63	2.63	2.65	2.66	2.68	2.73	2.70	2.70	2.73	2.77	2.73
2006	2.70	2.70	2.72	2.70	2.70	2.68	2.67	2.67	2.69	2.68	2.64	2.62
2007	2.63	2.66	2.69	2.68	2.67	2.70	2.66	2.70	2.69	2.66	2.69	2.73
2008	2.73	2.71	2.72	2.71	2.70	2.72	2.74	2.72	2.77	2.85	2.93	3.10

Appendix A7.2: Exchange rate index January 1913– December 2008

Table A7.19: *Periods for which separate exchange rate indices are calculated, the countries included in the indices and the percentage of Sweden's foreign trade covered by countries included.*

Period (weights pertaining to year)	Countries whose currencies are included in the exchange rate index	Percentage of Sweden's total foreign trade (imports + exports) for countries included in the index
1913,1–1916,1 (1915)	UK, USA, Germany, France, Denmark, Norway, Finland, Austria, Russia	88.2 (excl. Germany 58.2)
1916,1–1921,1 (1915)	UK, USA, Germany, France, Switzerland, Netherlands, Denmark, Norway	83.6 (excl. Germany 53.6)
1921,1–1924,2 (1920)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy Spain	86.8 (excl. Germany 74.5)
1924,2–1930,1 (1925)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Spain, Czechoslovakia	85.5
1930,1–1935,1 (1930)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Spain, Czechoslovakia, Poland	86.5
1935,1–1940,1 (1935)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Czechoslovakia, Poland	84
1940,1–1943,1 (1940)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy	82.2
1943,1–1944,9 (1943)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Portugal, Argentina	83.6
1944,9–1945,5 (1944)	UK, USA, Germany, Switzerland, Netherlands, Denmark, Norway, Finland, Portugal, Argentina	79.7
1945,5–1945,12 (1945)	UK, USA, Switzerland, Denmark, Norway, Finland, Argentina	66.2
1945,12–1950,1 (1946)	UK, USA, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Argentina	66.1
1950,1–1950,9 (1950)	UK, USA, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Argentina, Brazil	60.5
1950,9–1955,1 (1950)	UK, USA, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Argentina, Brazil	72.1
1955,1–1960,1 (1955)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy	81.7
1960,1–1965,1(1960)	See, previous period	76.7
1965,1–1970,1 (1965)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Spain, Austria, Canada, Japan	82.2
1970,1–1975,1 (1970)	See previous period	85.9
1975,1–1980,1 (1975)	See previous period	82

Period (weights pertaining to year)	Countries whose currencies are included in the exchange rate index	Percentage of Sweden's total foreign trade (imports + exports) for countries included in the index
1980,1–1985,1 (1980)	See previous period	76.5
1985,–1990,1 (1985)	See previous period	82.4
1990,1–1995,1 (1990)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Spain, Austria, Canada, Japan, Portugal, Australia	85.3
1995,1–2000,1 (1995)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Spain, Austria, Canada, Japan, Portugal, Australia	83.7
2000,1–2002,2 (2000)	UK, USA, Germany, France, Belgium, Switzerland, Netherlands, Denmark, Norway, Finland, Italy, Spain, Canada, Japan, Australia, Czech Republic, Poland, Estonia, P.R.China, Hong Kong, Turkey, Taiwan, Mexico, Malaysia, Russia	88
2002,2–2005,1 (2000)	Euro-land (Germany, France Belgium, Netherlands, Finland, Italy, Spain, Austria, Portugal, Ireland, Greece), UK, USA, Switzerland, Denmark, Norway, Canada, Japan, Australia, Czech Republic, Poland, Estonia, P.R. China, Hong Kong, Turkey, Taiwan, Mexico, Malaysia, Russia	91.1
2005,1– (2005)	Euro-land (Germany, France Belgium, Netherlands, Finland, Italy, Spain, Austria, Portugal, Ireland, Greece), UK, USA, Switzerland, Denmark, Norway, Canada, Japan, Australia, Czech Republic, Hungary, Poland, Latvia, Estonia, Lithuania, P. R. China, Hong Kong, Turkey, Mexico, Russia	90.3

Table A7.20. Exchange rate index 1913-2008, SEK/foreign currency (January 1929 = 100).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	231.44	231.51	231.67	231.56	231.62	231.42	231.42	231.37	231.27	231.42	231.49	231.26
1914	231.23	231.00	231.09	231.12	231.25	231.19	231.26	231.84	233.70	232.34	228.92	233.30
1915	233.93	233.81	231.08	223.83	219.75	210.80	217.50	216.91	217.26	214.54	207.00	199.11
1916	198.82	194.91	189.80	185.65	183.38	186.58	190.95	189.80	190.20	188.87	187.94	180.82
1917	179.23	178.89	176.37	173.32	172.50	167.63	161.68	153.00	149.65	136.23	133.28	163.54
1918	160.68	172.45	174.46	169.69	168.81	163.88	154.98	152.69	157.48	173.60	175.62	166.20
1919	167.48	165.84	162.34	159.85	163.70	159.07	158.62	150.86	146.09	145.01	145.49	146.95
1920	146.38	149.75	145.45	141.36	145.75	144.82	141.91	141.86	139.19	140.48	142.12	141.87
1921	139.29	128.92	124.31	120.65	123.93	122.71	124.59	122.97	118.50	112.14	109.83	123.93
1922	108.97	106.76	106.56	108.04	109.67	108.59	106.02	103.49	101.71	100.32	100.14	101.61
1923	101.29	101.59	101.67	101.20	100.26	99.68	98.44	98.05	98.11	97.87	95.89	95.64
1924	93.58	92.82	92.57	94.51	94.51	93.37	93.24	95.18	95.19	95.88	96.70	93.21
1925	93.87	93.59	93.67	94.18	95.58	95.13	95.98	96.99	98.17	98.03	97.84	97.50
1926	97.55	97.88	98.02	97.70	97.25	97.20	96.38	96.85	97.01	97.77	98.84	99.35
1927	99.55	99.71	99.70	99.76	99.92	99.80	99.85	99.77	99.76	99.73	99.79	99.59

Table A7.20 (cont.). Exchange rate index 1913–2008, SEK/foreign currency (January 1929 = 100).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1928	99.89	100.05	100.12	100.15	100.21	100.15	100.11	100.07	100.04	100.04	100.07	99.99
1929	100.00	99.93	99.90	99.85	100.89	99.68	99.61	99.62	99.63	99.69	99.67	99.36
1930	99.51	99.45	99.29	99.25	99.35	99.22	99.17	99.12	99.01	98.99	99.20	99.16
1931	99.22	99.18	99.24	99.23	99.07	99.01	99.00	99.05	100.07	107.09	116.61	125.17
1932	122.48	122.32	121.09	126.50	128.34	127.95	129.82	131.45	131.52	133.19	132.24	128.61
1933	126.67	127.76	127.72	127.34	129.36	128.20	127.59	129.20	131.99	132.38	129.02	127.49
1934	128.89	132.40	132.46	131.28	132.07	131.95	131.84	133.04	135.37	136.52	134.94	135.65
1935	136.58	136.96	138.43	136.44	135.48	134.93	134.54	134.32	134.65	135.05	134.81	134.68
1936	134.54	134.36	134.42	134.49	134.02	133.27	133.37	133.11	132.65	130.42	130.31	130.11
1937	130.03	130.22	130.34	129.82	129.43	129.35	128.42	128.17	128.26	128.10	127.78	127.73
1938	127.62	127.52	127.66	127.62	127.40	127.57	127.86	128.41	128.41	130.17	131.02	131.70
1939	131.76	131.37	131.31	131.32	131.47	131.42	131.38	131.16	126.81	126.66	125.86	126.13
1940	126.67	126.59	126.50	127.85	127.77	127.94	127.95	126.29	126.25	126.33	126.25	126.13
1941	126.13	126.14	126.14	126.14	126.17	126.46	126.56	126.46	126.46	126.46	126.46	126.46
1942	126.42	126.67	126.68	126.69	126.69	126.69	126.72	128.35	126.69	126.69	126.69	126.69
1943	126.80	126.80	126.80	126.80	126.80	126.79	126.79	126.79	127.13	127.22	127.22	127.22
1944	127.22	127.22	127.20	127.18	127.07	127.10	127.12	127.09	127.06	125.08	125.30	125.29
1945	125.06	125.08	125.21	125.20	124.98	118.02	117.74	115.97	115.94	115.65	115.28	115.29
1946	110.88	110.89	110.95	110.96	110.96	116.18	101.50	95.27	95.22	95.18	95.64	95.13
1947	95.13	95.13	95.13	95.13	95.13	95.13	95.15	95.21	95.22	95.23	95.26	95.27
1948	95.27	95.27	95.28	95.28	95.28	95.12	93.77	93.82	93.79	93.74	93.76	93.77
1949	92.05	92.11	92.11	92.11	92.07	92.07	91.65	91.59	97.30	106.64	106.48	106.48
1950	106.48	106.48	106.48	106.48	106.48	106.48	106.48	106.48	105.34	105.13	105.06	104.99
1951	105.06	105.06	105.05	105.06	105.04	105.04	105.04	105.04	104.99	104.99	104.98	105.00
1952	105.00	105.03	105.06	105.06	105.07	105.08	105.08	105.08	105.08	105.08	105.11	105.17
1953	105.23	105.25	105.30	105.26	105.18	105.24	105.27	105.10	105.01	104.92	105.01	105.16
1954	105.28	105.35	105.35	105.38	105.25	105.10	105.26	105.27	105.20	105.31	105.39	105.34
1955	105.28	105.27	105.31	105.34	105.27	105.01	104.84	104.74	104.83	104.87	105.15	105.34
1956	105.39	105.39	105.38	105.38	105.35	105.18	104.90	104.75	104.81	105.03	104.80	104.87
1957	105.00	105.05	104.94	104.98	104.89	104.82	105.04	104.35	103.71	103.40	103.43	103.44
1958	103.55	103.65	103.68	103.67	103.61	103.53	103.42	103.37	103.55	103.67	103.56	103.21
1959	102.91	102.93	102.97	103.02	103.01	103.03	102.98	102.93	102.85	102.91	102.97	103.00
1960	103.03	103.01	103.01	102.86	102.88	102.74	102.79	102.69	102.84	102.86	102.94	103.01
1961	102.90	102.75	103.45	104.09	103.89	103.92	103.89	103.97	104.25	104.19	104.18	104.23
1962	104.18	103.97	103.93	103.77	103.73	103.69	103.71	103.60	103.63	103.61	103.92	104.45
1963	104.17	104.36	104.43	104.53	104.48	104.41	104.31	104.45	104.42	104.51	104.52	104.57
1964	104.46	104.31	103.71	103.50	103.44	103.36	103.45	103.30	103.37	103.74	103.69	103.57
1965	103.40	103.38	103.32	103.52	103.62	103.69	103.73	103.79	103.79	103.96	104.07	104.05
1966	103.92	103.81	103.56	103.52	103.41	103.52	103.93	103.82	103.85	103.94	103.94	103.99
1967	103.91	103.88	103.83	103.74	103.72	103.59	103.48	103.53	103.59	103.24	101.30	99.58
1968	99.34	99.34	99.48	99.49	99.37	99.22	99.17	99.10	99.20	99.32	99.42	99.40
1969	99.25	99.18	99.13	99.06	99.24	99.15	99.13	98.81	99.07	100.12	100.54	100.63
1970	100.58	100.95	101.33	101.50	101.60	101.38	101.32	101.21	101.59	101.38	101.18	101.06
1971	101.08	101.36	101.21	101.17	101.86	102.03	102.36	102.87	102.97	102.70	102.17	101.67
1972	101.52	101.83	101.75	101.81	101.31	100.97	100.05	99.87	99.65	99.31	99.20	99.22

Table A7.20 (cont.). Exchange rate index 1913-2008, SEK/foreign currency (January 1929 = 100).

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1973	99.31	101.08	102.75	102.93	102.50	101.99	102.33	102.20	102.98	102.86	103.01	104.68
1974	105.25	105.80	105.62	104.14	103.43	104.22	104.23	103.85	103.68	103.34	103.32	102.23
1975	101.29	101.22	100.73	100.33	99.75	99.42	100.14	101.35	102.71	102.03	101.80	101.32
1976	100.86	100.94	100.41	99.96	99.60	99.59	100.01	99.43	98.58	96.81	96.19	95.84
1977	96.92	97.36	96.97	99.61	99.90	101.31	101.15	102.83	111.12	111.23	112.35	114.48
1978	115.02	115.09	114.90	114.19	113.17	113.31	113.48	113.89	114.73	116.35	115.26	116.03
1979	116.49	116.64	116.58	116.06	115.21	114.80	115.39	115.01	115.25	115.24	115.45	116.09
1980	116.22	116.19	115.97	115.95	116.07	116.45	116.44	116.06	115.95	115.33	115.18	115.37
1981	115.58	114.00	113.81	113.49	113.19	113.05	112.88	113.09	119.94	125.09	125.71	126.14
1982	126.10	126.02	125.61	125.78	126.17	126.17	125.82	125.15	125.33	140.99	145.86	147.51
1983	147.74	147.74	147.62	147.32	147.13	146.48	145.88	145.72	146.17	146.47	145.99	145.59
1984	145.28	145.66	144.54	144.46	144.81	145.10	143.73	143.44	142.27	141.86	142.78	143.16
1985	143.34	142.82	144.41	146.24	145.94	145.85	146.14	146.83	146.43	146.67	146.30	146.65
1986	147.08	148.06	148.51	148.55	148.28	148.50	149.21	149.94	150.12	150.30	150.27	150.68
1987	152.23	152.12	150.95	151.03	151.67	151.27	151.42	151.80	152.65	152.93	154.42	155.05
1988	154.76	153.59	153.19	150.82	152.26	152.17	151.57	151.90	151.59	151.29	152.11	152.07
1989	151.46	151.40	151.44	150.90	150.29	149.62	150.41	150.04	149.55	150.47	151.40	153.22
1990	154.21	154.49	153.10	153.21	154.12	154.18	154.85	155.93	155.73	156.60	157.17	157.16
1991	156.65	156.52	155.43	154.47	154.02	155.30	155.62	155.27	154.77	155.11	153.55	152.09
1992	151.49	151.83	152.07	151.60	151.16	151.32	149.88	149.45	149.26	149.69	157.13	173.27
1993	178.76	181.93	186.37	185.20	182.96	181.37	188.18	189.85	194.72	192.91	194.04	196.46
1994	189.45	186.75	188.25	187.48	186.84	191.30	195.94	195.59	192.51	189.44	189.66	190.21
1995	192.29	192.62	198.03	204.45	199.57	200.23	199.38	195.30	190.77	186.84	180.21	178.48
1996	178.98	182.56	177.76	175.29	175.35	173.13	174.07	175.29	174.26	171.90	174.87	176.75
1997	179.12	181.37	185.05	184.74	185.22	185.46	182.84	182.11	179.15	179.11	181.04	182.25
1998	183.93	185.69	182.52	179.81	178.78	182.28	183.48	186.72	188.83	193.41	193.26	195.69
1999	189.19	186.89	189.13	189.70	191.59	189.75	187.73	187.25	185.86	187.37	186.82	187.34
2000	187.62	186.93	185.49	183.78	184.50	183.20	186.14	188.29	190.57	194.44	196.34	194.17
2001	196.02	198.73	202.63	203.49	204.01	209.05	209.53	207.51	215.34	213.59	211.34	211.25
2002	207.05	207.28	204.27	205.88	206.31	202.25	204.26	204.36	202.74	201.11	199.77	199.42
2003	199.12	197.04	197.30	195.67	193.04	191.41	193.64	195.24	191.91	189.46	189.36	188.21
2004	189.43	190.21	192.73	192.98	191.69	191.92	192.37	192.68	190.24	189.02	187.09	185.74
2005	187.88	188.89	188.68	190.88	192.29	196.09	199.38	197.14	197.85	199.98	203.63	200.53
2006	197.15	198.19	199.06	197.12	196.40	193.85	193.11	193.02	193.91	193.74	190.45	188.50
2007	189.70	191.97	193.72	192.16	191.38	194.73	191.50	194.27	193.37	190.81	191.57	194.22
2008	193.96	192.62	191.72	190.29	189.96	191.00	192.61	192.66	196.44	203.27	208.96	215.60

Table A7.21. *Exchange rate index excluding Germany 1913–24.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	120.05	120.05	120.05	120.05	120.10	119.93	119.98	119.94	119.85	119.98	120.11	120.01
1914	120.03	119.80	119.84	119.89	120.00	119.93	120.04	120.72	122.38	123.03	122.88	125.40
1915	125.76	126.61	126.54	122.85	121.09	119.99	121.01	120.89	120.57	119.26	116.25	114.20
1916	115.95	114.32	112.73	109.64	107.60	109.80	112.83	112.54	113.19	112.54	112.60	110.07
1917	108.39	108.22	108.51	107.73	107.63	107.13	103.56	98.36	96.67	88.40	85.08	97.41
1918	100.35	100.44	101.24	98.31	98.08	96.54	94.04	94.18	99.16	108.46	113.14	110.70
1919	111.22	113.02	113.73	115.99	119.21	118.45	118.72	116.83	116.28	117.04	121.37	124.12
1920	125.11	130.81	126.35	121.02	122.54	120.16	117.88	119.15	118.24	120.51	122.58	122.23
1921	119.62	111.44	107.66	104.76	107.57	107.33	109.96	109.64	107.85	104.90	105.74	109.76
1922	103.96	102.39	103.28	104.88	106.48	105.60	104.10	102.56	101.07	100.00	99.59	101.49
1923	101.22	101.56	101.62	101.16	100.24	99.67	98.44	98.05	98.11	97.87	95.89	95.64
1924	93.58	92.82	92.57	94.51	94.51	93.37	93.24	95.18	95.19	95.88	96.70	93.21
1925	93.87	93.59	93.67	94.18	95.58	95.13	95.98	96.99	98.17	98.03	97.84	97.50

Table A7.22. *Exchange rate index excluding German hyperinflation.*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1913	198.77	198.82	198.97	198.87	198.92	198.75	198.75	198.71	198.62	198.75	198.81	198.61
1914	198.58	198.39	198.47	198.49	198.60	198.55	198.62	199.10	200.71	199.54	196.60	200.37
1915	200.90	200.80	198.46	192.23	188.73	181.04	186.79	186.29	186.58	184.25	177.78	171.00
1916	170.75	167.39	163.00	159.44	157.49	160.24	163.99	163.01	163.35	162.21	161.40	155.29
1917	153.93	153.63	151.47	148.85	148.14	143.96	138.85	131.40	128.53	117.00	114.46	140.45
1918	138.00	148.10	149.83	145.73	144.98	140.74	133.10	131.13	135.25	149.09	150.83	142.74
1919	143.84	142.42	139.42	137.28	140.59	136.61	136.22	129.56	125.46	124.54	124.95	126.20
1920	125.71	128.61	124.92	121.41	125.17	124.37	121.88	121.84	119.54	120.65	122.05	121.84
1921	119.62	111.44	107.66	104.76	107.57	107.33	109.96	109.64	107.85	104.90	105.74	109.84
1922	103.96	102.39	103.28	104.88	106.48	105.60	104.10	102.56	101.07	100.00	99.59	101.49
1923	101.22	101.56	101.62	101.16	100.24	99.67	98.44	98.05	98.11	97.87	95.89	95.64
1924	93.58	92.82	92.57	94.51	94.51	93.37	93.24	95.18	95.19	95.88	96.70	93.21
1925	93.87	93.59	93.67	94.18	95.58	95.13	95.98	96.99	98.17	98.03	97.84	97.50

Because of the rapid German inflation during World War One and the hyperinflation in 1921–23, separate exchange indices have been calculated that exclude Germany in the periods 1913–24 and 1921–23.

Appendix A7.3: Summary tables of annual rates

Table A7.23. Annual exchange rates 1913–2008.

Year	UK	USA	Germany	France	Belgium	Switzerland	Netherlands	Denmark	Norway	Finland
1913	18.24	3.75	89.12	72.29	71.82		150.51	100.00	100.00	72.01
1914	18.41	3.80	88.41	73.47	72.33		153.64	100.00	100.00	70.89
1915	18.32	3.85	79.25	69.64		69.83	156.59	99.73	99.97	58.97
1916	16.60	3.51	62.45	59.28		67.06	145.73	98.53	99.29	50.36
1917	14.76	3.12	47.52	53.87		65.32	130.24	92.68	94.06	43.69
1918	14.60	3.08	52.37	54.78		70.19	142.98	91.94	93.81	39.21
1919	17.43	3.95	23.43	55.92		74.92	154.16	91.24	96.36	27.95
1920	17.92	4.92	8.38	34.62	36.28	82.76	168.41	76.81	80.25	18.09
1921	17.12	4.45	4.99	33.25	33.96	77.27	149.96	79.37	66.21	9.02
1922	16.93	3.83	59.67*	31.28	29.39	73.08	147.38	80.21	67.01	8.28
1923	17.23	3.76	0.73*	22.94	19.81	68.17	147.52	69.19	62.71	10.10
1924	16.63	3.76	89.7	19.62	17.48	68.84	144.31	63.32	52.65	9.45
1925	17.99	3.73	88.74	17.72	17.86	72.04	149.73	78.12	66.18	9.40
1926	18.15	3.74	89.01	12.17	52.24	72.24	149.96	98.09	83.43	9.41
1927	18.13	3.73	88.69	14.69	51.99	71.90	149.66	99.74	97.20	9.41
1928	18.16	3.73	89.09	14.67	52.03	71.92	150.16	99.84	99.64	9.40
1929	18.13	3.73	89.30	14.65	52.00	72.03	150.02	99.67	99.68	9.40
1930	18.11	3.73	88.88	14.64	52.02	72.23	149.85	99.71	99.69	9.38
1931	17.97	3.99	94.84	15.72	55.78	77.64	160.86	99.46	99.46	9.27
1932	18.99	5.43	129.91	21.56	76.16	106.15	218.87	102.24	97.84	8.44
1933	19.20	4.61	138.52	22.81	81.37	112.72	234.11	86.86	97.57	8.52
1934	19.40	3.85	152.30	25.38	90.19	125.28	259.80	86.85	97.61	8.60
1935	19.40	3.96	159.77	26.18	72.89	129.17	268.69	86.85	97.60	8.60
1936	19.40	3.91	157.89	23.73	66.52	116.99	250.92	86.85	97.60	8.60
1937	19.40	3.93	158.37	15.84	66.66	90.46	216.58	86.83	97.63	8.60
1938	19.41	3.98	160.10	11.51	67.50	91.20	219.05	86.77	97.65	8.60
1939	18.50	4.17	167.64	10.55	70.89	94.00	222.86	84.90	97.11	8.60
1940	16.95	4.20	168.68	9.26	69.83	95.80	254.26	81.25	95.62	8.59
1941	16.95	4.20	168.50	9.00	67.47	97.80	223.45	81.25	95.65	8.60
1942	16.95	4.20	168.51	9.00	67.50	97.00	230.49	87.48	95.65	8.59
1943	16.95	4.20	168.50	9.00	67.50	97.80	223.50	87.90	95.65	8.59
1944	16.95	4.20	168.50			97.80	223.50	87.90	95.65	8.59
1945	16.95	4.20		8.38	9.60	97.79	157.75	87.77	88.66	5.24
1946	15.76	3.91		3.55	8.93	91.35	147.56	81.50	78.82	2.91
1947	14.50	3.60		3.03	8.23	83.70	135.90	75.05	72.55	2.69
1948	14.50	3.60		3.03	8.23	83.70	135.90	75.05	72.55	2.69
1949	14.50	3.99		1.39	8.77	92.20	136.08	75.05	72.55	2.48
1950	14.50	5.18	123.30	1.49	10.37	118.50	136.55	75.05	72.55	2.27
1951	14.50	5.18	123.30	1.49	10.37	118.50	136.55	75.05	72.55	2.27
1952	14.51	5.18	123.30	1.49	10.37	118.50	136.55	75.05	72.55	2.27
1953	14.52	5.18	123.67	1.49	10.37	118.79	136.78	74.96	72.55	2.27
1954	14.54	5.18	123.94	1.49	10.40	119.06	137.00	74.98	72.75	2.27

Table A7.23 (cont.). Annual exchange rates 1913–2008.

Year	UK	USA	Germany	France	Belgium	Switzerland	Netherlands	Denmark	Norway	Finland
1955	14.49	5.18	123.56	1.49	10.40	118.66	136.72	74.98	72.55	2.27
1956	14.48	5.18	123.84	1.48	10.41	118.62	136.37	75.01	72.60	2.27
1957	14.49	5.18	123.57	1.38	10.35	118.48	136.26	74.86	72.63	2.06
1958	14.49	5.18	123.82	1.23	10.42	118.65	137.02	75.06	72.57	1.64
1959	14.54	5.18	124.00	1.06	10.39	119.94	137.33	75.25	72.77	1.63
1960	14.52	5.17	124.10	105.63	10.40	119.87	137.30	75.13	72.61	1.63
1961	14.49	5.17	128.63	105.57	10.40	119.85	142.36	75.02	72.54	1.62
1962	14.49	5.16	129.17	105.45	10.40	119.48	143.40	74.89	72.42	1.61
1963	14.54	5.19	130.35	106.11	10.44	120.27	144.37	75.34	72.75	161.51
1964	14.40	5.16	129.83	105.37	10.39	119.52	143.10	74.68	72.17	160.59
1965	14.43	5.16	129.36	105.48	10.43	119.42	143.55	74.77	72.31	160.59
1966	14.44	5.17	129.42	105.38	10.40	119.66	142.96	74.97	72.43	160.77
1967	14.16	5.17	129.70	105.16	10.42	119.52	143.53	74.05	72.38	152.20
1968	12.38	5.17	129.71	104.60	10.38	120.04	143.10	69.26	72.54	123.82
1969	12.37	5.17	132.22	99.91	10.35	120.10	143.01	68.98	72.56	123.48
1970	12.44	5.19	142.46	94.07	10.48	120.56	143.70	69.39	72.80	124.55
1971	12.49	5.11	146.93	92.94	10.55	124.28	146.67	69.22	73.00	122.71
1972	11.88	4.76	149.54	94.61	10.85	125.00	148.63	68.72	72.45	115.18
1973	10.72	4.37	164.51	98.82	11.29	139.04	157.22	72.70	76.54	115.00
1974	10.41	4.44	171.98	92.82	11.44	149.89	165.70	73.36	80.74	118.39
1975	9.22	4.16	169.15	97.15	11.33	161.06	164.58	72.60	79.79	113.46
1976	7.87	4.36	173.29	91.47	11.32	174.58	165.08	72.30	80.08	113.27
1977	7.83	4.48	193.05	91.36	12.53	186.84	182.82	74.78	84.32	111.53
1978	8.68	4.52	225.41	100.54	14.40	253.88	209.29	82.24	86.48	110.24
1979	9.10	4.29	234.27	101.03	14.65	258.20	214.06	81.71	84.87	110.59
1980	9.85	4.24	233.19	100.40	14.50	253.66	213.25	75.27	85.84	113.92
1981	10.21	5.06	224.12	93.42	13.65	257.93	203.10	71.21	88.31	117.64
1982	10.95	6.26	258.16	95.66	13.75	308.95	234.64	75.34	97.37	130.48
1983	11.64	7.67	300.84	101.04	15.05	365.73	269.25	84.12	105.27	138.08
1984	11.04	8.27	291.23	94.93	14.35	352.79	258.34	80.10	101.63	138.05
1985	11.09	8.59	293.14	96.13	14.54	351.54	259.90	81.48	100.32	139.12
1986	10.46	7.13	328.92	103.10	15.99	397.35	291.57	88.31	96.52	140.75
1987	10.39	6.35	353.25	105.72	17.02	426.01	313.52	92.93	94.33	144.55
1988	10.83	6.13	349.56	103.16	16.71	419.79	310.64	91.28	94.26	146.75
1989	10.57	6.45	343.36	101.31	16.40	394.76	304.44	88.41	93.58	150.58
1990	10.54	5.92	366.76	108.98	17.75	427.20	325.52	95.91	94.81	155.12
1991	10.67	6.05	364.91	107.39	17.73	422.30	323.93	94.69	93.40	149.76
1992	10.22	5.81	372.28	109.85	18.01	413.75	330.68	96.32	93.70	129.98
1993	11.67	7.77	470.23	137.35	22.51	526.37	418.78	120.05	109.65	136.18
1994	11.81	7.71	475.83	139.13	23.09	564.61	424.25	121.40	109.35	147.98
1995	11.25	7.13	497.99	142.99	24.20	603.82	444.59	127.34	112.58	163.42
1996	10.47	6.71	445.88	131.13	21.67	541.15	397.93	115.69	103.88	146.06
1997	12.50	7.63	440.65	130.89	21.35	526.31	391.53	115.66	108.05	147.19
1998	13.16	7.95	452.11	134.86	21.92	548.87	401.09	118.71	105.37	148.66

Table A7.23 (cont.). Annual exchange rates 1913–2008.

Year	UK	USA	Germany	France	Belgium	Switzerland	Netherlands	Denmark	Norway	Finland
1999	13.37	8.26	450.52	134.33	21.84	550.63	399.85	118.50	106.00	148.20
2000	13.85	9.15	431.80	128.75	20.94	542.26	383.23	113.30	104.09	142.04
2001	14.87	10.32	472.90	141.00	22.93	612.33	419.71	124.11	114.92	155.56
2002	14.57	9.71				624.26		123.28	121.96	
2003	13.19	8.08				600.25		122.79	114.13	
2004	13.45	7.35				591.12		122.67	109.03	
2005	13.57	7.46				599.41		124.54	115.83	
2006	13.57	7.37				588.30		124.06	115.04	
2007	13.52	6.76				563.27		124.17	115.44	
2008	12.08	6.55				605.42		128.84	117.03	

* SEK per 1 million mark.

Note:

UK: SEK per GBP

USA: SEK per USD

Germany: SEK per 100 mark 1913-1921, SEK per 1 million mark 1922-1923, SEK per 100 reichsmark 1924-1945, SEK per DEM 1950-2001.

France: SEK per 100 (old) franc 1913-1959, SEK per 100 franc 1960-2001.

Belgium: SEK per 100 (old) franc 1913-1925, SEK per 100 belgas 1926-1943, SEK per 100 BEF 1945-2001.

Switzerland: SEK per 100 CHF 1915-2008

Netherlands: SEK per 100 NLG 1913-2001

Denmark: SEK per 100 DKK 1913-2008

Norway: SEK per 100 NKK 1913-2008

Finland: SEK per 100 (old) mark 1913-1962, SEK per 100 (new) mark 1963-2001

The annual averages have been calculated as geometric averages of monthly exchange rates.

Table A7.24. Annual exchange rates and the exchange rate index 1913–2008.

	Italy	Euro	Japan	Czech Republic	Poland	Latvia	Estonia	Lithuania	Exchange rate index (ERI)	ERI excl. Germany 1913-24	ERI excl. German hyperinflation
1913									231.46	120.01	198.78
1914									231.52	121.15	198.83
1915									218.56	121.20	187.70
1916									188.92	111.96	162.25
1917									170.42	99.06	146.36
1918									165.70	101.05	142.31
1919									155.73	117.11	133.74

Table A7.24 (cont.). Annual exchange rates and the exchange rate index 1913–2008.

	Italy	Euro	Japan	Czech Republic	Poland	Latvia	Estonia	Lithuania	Exchange rate index (ERI)	ERI excl. Germany 1913-24	ERI excl. German hyperinflation
1920									143.38	122.17	123.14
1921	19.37								122.44	108.79	108.80
1922	18.28			9.02					105.10	102.93	102.93
1923	17.49			11.23					99.12	99.10	99.10
1924	16.56			11.21					94.22	94.22	94.22
1925	14.92			11.15					95.86	95.86	95.86
1926	14.61			11.14					97.65		
1927	19.28			11.12					99.74		
1928	19.68			11.12					100.07		
1929	19.56			11.10					99.82		
1930	19.54			11.08	41.89	71.90	99.36		99.23		
1931	20.93			11.93	44.99	74.00	102.41		103.19		
1932	28.31			16.54	61.71				127.90		
1933	30.59			17.67	65.94			58.73	128.71		
1934	33.37			16.82	73.25			65.18	133.02		
1935	33.11			16.87	75.25			67.19	135.57		
1936	28.85			15.95	74.25			66.44	132.91		
1937	20.94			13.93	74.81			66.95	128.97		
1938	21.06			13.94	75.53	77.57	107.26	67.57	128.65		
1939	22.01			14.51	79.43	78.05	105.22	70.69	129.70		
1940	21.46			14.68		79.65	101.00	71.83	126.87		
1941	21.88								126.34		
1942	21.99								126.80		
1943	22.20								126.93		
1944	22.20								126.66		
1945									119.87		
1946									103.75		
1947	14.59								95.18		
1948									94.51		
1949									95.86		
1950	0.83								106.03		
1951	0.83								105.03		
1952	0.83								105.08		
1953	0.83								105.16		
1954	0.83								105.29		
1955	0.83								105.10		
1956	0.83								105.10		
1957	0.83								104.42		
1958	0.83								103.54		
1959	0.84								102.96		
1960	0.84		1.45						102.89		
1961	0.84		1.45						103.81		

Table A7.24 (cont.). Annual exchange rates and the exchange rate index 1913–2008.

	Italy	Euro	Japan	Czech Republic	Poland	Latvia	Estonia	Lithuania	Exchange rate index (ERI)	ERI excl. Germany 1913-24	ERI excl. German hyperinflation
1962	0.84		1.45						103.85		
1963	0.84		1.45						104.43		
1964	0.83		1.44						103.66		
1965	0.83		1.44						103.69		
1966	0.83		1.44						103.77		
1967	0.83		1.44						103.11		
1968	0.83		1.45						99.32		
1969	0.83		1.46						99.44		
1970	0.83		1.46						101.25		
1971	0.83		1.49						101.95		
1972	0.82		1.59						100.53		
1973	0.76		1.63						102.38		
1974	0.69		1.54						104.09		
1975	0.64		1.42						101.00		
1976	0.53		1.49						99.00		
1977	0.52		1.69						103.58		
1978	0.54		2.18						114.61		
1979	0.52		1.97						115.68		
1980	0.50		1.88						115.93		
1981	0.45		2.30						117.05		
1982	0.47		2.53						130.29		
1983	0.51		3.24						146.65		
1984	0.47		3.49						143.92		
1985	0.45		3.62						145.63		
1986	0.48		4.25						149.12		
1987	0.49		4.40						152.29		
1988	0.47		4.79						152.27		
1989	0.47		4.69						150.85		
1990	0.50		4.10						155.06		
1991	0.49		4.50						154.90		
1992	0.47		4.61						153.06		
1993	0.50		7.00						187.65		
1994	0.48		7.55						190.26		
1995	0.44		7.56						193.02		
1996	0.43		6.17						175.83		
1997	0.45		6.32						182.27		
1998	0.46	8.92	6.09	24.66	2.28	13.49	0.56	1.99	186.13		
1999	0.46	8.81	7.28	23.88	2.09	14.07	0.56	2.06	188.21		
2000	0.44	8.45	8.49	23.70	2.11	15.10	0.54	2.28	188.41		
2001	0.48	9.25	8.50	27.16	2.52	16.51	0.59	2.58	206.79		
2002		9.16	7.76	29.74	2.38	15.78	0.59	2.65	203.71		
2003		9.12	6.97	28.66	2.08	14.25	0.58	2.64	193.42		

Table A7.24 (cont.). Annual exchange rates and the exchange rate index 1913–2008.

	Italy	Euro	Japan	Czech Republic	Poland	Latvia	Estonia	Lithuania	Exchange rate index (ERI)	ERI excl. Germany 1913–24	ERI excl. German hyperinflation
2004		9.13	6.79	28.60	2.02	13.73	0.58	2.64	190.50		
2005		9.28	6.78	31.16	2.31	13.33	0.59	2.69	195.20		
2006		9.25	6.34	32.66	2.38	13.35	0.59	2.68	194.52		
2007		9.25	5.74	33.35	2.45	13.22	0.59	2.68	192.44		
2008		9.61	6.35	38.52	2.70	13.67	0.61	2.78	196.44		

Note:

Italy: SEK per 100 ITL 1920–2001

Euro: SEK per EUR 1998–2008

Japan: SEK per 100 JPY 1960–2008

Czech Republic: SEK per 100 CSK 1922–2008

Poland: SEK per 100 zloty 1930–39 and per PLN 1998–2008

Latvia: SEK per 100 lats 1930–40 and per LVL 1998–2008

Estonia: SEK per 100 krooni 1930–40 and per EEK 1998–2008

Lithuania: SEK per 100 litas 1932–40 and per LTL 1998–2008

The annual averages have been calculated as geometric averages of monthly exchange rates.

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