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Bästa läsare,

Denna utgåva av Penning- och valutapolitik innehåller två långa artiklar, och visar på spännvidden i de ämnen som kan tas upp i tidskriften. Den första artikeln handlar om den svenska elmarknaden. Det senaste årets stora rörelser i elpriser har satt fokus på hur elmarknaden fungerar. Den andra artikeln redogör för ett omfattande arkivarbete, ett arbete som handlar om en spännande period i svensk penningpolitisk historia.

- **Den svenska elmarknaden – idag och i framtiden**

Pär Holmberg och *Thomas Tangerås*, båda verksamma vid Institutet för Näringslivsforskning, beskriver den svenska elmarknaden, hur den fungerar idag och med en blick mot framtiden. På Riksbanken ökade intresset för elmarknadens funktionssätt i samband med att elpriserna steg kraftigt mot slutet av 2021, ett av de viktigaste skälen till att inflationen i Sverige steg snabbt och oväntat. Artikeln ger en översikt som kan vara av intresse även för den bredare allmänheten.

- **Open mouth operations: Monetary policy by threats and argument**

Lars Jonung, professor emeritus vid Lunds universitet, beskriver protokollen från veckovisa möten mellan Riksbanken och ledningarna för Bankföreningen under åren 1956-1973. Genomgången ger en inblick i hur penningpolitiken i Sverige bedrevs under denna period, som präglades starkt av de omfattande kreditmarknadsregleringarna, och då de nuvarande penningpolitiska verktygen inte var tillgängliga på samma sätt som idag.

Artikeln finns endast på engelska.

Trevlig läsning!

Marianne Nessén och Ulf Söderström

Innehållsförteckning

Den svenska elmarknaden – idag och i framtiden	5
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Pär Holmberg och Thomas P. Tangerås

Open mouth operations: Monetary policy by threats and arguments	36
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Lars Jonung

Den svenska elmarknaden – idag och i framtiden

Pär Holmberg och Thomas P. Tangerås*

Författarna är docenter i nationalekonomi och verksamma vid Institutet för Näringslivsforskning (IFN)

Energikrisen har drivit elpriserna upp till nivåer vi aldrig tidigare upplevt, och skapat stora prisskillnader inom landet. Det finns även risk för fysisk bortkoppling av användare. Denna artikel studerar dagens elmarknad, energikrisen och den gröna energiomställningen.

Flaskhalsar i överföringsnätet har under energikrisen skapat enorma inkomstöverföringar från konsumenterna till Svenska kraftnät. Dessa flaskhalsintäkter borde införlivas i nätregleringen.

För att lösa energikrisen behövs åtgärder som på kort sikt ökar produktionskapaciteten, förbättrar nätutnyttjandet och minskar elförbrukningen, särskilt när efterfrågan är hög. Vi presenterar även åtgärder för att öka effektiviteten i elsystemet.

Elektrifiering av industri och transporter förutsätter en kraftig utbyggnad av nät och produktion. Ny el kommer framför allt behövas till produktion av vätgas. Den förbrukningen är priskänslig och beroende av att billig elproduktion byggs ut i stor skala. För en effektiv energiomställning behövs långsiktiga, teknikneutrala spelregler, effektiva tillståndsprocesser och välutvecklade finansiella marknader. Därtill behöver de politiska riskerna på elmarknaden minska.

* Denna artikel är författad på uppdrag av Sveriges riksbank och färdigställdes i slutet av 2022. Författarna är tacksamma för inkomna kommentarer under arbetets gång och för synpunkter framförda under seminarier på Riksbanken och vid Konjunkturinstitutet och i ett möte med Urban Andersson på Energiforsk. Analysen och de åsikter som förmedlas i artikeln är författarnas egna och återspeglar inte nödvändigtvis IFN:s eller Riksbankens åsikter.

1 Inledning

Elsystemet och marknaderna som ska upprätthålla och utveckla elsystemet utgör gemensamt landets *elförsörjning*. Under 2022 har elförsörjningen uppmärksammats i Sverige och Europa mer än någonsin tidigare. Kriget i Ukraina och den påföljande energikrisen har drivit elpriserna upp till nivåer man aldrig tidigare upplevt i Europa. Användare riskerar till och med bli bortkopplade för att det inte finns tillräcklig elproduktion att tillgå. Detta har aldrig hänt i Sverige i modern tid.

Samtidigt som många har börjat reflektera över elförsörjningens grundläggande betydelse för samhällsekonomin, är elmarknaden komplicerad och kan vara svår att förstå. Denna artikel syftar till att beskriva hur elmarknaden i Sverige fungerar. Därefter diskuterar artikeln utmaningar vad gäller elförsörjningen på kort och lång sikt.

Artikeln beskriver först elsystemet i avsnitt 2 och därefter elmarknadens olika delar i avsnitt 3. Den pågående energikrisen har ökat risken för elbrist och ökat konsumenternas elkostnader. Avsnitt 4 studerar elmarknadens utmaningar och potentiella lösningar från detta kortsiktiga perspektiv. På längre sikt är den centrala frågan hur man ska säkerställa en hållbar, tillförlitlig och resurseffektiv energiomställning. Dessa frågor diskuteras i avsnitt 5. Artikeln avslutas med en sammanfattande diskussion och slutsatser i avsnitt 6.

2 Elsystemet i Sverige

Huvudpulsådern i elsystemet är det högspända transmissionsnätet. Detta kopplar ihop storskalig elproduktion, som vatten- och kärnkraft, med kopplingsstationer för regionala elnät genom 157 anslutningspunkter.¹ Regionnäten ansluter annan elproduktion och industrianläggningar, som stålverk och pappersbruk, till elnätet. De överför även el via kopplingsstationer till de lågspända lokalnäten som i sin tur ansluter hushåll och andra mindre konsumenter till systemet. Det svenska elsystemet är del i det integrerade europeiska elsystemet genom högspända överföringsförbindelser till våra nordiska grannländer samt Litauen, Polen och Tyskland.

Transmissionsnätet ägs och drivs av det statliga affärsverket Svenska kraftnät (Svk), som även är delägare i de flesta förbindelserna med utlandet.² Sex företag äger och driver regionnät, varav de största är Vattenfall och Ellevio.³ Totalt 149 privata och offentliga företag äger och driver lokalnät.

Figur 1 visar en bild över transmissionsnätet i Sverige med angivna anslutningspunkter och de internationella förbindelserna. Nätstrukturen från norr till söder återspeglar behovet att frakta el producerad med storskalig vattenkraft i norr till befolkningscentran längre söderut. De nya överföringsförbindelserna från Norge till Storbritannien och Tyskland samt ny kärnkraft i Finland ökar flödena i öst-västlig

¹ Svenska kraftnät tillämpar tröskelvärdet att en anläggning måste ha en inmatnings- eller uttagskapacitet om minst 100 megawatt (MW) för att anslutas till transmissionsnätet (Svenska kraftnät, 2023).

² Undantaget är Baltic Cable mellan södra Sverige och Tyskland som ägs av Statkraft.

³ Det finns även enskilda överföringslinjer på regionnätetsnivå.

riktning, tvärs emot transmissionsnätets nuvarande struktur. Dessa flöden skapar utmaningar för det svenska elnätet, vilka vi ska återkomma till.

Figur 1. Karta över transmissionsnätet i Norden och Baltikum 2021



Källa: Svenska kraftnät

2.1 Elproduktionen

Historiskt har det mesta av den svenska elproduktionen bestått av vattenkraft och kärnkraft, kompletterat med fossilbaserad värmekraft. Figur 2 visar elproduktionen i Sverige fördelat på de viktigaste kraftslagen för varje år under perioden 2000-2020. Den visar även nettoexporten av el i samma period. Vattenkraften uppvisar stora årliga variationer, bland annat därför att inflödet ändrar sig från år till år. Kärnkraften varierar också, men har haft en trendmässig nergång sedan all-time-high 2004 då de 11 reaktorerna gemensamt producerade 75 terawattimmar (TWh) el.⁴ Fem reaktorer har lagts ner sedan dess. Efter nerläggningen av Ringhals 2 i slutet av 2019 ser vi till exempel en substantiell reduktion i kärnkraftsproduktionen året efter. Ringhals 1 stängdes nyårsafton 2020, men dess konsekvenser för elproduktionen fångas inte upp i figuren nedan. Genomförda och planerade effekthöjningar i återstående reaktorer bidrar till att begränsa den totala effektminskningen något.⁵

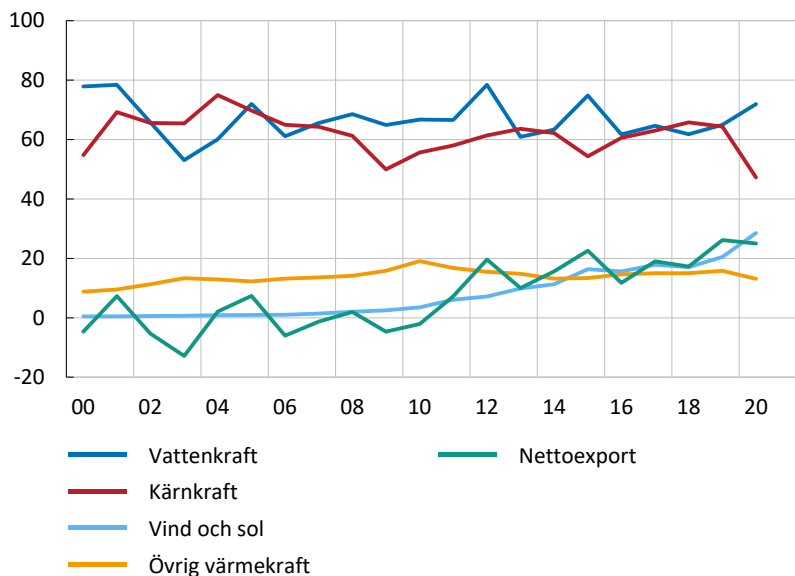
De olika kraftslagen påverkar elförsörjningen på olika sätt eftersom de skiljer sig åt i vilken utsträckning de är planerbara, flexibla och uthålliga. Produktionen i en elanläggning är *planerbar* om man god tid i förväg, exempelvis dagen före, kan säga med stor säkerhet hur mycket av den installerade kapaciteten som kommer vara tillgänglig under driftstimmen. Exempel på planerbar elproduktion är vattenkraft, kärnkraft och värmekraft. Elproduktion är *flexibel* om den kan ökas eller minskas på kort varsel, inom ramen av 15 minuter eller kortare, utan att det uppstår stora kostnader i samband med själva produktionsändringen. Kärnkraften är exempel på oflexibel elproduktion. Elproduktionen i en anläggning är *uthållig* om man kan upprätthålla samma produktionsnivå under lång tid. Exempel är kärnkraft och elproduktion baserad på fossila bränslen. Vattenkraften har en särskild ställning i den svenska elförsörjningen så till vida att den både är planerbar och mycket flexibel, vilket gör att den kan fungera som en buffert för att fånga upp annan variation i produktion och förbrukning.

⁴ Utnyttjandet av kapaciteten i kärnkraften har historiskt uppvisat stor variation från år till år. Förbättrat utnyttjande av återstående kapacitet förklarar att produktionsrekordet inträffade efter att Barsebäck 1 lades ner 1999.

⁵ Forsmark 1 har nyligen höjt effekten med 100 MW. I jämförelse hade Ringhals 1 en effekt om 881 MW.

Figur 2. Årlig produktion och nettoexport av el

TWh i Sverige, 2000-2020



Källa: SCB

Den mest anmärkningsvärda utvecklingen i figur 2 är ökningen i väderberoende elproduktion, särskilt vindkraft, sedan 2006. Den planerbara elproduktionen har sjunkit som andel av den totala elproduktionen från 100 procent år 2000 till 82 procent år 2020 och i stället ersatts av icke-planerbar elproduktion (vind- och solkraft). Sverige har gått från att vara självförsörjande på årsbasis (med viss variation) till att bli nettoexportör av el. Särskilt följer produktionen av vindkraft och nettoexporten varandra sedan 2013. För närvarande exporterar Sverige motsvarande hela sin vindkraftsproduktion på årsbasis.⁶

Sverige förefaller ha en ganska stabil elförsörjning eftersom hela den inhemska elförbrukningen täcks av planerbar elproduktion. Denna bild måste dock nyanseras. Det mesta av den högspända överföringskapaciteten går från norr till söder, se figur 1. Stora obalanser mellan lokal produktion och förbrukning av el skapar ibland situationer då transmissionsnätet inte har tillräcklig kapacitet att överföra all den efterfrågade elproduktionen. För att ta hänsyn till dessa *flaskhalsar* är Sverige indelat i fyra elområden. När det uppstår flaskhalsar får varje elområde ett eget elpris för att förbättra den lokala balansen mellan utbud och efterfrågan på elbörsen. Vi återkommer till en ekonomisk analys av elområden i avsnitt 3.

⁶ Den ökade vindkraftsproduktionen kan främst härledas till det särskilda stödet till förnybar elproduktion som infördes 2003, se Holmberg och Tangerås (2020) för en beskrivning av systemet med elcertifikat. Numera är stödet nästan försumbart och är under avveckling. Anläggningar som togs i drift efter den 31 december 2021 har inte rätt till elcertifikat.

Figur 3. Karta över elområden i Norden och Baltikum 2022



Källa: Svenska kraftnät

Figur 3 visar en geografisk beskrivning av indelningen i elområden. Danmark och Norge är indelade i två respektive fem elområden för att återspegla inhemska flaskhalsar. De andra EU länderna, förutom Italien, består för nuvarande av var sitt elområde. Dessa länder har därför nationella elpriser.⁷

Tabell 1. Elproduktion och förbrukning

TWh per elområde under 2021

	SE1	SE2	SE3	SE4	Totalt
Produktion					
Vattenkraft	22,1	38,8	11,4	1,3	73,6
Kärnkraft	0,0	0,0	51,4	0,0	51,4
Sol- och vindkraft	4,6	10,8	8,5	4,2	28,1
Övrig värmekraft	0,2	1,1	5,4	1,6	8,3
Totalt	26,9	50,7	76,7	7,1	161,4
Förbrukning (inkl. nätförluster)	10,7	15,4	85,9	23,9	135,9

Källa: Svenska kraftnät

Tabell 1 visar produktionen under 2021 för de viktigaste kraftslagen inom varje elområde, och anger även förbrukningen fördelat per elområde.⁸ De lokala obalanserna mellan produktion och förbrukning framgår tydligt. De två norra elområdena hade gemensamt ett stort elöverskott om 51,5 TWh under 2021. De två södra elområdena (SE3 och SE4) hade gemensamt ett underskott av elproduktion om 26 TWh. Det finns stora regionala skillnader vad gäller produktionsmixen. SE1-SE3 har stora andelar planerbar elproduktion. All kärnkraft ligger i SE3. SE4 skiljer sig ut genom att det är ont om produktion. Dessutom kommer mer än hälften av produktionen i SE4 från väderberoende kraftkällor, medan resten är vattenkraft och värmekraft.

2.2 Elförbrukningen

Den årliga elförbrukningen har legat ganska konstant de senaste 35 åren och pendlat mellan 136 TWh (2020) och 150 TWh (2004). I jämförelse fördubblades Sveriges reala BNP mellan 1986 och 2020. Det finns viktiga skillnader i förbrukningsmönstret mellan de olika elområden. Tabell 2 nedan anger elförbrukningen under 2021 för olika sektorer.⁹

⁷ Luxemburg är ett specialfall. De har samma pris som Tyskland. Ett annat specialfall är Nordirland, som har samma pris som Irland.

⁸ Produktionsdata från Svenska kraftnät anger inte industriell kraftvärme. Denna elproduktion uppgick exempelvis till 6,7 TWh under 2020 enligt SCB.

⁹ Nätförluster uppstår i samband med överföring av el över längre sträckor, vilket gör att man alltid måste mata in mer energi i elnätet än vad man kan ta ut som förbrukning. Dessa nätförluster utgör skillnaden mellan den totala uppmätta elförbrukningen om 135,9 TWh i Tabell 1 och 130,9 TWh i Tabell 2.

Tabell 2. Elförbrukning för olika sektorer

TWh per elområde under 2021

	SE1	SE2	SE3	SE4	Totalt
Bostäder (hushåll)	1,7	3,6	25,0	7,6	37,9
Mineralutvinning och tillverkning	6,3	6,9	26,3	6,8	46,3
Handel och övrigt	1,1	1,0	9,2	2,4	13,7
Bygg och fastighet	0,5	0,9	9,8	2,6	13,8
Jord- och skogsbruk	0,1	0,3	1,6	1,0	3,0
Försörjning och transport	0,5	0,9	6,0	1,4	8,8
Offentlig verksamhet	0,4	0,8	4,8	1,3	7,4
Totalt (exkl. nätförluster)	10,6	14,4	82,7	23,2	130,9

Källa: SCB

Drygt 35 procent av elanvändningen i Sverige går åt till utvinning av mineraler eller tillverkning av produkter. Den tunga industrin är av stor betydelse i alla elområden, men dominerar särskilt i norra Sverige. Hushållens elförbrukning i bostäder utgör knappt 30 procent av elförbrukningen och är större i södra jämfört med norra Sverige, både i absoluta tal och som andel av elförbrukningen inom varje elområde. Detta gäller även övriga sektorer, som försörjning/transport och offentlig verksamhet. Detta hänger samman med att fler människor bor i söder än i norr.

2.3 Transmissionsnätet

Huvudsyftet med transmissionsnätet är att transportera stora mängder el på ett effektivt sätt från produktionen i norr till förbrukarna i söder, samt att underlätta för utbytet av el med de nordiska grannländerna och med den europeiska kontinenten. Överföringskapaciteten från norr till söder är 3 300 MW mellan SE1 och SE2, 7 300 MW mellan SE2 och SE3 och 5 600 MW mellan SE3 och SE4.¹⁰ Detta utgör en potentiell importkapacitet till SE4 från SE2 om 49 TWh el per år om man antar att den fulla kapaciteten i transmissionsnätet är tillgänglig hela året.¹¹ Detta är mer än dubbelt så mycket som den totala elförbrukningen i SE4, se tabell 2.

Den samlade exportkapaciteten från Sverige till grannländerna utgör 10 850 MW. I termer av elproduktion utgör detta ungefär 95 TWh på årsbasis, att jämföra med den totala inhemska elproduktionen om cirka 160 TWh under 2021, se tabell 1. Den motsvarande siffran för importkapaciteten är 10 630 MW, vilket utgör ungefär 93 TWh sett över året som helhet. Detta kan man jämföra med en årsförbrukning om cirka 130 TWh, se tabell 2. Det svenska elsystemet är alltså välintegrerat såtillvida att exportkapaciteten utgör 60 procent av den årliga elproduktionen och importkapaciteten 75 procent av den årliga elförbrukningen.

¹⁰ De angivna siffrorna är de maximala kapaciteter som nätägarna har bjudit in på Nord Pool sedan januari 2012.

¹¹ Den viktigaste flaskhalsen som begränsar handeln mellan norra och södra Sverige är kapacitetsbegränsningen mellan SE3 och SE4. Den potentiella importkapaciteten från SE2 till SE4 mätt i megawattimmar (MWh) beräknas då som 5 600 MW multiplicerat med antalet timmar per dygn (24) och dygn per år (365). 1 TWh är lika med 1 miljon MWh.

3 Den svenska elmarknaden

Det ekonomiska elsystemet består av två huvuddelar. Den ena är den avreglerade marknaden för *handel* med el, den andra är den reglerade marknaden för *överföring* av el.¹²

3.1 Den avreglerade marknaden för handel med el

Sverige är en del av den regionala nordisk-baltiska elmarknaden. Förutom Sverige, består denna marknad av Danmark, Finland och Norge samt de baltiska länderna Estland, Lettland och Litauen. Elmarknaden består av en rad delmarknader som gemensamt bildar en helhet.

3.1.1 Dagen-före-marknaden

Det mesta av elen som produceras i Norden säljs på elbörsen *Nord Pool Spot*. Sedan juni 2020 finns det även en konkurrerande elbör, *EPEX Spot*, och Nasdaq planerar att starta en tredje börs.¹³ Dagen-före-marknaden är en grossistmarknad där elhandelsföretag och elintensiv industri köper el direkt från producenterna. Under 2020 såldes 372 TWh el på denna marknad, vilket utgjorde 89 procent av produktionen i Nord Pool-området det året.¹⁴ Till följd av sin storlek är dagen-före-marknaden av fundamental betydelse för hela elmarknaden. Till exempel sätts priserna som hushållen betalar för sin elförbrukning som ett påslag på dagen-före-priset. Det utgör även referenspris för de finansiella kontrakt som marknadsaktörerna använder för att prissäkra sin produktion och förbrukning.

Hur bestäms marknadspriserna?

Producenterna anger varje dag innan klockan tolv hur mycket el de önskar sälja till olika priser varje timme under nästa dygn. På samma sätt lämnar elhandelsbolag och större industriella konsumenter bud på hur mycket el de är villiga att köpa till olika priser varje timme nästa dygn. Nätägarna anger kapaciteten i transmissionsnätet för varje timme. Därefter skapas en utbudskurva för varje timme nästa dygn genom att lägga ihop alla inkomna säljbud för den timmen samt en efterfrågekurva genom att summera alla köpbud för samma timme för alla elbörserna gemensamt. *Systempriset* för gällande timme sätts till den nivå där utbudet är lika med efterfrågan för hela den geografiska marknaden.

¹² Omregleringen genomfördes 1996 som en del av den nordiska reformvägen av elmarknaden. För den som önskar läsa mer om bakgrunden, hänvisar vi till Holmberg och Tangerås (2020).

¹³ Elbörserna skickar alla köp- och säljbud vidare till EU:s gemensamma marknadsklareringsalgoritm, så numera har de en utpräglad mäklarroll.

¹⁴ Handels- och produktionsdata från Nord Pool.

Elområden

Till följd av de regionala obalanserna mellan produktion och förbrukning uppstår ibland flaskhalsar då elnätet inte har tillräcklig kapacitet för att hantera alla flöden från norr till söder som behövs för att balansera utbudet och efterfrågan i Sverige till systempriset. För att återspegla flaskhalsar i elnätet är den nordisk-baltiska elmarknaden indelad i femton olika elområden. Norge har fem elområden, Sverige har fyra och Danmark har två. Finland och de baltiska länderna utgör ett elområde vardera.¹⁵ Figur 3 illustrerar denna indelning.

För att hantera flaskhalsarna skapas ett enskilt elpris för varje elområde. Genom att elpriset går ner i elområden med överskott av elproduktion och upp i elområden med underskott av elproduktion, minskar utbudet av el i de förra elområden medan utbudet ökar i de senare elområden. Den förbättrade balansen mellan utbud och efterfrågan inom varje elområde minskar behovet att handla med el mellan de olika elområden. Elområdespriserna ändras till dess att flödena av el matchar den angivna kapaciteten i transmissionsnätet. Syftet med elområden är att öka effektiviteten i elförsörjningen på kort och lång sikt genom att priserna signalerar var i systemet det finns brist på eller överskott av el.¹⁶ Dessutom ger prisskillnader en signal om lönsamheten att investera i ny överföringskapacitet i elnätet. En konsekvens av hur marknaden är utformad, är även att alla elområden mellan vilka det *inte* finns någon flaskhals har samma elpris. Sverige har ofta ett enhetligt elpris om natten och under helger då efterfrågan i södra Sverige är relativt låg. Södra Sverige (SE4) har ofta samma elpris som resten av norra Europa till följd av den omfattande nätkapaciteten till Tyskland och Baltikum.

Tabell 3. Årliga genomsnittspriser

öre/kWh på dagen-före marknaden 2012-2022

	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

Källa: Nord Pool Group

Tabell 3 visar det genomsnittliga årliga elpriset på dagen-före-marknaden mellan 2012 och 2022. Priset i norra Sverige har pendlat mellan 20 och 66 öre/kWh sedan införandet av elområden. Elpriserna i norra och södra Sverige var ungefär desamma fram till 2020. Därefter har elpriserna i SE3 och SE4 varit väsentligt högre än i Norrland, och skillnaden har ökat. Genomsnittspriset i SE4 för 2022 var fem gånger så högt som den genomsnittliga nivån fram till och med 2020. En viktig förklaring är

¹⁵ Sverige delades in i fyra elområden den 1 november 2011. Innan dess bestod Sverige av ett enda elområde. För att hantera efterfrågeöverskottet i södra Sverige till det enhetliga Sverigepriset, begränsade Svk regelbundet exporten av el till Danmark. EU bedömde att detta förfarande kunde bryta mot unionens konkurrensregler. Svk beslutade därefter att införa elområden i syfte att uppnå en bättre lokal balans mellan utbud och efterfrågan på el.

¹⁶ Lundin (2022) visar att elområden har ökat investeringarna i vindkraft i södra relativt till norra Sverige.

energikrisen som har drivit upp elpriserna i SE3 och SE4 till följd av integrationen med Europa. Kriget i Ukraina har inte påverkat priserna i SE1 och SE2 särskilt mycket jämfört med de nivåer som kan anses vara normala. Flaskhalsarna i elsystemet har i realiteten isolerat de norra elområdena i Sverige mot krisen. De ökande skillnaderna i elpriset har inhemska förklaringar som ökande lokala obalanser mellan utbud och efterfrågan på el.

Vem tjänar på flaskhalsar?

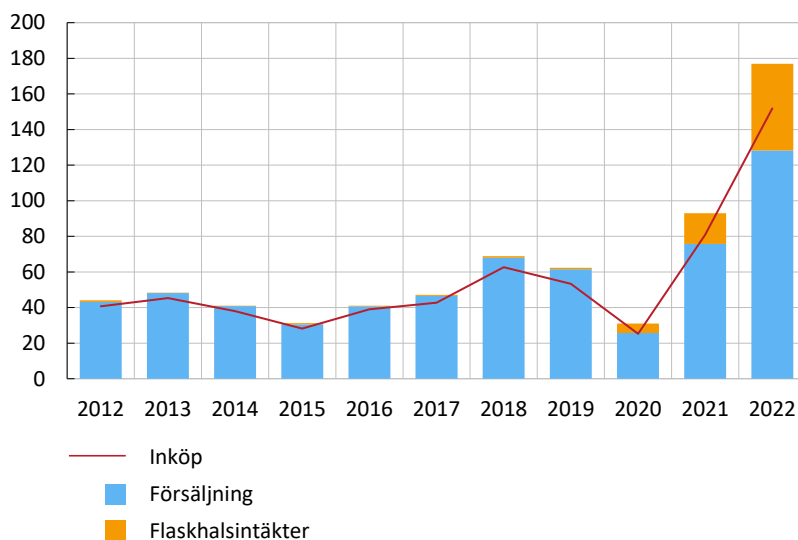
All elförbrukning [elproduktion] inom ett enskilt elområde betalar [ersätts med] det lokala elområdespriset. De som tjänar på prisskillnaderna mellan elområden, är de som äger transmissionsnätet. *Flaskhalsintäkter* mellan två elområden beräknas som prisskillnaden multiplicerat med handeln mellan de två områdena. Svenska kraftnät får alltså flaskhalsintäkter genom att exportera billig el från producenter i norr till konsumenter i söder.¹⁷ Den nordiska elmarknaden är i sin tur integrerad med den kontinentala elmarknaden. Detta innebär exempelvis att elpriset i SE4 är detsamma som i Tyskland så länge som nätkapaciteten inte begränsar handelsflödena mellan länderna. När nätkapaciteten till utlandet är begränsad uppstår även intäkter på utlandsförbindelserna. Dessa internationella flaskhalsinkomster delas mellan de som äger förbindelserna där det finns flaskhalsar.

Det totala värdet av producenternas försäljning i alla de fyra elområdena plus de inhemska flaskhalsintäkterna är lika med den totala kostnaden för konsumenternas inköp i alla dessa fyra elområden plus värdet av nettoexporten till utlandet. Figur 4 anger de olika intäkts- och kostnadsströmmarna i nominella värden på Nord Pools dagen-före-marknad för varje år mellan 2012 och 2022. De blå staplarna visar vilka årliga inkomster de inhemska producenterna i Sverige har haft på att sälja sin el på dagen-före-marknaden. De gula staplarna anger storleken på de årliga inhemska flaskhalsintäkterna. Den röda linjen visar hur mycket inköpen av el på dagen-före-marknaden har kostat konsumenterna för varje år. Skillnaden mellan summan av de två staplarna och linjen utgör det årliga nettoexportvärdet från Sverige.

¹⁷ Svenska kraftnät benämner flaskhalsintäkter som *kapacitetsavgifter*. I EU:s regelverk omnämns de som *intäkter från överbelastning*.

Figur 4. Värdet av handel

Mdr SEK på dagen-före marknaden SE1-SE4 per år 2012-2022



Källa: Nord Pool Group

Elbolagens inkomster och kundernas kostnader visar stor årlig variation. Fram till 2020 var de inhemska flaskhalsinkomsterna nästan försumbara. Även värdet på nettoexporten var av mindre betydelse. Därefter har nivån på och sammansättningen av inkomster och utgifter på dagen-före-marknaden ändrats betydligt till följd av ökningen i elpriset i södra Sverige som vi visade i tabell 3. Den ökade kostnaden för inköp de senaste två åren är särskilt anmärkningsvärd. Under 2022 lade konsumenterna sex gånger så mycket på el som under 2020. En bidragande orsak till de ovanligt låga elkostnaderna under 2020 var den låga elförbrukningen det året. Under 2020 uppgick den totala elförbrukningen (exklusiva förluster) till 125 TWh. Genomsnittet för de tolv föregående åren var ungefär 130 TWh.

Flaskhalsintäkterna har ökat dramatiskt de senaste åren. Under 2022 tjänade Svenska kraftnät nästan 49 miljarder kronor bara på de inhemska flaskhalsarna. Detta är en tredjedel av vad konsumenterna i Sverige betalade för sin el på elbörsen samma år. Handeln på elbörsen har de senaste två åren inneburit en betydande omfördelning från konsumenterna till staten som genom Svenska kraftnät äger transmissionsnätet. Exportvärdet har dessutom ökat betydligt under 2021 och 2022 från låga nivåer dessförinnan.

Resursbrist

Ibland finns det otillräcklig lokal produktion och nätkapacitet för att möta den lokala efterfrågan inom ett eller flera elområden. Då uppstår inget "priskryss", det vill säga ett pris där utbud och efterfrågan möts, på dagen-före-marknaden. Detta hände senast i Baltikum den 17 augusti 2022. Om det inte heller finns några produktionsreserver att tillgå, ransoneras elen i den mening att kunderna får dela på den kapacitet som finns tillgänglig på marknaden. Priset sätts till maximalpriset på elbörsen, som vid tillfället med Baltikum var 4 000 EUR/MWh. Situationer med

resursbrist betyder inte nödvändigtvis att marknaden inte fungerar. Perioder med extrempriiser behövs för att producenterna ska få täckning för sina kapitalkostnader.

3.1.2 Marknaderna för balanskraft

Mängden el som matas in på nätet måste hela tiden och överallt motsvara elförbrukningen, inklusive överföringen med utlandet, för att upprätthålla balansen i elsystemet. Stora obalanser kan leda till kostsamma störningar och elavbrott. El handlas på dagen-före-marknaden upp till 36 timmar före själva driftstimmen. Därför uppstår oftast behov att justera produktion och förbrukning allt eftersom ny information når marknaden i form av uppdaterade väderprognoser eller oplanerade ändringar i produktionen eller överföringsnätet. De olika balansmarknaderna blir allt viktigare eftersom behovet att justera den planerade produktionen ökar i takt med ökningen av väderberoende elproduktion.

En viktig marknad där företag kan justera sina positioner är elbörsens *intradagmarknad*. Denna öppnar två timmar efter att dagen-före-marknaden har stängts och stänger 60 minuter innan driftstimmen. Intradagmarknaden följer indelningen i elområden och fungerar nästan som en aktiemarknad genom att aktörerna lägger bud löpande. Den kontinuerliga handeln gör att priset kan skilja sig åt över handelsperioden, även för el kontrakterad för en viss driftstimme.

Svenska kraftnät organiserar en rad marknader för balanskraft. Dessa skiljer sig åt avseende vilka krav som gäller för hur snabbt kapaciteten kan aktiveras. På den största av dessa, reglerkraftmarknaden eller *manual frequency restoration reserve – mFRR*, är kravet att produktion ska kunna startas inom femton minuter efter att Svenska kraftnät har begärt aktivering.¹⁸ Budgivningen till denna marknad stänger 45 minuter innan leveranstimmen och fungerar på ett liknande sätt som dagen-före-marknaden.

Även inom elområden kan det uppstå flaskhalsar som måste hanteras för att upprätthålla balansen i systemet. Detta gäller särskilt omkring Stockholm i SE3 och Malmö i SE4. Normalt hanterar Svenska kraftnät sådana interna flaskhalsar genom *omdirigering*.¹⁹ Detta innebär att Svenska kraftnät betalar [tar betalt av] elbolag för att öka [minska] sin produktion där det finns lokalt efterfrågeöverskott [-underskott]. Detta ger ett underskott för Svenska kraftnät, eftersom kostnaden för att öka produktionen på det ena hållet överstiger värdet av att minska produktionen på det andra hållet. Kostnaderna för omreglering fördelas schablonmässigt över konsumenterna och producenterna.²⁰

¹⁸ De tre andra kortsiktiga marknaderna för reserver är FCR-Normal (1-3 minuter), FCR-Disturbance (5-30 sekunder) och aFRR (2 minuter); se Svenska kraftnät (2021b) för information. Det finns även en störningsreserv och en strategisk effektreserv som kan användas för att balansera elsystemet. Holmberg och Tangerås (2020) diskuterar några av dessa reserver i detalj.

¹⁹ I nödlägen har Svenska kraftnät laglig rätt att fysiskt bortkoppla viss produktion eller förbrukning för att upprätthålla balansen i systemet. Denna extrema åtgärd har dock aldrig varit nödvändig.

²⁰ Flaskhalsintäkterna har normalt täckt Svk:s kostnader för omdirigering.

3.1.3 Slutkundsmarknaden

Elhandlare konkurrerar om slutkunderna och köper sin el på elbörsen för att täcka sina kunders förväntade förbrukning. Deras marginaler är ganska begränsade till följd av konkurrensen på slutkundsmarknaden.

Slutkunderna väljer mellan två huvudsakliga avtalsformer. Under avtal med rörligt pris utgör kundpriset ett påslag på priset på elbörsen. Timprisavtal pris ger full exponering mot priset på elbörsen för kunder med timmätning av elförbrukningen. Rörligt pris kan även innebära månadsavläsning där kunden betalar ett månadspris utifrån en schablonmässig förbrukningsprofil. Den andra varianten är avtal med fastpris och avtalslängd på mellan ett och tre år. Då erbjuder elhandlaren ett förutbestämt elpris för varje kWh som kunden använder under avtalsperioden.

Tabell 4. Elavtal fördelat på avtalstyper

Andelar i procent per elområde, juli 2022

	SE1	SE2	SE3	SE4	Totalt
Rörligt pris	46,1	47,3	53,9	66,6	55,6
Fastpris	40,3	25,7	25,7	16,4	24,4
Övriga ²¹	13,6	27,0	20,4	17,0	20,0
Totalt	100	100	100	100	100

Källa: SCB

Tabell 4 visar att i juli 2022 hade drygt hälften av alla kunder i Sverige avtal med rörligt pris, och andelen ökar ju längre söderut man kommer i landet. Nästan en fjärdedel av alla kunder har fastprisavtal. Det vanligaste är då att skriva ett avtal på tre år. Andelen kunder med fastprisavtal ökar ju längre norrut man kommer i landet. Fördelningen mellan rörliga och fasta avtal har legat relativt konstant de senaste åren.

3.1.4 De finansiella marknaderna

Elhandlare kan ha behov av att prissäkra sina planerade inköp på elbörsen viss tid i förväg för att minska sin exponering mot spotmarknaden. Detta gäller särskilt om elhandlaren har många kunder med fastprisavtal. Elproducenter kan samtidigt önska att prissäkra viss försäljning för att garantera sina intäkter. Därför finns en marknad för standardiserade finansiella kontrakt som till exempel handlas på Nasdaq Commodities. Dessa har oftast en relativt kort löptid, maximalt tre till fem år. Producenter och stora konsumenter kan även ingå bilaterala finansiella kontrakt direkt med varandra och som kan ha längre tidshorisont.

Power Purchase Agreements (PPAer) har varit särskilt betydelsefulla för elmarknadens utveckling. Ett PPA ingås normalt mellan ägaren till ett planerat vindkraftverk och en köpare som önskar prissäkra sin elförbrukning genom att särskilt finansiera förnybar

²¹ Under övriga avtal ingår det som kallas för anvisat elavtal. Detta avtal tilldelas dem som inte aktivt väljer en elleverantör. Avtalet är oftast dyrare än övriga avtal, och kan sägas upp med kort varsel, om kunden skulle välja ett annat avtal. Ungefär nio procent av användarna i Sverige hade ett sådant avtal under juli 2022.

elproduktion. PPAer garanterar ett fast pris för en fast andel av den planerade elproduktionen över en stor del av anläggningens planerade livshorisont. Dessa finansiella kontrakt är ofta en förutsättning för att få banklån för vindkraftsprojekt.

3.2 Den ekonomiska regleringen av elnäten

Elnätet delas in i transmissionsnät, regionnät och lokalnät. Alla nätföretag är prisreglerade eftersom kostnaden för konkurrerande infrastruktur begränsar möjligheten att uppnå fungerande konkurrens i elnätet. Nuvarande reglering infördes 2012. Centralt för regleringen är den intäktsram som varje nätföretag blir tilldelat inför varje tillsynsperiod. Denna bestämmer hur höga nättariffer ett nätföretag maximalt får ta ut av sina kunder och sätts för fyra år i taget av Energimarknadsinspektionen (Ei). Intäktsramen ska täcka de löpande kostnaderna för att driva verksamheten och ge sådan avkastning på det investerade kapitalet ”som behövs för att i konkurrens med alternativa placeringar med motsvarande risk få tillgång till kapital för investeringar” (5 kap. 1 § ellagen).

Nätföretagens löpande kostnader består för det första av deras opåverkbara kostnader. Exempel är nätförluster, abonnemang till överliggande och angränsande nät och myndighetsavgifter. För dessa kostnader får nätföretagen full kostnads-täckning. Dessutom uppstår påverkbara kostnader i form av drift och underhåll, kundspecifika kostnader för mätning, beräkning och rapportering av nätförluster och annat. Nätbolagen påläggs ett effektiviseringskrav över sina påverkbara kostnader eftersom de har visst inflytande över storleken på dessa poster. Ei bestämmer effektiviseringskravet individuellt för varje nätföretag mot bakgrund av företagets historiska kostnader jämförda med kostnaderna hos andra nätföretag som opererar under liknande villkor. De löpande kostnaderna kan ändras från år till år, och därför är intäktsramen flexibel avseende dessa kostnader över tillsynsperioden.

Kostnaden för kapital utgör nätföretagens andra stora kostnadspost. En utmaning är att skatta en skälig kapitalkostnad. En för generös ersättning ger överinvestering, medan en som är för snäv ger motsatt resultat. Det första steget är då att beräkna företagets kapitalbas. Detta görs utifrån de tillgångar som företaget behöver för att bedriva nätverksamheten och med hänsyn till investeringar och avskrivningar under tillsynsperioden. Kapitalbasen sätts utifrån det skattade nuanskningsvärdet; det vill säga hur mycket det skulle kosta att bygga motsvarande nät till dagens priser. Nuanskningsvärdet för lokal- och regionnäten skattades till cirka 460 miljarder kronor för 2018 (Ei, 2022c). Det andra steget är att beräkna en gemensam kalkylränta för alla nätföretagen. För tillsynsperioden 2012–2015 satte Ei den reala räntan före skatt till 5,2 procent. Räntan sjönk till 4,53 procent under 2016–2019. För perioden 2020–2023 tillämpar Ei en kalkylränta om 2,16 procent.

En aspekt av transmissionsnätet är att nätägaren tjänar flaskhalsinkomster på prisskillnaderna mellan elområdena och på de internationella överföringsförbindelserna. Dessa inkomster hålls utanför intäktsramen och ska bland annat användas för att förstärka transmissionsnätet. De senaste årens stora prisskillnader har medfört så stora intäkter för Svenska kraftnät att det blivit aktuellt att återbetala flaskhalsinkomster till kunderna.

Tabell 5. De totala intäktsramarna

Mdr SEK för de olika tillsynsperioderna

	Ansökta belopp	Beslutade ramar	Domstolsprövning
2012-15 (prisnivå 2010)	183	160	196
2016-19 (prisnivå 2014)	176	164	173
2020-23 (prisnivå 2018)	-	168	-

Källa: Ei (2022d)

Den första kolumnen i tabell 5 visar de totala beloppen som nätföretagen har ansökt om för att bekosta sin verksamhet i region- och lokalnäten för de olika tillsynsperioderna.²² Den andra kolumnen summerar de beslutade inkomstramarna. Ei har genomgående minskat ramarna jämfört med nätföretagens ekonomiska krav. Ramarna har ökat i reala termer, trots minskningen i kalkylräntan. Ökningen beror bland annat på nyinvesteringar i elnätet som har ökat den underliggande kapitalbasen över tid.

Nätföretagen har framgångsrikt överklagat den beslutade kalkylräntan med argumentet att den är oskäligt låg. Rätten justerade räntan till 6,5 procent för 2012–2015 och 5,85 procent för 2016–2019. Konsekvenserna ser vi i den sista kolumnen i tabell 5. Faktiskt fick nätföretagen en högre ränta och därför en större inkomstram för 2012-2015 än vad de själva hade ansökt om. Inga rättsliga beslut finns för den senaste tillsynsperioden. Med en kapitalbas om 460 miljarder kronor, skulle 1 procent högre kalkylränta öka företagets intäktsram med 18 miljarder kronor över fyra år. Detta skulle innebära en ökning av nättarifferna för 2020-23 med över tio procent.

Nätföretagens reala avkastning påverkas inte bara av storleken på kapitalbasen, men även av kvaliteten i verksamheten och hur effektivt nätet utnyttjas. Kvaliteten bedöms särskilt utifrån omfattningen av avbrott i överföringen medan bedömningen av effektiviteten beror på storleken i nätförlusterna och belastningen på det lokala elnätet. Beroende på den uppmätta kvaliteten och effektiviteten, kan kalkylräntan öka eller minska med högst en tredjedel per år.

Den genomsnittliga årliga nättariffen har ökat för alla typer av hushållskunder sedan införandet av den nya regleringen 2012 (Ei, 2022d). För hela perioden 2012–21, ökade elnätstariffen för en typisk kund med villa med nästan 22 procent, från 30 till 37 öre/kWh. Mindre kunder har i genomsnitt högre avgifter än större kunder eftersom den fasta avgiften är oproportionerligt hög för mindre kunder. Exempelvis ökade nättariffen för kunder i lägenhet från 68 till 80 öre/kWh mellan 2012 och 2021. I jämförelse ökade KPI med drygt 8 procent under samma period.²³ Jämfört med det genomsnittliga elpriset under samma period i tabell 3, har nättariffen utgjort den viktigaste och en ökande andel av hushållens elräkning. Ett undantag gäller för hushåll med den allra högsta elförbrukningen.²⁴

²² Från och med 2020 ansöker nätföretagen inte längre om inkomstramar.

²³ Nättarifferna ökade avsevärt mer i Sverige än i grannländerna i perioden (Lundin och Söderberg, 2022).

²⁴ Notera att högkostnadsskyddet för hushållen som infördes vintern 2022 beräknades som ett fråndrag i nättariffen.

De enskilda nätföretagen bestämmer själva strukturen för sina nättariffer. De uppställda kraven i ellagen är att de samlade tarifferna som nätföretagen tar ut inte får överstiga intäktsramen under tillsynsperioden. Tarifferna ska vara objektiva och icke-diskriminerande, och för lokalnät gäller att de inte får utformas med hänsyn till var i nätet en anslutning är belägen. I realiteten har nättariffen oftast en fast komponent och en rörlig som beror på elpriset och elförbrukningen.

Ei arbetar för närvarande med uppdaterade föreskrifter för hur nättarifferna ska vara utformade. Nätföretagen kommer därefter inte ha samma frihet som i dag att bestämma sina nättariffer. Särskilt skulle dynamiska nättariffer bidra till att öka flexibiliteten i efterfrågan för att minska risken för lokal elbrist; se Holmberg och Tangerås (2022).

4 Kortsiktiga utmaningar på elmarknaden

Elmarknaden i Sverige står inför ett antal kortsiktiga utmaningar. Särskilt akut är den pågående elkrisen som har medfört att elpriserna har blivit ohanterligt höga för vissa konsumenter och ökat risken för elbrist. Energikrisen består egentligen av tre oberoende kriser som samtidigt har drabbat EU. Rysslands invasion av Ukraina har strypt exporten av el, gas och kol från Ryssland, vilket har fördyrat den fossilbaserade elproduktionen i EU. Europas kärnkraftverk har minskat produktionen med 19 procent (E3G och Ember, 2022). Viss kärnkraft har fasats ut, men ett större problem har varit de tekniska problem som särskilt drabbat franska kärnkraftverk under det gångna året. Den tredje krisen är att vattenkraftsproduktionen i EU har minskat med 21 procent på grund av torka, bland annat i södra Norge (E3G och Ember, 2022).

Även Sverige har haft nedstängning av kärnkraft och tekniska problem i resterande verk. Trots detta exporterar vi mycket el. Under 2022 var Sverige Europas största nettoexportör av el. I vanliga fall är risken för elbrist låg i landet som helhet, och vanligtvis kan vi importera el från våra grannländer när vi behöver. Under energikrisen har dock risken för elbrist varit förhöjd, åtminstone för de timmar som Sverige är importberoende.

Därutöver kommer det under hela 2020-talet vara risk för elbrist i Sveriges storstäder, främst i Stockholm och Uppsala. Detta problem är oberoende av energikrisen, och beror mest på bristande överföringsföringskapacitet in till storstäderna och på bristande produktionskapacitet inne i storstäderna. Elbrist i storstäderna berörs inte mer i denna artikel, eftersom det analyseras i detalj av Holmberg och Tangerås (2022).

En ytterligare utmaning är den försämrade stabiliteten i elförsörjningen, särskilt i södra Sverige. Ett problem är att planerbar produktion stängt ned i södra Sverige. Norges export av el till Storbritannien och Tyskland har skapat ytterligare problem till följd av de ökande effektflödena i öst-västlig riktning genom Sverige. Figur 1 antyder att kraftsystemet inte är dimensionerat för sådana flöden och därför har blivit känsligare för störningar. Säkerhetsmarginalerna i nätet har därmed fått höjas.

För att hantera dessa utmaningar har politiker och myndigheter beslutit om en rad åtgärder, och ytterligare åtgärder är under diskussion. Det handlar särskilt om att

minska elförbrukningen, öka elproduktionen, effektivisera elmarknaden och omfördela resurser från de som vunnit på krisen till de som har drabbats.

4.1 Minskad elförbrukning

4.1.1 Energieffektivisering

Elförbrukningen i Sverige har legat ganska konstant, och till och med minskat något, under de senaste 35 åren, trots en årlig BNP tillväxt. Effektiviseringen av elförbrukningen har varit ungefär 2-3 procent per år (WSP, 2020). Enligt vissa bedömare kan ökat fokus på resurshållning, klimat och miljö framöver öka effektiviseringen i elförbrukningen till 3-4 procent per år (NEPP, 2015; WSP, 2020). Staten bidrar med olika åtgärder till att öka på processen. För hushåll går det att få stöd på upp till 50 procent vid tilläggsisolering och installation av värmepump. Företag och bostadsrätter kan få stöd till 30 procent av kostnaden för olika energieffektiviseringsåtgärder.

En fördel med energieffektivisering är att det är en åtgärd som får en snabb effekt jämfört med utbyggnaden av elproduktion. Minskad efterfrågan på el bidrar även till lägre elpriser. Därför kan det vara motiverat med tillfälliga subventioner för att stimulera till energieffektivisering under energikriser. På lång sikt är dock sådana stöd ineffektiva då de snedvrider marknaden.

4.1.2 Sparande på el

Energieffektivisering leder till en bestående minskning av elförbrukningen. En tillfällig åtgärd för att dämpa elpriserna under den pågående elkrisen är att tillfälligt minska elförbrukningen. Efterfrågan på el är mycket okänslig för kortsiktiga prisändringar, och utbudspriset ökar snabbt vid mycket hög produktion (Holmberg och Tangerås, 2022). Sammantaget innebär detta att elpriset riskerar bli mycket högt under timmar med elbrist när efterfrågan ligger nära den tillgängliga produktionskapaciteten. Då kan en liten minskning i efterfrågan få en stor effekt på priset. Wråke m.fl. (2022) anser att elpriserna i södra Sverige skulle minska med 85 öre/kWh om hela Europa minskade elförbrukningen med 5 procent. Om enbart södra Sverige skulle spara 5 procent, skulle priset där minska med 40 öre/kWh. I EU har man kommit överens om att varje land ska minska elförbrukningen med 5 procent under timmar med särskilt hög elförbrukning. Ambitionen är att varje land ska spara 10 procent på sin elförbrukning, men detta är ett frivilligt åtagande. Två exempel från vår omvärld där i-länder under 2000-talet tvingats till snabba elbesparingar är Nya Zeeland och Japan där elförbrukningen på kort tid minskades med 10 respektive 18 procent (Pollitt, 2022).

Höga elpriser bidrar i sig till minskad elförbrukning, men staten kan även vidta åtgärder för att öka elsparandet ytterligare. För det första kan staten besluta om minskad elförbrukning inom offentlig sektor, exempelvis genom olika typer av påbud. Staten kan även betala kompensation för elsparande, exempelvis ett fast belopp för varje kWh som en konsument sparar jämfört med året innan. Under perioden 1 december 2022 till 31 mars 2023 kommer Svenska kraftnät betala ut ersättning till företag som minskar sin förbrukning under timmar med hög förbrukning.

Målsättningen är att åtgärden ska minska förbrukningen under dessa timmar med 5 procent.

För användare med fastprisavtal kan det vara samhällsekonomiskt motiverat att subventionera elsparande, eftersom dessa saknar ekonomiska incitament att minska elförbrukningen även om det rörliga priset är högt. För övriga grupper leder en sådan subvention till underkonsumtion av el, vilket är ineffektivt. Å andra sidan underlättar sänkt elpris och ökat konsumentöverskott för andra konsumenter som drabbats hårt av energikrisen, så det kan vara motiverat att tillfälligt subventionera elsparande för alla konsumenter i kompensations syfte.

4.2 Ökat utbud av värmekraft

Det finns i storleksordningen 1 000 MW värmekraft i malpåse i Sverige, vilket ungefär motsvarar en kärnkraftreaktor. Denna kapacitet har möjlighet att producera även på kort sikt om deras förutsättningar förbättras. Svenska kraftnät (2022b) gjorde prognosen att aktivering av denna kapacitet skulle kunna minska elpriset i södra Sverige med 10 procent under vintern 22/23. Värmekraften kan även bidra till att förbättra stabiliteten i elförsörjningen i södra Sverige, vilket i sin tur kan öka överföringen av el från norra till södra Sverige.

Tillfälliga undantag från miljölagstiftningen kan krävas för att göra sådan kapacitet tillgänglig för marknaden. Dessutom kan ägarna behöva kompensation för att det ska bli lönsamt att ta dessa enheter i drift. EU:s nya intäktstak, se avsnitt 4.4.1 nedan, kan försvåra möjligheterna att få in den här produktionen på marknaden, men regeringen har vissa möjligheter att höja intäktstaket för värmekraftverken. Ett annat problem är att regelverken gör det svårt att rikta särskilda bidrag till en specifik typ av produktion. Det borde dock vara möjligt att vidta tillfälliga åtgärder som generellt förbättrar förutsättningarna för elproduktion, såsom sänkta skatter, sänkta nättariffer och en utökad upphandling av reservkraft.

4.3 Effektivisering av elmarknaden

4.3.1 En mera ändamålsenlig indelning i elområden

EU har tillsammans med myndigheter och systemoperatörer genomfört en utvärdering av indelningen i elområden i medlemsländerna baserat på simuleringar av flaskhalsarna i elsystemet (ACER, 2022). I Sverige ska fyra olika alternativ utvärderas djupare. Alla dessa förslag innehåller ett nytt elområde i Östra Svealand med syfte att hantera de öst-västliga flödena och flaskhalsar i Stockholms län på ett bättre och mer effektivt sätt. De nya elområdena skulle kunna införas år 2025. Konsekvensen blir troligtvis prisökningar i och omkring Stockholm till följd av efterfrågeöverskottet i regionen. Under 2024 planerar Svenska kraftnät att införa en mer effektiv hantering av flaskhalsarna på elbörsen för befintliga elområden, som kallas för flödesbaserad prissättning.

4.3.2 Ökad övervakning av elmarknaden

Den prisokänsliga efterfrågan på el och det koncentrerade ägandet av produktionskapaciteten (Moghim i m.fl., 2022) ger aktörer möjlighet att öka priserna genom att hålla tillbaka kapacitet från elmarknaden. Lundin och Tangerås (2020) skattar att utnyttjandet av marknadsmakt har ökat priset med i genomsnitt 4 procent, se även Tangerås och Mauritzen (2018). Lönsamheten att utnyttja marknadsmakt kan öka i en energikris som den vi nu befinner oss i eftersom företagen kan driva upp priset väldigt högt genom att hålla tillbaka endast lite kapacitet. Därför borde berörda myndigheter skärpa övervakningen av elmarknaden. Lundin (2021) menar att elbolagens gemensamma ägande av kärnkraften har bidragit till utövandet av marknadsmakt. Det kan även ha bidragit till att kärnkraft stängdes ner i förtid, och borde om möjligt brytas upp.

4.3.3 Upprätthåll likviditeten i den finansiella handeln

Fungerande prissäkring är särskilt viktig när riskerna är förhöjda till följd av energikrisen. God likviditet i den finansiella handeln innebär att en aktör kan prissäkra sig till låga transaktionskostnader och till ett någorlunda stabilt pris.

En aspekt som har fått ökad betydelse under krisen, är de säkerheter som Nasdaq Commodities och andra handelsplattformar kräver från parterna som tecknar finansiella avtal. Säkerhetens omfattning ökar när skillnaden mellan kontraktspriset och elpriset ökar. Eftersom en aktör kan ha värdet av produktionen eller förbrukningen för flera år samlat i terminskontrakt på elbörsen, kan summorna bli mycket höga. För stora elproducenter är det normalt inte något problem att uppfylla åtaganden om att sälja el till ett förutbestämt pris. Men de kan ändå få problem med likviditeten ifall kraven om finansiell säkerhet ökar för mycket. För att undvika likviditetsbrist i den finansiella handeln, har regeringen beslutat införa statliga kreditgarantier för elproducenter upp till 80 procent av lånet. Garantiramen uppgår till 250 miljarder kronor. Garantier kan beviljas till och med den 31 mars 2023, och den totala löptiden får inte överstiga tre år. Avgiften för garantin ska vara marknadsmässig och sätts individuellt per bolag.

Den finansiella handeln på Nasdaq berör främst kontrakt för elbörsens systempris, se avsnitt 3.1.1. Men på senare år och särskilt under energikrisen har prisskillnaderna inom Norden växt, se exempelvis Tabell 3. Det finns även möjlighet att handla med kontrakt som säkrar priserna på elområdesnivå, men den handeln har väsentligt sämre likviditet. En orsak är att elområdena i Sverige är asymmetriska på så sätt att det kan vara svårt för en konsument i södra Sverige eller en producent i norra Sverige att finna en finansiell motpart inom sitt elområde. Problemet med att hitta en motpart skulle minska om Svenska kraftnät prissäkrade sina flaskhalsintäkter, exempelvis genom att köpa el i norra Sverige och sälja den i södra Sverige på den finansiella marknaden. Holmberg och Tangerås (2022) samt Holtz m.fl. (2022) beskriver mer detaljerat hur Svenska kraftnät kan handla med finansiella kontrakt.

4.4 Omfördelning

4.4.1 Intäktstak för elproduktion med låg rörlig kostnad

Under krisen har elpriserna i Europa ökat i takt med att bränslepriserna har fått den rörliga kostnaden för fossilbaserad elproduktion att skjuta i höjden. Den rörliga kostnaden för fossilfri elproduktion har inte ökat motsvarande, och dessa kraftslag har fått stora vinster. EU beslutade under 2022 att beskatta sådana extraordinära vinster genom ett intäktstak om 180 Euro/MWh ($\approx 1,8$ kr/kWh) för elproduktion med låga rörliga kostnader (EU reglering 2022/1854). För Sveriges del gäller detta kärnkraft, vindkraft, solkraft och icke-reservoarbaserad vattenkraft. Intäktstaket ska vara tillfälligt och gälla mellan december 2022 och juni 2023. Tanken är att intäkterna ska användas till att kompensera elkonsumenterna.

Ett sådant intäktstak är problematiskt därför att det minskar intresset att investera i produktion med låg rörlig kostnad om aktörerna förväntar sig att liknande reglering kan återinföras i framtiden. Energiomställningen kommer bromsa upp, elektrifieringen försvåras och risken för elbrist ökar. Ett intäktstak skapar även problem på kort sikt. Precis som effektskatten på kärnkraft, så riskerar det att bidra till att kärnkraftverk stängs i förtid. Dessutom blir effekthöjningar i produktionen mindre lönsamma, och regleringen förhindrar att värmekraftverk tas ur malpåse (se avsnitt 4.2). Intäktstak ställer även till det för ingångna avtal för prissäkring av elproduktion.

Det finns förslag från olika EU-länder om att ändra elbörsens prissättning så att omfördelningen från producenter till konsumenter sker redan på marknaden. Den typen av förslag har även diskuterats i Sverige. Den så kallade BEKEN-modellen, särskilt förordad av Vänsterpartiet, har liknande nackdelar som en straffbeskattning av kraft med låg rörlig kostnad. För BEKEN räcker det inte att ändra prissättningen på elbörsen, man måste även införa kompletterande prisregleringar för att det ska vara möjligt att upprätthålla artificiella prisskillnader på elbörsen. Dessutan skulle man behöva reglera prissättningen i avtal som ingås utanför elbörsen för att undvika arbitrage.

I viss mån går det att kompensera producenterna för intäktsbortfall med kapacitetsmarknader. Det innebär att producenterna får en extra betalning, en kapacitetsbetalning, för all produktion som de har tillgänglig på marknaden. Kapacitetsmarknader används utomlands och har även anhängare i Sverige. Nackdelarna överväger dock fördelarna med en sådan lösning (Aagaard och Kleit, 2022; Holmberg och Tangerås, 2023).

4.4.2 Kompensation till konsumenter

Elkrisen har bidragit till att staten har ökat sina intäkter. Särskilt har de stora inhemska prisskillnaderna skapat enorma flaskhalsintäkter de senaste åren, se Figur 4. Dessa ska i första hand gå till investeringar i elnätet, men det är även inom ramen för EU:s regelverk att använda intäkterna till att kompensera elkonsumenter. Svenska kraftnät har planerat att dela ut ungefär 55 miljarder kronor i retroaktivt stöd till hushåll och företag i SE3 och SE4. I elområde SE3 var stödet 50 öre och i elområde SE4 79 öre per kWh el som konsumerats mellan oktober 2021 och september 2022. Ei har satt ett tak

på stödet som innebär att de konsumenter som har förbrukat mer än 3 GWh under tidsperioden måste göra en särskild ansökan för förbrukning över den nivån.²⁵

En fördel med retroaktivt stöd är att det inte stör prissignalerna, så länge det inte skapas förväntningar om framtida stöd. De momssänkningar och det högkostnads-skydd som diskuterades under valrörelsen skulle öka elförbrukningen och priserna på elbörsen. Kompensation är även en bättre metod än att ändra på prissättningen eller straffbeskatta viss produktion som vi diskuterade i förra avsnittet.

4.5 Elpriserna på kort sikt

Medlemsländerna i EU har kommit överens om att minska elförbrukningen med 5-10 procent. Svenska kraftnät planerar att öka överföringskapaciteten från norra till södra Sverige med 300-700 MW och att öka importkapaciteten från Finland med 200-300 MW under vintern 22/23.²⁶ Sammantaget bör dessa åtgärder få en stor effekt på priset. Baserat på resultaten i Wråke m.fl. (2022), är en rimlig förväntan att spotpriset minskar med en krona eller mer i södra Sverige jämfört med om inga åtgärder vidtas. Ökad överföring av el från norr till söder kommer dock öka spotpriset i norr. Uppstarten av Finlands nya kärnkraftreaktor, Olkiluoto 3, kommer minska importbehovet i Finland. Planen är att Ringhals 4 ska återstarta under våren 2023. Om alla dessa åtgärder följer planen, och Rysslands krig med Ukraina och Rysslands sanktioner mot EU inte trappas upp ytterligare, bör de värsta pristopparna vara över i mars 2023, åtminstone i Sverige. Terminspriserna på de finansiella marknaderna bekräftar den bilden. Å andra sidan visar terminspriserna även att det kan bli riktigt tufft innan dess. Elpriserna riskerar att bli rekordhöga vintern 22/23 (Ei, 2022b).

Energimyndigheten (2022) och Svensk Vindenergi (2022) menar att elproduktionen i Sverige kommer öka med ungefär 5 TWh per år mellan 2020 och 2025, främst genom ny vindkraft. Detta energitillskott motsvarar ungefär en halv ny kärnkraftsreaktor per år. Svensk Vindenergis prognos indikerar att ungefär en tredjedel av denna produktion placeras i södra Sverige. Sweco (2022) uppskattar att ett tillskott om 15 TWh vindel under 2023-2025 skulle minska snittpriset i Sverige med cirka 15 öre/kWh. Energimyndighetens prognos är att den årliga elanvändningen kommer vara ganska konstant fram till 2025, och att Sveriges nettoexport av el blir 41 TWh år 2024. Ett sådant elöverskott skulle bidra till att minska påverkan av Europas elpriser på Sverige.

Samtidigt finns det en risk att läget på elmarknaden förvärras. En kall, utdragen vinter skulle ge extrema priser och eventuellt manuell bortkoppling. Gaslagren och vattenmagasinen skulle dräneras, med konsekvenser för elpriset under hela 2023. Det finns även en risk att Ryssland stryper energiexporten till EU ytterligare ett par snäpp. Dessutom skulle de kunna slå mot Europas kärnkraftindustri, särskilt de 18 kärnkraftverk i Östeuropa och Finland som är delvis beroende av ryskt kärnbränsle och ryskt underhåll (Bowen och Dabbar, 2022). Vidare har Ryssland en marknadsandel på över 40 procent vad gäller förädling av uran. Det senare bör dock inte leda till någon akut energikris, eftersom kärnkraftverken i EU normalt har bränslelager för produktion i ett

²⁵ Detaljerna beskrivs i Ei (2022a).

²⁶ Åtgärderna finns i Svenska kraftnät (2022a).

par år. Priset på förädlad uran från icke-ryska leverantörer har dock stigit kraftigt under 2022 (Combs, 2022). På sikt finns en risk att det kommer minska kärnkraftsproduktionen eller höja elpriserna.

5 Omställning mot en hållbar elförsörjning

Samhället står inför en omfattande grön omställning av energisystemet. Det kommer bland annat innebära att fossilbaserad energi ersätts med fossilfri el, så elförbrukningen förväntas öka. Bergman m.fl. (2022) sammanställer olika prognoser över utvecklingen i elförbrukningen till 2050. Enligt de mest återhållsamma scenarierna kommer elförbrukningen ligga på 150 TWh år 2050, vilket är ungefär samma nivå som nu. De mest extrema scenarierna anger en elförbrukning om nästan 300 TWh, vilket utgör en fördubbling jämfört med dagens nivå. Energiforsk och Profu (2021) uppskattar att ungefär $\frac{3}{4}$ av den ökade elförbrukningen kommer ske i Norrland (SE1 och SE2).

En viktig anledning till den ökande efterfrågan på el är behovet av vätgas i industrin och transportsektorn. Grön vätgas produceras genom elektrolys av vatten, vilket slukar mycket el. Vätgas är grundläggande exempelvis för produktionen av fossilfritt stål. LKAB anser att de kommer behöva ytterligare 55 TWh per år för sin framtida produktion (Svenska kraftnät, 2021a). Detta utgör cirka 40 procent av Sveriges nuvarande elförbrukning. Elektrifiering av transporter, industriella processer och elförbrukningen i nya industrier som serverhallar och batterifabriker tillkommer.

5.1 Effektiva investeringar i elproduktion

För att förverkliga den planerade energiomställningen, är det tydligt att Sverige står inför en kraftig utbyggnad av elproduktionen. Frågan är hur det ska göras på ett effektivt sätt. På en ekonomiskt effektiv elmarknad produceras elen till lägsta möjliga totala produktions- och investeringskostnad. Därtill ska en effektiv marknad ha rätt mängd produktionskapacitet för att uppnå önskad grad av leveranssäkerhet.

Efterfrågan på el svänger både över dygnet och över året. Därmed kommer utnyttjandegraden variera för olika anläggningar. I regel är det effektivt att investera i en blandning av teknologier, där valet av teknologi för specifika anläggningar beror på hur ofta de ska användas. Normalt har teknologier med en låg rörlig kostnad en hög investeringskostnad, och omvänt. Vartefter utnyttjandegraden minskar, blir det viktigare att anläggningen inte kostar när den inte används. Det blir då samhälls-ekonomiskt lönsammare att använda teknologier med högre rörliga kostnader och lägre fasta kostnader. Gasturbiner utgör ett typiskt exempel på sådan *toppkraft*. Det är inte samhälls-ekonomiskt lönsamt att bygga ut elproduktionen så pass att risken för elbrist helt försvinner. I ett effektivt elsystem är därför risken för manuell bortkoppling positiv.

För att få till effektiva investeringar är det även viktigt att förkorta tillståndsprocesserna och att utforma adekvata kompensationer för kommuner och markägare som drabbas av utbyggnaden elproduktion och kraftnät.

5.2 Kreditgarantier för gröna investeringar

Den förra regeringen gav Riksgälden i uppdrag att ställa ut statliga kreditgarantier (Förordning, 2021:524) med motiveringen att det är svårt att få lån med lång löptid till gröna investeringar i Sverige. Garantiramen uppgick till 10 miljarder kronor under 2021. Därefter beräknas ramen till 50 miljarder för 2022, 65 miljarder kronor 2023 och 80 miljarder kronor 2024.²⁷

EU-parlamentet har beslutat att kärnkraft under en begränsad period och under vissa villkor ska ingå i EU:s taxonomi. Detta skulle eventuellt kunna innebära att Riksgälden gör tolkningen att kreditgarantier för gröna investeringar även kan nyttjas till kärnkraftsinvesteringar. Den nya regeringen vill enligt Tidöavtalet avsätta ytterligare 400 miljarder till statliga kreditgarantier öronmärkta för ny planerbar el, särskilt kärnkraft. Tanken är att Riksgälden ska utfärda dessa garantier till ett subventionerat pris.

I praktiken har det varit svårt att få banklån till kärnkraftverk. Detta skulle kunna vara ett marknadsmisslyckande som motiverar att staten erbjuder särskilda kreditgarantier till kärnkraft. Men subventionerade kreditgarantier är problematiska om de snedvrider investeringar i riktning av enskild kraftproduktion. Det är olyckligt om statliga kreditgarantier konkurrerar ut sådana finansiella marknader som fungerar väl. Därför finns det anledning att från ett marknadsmässigt perspektiv ifrågasätta politiskt motiverade kreditgarantier.

5.3 Minskad politisk risk

Den ombytliga energipolitiken skapar betydande politisk risk för producenter och konsumenter. Exempelvis finns en oro att politiker ska vidta åtgärder som missgynnar viss elproduktion. EU:s intäktstak för produktion med låga rörliga kostnader är ett exempel, effektskatten på kärnkraft ett annat. Politisk risk fördyrar investeringarna och bromsar energiomställningen. En del av de politiska ingripanden som gjorts under den pågående energikrisen har varit befogade. Men för att göra spelreglerna på elmarknaden mer förutsägbara, bör det lagstiftas under vilka villkor som staten kan gripa in, och vilka åtgärder som då kan komma att vidtas.

Energistadgefördraget ger utländska investerare ett visst skydd mot politisk risk (Horn, 2021). Exempelvis fick Vattenfall skadestånd när de tvingades att i förtid stänga ned sina kärnkraftverk i Tyskland. Ett sätt att minska den politiska risken vore att införa motsvarande skydd även för svenska investerare (Holmberg och Tangerås, 2020). Under valrörelsen förordade Moderaterna ett investeringsskydd för kärnkraft mot politiska risker. Ett sådant skydd vore lämpligt, men borde även omfatta annan elproduktion. Ett lagstadgat investeringsskydd skulle även underlätta att upprätthålla blocköverskridande överenskommelser om energipolitiken.

Volatila elpriser ökar det politiska trycket att intervensera under energikriser. Konsumenter med rörliga priser har särskilt starkt incitament att agera för ett högkostnadsskydd. Från ett sådant perspektiv vore det bättre om färre kunder hade avtal

²⁷ Kreditgarantierna beskrivs mer utförligt i Riksgälden (2021).

med rörligt pris.²⁸ Fastprisavtal har dock nackdelen att de inte ger ekonomiskt incitament att minska förbrukningen vid risk för elbrist. Elmixavtal utgör en bra kompromiss mellan rörligt- och fastpris, eftersom de erbjuder konsumenter möjligheten att pris-säkra en valfri del av sin planerade elförbrukning (Holmberg och Tangerås, 2022). Ett sätt att få högre likviditet och stabilare priser på terminsmarknaden vore om Svenska kraftnät prissäkrade sina flaskhalsintäkter, se avsnitt 4.3.3. Organiserad handel med långsiktiga terminskontrakt vore också bra för likviditeten på den finansiella marknaden (Holmberg och Tangerås, 2020).

5.4 Kostnader för ny elproduktion

Vad gäller ny elproduktion, är det främst fossilfritt som är av intresse. Kostnads-estimaten nedan utgår från "levelized cost of energy" (LCOE). LCOE inkluderar drift, underhåll och investeringskostnad fördelat på beräknat kapacitetsutnyttjande. Landbaserad vindkraft har lägst LCOE, om 30-35 öre/kWh enligt Elmqvist (2021). Havsbaserad vindkraft är betydligt dyrare, med uppskattad LCOE i Europa om 1-1,6 kr/kWh inklusive nätkostnad om 40-60 procent (IEA, 2019). Kostnaden för havsbaserad vind förväntas sjunka med ungefär hälften till 2040 (IEA, 2019). Elmqvist (2021) är dock mer optimistisk och uppskattar kostnaden för ny svensk havsbaserad vindkraft till 50-55 öre/kWh.

Kostnaden för storskalig solkraft i Sverige är cirka 40 öre/kWh (Elmqvist, 2021). Kostnaderna för vind- och solkraft har minskat kraftigt sedan 2009, med 70 respektive 90 procent (Lazard, 2020). Dessa kostnader kommer antagligen fortsätta minska, men inte lika snabbt. Solkraft kan bli den viktigaste produktionsteknologin i världen till 2050 enligt vissa bedömare, men sådan elproduktion är inte lika effektiv i Sverige.

Kostnaden för ny kärnkraft är svår att uppskatta. De reaktorer som har byggts i Västeuropa och USA under 2000-talet, har haft stora förseningar och har blivit mångdubbelt dyrare än beräknat. Baserat på faktiska projekt, uppskattar Lazard (2020) LCOE för ny kärnkraft till 1,6 kr/kWh. IEA (2022) gör en liknande bedömning för EU, men är mer optimistiska för USA där kostnaden uppskattas till ungefär 1 kr/kWh.²⁹ IEA (2022) bedömer kostnaden för ny kärnkraft i Asien till 60-75 öre/kWh. En anledning till de lägre kostnaderna är den billigare arbetskraften i Asien.

Elmqvist (2021) är mer optimistisk och uppskattar kostnaden för ny svensk kärnkraft till 49-64 öre/kWh. Polen har nyligen kontrakterat tre nya kärnkraftverk som kan hamna inom detta intervall givet att de färdigställs enligt plan och budget. Dock är löne- och byggkostnaderna väsentligt lägre i Polen än Sverige. Styckpriset blir även lägre om man kontrakterar flera enheter samtidigt.

Det finns en förhoppning om att kostnaderna kan bli väsentligt lägre för små modulära kärnkraftverk (SMR), vilka har potential att kunna serietillverkas. IEA (2022) menar vidare att det är lönsamt att göra investeringar som förlänger livstiden för

²⁸ Efter energikrisen 2021 beslutade Texas helt enkelt att förbjuda elavtal med rörligt elpris.

²⁹ Detta stämmer väl överens med U.S. Energy Information Administration (2022) som uppskattar kostnaden till ungefär 90 öre/kWh i USA.

existerande kärnkraftverk. Den typen av investeringar har en total kostnad på runt 40 öre/kWh.

Fossilfri värmekraft som eldar biobränsle eller fossila bränslen med koldioxidlagring, har en skattad kostnad på cirka 1 kr/kWh (IEA, 2022). Anledningen till att biobränsle är förhållandevis dyrt är IEA:s bedömning att det kommer vara brist på biobränsle i Europa. Värmekraft på biobränsle (inklusive grön vätgas) skulle då passa som toppkraft.

En väsentlig andel av Sveriges elproduktion kommer från kraftvärmeverk som producerar både el och värme. Om värmen omhändertas i de nya kärnkraftverk som byggs, skulle de bli mer effektiva och lönsamma. Det blir enklare att genomföra för SMR som är säkrare än storskalig kärnkraft och som därmed kan placeras närmare konsumenterna. Värmebehovet kan öka i industrin, exempelvis i vätgastillverkningen. Å andra sidan förväntas värmehantering effektiviseras kraftigt, så troligtvis kommer värmeproduktionen kan minska.

5.5 Energilagring

Behovet att lagra energi kommer öka i takt med att den väderberoende förnybara produktionen byggs ut. Energilager bidrar med att hålla elsystemet i balans och till att produktion och nät utnyttjas mer effektivt. Sveriges största energilager är vattenkraften. Miljörestriktioner gör dock att det blir svårt att öka vattenkraften i Sverige i stor skala. Det finns dock vissa möjligheter att bygga om vattenkraften. Ett intressant alternativ är pumpkraftverk som pumpar upp vatten till en övre reservoar vatten när priset är lågt och släpper ut vatten till en nedre reservoar när priset är högt. Dessa har en effektivitet på 75-80 procent. En annan stor lagringsresurs är batterier i elbilar.

Man kan även se förskjutning av konsumtion över tid som en sorts energilagring. Exempelvis går det att flytta på förbrukningen i frys, kyl, elvärme, värmepumpar och varmvattenberedare utan att det behöver få någon påtaglig inverkan på effektiviteten i dessa enheter. Vätgaslager fyller en likande funktion genom att bidra till efterfrågefleksibilitet. Hybrit i Luleå planerar ett lager för upp till två veckors produktion av vätgas. Att konvertera vätgas till el är normalt ineffektivt, men kan eventuell vara aktuellt för kraftverk som körs sällan.

5.6 Utbyggnad av transmissionsnätet

De två stora utmaningarna för Svenska kraftnät är utbyggnaden av transmissionsnätet samtidigt som delarna av ledningsnätet som byggdes på 50- och 60-talet behöver förnyas. Takten på investeringarna har därför skruvats upp ordentligt. Planen är en femdubbling av nätinvesteringarna på sex år, från drygt 2 miljarder kronor 2018 till drygt 10 miljarder 2024 (Regeringen, 2022). Därefter ska Svenska kraftnät hålla en hög investeringstakt i drygt 15 år, fram till 2040.

Med smarta lösningar kan överföringen i nätet ökas även innan nätinvesteringarna är gjorda. Svenska kraftnäts bedömning är att sådana åtgärder kan öka överföringen från

norra till södra Sverige med ungefär 800 MW innan 2028, vilket motsvarar en kapacitetshöjning om 10 procent.³⁰

Det är inte lönsamt att bygga bort alla flaskhalsar i nätet, och varje ny produktionsanläggning ska bekosta nödvändiga nätförstärkningar förknippade med anläggningen. Det tidigare undantaget för havsbaserad vindkraft ska avskaffas enligt Tidö-avtalet, något som betydligt kommer fördyra för vindkraft ute till havs.

5.7 Elpriserna på lång sikt

Tre saker kommer med stor sannolikhet prägla framtidens elsystem: 1) fortsatt ökning i vind- och solkraften, 2) ökad mängd toppkraft, 3) ökad lagringskapacitet för energi och ökad flexibilitet i elförbrukningen. Man kan tänka sig att marknaden får tre typer av prisnivåer. Ett pris nära noll när vind- och solkraften producerar för fullt och det finns ett stort överskott av billig elproduktion, ett mycket högt pris när den väderberoende elproduktionen står still och energilagren inte räcker till, och ett mellanläge där kärnkraft, vattenkraft, vätgaslager och andra energilagrar bestämmer priset.

Scenariot ovan är inte olik prisbildningen på dagens marknad, men det kommer bli vanligare med mer extrema priser åt båda håll. Vi ser redan tecken på ökad volatilitet i elpriserna. Teknikutvecklingen bidrar till att minska kostnaderna i elproduktionen. Samtidigt bidrar omställningen mot fossilfri energi till att fördyra värmekraften. Därtill kommer konsumenterna vara med och bekosta alla nödvändiga och omfattande nätförstärkningar. Det framtida elpriset kommer även bero på priskänsligheten i efterfrågan. Vätgas kan importeras eller tillverkas på annat sätt än genom elektrolys. Dessutom kommer fossilfritt stål konkurrera på en global marknad. Det kommer därför krävas låga elpriser för att grön vätgas ska bli lönsam. Alltså kan det bli acceptansen för fortsatt expansion av landbaserad vindkraft som bestämmer hur mycket elförbrukningen och produktionen av grön vätgas kan öka på marknadsmässiga grunder.

6 Diskussion och slutsatser

Priserna på elbörsen har närmast exploderat de senaste åren, och flaskhalsar i överföringsnätet har skapat stora skillnader mellan södra och norra Sverige i kostnaderna för att köpa el. Denna situation har medfört en omfattande inkomstöverföring från konsumenterna till staten under 2021 och 2022 genom de flaskhalsintäkter som Svenska kraftnät tjänar på att köpa billig kraft i norr och sälja den till ett högt pris i söder. Samtidigt ökar nättarifferna som konsumenterna betalar för att underhålla och öka kapaciteten i elnätet. Denna utveckling tydliggör behovet att behandla flaskhalsintäkter som en integrerad del av prisregleringen av elnäten.

Elpriserna speglar energikrisen, som i första hand drabbat Kontinentaleuropa, men som även höjt priserna främst i södra Sverige genom elexporten till grannländerna. Inhemsk faktor, som nerläggning av planerbar elproduktion i södra Sverige, har bidragit till att förvärra situationen. Ett batteri av kortsiktiga åtgärder är nödvändiga

³⁰ Åtgärderna finns i Svenska kraftnät (2022a).

för att lösa den pågående energikrisen. Elförbrukningen behöver minska, särskilt i situationer med risk för elbrist. Den planerbara elproduktionen behöver öka, exempelvis genom igångsättande av elproduktion i malpåse. Därtill kan elnätet utnyttjas bättre, och det är nödvändigt med viss omfördelning från vinnare till förlorare för att kompensera för höga elkostnader. Hushåll med låg inkomst riskerar drabbas särskilt hårt av höga elpriser om de exempelvis inte har råd till att värma upp sin bostad.

Vissa prognoser förutspår fördubblad elförbrukning fram till 2050. Dessa bygger särskilt på en dramatisk ökning av industriell vätgasproduktion genom elektrolys. Denna förbrukning är dock priskänslig, och beroende av billig el. Hur mycket förbrukningen ökar, beror antagligen på hur omfattande utbyggnaden av den landbaserade vindkraften blir. Huruvida havsbaserad vindkraft och ny kärnkraft blir samhällsekonomiskt lönsamma beror på teknologisk utveckling och hur mycket kostnaderna kan pressas för dessa teknologier. Exempelvis blir kärnkraft mer intressant om även värmen tas tillvara.

Hursomhelst kan vi räkna med en kraftig utbyggnad av både nät och produktion. Hur stor del av kostnaden som drabbar konsumenterna beror på resurseffektiviteten i energiomställningen. För en effektiv omställning behövs långsiktiga och teknikneutrala spelregler samt effektiva tillståndsprocesser. Därtill behöver de politiska riskerna minska och de finansiella marknaderna utvecklas.

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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.

* 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 1945-90.¹ 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

¹ 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.² 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.³ 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 Jøge 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

² See Jonung (1993b, p. 348).

³ 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.⁴

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.⁵

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.⁶ However, as far as I have found, no other country relied on such meetings to the same extent as Sweden.

⁴ For a description of the rise of the policy of credit controls, see Wetterberg (2009) and Jonung (1993b).

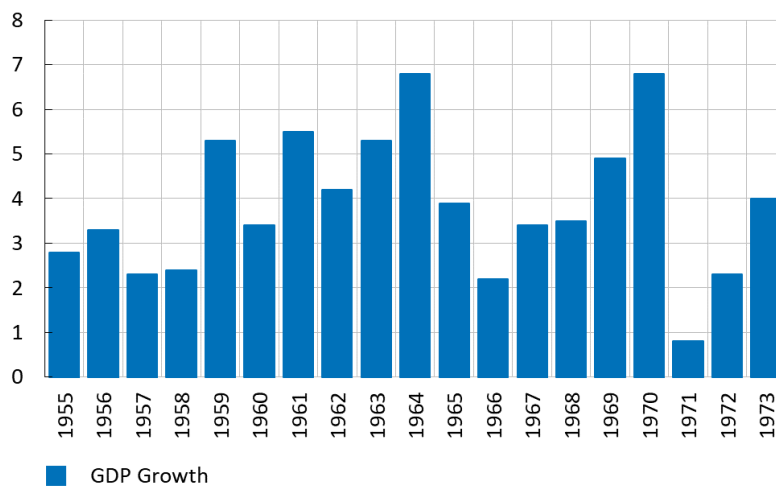
⁵ For the effect of the financial repression on the relative size of the Swedish stock market prior to the financial deregulation of the 1980s, see Jonung (2022).

⁶ 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.

Figure 1. The rate of growth in GDP, 1955-73

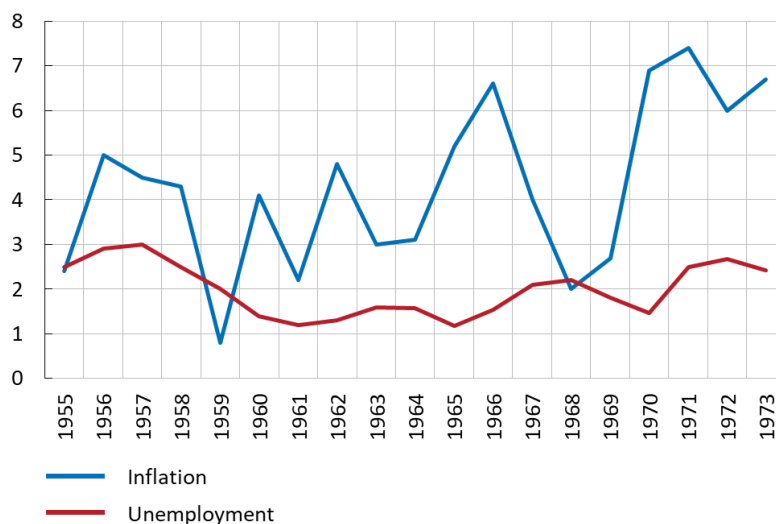
Percent



Source: Andersson (2021)

Figure 2. Inflation and unemployment, 1955-73

Percent



Source: Andersson (2021)

3 The archival materials

This study is based on a total of 160 sets of minutes for the years 1956-73.⁷ 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.⁸ 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 1952.⁹

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

⁷ It proved impossible to assemble a complete series of the minutes for the years prior to 1956.

⁸ 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.

⁹ The meetings which took place in 1947 and 1948 during Ivar 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 1973.¹⁰ 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.¹¹ 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.¹² 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-à-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

¹⁰ 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.

¹¹ 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).

¹² 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.¹³

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.¹⁴ 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.¹⁵ 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

¹³ There were various other forms of regular contacts between the Riksbank and commercial banks besides the monthly meetings.

¹⁴ 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.

¹⁵ 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.¹⁶ 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.¹⁷

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

¹⁶ 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.

¹⁷ 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.

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

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

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.¹⁸ 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

¹⁸The 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.¹⁹

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

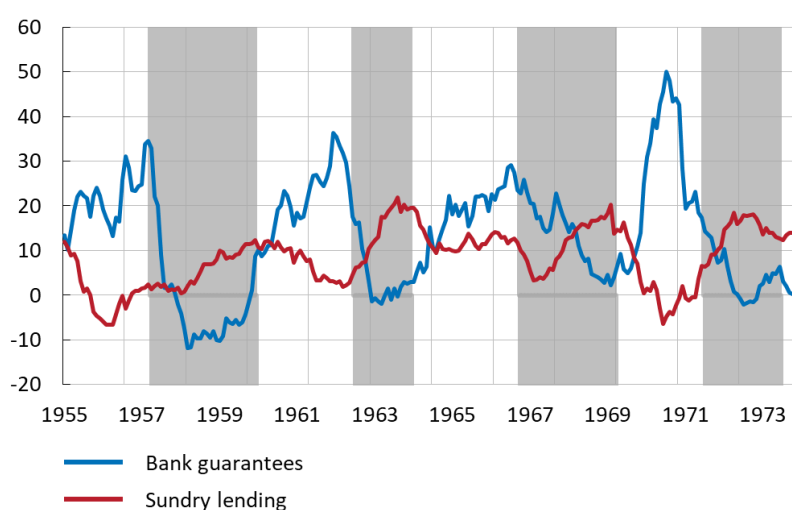
¹⁹ An alternative approach would be to use a game theoretical framework. This gives little guidance, however, since it requires fixed rules governing the way the game is "played". This means, for example, that penalties and rewards shall be fixed beforehand and known to the various parties. Such was 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.²⁰ 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.

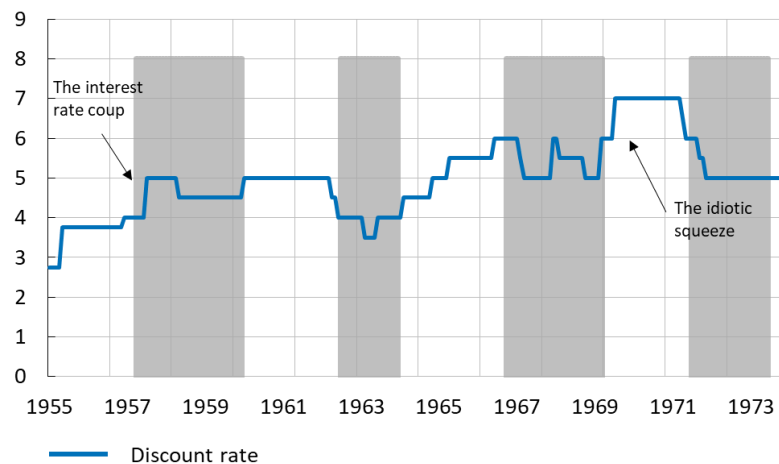
The Riksbank sought to control the banks via various forms of measures. It used "soft" measures such as recommendations, persuasion, voluntary agreements, and threats – techniques which go under the denomination of "moral suasion" in the literature of monetary policy – as well as "hard" controls directed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

²⁰ 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.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

²¹ 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:²²

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

²² 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.²³ 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

²³ 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 so-called "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 anti-inflationary 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:²⁴ "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

²⁴ 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.²⁵ 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

²⁵ 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.²⁶

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

²⁶ 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.²⁷

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."

²⁷ 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. Jøge 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."²⁸ 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

²⁸ 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.²⁹

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.³⁰

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

²⁹ 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.

³⁰ 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.³¹ 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."³²

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?

³¹ See Chapter 15 in Werin (1993).

³² 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.³³

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.

³³ 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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