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# Sveriges Riksbank Economic Review

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#### **Sveriges Riksbank Economic Review**

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# Dear readers,

This edition of Sveriges Riksbank Economic Review contains two long articles, and shows the breadth of the subjects that can be included in this journal. The first article concerns the Swedish electricity market. The large fluctuations in electricity prices over the past year have called attention to the functioning of the electricity market. The second article describes extensive archive work, a work that covers an exciting period in Swedish monetary policy history.

#### • The Swedish electricity market – today and in the future

*Pär Holmberg* and *Thomas Tangerås,* who both work at the Research Institute of Industrial Economics, describe the Swedish electricity market, how it functions today and they also look to the future. At the Riksbank, interest in the functioning of the electricity market increased in connection with electricity prices rising substantially towards the end of 2021, one of the most important reasons why inflation in Sweden rose rapidly and unexpectedly. The article provides an overview that can be interesting for a broad general public.

#### • Open mouth operations: Monetary policy by threats and argument

*Lars Jonung,* Professor Emeritus at Lund University, describes the minutes from the weekly meetings between the Riksbank and the management of the Swedish Bankers' Association during the period 1956-1973. The review gives an insight into how monetary policy in Sweden was conducted during this period, which was dominated by the extensive credit market regulations, and when the current monetary policy tools were not accessible in the same way as now.

This article is only available in English.

Read and enjoy! Marianne Nessén and Ulf Söderström

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# The Swedish electricity market – today and in the future

Pär Holmberg and Thomas P. Tangerås<sup>\*</sup>

The authors are associate professors in economics and work at the Research Institute of Industrial Economics (IFN)

The energy crisis has driven electricity prices up to levels we have never experienced before, creating major price differences within the country. There is also a risk that users will be physically disconnected. This article examines today's electricity market, the energy crisis and the green energy transition.

During the energy crisis, bottlenecks in the electricity transmission system have created huge transfers of income from consumers to the transmission system operator, Svenska kraftnät. This congestion rent should be incorporated into the regulation of the transmission system operator.

To resolve the energy crisis, measures are needed to increase generation capacity in the short term, improve grid utilisation and reduce electricity consumption, especially when demand is high. We also present measures to increase the efficiency of the electricity system.

The electrification of the manufacturing and transport sectors will require a major expansion of electricity networks and production. In particular, new electricity will be needed to produce green hydrogen. This demand is price-sensitive and relies on a large-scale expansion of cheap electricity production. An effective energy transition will require long-term, technology-neutral rules, efficient authorisation processes and well-developed financial markets. In addition, political risks in the electricity market need to be reduced.

<sup>\*</sup> This article was commissioned by Sveriges Riksbank and was completed at the end of 2022. The authors are grateful for comments received during the course of the work and for views expressed during seminars at the Riksbank and National Institute of Economic Research, as well as in a meeting with Urban Andersson at Energiforsk. The analysis and views expressed in this article are those of the authors and do not necessarily reflect the views of IFN or the Riksbank.

## 1 Introduction

The electricity system and the markets that maintain and develop the electricity system together constitute the country's *electricity supply*. In 2022, the electricity supply has received more attention in Sweden and Europe than ever before. The war in Ukraine and the ensuing energy crisis have pushed electricity prices up to levels never before experienced in Europe. Users are even at risk of being disconnected because enough electricity cannot be produced. This has never happened in Sweden in modern times.

While many have begun to reflect on the fundamental importance of the electricity supply to the economy, the electricity market is complex and can be difficult to understand. This article aims to describe how the electricity market works in Sweden. It then discusses the challenges for the electricity supply in the short and long term.

The article first describes the electricity system in section 2 and then the different parts of the electricity market in section 3. The ongoing energy crisis has increased the risk of electricity shortages and increased consumers' electricity costs. Section 4 examines electricity-market challenges and potential solutions from this short-term perspective. In the longer term, the key question is how to ensure a sustainable, reliable and resource-efficient energy transition. These issues are discussed in section 5. The article finishes with a summary discussion and conclusions in section 6.

## 2 The electricity system in Sweden

The backbone of the electricity system is the high-voltage transmission grid. This connects large-scale production of electricity, such as hydroelectric and nuclear power, with transmission substations for regional electricity grids through 157 connection points.<sup>1</sup> The regional grids connect other electricity producers and industrial facilities, such as steel mills and paper mills, to the electricity grid. They also transfer electricity via transmission substations to the low-voltage local grids, which, in turn, connect households and other smaller consumers to the system. The Swedish electricity system is part of the integrated European electricity system via high-voltage transmission connections with our Nordic neighbours as well as Lithuania, Poland and Germany.

The transmission grid is owned and operated by Svenska kraftnät (Svk), which is also a co-owner of most of the connections with foreign countries.<sup>2</sup> Six companies own and operate regional grids, the largest of which are Vattenfall and Ellevio.<sup>3</sup> A total of 149 private and public companies own and operate local grids.

Figure 1 shows a map of the transmission grid in Sweden with indicated connection points and international connections. The grid structure from north to south reflects the need to transport electricity produced by large-scale hydroelectric power in the

<sup>&</sup>lt;sup>1</sup> Svenska kraftnät applies the threshold value that an industrial facility must have an input or output capacity of at least 100 megawatts (MW) to be connected to the transmission grid (Svenska kraftnät, 2023).

<sup>&</sup>lt;sup>2</sup> The exception is the Baltic Cable between southern Sweden and Germany, which is owned by Statkraft.

<sup>&</sup>lt;sup>3</sup> There are also individual transmission lines at regional grid level.

north to the population centres further south. The new transmission connections from Norway to the United Kingdom and Germany and new nuclear power in Finland are increasing flows in an east-west direction, straight across the current structure of the transmission grid. These flows are creating challenges for the Swedish electricity grid, to which we shall return.



#### Figure 1. Map of the Nordic and Baltic transmission grid, 2021

Source: Svenska kraftnät

#### 2.1 Electricity production

Historically, most of Sweden's electricity production has been hydroelectric and nuclear, supplemented by fossil-fuel based thermal power. Figure 2 shows electricity production in Sweden by the main types of power used for each year in the period

2000-2020. It also shows net exports of electricity in the same period. Hydroelectric power shows large annual variations, partly because the inflow changes from year to year. Nuclear power also varies but has had a downward trend since the all-time-high in 2004 when the 11 reactors collectively produced 75 terawatt hours (TWh) of electricity.<sup>4</sup> Five reactors have been shut down since then. For example, following the closure of Ringhals 2 at the end of 2019, we see a substantial reduction in nuclear power production the following year. Ringhals 1 was closed on New Year's Eve 2020, but its consequences for electricity production are not captured in the figure below. Implemented and planned power increases in the remaining reactors are helping to limit the overall power reduction somewhat.<sup>5</sup>

The different types of power affect the electricity supply in different ways because they differ in the extent to which they are dispatchable, flexible and have endurance. The output of a power plant is *dispatchable* if it is possible to predict with great certainty and well in advance, for example the day before, how much of the installed capacity will be available during its operating hours. Examples of dispatchable electricity production are hydroelectric, nuclear and thermal power. Electricity production is *flexible* if it can be increased or decreased at short notice, within 15 minutes or less, without incurring significant costs associated with the actual change in production. Nuclear power is an example of inflexible electricity production. Electricity production in a plant has *endurance* if the same level of production can be maintained over a long period of time. Examples are nuclear power and electricity production based on fossil fuels. Hydroelectric power has a special position in the Swedish electricity supply in that it is both dispatchable and very flexible, which means that it can act as a buffer to absorb other variations in production and consumption.

<sup>&</sup>lt;sup>4</sup> Utilisation of nuclear power capacity has historically varied greatly from year to year. The record production that occurred after the closure of Barsebäck 1 in 1999 can be explained by the improved utilisation of the remaining capacity.

<sup>&</sup>lt;sup>5</sup> Forsmark 1 has recently increased its capacity by 100 MW. In comparison, Ringhals 1 had a capacity of 881 MW.



#### Figure 2. Annual production and net exports of electricity

Source: Statistics Sweden

The most remarkable development in Figure 2 is the increase in weather-dependent electricity production, particularly wind power, since 2006. Dispatchable electricity generation has fallen as a share of total electricity production from 100 per cent in 2000 to 82 per cent in 2020, to be replaced by non-dispatchable electricity production (wind and solar). Sweden has moved from being self-sufficient on an annual basis (with some variation) to becoming a net exporter of electricity. In particular, wind-power production and net exports have covaried since 2013, with Sweden currently exporting the equivalent of its entire wind-power production on an annual basis.<sup>6</sup>

Sweden appears to have a fairly stable electricity supply as all domestic electricity consumption is covered by dispatchable electricity generation. However, this picture needs to be modulated. Most of the high-voltage transmission capacity runs from north to south; see Figure 1. Large imbalances between local production and consumption of electricity sometimes create situations where the transmission grid does not have sufficient capacity to transfer all the demanded electricity. To take account of these *bottlenecks*, Sweden is divided into four bidding zones. When bottlenecks occur, each bidding zone is given its own electricity price to improve the local balance between supply and demand on the power exchange. We will return to an economic analysis of the bidding zones in Section 3.

<sup>&</sup>lt;sup>6</sup> The increase in wind-power production can mainly be attributed to the special support for renewable electricity production introduced in 2003; see Holmberg and Tangerås (2020) for a description of the electricity certificate system. This support is now almost negligible and is being phased out. Wind power commissioned after 31 December 2021 is not eligible for electricity certificates.



Figure 3. Map of Nordic and Baltic bidding zones, 2022

Source: Svenska kraftnät

Figure 3 shows the geographical division of bidding zones. To reflect domestic bottlenecks, Denmark and Norway are divided into two and five bidding zones

respectively. Every other EU country, except for Italy, currently consists of a single bidding zone. These countries therefore have national electricity prices.<sup>7</sup>

TWh by electricity region in 2021

	SE1	SE2	SE3	SE4	Total
Production					
Hydroelectric power	22.1	38.8	11.4	1.3	73.6
Nuclear power	0.0	0.0	51.4	0.0	51.4
Solar and wind power	4.6	10.8	8.5	4.2	28.1
Other thermal power	0.2	1.1	5.4	1.6	8.3
Total	26.9	50.7	76.7	7.1	161.4
Usage (incl. grid losses)	10.7	15.4	85.9	23.9	135.9

Source: Svenska kraftnät

Table 1 shows production in 2021 of the main power types in each bidding zone and also gives the consumption breakdown by bidding zone.<sup>8</sup> The local imbalances between production and consumption are clearly visible. The two northern bidding zones together had a large electricity surplus of 51.5 TWh in 2021. The two southern bidding zones (SE3 and SE4) together had an electricity generation deficit of 26 TWh. There are large regional differences in terms of the production mix. SE1-SE3 has a large share of dispatchable electricity generation. All nuclear power is in SE3. SE4 stands out due to its shortage of production. In addition, more than half of the production in SE4 comes from weather-dependent power sources, while the rest is hydroelectric and thermal power.

#### 2.2 Electricity consumption

Annual electricity consumption has remained fairly constant over the past 35 years, fluctuating between 136 TWh (2020) and 150 TWh (2004). In comparison, Sweden's real GDP doubled between 1986 and 2020. There are important differences in consumption patterns between the different bidding zones. Table 2 shows electricity consumption in 2020 for different sectors.<sup>9</sup>

<sup>&</sup>lt;sup>7</sup> Luxembourg is a special case. It has the same price as Germany. Another special case is Northern Ireland, which has the same price as Ireland.

<sup>&</sup>lt;sup>8</sup> Production data from Svenska kraftnät do not include industrial cogeneration. For example, this generated 6.7 TWh of electricity in 2020 according to Statistics Sweden.

<sup>&</sup>lt;sup>9</sup> Network losses occur when electricity is transferred over long distances and mean that more energy must always be fed into the grid than can be consumed. These losses represent the difference between the total measured electricity consumption of 135.9 TWh in Table 1 and 125.2 TWh in Table 2.

	SE1	SE2	SE3	SE4	Total
Homes (households)	1.7	3.6	25.0	7.6	37.9
Mineral extraction and manufacturing	6.3	6.9	26.3	6.8	46.3
Trade and other	1.1	1.0	9.2	2.4	13.7
Construction and property	0.5	0.9	9.8	2.6	13.8
Agriculture and forestry	0.1	0.3	1.6	1.0	3.0
Supply and transport	0.5	0.9	6.0	1.4	8.8
Public services	0.4	0.8	4.8	1.3	7.4
Total (excl. grid losses)	10.6	14.4	82.7	23.2	130.9

#### Table 2. Electricity consumption for different sectors

TWh by bidding zone in 2021

Source: Statistics Sweden

Around 35 per cent of electricity use in Sweden goes to the extraction of minerals or the manufacture of products. Heavy industry is of great importance in all bidding zones but is particularly dominant in northern Sweden. Residential electricity consumption accounts for just under 30 per cent of electricity consumption and is higher in southern Sweden than in northern Sweden, both in absolute terms and as a share of electricity consumption in each electricity region. This also applies to other sectors, such as supply/transport and public services. This is linked to the fact that more people live in the south than in the north.

#### 2.3 **Transmission grid**

The main purpose of the transmission grid is to transport large amounts of electricity efficiently from production in the north to consumers in the south, and to facilitate the exchange of electricity with neighbouring Nordic countries and continental Europe. The transmission capacity from north to south is 3,300 MW between SE1 and SE2, 7,300 MW between SE2 and SE3 and 5,600 MW between SE3 and SE4.<sup>10</sup> This represents a potential import capacity to SE4 from SE2 of 49 TWh of electricity per year, assuming that the full capacity of the transmission grid is available throughout the year.<sup>11</sup> This is more than double the total electricity consumption of SE4; see Table 2.

The total export capacity from Sweden to neighbouring countries amounts to 10,850 MW. In terms of electricity production, this represents about 95 TWh on an annual basis, compared to the total domestic electricity production of about 160 TWh in 2021; see Table 1. The corresponding figure for import capacity is 10,630 MW, which represents about 93 TWh over the year as a whole. This compares to an annual consumption of about 130 TWh; see Table 2. The Swedish electricity system is thus

<sup>&</sup>lt;sup>10</sup> The figures given are the maximum capacities that the network owners have offered on Nord Pool since January 2012.

<sup>&</sup>lt;sup>11</sup> The most important bottleneck that limits trade between northern and southern Sweden is the capacity constraint between SE3 and SE4. The potential import capacity from SE2 to SE4 measured in megawatt hours (MWh) is calculated as 5 600 MW multiplied by the number of hours in a day (24) and the number of days in a year (365). 1 TWh equals 1 million MWh.

well integrated in the sense that export capacity represents 60 per cent of annual electricity production and import capacity 75 per cent of annual electricity consumption.

# 3 The Swedish electricity market

The economic electricity system consists of two main parts. One is the deregulated electricity market for electricity trade, the other is the regulated market for electricity distribution.<sup>12</sup>

#### 3.1 The deregulated electricity trading market

Sweden is part of the regional Nordic-Baltic electricity market. In addition to Sweden, this market consists of Denmark, Finland and Norway and the Baltic countries of Estonia, Latvia and Lithuania. The electricity market consists of multiple sub-markets.

#### 3.1.1 The day-ahead market

Most of the electricity produced in the Nordic countries is sold on the *Nord Pool Spot* power exchange. Since June 2020, there exists a competing power exchange, *EPEX Spot*, and Nasdaq plans to launch a third exchange.<sup>13</sup> The day-ahead market is a wholesale market in which electricity retailers and electricity-intensive industries buy electricity directly from producers. In 2020, 372 TWh of electricity was sold on this market, which represented 89 per cent of production in the Nord Pool area that year.<sup>14</sup> Due to its size, the day-ahead market is of fundamental importance to the entire electricity market. For example, the prices paid by households for their electricity consumption are set as the day-ahead price plus a mark-up. It also provides the reference price for the financial contracts that market participants use to price their production and consumption.

#### How are market prices determined?

Every day before noon, producers specify how much electricity they wish to sell at different prices every hour for the next 24 hours. Similarly, electricity retailers and large industrial consumers submit bids for how much electricity they are willing to buy at different prices every hour for the next 24 hours. The network owners announce the capacity of the transmission grid for each hour. A supply curve is then created for each hour of the next day by adding together all the bids received for that hour and a demand curve by summing up all bids for the same hour for all exchanges together. The *system price* for the hour in question is set at the level at which supply equals demand for the entire geographical market.

<sup>&</sup>lt;sup>12</sup> Deregulation was implemented in 1996 as part of the wave of Nordic electricity market reforms. For those wishing to read more about the background, we refer to Holmberg and Tangerås (2020).

<sup>&</sup>lt;sup>13</sup> The power exchanges send all bids and offers to the EU joint market-clearing algorithm, so they now have a distinct brokerage role.

<sup>&</sup>lt;sup>14</sup> Trade and production data from Nord Pool.

#### **Bidding zones**

As a result of the regional imbalances between production and consumption, bottlenecks sometimes occur as the transmission grid does not have sufficient capacity to handle all the flows from north to south needed to balance supply and demand in Sweden at the system price. To reflect bottlenecks in the grid, the Nordic-Baltic electricity market is divided into fifteen different bidding zones. Norway has five bidding zones, Sweden has four and Denmark has two. Finland, Estonia, Latvia, and Lithuania each have one bidding zone.<sup>15</sup> Figure 3 illustrates this division.

To manage congestion, an individual zonal price is created for each bidding zone. As the zonal price goes down in bidding zones with surplus electricity production and up in bidding zones with a deficit in electricity production, the supply of electricity decreases in the former bidding zones while the supply increases in the latter bidding zones. The improved balance between supply and demand within each bidding zone reduces the need to trade electricity between the different bidding zones. The zonal prices are adjusted until the flows of electricity match the specified capacity of the transmission grid. The purpose of bidding zones is to increase the efficiency of the electricity supply in the short and long term by having prices signal where in the system there is a shortage or surplus of electricity.<sup>16</sup> In addition, price differentials signal the profitability of investing in new transfer capacity in the electricity grid. One other consequence of the design of the market is that all bidding zones between which there is no bottleneck have the same electricity price. Sweden often has a uniform electricity price at night and at weekends when demand in southern Sweden is relatively low. Southern Sweden (SE4) often has the same electricity price as the rest of Northern Europe due to the extensive network capacity to Germany and the Baltic states.

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
SE1	28	34	29	20	28	30	45	40	15	43	63
SE2	28	34	29	20	28	30	45	40	15	43	66
SE3	28	34	29	21	28	30	46	41	22	67	138
SE4	30	35	29	21	28	31	48	42	27	82	162

### Table 3. Annual average prices

öre/kWh on the day-ahead market 2012-2022

Source: Nord Pool Group

Table 3 shows the average annual zonal prices in the day-ahead market between 2012 and 2022. The price in northern Sweden has fluctuated between 20 and 66 öre/kWh since the introduction of bidding zones. Electricity prices in northern and southern

<sup>&</sup>lt;sup>15</sup> Sweden was divided into four bidding zones on 1 November 2011, before which it consisted of a single bidding zone. In order to manage the excess demand in southern Sweden at the uniform Swedish price, Svenska kraftnät regularly limited the export of electricity to Denmark. The EU considered that this practice could violate EU competition rules. Svenska kraftnät subsequently decided to introduce bidding zones in order to achieve a better local balance between electricity supply and demand.

<sup>&</sup>lt;sup>16</sup> Lundin (2022) shows that bidding zones have increased investment in wind power in southern as compared to northern Sweden.

Sweden were approximately equal until 2020. Since then, zonal prices in SE3 and SE4 have been significantly higher than in the north, and the difference has increased. The average price in SE4 for 2022 was five times higher than the average up to 2020. One major explanation is the energy crisis that has driven up electricity prices in SE3 and SE4 as a result of integration with Europe. The war in Ukraine has not affected prices particularly much in SE1 and SE2 compared to the levels that can be considered normal. The bottlenecks in the electricity system have effectively insulated the northern bidding zones of Sweden from the crisis. The increasing differences in electricity prices have domestic explanations such as increasing local imbalances between electricity supply and demand.

#### Who benefits from bottlenecks?

All electricity consumption [production] within a single bidding zone pays [receives] the local zonal price. Those benefiting from the price differences between bidding zones are the owners of the transmission network. The *congestion revenue* between two bidding zones is calculated as the zonal price difference multiplied by the trade between the two zones. Svenska kraftnät thus receives congestion revenue by exporting cheap electricity from producers in the north to consumers in the south.<sup>17</sup> The Nordic electricity market is, in turn, integrated with the continental electricity market. This means, for example, that the price of electricity in SE4 is the same as in Germany, as long as network capacity does not restrict trade flows between the countries. If network capacity to other countries is constrained, then congestion revenues is also generated on the international connection. International congestion revenue is shared between the owners of the congested connections.

The total value of sales by producers in all four bidding zones plus the domestic congestion revenue equals the total cost of purchases by consumers in all four bidding zones plus the value of net exports abroad. Figure 4 shows the different revenue and cost flows in nominal values on the Nord Pool day-ahead market for each year between 2012 and 2022. The blue bars show the annual income generated by domestic producers in Sweden from selling their electricity on the day-ahead market. The yellow bars show the size of the annual domestic congestion revenue. The red line shows how much the purchase of electricity on the day-ahead market has cost consumers for each year. The difference between the sum of the two bars and the line represents the annual net export value from Sweden.

<sup>&</sup>lt;sup>17</sup> Svenska kraftnät refers to bottleneck incomes as *capacity charges*. In the EU regulatory framework, they are referred to as *congestion revenues*.



#### Figure 4. Value of trading

SEK bn on the day-ahead market SE1-SE4 by year 2012-2022

Source: Nord Pool Group

Electricity companies' incomes and customers' costs show large annual variations. Until 2020, the domestic congestion revenue was almost negligible. The value of net exports was also of minor importance. Since then, the level and composition of incomes and expenditures in the day-ahead market have changed significantly as a result of the increase in the price of electricity in southern Sweden as we showed in Table 3. The increase in the cost of purchases in the last two years is particularly noteworthy. In 2022, consumers spent six times as much on electricity as in 2020. One contributing factor to the unusually low electricity costs in 2020 was the low electricity consumption in that year. In 2020, total electricity consumption (excluding losses) amounted to 125 TWh. The average for the previous twelve years was about 130 TWh.

Congestion revenue has increased dramatically in recent years. In 2022, Svk earned almost SEK 49 billion from domestic bottlenecks alone. This is a third of what consumers in Sweden paid for their electricity on the power exchange in the same year. Trading on the power exchange over the last two years has meant a significant redistribution from consumers to the state, which owns the transmission network through Svenska kraftnät. In addition, the value of exports has increased significantly in 2021 and 2022 from previously low levels.

#### **Resource scarcity**

Sometimes there is insufficient local production and grid capacity to meet local demand in one or more bidding zones. In this case, there is no clearing of the day-ahead market. This happened most recently in the Baltic states on 17 August 2022. If there are no reserves available, electricity is rationed in the sense that customers

have to share the capacity available on the market. The price is set at the maximum price on the power exchange, which, at the time of the Baltic case, was EUR 4,000/MWh. Situations of resource scarcity do not necessarily mean that the market is not functioning. Periods of extreme prices are needed for producers to recover their capital costs.

#### 3.1.2 Markets for balancing power

The amount of electricity fed into the grid must always and everywhere be equal to electricity consumption, including the exchange with foreign countries, in order to maintain the balance of the electricity system. Large imbalances can lead to costly disturbances and power cuts. Electricity is traded on the day-ahead market up to 36 hours before the actual operating hour. Consequently, there is often a need to adjust production and consumption as new information reaches the market in the form of updated weather forecasts or unplanned changes in production or the transmission network. The various balancing markets are becoming increasingly important as the need to adjust planned production increases in line with the growth in weather-dependent electricity production.

One important market in which companies can adjust their positions is the *intraday market* of the power exchange. This opens two hours after the day-ahead market closes and closes 60 minutes before the operating hour. The intraday market follows the division into bidding zones and works almost like a stock market in that traders place bids on a continuous basis. Continuous trading means that the price can vary over the trading period, even for electricity contracted for a particular operating hour.

Svenska kraftnät organises a number of markets for balancing power. These differ in terms of the requirements for how quickly capacity can be activated. The largest of these, the *manual frequency restoration reserve (mFRR)* requires that production be activated within fifteen minutes of Svenska kraftnät's request for activation.<sup>18</sup> Bidding for this market closes 45 minutes before dispatch hour and works in a similar way to the day-ahead market.

Even *within* bidding zones, bottlenecks can occur and need to be managed to maintain the balance of the system. This is particularly the case around Stockholm in SE3 and Malmö in SE4. Normally, Svenska kraftnät handles such internal bottlenecks by *redispatch*.<sup>19</sup> This means that Svenska kraftnät pays [charges] electricity companies to increase [decrease] their production where there is local excess [deficit] demand. This results in a deficit for Svenska kraftnät, as the cost of increasing production in one direction exceeds the value of reducing production in the other direction. The

<sup>&</sup>lt;sup>18</sup> The other three short-term markets for reserves are FCR-Normal (1-3 minutes), FCR-Disturbance (5-30 seconds) and aFRR (2 minutes); see Svenska kraftnät (2021b) for details. There is also a disturbance reserve and a strategic reserve that can be used to balance the electricity system. Holmberg and Tangerås (2020) discuss some of these reserves in detail.

<sup>&</sup>lt;sup>19</sup> In emergency situations, Svenska kraftnät has the legal right to physically disconnect some production or consumption in order to maintain the balance of the system. However, this extreme measure has never been necessary.

costs of re-regulation are spread across consumers and producers on a flat-rate basis.<sup>20</sup>

#### 3.1.3 Retail market

Retailers compete for end users and buy their electricity on the power exchange to cover their customers' expected consumption. Their margins are limited due to intense competition in the retail market.

Customers can choose between two main types of contracts. Under variable-price contracts, the retail price is a mark-up on the power exchange price. Hourly-price contracts provide full exposure to the hourly day-ahead price for customers with hourly metering of electricity consumption. Variable-price contracts may also involve monthly metering where customers then pay a monthly price based on a flat rate consumption profile. The second variant is a fixed-price contract with a duration between one and three years. In this case, the retailer offers a predetermined price for each kWh used by the customer during the contract period.

#### Table 4. Electricity contracts by type of contract

Shares in per cent by bidding zone, July 2022

	SE1	SE2	SE3	SE4	Total
Variable price	46.1	47.3	53.9	66.6	55.6
Fixed price	40.3	25.7	25.7	16.4	24.4
Other <sup>21</sup>	13.6	27.0	20.4	17.0	20.0
Total	100	100	100	100	100

Source: Statistics Sweden

Table 4 shows that in July 2022 more than half of all customers in Sweden had variable-price contracts, with the proportion increasing the further south you go in the country. Almost a quarter of all customers have fixed-price contracts. The most common option is to sign a three-year contract. The proportion of customers with fixed-price contracts increases the further north you go in the country. The split between variable and fixed contracts has remained relatively constant in recent years.

#### 3.1.4 The financial markets

Retailers may need to price hedge their planned purchases on the power exchange some time in advance to reduce their exposure to the spot market. This is particularly the case if the retailer has many customers with fixed-price contracts. At the same time, electricity producers may wish to hedge prices in order to guarantee their revenues. Consequently, there is a market for standardised financial contracts, such as those traded on Nasdaq Commodities, which usually have a relatively short

<sup>&</sup>lt;sup>20</sup> Congestion revenues have typically covered the costs of redispatch for Svk.

<sup>&</sup>lt;sup>21</sup> Other contracts include what are called designated electricity contracts. These contracts are allocated to customers who do not actively choose an electricity supplier. Such contracts are usually more expensive than the other contracts and can be terminated at short notice should the customer choose a different contract. Around 9 per cent of users in Sweden had such a contract in July 2022.

maturity, three to five years maximum. Producers and large consumers can also enter into bilateral financial contracts directly with each other, which can have a longer time horizon.

Power Purchase Agreements (PPAs) have been particularly important for the development of the electricity market. A PPA is typically signed between the owner of a planned wind power project and a buyer who wishes to secure the price of their electricity consumption by specifically financing renewable electricity production. PPAs guarantee a fixed price for a fixed share of the planned electricity production over a large part of the planned lifetime of the project. These financial contracts are often a prerequisite for obtaining bank loans for wind power projects.

#### 3.2 The economic regulation of electricity networks

The electricity grid is divided into the transmission network, regional networks, and local networks. All network companies are price regulated because the cost of competing infrastructure limits the possibility of achieving effective competition in the electricity grid. The current regulation was introduced in 2012 and is based on a revenue allowance that each network company is allocated for each regulatory period. The allowance determines the maximum network tariffs a network company can charge its customers and is set for four years at a time by the Swedish Energy Markets Inspectorate (Ei). The revenue allowance must cover operating costs and provide a sufficient return on invested capital to obtain access to capital for investments in competition with alternative investments with equivalent risk (Chapter 5, Section 1 of the Electricity Act).

The operating costs of network companies consist firstly of their exogenous costs. Examples include network losses, subscriptions to overhead and neighbouring networks and charges to local authorities. For these costs, network companies receive full cost coverage. In addition, there are operating costs in the form of maintenance, customer specific metering, costs of calculating and reporting network losses and other costs. Network companies are subject to an efficiency requirement concerning such endogenous operating costs. The Ei determines the efficiency requirement individually for each network company in the light of its historical costs compared with the costs of other network companies operating under similar conditions. The operating costs may change from year to year, and therefore the revenue allowance is flexible with respect to these costs over the regulatory period.

The cost of capital is the second major cost item for network companies. If the cost compensation is too generous, then it leads to over-investment, and conversely if it is too strict. The first step is to calculate the company's capital base. This is the net present value of the current network assets, adjusted by investment and depreciation during the regulatory period. The capital base is based on the estimated cost of building the corresponding grid at current prices. The capital base of local and regional networks was estimated at around SEK 460 billion for 2018 (Ei, 2022b). The second step is to calculate a rate of return. For the 2012–2015 regulatory period, Ei set the pre-tax real rate of return at 5.2 per cent. The rate fell to 4.53 per cent in 2016–2019. For the period 2020–2023, Ei applies a rate of return of 2.16 per cent.

A specific characteristic of the transmission grid is that the network owner earns congestion revenue on price differences between bidding zones and from interconnections. These revenues are kept outside the revenue allowance and should, among other purposes, be used to reinforce the transmission grid. The large price differences in recent years have resulted in such large revenues for Svenska kraftnät that it has become necessary to refund congestion revenue to customers.

#### Table 5. Total revenue allowance

SEK bn for different regulatory periods

	Requested allowance	Ei allowance	Judicial review
2012-15 (2010 price level)	183	160	196
2016-19 (2014 price level)	176	164	173
2020-23 (2018 price level)	-	168	-

Source: Ei (2022c)

The first column of Table 5 shows the total allowance requested by the network companies to pay for their operations in the regional and local grids for the different regulatory periods.<sup>22</sup> The second column summarises the allowances determined by the regulatory authority. Ei has consistently reduced the allowances compared to the network companies' requests. The allowances have increased in real terms, despite the reduction in the cost of capital. In part, this increase is due to new investments in the electricity grid, which have increased the underlying capital base over time.

The network companies have successfully challenged the decided allowances in court, arguing that the awarded rates of return were too low. The courts adjusted the rate to 6.5 per cent for 2012–2015 and 5.85 per cent for 2016–2019. The consequences can be seen in the last column of Table 5. In fact, the network companies received a higher interest rate and therefore larger revenue allowances for 2012-2015 than they had requested. No legal decisions are available for the last regulatory period. With a capital base of SEK 460 billion, 1 per cent higher capital costs would increase the companies' allowances by SEK 18 billion over four years. This would imply an increase in network tariffs for 2020-23 of over 10 per cent.

The real rate of return is affected by the quality and efficiency of network operation. In particular, quality is assessed by the number of transmission interruptions, while the assessment of efficiency depends on the magnitude of network losses and strain on the local electricity grid. Depending on the measured quality and efficiency, the rate of return may increase or decrease by a maximum of one third per year.

The average annual network tariff has increased for all types of household customers since the introduction of the new regulations in 2012 (Ei, 2022c). For the whole period 2012–21, the network tariff for a typical customer in a detached house increased by almost 22 per cent, from 30 to 37 öre/kWh. Smaller customers pay higher tariffs on average than larger customers because the fixed network tariff is disproportionately

<sup>&</sup>lt;sup>22</sup> As of 2020 the network companies no longer apply for allowances.

high for smaller customers. For example, the network tariff for customers in flats increased from 68 to 80 öre/kWh between 2012 and 2021. In comparison, the CPI increased by just over 8 per cent over the same period.<sup>23</sup> Compared to the average electricity price over the same period in Table 3, the network tariff has represented both the most important share and a rising share of household electricity bills. An exception is households with the highest electricity consumption.<sup>24</sup>

The individual network companies unilaterally determine the structure of their network tariffs. The requirements of the Electricity Act are that the total tariffs charged by the network companies must not exceed the revenue allowance during the regulatory period. Tariffs must be objective and non-discriminatory and, for local networks, they must not be structured according to where in the grid a connection is located. In practice, grid tariffs usually have a fixed component and a variable component that depends on the price and consumption of electricity.

Ei is currently working on updated regulations for the design of network tariffs. Once these are introduced, network companies will not have the same freedom as today to set their tariffs. In particular, dynamic network tariffs would help to increase flexibility in demand to reduce the risk of local electricity shortages; see Holmberg and Tangerås (2022).

# 4 Short-term challenges in the electricity market

The electricity market in Sweden is facing multiple short-term challenges. One particularly acute challenge is the ongoing electricity crisis, which has led to unmanageably high electricity prices for some consumers and increased the risk of electricity shortages. The energy crisis actually consists of three independent crises that have hit the EU at the same time. Russia's invasion of Ukraine has choked off exports of electricity, gas and coal from Russia, making fossil-based electricity generation in the EU more expensive. Europe's nuclear reactors have reduced output by 19 per cent (E3G and Ember, 2022). Some nuclear power has been phased out, but a bigger problem has been the technical problems that have affected French nuclear reactors in particular over the past year. The third crisis is that hydroelectric power production in the EU has fallen by 21 per cent due to droughts in southern Norway and elsewhere (E3G and Ember, 2022).

Sweden has also experienced nuclear power shutdowns and technical problems at its remaining plants. Despite this, Sweden export a lot of electricity. In 2022 Sweden was Europe's largest net exporter of electricity. Usually, the risk of electricity shortages is low in the country as a whole and, usually, we can import electricity from our neighbours when we need it. During the energy crisis the risk of electricity shortages has been heightened, at least for the hours that Sweden is import-dependent.

<sup>&</sup>lt;sup>23</sup> Network tariffs increased significantly more in Sweden than in neighbouring countries over the period (Lundin and Söderberg, 2022).

<sup>&</sup>lt;sup>24</sup> Note that the high-cost protection scheme for households introduced in winter 2022 was calculated as a deduction from the grid tariff.

In addition, throughout the 2020s, there will be a risk of electricity shortages in Sweden's major cities, mainly Stockholm and Uppsala. This problem is independent of the energy crisis and is mostly due to a lack of transmission capacity into the cities and a lack of generation capacity within the cities. Electricity shortages in large cities are not further addressed in this paper, as they are analysed in detail by Holmberg and Tangerås (2022).

A further challenge is the deteriorating reliability of the electricity supply, particularly in southern Sweden. One problem is the shutdown of dispatchable production in southern Sweden. Norway's exports of electricity to the United Kingdom and Germany have created additional problems due to the increasing power flows in an east-west direction through Sweden. Figure 1 suggests that the power system is not dimensioned for such flows and has therefore become more sensitive to disturbances. As a result, the safety margins in the grid have had to be increased.

To address these challenges, politicians and authorities have decided on a series of measures, and further measures are under discussion. These include reducing electricity consumption, increasing electricity production, making the electricity market more efficient and redistributing resources from those who have benefited from the crisis to those who have been harmed by it.

#### 4.1 Reduced electricity consumption

#### 4.1.1 Energy efficiency

Electricity consumption in Sweden has remained fairly constant, and even declined slightly, over the past 35 years, despite annual GDP growth. The efficiency of electricity consumption has increased about 2-3 per cent per year (WSP, 2020). According to some analysts, increased focus on energy conservation, climate change and the environment could increase the efficiency of electricity consumption to 3-4 percent per year in the future (NEPP, 2015; WSP, 2020). The government is contributing with various measures to accelerate the process. For households, subsidies of up to 50 per cent are available for insulation and installation of heat pumps in residential facilities. Companies and tenant-owned apartments can receive support for up to 30 per cent of the cost of various energy efficiency measures.

One advantage of increasing energy efficiency is that it is a measure that has a rapid effect compared to the expansion of electricity production. Reduced electricity demand also contributes to lower electricity prices. Consequently, temporary subsidies to stimulate energy efficiency during energy crises may be justifiable. In the long run, however, such subsidies are ineffective as they distort the market.

#### 4.1.2 Saving electricity

Energy efficiency leads to a lasting reduction in electricity consumption. One temporary measure to restrain electricity prices during the current electricity crisis would be to reduce electricity consumption temporarily. Demand for electricity is very insensitive to short-term price changes and the supply price increases rapidly at very

high production levels (Holmberg and Tangerås, 2022). Overall, this means that the price of electricity risks becoming very high during hours of electricity shortage when demand is close to the available production capacity. At these times, a small shift in demand can have a large effect on the price. Wråke et al. (2022) estimate that electricity prices in southern Sweden would decrease by 85 öre/kWh if the whole of Europe reduced electricity consumption by 5 per cent. If only southern Sweden were to save 5 per cent, the price there would fall by 40 öre/kWh. In the EU, it has been agreed that each country should reduce electricity consumption by 5 per cent during hours of particularly high electricity consumption. The ambition is for each country to save 10 per cent of its electricity consumption, but this is a voluntary commitment. Two examples of industrialised countries that have been forced to make rapid electricity savings in the 2000s are New Zealand and Japan, where electricity consumption was reduced by 10 and 18 per cent respectively over a short period of time (Pollitt, 2022).

High electricity prices in themselves contribute to a reduction in electricity consumption, but the government can also take measures to further increase electricity savings. First, the government can decide to reduce electricity consumption in the public sector, for example through injunctions of various types. The government can also pay compensation for electricity savings, for example a fixed amount for each kWh saved by a consumer compared to the previous year. Over the period from 1 December 2022 to 31 March 2023, Svenska kraftnät will pay compensation to companies that reduce their consumption during hours of high consumption. The aim is for the measure to reduce consumption during these hours by 5 per cent.

For users with fixed-price contracts, there may be a socio-economic justification for subsidising saving electricity, as these users have no financial incentive to reduce electricity consumption even if the variable price is high. For other groups, such a subsidy leads to under-consumption of electricity, which is inefficient. On the other hand, lower electricity prices and increased consumer surpluses help other consumers that are badly affected by the energy crisis, so it may be justifiable to subsidise electricity saving temporarily for all consumers for compensatory purposes.

#### 4.2 Increased supply of thermal power

There is about 1,000 MW of thermal power mothballed in Sweden, which is roughly equivalent to one nuclear power reactor. Potentially, this capacity could be producing even in the short term if preconditions could be improved. Svenska kraftnät (2022b) forecasted that this could reduce the price of electricity in southern Sweden by 10 per cent during the winter of 22/23. Thermal power could also help to improve the reliability of the electricity supply in southern Sweden, which could, in turn, increase the transmission of electricity from northern to southern Sweden.

Temporary exemptions from environmental legislation may be required to make such capacity available to the market. In addition, owners may need compensation to make it viable to bring these units into operation. The new EU revenue cap (see section 4.4.1 below) may make it harder to bring this production to market, but the

Government has some scope to raise the revenue cap for thermal power. Another problem is that the regulatory framework makes it difficult to target a specific type of production with specific subsidies. However, it should be possible to take temporary measures that generally improve the preconditions for electricity generation, such as reduced taxes, reduced grid tariffs and increased procurement of back-up power.

#### 4.3 Improving the electricity market

#### 4.3.1 A more appropriate partition into bidding zones

Together with authorities and system operators, the EU has carried out an evaluation of the partition into bidding zones in member states based on simulations of the bottlenecks in the electricity system (ACER, 2022). In Sweden, four different alternatives will be evaluated in greater depth. All of these proposals include a new bidding zone in eastern Svealand with the aim of managing the east-west flows and bottlenecks in the Stockholm region in a better and more efficient way. The new bidding zones could be implemented in 2025. The consequences would likely include price increases in and around Stockholm due to excess demand in the region. In 2024, Svenska kraftnät plans to introduce more efficient management of the bottlenecks on the power exchange for existing bidding zones, which is known as flow-based pricing.

#### 4.3.2 Increased oversight of the electricity market

The price-insensitive demand for electricity and the concentrated ownership of production capacity (Moghimi et al., 2022) enable generation owners to increase prices by withholding capacity from the electricity market. Lundin and Tangerås (2020) estimate that the use of market power has increased prices by an average of 4 percent; see also Tangerås and Mauritzen (2018). The profitability of exploiting market power may increase in an energy crisis like the one we are currently facing, as companies can generate very high prices by withholding only a little capacity. Consequently, relevant authorities should tighten oversight of the electricity market. Lundin (2021) argues that the joint ownership of nuclear power by electricity companies has contributed to the exercise of market power. It may also have contributed to the premature closure of nuclear power and should be broken up if possible.

#### 4.3.3 Maintaining liquidity in financial trading

Effective hedging is particularly important as risks are elevated because of the energy crisis. High liquidity in financial trading implies that market participants can use hedging at low transaction costs at reasonably stable prices.

One aspect that has become increasingly important during the crisis is the collateral that Nasdaq Commodities and other trading platforms require from parties entering into financial contracts. The amount of collateral increases as the difference between the contract price and the electricity price increases. As a producer may have the value of several years' production or consumption pooled in forward contracts on the power exchange, the sums involved can be very high. For large electricity producers,

meeting commitments to sell electricity at a predetermined price is normally not a problem. However, they may still face liquidity problems if financial collateral requirements increase too much. To avoid liquidity shortages in financial trading, the Government has decided to introduce credit guarantees for electricity producers of up to 80 per cent of the loan. The guarantee framework amounts to SEK 250 billion. Guarantees can be granted until 31 March 2023, and the total maturity must not exceed three years. The fee for the guarantee must be market-based and is set individually for each company.

Financial trading on Nasdaq mainly involves contracts settled against the system price of the day-ahead market; see section 3.1.1. However, in recent years and especially during the energy crisis, price differences within the Nordic region have grown; see, for example, Table 3. It is also possible to trade in contracts that hedge prices at bidding zone level, but this trade has significantly lower liquidity. One reason is that the bidding zones in Sweden are asymmetric in the sense that it may be difficult for a consumer in southern Sweden or a producer in northern Sweden to find a financial counterparty in their bidding zone. The problem of finding a counterparty would be reduced if Svenska kraftnät were to hedge its congestion revenue, for example by buying electricity in northern Sweden and selling it in southern Sweden on the financial market. Holmberg and Tangerås (2022) and Holtz et al. (2022) describe in more detail how Svenska kraftnät can trade in financial contracts.

#### 4.4 Redistribution

#### 4.4.1 Revenue cap for electricity production with low variable cost

During the crisis, electricity prices in Europe have risen as fuel prices have pushed up the variable cost of fossil-fuel based electricity production. The variable cost of fossilfree electricity production has not increased correspondingly, and these types of power have made large profits. The EU decided in 2022 to tax such windfall gains through a revenue cap of EUR 180/MWh (≈ SEK 1.8/kWh) for low variable cost electricity generation (EU regulation 2022/1854). For Sweden, this applies to nuclear, wind, solar and non-reservoir based hydroelectric power. The revenue cap will be temporary and applied between December 2022 and June 2023. The idea is for the revenue to be used to compensate electricity consumers.

The EU revenue cap is problematic because it reduces the incentive to invest in low variable cost production if operators expect similar regulation to be reintroduced in the future. The energy transition will slow down, electrification will be made more difficult, and the risk of electricity shortages will increase. The revenue cap also creates problems in the short term. Like the capacity tax on nuclear power, it risks contributing to the premature closure of nuclear reactors. In addition, it makes capacity expansion of existing generation units less profitable and prevents thermal power plants from being restarted (see section 4.2). The revenue cap also puts a strain on existing forward contracts.

There are proposals from various EU countries to change pricing on the power exchange so that redistribution from producers to consumers takes place in the

market. This type of proposal has also been discussed in Sweden. The so-called BEKEN model, advocated in particular by the Left Party, has similar drawbacks to the punitive taxation of low variable cost power. It is not enough to change pricing on the power exchange to implement BEKEN, additional price regulation must be introduced to make it possible to maintain artificial price differentials on the power exchange. In addition, pricing of contracts written outside the power exchange would need to be regulated to avoid arbitrage.

To some extent, capacity markets can compensate producers for lost revenue. This means that producers receive an additional capacity payment, for all the production made available to the market. Capacity markets are used abroad and also have supporters in Sweden. However, the disadvantages of such a solution outweigh the advantages (Aagaard and Kleit, 2022; Holmberg and Tangerås, 2023).

#### 4.4.2 Compensation to consumers

The electricity crisis has contributed to an increase in government revenues. In particular, the large domestic price differences have created huge congestion revenues in recent years; see Figure 4. These should primarily go to investments in the electricity grid, but (during the crisis) it is also within the EU regulatory framework to use these revenues to compensate electricity consumers. Svenska kraftnät has planned the distribution of approximately SEK 55 billion in retroactive support to households and businesses in SE3 and SE4. In bidding zone SE3, the support was 50 öre and in bidding zone SE4 79 öre per kWh of electricity consumed between October 2021 and September 2022. Ei has set a cap on this support which means that consumers who have used more than 3 GWh during this time period must make a separate application for consumption above that level.<sup>25</sup>

One advantage of retroactive support is that it does not interfere with price signals, as long as it does not create expectations of future support. The VAT reductions and the high-cost protection discussed during the election campaign would increase electricity consumption and prices on the power exchange. Compensation is also a better approach than changing pricing or punitive taxation of certain production as discussed in the last section.

#### 4.5 Electricity prices in the short term

EU member states have agreed to reduce electricity consumption by 5-10 per cent. Svenska kraftnät plans to increase transmission capacity from northern to southern Sweden by 300-700 MW and to increase import capacity from Finland by 200-300 MW during the winter of 22/23.<sup>26</sup> Taken together, these measures should have a major impact on prices. Based on the results in Wråke et al. (2022), a reasonable expectation is that the spot price will decrease by a krona or more in southern Sweden compared to a situation where no measures are taken. However, increased transmission of electricity from the north to the south will increase the spot price in the north. The start-up of Finland's new nuclear reactor, Olkiluoto 3, will reduce

<sup>&</sup>lt;sup>25</sup> The details are described in the press release in Ei (2022a).

<sup>&</sup>lt;sup>26</sup> The measures are described in Svenska kraftnät (2022a).

import demand in Finland. Ringhals 4 is scheduled to restart during the spring of 2023. If all these measures go according to plan and Russia's war with Ukraine and Russia's sanctions against the EU do not escalate further, the worst of the price spikes should be over by March 2023, at least in Sweden. Forward prices on the financial markets confirm this prognosis. On the other hand, forward prices also show that things could get really tough before then. Electricity prices risk reaching record highs the winter of 22/23.<sup>27</sup>

The Swedish Energy Agency (2022) and the Swedish Wind Energy Association (2022) estimate that electricity production in Sweden will increase by about 5 TWh per year between 2020 and 2025, mainly through new wind power. This is equivalent to about half a new nuclear reactor per year. The Swedish Wind Energy Association's forecast indicates that about one third of this production will be located in southern Sweden. Sweco (2022) estimates that an addition of 15 TWh of wind power in 2023-2025 would reduce the average price in Sweden by about 15 öre/kWh. The Swedish Energy Agency forecasts that annual electricity consumption will remain fairly constant until 2025 and that Sweden's net electricity exports will be 41 TWh in 2024. Such an electricity surplus would help to reduce the impact of Europe's electricity prices on Sweden.

At the same time, there is a risk that the situation in the electricity market will worsen. A cold, prolonged winter would lead to extreme prices and possibly manual disconnection of consumers. Gas and water storage facilities would be drained, with consequences for electricity prices throughout 2023. There is also a risk that Russia could choke off energy exports to the EU somewhat further. In addition, Russia could target Europe's nuclear power industry, especially the 18 nuclear power stations in Eastern Europe and Finland that are partly dependent on Russian nuclear fuel and maintenance (Bowen and Dabbar, 2022). Furthermore, Russia has a market share of over 40 per cent in uranium processing. However, this should not lead to an acute energy crisis, as nuclear reactors in the EU normally have fuel stocks for production for a couple of years. However, the price of refined uranium from non-Russian suppliers rose sharply in 2022 (Combs, 2022). In the long run, there is a risk that this will reduce nuclear production or increase electricity prices.

# 5 Transition towards a sustainable electricity supply

Society is facing a major green transformation of the energy system. This will include the replacement of fossil-based energy with fossil-free electricity, so electricity consumption is expected to increase. Bergman et al. (2022) compile various forecasts of electricity consumption until 2050. According to the most conservative scenarios, electricity consumption will be 150 TWh in 2050, which is less than the current electricity production in Sweden. The most extreme scenarios indicate an electricity consumption of almost 300 TWh, which is more than double of the current annual electicity consumption. Energiforsk and Profu (2021) estimate that about three-

<sup>&</sup>lt;sup>27</sup> The measures are described in Svenska kraftnät (2022a).

quarters of the increase in electricity consumption will take place in Norrland (SE1 and SE2).

One major reason for the growing demand for electricity is the need for hydrogen in the manufacturing and transport sectors. Green hydrogen is produced by electrolysis of water, which consumes a lot of electricity. Hydrogen is essential for the production of fossil-free steel, for example. LKAB estimates that it will need an additional 55 TWh per year for its future production (Svenska kraftnät, 2021a). This represents about 40 per cent of Sweden's current electricity consumption. Electrification of transport, industrial processes and electricity consumption in new industries such as server halls and battery factories can be added.

#### 5.1 Efficient investments in electricity production

Sweden is facing a major expansion of electricity production so that the planned energy transition can be realised. The question is how to do this efficiently. In an economically efficient electricity market, electricity is produced at the lowest possible total production and investment cost. In addition, an efficient market should have the right amount of production capacity to achieve the desired reliability of supply.

Demand for electricity fluctuates over both the day and the year. The degree of utilisation will thus vary for different facilities. In general, it is efficient to invest in a mix of technologies, with the choice of technology for specific facilities depending on how often they will be used. Typically, technologies with a low variable cost have a high investment cost, and vice versa. As the degree of utilisation decreases, it becomes more important that the facility does not cost money when it is not in use. This would make it more economically profitable for society to use technologies with higher variable costs and lower fixed costs. Gas turbines are a typical example of such *peak power*. It would not be economically profitable to expand electricity production to such an extent that the risk of electricity shortages would be completely eliminated. In an efficient electricity system, the risk of curtailment is therefore positive.

In order for investment to be efficient, it is also important to streamline permitting processes and to design adequate compensation for municipalities and landowners affected by the expansion of electricity generation and power grids.

#### 5.2 Credit guarantees for green investment

The previous government mandated the Swedish National Debt Office to issue credit guarantees (Regulation 2021:524) on the grounds that it is difficult to obtain long-term loans for green investments in Sweden. The guarantee framework amounted to SEK 10 billion in 2021. After this, the framework is calculated at SEK 50 billion in 2022, SEK 65 billion in 2023 and SEK 80 billion in 2024.<sup>28</sup>

The European Parliament has decided to include nuclear power in the EU taxonomy for a limited period and under certain conditions. This could possibly mean that the

<sup>&</sup>lt;sup>28</sup> The credit guarantees are described in more detail in Riksgälden (2021).

Swedish National Debt Office will conclude that credit guarantees for green investments can also be used for nuclear power investments. Under the Tidö Agreement, the new government wants to allocate an additional SEK 400 billion to credit guarantees earmarked for new dispatchable electricity, especially nuclear power. The idea is that the Swedish National Debt Office will issue these guarantees at a subsidised price.

In practice, it has been difficult to obtain bank loans for nuclear reactors. This could be a market failure justifying public provision of credit guarantees specifically for nuclear power. But subsidised credit guarantees are problematic if they distort investment towards specific power generation. It would be unfortunate if credit guarantees were to out compete well-functioning financial markets. Consequently, there is reason to question politically motivated credit guarantees, from a market perspective.

#### 5.3 Reduced political risk

The variable energy policy is creating significant political risk for producers and consumers. For example, there are concerns that politicians will take measures that disadvantage certain types of electricity generation. The EU revenue cap for low variable cost production is one example, the capacity tax on nuclear power another. Political risk makes investment more expensive and slows down the energy transition. Some of the policy interventions made during the current energy crisis have been justified. But to make the rules of the electricity market more predictable, the conditions under which the state can intervene and the measures that can be taken should be regulated.

The Energy Charter Treaty provides foreign investors some protection against political risk (Horn, 2021). For example, Vattenfall received compensation when it was forced to prematurely shut down its nuclear reactors in Germany. One way to reduce political risk would be to introduce similar protection for Swedish investors as well (Holmberg and Tangerås, 2020). During the election campaign, the Moderate Party advocated investment protection for nuclear power against political risk. Such protection would be appropriate, but should also cover other electricity production. Statutory investment protection would also make it easier to maintain cross-party agreements on energy policy.

Volatile electricity prices increase political pressure to intervene during energy crises. Consumers with variable-price contracts have a particularly strong incentive to push for high-cost protection. From such a perspective, it would be better if fewer customers had variable-price contracts.<sup>29</sup> However, fixed-price contracts have the disadvantage that they do not provide an economic incentive to reduce consumption when there is a risk of electricity shortages. Mixed contracts represent a good compromise between variable and fixed price, as they offer consumers the opportunity to hedge part of their planned electricity consumption (Holmberg and Tangerås, 2022). One way to achieve higher liquidity and more stable prices in the

<sup>&</sup>lt;sup>29</sup> After the energy crisis in 2021, Texas simply decided to ban variable-price electricity contracts.

forward market would be for Svenska kraftnät to hedge its congestion revenue; see section 4.3.3. Organised trade of long-term forward contracts would also be beneficial for liquidity in the financial market (Holmberg and Tangerås, 2020).

#### 5.4 Costs of new electricity production

In terms of new electricity generation, it is mainly fossil-free that is of interest. Cost estimates below are based on the levelised cost of energy (LCOE). LCOE includes operation, maintenance and investment costs allocated to the estimated capacity utilisation. Onshore wind power has the lowest LCOE, about 30-35 öre/kWh according to Elmqvist (2021). Offshore wind power is significantly more expensive, with an estimated LCOE in Europe of SEK 1-1.6/kWh including grid cost of 40-60 per cent (IEA, 2019). The cost of offshore wind is expected to fall by about half by 2040 (IEA, 2019). Elmqvist (2021) is significantly more optimistic and estimates the cost of offshore wind in Sweden to 50-55 öre/kWh.

The cost of large-scale solar power in Sweden is around 40 öre/kWh (Elmqvist, 2021). The costs of wind and solar power have fallen sharply since 2009, by 70 and 90 per cent respectively (Lazard, 2020). These costs are likely to continue to fall, but not as rapidly. Solar power may become the most important generation technology in the world by 2050 according to some analysts, but such electricity production is not as efficient in Sweden.

The cost of new nuclear power is difficult to estimate. The reactors built in Western Europe and the United States in the 2000s have been subject to long delays with substantial cost overruns. Based on actual projects, Lazard (2020) estimates the LCOE of new nuclear power at SEK 1.6/kWh. The International Energy Agency (IEA, 2022) makes a similar estimate for the EU, but is more optimistic for the United States, where the cost is estimated at about SEK 1/kWh.<sup>30</sup> IEA (2022) estimates the cost of new nuclear power in Asia at 60-75 öre/kWh. One reason for the lower costs is the cheaper labour in Asia.

Elmqvist (2021) is more optimistic, estimating the cost of new Swedish nuclear power at 49-64 öre/kWh. Poland has recently contracted three new nuclear reactors that could fall within this range, provided they are completed on schedule and on budget. However, labour and construction costs are significantly lower in Poland than in Sweden. The unit price will also be lower if several units are contracted at the same time.

Many hope that costs can be substantially reduced for small modular reactors (SMRs), which have the potential to be mass-produced. IEA (2022) further argues that it is profitable to make investments to extend the lifetime of existing nuclear reactors. Such investments have an overall cost of around 40 öre/kWh.

Fossil-free thermal power, which burns biofuels or fossil fuels with carbon capture, has an estimated cost of about SEK 1/kWh (IEA, 2022). The reason why biofuels are

<sup>&</sup>lt;sup>30</sup> This is very much in line with the U.S. Energy Information Administration (2022), which estimates the cost at approximately SEK 0.9/kWh in the United States.

relatively expensive is the IEA's assessment that there will be a shortage of biofuels in Europe. Thermal power using biofuels (including green hydrogen) would then be appropriate as peak power.

A significant share of Sweden's electricity production comes from thermal power plants that produce both electricity and heat. If heat is reused in the new nuclear reactors being built, they would be more efficient and profitable. This would be easier to implement for SMRs, which are safer than large-scale nuclear power and can therefore be located closer to consumers. Heat requirements may increase in the manufacturing sector, for example in hydrogen production. On the other hand, heat management is expected to become much more efficient, so it is likely that heat production may decrease.

#### 5.5 Energy storage

The need to store energy will increase as weather-dependent renewable generation is expanded. Energy storage helps to keep the electricity system in balance and to make more efficient use of generation and the grid. Sweden's largest energy store is hydropower. However, environmental constraints make it difficult to increase hydropower in Sweden on a large scale. Nevertheless, some possibilities exist for restructuring hydropower. One interesting alternative is pumped storage, in which water is pumped into an upper reservoir when prices are low and released into a lower reservoir when prices are high. Such plants can achieve energy recovery of 75-80 per cent. Another large storage resource is provided by batteries in electric cars.

Intertemporal substitution of consumption can also be seen as a kind of energy storage. For example, energy consumption in freezers, refrigerators, electric heaters, heat pumps and water heaters could be changed without this needing to have a significant impact on the efficiency of these devices. Hydrogen storage fulfils a similar function by contributing to demand flexibility. Hybrit in Luleå is planning a storage facility for up to two weeks' production of hydrogen. Converting hydrogen into electricity is normally inefficient but may be relevant for power plants that run infrequently.

#### 5.6 Extension of the transmission grid

The two major challenges for Svenska kraftnät are the expansion of the transmission grid and the renewal of parts of the network built in the 1950s and 1960s. The pace of investment has therefore been stepped up considerably. The plan is to increase grid investment fivefold in six years, from just over SEK 2 billion in 2018 to over SEK 10 billion in 2024 (Government Offices of Sweden, 2022). Svenska kraftnät will subsequently maintain a high investment rate for just over 15 years, until 2040.

Smart solutions could increase transmission in the grid even before investments are made. Svenska kraftnät estimates that such measures could increase transmission

from northern to southern Sweden by about 800 MW before 2028, which corresponds to a capacity increase of 10 per cent. <sup>31</sup>

It is not economically viable to remove all bottlenecks in the grid and each new production plant must pay for the necessary grid reinforcements associated with the plant. The earlier exemption for offshore wind power is to be abolished under the Tidö Agreement, which will make off shore wind power significantly more costly

#### 5.7 Electricity prices in the long term

Three things will most likely shape the electricity system in the future: 1) continued growth in wind and solar power, 2) increased amount of peak power, 3) increased energy storage capacity and increased flexibility in electricity consumption. Three types of price level can be envisaged in the market: A price close to zero when wind and solar power are producing at full capacity and there is a large surplus of cheap electricity production; a very high price when weather dependent electricity production is at a standstill and energy storage is insufficient; and an intermediate situation where nuclear, hydropower, hydrogen and other energy storage determine the price.

The above scenario is not dissimilar to pricing in today's market, but more extreme prices in both directions will become more common. We are already seeing signs of increased volatility in electricity prices.

Technological developments are helping to reduce the costs of electricity generation. At the same time, the transition to fossil-free energy is making thermal power more expensive. In addition, consumers will contribute to paying for all the necessary and extensive grid reinforcements. The future price of electricity will also depend on the price sensitivity of demand. Hydrogen can be imported or produced by means other than electrolysis. In addition, fossil-free steel will compete in a global market. Low electricity prices will therefore be required for green hydrogen to become viable. This means it may be the acceptance of further expansion of onshore wind power that determines how much electricity consumption and production of green hydrogen can increase on a market basis.

# 6 Discussion and conclusions

Prices on the power exchange have exploded in recent years and bottlenecks in the transmission grid have created large differences between southern and northern Sweden in the cost of electricity. This situation has resulted in a substantial income transfer from consumers to the state in 2021 and 2022 through the congestion revenue that Svenska kraftnät earns from buying cheap power in the north and selling it at a high price in the south. At the same time, network tariffs paid by consumers to maintain and increase the capacity of the electricity grid are rising. These

<sup>&</sup>lt;sup>31</sup> The measures are described in Svenska kraftnät (2022a).

developments highlight the need to treat congestion revenue as an integral part of the price regulation of transmission network owners.

Electricity prices reflect the energy crisis that has primarily affected continental Europe but that has also raised prices, mainly in southern Sweden, through electricity exports to neighbouring countries. Domestic factors, such as the shutdown of dispatchable electricity generation in southern Sweden, have exacerbated the situation. A battery of short-term measures is needed to solve the current energy crisis. Electricity consumption needs to be reduced, especially in situations where there is a risk of electricity shortages. Dispatchable electricity production needs to be increased, for example by reactivating electricity production that has been mothballed. In addition, better use can be made of the electricity grid and some redistribution from winners to losers will be necessary to compensate for high electricity costs. Low-income households are particularly at risk from high electricity prices, for example if they cannot afford to heat their homes.

Some forecasts predict a doubling of electricity consumption by 2050, based, in particular, on a dramatic increase in industrial hydrogen production through electrolysis. However, this consumption is price-sensitive and dependent on cheap electricity. How much consumption increases will probably depend on the scale of the expansion of onshore wind power. Whether offshore wind and new nuclear power will become economically viable depends on technological developments and how much the costs of these technologies can be pushed down. For example, nuclear power becomes more attractive if the heat it generates is also harnessed.

Either way, we can expect a major expansion of both networks and production. How much of the cost is passed on to consumers depends on the resource efficiency of the energy transition. An efficient transition will require long-term and technology-neutral regulations and efficient permit processes. In addition, the political risks need to be reduced and the financial markets developed.

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## Open mouth operations: Monetary policy by threats and arguments The monthly meetings between the Riksbank and the commercial banks, 1956-1973

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After World War II and prior to the financial deregulation of the 1980s, monetary policy in Sweden as well as in other western European countries rested chiefly on a system of far-reaching non-market-oriented controls of credit flows and interest rates. How was monetary policy conducted in such an environment of financial repression, where the central bank was unable to rely on traditional monetary policy instruments working on "free" and "unregulated" money and capital markets? This study provides an answer from the Swedish experience. It is based on a unique set of confidential minutes from about 160 monthly meetings between the Riksbank and the commercial banks during the years 1956-73.

The examination of the minutes demonstrates that monetary policy was framed in a process involving threats and arguments in a small and closed club involving the central bank and the chief executives of the commercial banks. According to a joke assigned to Erik Lundberg, "open market operations were replaced by open mouth operations" – albeit the dialogue was kept within the club. When Swedish financial markets were deregulated in the 1980s, the standard tools of monetary policy rapidly replaced the meetings between the central bank and the commercial banks.

<sup>\*</sup> This article is based on Jonung (1993a), extended and translated into English. I have received constructive comments from many, including Mikael Apel, Michael D. Bordo, Axel Leijonhufvud, Eric Monnet, Hans Tson Söderström and Ulf Söderström. In 2013, Axel Leijonhufvud selected the title for this study. He wanted to make the concept of open mouth operations known for economists outside Sweden. Fredrik NG Andersson, Dag Rydorff and Ulf Söderström have helped me generously with data. The archive of the Riksbank has been supportive in identifying documents from the meetings. I have also benefitted from comments at the workshop on "Interest rates and credit allocation in post WWII Europe 1945-1970", organized by the Bank of Norway in June 2013 and at The Tenth Swedish Economic History Meeting, Lund, October 2013. The opinions expressed in this article are the sole responsibility of the author and should not be interpreted as reflecting the views of Sveriges Riksbank.

### 1 Introduction

Swedish monetary policy in the 1950s and 1960s rested on a system of far-reaching non-market-oriented controls and interventions. A system of exchange controls, managed by the Riksbank, isolated the Swedish financial market from international impulses. Short-term and long-term domestic interest rates were kept at a low level, below a market-clearing level as part of the policy of the Government. The flow of credit within Sweden was allocated by the Riksbank according to political priorities, subsidizing the government and the housing sector.

How was monetary policy conducted in this system of financial repression, in which the Riksbank was restricted from using changes in its policy rate and other traditional monetary policy instruments on "free" and "unregulated" money and capital markets? An answer to this question is offered here, based on the minutes from the monthly meetings between the Riksbank and the commercial banks during the years 1956-73.

These minutes, written during or directly after the meetings, became available to scholars when the Riksbank commissioned a study of its history in the period 1945-90.<sup>1</sup> As far as I know, no similar archival materials exist for any other country.

The minutes form a unique source. In the first place, the Governor of the Riksbank is more outspoken here than in any other available documents. During the meetings, he develops his philosophy of monetary policy, explains and defends it against the criticism of the commercial banks. In this way, he reveals his view of the Riksbank's goals, instruments and the constraints imposed by the government on his actions.

In the second place, the minutes bring out the commercial banks' preferences, arguments and strategies for influencing the Riksbank. The minutes cover a very long period as well. Thus, they shed light on important but little-documented areas of the monetary policy process during the years when credit market controls were in force and financial markets were suppressed.

The aim of this study is to chart the general patterns in the arguments and in the behavior of the two parties, the Riksbank and the commercial banks, with the aid of the minutes from the meetings, chiefly those made by the general secretary of the Swedish Bankers' Association (*Bankföreningen*). Consequently, the exposition is not based on a chronological arrangement. Instead, it summarizes the interpretations and attitudes of the Riksbank and the commercial banks with the help of numerous quotes taken from the minutes.

In this regime of financial repression in Sweden, the orders, threats and arguments by the central bank represented important instruments. The communication of the Riksbank was based on open mouth operations, the term used by contemporary

<sup>&</sup>lt;sup>1</sup> The project was headed by Lars Werin and involved Peter Englund, Lars Jonung and Clas Wihlborg as collaborators. They prepared a set of studies covering the financial sector, the system of housing finance, the exchange rate policy and the domestic policy of the Riksbank. These studies were published in Werin (1993).

Swedish observers.<sup>2</sup> According to oral tradition, Erik Lundberg was probably the first economist to adopt the concept of "open mouth operations" in the 1950s, arguing that open market operations had been replaced by open mouth operations – the mouth in question being that of the Riksbank, which was heard most clearly within the closed club of the Riksbank and the commercial banks.

More recently, the concept of open mouth operations has been introduced in models of monetary policy to describe central bank communication to influence interest rates without changing the policy rate of the central bank.<sup>3</sup> These models are based on the institutional assumption of a "free" market-oriented financial system as well as on various assumptions about the expectations formation of the involved actors. Open mouth operations serve in these models as a complement to traditional monetary policy. Basically, they stand for the standard concept of moral suasion. In contrast, the open mouth operations of the Riksbank in the 1950s and 1960s were rather a substitute for traditional monetary policy in a system of tight administrative controls.

## Dramatis personae

#### **Representatives from the Riksbank**

- Per Åsbrink, Governor 1955-73
- Mats Lemne, Governor 1951-55
- Arne Callans, Kurt Eklöf, Sven Joge and Carl-Göran Lemne.

#### Representatives from the commercial banks

• Managers of the major commercial banks: Tore Browaldh, Curt G. Olsson, Rune Höglund, Lars-Erik Thunholm, Jan Wallander, Marc Wallenberg and Marcus Wallenberg. See also Table 1.

#### Representatives from the Swedish Bankers' Association (Bankföreningen)

• Bengt-Göran Löwenthal, Jonas Nordenson and Sven Strömberg.

#### **Representatives from the Government**

• Gunnar Sträng, Minister of Finance, Tage Erlander, Prime Minister, and Rune Johansson, Minister of Housing

The above list covers the most prominent actors involved in the meetings between the Riksbank and the commercial banks

<sup>&</sup>lt;sup>2</sup> See Jonung (1993b, p. 348).

<sup>&</sup>lt;sup>3</sup> See for example Guthrie and Wright (2000) and Campbell and Weber (2018) for model-based studies of the use of open mouth operations.

## 2 The credit control regime of the 1950s and 1960s

Before analyzing the meetings, the rise of the system of credit controls after World War II is first described. This account serves as the background for the subsequent discussion, showing why the meetings became an important part of the policy framework.

Prior to World War II, the Riksbank followed a traditional type of monetary policy using the discount rate as its main policy instrument. Carrying out its policy, the Riksbank relied on "free" financial markets where interest rates, money and capital flows moved without obstruction within Sweden as well as across its borders with no attempt by the authorities to prevent the workings of these markets. The Swedish financial sector was well integrated with the rest of the world.

The outbreak of war in 1939 marked the end of this type of market-oriented monetary regime. A system of exchange controls (*valutaregleringen*) was introduced in 1940, effectively isolating the Swedish money and capital markets from external influence. The regulation of the foreign exchanges was initially regarded as a wartime emergency measure. Still, it remained in force, although modified, until 1989 when it was abolished as part of the financial deregulation of the 1980s. As long as it existed, it remained the pillar for the system of domestic credit regulations that emerged in Sweden in the 1950s and 1960s.

During World War II, Swedish government debt increased rapidly to finance war-time induced government expenditures. Commercial banks became major purchasers of government bonds during these years. The Riksbank stabilized the bond rate at a low level. After the war, this policy of low interest rates became the guiding principle for the Social Democratic government and the Riksbank. Low interest rates were regarded as a method of supporting the housing sector, keeping apartment rents at a low level and the construction of new housing at a high level.

With the advent of peace, commercial banks made large sales of their holding of bonds in order to increase their lending to other sectors, in particular to industry, putting upward pressure on the bond yield. As the Riksbank aimed to maintain the discount rate and the bond rate at an unchanged level, it was forced to make large purchases of bonds.

As the Riksbank found it increasingly difficult to maintain low interest rates using traditional monetary policy instruments, it turned eventually to parliament and asked for new legislation to support the low interest rate policy. In the fall of 1951, parliament passed a stand-by law introducing direct controls of lending and deposit rates as policy instruments. Using this stand-by law as bargaining pressure, the Riksbank reached a "voluntary" agreement with the commercial banks in the early months of 1952, allowing the Riksbank to decide the deposit and lending rates of the commercial banks.

The commercial banks also agreed to maintain the liquidity ratios recommended by the Riksbank. These ratios constituted a method for allocating funds to the government and to the building sector as bonds issued by the government and the

housing sector were included together with cash items in the definition of the liquid assets that formed the numerator of the liquidity ratio. The volume of commercial bank deposits represented the denominator of this ratio.

At the same time, the system of credit controls was extended to the bond market through the control by the Riksbank of new issues of bonds (*emissionskontrollen*). The timing, size and interest rate of every new bond issue had to be approved by the Riksbank. A queue was soon established for companies that wanted to emit new bonds (*obligationskön*).

This system of controls of interest rates and the flow of credit, financial repression according to modern parlance, contributed to the establishment of the monthly meetings between the Riksbank and the commercial banks held from the early 1950s and onwards. As the Riksbank could not communicate its policy via freely functioning financial markets, it chose to do so in regular meetings with the commercial banks. Here "open mouth operations" replaced open market operations. "Voluntary" agreements between the Riksbank and all major financial institutions were an element of this policy regime.<sup>4</sup>

In this regime of financial repression, the actions of the Riksbank were framed in terms of credit aggregates while the rate of interest was kept at a "low" and "stable" level. The policy of the Riksbank was aimed not only at stabilizing the business cycle, but allocative and distributional goals were also fostered by the Riksbank. The Riksbank behaved as a regulatory agency in charge of a program of controls of interest rates and of domestic and foreign flows of credit and capital.

This system of command and control replaced the earlier system of market allocation. There were basically no functioning secondary markets for financial assets in Sweden with the sole exception of government-issued lottery bonds (*premieobligationer*) held by the public which were in high demand because of the prevailing tax laws. Financial innovations were held at bay during the 1950s and 1960s. The stock market capitalization in relation to GDP was held at a low and constant level during the period of financial repression. Basically, Sweden faced a financial ice age during these decades.<sup>5</sup>

Sweden became member of the Bretton Woods system in 1951. The stable exchange rate for the Swedish krona to the US dollar was a key part of this arrangement. The membership was consistent with the financial repression of 1950s and 1960s. Many European countries adopted various forms of credit policies during the Bretton Woods period where the central bank met with commercial banks.<sup>6</sup> However, as far as I have found, no other country relied on such meetings to the same extent as Sweden.

 <sup>&</sup>lt;sup>4</sup> For a description of the rise of the policy of credit controls, see Wetterberg (2009) and Jonung (1993b).
 <sup>5</sup> For the effect of the financial repression on the relative size of the Swedish stock market prior to the financial deregulation of the 1980s, see Jonung (2022).

<sup>&</sup>lt;sup>6</sup> For a brief survey of "monetary policy without interest rates", see Monnet (2018).

The Swedish economy benefited from the golden age of recovery from World War II. It was a period of rapid economic expansion. GDP growth averaged around 4 percent in the period 1955-73 (Figure 1). Even during the recessions in the 1950s and 1960s, growth remained around 2 percent. Unemployment hovered around a full employment rate of 2 percent. Average annual inflation rate was around 4 percent with a rising trend (Figure 2). This favourable macroeconomic development prevailed during the Bretton Woods system until it started to break down in the early 1970s.





Source: Andersson (2021)





Source: Andersson (2021)

## 3 The archival materials

This study is based on a total of 160 sets of minutes for the years 1956-73.<sup>7</sup> These were compiled by Sven Strömberg, general secretary of the Bankers' Association (*Bankföreningen*) until 1970, and after that by Jonas Nordenson. Strömberg, with a background as a Justice of the Supreme Administrative Court, writes in direct speech. The reader gets the feeling of being seated at the meeting table as Strömberg made notes. He probably captured the spoken exchanges in their entirety. Nordenson's transcripts are also detailed but more condensed. The notes were scrutinized by the chairman of the Bankers' Association and then distributed to a limited circle in the commercial banking world.

The Riksbank made internal minutes too. These were more condensed than those of the Bankers' Association during the period 1956-73. Moreover, considerably fewer of the Riksbank's minutes could be found when preparing this study.

Wherever minutes of both the Bankers' Association and the Riksbank exist for the same meeting, they show considerable agreement. There is no propensity in the minutes of the commercial banks to present the banks in a favorable light or to besmirch the Riksbank. Indeed, it was in the interest of the Bankers' Association to have as correct a record as possible because the minutes formed a basis for policymaking within the Association.

When interpreting the minutes, I have received support from participants who took part in the meetings: Kurt Eklöf and Carl-Göran Lemne from the Riksbank and Tore Browaldh, Bengt-Göran Löwenthal, Curt G. Olsson, Lars-Erik Thunholm and Jan Wallander from the commercial banks.

## 4 How it started

The definitive switch of monetary policy to a regulatory regime of financial repression took place in 1952, when controls were established over new bond and security issues, along with liquidity ratios, through an agreement between the Riksbank and the commercial banks.<sup>8</sup> The monthly meetings emerged from this set-up as a permanent feature. The Riksbank, under the governorship of Mats Lemne, initiated the meetings with the banks with a view to controlling liquidity. From this developed the monthly meetings, which rapidly became a permanent institution. The first regular gatherings began in January 1952.<sup>9</sup>

The system of monthly meetings was expanded to include regular meetings between the Riksbank and representatives from the savings banks, insurance institutions and the rural credit societies. The National Pension Insurance Fund was brought into the

<sup>&</sup>lt;sup>7</sup> It proved impossible to assemble a complete series of the minutes for the years prior to 1956.

<sup>&</sup>lt;sup>8</sup> See Jonung (1993b) for the rise and fall of the policy of credit controls. Jonung (1973) deals with the distinction between credit policy and traditional monetary policy in Sweden.

<sup>&</sup>lt;sup>9</sup> The meetings which took place in 1947 and 1948 during lvar Rooth's term as Governor of the Riksbank were forerunners. These meetings too were inaugurated to influence the commercial banks' portfolio choices. They likewise led to the distribution of circular letters by the Bankers' Association.

system after 1973.<sup>10</sup> These meetings became a necessary complement to the meetings with the commercial banks, even though they did not include any profound discussions of monetary policy. As a rule, these financial institutions, in contrast to the commercial banks, followed the directives issued by the Riksbank without any opposition.

The inauguration of the monthly meetings should be regarded in the light of the cooperation between business and government emerging during the World War II.<sup>11</sup> Representatives of commerce, industry and the banking world were closely associated with government policy during the war. They sat on commissions and boards. Consequently, there were recent experiences to fall back on when the Riksbank summoned the commercial banks early in 1952. Seen in this perspective, the meetings were a continuation of a trend started by the regulations of the war.

## 5 Why was the system of meetings accepted?

No formal legal grounds were created setting forth the rules for the monthly meetings. The system was not based on any legislation – even though there was a strong element of threat and coercion in the Riksbank's management of the financial sector. The Riksbank and the Ministry of Finance apparently preferred this system with its elements of negotiations and bargaining to one based on legislation and binding rules.

The Riksbank's interest in participating in the regular meetings with various financial institutions should be viewed in the context of the non-market-oriented monetary policy. Because the Riksbank considered itself precluded from conducting a purely traditional monetary policy via signals on functioning markets, it was compelled to rely on other techniques. The meetings became an important channel of information through which the Riksbank could make its intentions known.<sup>12</sup> The Riksbank also made use of traditional monetary policy weapons such as changes to its discount rate.

Why did the commercial banks allow the Riksbank to control their business activities so directly without any formal system of rules? A number of factors contributed to the banks' acceptance of the monthly meetings. The Riksbank was in a strong position *vis*- $\dot{a}$ -*vis* the commercial banks. It could threaten them with binding legislation if they failed to follow Riksbank directives. It did so on several occasions. Regular informal

<sup>&</sup>lt;sup>10</sup> The antagonisms in the 1960s between Lennart Dahlström, director of the National Pension Insurance Fund (*AP-fonden*), and Per Åsbrink, Governor of the Riksbank, made it necessary for the finance minister to function as arbitrator on several occasions. Their exchange of arguments was at least as lively as during the meetings with the commercial banks.

<sup>&</sup>lt;sup>11</sup> The meetings between the Riksbank and the commercial banks are an example of the corporatism system which evolved after World War II in Sweden encouraged by the Social Democratic Party. See Rothstein (1992).

<sup>&</sup>lt;sup>12</sup> The commercial banks' memoranda of the meetings became themselves an instrument of monetary policy in the sense that the minutes were duplicated and distributed on a limited basis within the banking system. In this way, bank managers in top positions were advised of the Riksbank's views and the attitudes of the heads of the commercial banks. The commercial banks also informed their local branches of the Riksbank's wishes regarding monetary policy in formal communications issued in the name of the Bankers' Association. In some isolated instances the Riksbank asked to scrutinize the content of these circulars.

meetings with the Riksbank seemed a less unpleasant alternative to the banks than legislation. At the meetings they could hope to get a hearing for their views and exert influence on the Riksbank to their advantage. Moreover, punitive measures against those banks, which acted in defiance of the Riksbank's intentions, could be taken in silence, and they could also be adapted to what was suitable for the moment.

The system was based partly on a gentlemen's agreement whereby the Riksbank and commercial banks could discuss the problems which arose. Legislation would have caused disputes over interpretation, sanctions and punishments which would have felt more unpleasant to those involved. It would also have brought an openness and visibility which none of the parties would have regarded as desirable. Indeed, the minutes reveal the Riksbank's interest in keeping information secret.

At first, the monthly meetings were probably also regarded by the banking community as a temporary phenomenon which would disappear after some years. This hope proved too optimistic. The meetings lost their role as a result of the financial deregulation during the second half of the 1980s.<sup>13</sup>

The ideological climate, determined by the Social Democratic party's hegemonic position, was critical towards private commercial banking. A threat of nationalization hung over the commercial banking system, as was illustrated regularly by motions at the Social Democratic Party's congresses.<sup>14</sup> This encouraged docility on the part of the banks. All the indications are that when the system of meetings was developing, no representative of the commercial banks protested against it either.<sup>15</sup> Instead, the meetings became a forum in which to protest against the Riksbank's measures.

The policy regime based on the meetings along with the regulation of the entire capital market brought the commercial banks certain benefits. It facilitated cartel collaboration between the banks with the Bankers' Association as the cartel organizer. There was a special body within the Bankers' Association known as the "interest-rate syndicate", which met each time there was a change in the discount rate to decide what rates the banks were to set, in reality within the framework determined by the Riksbank. The Riksbank then considered the banks' proposals for new rates, usually the following day. Because the Riksbank then sanctioned the banks' proposals, possibly after some adjustments and contacts with the savings banks and post office savings bank, the Riksbank functioned as the chief guarantor of the syndicate's rate-setting.

It was in the interest of the commercial banks that the Riksbank supervised and regulated the entire credit market and functioned as an arbitrator and controller

<sup>&</sup>lt;sup>13</sup> There were various other forms of regular contacts between the Riksbank and commercial banks besides the monthly meetings.

<sup>&</sup>lt;sup>14</sup> In an internal document from the Bankers' Association concerning the situation faced by the commercial banks in the 1960s, Tore Browaldh wrote in 1959 that the threat of socialization seemed to be weaker than before. But it was still there.

<sup>&</sup>lt;sup>15</sup> According to information supplied by Torsten Carlsson, commercial bankers such as Gustaf Söderlund, Marcus Wallenberg and Ernfrid Browaldh regarded the methods of control which the Riksbank adopted in the early 1950s as temporary, which contributed to the acceptance of the meetings by the commercial banks.

when some actor threatened stability, for example in the form of an "interest-rate war" such as Åsbrink feared. Through its policy, the Riksbank protected the commercial banks from competition, whether from external sources or from within themselves.

The Riksbank policy guaranteed the commercial banks' profits within certain limits. The Riksbank was also interested in "tranquility" and "stability" on the credit market to be able to enforce its policy of regulations. This period was characterized, not unexpectedly, by considerable structural stability. No new private banks or competitors entered the field, and the market shares on the so-called "organized" market remained relatively constant. An important exception was the National Pension Insurance Fund and the so-called "intermediate" institutions which followed in its footsteps. These were political creations, not a result of the ordinary market process.<sup>16</sup> The system of controls led in time to competition from the "gray" market and sundry forms of circumvention and evasion – a process which later helped to trigger the process of financial deregulation that started in the 1970s and peaked in the 1980s.<sup>17</sup>

## 6 The procedure of the meetings

The meetings took place as a rule on a Wednesday in the middle of every month, except for July, in conjunction with the Bankers' Association's monthly executive committee meetings and the meetings of the Board of Governors of the Riksbank. The procedure was as follows: first the commercial banks met at the Bankers' Association premises in the morning. After lunch, usually at 3 pm, the commercial banks' representatives went up to the Riksbank, headed by the chairman of the Bankers' Association.

The delegation consisted of the heads of all the commercial banks except for two small provincial banks, the *Jämtlands Folkbank* and the *Bohusbank*, along with additional representatives of the three major banks: *Svenska Handelsbanken*, *Skandinaviska Banken* and *Stockholms Enskilda Bank*. Something like twenty persons altogether were present on behalf of the commercial banks.

On the following day, a Thursday, the regular meeting of the Board of the Riksbank took place, at which the Governor had the opportunity to report from the meeting with the commercial banks – if he felt it appropriate.

When the Board of Governors changed the discount rate, which as a rule happened at the meeting on Thursday morning, representatives of the commercial banks were summoned to the Riksbank. The Riksbank wanted to inform them of the measure

<sup>&</sup>lt;sup>16</sup> The government policy was that new financial institutions ought to be under state ownership. For example, Gunnar Sträng, powerful Social Democratic Minister of Finance 1955-76, opposed the commercial banks' plans to establish a bank giro service to compete with the government owned postal giro system.
<sup>17</sup> The structure of the credit market changed radically as a result of the financial deregulation of the 1980s: new institutions and financial instruments emerged at a rapid pace. The regulatory policy of the 1950s and 1960s was based on a well-defined credit market easily controlled by the Riksbank. This state of affairs gradually disappeared during the 1970s and 1980s.

being taken, find out how the commercial banks intended to adjust their interest rates, and to influence their decisions.

Similar conferences then took place at the Riksbank between the Riksbank and representatives of the savings banks, rural credit societies and insurance companies, in this order. The latter meetings, which accomplished their business quickly, were less important in a monetary policy perspective than those between the commercial banks and the Riksbank. A few extraordinary meetings or series of meetings were arranged to deal with acute monetary policy questions.

The Governor of the Riksbank, Per Åsbrink, represented the Riksbank. Alongside him he had officials from the statistics office, the Deputy Governor, and holders of other senior posts at the Riksbank. In his absence, the meetings became quiet affairs without debate. The commercial banks evidently did not regard his deputy as a serious substitute.

Period	Chairman
1955-57	Marcus Wallenberg, Stockholms Enskilda Bank
1957-59	Lars-Erik Thunholm, Skandinaviska Banken
1959-61	Tore Browaldh, Svenska Handelsbanken
1961-63	Marc Wallenberg, Stockholms Enskilda Bank
1963-65	Lars-Erik Thunholm, Skandinaviska Banken
1965-67	Marc Wallenberg, Stockholms Enskilda Bank
1967-69	Rune Höglund, Svenska Handelsbanken
1969-72	Lars-Erik Thunholm, Skandinaviska Enskilda Banken
1972-74	Jan Wallander, Svenska Handelsbanken

Table 1. The chairmen of the Swedish Bankers' Association, 1955-74

Note: Sven Strömberg was general secretary of the Bankers' Association 1955-70. Jonas Nordenson occupied this post in 1970-76.

The banks' chief spokesman was the chairman of the Bankers' Association, usually a representative of one of the three major banks. Leading representatives of the banks at these meetings were Marcus Wallenberg, Lars-Erik Thunholm, Tore Browaldh and Marc Wallenberg. See Table 1 for a list of the chairmen and general secretaries of the Bankers' Association during the years 1956-73. The general secretary of the Bankers' Association played an obscure role at the meetings.<sup>18</sup> His primary duty was to prepare the minutes.

The ordinary meetings started off with a review of the most recent credit market statistics. As a rule, these included the individual commercial banks' liquidity ratios and building credits along with details of the foreign reserves and of housing construction. The introductory phrase in the Bankers' Association minutes from February 1956 onwards is some variant of "After the liquidity and lending figures had been presented, it was stated ... ." In November 1956 came the additional words "and

<sup>&</sup>lt;sup>18</sup>The chief duty of the general secretary of the Bankers' Association was to influence legislation concerning the banking system and the credit market. For this reason, he frequently had a background in law.

the statistics on housing construction." Details of the foreign exchange reserves were reported regularly from March 1957 onwards.

These figures triggered the discussion, especially if the Riksbank found them disturbing. The commercial banks were then given the opportunity to comment on the statistics and defend their positions. The meetings were dominated by the question of the monetary policy stance, especially in the short term. When this was not a burning issue, sundry other topics would be dealt with. The economic outlooks in Sweden and abroad were discussed regularly. Fiscal policy and housing policy were also topics frequently on the agenda. When there were no matters in dispute, the meetings could be of short duration with mainly a ceremonial content. On some occasions, meetings were cancelled due to a lack of business.

## 7 The Riksbank's behavior

In order to impose a structure on the analysis, the minutes are used to study the goals and the instruments of the Riksbank as well as the constraints on monetary policy. Åsbrink usually did not discuss in these terms, but his reasoning and arguments throw light upon these issues. First, the goals of the Riksbank as disclosed in the minutes are considered. Next, an account of the instruments and techniques employed at the meetings in order to impose control on the commercial banks are examined. Finally, the constraints which Åsbrink considered to hamper the Riksbank are dealt with.<sup>19</sup>

As an introduction to the analysis of the Riksbank's behavior and arguments, the cyclical pattern of the lending of the commercial banks and the discount rate of the Riksbank are examined.

#### 7.1 The cyclical pattern

The meetings between the commercial banks and the Riksbank revolved to a large extent around the commercial banks' "sundry lending" (*övrig utlåning*). This item covered lending to non-priority sectors such as industry, commerce, and households, that is to all sectors but the building sector that was given top priority by the Government. The term had already been coined in the late 1940s and continued to be used at the meetings. The growth of "sundry lending" during the period 1955-73 is shown in Figure 3. This figure epitomizes the framing of monetary policy during Per Åsbrink's term as Riksbank Governor.

It is possible to distinguish five occasions of monetary restraint in the sense of sharply reduced growth in sundry lending: in 1955-56, 1960-61, 1964, 1966-67 and 1969-70. Of these contractions, those of 1955-56 and 1969-70, the latter nicknamed the idiotic

<sup>&</sup>lt;sup>19</sup> An alternative approach would be to use a game theoretical framework. This gives little guidance, however, since it requires fixed rules governing the way the game is "played". This means, for example, that penalties and rewards shall be fixed beforehand and known to the various parties. Such was not the case at the meetings between the commercial banks and the Riksbank, at which the parties proceeded by trial and error, with penalties/rewards not being clearly stated as a rule. There was considerable elbowroom for negotiation. A range of new arguments and conditions might be cited from case to case during the long process of meetings.

squeeze (*idiotstoppet*) stand out as the most severe.<sup>20</sup> On these occasions, the outstanding volume of sundry lending diminished in absolute terms.

The Riksbank's policy was countercyclical during Åsbrink's time, being contractionary during booms. This is apparent from Figure 3 where the years of recession are shaded. During the boom years of 1955-56, 1960-61, 1964-66 and 1969-70, growth in sundry lending slowed. During the recession years of 1957-59, 1962-63, 1967-68 and 1971-73, the rate of growth increased.

# Figure 3. Growth of commercial banks' sundry lending and of the volume of bank guarantees, 1955-73



Percentage change on a yearly basis. Shaded periods mark recessions

Note: During contractionary credit policy in boom periods, commercial banks responded to the forced reduction in sundry lending by increasing their bank guarantees. These guarantees served as collateral for financial intermediation outside the banking system, supporting the "gray" market. Sundry lending is defined as lending to all sectors except the building construction sector.

Source: The annual reports of the Riksbank and data from the archive of the Riksbank. The dating of recessions is taken from Jonung (1993a).

Figure 3 illustrates the conflict of interest between the Riksbank and the commercial banks. When the Riksbank cuts back on the supply of credit to non-priority purposes during boom periods, the commercial banks encounter at the same time a boom-induced growth in the demand for credit on the part of business, industry and private individuals. The intensity of debate at the meetings therefore shows a pro-cyclical pattern. The verbal clashes between the Riksbank and the commercial banks became most heated during periods of Riksbank restraint occurring during boom conditions.

The Riksbank sought to control the banks via various forms of measures. It used "soft" measures such as recommendations, persuasion, voluntary agreements, and threats – techniques which go under the denomination of "moral suasion" in the literature of monetary policy – as well as "hard" controls directed at the commercial banks'

<sup>&</sup>lt;sup>20</sup> On the idiotic squeeze, see Wetterberg (2009, pp. 376-384).

business activities. Among the latter, liquidity ratios, control of new bond issues and lending ceilings occupy a prominent place. The Riksbank also made use of discount rate changes and market operations in combination with its other measures.



**Figure 4. The discount rate of the Riksbank, 1955-73.** Percent. Shaded periods mark recessions

Source: The annual reports of the Riksbank.

The discount rate policy is illustrated by Figure 4. It reveals a countercyclical pattern: the discount rate was raised during the booms of 1954-56, 1960-61, 1964-66 and 1969-70 and lowered during all recessions. A total of 23 discount rate changes were made during the period 1956-73, but the adjustments were small as a rule; one half of a percentage point was the most frequent shift. This signified a softening of the tougher variant of the low-interest doctrine, which guided the Riksbank during the decade immediately after the end of World War II when the discount rate was held constant.

#### 7.2 The goals of the Riksbank

In the traditional analysis of monetary policy, a distinction is commonly made between the goals, the indicators and the means or instruments of the central bank. The goals may be divided into two groups: intermediate and ultimate goals. Indicators are used by the central bank to gather information about the development of the economy, thus about the need for changes in monetary policy. The effect of central bank policy measures is recorded first in changes in the intermediate goals. Eventually the ultimate goals are influenced.

There is no clear and unambiguous boundary between these concepts. Central banks have often used the same aggregates as both indicators and intermediate goals. Even the distinction between intermediate goals and ultimate goals is sometimes hard to sustain. Despite such problems of classification, the Riksbank's behavior, as it appears from the minutes, is described below using these concepts.

#### 7.2.1 The intermediate goals of the Riksbank: Controlling commercial bank lending

The Riksbank was guided by two main intermediate goals: control over lending and control over interest rates. The debate at the meetings is dominated entirely by the first-mentioned goal. Almost every meeting concerns the volume of lending, especially during periods of restraint. The interest-rate comes up for discussion as a rule only in connection with changes in the discount rate or when the commercial banks report that other financial institutions have altered their rates. For these reasons, I describe first the Riksbank's focus on commercial bank lending and the instruments and techniques used to control it. Lending serves also as the primary indicator of the Riksbank's policy.

The discussion starts off with the presentation by the Riksbank's representatives of the latest statistics on commercial bank lending. Åsbrink often takes the report as the starting point for his comments on the behavior of the commercial banks. This is illustrated by the following quotes from the minutes of meetings. The date of the relevant meeting is given in brackets. For reasons of space the extracts are not reproduced *in extenso*. Omissions within the quotes are indicated by three stops (...). Interpolated comments and explanations are placed within square brackets []. The italics occurring within the quotes are retained from the original minutes.

Åsbrink (13 June 1956): " ... the figures [of sundry lending] you have come up with are quite nasty. Only five banks have reduced their lending during May, and the reduction is probably not much to brag about."

(15 August 1956): " ... you have another month left, of course. However, some of the figures look bad."

(19 June 1957): "These figures [i.e. the data on sundry lending] do not look all that good."

(21 October 1959): " ... I think these lending figures are beginning to look terribly worrying."

(12 December 1959): "We have never in any year had such substantial lending in November as now. I had really believed, perhaps rather foolishly, that we had a common interest in holding back on lending now and doing so without too many bothersome restrictions and regulations." Later on in the same set of minutes: "The figures for November do not look good, and I find it difficult to accept them. I should at least like to have a declaration today from every bank at the table saying how you think matters ought to develop in the future."

(13 April 1960): "May I now ask what you have to say about these dreadful figures [i.e. the lending data]? ... We would simply like to know what lies behind the rising lending figures."

These cases can be supplemented by numerous examples showing how central the volume of lending is to the Riksbank. Arne Callans, Åsbrink's right-hand man for many years at the Riksbank, explains to the banks on one occasion (9 June 1966) why the Riksbank wants to control their lending:

"We [i.e. the Riksbank] do not only have to consider industry, you know, but also the housing construction program which is not determined by us." The Riksbank can "not do much about the capital market. For instance, we are able to prohibit the National Pension Insurance Fund from lending and force it to keep its money in cash instead. Such a policy would benefit nobody. The only possibility remaining is to hit commercial bank credit. This conclusion is unavoidable."

"To hit commercial bank credit" is a straightforward description of the Riksbank's choice of target for its countercyclical policy when it is restricted in its use of the discount rate.

#### 7.2.2 The ultimate goals of the Riksbank

The minutes show clearly that the main intermediate target is commercial bank lending. Lending is the axis around which the dialogue revolves. In contrast, the ultimate goals of monetary policy are seldom discussed. They are mentioned *en passant* as a balanced macroeconomic development, neither overheating nor recession being acceptable, low inflation and the safeguarding of foreign reserves. The following quote illustrates this:

Åsbrink (18 April 1956) justifies the curtailment of the lending of the commercial banks by reference to the foreign exchange situation. "The most serious feature of today's picture is the way the balance of foreign trade is developing. It has to be said that the figures for the most recent months are gruesome ... our foreign currency position is weak."

Ten years later, Åsbrink (16 February 1966) pronounces that it is "absolutely necessary that you should not aggravate the overheating through a credit expansion." In the same year, Arne Callans (19 January 1966) propounds similar views: "I suppose we are all agreed that we have too many price and wage increases. So, there does not seem to be any other corrective measure than to hit lending."

During the most severe period of restraint during his time as Riksbank Governor, Åsbrink (15 October 1969) states: "I see no reason to ease off on restraint; on the contrary, we may have to tighten it up. In making this judgment, it is primarily the business outlook I have in mind, although of course I have an eye on the foreign exchange situation as well."

Åsbrink (20 October 1971) rejects Thunholm's proposal for "organized borrowing abroad" with the argument that this would undermine a "balance-creating economic policy."

#### 7.3 The instruments of the Riksbank

In broad terms, the Riksbank's steering of the activities of the commercial banks can be divided into three phases. In the first phase, the Riksbank warns and threatens. Step by step, the warnings are worded in increasingly menacing terms. The threats are made frankly, sometimes almost brutally, by Åsbrink. A drastic example is his warning to the banks at the meeting of April 1966 that the Riksbank: " ... has enough potential ways of getting bloody nasty with you. And we shall do it too."

In the next or second phase of the regulatory cycle, Åsbrink's patience is at an end. Moral pressure seems insufficient to him. The Riksbank wants to see results. Now the threats are carried out. For this purpose, Åsbrink selects proper instruments from his abundant arsenal of credit controls.

Finally, in the third phase, monetary policy is relaxed again after the squeeze, a new credit expansion gets under way and the conflicts die down. Now the Riksbank appeals to the banks to be cautious in their lending operations. They are urged to avoid an excessively rapid or "irresponsible" credit expansion. Then the regulatory cycle starts afresh, accompanied by increasingly frequent warnings when the pendulum swings towards rising economic activity.

These three phases taken together – warnings and threats during the upswing, contractionary interventions at the peak and moral exhortations during the recession – form the Riksbank's regulatory cycle. However, the difference between the phases should not be exaggerated – they often merge into one another. In Åsbrink's comments, the admonitions run like a common thread irrespective of the macroeconomic outlook.

The Riksbank also employed market operations and discount rate changes as monetary policy instruments, but no great attention is paid to them during the meetings compared to the lively exchange over the instruments of credit control. In the following analysis of the Riksbank's behavior, this regulatory cycle is documented by means of sundry quotes.

#### 7.3.1 Phase I. Riksbank warnings and threats

The first phase may be divided into two stages: a milder one in which warnings predominate and a harsher one when the threats become increasingly stern. These warnings and threats are an important element of the Riksbank's behavior. Their frequency is explained by the fact that the regulatory policy created a permanent rationing situation on the credit market as interest rates were not allowed to clear financial markets.

The Riksbank's behavior is illustrated by the following passages in which Governor Åsbrink expressly chooses the words "warn" or "warning".

Åsbrink (13 June 1956): "The warning I have given you today is justified."

(12 September 1956): "Of course I have already warned you before that you should not believe there can be any alleviation now after 31 August. And I have also warned you that we shall have to continue with the present arrangements until further notice."

(19 June 1957): "I have decided to mention this so that you should be warned."

(18 November 1959): "But we now consider that we have warned you enough to be able to press hard later on without having to think about any lengthy transitional periods or such like."

(14 June 1960): " ... then I shouted a warning to you against any further expansion. The last time we met I shouted again, and now I am calling out once more for the same purpose. So, there is no reason now for any further warnings. ... I therefore believe that it may not be out of place to remind you that we can soon celebrate the first anniversary of our starting to warn you against this trend of lending activity. ... We take no pleasure in waving the big stick, but good God, you force us into it when you do nothing despite the fact that we have warned you and negotiated with you for close on a whole year."

In a subsequent reply: "Now Mr. Thunholm is forgetting again that we have warned you and argued with you for a whole year."

(12 October 1960): " ... we feel a little unhappy when we have warned you for so long and so explicitly and yet you are still in a position where you cannot do anything."

(17 May 1961): "You cannot complain that this is coming at you too suddenly, because we have warned you many times before."

(17 October 1962): "In other words my warning is dictated, in point of fact, by goodwill towards you."

(17 April 1963): "I just wanted to warn you and emphasize that we shall not be so easy-going that we shall also rescue the liquidity of those who run off with their lending in advance."

(13 June 1963): " ... we consider that you have been too easy-going with your lending in spite of the gentle warnings you have had from us."

(17 December 1964): " ... give you [i e the commercial banks] a warning again now."

(19 January 1966): " ... I wanted to give you a warning."

As well as the occasions when Åsbrink speaks directly of warnings, he often comes out with explicit threats aimed at the commercial banks. The threats are often also augmented by hints that the banks are being watched and that they may find themselves being subjected to even more rigorous controls. Here are some samples of threats.

Åsbrink (21 October 1959): " ... we *will* tighten up if you do not bring about a change of your own accord ... what we are aiming at is to bring about a cutback in lending ... in other words I am advising you seriously to be cautious with private loans."

(20 December 1961): " ... I hope you have not forgotten the threatening turns of phrase we used earlier."

(13 April 1960): "We simply want to know what lies behind the rising lending figures. We hope this can take place in all friendliness with the help of the banks themselves. But if we cannot get there that way, then we shall have to go via the Bank Inspection Board ... for there *has* to be a change in this trend. It may hurt you: that cannot be helped. It has not done so up till now."

(10 May 1960): "If you don't do something of your own accord, then we shall still have to find some means of making you do so, because we simply cannot let things go on like this."

(14 June 1960): " ... I should regard it as particularly catastrophic if we were to go on arguing for another year and having to listen to you protesting your understanding of the danger of a credit expansion and still not getting any practical results."

(13 November 1963): "We must, and we shall resort to reprisals – yes, I don't hesitate to use the word – unless we can see a definite effort to put an end to the expansion of credit."

(16 February 1966): "Well, you must have noticed that your liquidity is going down the drain ... It *is* not to be taken for granted that more money will be spent from here. I have no great wish to discuss conceivable measures today, but if we do not see some adjustments, we shall consider ourselves at liberty to be as tough as we like. I shall say no more, but I really hope you will take this seriously."

(20 April 1966): " ... I know we still have enough possibilities for being bloody nasty to you. And we will do it too. I do not intend to repeat the sermon I preached when we last met. But it still stands."

Behind Åsbrink's threats lies the prospect, for example, of the Riksbank going to the government with a request for a tightening of legislation concerning credit policy. One instance of this occurs when Åsbrink declares at the meeting of April 1965: "We are serious about what it says there, and I have made sure that I can get the cash ratio law put into effect if necessary." Another case is Åsbrink's (19 November 1969) remark: "If the old instruments do not help any longer, then you had better be prepared for us thinking up new ones."

#### 7.3.2 Phase II. The Riksbank's orders and sanctions

Åsbrink's warnings and threats were presented as a rule simultaneously with demands for actions on the part of the commercial banks. The constant request to the banks is to slow down the growth of their lending. When Åsbrink feels he has warned and threatened long enough without the desired outcome, he uses direct commands, or "requests", as they are called in his vocabulary. At this point, the Riksbank Governor may present his orders in a way which scarcely invites discussion. Some examples:

Åsbrink (18 April 1956) during the squeeze of 1956: "My request is that the proportion should be reduced from 99 to 95 percent of the July 1955 figure by the end of August. Half of this program is to be accomplished by the middle of the period. Of course, there will be difficulties but what are we to do?" (13 June 1956): " ... we have given you until the end of the month of August. But we are sticking rigidly to the requirement ... You have got to bring about some change already in June if you are going to manage it by the end of August."

(12 September 1956): "The 95 percent will have to be a ceiling which you must not climb over. That figure you will have to abide by every month, and if you need any elbowroom you will have to make it for yourselves."

In April 1960, there is a lively exchange of views concerning the Riksbank's role as a central bank. Åsbrink (13 April 1960): "You simply *must* not console yourselves with the idea that you have fulfilled the liquidity requirements *fairly* well. ... It cannot go on like this, we cannot put up with it, the thing *must* be put right. ... From now on the banks' right to borrow from the Riksbank is not to be regarded as an unconditional right to borrow any amount they like any time they like on terms established in advance."

Browaldh retorts: " ... and what does it imply when the Riksbank says it can no longer be taken for granted that the banks can borrow from the Riksbank? Does it mean that the Riksbank is no longer going to function as a lender of last resort? Is it going to be accepted that we issue bonds for sale instead and in that way raise the interest level still more?"

Åsbrink replies: "There is no intention of the Riksbank's ceasing to be the lender of last resort. But perhaps we can say 'of very last resort', to adapt the expression. I am not impressed in the slightest by this threat of yours to put bonds on sale."

Åsbrink (10 May 1960): "We simply have to break this trend towards constantly increasing lending; we *must* get down to another level. But on the other hand, of course I have to yield to the fact that you have only had a fortnight since we last met ... [and it] ought to be in our common interest not to force the Riksbank to resort to more stringent measures than ought to be necessary."

An unusual regulatory technique is tried out in the spring of 1964. At the meeting on 15 April, the Riksbank Governor hands out envelopes to some of the commercial banks' representatives:

"Envelopes are then distributed to certain members, with regard to which the Governor of the Riksbank states: The envelopes contain a list of needy lending to housing construction firms notified to us which have received start-up permits for building works falling within the framework of the housing construction program adopted by the Riksdag ... this will be a crowbar which will break open our credit policy ... in return we count on receiving your cooperation in furnishing credits to the building firms which are in need."

This episode illustrates the selective character of the policy of the Riksbank caused by the political priority given to the housing sector. Housing construction is to be sustained. When customary instruments such as the liquidity ratios appear inadequate, the banks are simply ordered to finance specific construction projects through direct orders handed out at the meeting.

#### 7.3.3 Phase III. The Riksbank's exhortations

In the third phase, when credit policy is made less tight after a period of contraction, the Riksbank admonishes and exhorts the banks to exercise responsibility, caution and indeed almost solidarity with the Riksbank. It ought to be in the banks' own interests to be prudent and avoid loans for unfitting purposes. The commercial banks ought not to "misappropriate" their funds for "adventures".

These admonitions to caution are sometimes presented by Åsbrink with moralizing overtones. He acts on occasion like a stern father reminding his sons of the temptations they ought to avoid like loans for purposes of consumption, for share purchases, second homes and cars. Warnings run like a common theme through every phase of the Riksbank's regulatory cycle:

Åsbrink (15 February 1956): "The money ought not to be used for any adventures. If it is 'misappropriated', the banks cannot count on the Riksbank's helping them with future transfers of such credits to other institutions ... There should always be a silent understanding between you and us that you maintain liquidity and abstain from going in for risky business."

On the occasion of the famous interest-rate coup (*räntekuppen*) of 1957, when the Riksbank raised the discount rate without informing the government in advance, Åsbrink (11 July 1957) remarks: "Thus there should now be a chance of freedom with responsibility." At the meeting the following day he admonishes the banks: "There must not be any explosion of credit. When we take a step such as this raising of the discount rate, we feel entitled to count on your helping us so that the measure will not be discredited. There are probably many who would like to see that."

Åsbrink (16 March 1960): "I must say we had expected greater caution with regard to lending."

(14 June 1960): "I hoped and believed that a result could be arrived at through conversations in this relatively limited circle, where all of us ultimately ought to have the same interest."

(19 January 1966): "Yes, well that was the little lesson I felt I needed to teach you today."

When the rules for interest on overdue bills were eased in the summer of 1956, the banks were warned against negligent behavior. Åsbrink (22 July 1966): "At the same time it is to be emphasized forcefully that you must not start granting credits irresponsibly as a result of this." In December 1970, when there is talk of some alleviation after the restraint of 1969-70, Åsbrink stresses that "the Riksbank would not accept a lending explosion channeled towards consumption or other less desirable purposes."

As one strand of the strategy of exhortation, Åsbrink may directly approach those bank directors who have been negligent. One occasion when this happened was during the squeeze of 1969 when Åsbrink (22 August 1969) asked "the representatives of four banks to remain behind for a while after the end of the meeting." Then the four "detainees" were told what the Riksbank Governor thought of their behavior.  $^{\rm 21}$ 

#### 7.4 Other Riksbank tactics

The above description of the Riksbank's regulatory cycle gives an incomplete picture of Åsbrink's behavior as he deploys a plentiful array of arguments and tactical devices to get his way at the meetings. One notable theme is Åsbrink's stern attitude; another is his repeated requests for explanations. When he feels under less pressure, he can display an understanding attitude, be accommodating and cooperative.

#### 7.4.1 Stern attitude

To buttress the credibility of his directives and to reduce discussion, and therefore the scope for the commercial banks to influence the Riksbank, Åsbrink frequently chooses to adopt an unyielding and uncompromising attitude. He declares on various occasions that he is not going to change his view. Sometimes there is no point for the commercial banks in even discussing with him:

Åsbrink (18 April 1956): "We cannot agree to any postponement of the restriction of credit."

(19 April 1956): "We cannot agree to any extension of the period of grace."

(13 June 1956): "I can assure you that we shall not change our minds."

(21 October 1959): "And I shall not accept any counterargument ... Nor will I accept your apportioning the blame elsewhere ... I feel no necessity to discuss the explanation for the rise in lending. All I need to do is to state that it is too big."

(18 November 1959): "We could sit here 'instructing' one another pretty well as long as you like but we would still not agree, so I do not think there is any point in continuing."

(18 October 1961): "We shall hold rigidly to them [i.e. the liquidity ratios] as a floor for liquidity. As I have stated before, we are also prepared to resort to quite harsh methods of a kind already familiar." Later on, during the same meeting: "In other words I am prepared to discuss, but please note not to discuss the severity or the degree of restraint but only the technical formulation of the liquidity ratios."

(18 August 1963): "For a number of banks we have now introduced the system of loan stops, and we shall not change this until we have seen the figures for September."

(16 February 1966): " ... absolutely necessary that you do not aggravate the overheating through a credit expansion. And you will not be able to do it either, for we are not going to release any money. You must not think that when I say this I am

<sup>&</sup>lt;sup>21</sup> According to Kurt Eklöf, the heads of the commercial banks found these personal conversations with Åsbrink unpleasant, so much so that the very thought of them helped to ensure that the banks followed Åsbrink's directives. My interviews with representatives of the commercial banks such as Lars-Erik Thunholm and Tore Browaldh confirm this conclusion.

just babbling and everything will come out all right just the same ... For a long time now you have shown that the only thing that does any good is to play hardball."

Åsbrink (18 June 1969): "You must not think we are compelled to sit quietly watching the weapons fall from our hands. We will have a result."

(15 October 1969): " ... we are serious about this, and we are going to maintain the restrictions."

(12 February 1970): " ... I am quite appalled at what has happened now, and I ask myself whether we really have any other way out than to go on being harsh and brutal."

Åsbrink's closest colleagues at the Riksbank also try to show a tough attitude. Hammarskjöld (11 October 1957): "We are going to hold on to the moneybags as tight as we can."

#### 7.4.2 Requests for explanations

Åsbrink examines the new monthly statistics on bank lending at every ordinary meeting and holds the commercial banks to account for the figures, especially during periods of restraint. Åsbrink requests explanations of their behavior. In this way he becomes an interrogator, and the banks immediately go on the defensive – an adroit tactical move. Here, Åsbrink's tone varies from fumbling curiosity to hard-nosed aggression:

Åsbrink (15 August 1956): "Would it be impolite to ask if you want to defend yourself right away?"

(17 October 1956): "Yes, everyone is free to speak. There may be someone who wants to defend himself perhaps."

(13 April 1960): "May I now ask what you have to say about these appalling figures?"

(14 June 1960): "First you ought to have a chance to explain yourselves."

Åsbrink is unusually incisive towards *Handelsbanken* on one occasion when the bank has borrowed from the Riksbank. He wants (17 February 1965) "first to give Mr. Browaldh an opportunity to explain why *Handelsbanken* is still depending on the Riksbank, or to put it another way, why *Handelsbanken* has lost control since the managing director became the chairman." In response to this blunt attack, Browaldh (to whom Åsbrink turned) declares: "We have many good lines of defense for our increased lending."

#### 7.4.3 The Riksbank's vigilance

The Riksbank stresses that it is following the banks' doings closely. The banks are not to expect that they can escape the Riksbank's vigilant eye:<sup>22</sup>

Åsbrink (14 March 1956): "But you must not think that we intend to relax our vigilance."

(16 March 1960): "If you now give your assurance that you are really exerting yourselves to observe caution, then perhaps we may hope that this will be effective. However, we shall keep an eye on the matter as we have said and see how it looks at the end of next month."

(14 September 1960) immediately prior to the election: " ... the fact that I refrain from kicking up a fuss does not mean that I have forgotten the liquidity ratio requirements."

#### 7.5 The Riksbank's control of interest rates

As stressed above, the prime goal of the Riksbank is to control the volume of sundry lending. In addition to this goal, the Riksbank also tries to determine the level of interest rates and the structure of rates in the Swedish economy with the help of the discount rate and agreements with the commercial banks and other financial institutions. The minutes show the following pattern: at every change of the discount rate, the Riksbank takes the opportunity to express its wishes concerning the new interest rates to be set.

As a rule, the commercial banks promise to follow the view of the Riksbank but first they have to confer with each other and with their closest competitors. Unity is achieved on proposals for new rates through internal discussion within the Bankers' Association, or more precisely in the so-called "interest-rate syndicate". The banks keep in touch with their competitors to coordinate their proposals with other financial institutions.

The Riksbank is then informed, as a rule, the next day. The Riksbank sanctions the banks' proposals, possibly after further adjustment. The Riksbank wants tranquility and order on the credit market, above all no "interest-rate wars" to spoil the picture. This pattern is illustrated by the following quotes:

On the occasion of the celebrated interest-rate coup of 1957, Åsbrink (11 July 1957) begins: "We imagine that this [i.e. the interest-rate coup] will lead to a restructuring between long- and short-term interest rates, in which direction you yourselves will understand." To this Marcus Wallenberg replied as spokesman for the commercial banks: "However, our final decision [concerning the banks' new interest rates] must be dependent on what the other credit institutions do and on how matters stand with

<sup>&</sup>lt;sup>22</sup> On some occasions, Åsbrink indicated that the Bank Inspection Board can be requested to make a special investigation. Otherwise, the Bank Inspection Board played no part in the dialogue between the Riksbank and the commercial banks.

regard to rediscounting possibilities and the rediscount rate." Åsbrink suggests that he for his part can "accept a rise of 3/4 percent in deposit rates."

This message is taken home by the commercial banks to consider until the meeting the next day. At this meeting, after "Mr. Wallenberg reported the interest-rate rises which the commercial banks had decided to bring into effect", the Riksbank Governor asks: "Are you in agreement with the savings banks about deposit rates?" Wallenberg replies: "No, we can't say that."

Åsbrink emphasizes that there must not be "a war between you and the savings banks which will lead to further rises in deposit rates ... I now want to ask if you are prepared to promise, as a gentlemen's agreement, not to raise deposit rates without having contacted us first. I am not bothered about lending rates." Wallenberg replies: "I pass the question on to my colleagues – they seem to be nodding their assent – so I give that promise on behalf of all."

The pattern is repeated on the occasion of the lowering of the discount rate in May 1958. Browaldh points out that the commercial banks "have not had any opportunities to discuss amongst ourselves what we shall do as a result of the lowering of the discount rate. So we shall have to have a talk about it after this meeting and then tell the Governor the result." Åsbrink responds: "What we want is to know how you are going to react. What the Riksbank will then do depends partly on that."

Later in May, the commercial banks accuse the post office savings bank of causing "a worrying disturbance of the competitive situation." Thunholm (21 May 1958): "What worries us most is that the post office savings bank is unwilling to reduce its deposit rate by more than 1/4 percent. This means that the interest rate of the post office savings bank will be higher than the rate on our savings account, and also upsets the ratio between post office interest and savings bank interest." Åsbrink replies non-committedly: "I find it difficult to understand that you can really regard this question of the post office savings bank interest as a serious one."

In April 1959, Thunholm again reverts to the matter of the interest rates of the post office savings bank, in particular to the decision to "pay interest on postal giro balances of a certain size. From the standpoint of the commercial banks, we naturally view this decision with a certain amount of regret. ... The new bank giro service in our view is not sufficient reason for starting to offer interest on postal giro funds. ... The interest-rate decision may be the prelude to a fierce battle between the postal giro and ourselves."

Åsbrink defends the post office with the argument that "the newly appointed head of the post office savings bank has simply been seriously worried about the new bank giro" but at the same time declares him critical of any "interest-rate competition over deposits".

At the meeting in January 1960, one hour after the announcement of the Riksbank's decision to raise the discount rate from 4.5 to 5 percent, Åsbrink (14 January 1960) asks "as usual to be told how you think the raising of the discount rate will affect your

setting of interest rates. If you cannot yet give an indication on that point, then you can come back on it after you have discussed the question in detail."

Browaldh wonders: "And as to the rest, I should like to know whether the Riksbank has any special monetary policy wishes with regard to our interest rates or whether we are free to do what we like, for example to introduce interest on current accounts."

The banks present their proposals the following day. Browaldh (15 January 1960) hands over a complete table covering eight types of deposits: "We have come here to state our plans regarding our interest-rate changes due to the raising of the discount rate. ... our plans for the deposit side are based on raising rates ... We would then have the following percentages..."

After reading the table at the meeting, Browaldh continues "As I have said, this is our sketch of deposit rates. We have discussed it with both the savings banks and the rural credit societies and have received the impression that it would be acceptable to them. The post office seemed to be on the same wavelength as well during a conversation we had with them yesterday." Åsbrink stresses in his comments: "I don't want any interest-rate war going on."

Browaldh's table of interest rates for the eight types of deposit illustrates the Riksbank's desire to control interest-rate movements. The same pattern is repeated at every change of the discount rate. The Riksbank aims to regulate not only the level of interest rates but also the margin between deposit and lending rates. This is shown clearly by Åsbrink's argument when the discount rate was lowered in April 1971:

"a reminder that the banks are to bring down the margins between deposit and lending rates which were widened last year ... I do not bring up this question in order to pick a quarrel with you but so as to avoid conducting the dispute publicly ... I have asked to be allowed to see the banks' circulars [i e the information sent within each commercial bank] concerning this question, but up to now have only received them from three smaller banks ... It is one of the primary duties of a central bank to keep an eye on interest-rate differentials." This latter assertion is characteristic of Åsbrink's view that the Riksbank should supervise the setting of all interest rates.

Furthermore, Åsbrink demands that the commercial banks provide the Riksbank with information on interest-rate changes:

Åsbrink (12 July 1957): "I shall now ask whether you are prepared to promise, as a gentlemen's agreement, not to increase any deposit rates without first having contacted us."

(21 May 1958): "Should you be considering raising your interest rates, however, I hope that you will notify me beforehand." To this Thunholm replies as spokesman for the banks: "Yes, we can promise right away that we shall do that." During the discussion of the banks' interest rates after the raising of the discount rate in January 1960, Åsbrink (14 January 1960) remarks: "However, I want of course to be informed of what you are thinking of doing."

Judging from the minutes, Åsbrink finds it relatively easy to control the commercial banks' setting of interest rates. After a certain amount of discussion, he accepts the proposals which the Bankers' Association submits to the Riksbank. The extent to which the commercial banks actually apply the interest rates accepted by the Riksbank is an open question.<sup>23</sup> Certainly, the bank cartel exercised some control. Because the commercial banks and the Riksbank had a common interest in the setting of rates, the issue of rates did not become a source of conflict in the same way as the commercial banks' lending.

#### 7.6 The constraints on the Riksbank: the housing construction program

It is easy to identify from the minutes the constraints considered by the Riksbank to be crucial to its policy. In the exchange of views with the commercial banks, Åsbrink again and again singles out the construction of new housing as the reason for the policy pursued by the Riksbank, or more precisely feels itself compelled to pursue. The number of new dwellings included in the housing program is determined by the government and the Riksdag, thus beyond the scope of influence of the Riksbank. Then the Riksbank is assigned the task of financing the construction of new housing at below-market rates. It then must divide up this financing task between the credit market institutions.

During periods of restraint, the situation becomes particularly precarious because the housing construction program is not permitted to be cut back. The Riksbank finds itself forced instead to restrict sundry lending and to focus primarily on the commercial banks to this end.

It is hinted by Åsbrink that had the Riksbank been able to shape its policy independently, another type of monetary policy would have emerged. However, the housing policy puts "the poor old Riksbank" in a "secondary" position. He appeals to the banks to subordinate themselves to the housing construction program and try to understand the Riksbank's situation. The following quote illuminates the part played by the housing program in restricting the Riksbank's room for maneuver:

Åsbrink (21 November 1956) states in response to a question about housing policy: "The question ought to be addressed to the 'building minister', i.e. the Minister for Social Affairs. It is he who has said that the building of owner-occupied homes is to increase." Later on during the same meeting Åsbrink complains: "The poor old Riksbank is sitting in a secondary position, unfortunately. We do not determine what we think we can afford; this is done by others. For example, others determine the guidelines for the very capital-intensive construction program. Not only the poor government that everybody complains about, but all the parties, including parties which the gentlemen here present have voted for, unless you were sensible enough

<sup>&</sup>lt;sup>23</sup> Like all other controls, interest-rate controls could be evaded in a number of ways. Special forms of deposits were one such technique. According to information supplied by Tore Browaldh, the commercial banks developed arrangements which enabled higher returns to be paid on larger deposits while concealing this in the official statistics to the Riksbank.

not to bother voting, are behind the housing policy." Browaldh agrees: "Yes indeed, the enthusiasm for increased housing construction is a nuisance."

Åsbrink (17 April 1957): " ... political considerations have completely taken over housing issues and housing construction is the main reason why the capital market today is as strained as it is. I am convinced that without this millstone, the situation would be considerably easier to master." Later on at the same meeting Åsbrink sighs: " ... housing construction, that sacred cow ... "

When the interest-rate coup is carried through in July 1957, Åsbrink (12 July 1957) stresses the importance of not allowing the rise in the discount rate to have a negative effect on housing construction: "If housing construction suffered, then the entire measure [i.e. the increase in the discount rate] would be discredited."

Åsbrink replies (25 February 1958) to a proposal by Thunholm and Marcus Wallenberg that controls over new bond issues should be abolished: "I cannot see how we could ease controls over new issues without this having fateful consequences for housing construction. If housing construction was able to compete with other needs, one should imagine rates of interest so high as to entail a considerable rise in the cost of housing. If we were to relax controls over new issues, then to a large extent housing construction would drop like a stone." The existence of the Riksbank's control over new bond issues could scarcely be explained more clearly.

The conflicts over housing policy became acute in the mid-1960s. Åsbrink (15 April 1964): " ... we have a housing construction program presently ... which must now be implemented." Åsbrink comments (20 October 1965): " ... the idea of reducing housing construction. There, however, we are bound by political decisions solemnly arrived at concerning how much construction there is to be. We at the Riksbank cannot evade the task of finding the finance for the housing program thus established, and it is probably in your interests to help with this as well. Otherwise we shall simply be forced to proceed in other ways." Åsbrink declares (9 June 1966) that the Riksbank has to "arrange proper financing of the investment program which the government has laid down, for housing construction for example."

Arne Callans, one of Åsbrink's closest associates, (9 June 1966): "Of course we do not have just industry to consider but also a housing program which is not decided by us here in the Riksbank but by 350 people on the other side of the street [i.e. by the Riksdag]. To this Marc Wallenberg replies: "Of course, the whole thing is a question of allocation of resources, which means that some sector has to give way. So if you regard the housing sector as sacred, then I suppose the inevitable conclusion is that business and industry will suffer, as Mr. Höglund said."

In the early autumn of 1966, Åsbrink (24 August 1966) develops his views on the topic of housing construction. He wants to "chat with you a little about the financing of housing. ... Certainly we can think what we like about housing policy; ... But of course solemn decisions are now being taken with the support of all parties as to how large a volume of housing construction we shall have, and so that volume simply has to be provided for ... I would not assert that you have deliberately tried to put the brakes on

housing construction, but it would probably be wise if you were to act now in such a way that no suspicions in that direction need arise."

At the same meeting, Åsbrink stresses that housing construction is "a big lump of investment about which the political authorities take decisions with the support of all parties. Then you play a big social role by making the money available. Perhaps you may say that you do not want to go on doing it any more, of course, but in that case the task will have to be performed by somebody else. You must not think that you can act as a kind of superior authority which can correct the decisions of government authorities."

Åsbrink (19 October 1966): "We are not keen on keeping them and would prefer to do without them [i.e. the credit controls], but the solemnly established housing construction program must be implemented."

(21 January 1970): "The situation is this: the government and the Riksdag have decided on a housing program, and you will be compelled to finance it ... I am not out for bankers' blood if it can be arranged in some other way ... You will be forced to put the housing construction program into effect anyway. For I hardly believe you can tell the housing authorities that you will not have anything to do with this."

A special meeting is called for 16 June 1970 as a result of complaints against the tight credit policy during the so-called "idiotic squeeze". Those taking part are the Minister of Finance Gunnar Sträng, the Riksbank and the commercial banks. The Minister of Finance demonstrates his strong commitment to the housing program, according to the minutes of this exceptional meeting:

"However, Sträng underlined that no kind of political opinion existed for a general curtailment of public expenditure ... All talk of reducing housing construction would also be meaningless, because the Riksdag had spoken its piece. This does not mean that Sträng disputes anyone's right to try to shape public opinion, but it was desirable to be realistic ... Against the background of the description of the economic situation which had been presented, Sträng could not recommend any general relaxation of the credit policy."

Some months later, at the meeting of 1 September 1970, the Riksbank management emphasizes that it must implement an investment program which has been imposed on the Riksbank. Åsbrink states "that housing finance was not really within his remit. If the banks could bring about a change of housing policy, then he would have nothing against it. But the reality is that no one can change it. They were in a cleft stick. The Riksbank did not feel responsible, and the banks would have to complain elsewhere over the problems of housing finance."

The minutes demonstrate clearly how the Riksbank is governed by the program of new construction laid down by government and the Riksdag. "The solemnly established housing construction program must be implemented", as Åsbrink summarizes his view at a meeting in the autumn of 1966. The financing of the socalled "million program" of housing construction via the Delegation for Housing Finance manifests how the Swedish credit market was subordinated to housing policy. Inwardly, Åsbrink was critical of the effects of the program on monetary policy. Outwardly, however, he did not show this during his long tenure as Governor of the Riksbank.

Glimpses of other constraints besides housing policy are revealed from the minutes. Even if the Riksbank was freed from the "millstone" of the housing program, Åsbrink (25 February 1958) doubted the possibility of conducting an "orthodox" monetary policy:

"Thunholm praised us for the interest-rate increase last summer, but you saw for yourselves what a fuss there was about it, and it shows you what difficulties the Riksbank runs into when it wants to pursue an effective interest-rate policy ... Even if we did not have political obstacles to conducting an orthodox monetary policy with interest-rate changes and open market operations, it is still not certain that we should be able to do it ... such large interest-rate variations that they would be damaging, not only for Mr. Rubbestad (Farmers' Party representative on the Riksbank Board of Governors and a strong supporter of low interest rates) and others who do not like high interest rates, but also for long-term investors and for business in general."

Åsbrink considers that "there is no support in public opinion for conducting an antiinflationary policy. There is no support in this country for any opinion which would prevent the state from getting money when it needs it ... that is how the political situation is just now, and it is not the Riksbank's fault."

He strikes a similar note on other occasions. He would like a tougher anti-inflationary policy but sees no political support for such a policy.

## 8 The behavior of the commercial banks

The evidence suggests that the Riksbank made no particular preparations before the meetings. It did not meet to discuss arguments and tactics *vis-à-vis* the commercial banks. A Riksbank official collected the statistics and might make comments to Åsbrink on his own initiative. The picture is quite different for the commercial banks, the other party, involved.

#### 8.1 The preparations by the commercial banks

The commercial banks discussed and planned their strategy at the executive committee meeting of the Bankers' Association which took place on the same day as the banks' representatives went up to the Riksbank. A paragraph concerning these preparations appears in the Bankers' Association executive committee minutes for the first time in 1959 and then becomes a regular feature of the minutes. Here we find a detailed description of how the banks' representatives worked out a common view, weighed various alternatives and tried to foresee Åsbrink's behavior.

Parts of the minutes of the Bankers' Association meeting of 28 October 1959 are reproduced below as an illustration of the commercial banks' "council of war". They are representative of the preparatory discussions between the banks.

"Browaldh: I suppose the first question which we ought to discuss today is what we shall do about the warnings and admonitions we got from Åsbrink last Wednesday. I expect all of us, each in his own domain, have passed on our demands to our men out in the field. However, there are one or two points which are not quite clear ... If we now get another raise by order, the question is whether we should not come up with some counter-demands from our side ...

Thunholm: ... it is desirable that we plan how we shall act ... On the other hand, the individual banks ought to reserve their full freedom of action over the question of the areas in which restraint should be applied. We ought to avoid any discussion of which sectors to attack and which to favor ... With reference to Mr. Browaldh's remarks concerning the risk that, at the next meeting with the Riksbank, we may be faced with a rise in the ratio of up to 45 percent, I would say that I too regard such a rise as probable. Should Åsbrink come up with such a demand, then in my opinion we ought not to go along with any agreement or commitments but confine ourselves to stating merely that we have noted what he has said ...

Marcus Wallenberg: ... Having regarded the business outlook, there are good enough reasons for us to be cautious in our lending. But it ought to be up to each individual bank to determine the points at which they will cut back ... I am not prepared to commit myself to any agreement as to how much we are to cut back over these matters ...

Browaldh: I suppose we reach a decision that no one seems to want an absolute stop on building credits and that we are agreed on applying strong restrictiveness to private loans and such like up to 1 January 1960 but no longer. As to the rest, we ought to be cautious with our lending but at the same time we ought to safeguard our right to decide for ourselves the points at which we shall apply our measures of retrenchment...

Browaldh: We also really ought to discuss what may happen if we adopt the position, which we have now agreed on. Åsbrink will probably publish his recommendation, so I suppose we ought then to make our views public as well. And also, we ought to think about what Åsbrink may do then if we don't obey his diktat. Of course he may wave the cash reserve law at us, but in itself that is not really too serious, and besides, there probably will not be any inclination to bring it into operation in an election year. A more serious risk is that he will punish us by lowering the interest rate on treasury bills."

This extract from one set of minutes demonstrates how the commercial banks devised their strategy and how they planned their counter-moves. These preparations are then reflected in their contributions at the meetings. No conflicts of opinion occur between the banks representatives when they are in discussion with Åsbrink. They are well coordinated. It is not hard to see from the minutes of the meetings which issues the commercial banks have decided beforehand to press *vis-à-vis* the Riksbank. These preparatory meetings at the Bankers' Association also illustrate how the regulatory policy under Åsbrink's leadership reinforced the incentives to cooperation among the commercial banks to confront the Riksbank as effectively as possible.

#### 8.2 The defense of the commercial banks

Facing the Riksbank's attacks in the form of warnings, threats, demands for results and proposals for controls, the commercial banks present a defense based on several arguments. First, they affirm their loyalty to the Riksbank but stress the absurdity or impossibility of drastically reducing the volume of credit in the short term. They draw attention to the temporary impact of particular events and seasonal influences; they seek to postpone the Riksbank's decision and present criticisms of principle against the Riksbank's regulatory strategy. The commercial banks seem at least as inventive as the Riksbank when it comes to finding arguments. The following broad lines of defense can be identified:

#### 8.2.1 Loyalty and goodwill

The commercial banks express their loyalty to the Riksbank and their understanding of its aims and purposes on numerous occasions, even in situations where Åsbrink is trying to put pressure on them. These demonstrations of loyalty should be regarded as a way of appeasing the Riksbank and getting Åsbrink to be more accommodating. The following quotes from Marcus Wallenberg's term as chairman of the Bankers' Association illustrate this:

Wallenberg (13 June 1956): "We are ready to cooperate in imposing restraint, but we cannot speak for thousands of minds and determine what they may think." ... "But what I presume is important is the spirit behind it all, and for our part that is unchanged."

(12 September 1956): "We have already declared that we do not believe in this system. But the fact that we do not like it is not because we are unwilling to cooperate with a restrictive policy. I hope the Riksbank Governor does not believe that."

(15 July 1957): "Yes, we shall cooperate over restrictiveness."

(15 August 1956): " ... I suppose we must take note of the Riksbank Governor's declaration that he will help us to get rid of this system which we do not believe in, although we shall continue to act loyally in accordance with the Riksbank's instructions. How monetary policy will then be shaped I suppose we must discuss another time."

(17 April 1957): "We are willing to pursue a restrictive policy."

During Thunholm's time as chairman of the Bankers' Association, the same note is struck. When the Riksbank Governor states that liquidity ratios have been raised through a "recommendation" in July 1959, Thunholm replies: "And we shall certainly try to follow the recommendation to the best of our ability."

Thunholm (10 May 1960): "it is in our own interests to conduct ourselves prudently."

(15 October 1969): "We are doing all we can to tighten up."

(19 November 1969): "We have no other aim than to follow the Riksbank's intentions."

(21 January 1970): " ... we have made an enormous effort to follow the Riksbank's directives."

Browaldh too stresses the willingness to follow the Riksbank. When Åsbrink remarks (17 August 1960): "In your own interests, you ought to be careful of going on with a free-for-all policy." Browaldh replies: "We are fully aware that we must now tighten up for purely selfish reasons, and we are struggling hard to that end."

On a few rare occasions, the commercial banks even praise the Riksbank. It happens on the occasion of the interest-rate coup of 1957. When the discount rate is raised from 4.5 to 5 percent in January 1960, Browaldh comments: "We regard the raising of the base rate as a proper measure and we appreciate the initiative and political courage behind it." The praise may also be sarcastic. Wallenberg (13 April 1960) finds it " ... praiseworthy that the Riksbank Governor has not used the term 'lending ceiling'."

#### 8.2.2 Defense arguments

When the commercial banks are criticized by Åsbrink and invited to defend themselves, they invoke a range of arguments, varying them as opportunity serves. In fact, these become so familiar that on one occasion Browaldh (17 August 1960) meets Åsbrink's criticism with a reference to them: "Of course we have a set of standard arguments which we are accustomed to trot out on this sort of occasion, but they are so well known that I shall not trouble to repeat them today." Some of the familiar standard arguments and lines of defense are given below.

The commercial banks point out at regular intervals that it takes a long time to adjust lending to the Riksbank's requirements. Marcus Wallenberg (19 June 1957): "I therefore believe that it is a misjudgment of all banking, commerce and industry to believe that credit restrictions like these can be operated on a month-to-month basis. You must work with longer time-horizons ... I repeat what I said: you cannot run credit restrictions like these on a month-to-month basis."

Åsbrink (18 November 1959): " ... I have all the time preferred to give you an honest chance. Of course, we can say that you can have another month, but after that there is no reason for more delay, in my opinion." Browaldh replies: "You say you will not push so hard as to demand a result in 9 days, but even 40 days is a short time. A change in credit policy cannot be implemented at the banks with a snap of the fingers; it takes time before such measures take effect." At the same meeting, Thunholm interposes: "It is not certain that it is so easy to reverse a trend in a short time. Only quite recently the policy was to encourage and assist investment, you know."

Thunholm (16 February 1966): "It was undeniably a surprise that the rise in lending was so large in January. We were quite shocked by it ourselves. That is why we have now also put very firm measures into place to stop the outflow. Nevertheless, it is hard to say how quickly we can succeed in this."

Höglund (18 June 1969): "Instructions have gone out on restrictiveness ... as severe as during earlier credit squeezes. But as you know it does take time before you really get any effect."

But Åsbrink wants immediate results. When Thunholm (13 April 1960) says: "I understand the Riksbank Governor's worry in face of a credit expansion in the present situation, but as I have said, I cannot promise any results in the short term", Åsbrink retorts sourly: "We cannot accept that as soon as we ask for anything, there is always talk about 'the short term'."

The banks excuse themselves sometimes by referring to seasonal factors, which affect their balance figures in an unfavorable or uncontrollable manner and consequently ask the Riksbank to accept these sources of interference.

Marcus Wallenberg (12 September 1956): " ... seasonal strains on the banks are strong."

(19 June 1957): "May is always a difficult month, you know."

(11 July 1957): " ... it is not appropriate to operate credit restrictions on a monthly basis. There are always seasonal fluctuations to take into account."

Marc Wallenberg counters Åsbrink's criticism (20 April 1966): "Yes, well, we cannot deny that an increase in lending has happened, but March was really exceptionally difficult." Thunholm expands on this: "Both the severe winter and the wage negotiations have forced up debt recoveries which have to be financed, and when you have taxes to be paid and the squeeze on the capital market on top of this, it is not hard to explain how things have gone the way they have gone."

#### 8.3 Criticism and counterproposals by the commercial banks

The banks are concerned not merely to defend themselves against the Riksbank. They also go on the attack by criticizing the Riksbank's policy during periods of restraint, especially in 1956-57 and 1969-70, the periods when the commercial banks were compelled to reduce the volume of "sundry lending" – see Figure 3. The banks assert their views forcefully, as the following quotes illustrate:

Thunholm (18 March 1970): "We do not contest the Riksbank's right to determine the shape of credit policy, but that does not prevent us from wanting to express our opinion about it."

Marcus Wallenberg was a prominent critic during his tenure as chairman of the Bankers' Association. Wallenberg (13 June 1956): "For that matter perhaps one might ask in this connection how things are going on the capital market. It has almost stopped functioning of course, and for years it has been entirely closed to industry ... I want to make the point that the capital market is of great importance to the business of the banks. We have to be allowed to see the color of our money. If we cannot transfer building credits to mortgage institutions and insurance companies and obtain amortizations, then we cannot keep the show on the road and fulfil our function in society."

Wallenberg (12 September 1956): "But the system is a little clumsy and a little rigid ... I believe it will be very difficult to conduct banking business with such uniformity and stability that the line can be held every month."

(12 September 1956): " ... the credit restrictions are only aimed at a small sector ... And in addition, we dislike the present system because in practice it removes all possibility of competition between the commercial banks."

(21 November 1956): "We are seriously worried about the 'fence-building' on the capital market. A fence is being built around housing construction ... the capital market cannot function as it ought to do."

Thunholm, who became perhaps the fiercest critic of the regulatory system, made a prophecy early on which was fulfilled twenty years later (25 February 1958): " ... the system of liquidity ratios opens up quite nasty perspectives. With liquidity constantly increasing, the ratios previously established will little by little become too low. So new and higher ratios must be introduced. But in time these become too low as well, and so on and so forth. In the end this may lead to the commercial banks simply becoming nothing more than dumping grounds for treasury bills." It is not merely controls which the banks criticize. They also seek to bring about a dialogue with the Riksbank with a view of establishing another system of monetary policy:

Marcus Wallenberg (12 September 1956): "As we have said, we have a great deal of objections to the present system, and we should welcome an opportunity to discuss in some smaller group a change to some other arrangement." Åsbrink receives the invitation positively but insists at the same time that the prevailing restraint must continue: "Arising from what Mr. Wallenberg said about discussions in a smaller group with a view to changing to some other arrangement, I would reply that we shall gladly discuss whatever suggestions you may make. There is nothing to stop you making suggestions ... for the present we must continue along the same lines as hitherto."

Wallenberg (17 October 1956) wonders again "whether we could meet and discuss a change to another system." To this Åsbrink replies: "of course we can meet, and we shall gladly listen to your suggestions." Wallenberg states some months later (16 January 1957): "Our job is to try to devise some system which can replace the present lending ceiling. Our economists are working on it, but we are not quite ready yet." Judging by the minutes, Wallenberg's interest in proposing another system cools after the "interest-rate coup" of July 1957.

The commercial banks combine their criticisms with various proposals for getting away from the system of credit controls. Some examples of measures which the commercial banks want to see: Wallenberg (21 November 1956) wants to "relax rent control [i.e. of rental apartments]. Then perhaps we would not have a housing shortage but would find demand limited to what is reasonable."

Söderlund (21 January 1956) suggests a more active interest-rate policy a year prior to the interest-rate coup:<sup>24</sup> "We do not want to discuss politics here of course, but in the end, it will be unavoidable when we see politicians making the decisions about all the instruments for influencing the economy which we and the Riksbank between us ought to have. It strips us of one thing after another, but the Riksbank still has one instrument at its disposal, and that is the price of credit."

Thunholm (25 February 1958) wants to abolish the Riksbank's control of new bond issues: " ... we ought to try to arrive at a free market in capital without any control of new issues." At the same meeting, Wallenberg suggests that it would be "a suitable opportunity to relax control of new bond issues just now."

The response of the commercial banks to the Riksbank's squeeze of 1969-70 is vehement. Thunholm is the leading critic:

Thunholm (30 January 1970): "There is no rational background for a shock treatment of the banks in 1970 of the type which the banks suffered in 1969, i.e. that the banks were not allowed to increase their sundry lending at all." He also states: "A special problem which has become more and more acute is that customers no longer repay their credits if they have any way of avoiding this."

(18 March 1970): The part of the financial system which is most necessary to keep the economy going is being crippled. Our anxiety over the economy is growing month by month."

Thunholm (4 December 1970) suggests that the Riksbank should lend its support to "organized borrowing from abroad". Later, this becomes a guiding principle of the borrowing policy from 1974 onwards, but Åsbrink takes a frosty view of capital imports: "This might perhaps be appealing to those who want to avoid having to follow an economic policy aiming for equilibrium."

(20 October 1971): "What was being sought [by the commercial banks] was freedom of movement in discussions with customers. Greater flexibility with permits for new issues, less regulation with respect to long-term perspectives and closer links with the international capital market would give more flexible opportunities to solve various problems."

At the next meeting, Thunholm (24 November 1971) brings up a new objection. "What particularly worried the commercial banks was that, in periods of credit restraint, the Riksbank introduced stiffer monetary policy measures without going back afterwards when a different situation came about." Åsbrink acknowledges that: "Thunholm [was] right that the Riksbank's activities and measures tend to shift

<sup>&</sup>lt;sup>24</sup> Gustaf Söderlund was head of *Skandinaviska Banken* in Stockholm 1946-56.
gradually upwards to a higher level, but this did not result from any particular wish on the Riksbank's part but from the realities."

At the same meeting, the commercial banks launch a frontal attack on the regulatory system and present a detailed list of measures: "The commercial banks asked for a relaxation of credit policy partly in order to avoid being compelled under future credit restrictions to start off from an abnormally tight situation which would further reduce the banks' alternatives for action." The banks request:

- 1. Reduced liquidity ratios
- 2. Abolition of cash ratios because the banks consider them unlawful in today's credit market situation
- 3. Abolition of the control over new bond issues
- 4. Abolition of the industrial investment credit report.

### 8.3.1 The banks' criticism of fiscal policy

The banks' criticisms are not aimed solely at the Riksbank: fiscal policy comes under fire as well. It is possible that the banks pick on fiscal policy as a method to draw Åsbrink's interest away from their own actions. The banks regard fiscal policy as far too expansionary. Thus, the Riksbank is forced to pursue a more stringent monetary policy than would otherwise be the case, which hits the banks and their customers in the form of credit controls. On this point, the banks receive a certain amount of support from Åsbrink:

Wallenberg (13 January 1957): "The main problem is that the public sector has become too big and gives too many impulses in an expansionary direction to the private sector. Therefore, it is not enough for the budget to be totally in balance or even more than in balance. We have to call a halt to the rise in public expenditure."

Browaldh (13 March 1957): "Does the Governor of the Riksbank himself think that it is going to be possible to pursue a proper monetary policy in the long run if it is not underpinned by a sensible fiscal policy?" To this Åsbrink replies: "I should myself like a better and more rigorous monetary policy. But where are you going to find backing for such a policy in the nation at large?" Later on at the same meeting, Åsbrink declares: "No, I know that you want to achieve the better balance by reducing [public] expenditure. And all right, I can go along with that a fair way myself. There are many expenditure items I would be ready to sacrifice without missing them much."

Wallenberg (17 April 1957): "There are a number of things in our economy which worry us in the banking system. Now it seems likely that the national debt is going to increase by 1,200 million *kronor* during the current budget year ... of course we here do not decide in the end. But it is still the Riksbank that has to keep the value of money stable and at the same time make sure that our commerce and industry function. And the Riksbank does have some scope for doing this ... we are finding it more and more difficult to maintain the lending ceiling. In addition, we have the nuisance of a gray market which has come into existence outside the banks ... We do not blame inflation on the Riksbank. We know where the shoe pinches. It is the public sector. As long as it only goes on expanding, then any tightening-up on our part does

little good." Åsbrink is quick to agree: "I do not have a lot of objections to the description which Mr. Wallenberg has given. It certainly is annoying; the way the budget has developed."

Browaldh (21 January 1959): " ... it ought to be made clear to people that no improvement can be achieved unless fiscal policy and monetary policy are coordinated. But that does not seem to be the case. I dare say it is because there are a lot of villains and perhaps only one who can be described as a hero in the current inflationary drama, and that is Riksbank Governor Åsbrink. Well, it is a good thing in its way that there is such a hero, but for our part, we find it a little worrying, since it means that the crucial weight in the struggle against inflation is going to be laid on monetary policy, and then we will have to act as the tools."

#### 8.3.2 The Riksbank's response

The Riksbank does not sit quietly holding its tongue when under criticism but springs to its own defense. Sometimes Åsbrink hints at a degree of understanding for the banks. He is no fervent believer in the credit controls but regards them as a necessary evil.

Åsbrink (17 April 1957): " ... so now we know that you want to get rid of the lending ceiling. We want too as well, as a matter of fact." Åsbrink (30 January 1970) remarks "that the Riksbank has never considered the present system a smooth one but on the other hand it is probably necessary with regard to the circumstances." In response to the banks' criticism, Åsbrink (4 December 1970) asks "the banks to try to come up with something that would make it possible for the Riksbank to take the risk of a relaxation of credit conditions and of an increase in their freedom. From this gradually emerges the proposal for special industrial investment credits.

Åsbrink (15 April 1970): "I am not happy at having to pursue such a rigid credit policy as the present one, but I can only state sadly that developments in lending are pointing in an uncomfortable direction." Åsbrink (1 December 1970) finds it "natural that both banks and companies consider the situation unsatisfactory." He argues "that agreements now in force with respect to the credit policy will expire at the end of the year and that the situation gives cause for feeling it necessary to come up with something new in the credit policy ... On the Riksbank's side, we have been fully aware that the kind of extremely harsh credit policy, which we have been forced to practice in 1970 and to a certain extent even earlier, could not go on forever."

#### 8.3.3 The banks' claim for equal treatment

One recurrent theme of the commercial banks' arguments is the demand that their competitors, i.e. the savings banks, the rural credit societies, and the post office savings bank, should be brought under the same restrictive controls as the commercial banks. The representatives of the commercial banks argue that the Riksbank is more lenient with these institutions than with the commercial banks for

political reasons.<sup>25</sup> Åsbrink responds with an account of Riksbank measures directed against other credit institutions. Sometimes he is urged by the banks to be still sterner. On occasion, the commercial banks report their competitors for attempting to raise their interest rates to attract customers away from the commercial banks.

When Åsbrink presents his proposals for belt-tightening in April 1956, the spokesman for the commercial banks, after adjournment of the meeting, declares that the banks can consider giving the proposals their backing but want "to assert at the same time the importance of keeping the lending activities of the savings banks and rural credit societies under control." At the next meeting, the commercial banks are reassured by Åsbrink (23 May 1956): "The savings banks will reduce their new lending for purposes other than housing construction to about one third of the corresponding new lending they had in 1954 and 1955."

In the autumn Marcus Wallenberg (21 November 1956) brings up "the things the savings banks are doing", and at the April meeting the following year the rural credit societies. Thunholm (8 July 1957) wonders whether there ought to be "restraint on the savings banks and rural credit societies as well?", since otherwise "the competitive situation will be affected."

Thunholm (25 February 1958) criticizes the system of liquidity ratios because they turn the commercial banks into "dumping grounds for treasury bills" while their competitors go free: "And at the same time, the savings banks and the insurance companies for example are unfettered in increasing their lending."

When Åsbrink raises the liquidity ratios for the commercial banks in July 1959, Thunholm (8 July 1959) brings up the issue of the treatment of their competitors: "Finally I must come back to my question whether the Riksbank intends to do anything about the savings banks and the rural credit societies." When the liquidity ratios are raised again in January 1960, Browaldh (14 January 1960) wonders: "Is the Riksbank going to prescribe more rigorous credit restrictions for the other credit institutions as well?", to which Åsbrink replies that the Riksbank will "talk to them later today."

# 9 Evading the credit controls. Bank guarantees and the gray market

The Riksbank endeavors through its control policy to prevent the commercial banks from fulfilling their central function as financial intermediaries between units with surplus savings and units with deficit savings. The consequence is that the commercial banks develop techniques for circumventing the controls. Instead of accepting deposits and converting them into loans, which is the traditional task of the banking

<sup>&</sup>lt;sup>25</sup> According to Tore Browaldh, the meetings between the Riksbank and the savings banks and between the Riksbank and the cooperative and rural banks were regarded as "playing to the gallery". This impression is strengthened by the available minutes of these meetings. These exude a tranquil atmosphere compared with the meetings between the Riksbank and the commercial banks.

system, the banks arrange direct contacts between the two sides of their balance sheet.

This sort of technique is based on borrowers and lenders being paired off by the banks and furnished with bank guarantees to reduce the credit risks to the lenders. Because of the credit controls, a so-called gray market also comes into existence outside the regular or so-called organized credit market.

The Riksbank is aware of the evasion via bank guarantees and of the gray market, as is illustrated by the following quotes:

Åsbrink (18 April 1956): " ... there have been certain evasive maneuverings with guarantees and suchlike."

(15 August 1956): "When one looks at the way bank guarantees have developed, one gets a feeling that people have found a way of evading the credit restrictions. Accordingly, I want to say today that bank guarantees must not be utilized to circumvent what we have agreed on."

(19 June 1957): "If one compares the figures for the fall in lending and for the rise in bank guarantees, they are so similar as almost to give the impression that they 'agree'. I shall only say that we shall ask the Bank Inspection Board to look into the matter."

(12 July 1961): "...bank guarantees... if there is too big an expansion there, we shall have to draw the conclusion that what is happening is really lending, although in another form." The banks are warned by Åsbrink (16 August 1961) against "issuing guarantees and arranging swap transactions and other devices to replace lending."

During the squeeze of 1969-70, bank guarantees increase briskly, causing Kurt Eklöf of the Riksbank (12 February 1970) to say that "guarantees have risen by SEK 963 million during 1969." Later on the same year, Åsbrink (7 September 1970) singles out the banks as partially responsible for the gray market: "The gray market is partly kept going in this fashion by the banks, using such methods as the provision of guarantees."

Only on a few occasions do the commercial banks refute the Riksbank's criticism of bank guarantees or comment on them in some other way. One example is Thunholm's (20 December 1961) defense of guarantees in December 1961: "[with regard to] guarantees, the rise can be explained largely by a bigger volume both of foreign trade and of building activity."

Åsbrink (12 October 1960) also comments on other possibilities of evasion: " ... something happened to our control over new bond issues which you all know about and which we take seriously ... We cannot have it being circumvented in such a simple manner as giving certain papers a different name from their customary one." To a question from the commercial banks, Åsbrink (13 November 1963) replies bluntly that he wants to avoid a reintroduction of the lending ceiling because the technique for evading it was well known: "We have no wish to return to a system in which, if I may put it this way, the possibilities for evasion are already mapped out."

Evasion also applies to foreign exchange control, as Åsbrink notes (17 February 1965): "In the situation which we have now, with general restraint and fairly high interest rates, then it seems natural as you know for business and industry to exploit every chance of getting foreign credit in connection with their current transactions. The increase in the currency reserves is also a clear sign that this has already started happening." The Riksbank sees a clear link here between restraint and the inflow of foreign exchange.

It is obvious to all parties that the rapid growth in the volume of bank guarantees is a result of the Riksbank's policy. The commercial banks regard bank guarantees as a safety valve for the prevailing system, even as a profitable one since by this means the banks can help customers who would not have got loans in any other way and would push other borrowers aside if they received traditional bank loans. Thus, the banks have an interest of their own in retaining bank guarantees and do not want to risk getting on the wrong side of the Riksbank by defending them too ardently. They believe they can ride out the storm by keeping quiet and thus not defying the Riksbank directly.

This line of business, which mostly involved large customers such as local authorities and business firms, was recorded directly under the heading "bank guarantees" emerging below the line in the statistics of the activities of the commercial banks. Thus, the movement of the volume of bank guarantees can be followed month by month; see Figure 3, which shows the rate of growth of bank guarantees and "sundry lending" respectively.

The two series move as mirror images of one another. During periods of restraint, when lending growth loses momentum, bank guarantees grow rapidly. When Riksbank policy subsequently becomes more relaxed, the growth of sundry lending gathers pace while the rate of growth in the volume of bank guarantees subsides. The intermediation process then returns into the commercial bank system.

To what extent did this type of evasion nullify the credit control policy? Bank guarantees did not grow to such an extent as to totally offset the fall in the growth of other lending. Thus, evasion was not complete.<sup>26</sup>

## 10 Relations with the press

The meetings are totally confidential and closed to outsiders. Still, the question arises to which extent third parties, i.e. the press, should be informed about the discussion

<sup>&</sup>lt;sup>26</sup> Evasion took many forms which were not remarked on at the meetings. According to Tore Browaldh, the commercial banks availed themselves of several methods for bringing down borrowing at the month's end when the statistics were reported to the Bank Inspection Board. Companies were urged to empty their postal giro accounts. The insurance companies were able to assist the banks by taking over their lending for short periods. Deposits and loans were routinely set off against one another. Interest-rate controls could also be evaded in various ways.

at the meetings. This issue comes up frequently. Information is leaked a few times about what has been or is going to be discussed. As a rule, the Riksbank wants to keep the newspapers at bay by insisting on silence, especially when the credit policy is being turned into a more expansionary direction. On some occasions, a joint communiqué is published.

After the cut in the discount rate of May 1958, Browaldh (2 May 1958) wonders what the banks are to say to the press. "At the banks, we must reckon on enquiries from the press as to whether we are now going to be more liberal in granting credits. We should like to have an indication as to what our answer shall be."

Åsbrink's reply reflects his restrictive attitude to increases in lending – to borrow from the bank is not a "civil right"... "and I can scarcely imagine that you would have any interest in the Riksbank announcing that we have now dropped the credit restrictions. The consequence might easily be that you would be overwhelmed with credit applications, perhaps not so much from good, solid firms but from the sort that neither you nor I would regard as creditworthy. People might hark back to the old idea that getting credit from a bank as soon as you want it should be regarded as a civil right. Therefore, I believe it is in the interest of both sides that we say nothing at all about credit restrictions but simply stress that all that has happened is a lowering of the discount rate."

In December 1958, Åsbrink condemns a leak to the press: "I think it is unfortunate that such a thing should have to happen, and I think we ought to be able to agree that what we discuss here must not be allowed to come out until the matter is settled." Thunholm agrees: "In that respect there is surely no one here whose opinion differs from the Riksbank Governor's. In other words, we can only declare that we share the Governor's view and at the same time regret what has happened."

When the Riksbank changes the liquidity ratios in July 1959, Thunholm requests that a joint press release be drafted: "I should therefore like to propose that we jointly come to an agreement on a communiqué to the press and that neither the Riksbank nor the commercial banks side should then make any further comments to the press."

On some occasions, Åsbrink wants to keep information secret and only give it to the commercial banks. Åsbrink (22 July 1966): "However, we want to give you the news at a meeting because we shall not release it in any other way." [The news that the rules for calculating interest on overdue payments had been relaxed by the Riksbank.]

"Åsbrink (9 October 1970) then moved on to the publicity question and explained that he was very dubious about a communiqué, and his doubts had increased after the price freeze [announced by the government]. He had no desire to publicize the fact that the Riksbank had accepted interest-rate increases in the present situation. He would therefore avoid all publicity actions from both sides and try to check that officials at the banks who might receive knowledge of the agreement did not release it into the public domain."

The banks too prefer silence except when publicity serves their interests. The commercial banks' representatives take part in the debate on monetary policy on

numerous occasions, probably in the hope of being able to wean the Riksbank away from its regulatory thinking. Thunholm produces an imposing number of newspaper articles in *Svenska Dagbladet* criticizing the policy of credit controls. Professor Erik Lundberg and Erik Dahmén, associated with the *Skandinaviska Banken* and *Stockholms Enskilda Bank*, respectively, like other economists employed by the commercial banks, are ardent attackers of the Riksbank in newspaper articles and in public debate. The Riksbank prefers to defend itself more rarely in public debate.

# 11 The meetings as a bargaining process

The meetings are principally a channel for the exchange of information between the Riksbank and the commercial banks. They are dominated by the dispensing of commands and orders by the Riksbank on monetary policy. To a limited extent, the meetings also form a framework for negotiations between the Riksbank and the commercial banks, primarily when the Riksbank wants to discuss the technical design and practical application of various instruments of credit policy.

Two episodes stand out as examples of negotiations: the talks on liquidity ratios in 1958-59 and on credit policy in 1970-71. The meetings on these occasions exemplify the bargaining economy which emerged in Sweden during the postwar period. In many fields, the growth of state involvement entailed cooperation, negotiations and bargaining between state bodies and firms and sectors which the state authorities were supposed to control or influence.<sup>27</sup>

## 11.1 The liquidity ratios 1958-59

In January 1958, Åsbrink issues invitations to negotiations on the design of the liquidity ratios. This leads to a vigorous debate at the February meeting and several subsequent ones.

Åsbrink (25 February 1958) leads off by stating that "we [i.e. the Riksbank] shall not shock you today with some ready-made proposal ... we should like to talk about the question in the most general way ... a discussion about a technical remodeling of the current system ... First of all, we should like to develop a system which makes it easier to change the liquidity ratios when necessary." Here Thunholm replies with a rebuttal of liquidity ratios as a credit policy instrument: "For our part, we should be happy to debate the entire existence or otherwise of the ratio system. We have had liquidity ratios for six years now, and in that time much has changed ... Monetary policy has now begun to be conducted much more forcefully, and the latest rise in interest rates particularly has had quite a good effect. It has had a stabilizing impact not only on credit but also by stimulating savings ... we can scarcely feel that any liquidity ratios are necessary or effective today."

<sup>&</sup>lt;sup>27</sup> Some examples may illustrate this trend. The investment fund system involved a certain element of negotiation, as did regional policy and employment policy. The same situation is documented with respect to the system of price controls pursued during the 1970s.

Åsbrink wants to keep the liquidity ratios, however: " ... I still really think we need a system like this in the future as well. It is probably no coincidence that there are arrangements of this sort almost all over the world, ... for Sweden's part there are probably special reasons for having a ratio system as one of the blunt weapons which the Riksbank can employ ... Thunholm praised us for the interest-rate rise of last summer, but you saw for yourselves what an uproar there was."

In the following month, Thunholm (12 March 1958) states that, after discussions at the Bankers' Association, the commercial banks "do not wish to assist in any general increase of the level of liquidity ratios." To this Åsbrink replies in a conciliatory fashion: "Well, if you nevertheless want to postpone the whole thing, I shall not be obstinate, so I suppose we can agree to finish here and go home."

A year later, in May 1959, the Riksbank brings up the issue again. Åsbrink is anxious for a quick agreement now. He states "the question of raising the liquidity ratio figures has now become particularly urgent. I can also tell you that we are *going* to adjust them upward to make them correspond to the real world we are now living in." Thunholm wonders whether the banks can negotiate with the Riksbank: "Is it a case of unilateral establishment of new ratios on the Riksbank's part, or is there a chance of discussing the matter?" Åsbrink will discuss it: "It is always possible to talk to us, this time as well." The discussion ends with Åsbrink giving the banks "one month's study time."

At the next meeting in June 1959, the exchange of views is lively. Thunholm again directs vigorous criticism of principle against the liquidity ratios: "[The ratios] affect our position compared with other credit institutions, chiefly our closest competitors the savings banks and rural credit societies ... the credit restrictions have had a tendency up to now to place us in a worse position than our competitors." Åsbrink cites foreign experiences in his reply: "I assume that like me you are in the habit of reading that excellent journal *The Economist* ... we need to adjust the liquidity ratio figures to take account of the actual liquidity which exists in each individual bank taken by itself. This is what lies behind the plans both for changing the group breakdown and for the upward adjustment of the ratios."

Thunholm replies: "I say that we ... are very strongly opposed to the entire ratio system as such. We are even more so because the ratio system does not in fact *have* the effect which is supposed to be the reason for having it. As a matter of fact, there is no damping of the macroeconomy, there is no sterilization of cash, all that happens is that the money is diverted from commerce and industry to the state. And the system of liquidity ratios does not have any anti-inflationary effect. If we are to continue on the road now being opened, then this will only mean that we shall successively have one readjustment after another to the constantly increasing actual liquidity which will come about by incessant expansion of government expenditure. The end-result will be a radical change in the structure of the commercial banks, so that we shall become eventually little more than lending institutions for the state."

Åsbrink makes no objections to Thunholm's argument but stresses his own difficult situation: "But I am convinced that each and every one of you, if you were in my

shoes, would feel that something at any rate has to be done. If we recognize that, then perhaps we can leave the grand debate over principles for another occasion and in other surroundings than the Riksbank, where I am compelled to pay regard to actual developments and events in politics ... for my part I am prepared on that point to leave it to you [to decide] what system you want to have." However, the banks do not come up with any suggestions of their own. They decline to confer legitimacy to the system by proposing another design.

Åsbrink announces in July 1959 that the liquidity ratios have been raised: "On the principal point of issue, we understand very well that you cannot be happy that we want to raise the ratios at all. We do not ask you to be either, but we must do it anyway ... I now also must announce that I shall calculate on the basis of the new ratios from 1 July onwards and that I shall use those means which are at my disposal for ensuring that they are observed ... If you wish to regard that as a unilateral recommendation on my part, I do not mind. The banks' spokesman Thunholm replies in weary tones: "If the Riksbank Governor now puts it in the form of a unilateral recommendation instead, the question is settled. We cannot of course do anything else but accept it *ad notam*."

The outcome of this long process of argumentation is a unilateral increase of the liquidity ratios by the Riksbank. The commercial banks failed to influence the Riksbank. Perhaps they postponed the change in the ratio system for a time.

## 11.2 Negotiations on credit policy relaxation 1970-71

Five meetings take place altogether in December 1970 and January 1971. This is an unusually intensive round of negotiations. The cause is the policy of restraint and its effects. The banks want to soften the credit controls. The Riksbank wants guarantees that the flow of credit once released will go to "proper" sectors and purposes. Nordenson, preparing the minutes as general secretary of the Bankers' Association, records:

"The character of the deliberations has been tentative and at times difficult to grasp; various arguments have reappeared with differing wordings on the various occasions, and misunderstandings have arisen. Also, the Riksbank side has expressed the wish privately that isolated remarks in the minutes of the meetings should not bind the participants in any way."

At the meeting of 9 December 1970, it is noted that "business cycle conditions and the fiscal policy situation gave scope for a certain degree of credit expansion", and that "industry's investments ought to be facilitated primarily by increased credits furnished by the commercial banks". Åsbrink considers: "If the banks could not present techniques offering the Riksbank reasonable assurance that the banks' apparatus would function in such fashion as to accomplish a really selective focusing of the credit expansion, then the Riksbank must have recourse to its own extraordinary measures."

The commercial banks reply "as an initial reaction to Åsbrink's argument, that the possibilities of distinguishing between loans used by firms for investment and loans

used for other purposes were unworkable both in accounting terms and statistically. ... . Åsbrink enquired whether the banks could not give the Riksbank a list of all credits intended purely for investment purposes. ... This idea provoked immediate strong misgivings from the banks' side, and it was emphasized that detailed control was not to be considered. ... After the conference with the Riksbank, a brief meeting was held with the representatives of the banks. Thunholm states: It must also be borne in mind that, strictly speaking, the Riksbank was able to obtain the legal instruments to demand details of individual credits."

At the meeting on 16 December, Thunholm emphasizes "that to supply details of individual credits would signify a far-reaching step towards a regulation of credit such as Sweden has never previously had at all. It would imply an entirely novel principle with wide-ranging consequences." The negotiations continued the next day: "When the discussion was tending towards deadlock, Åsbrink took up the question which had been raised concerning the Riksbank's efforts in the matter of creating conditions for increased lending. He reiterated his assessment that in principle there was a certain amount of scope for increased lending if this expansion could be guided in certain directions."

"The Riksbank was then prepared to allow liquidity to rise, chiefly by permitting borrowing from the Riksbank on cheaper terms ... Åsbrink demonstrated a clear preference for a special form of loan combined with the option for the Riksbank to check individual credits, at least on a sample basis. He underlined ... that, if necessary, it would not be difficult for him to get a parliamentary bill empowering the Riksbank to require details of individual credits ... The exchange of views continued a while longer but nothing new emerged. The Riksbank remained in favor of a special form of credit along with the reporting of individual credits above a certain sum or in accordance with some sampling procedure. On the other side, there were the banks' doubts concerning the value and feasibility of a new form of credit and their categorical opposition to supplying the Riksbank with details of individual credits."

The next conference on 22 December 1970 "began with Thunholm presenting a proposal for the establishment of a special account for so-called industrial investment credits. Joge argues on behalf of the Riksbank that "investment ought to mean investment *in Sweden*." The meeting advances towards mutual agreement. Åsbrink says that "it would not be possible for the guidelines to become official before 8 January, when a meeting of the Riksbank Board of Governors was due to take place. This would not prevent preparations within the banks, but only then would a communiqué be issued to the public." Thunholm retorts to this with some acrimony. Åsbrink is of the opinion that Thunholm is taking it too hard. Åsbrink adds somewhat acidly that, if there was anyone on the banks' side who wanted to raise the question of mistrust on the part of the Riksbank, then the Riksbank might feel forced to recount its experiences of the sort of things that can happen inside the banks, especially in recent years. ... Åsbrink then goes on to describe in more detail, as promised earlier, the Riksbank's planned measures to facilitate an expansion of credit.

At the meeting of 4 January, Nordenson reads out "the Bankers' Association's proposals for industrial investment credits." Åsbrink says "that he wants to examine

the Bankers' Association's proposals in detail during a recess and therefore suggests that Mr. Thunholm should present the views currently prevailing with regard to the Riksbank's proposals for guidelines." After Thunholm has presented his criticisms, Åsbrink proposes that the meeting "be adjourned until 3 pm to give the Riksbank time to scrutinize the documents submitted by the Bankers' Association."

When the meeting resumes, Åsbrink goes through "a new and somewhat revised version of the guidelines previously supplied to the Bankers' Association which have formed the subject of comments on Mr. Thunholm's part at the meeting this morning ... Mr. Thunholm states that the new wording signified a clear improvement."

Åsbrink hopes "that it may be possible to bring the negotiations to an end during the course of the day but that he accepts of course an interruption to enable the banks to have an internal discussion." The meeting is suspended for 10 minutes at this point for the Bankers' Association to hold a private discussion.

When it resumes, Åsbrink emphasizes "that the agreement now reached will be submitted to the Board of Governors of the Riksbank on Friday 8 January and that a communiqué will be issued thereafter, and he for his part would be grateful if publication in the media could wait until the board meeting had taken place."

This series of meetings marks the end of the restraint policy of 1969-70, a policy known as the "idiotic squeeze". A new type of credit was introduced entitled the industrial investment credit. The first statistical summary of this new form of credit is presented at the meeting of March 1971. In the spring of 1973, Åsbrink states in response to a question by Nordenson that he is "prepared to abolish these reports".<sup>28</sup> By then they have terminated their role as a credit policy lubricant enabling the Riksbank to accept the relaxation of its contractionary policy of 1969-70.

These extracts from the notes of 1970-71 give a striking illustration of the Riksbank's power position *vis-à-vis* the commercial banks. The Riksbank can threaten with legislation enforcing detailed reporting by the commercial banks on their lending to individual borrowers, a step never previously contemplated. Åsbrink declares frankly that he has the political influence to push through a new form of loan, industrial investment credits, despite the vigorous objections of the commercial banks. Eventually the deadlock is broken. The commercial banks accept the new form of loan in return for a promise of a more expansionary credit policy. An agreement is reached, and monetary policy becomes more expansionary. The new form of lending existed just for a short time.

# 12 The balance of power on the credit market

The minutes from the meetings between the Riksbank and the commercial banks during the years 1956-73 give a unique description of the balance of power when the Riksbank's policy rested mainly on a strategy of controlling the volume and allocation

<sup>&</sup>lt;sup>28</sup> The archive of the Riksbank contains data sheets, compiled by the statistical office, on the volume of industrial credit, starting in January 1971 and ending in January 1973.

of credit. In this institutional setting, the Riksbank Governor enjoys a position of almost total dominance. He exercises his power over the banks. The minutes demonstrate the concentration of power to Åsbrink. At the meetings, he admonishes, lectures, warns, threatens, demands and commands the commercial banks to obedience and docility concerning their business of lending.

The commercial banks have little power to oppose to this. Their political support is weak in Sweden under Social Democratic rule. They cannot appeal to the government or to pressure groups. Their writings in the mass media do not influence public opinion. The threat of more stringent credit policy legislation, in the long run of nationalization, constantly hangs over them.<sup>29</sup>

Åsbrink stresses that he has the backing of the government for whatever legislation he may consider he needs if the banks are not willing to follow his intentions. Foreign exchange controls isolate the Swedish financial system from international influences to a large extent during the 1950s and 1960s. Their arguments can be brushed aside by a decidedly autocratic Riksbank Governor who does not avoid employing brutal language and an abrupt manner towards the managers of the commercial banks.<sup>30</sup>

The personality of the Riksbank Governor had a considerable impact within the policy regime based upon credit controls of the sort prevailing in Sweden during Åsbrink's tenure, since the system created wide scope for the exercise of power by the Riksbank Governor, unlike a state of affairs based on the anonymous price signals which enforce discipline under a market-oriented monetary policy.

On a free financial market all actors-credit institutions are equal in the sense that they are confronted with the same prices and restrictions. In such a monetary policy regime, the Governor of the central bank is neutral *vis-à-vis* the financial institutions. The rules of the game are transparent.

The Riksbank, or "we" – the word used in the minutes – became synonymous with Åsbrink. He sets his personal stamp on the relationship between the commercial banks and the Riksbank, characterized by harshness and animosity. According to the heads of the commercial banks, Åsbrink is inflexible and callous to the situation of the commercial banks. At times Åsbrink's remarks also reflect a monetary policy moralism: to borrow from a bank must not become a civil right, and banks ought not to deal in loans for consumption, second homes, cars, or shares.

The minutes breathe a cold, almost hostile atmosphere on many occasions – a feature not to be found after Åsbrink's departure in 1973, nor in the minutes from Mats

<sup>&</sup>lt;sup>29</sup> Many bankers were of the opinion that the only commercial bank which could openly defy Åsbrink – within certain limits of course – was the state-owned *Kreditbanken*, as it was already nationalized.
<sup>30</sup> In 1960, when Lennart Dahlström, attending his first meeting as head of the National Pension Insurance Fund, seeks out Åsbrink at the Riksbank, the way the latter speaks to him takes him by surprise. For the Governor of the Riksbank starts off the conversation by telling Dahlström that he deserves a slap in the face. A similar event is also reported where Åsbrink is claimed to have actually hit Thunholm physically. This story inspired Erik Lundberg, who loved to express himself in a provocative manner, to exclaim for his students at a lecture that the arsenal of monetary policy instruments has now been extended to include a smack in the face. This story has been recollected separately to me by three students of Erik Lundberg in the 1960s.

Lemne's term as Riksbank Governor. But Åsbrink did win a degree of reluctant respect for his uncompromising attitude. His closest colleagues, Arne Callans, Sven Joge and Kurt Eklöf, were regarded by the commercial banks as difficult, lacking independence, excessively bureaucratic and unsympathetic to the commercial banks.

The social gulf between Åsbrink, who had worked his way up through the Social Democratic political machine, and commercial bank directors like Marcus and Marc Wallenberg, who had inherited power and wealth and belonged to the élite of Swedish capitalism, probably did little to ease the tension between the Riksbank and the commercial banks. Moreover, Åsbrink and Callans had no great practical or theoretical knowledge of banking and financial issues before they found themselves in charge of the Riksbank. This made it difficult for them to understand the problems facing the commercial banks.

The Riksbank management for its part entertained no greater regard for the directors of the commercial banks. The system of controls and the evasion which the system induced created an atmosphere of mutual suspicion and mistrust which could not be bridged as long as the controls were in force. This is evident from the interviews with leading representatives of the commercial banks during the 1950s and 1960s.<sup>31</sup> The same view is expounded by Thunholm (2005) in his memoirs where he states frankly that Åsbrink's personality was a major problem. "Never a smile or *bon mot* [from Åsbrink] which could have improved the atmosphere at the meetings. I do not understand that he could have become such a person. The air at the meetings turned ice-cold".<sup>32</sup>

It is impossible to establish the extent to which the meetings constituted a game between the commercial banks and the Riksbank which was not directly reflected in the banks' actual behavior on the credit market. At the meetings, the Riksbank has a strong power position and seeks to control the commercial banks. As time goes on, however, the latter devise various techniques for circumventing and neutralizing the Riksbank's measures. For obvious reasons, the commercial banks are better informed about what is happening "in the field" than the Riksbank. And as evasion grows, the quality of the statistics on which the Riksbank relies deteriorates.

## 13 Conclusions

After World War II and prior to the financial deregulation of the 1980s, monetary policy in Sweden rested chiefly on a system of far-reaching controls of credit flows and interest rates. How was monetary policy conducted in such an environment of financial repression, where the central bank was unable to rely on the traditional monetary policy instruments working on "free" and "unregulated" money and capital markets?

<sup>&</sup>lt;sup>31</sup>See Chapter 15 in Werin (1993).

<sup>&</sup>lt;sup>32</sup> Åsbrink himself was of a different opinion. In an interview with *Veckans Affärer*, a Swedish business weekly, on 1 November 1973 on the occasion of his retirement, Åsbrink stated: "I have heard it said that I was hostile to the banks, but I don't understand what is meant by that ... I am one of those who believe we can tolerate the banks being private."

This study provides an answer from the Swedish experience. It is based on a unique set of confidential minutes from about 160 monthly meetings between the Riksbank and the commercial banks during the years 1956-73. These minutes, written during or directly after the meetings, have not been available to scholars before. Most likely, a similar archive material does not exist for any other country.

The examination of the minutes demonstrates that monetary policy was framed in an exchange of threats, orders and arguments in a small and closed club involving the central bank and the chief executives of the commercial banks. Here the "open mouth operations" of the Riksbank were a main part of the communication of the central bank, although the Riksbank talked only behind closed doors to all the commercial banks of Sweden.

The protocols from the meetings illustrate the Riksbank's view on monetary policy. The Riksbank's ultimate goal during the 1950s and 1960s is to maintain internal and external balance, fulfilling the requirements of the Bretton Woods system. At the same time, the Riksbank has been assigned the task of guaranteeing the financing of new housing at low interest rates. The size of this financing requirement, however, is determined by the government and the Riksdag, not the Riksbank, a situation which Åsbrink does not like but has to accept. In addition, the discount rate has to be kept as low as possible, restraining the scope for discount-rate increases.

The Riksbank finds itself called upon to concentrate its control measures on regulating the volume of commercial bank lending, or more precisely on "hitting" or "attacking" lending to sectors other than the construction sector. To this end, it makes use of a range of techniques. The Riksbank admonishes, exhorts, warns and threatens the commercial banks, "messes around with them" in Åsbrink's words, and intervenes with binding controls such as lending ceilings and liquidity ratios when nothing else works. The element of moral suasion, i.e. of various forms of verbal pressure, is great, but the actual impact of suasion on the lending activities of the banks is difficult to judge. It was probably relatively limited. The use of blunt instruments such as lending ceilings, liquidity ratios and discount-rate changes was the main determinants of bank behavior.

The commercial banks for their part developed a verbal defense against the Riksbank's policy. The chief executives prepared themselves at the Bankers' Association's conference before attending the meeting with Åsbrink at the Riksbank. While declaring their loyalty, the managers stress the difficulties entailed in meeting the Riksbank's requirements. They present criticisms of the regulatory policy along with proposals for dismantling the controls. The crunch comes when the Riksbank wants to regulate lending more directly and selectively. The banks want freedom and flexibility and equal treatment compared with other institutions on the credit market, and a well-functioning capital market. At the same time, the regulatory system had some favorable effects for the commercial banks. The Riksbank kept their cartel together and shielded them from outside competition.

The meetings are frequently marked by confrontation, especially during periods of contractionary Riksbank policy. The Riksbank and the commercial banks do have

certain common interests, however. There are occasions when the minutes give the impression of originating from a monetary policy club in which the members are discussing how best to behave towards each other and the outside world, mainly the press. Both parties express the desire to prevent outside observation and to keep information from the press.

The regulatory policy was the base from which the monthly meetings developed. They were established on a permanent basis because of the introduction of liquidity ratios, during the period when controls were being imposed in the early 1950s. The financial deregulation process during the latter half of the 1980s signaled the end to the monthly meetings as a platform for policy-making.

Since the adoption of inflation targeting in the early 1990s, the Riksbank has relied on the use of its policy rate as its main policy instrument. It has also emerged as an independent central bank. The opposite held during the financial repression of the 1950s and 1960s when the Riksbank became dependent on the policy decisions and priorities of the government.<sup>33</sup>

When Swedish financial markets were deregulated, the standard tools of monetary policy replaced the meetings between the central bank and the commercial banks. Today, the Riksbank communicates in an open way to all financial market participants, instead of turning to the commercial bankers in meetings closed to outsiders.

<sup>&</sup>lt;sup>33</sup> Will a system of financial repression make a return in the future? Judging from the history of the Riksbank such a development cannot be ruled out.

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