

The Bank on the Market

With the opening of the London foreign exchange market in late 1951, the Bank of England took an active role in managing the exchange rate. This was Britain's responsibility as a signatory of the Bretton Woods agreement. It had to keep the sterling-dollar exchange rate within a 1 per cent band above and below the official parity. Although this was a national responsibility, as the Bretton Woods system became less stable, maintaining sterling parity started to have international repercussions. The United States became ever more aware that a sterling devaluation could trigger a run on the dollar. This could threaten the whole system. If sterling as a reserve currency failed, so could the dollar, the other reserve currency.¹

Here I review how the Bank of England managed sterling after the opening of the foreign exchange market in London in 1951. I present a new database on Bank of England intervention and assess the performance of the Bank in defending sterling during the Bretton Woods period. Analysis of the database highlights that the pressure on the Bank to intervene increased following convertibility in 1958. Using a reaction function, I also demonstrate that the Bank of England failed to embrace intervention on the forward market, which the Federal Reserve used as its main intervention tool. Finally, results from an event study show that intervention was more often than not unsuccessful.

Bordo et al. have written on US intervention in the foreign exchange market.² They argue that US intervention was an effective short-term remedy during the Bretton Woods period, delaying the collapse of the

¹ Charles A. Coombs, *The Arena of International Finance* (New York: Wiley, 1976).

² Michael D. Bordo, Owen F. Humpage and Anna J. Schwartz, *Strained Relations: US Foreign-Exchange Operations and Monetary Policy in the Twentieth Century* (Chicago, IL: University of Chicago Press, 2015).

system. British intervention has received no more than sporadic attention in the literature. Bordo et al. wrote the first econometric paper on foreign exchange market intervention for the United Kingdom during the sterling crises between 1964 and 1967.³ They argue that Britain maintained the peg with the dollar thanks to loans and external help, such as swap contracts and international rescue packages.

The Bank mainly intervened in the dollar/sterling market, with the dealers' reports registering negligible intervention in the Canadian dollar and French franc in the early 1950s and sporadic mention of Deutschmark intervention in 1957.⁴

FOREIGN EXCHANGE INTERVENTIONS

The Bank of England was active in the market every day, as recorded in the dealers' reports. The goal of intervention was two-fold. The first goal was to keep the exchange rate within the Bretton Woods bands. For example, bands were \$2.78–2.82/£ in 1949–67. The second goal was to avoid 'undue fluctuations in the exchange value of sterling'.⁵ This second point derives from the Finance Act of 1932 and is a woolly definition of maintaining 'orderly' markets. It can be understood as foreign exchange market house-keeping. The concept of 'orderly markets' was not based on any metric or model and is unclear. The goal of keeping markets tidy was a recurring theme at the Bank. It can also be found in the gold market (see Chapter 5) and the money market.⁶

For the money market, Capie notes how the Bank 'tried to influence expectations and engaged in psychological warfare'. It also gave 'dark hints and by a variety of means nudged or indicated or otherwise tried to suggest the outcome it wanted'.⁷ These tactics applied also to the foreign exchange market. Senior dealers took most decisions on intervention tactics. As we will see, they were often about trying to surprise the market. Decisions were made based on gut feelings.

³ Michael D. Bordo, Ronald MacDonald and Michael J. Oliver, 'Sterling in Crisis, 1964–1967', *European Review of Economic History* 13, 3 (1 December 2009), 437–59.

⁴ Foreign exchange and gold market reports (dealers' reports), various dates, London, Bank of England Archives, C8.

⁵ Finance Act 1932 (London: HMSO, 1932).

⁶ For more on the money market see Allen, *Monetary Policy and Financial Repression*; William A. Allen, *The Bank of England and the Government Debt: Operations in the Gilt-Edged Market, 1928–1972* (New York: Cambridge University Press, 2019).

⁷ Capie, *The Bank of England*, 309.

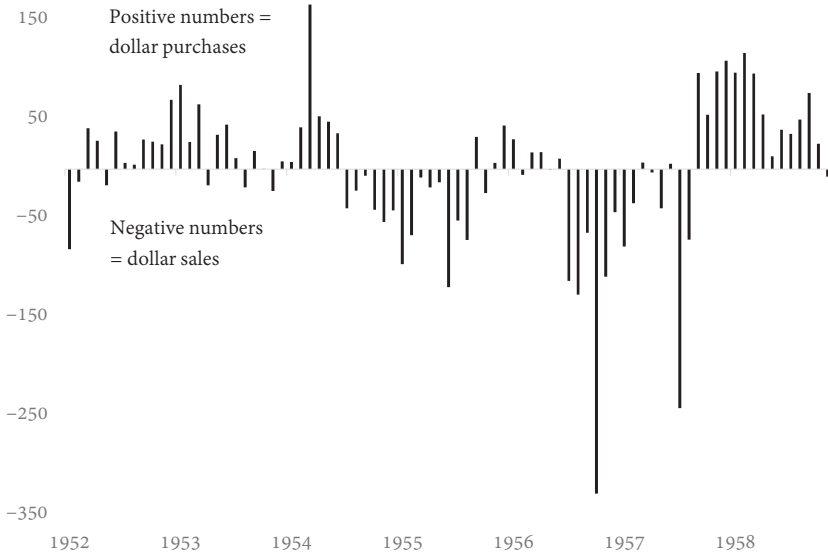


Figure 4.1. Overall net monthly dollar intervention, 1952–58

Source: Dealers' reports (C8).

Figure 4.1 illustrates the Bank's monthly net dollar intervention. The figure shows monthly dollar purchases (positive numbers) and sales (negative numbers).⁸ Dollar purchases weaken sterling and increase reserves. Dollar sales strengthen sterling and use up reserves. The November 1956 Suez crisis stands out as the highest sales month. The figure shows trends over several months. After November 1957 (on the right-hand side of the graph), the Bank managed to increase its reserve position. From 1954 to 1957, there is a period of constant sales. It is indicative of pressure on sterling. Later we will look at daily figures. They present much more volatility.

To understand a typical day in the dealers' room, let us look at an outsider view. In 1961, the Bank of France sent M. Gouzerh to spend five days at the Bank of England. He recorded: '[Th]e information reported has not been communicated by the Bank of England, but are the results of

⁸ For more analysis on this data, see also Alain Naef, 'Dirty Float or Clean Intervention? The Bank of England in the Foreign Exchange Market', *European Review of Economic History*, 2020, <https://doi.org/10.1093/ereh/hea011>; Alain Naef and Jacob Weber, 'How Powerful Is Unannounced, Sterilized Foreign Exchange Intervention?', *SocArXiv*, 25, 1 (2021), 180–201, <https://doi.org/10.31235/osf.io/bfehz>.

observations I made.⁹ His report offers a detailed insight into the day-to-day business of the Bank and gives estimates of operations and a description of processes. This was a time of central bank cooperation and the French observer was welcomed. However, mistrust remained. The Bank wanted to keep some of its trade secrets. Gouzerh reported that he was asked to leave the dealing room every day just before 5 pm, under the pretence that he would disturb the dealers as they were busier then. He noted that 5 pm was the time when heavy sterling sales from the United States started. This kind of mistrust would eventually be resolved. In Chapter 14 on the ERM crisis, I rely on intervention data that was shared daily among European central bankers.

The intervention orders were given during business hours by telephone to four retail or commercial banks: Westminster, Lloyds, National Provincial and Société Générale. Westminster received the bulk of the orders. The goal was either to prevent the exchange rate from depreciating too quickly or to encourage or amplify an appreciation. The French observer estimated that during the five days he spent at the Bank, dealers intervened more than \$150 million.¹⁰

The dealers, according to Gouzerh, feared both the opening of the market in Paris in the morning and the opening of the New York market at 3 pm. The Bank of England usually gave sterling a final push in the last half-hour of trading. After that, the Bank handed over the responsibility for intervention to the New York Fed in the evening. The Fed's operations were monitored by a 'principal' at the Bank of England. The principal stayed in touch with New York until the market closed late in the evening London time.

Another document shows how the Bank viewed its role in the market. Before the October 1959 general election, the Bank prepared a foreign exchange intervention plan. It reads:

So long as the outcome of the election remains unclear, confusion in the exchange market must be expected, some operations one way, some another. In that event we will endeavour to maintain relative stability in the sterling/dollar rate until the

⁹ The original reads: 'Les renseignements consignés ci-dessous ne m'ont pas été communiqués par la Banque d'Angleterre, ils sont le résultat d'observations.' Extract of a letter from M. Gouzerh staying at the Bank of England to M. Floch, 19 May 1951, Paris, Archives of the Bank of France, 1495200501/564.

¹⁰ Extract of a letter from M. Gouzerh staying at the Bank of England to M. Floch, 19 May 1951, Paris, Archives of the Bank of France, 1495200501/564.

results become more apparent, aiming provisionally at something like 2.79¼–2.80¾, i.e., a wider fluctuation than one normally sees during the day.¹¹

After the election, the Bank had two scenarios in mind. In the event of downward pressure, the Bank would

not offer much resistance but let the rate fall quite quickly to say, 2.78 1/16, testing the market periodically on the way down. There would be no point in spending much on the way down which would be expensive and encourage speculation against the pound. Later, when election influences had subsided, we would examine the possibility of bringing about an improvement in the rate.¹²

In the event of upward pressure, the Bank ‘would let the rate go over 2.81 fairly easily; then we would begin to take in dollars on a rising market. If the demand proved to be large we would let the rate go to the upper limit’.¹³

This highlights the dual strategy of the Bank. In uncertain markets, it would maintain ‘relative stability’. When the pound was falling, it would let the price reach a new equilibrium before trying to influence the direction of the exchange rate again. What emerges from these extracts is the ‘cook-book’ nature of intervention. The Bank treated fundamental economic variables as exogenous to its intervention decisions as it could not adjust fundamentals. Dealers could do no more than try to influence the Treasury or government. The Bank did not consider devaluation or changes in interest rates as options. Dealers were often forced to intervene in spite of the fundamental value of the currency.

Another feature during that period was that intervention was covert and had little signalling value for the market. Current literature stresses that a central bank can lead the market with signalling, when fundamental economic factors become fuzzy after an election or a global shock for example.¹⁴ The Bank of England did not make public its interventions. Instead, it preferred surprise and changing tactics to try to win over the market. This sometimes worked as the reserves of the Bank were sizeable in comparison to the market. This is no longer the case today.

Changes in tactics are illustrated by the following intervention instructions given by Bridge to the Federal Reserve: ‘I shall ask you to go into the

¹¹ Contingency plan, the exchanges – Friday, 9th October, 8 October 1959, London, Archive of the Bank of England, C43/32.

¹² Ibid. ¹³ Ibid.

¹⁴ Lucio Sarno and Mark P. Taylor, ‘Official Intervention in the Foreign Exchange Market: Is It Effective and, if so, How Does It Work?’, *Journal of Economic Literature* 39, 3 (2001), 839–68.

market after lunch. . . . Don't go before lunch. I thought it wise to change tactics a bit. It is a good thing.'¹⁵ These instructions show how Roy Bridge was changing strategies every day to try to surprise the market, as opposed to trying to guide the market (as central bankers tend to do today). Bridge was at the heart of the Bank's foreign exchange strategy. He saw it as a game he played to try to fool or outsmart the market. Capie argues that this was one of the reasons why the Bank was so backward: 'One of the principal failings in the operation as far as the Bank was concerned was their obsession with psychological warfare. Their pride in market skills and the lack, for so long, of serious economic input contributed to a concentration on manipulating the market.'¹⁶

The Bank intervened in several dollar markets. The dealers' reports offer a detailed intervention classification. Intervention is broken down by different types of market in Figure 4.2. The figure underlines the fact that the bulk of interventions was made in the spot market. Spot interventions accounted for 72 per cent of the total dollar amount spent during the Bretton Woods period. Of the interventions, 89 per cent (72 + 17) were made in the spot or forward London market. Overnight interventions, representing 11 per cent (9 + 2) were in New York. Of the overall amount spent during the Bretton Woods period, 0.5 per cent was mainly in Switzerland in transferable sterling markets.¹⁷

The Bank was unfamiliar with the forward market. This reflected a general backwardness and rigidity when it came to defending the UK currency. The Federal Reserve almost exclusively used forward intervention.¹⁸ The Bank was still struggling to understand this market fully. It struggled to leverage it to manage sterling. Reporting on a conversation with Earland and Preston at the Bank, Bodner was surprised to learn about 'the difficulties that they [the Bank] seem to find in narrowing the forward discount'.¹⁹ According to Bodner,

¹⁵ Telephone conversation with Mr Bridge, Bank of England at 11:15 am, H. L. Sanford to file, 10 August 1956, New York, Archives of the Federal Reserve, box 617015.

¹⁶ Capie, *The Bank of England*, 243.

¹⁷ Even if Switzerland was not a 'transferable sterling' country, it offered a transferable dollar/sterling market. Dealers were monitoring rates in this market, as can be seen in their reports. Percentages are rounded up and therefore do not add up to 100 per cent. The comparison for the whole period is biased because transferable sterling interventions occurred only between February 1955 and December 1958.

¹⁸ On the Federal Reserve intervention policy, see Bordo, Humpage and Schwartz, *Strained Relations*.

¹⁹ Telephone conversation with Messrs Earland and Preston of the Bank of England at 8:50 am, Bodner to file, with copy to Coombs and eleven others, 23 October 1967, New York, Archives of the Federal Reserve, box 617031.

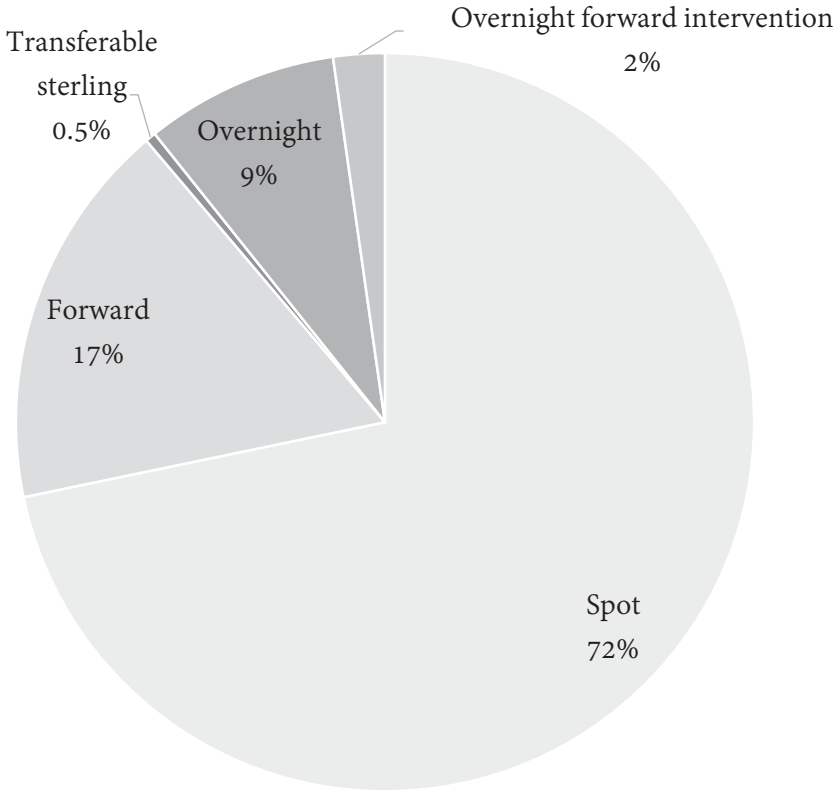


Figure 4.2. Total dollar sales by type, 1952–72

Source: Dealers' reports (C8).

'it seems clear from this conversation that there is, in fact, no technical reason why the Bank of England could not narrow the forwards sufficiently to create an incentive in favour of sterling'. Bodner thought the Bank just did not get it. He continued: 'The real limitation is the Bank of England's reluctance to take on a very large additional amount of forward commitments and their fear that this is what would result from any attempt to significantly narrow the forward discounts.' The Radcliffe Report did not favour forward market operations. The report stresses that 'operation in the forward market would not be an effective method of countering speculation against the pound'.²⁰

Figure 4.3 shows daily forward operations from 1952 to 1972. The Bank only bought forward sterling in large quantities during the 1964–67

²⁰ The Radcliffe Report, para. 707, 257.

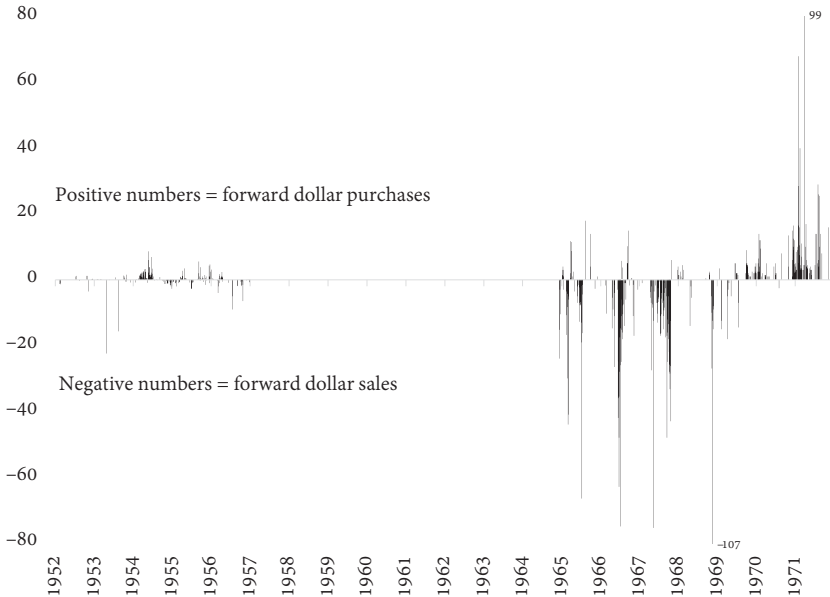


Figure 4.3. Forward market intervention

Source: Dealers' reports (C8).

sterling crisis. The Bank reacted strongly to the 1964 general election. The Labour Party had won the election and the ensuing crisis 'called for the deployment of every available technique, and forward intervention was one of these'.²¹ After a hesitant start, the Bank increased its activity in the forward market. The increase was so rapid that before the 1967 devaluation, its oversold position stood at \$7183 million.²² At this point, the Bank wanted to back out of its outstanding forward position. But doing so would have signalled an imminent devaluation and triggered further speculation. Capie notes that experience gained in 1964–67 had scarred the Bank and Treasury. In the 1970s, the Bank was reluctant to engage in forward intervention.²³

British reluctance was partly due to Governor Montagu Norman (1920–44). Norman had castigated the forward market as 'dominated by speculators'.²⁴ He called it an 'anathema' for the Bank. Only occasionally did the Bank intervene in this market during Norman's governorship – for

²¹ Capie, *The Bank of England*, 205. ²² *Ibid.*, 247. ²³ *Ibid.*, 372.

²⁴ Richard Sidney Sayers, *The Bank of England, 1891–1944* (Cambridge: Cambridge University Press, 1976), 420.

example, in 1926.²⁵ Immediately after the opening of the London forward market, Knoke asked the Bank: 'Are you operating officially in the forward market?'²⁶ Gurney of the Bank of England replied: 'No, we are not touching the forward market at all.' The word 'touching' is quite strong in this context. It highlights the Bank's reluctance to operate in this market. Its refusal to intervene in the forward market seemed to be based on tradition more than any valid economic argument.

COOPERATION WITH THE FED

The literature often portrays the Bretton Woods period as the peak of central bank cooperation.²⁷ In practice, however, exchanging information and working hand in glove were longer processes for the Federal Reserve and Bank of England. The 1950s saw cooperation slowly unfold. The Bank of England was reluctant to share information. Most of what follows comes from archival records of telephone conversations. The archives of the Fed offer detailed daily telephone conversation for the period.

Cooperation meant that the Fed intervened on behalf of the Bank. The Bank still did not fully trust the Fed early in the Bretton Woods period. In 1951, the foreign exchange market reopened and the Bank gave the Fed general instructions, telling it 'to operate for us at the official limits, i.e., to buy sterling in the New York market at 2.78 and to sell it at 2.82'.²⁸ These were broad and official instructions. Between the bands, the Bank of England preferred intervening through other third parties in North America. The goal was to make the Bank's operations on the American continent more secret. The Bank of England's main concern was that Fed dealers were not 'regular operators in sterling nor are they what we would regard as "in" the market' and that 'when they do intervene the whole market appears to be immediately aware' of this.²⁹

²⁵ Bordo, Humpage and Schwartz, *Strained Relations*, 36.

²⁶ Telephone call from Mr Gurney from the Bank of England to Mr Knoke 11:35 am, 18 December 1951, New York, Archives of the Federal Reserve, box 617031.

²⁷ For example, Borio and Toniolo, 'One Hundred and Thirty Years of Central Bank Cooperation'; Gianni Toniolo and Piet Clement, *Central Bank Cooperation at the Bank for International Settlements, 1930-1973* (Cambridge: Cambridge University Press, 2007).

²⁸ 'Aide Memoire for the Governor - Sterling Operations in the New York Market', 25 May 1956, London, Archives of the Bank of England, C43/319.

²⁹ Sir George Bolton's letter of 2 October, memorandum sent to Parson and Hawker with a copy to Tansley and Bridge, 15 October 1956, London, Archive of the Bank of England, C43/319.

Third parties the Bank hired to intervene in New York included the Bank of Canada. This led to some tensions between the Fed and the Bank. In 1956, the Fed became concerned that the Bank of England would use the Bank of Canada in New York instead of the Fed. The Fed wrote to the Bank to complain. The Bank of England wanted the operations to appear to be genuine demand, showing the strength of sterling, and not demand fabricated to support a weak sterling. The Bank of Canada was a natural player in New York. This made market participants less suspicious that the Bank of England was behind the operations. In theory, bank secrecy meant that any broker operating for a third party would withhold the identity of that third party (this applied to central bank dealers as well). In practice, however, dealers would share information and who was buying and selling would quickly become known to everyone. Introducing a third party such as the Bank of Canada added another tier, making it less obvious who was behind the orders, at least so the Bank thought. The issue was then discussed at length between the two central banks to try to channel British intervention in New York through the Federal Reserve.

This issue with the Bank of Canada was one example of the difficulties experienced in the 1950s for the two central banks. Another issue arose in the mid-1950s. The issue came from the Bank of England's reluctance to share foreign exchange market intervention data with the Federal Reserve. The Fed, in telephone call after telephone call, tried to get intervention figures from the reluctant Bank. This was a legitimate request as the Fed also operated at the other end of this market. Sharing information was to everyone's benefit. Sanford from the Fed started fishing for information. He asked Bridge about intervention amounts in 'round numbers'.³⁰ Bridge answered, 'it was less than we thought it would be in advance', a cryptic answer at best. This forced Sanford to guess: 'Would \$40 million sound like a reasonable figure?', to which Bridge answered, 'Rather on the high side'. This shows how reluctant the Bank was to share information about foreign exchange operations. These exchanges took place frequently in 1955–56. And from 1957, the Bank began to share more information on its interventions. This indicates more cooperation than in the interwar years when such exchanges did not occur. Still, the Bank was reluctant to fully cooperate.

In the late 1950s, the Federal Reserve and the Bank of England were talking about the foreign exchange on most days. The records show a

³⁰ Telephone conversation with Mr Bridge, Bank of England, at 11:34 am, Sanford to file, 15 March 1955, New York, Archives of the Federal Reserve, box 617031.

progressive institutional and personal integration between the two institutions. Personal connections and open collaboration would become critical in the 1960s. At that point, sterling was in almost constant crisis and the United States started to play a more important role in the fate of the British currency.

STRATEGIES AND TACTICS

Why did the Bank of England intervene? Its mission was to keep the London spot rate under control, but what about the other exchange rates? Here I show how the Bank reacted to movement in the various sterling rates. This is done by running a reaction function on the intervention dataset presented in this book.

To understand how central banks respond to exchange rate fluctuations, economists have estimated reaction functions.³¹ Klug and Smith looked at the Suez crisis. They determined a reaction function of the monetary authorities, and found that the Bank of England intervened in reaction to variations in the transferable sterling exchange rate. This shows that the Bank was concerned not only about exchange rates in London but also abroad. Bordo et al. used a reaction function to study foreign exchange market intervention for the United Kingdom during the sterling crises of 1964–67.³² They argue that the Bank of England reacted to the lower band of the exchange rate as well as within the Bretton Wood bands. Here I use a reaction function to determine which exchange rate was influencing the monetary authorities' policies.

When reading the dealers' reports, it seems clear that the Bank of England dealers intervened to avoid sterling depreciation against the dollar. Central bankers call this leaning against the wind; understand the wind as market forces. Bank dealers monitored both the official exchange rate in London and transferable sterling in New York and Zurich. Look at the first photograph of Bank of England dealers at the end of Chapter 7. The picture shows a chalk board in the background of the dealers' room.

³¹ For a review of the literature on reaction functions, see Hali J. Edison, *The Effectiveness of Central-Bank Intervention: A Survey of the Literature after 1982*, vol. 18 (Princeton, NJ: Princeton University Press, 1993), 37–42; Christopher Neely, 'An Analysis of Recent Studies of the Effect of Foreign Exchange Intervention', Federal Reserve Bank of St. Louis working paper (1 June 2005), 2–3; Takatoshi Ito and Tomoyoshi Yabu, 'What Prompts Japan to Intervene in the Forex Market? A New Approach to a Reaction Function', *Journal of International Money and Finance* 26, 2 (March 2007), 193–212.

³² Bordo, MacDonald and Oliver, 'Sterling in Crisis, 1964–1967'.

The chalk board displays exchange rate prices for both Swiss francs and even Swiss franc notes. This means that the Bank also monitored exchange rates abroad, including Swiss banknotes. The reaction function helps determine which of these different rates was more important in shaping the Bank's policy decisions.

The reaction function relates several exchange rates to Bank of England intervention. To reduce the issues associated with multicollinearity, the explanatory variables which relate to exchange rates are the differences from the lower bound instead of being actual exchange rates. The lower band is 2.78 until 1967, then 2.38 after the devaluation. By taking the difference from the lower band, the variables on the right-hand side become much less correlated than if they are used as sterling/dollar exchange rates directly. The Augmented Dickey–Fuller Unit root test confirms that all series are stationary when taken as the difference from the floor. Intervention data are stationary as they are.

Transferable sterling is relevant only in the period before 1958 as it later disappeared as a discrete sterling rate. Because the dealers' reports start reporting transferable sterling from 1953, a reaction function for the sub-sample from 1953 to 1958 is estimated (regression 1 in Table 4.1). The following equation shows the reaction function used in this book. It is similar to other reaction functions in the literature.³³

$$I_t = \beta_0 + \beta_1 I_{t-1} + \beta_2 \Delta S_{t-1} + \beta_3 \Delta_{low} S_{t-1} + \beta_4 \Delta_{low} S_{t-1}^{TREND} + \beta_5 \Delta_{low} S_{t-1}^{NOTE} + \beta_6 \Delta_{low} S_{t-1}^{3FWD} + \varepsilon$$

where I_t is intervention in dollars taking positive value for purchase of dollars and negative value for sales of dollars, I_{t-1} is lagged intervention to allow for autocorrelation, and ΔS_{t-1} is the difference between the exchange rate at days $t-2$ and $t-1$, which is used in most reaction functions. The remaining four terms are the difference between the Bretton Woods lower band (2.78/2.38) and the four exchange rates: London spot rate, transferable sterling, Swiss banknote cross-rate and the three-month London forward rate. Three regressions are run for the full sample, one before and one after the introduction of convertibility in December 1958. The results are presented in Table 4.1.

What does the regression analysis tell us? The Bank of England was reacting to an increase in the spot exchange rate by buying dollars and

³³ This function is inspired by Ito and Yabu, 'What Prompts Japan to Intervene in the Forex Market?'; Bordo, MacDonald and Oliver, 'Sterling in Crisis'.

Table 4.1. *Sterling reaction function regressions*

Dependent variable: Bank of England intervention			
	(1) Pre-convertibility including transferable sterling (1953–58)	(2) Post-convertibility to devaluation (1959–67)	(3) Whole sample (1952–72)
Intercept	-3.35 (0.63)***	-9.81 (1.97)***	-2.89(1.36)**
London spot sterling	171.01 (33.97)***	326.08 (97.23)***	171.62 (82.98)**
Transferable sterling	28.31 (9.75)***		
Three-month forward	0.95 (25.67)	217.37 (85.90)**	47.49 (57.51)
Swiss offshore banknote cross-rate	3.98 (3.33)		5.30 (3.22)*
Lagged intervention	0.35 (0.07)***	0.38 (0.03)***	0.35 (0.03)***
Previous day difference	513.10 (162.90)***	-260.70 (55.85)***	-283.39 (70.97)***
<i>Adjusted R</i> ²	0.321	0.258	0.194
<i>Observations</i>	1,000	2,249	4,966

Note: Standard errors are reported in parenthesis and are robust to heteroscedasticity and autocorrelation using heteroscedasticity and autocorrelation-consistent (HAC) estimators, using a Newey–West correction.

***signifies statistical significance at the 1% level; **signifies statistical significance at the 5% level; *signifies statistical significance at the 10% level.

to a decrease by selling dollars. This was expected. It is corroborated by qualitative evidence from the dealers' reports. A decrease in the spot rate of \$0.01 per sterling (for example, \$2.80 to \$2.79/£) would have led to the Bank spending \$1.71 million on any given day, other things remaining constant. Post-convertibility, the Bank would spend \$3.26 million for a similar decrease in the spot rate. This is just short of double the amount before convertibility. The fact that lower exchange rates led to more intervention after convertibility is expected. With fewer controls on capital flows, the Bank needed more firepower after convertibility.

Before convertibility, the monetary authorities also reacted to transferable sterling. This is consistent with findings by Klug and Smith. The

impact they found is greater, however.³⁴ For the pre-convertibility sample, the coefficient for the transferable sterling exchange rate is significant, but six times smaller than that for the official London sterling rate. This is consistent with evidence from daily telephone conversations between the Fed and the Bank.³⁵ During most of the period between 1952 to 1972, Bank of England and New York Federal Reserve officials would talk at least once a day to discuss market conditions as seen. These discussions also mentioned the state of transferable sterling in New York. The Bank prioritised the status of the official spot rate over other exchange rates.

What is interesting is that changes in forward rates triggered no reaction pre-convertibility as the coefficient is not significant (regression 1). Post-convertibility, forward rates seem to have played a role. The coefficient is significant only at 5 per cent (regression 2). The absence of significance in the forward market in regressions 1 and 3 highlights the reluctance of the Bank to engage in the forward market, as shown earlier. Finally, a more surprising result is the offshore banknote cross-rate in Switzerland. It does not seem to have influenced monetary authorities' decision-making. This could be because this is an artificial cross-rate and not a quoted rate. Or maybe authorities focused on official markets.

INTERVENTION PERFORMANCE

The Bank of England spent most days in the foreign exchange market. How efficient was this intervention? There is a vast literature on measuring foreign exchange intervention effectiveness. Here I analyse how successful the Bank's interventions were by using the intervention data presented earlier. It also assesses what made interventions successful. This is relevant not only to the history of the Bank, but also is of interest to the literature on intervention and to central banking professionals.

I use a simple daily indicator to observe exchange rate behaviour the day after an intervention. The indicator tests whether the exchange rate appreciates after a dollar sale or depreciates less than on the previous day. The limitation of the indicator is that it captures only the short-term effect of intervention and does not offer information over a few days. It is inspired

³⁴ Adam Klug and Gregor W. Smith, 'Suez and Sterling, 1956', *Explorations in Economic History* 36, 3 (July 1999), 181–203.

³⁵ Telephone conversations between Bridge and Sanford, New York, Archives of the Federal Reserve, boxes 617015 and 617031.

by an indicator developed by Humpage and applied by Bordo, Humpage and Schwartz to the US case.³⁶

During the Bretton Woods period, the Bank mainly tried to keep sterling from depreciating. This becomes clear when reading the dealers' reports and other internal memos. The Bank never tried to make sterling depreciate. If it was overvalued, it took the opportunity to build up reserves. Therefore, my assessment of the intervention only focuses on dollar sales. These operations were meant to make sterling appreciate. Intervention success in this context means that the Bank prevents sterling from depreciating.

I use three success criteria (SC). Exchange rate reversal (SC1) measures if dollar sales led to next-day appreciation of the exchange rate. Depreciation-smoothing (SC2) measures if selling dollars lessened the depreciation compared to the previous day. The sum of the two (SC3) combines reversal and smoothing to create a general measure of success. This last measure encompasses the two main reasons why the Bank would sell dollars on the market, either to smooth a fall or to reverse depreciation of the pound. Table 4.2 presents the results. The test suffers from not being able to establish the counter-factual in the absence of intervention. The Bank could have been intervening on a day when the exchange rate was reversing anyway. The test measures this as a success. However, as the Bank intervened mainly when the market was under pressure (against the wind), this should provide a reasonable account of the Bank's performance.

Table 4.2 highlights differences in success rates before and after convertibility. Before convertibility, the Bank managed to achieve desired outcomes (appreciation or smoothing) in half the days it sold dollars. The Bank had an impact on the exchange rate the next day, every other day. After convertibility, the success rate dropped to 36 per cent – a success in one in three attempts.

Market conditions became more adverse after convertibility. This becomes clearer when examining the intervention's size. Table 4.3 presents summary statistics of the Bank's daily intervention, comparing the pre- and post-convertibility period. The data come from the Bank of England dealers' reports. Before convertibility, the Bank spent \$2.7 billion in the

³⁶ Owen F. Humpage, 'U.S. Intervention: Assessing the Probability of Success', *Journal of Money, Credit and Banking* 31, 4 (1999), 731–47; Owen F. Humpage, 'The United States as an Informed Foreign-Exchange Speculator', *Journal of International Financial Markets, Institutions and Money* 10, 3 (1 December 2000), 287–302; Bordo, Humpage and Schwartz, *Strained Relations*.

Table 4.2. *Intervention success*

	Number of sales days	Exchange rate reversal the next day (SC1)		Depreciation smoothing the next day (SC2)		Reversal and smoothing (SC3)	
	Days	Days	Success rate	Days	Success rate	Days	Success rate
Pre-convertibility (1952–58)	905	239	26%	209	23%	448	50%
Post-convertibility (1959–72)	1,395	230	16%	269	19%	499	36%
Overall (1952–72)	2,300	469	20%	478	21%	947	41%

Source: Dealers' reports (C8).

Note: The methodology compares the movement of the exchange rate the day after an intervention. The percentages are success rates.

Table 4.3. *Bank of England intervention in the spot and forward markets, descriptive statistics*

In \$ million	Forward dollar sales		Spot dollar sales	
	1952–58	1959–72	1952–58	1959–72
Mean	1.5	33.6	3.8	31.6
Median	0.8	19.6	1.6	9.8
Maximum	22.4	211.4	54	1,229
Minimum	0.1	0.7	0.1	0.5
Std. Dev.	3.0	38.8	5.7	76.3
Sum	137	5,707	2,681	21,879
Observations	90	170	708	692

Source: Dealers' reports (C8).

market; after convertibility it was almost \$22 billion. Despite intervening on only 170 days in the forward market after 1959, the Bank still managed to sell a total of nearly \$6 billion. Table 4.3 does not show net interventions but only dollar sales, not purchases. On average, when the Bank was selling dollars in the market, the average spot sale was \$3.8 before convertibility and \$31.6 after convertibility, a ten-fold increase.

How large was Bank of England intervention compared to overall transaction volume in the sterling/dollar market? Data on market volume are hard to come by. To get a better idea, a telephone call report from the Federal Reserve archives gives a clue. The call mentions a market volume in New York of \$47.6–64.4 million a day and \$19.5 million in London.³⁷ It is unclear whether these days are typical or days with unusual trading volumes. But that would put the sterling/dollar trading volume at \$67.1–83.9 million when combining New York and London volumes. Average spot operations were \$3.8 million a day before 1959. This would put the average dollar sale by the Bank at around 5–6 per cent of the total market. The maximum sales of \$54 million by the Bank during the whole period is around 64–80 per cent of the market size estimates. In other words, on a normal day the Bank was responsible for 5 per cent of the market. This is sizeable. During a crisis, the Bank had the power to deploy over three-quarters of the market turnover on a given day. Before convertibility, the Bank of England was a large player in the market.

³⁷ Telephone call, H. L. Sanford, 30 April 1954, New York, Archives of the Federal Reserve, box 617031.

Market size figures post-convertibility are not available, but it is likely that the influence of the Bank shrank. In 2016, as a comparison, the daily foreign exchange market volume for sterling was \$649 billion and the total reserve of the UK government was \$111 billion. This means that if the government spent all its reserves on one day in 2016, it would only reach 17 per cent of the market, as opposed to 80 per cent if it had spent only \$54 million in the Bretton Woods period.³⁸ This is part of the explanation as to why the Bank of England avoids intervention today.

If the Bank was not always successful, what did make interventions successful? To reach a better understanding, I use a probit regression to differentiate which elements contribute to success. This methodology has also been used on modern data by Fratzscher et al. to derive the effect of intervention size and other variables to intervention success. In the regression, I test five variables that could explain intervention success. The variables are size of the intervention; exchange rate trend; exchange rate alignment with fundamentals; volatility of the exchange rate; and how far the exchange rate was from the Bretton Woods bands.

Before presenting the results of the analysis, what is the *ex ante* expectation? Larger interventions are expected to be more successful. Trend is also expected to be important. If the pound has been falling for ten days, making it appreciate would be more difficult. If it had been already appreciating for ten days, it would be easier to keep the trend going. Volatility can indicate stress on the currency; it is expected to make the dealers' task more difficult. Unsurprisingly, the closer to the lower band (Bretton Woods floor \$2.78 or \$2.38/sterling), the more difficult the intervention. Proximity to the lower band means a currency crisis can be expected, making investors more likely to sell sterling.

What about the alignment of the currency with its fundamental value? The hypothesis is that the more the exchange rate is misaligned *vis-à-vis* its fundamental value, the more difficult intervention is. For example, if poor balance of payments figures have just been published, the fundamental value of the currency is likely to go down. In this context, intervention would be less successful.

³⁸ Daily turnover for the pound today is 12.8 per cent of \$5,067 billion or \$649 billion (BIS, 'Triennial Central Bank Survey of Foreign Exchange and OTC Derivatives Markets in 2016'). The reserve data come from the Bank of England as the average for 2016 of the central government all foreign currency total reserve assets by instrument (in \$ million) not seasonally adjusted, Reference PQMBAAR.

Fundamental value is difficult to pin down. Current literature focusing on floating rates uses three-year moving averages of the exchange rate. It is assumed that this indicates the currency's long-term fundamental value.³⁹ In the Bretton Woods context, moving averages performed poorly. They fail to show the fundamental value of sterling as the exchange rate is mean-reverting over three-year periods. A three-year moving average simply represents the average of the exchange rate during the Bretton Woods period. The average exchange rate from 1952 to 1967 is almost 2.80 (the official parity). It indicates that three-year moving averages probably offers no more than weak long-term trends in during Bretton Woods.⁴⁰

While moving averages are a poor indicator of the fundamental value of a currency, the forward market offers a better proxy. Svensson argues that within exchange rate bands, the forward rate can indicate the credibility of the currency.⁴¹ Remember, the Bank of England engaged less in this market. This makes it freer of outside influence. It offers an idea of the fundamental value of the currency, even if it is not perfect. In my regression, I use the difference between the spot and forward rates called the forward premium. This is our proxy for distance of the exchange rate from fundamental value. The probit equation is modelled as follows:

$$SC_t = \beta_0 + \beta_1 I_t + \beta_2 (S_t - S_t^{3FWD}) + \beta_3 TREND_t + \beta_4 VOLATILITY_{t-10} + \beta_5 \Delta_{low} S_{t-1} + \varepsilon$$

where SC_t is intervention success on day t , according to reversal (SC1), smoothing (SC2) and smoothing or reversal (SC3). $S_t - S_t^{3FWD}$ is the forward premium. $\beta_3 TREND_t$ is the ten-day trend, computed as a sum of the differences of ten-day exchange rates. $\beta_4 VOLATILITY_{t-10}$ is the ten-day local volatility. $\beta_5 \Delta_{low} S_{t-1}$ is the gap between the exchange rate and the lower band (2.78 or 2.38).

The first striking feature in Table 4.4 is that intervention size has a negative effect on success for the reversal of the exchange rate. The larger the intervention the less likely it is to succeed in changing the direction of the exchange rate. This is probably due to a reverse causality issue. Bigger interventions are made during crises and are less likely to be successful.

³⁹ See, for example, Marcel Fratzscher et al., 'When Is Foreign Exchange Intervention Effective? Evidence from 33 Countries', *American Economic Journal: Macroeconomics*, 11, 1 (2019), 132–56. <https://doi.org/10.1257/mac.20150317>.

⁴⁰ The mean exchange rate is exactly 2.800219231 using daily data.

⁴¹ Lars E. O. Svensson, 'Assessing Target Zone Credibility: Mean Reversion and Devaluation Expectations in the ERM, 1979–1992', *European Economic Review* 37, 4 (1 May 1993), 763–93.

Table 4.4. *Intervention success explained*

Dependent variable: Intervention success (1/0) – Probit regression			
	(1) Reversal (SC1)	(2) Smoothing (SC2)	(3) Smoothing and/or reversal (SC3)
Intercept	2.088 (1.09)*	-0.257 (1.18)	0.494 (1.07)
Intervention size	-0.004 (0.001)***	0.002 (0.0009)*	-0.0007 (0.0009)
Spot with past two week's trend (1/0)	-0.028 (0.08)	-0.903 (0.08)***	-0.575 (0.07)***
Distance from fundamentals (forward premium/discount)	-30.423 (11.43)***	-9.916 (12.23)	-36.698 (11.02)***
Local volatility	-1.093 (0.39)***	-0.061 (0.42)	-0.253 (0.38)
Distance from the Bretton Woods floor ($S_{floor} - S_{t-1}$)	3.806 (4.21)	4.406 (4.17)	1.436 (3.80)
McFadden R^2	0.02	0.09	0.04
Observations	1,392 (1,106 failures/286 successes)	1,392 (1,066 failures/326 successes)	1,392 (890 failures/502 successes)

Note: Standard errors are reported in parenthesis and are robust. A Huber/White correction has been applied. ***is statistical significance at the 1% level; **is statistical significance at the 5% level; *is statistical significance at the 10% level.

The biggest intervention in the sample occurred the day before the 1967 devaluation. At this point, intervention was unlikely to fool market participants. They were expecting and heavily gambling on a devaluation without the risk of a quick appreciation playing against them. Larger interventions, however, seemed to increase success when the Bank managed to smooth a depreciation. To relate that to the first point, greater interventions do not reverse exchange rates but might be able to smooth depreciation.

If the intervention is going against the trend of the previous weeks, or if it is taking place during a period of volatility, it is less likely to succeed. The distance from the lower band is not significant in any of the regressions.

The forward premium seems to make an impact. The direction of the impact is puzzling. First, it is worth noting that during most of the Bretton Woods period, there was a forward discount. This means that the forward rate was below the spot rate. Currency investors generally had a negative

outlook on the British currency. The negative coefficient in the regressions seems to suggest that the lower the forward discount, the more likely interventions were to work. This could be due to higher discounts leading the Bank to intervene with larger amounts (and the data shows a correlation between lower discounts and higher intervention size). But the result remains somewhat surprising.

These results need to be read with caution. No clear trends emerge because of the frequency of interventions. The Bank was in the market on more than 80 per cent of the days. Several coefficients are not significant, a result that is in line with similar studies.⁴²

THE EXCHANGE EQUALISATION ACCOUNT

The Exchange Equalisation Account (EEA) is central to understanding for the Bank's foreign exchange interventions. It is the institutional link between the Bank of England and the Treasury. There is a limited amount of literature focused on the activities of the EEA. The following paragraphs review this literature and give a brief history of the EEA since its creation. I draw heavily on the work of Susan Howson, the first economic historian to explore its workings systematically.

The EEA was established in 1932 after Britain left the gold standard to manage the exchange rate. Its main purpose was to manage the floating pound from 1932 to 1939 after the sterling float of 1931.⁴³ The first operations of the EEA were meant to prevent rapid appreciation of the pound after the British economy recovered from the shock of leaving the gold standard.⁴⁴ The EEA was part of the Treasury, but the Bank of England was in charge of foreign market operations on its behalf. Figure 4.4 presents a schematic structure of the EEA. During the interwar years, the Treasury kept tight control over its operations. During the Bretton Woods period, the mandate of the Bank was simply to keep the exchange rate within the agreed IMF bands. This resulted in less involvement by the Treasury in its daily operations. As the Radcliffe Report put it, beyond its main mandate, the Bank had some room to manoeuvre when it

⁴² Even with a much bigger sample, Fratzscher et al., 'When Is Foreign Exchange Intervention Effective?', have only few coefficients that explain intervention success.

⁴³ Susan Howson, *Sterling's Managed Float: The Operations of the Exchange Equalisation Account, 1932–39* (Princeton, NJ: International Finance Section, Department of Economics, Princeton University, 1980), 15.

⁴⁴ Leonard Waight, *The History and Mechanism of the Exchange Equalisation Account* (Cambridge: Cambridge University Press, 1939), 8.

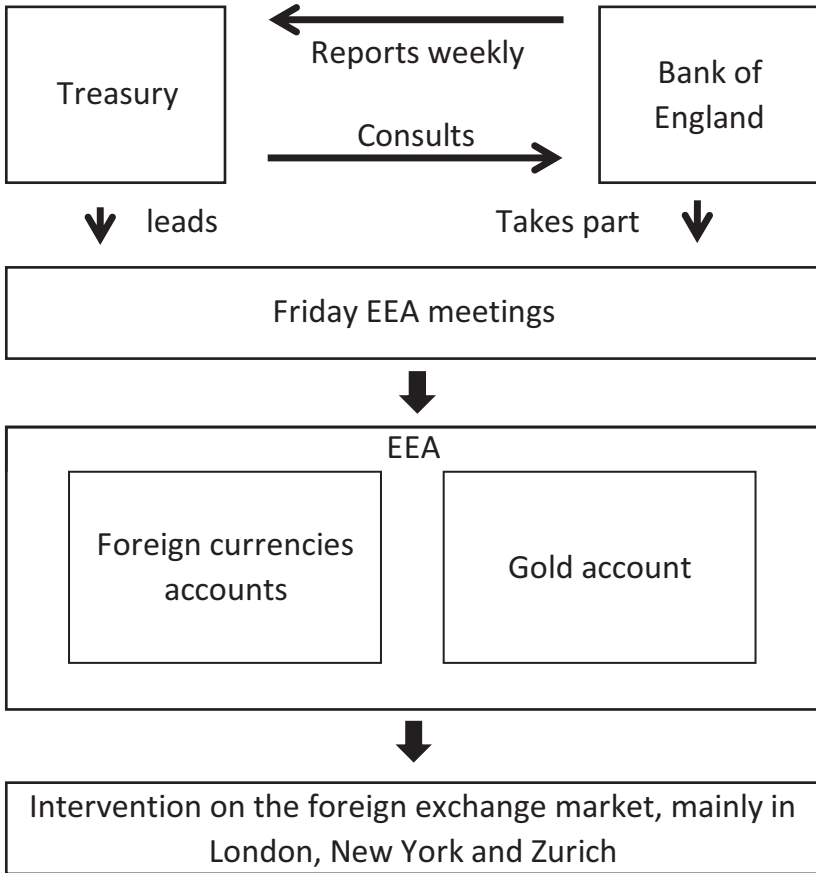


Figure 4.4. Schematic structure of the EEA

Source: Based on Howson, *Sterling's Managed Float* and the structure of the 'EEA ledgers', London, Bank of England archives 2A141/4 to 2A141/17.

came to daily exchange rate management. The Bank 'has discretion to operate' when the exchange rate was within the IMF limits and often intervened 'in order to prevent violent fluctuations of the rate'.⁴⁵

The main role of the EEA was to buy or sell currencies on the foreign exchange market to manage exchange rates. Most operations were done by

⁴⁵ *Radcliffe Report*, para. 326.

the Bank in London. The New York Fed sometimes performed overnight operations in New York on behalf of the Bank. The EEA operated mainly in dollars and French francs until 1935. After that, it introduced Dutch florins, Swiss francs, Belgian francs, Swedish kronors, Norwegian kroners, Canadian dollars, Argentine pesos and Indian rupees.⁴⁶ During the Bretton Woods period, most of the interventions were in dollars. Rarer operations were in gold, French francs, Belgian francs, Deutschmarks and Canadian dollars. The EEA kept important reserves in gold. They were converted into dollars when needed. The goal was to ensure ‘that exchange transactions within its territories do not differ by more than 1 per cent on either side of the parities declared to the [International Monetary] Fund’.⁴⁷

The creation of the EEA was a result of the Bank’s limited room to manoeuvre in its foreign exchange operations. As the Bank had to make its accounts public, it was decided to create a separate account for intervention. The EEA was able to act without having to disclose any reserve figures. This kept intervention activity hidden from the public.⁴⁸ The EEA was created as a loan from the Treasury to the Bank. Any unused funds from this loan would then be lent back to the Treasury in the form of Treasury bills.⁴⁹ This allowed for automatic sterilisation. In the interwar years sterilisation was not total but ‘substantial’, as Howson argues.⁵⁰ There were two limitations to sterilisation.⁵¹ First, lending back excessive reserves to the Treasury was not automatic. Second, it depended on how the banking system reacted.

Imagine the Bank bought £10 million with the equivalent amount in dollars to defend the sterling exchange rate. These £10 million were withdrawn from the economy. This reduced the money in circulation. This could impact monetary conditions and interest rates. However, if the Bank then took these £10 million to buy Treasury bills, the money would have little effect on the amount of money in circulation or on

⁴⁶ Howson, *Sterling’s Managed Float*, 36.

⁴⁷ *Radcliffe Report*, 111. This can also be found for example in Capie, *The Bank of England*, 59.

⁴⁸ Howson, *Sterling’s Managed Float*, 7, for the details on how intervention could be deduced by the public.

⁴⁹ Treasury bills are short-term bills issued by the Treasury. They were either issued ‘tap’ or ‘tender’. Tap bills are tendered constantly by certain government departments. Tender bills are tendered weekly for the best price. Waight, *The History and Mechanism*, 40.

⁵⁰ Howson, *Sterling’s Managed Float*, 9–10.

⁵¹ A detailed account of how an operation by the EEA would affect money supply can be found in Waight, *The History and Mechanism*, 40–3, and is summarised in Howson, *Sterling’s Managed Float*, 9–10.

interest rates. This was built into the mechanism of the EEA as it was a loan from the Treasury, as we have seen. Without this purchase, the Bank would have simply written off the £10 million, thereby deflating the economy, not least because a significant amount of Treasury bills were issued 'on tap', or constantly, and not only periodically. Thanks to the initial loan, the EEA had an inherent sterilisation mechanism. According to the Radcliffe Report, the Bank only kept 'a working balance' in sterling and invested the rest 'entirely in "tap" Treasury Bills'.⁵² Even if the purchase of Treasury bills was not simultaneous, it was close to perfect as tap Treasury bills were constantly available to the EEA.

The other channel for sterilisation has to do with the banking system and the provenance of the money inflow.⁵³ The Bank of England's *Quarterly Bulletin* explains the mechanism: 'An inflow of gold or foreign exchange added both to the cash reserves of the banks and to their deposits – enabling them to increase their domestic lending – unless offset by open market operations carried out by the authorities.'⁵⁴ A foreign gold or dollar inflow would potentially increase the money available. When the EEA acted as a counterpart of a foreign gold or dollar inflow, its operation would increase the reserves and deposits in British banks. Keeping a constant deposit ratio (around 10 per cent at the time), banks would be able to lend more after capital inflows from abroad.⁵⁵

Take the example of a French investor wanting to buy sterling in London to avoid a possible French franc devaluation. Depending on the market for French francs in London, the EEA might have ended up buying these French francs. If the French investor kept this money in an account with a London bank, the EEA transaction would have the effect of increasing the British money base. To offset this inflow of capital for which the EEA had paid, it needed to undertake open market operations, selling Treasury bills on the money market.

Apart from the seminal contribution by Howson detailing the early years of the EEA, there are few studies on this topic, and most of these focus on the interwar years. In 1933, the economist Alzada Comstock described the EEA as 'Great Britain's little-known but successful

⁵² *Radcliffe Report*, para. 325.

⁵³ Howson, *Sterling's Managed Float*; Waight, *The History and Mechanism*.

⁵⁴ Bank of England, 'The Exchange Equalisation Account: Its Origins and Development', *Bank of England Quarterly Bulletin*, December 1968, 379.

⁵⁵ This is explained in greater detail in Waight, *The History and Mechanism*.

experiment'.⁵⁶ Similar studies could be found at the time and highlighted the interest in this new tool. It was unknown to most economists and surrounded by secrecy. Noel Hall and Leonard Waight provide two early attempts to understand the EEA, but their approach is not based on archival data.⁵⁷ Howson presents the mechanisms behind the EEA and offers an interpretation of the EEA's actions based on the Treasury's archival records.⁵⁸ She examines how the exchange rate targets decided by the Treasury were implemented with EEA intervention. Between 1932 and 1939, the targets changed several times, from \$3.40/£ in 1932 to \$4.95/£ in 1936. This flexibility allowed the EEA and the Bank to amass substantial reserves. However, for the Bretton Woods period, the literature is limited to brief references to the EEA in histories of the Bank or of monetary policy.

American and French equivalents of the EEA have received more attention. Anna Schwartz presented a review of the Exchange Stabilisation Fund, and Bordo and co-authors offer an extensive review of US intervention.⁵⁹ Olivier Accominotti relies on data from the *Fond de Stabilisation des Changes* to justify the Bank of France's behaviour during the interwar period.⁶⁰ However, the EEA has not benefited from similar accounts in the literature. All three funds are similar in the fact that they belong to each country's treasury. The respective central banks were managing the funds. This included keeping detailed accounts of the funds.⁶¹

The EEA ledgers at the Bank of England record reserve data.⁶² These daily ledgers have not been used in the prior literature in any detail.⁶³ They contain important information on the state of Britain's foreign exchange

⁵⁶ Alzada Comstock, 'The British Exchange Equalization Account', *American Economic Review* 23, 4 (1933), 608–21.

⁵⁷ Noel Frederick Hall, *The Exchange Equalisation Account* (London: Macmillan, 1935); Leonard Waight, *The History and Mechanism of the Exchange Equalisation Account* (Cambridge: Cambridge University Press, 1939).

⁵⁸ Howson, *Sterling's Managed Float*.

⁵⁹ Anna Jacobson Schwartz, *From Obscurity to Notoriety: A Biography of the Exchange Stabilization Fund* (Cambridge, MA: National Bureau of Economic Research, 1996); Bordo, Humpage and Schwartz, *Strained Relations*.

⁶⁰ Olivier Accominotti, 'The Sterling Trap: Foreign Reserves Management at the Bank of France, 1928–1936', *European Review of Economic History* 13, 3 (2009), 349–76.

⁶¹ For open data on the Fond de Stabilisation des Changes and the EEA, see Alain Naef, 'Central Bank Reserves during the Bretton Woods Period: New Data from France, the UK and Switzerland' (SocArXiv, 18 January 2021), <https://doi.org/10.31235/osf.io/he7gx>; For more details on the US equivalent, see Bordo, Humpage and Schwartz, *Strained Relations*.

⁶² 'Ledgers of the Exchange Equalisation Account, 1947–70', London, Archive of the Bank of England, 2A141/1–17.

⁶³ Capie presents some monthly and quarterly data on actual reserves, see Capie, *The Bank of England*, 389–93.

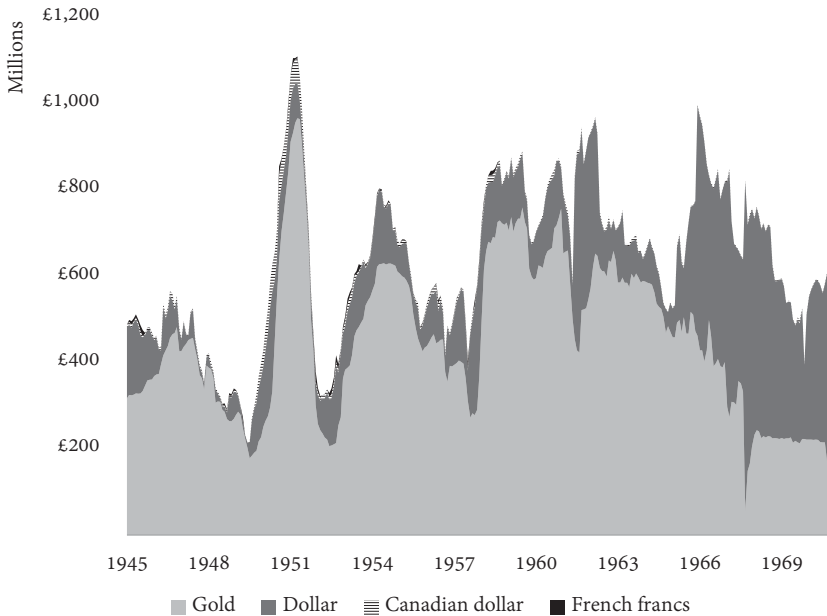


Figure 4.5. EEA gold, US dollar, Canadian dollar and French franc reserves
 Source: 'General Ledger of the EEA', 1945–49 and 1949–52, London, Archives of the Bank of England, 2a141/6–2a141/17.

reserves at daily frequency. This information was unknown to contemporaries. It reveals manipulation of the reserves position or window dressing.⁶⁴ Daily data make it possible to track the extent of daily window dressing operations, as explained in Chapter 11.

As the Bank was executing orders on behalf of the Treasury, it kept ledgers on all EEA activity. The daily data span October 1939 to March 1971. Previous studies calculate reserve levels from proximate sources or use monthly or quarterly data.⁶⁵ They have not used EEA ledgers, which offer more accurate daily figures. Figure 4.5 offers a monthly overview of the EEA's largest holdings, namely gold, US dollars, Canadian dollars and French francs. Throughout the period, gold and US dollars were the account's main reserves.

⁶⁴ For more on window dressing and for open access reserve data, see Naef, 'Dirty Float or Clean Intervention?'; Naef, 'Central Bank Reserves during the Bretton Woods Period'.

⁶⁵ For example Bordo, MacDonald and Oliver, 'Sterling in Crisis'; Cairncross and Eichengreen, *Sterling in Decline*.

EEA reserves are a poor proxy of the Bank's foreign exchange operations. The EEA was used for more than just intervention. The Treasury used it for all its foreign exchange needs. The Bank used it for customer transactions. For example, say the Bank of Italy asked the Bank of England to buy \$100 million on its behalf to be stored at the Bank. Before or after the transaction, the Bank of Italy would transfer dollars or sterling to the EEA. Within the course of a few days, the EEA would proceed to execute the \$100 million gold purchase. It would spread the purchase over a few days, to avoid moving the market. This means that such daily movements in the EEA accounts of both the US dollar and gold would only reflect customer business but not the intervention. John Fforde stresses that estimating changes in EEA reserves was not a good proxy for market intervention. He argues that 'foreign exchange ordered by Bank customers, mainly central banks and HMG, was usually supplied directly by the EEA and not put through the market'.⁶⁶

⁶⁶ Fforde, *The Bank of England and Public Policy*, 416.