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Zombie International Currency: The Pound Sterling 1945-1973

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Preliminary version

Abstract: This paper provides new evidence on the decline of sterling as an international currency, focusing on its role as foreign exchange reserve asset under the Bretton Woods era. Using a unique new dataset on the composition of foreign exchange reserves of central banks, I show that the shift away from the sterling occurred earlier than conventionally supposed for the countries not belonging to the sterling area. The use of sterling has been described as freely chosen, imposed by the Bank of England or negotiated. I argue that the sterling area was a captive market as the Bank of England used capital controls, commercial threats and economic sanctions against sterling area countries to limit the divestments of their sterling assets. This management of the decline of sterling benefited mostly Britain and the City of London but represented a cost for sterling area countries and the international monetary system.

Keywords: Monetary and financial history; Foreign exchnage; International monetary system
JEL Code: N24, F31, E58.

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In the 20th century, international money markets witnessed a major evolution: the decline of sterling as the international currency. This shift from sterling to dollar started after WWI and was complete by 1973. This paper investigates how the British authorities managed the decline of sterling as an international reserve currency despite the poor economic fundamentals of the United Kingdom after 1945.

Earlier contributions argued that, after 1945, sterling lost gradually its status but remained an important reserve currency, especially in the sterling area. Build in 1939, the sterling area was a monetary zone, covering most of Commonwealth, British Empire, and newly independent colonies. The area was protected by exchange and capital controls and members maintained a constant exchange rate with sterling. Interpretations diverge whether sterling area countries followed their best interest, protected a collective interest or were constrained by exchange controls and moral suasion from the British authorities.

This paper focuses on the decline of sterling in relation to sterling holders in Europe and in the sterling area and supports the "constraints" hypothesis. To conduct my analysis of the decline of sterling, I constructed a new dataset of foreign exchange reserves at country level for both Western Europe central banks and the sterling area from various archival sources. I first contribute to the literature by showing that Western European countries did not consider the sterling as a reserve currency after WWII. Second, I explain why the sterling played a role as reserve currency only for countries belonging to the sterling area. My third contribution lies in an in-depth analysis of Britain enforcement mechanisms to force sterling area members to support sterling or to discourage liquidation of sterling holding. I precisely document systemic threats issued by British authorities on sterling holders and complement the case studies of sterling area countries existing in the literature.

Using both econometrics analysis and historical narratives, I test the different motivations for holdings sterling and demonstrate that economic theory main drivers cannot explain the distribution of sterling reserves. I provide a new narrative on the decline of sterling: from 1945, sterling was a zombie international currency as in the aftermath of WWII, the Bank of England was virtually insolvent but sterling was maintained by blocking sterling liabilities. Limited convertibility persisted in the 1960s in the sterling area which functioned as a captive market. Sterling area members could not freely diversify their foreign exchange reserves as British authorities systematically threatened to apply commercial sanctions and freeze of assets those who would risk doing it without their approval. British authorities used international blackmailing, propaganda and economic sanctions to limit the decline of sterling, which distorted the international distribution of sterling.

The paper is organized as follows: the first section provides a review of the literature. The second section presents the data and the sources. In the third section, I present the new perspective on the use of sterling from my new dataset and I test if traditional demand factors for foreign exchange can explain it. In the fourth section, I describe how the sterling area was a captive market for sterling and how the British authorities resort to commercial and capital controls threats to control it. In the fifth section, I assess the international gains and losses incurred from the British management of the decline of sterling. The last section offers summary and concluding remarks.

1. Literature review

Scholars agree on the historical role of sterling pre-WWI and post 1971: Sterling was the key currency of 19th century international system[3] and its collapse with the 1967 devaluation spurred speculations against the dollar price of gold[4]. Sterling never recovered the end of the Bretton Woods system.[5] However the question of the role of sterling on international money markets between the end of WWI and the end of the Bretton Woods system fuels a vast academic literature.

The decline of sterling and its management by British authorities have been approached through different lenses. Scholars debate about the best variable to use to measure the decline of the international role of sterling. Some use the currency composition of international reserves in the long run. This first perspective relies on data produced by the IMF based on confidential declarations of the member countries of their reserves. Eichengreen et al. (2014) rely on this dataset and observe that, in the aftermath of World War II, sterling accounted for more than 80 per cent of foreign exchange reserves, was surpassed by the dollar in the mid-fifties and decreased to less 10% of international reserves in the mid-seventies. Using the same lens, Schenk (2010) argues “it took ten years following the end of the war (and a 30 per cent devaluation of the pound) before the share of dollar reserves exceeded that of sterling”[6].

[3] De Cecco, (1974), Flandeau & Jobst, (2005)
[4] Schenk (2010), Bordo et al. (2019)
[5] Chitu et al. (2014)
[6] Schenk (2010), p. 30.

A second perspective on the decline of sterling focuses on the fundamental drivers of international currencies. Eichengreen & Flandreau (2008, 2010) use the composition of central bank reserves with country-level observations from central banks archives and the lens of the provision of trade credit; they concluded that the shift to the dollar occurred not in the decade following WWII but during and immediately after World War I.[7]

A third and perhaps reconciling perspective on the shift from sterling to dollar as main international currency emphasize the regional role of sterling. Cohen (1971) argues that "relative to the dollar it is only within the sterling area that the pound is used really often. Outside the sterling area the currency is just one of several international moneys; inside the sterling area, on the other hand, it predominates. […] sterling is most definitely just a regional currency."[8] This is coherent with arguments by Schenk (2010, 2013) stating that "sterling remained the only major reserve currency other than the dollar"[9] between 1950 and 1962 but that, for the 1950-1970 period, "most central banks outside the sterling area had divested themselves of their sterling reserves and accumulated US dollar instead. Conversely, members of the sterling area continued to peg their exchange rates to sterling and to hold most of their reserves in sterling."[10] The regional dimension of sterling is also recognized by Eichengreen et al. (2018) and Eichengreen (2018) who state that "sterling was more a regional than an international currency, where the relevant region was the Commonwealth and Empire, newly independent former colonies with an inheritance of sterling pegs and reserves, and countries where Britain had troops on the ground and where its oil companies had an extensive presence (Iran and Kuwait)"[11] and that "postwar sterling balances were even larger, and by a considerable margin, than dollar balances in foreign hands, Britain's allies having accumulated them in payment for wartime goods and services rendered. But, in any meaningful economic sense, this image was an illusion"[12] based on UK regulation limiting the conversion of sterling balances in dollar.

There is no consensus regarding the motivations of the different actors. Cohen (1971) argues that within the sterling area, "the principal of voluntarism is key: members have always been

[7] Their conclusion is supported by Chinn & Frankel (2008) and Frankel (2012) who also based their approach on the determinants of international reserve currencies.
[8] Cohen (1971), p. 55.
[9] Schenk (2010) p. 84.
[10] Schenk (2013), p. 184.
[11] Eichengreen et al. (2018), chap. 8, p. 152.
[12] Eichengreen (2018)

free to leave, others to join."[13] While the functioning of the area relied on members holding their external reserves largely if not wholly in the form of sterling balances in London, Cohen describes that members started to diversify their reserves after 1961 when they recognized that their trade, financial and even political connections with Britain were weakening.[14] According to Eichengreen (2010), trade or financial network externalities within the area were not the primary motives for sterling holdings which were rather driven by "loyalty by members of the Commonwealth and by British colonies with limited choice in the matter".[15]

Contradicting with the arguments of loyalty or voluntarism, Strange (1971) argues that postwar sterling can be characterized as a *Negotiated Currency*, i.e. a reserve currency whose issuing country offers "special inducements – political, military, economic and financial – to the holders"[16]. She illustrates her points with the examples of Malaysia, Kuwait and Hong Kong in the 1960s which received a military guarantee from Britain and Australia which received important investments and commercial protection of key political groups such as Queensland sugar producers. Similarly, Schenk & Singleton (2015) described that "perceived national self-interest rather than loyalty"[17] explains sterling holdings of Australia and New-Zealand.

Kennedy (2018), studying the case of Australia rejected this interpretation and argued that "Australia did not act as a free portfolio manager but freely chose to follow the rules of the sterling area, including reserve pooling, rather than diversifying".[18] Henshaw (1996) reaches a similar conclusion for the case of South Africa, showing that British authorities offered only a limited range of choices to the South African government. In the same line, Eichengreen at al. (2018) conclude that "the British government used capital controls, moral suasion and geopolitical influence to manage [the decline of sterling]"[19].

Schenk (2010) also pointed the crucial role of the support received by British authorities from non-sterling area countries, to slow the decline of sterling, stating that "sterling's role was prolonged both by the structure of the international monetary system and by collective global interest in its continuation rather than by loyalty to a former imperial leader"[20]. Her views are summed up is in Schenk (2018) where she argues that the sterling area system "operated to

[13] Cohen (1971) p.70.
[14] Cohen (1971) p. 68-76.
[15] Eichengreen (2010), p.134.
[16] Strange (1971), p. 17.
[17] Schenk & Singleton (2015), p. 1160.
[18] Kennedy (2018), p. 25.
[19] Eichengreen et al. (2018)
[20] Schenk (2010), p.30.

support collective interests of its members in the stability of sterling and freer trade and investment flows, underpinned by carrots and sticks."[21] The advantage of being in the system was the access to the London capital market while leaving the system meant inconvertibility of sterling assets.

A limitation of the existing literature is that only aggregated data or limited samples of overseas sterling area countries are used. Another limitation is the lack of in-depth analyses of the disequilibrium of power within the sterling area between the British authorities and the rest of the members.

2. Data and methods:

International currencies fulfill different roles. Cohen (1971) and Kenen (1983) transposed the classical theory of the three functions of money, store of value, medium of exchange and unit of account for international currencies, to international reserves, vehicle currency and anchor for exchange regime. In this paper, I focus on the reserve role of sterling, studying the decision of central banks to hold their reserves in the form of sterling. This approach is standard in the historical literature[22] on international currencies but I am the first to use it with country-level data for the Bretton Woods era instead of using aggregated data provided on overall levels of reserves held in sterling in the world or conducting case studies on one or two sterling holders only. I reconstructed sterling holdings from archival sources.

Under the Bretton Woods era, similarly to previous periods, "foreign exchange" consisted mainly of foreign deposits, foreign bills and first-class government securities.[23] Because of data sensitivity, neither central banks nor governments published the decomposition of foreign exchange reserves. The volume of the aggregate portfolio was communicated by national monetary authorities to international organizations such as the IMF, which reported such data in their publications, notably the *International Financial Statistics*.[24] In this publication, the IMF disclosed holdings of gold and foreign exchange of central banks and other official institutions at country level. In the IMF annual report, estimations of the composition of world foreign exchange reserves were also published, based on dollar and sterling liabilities reported

[21] Schenk (2018), p.6
[22] See notably Chinn & Frankel (2008), Eichengreen & Flandreau (2009).
[23] See Eichengreen & Flandreau (2009) for a perspective on earlier periods.
[24] The International Financial Statistics is a monthly publication of the IMF which started in January 1948.

by US and UK banks respectively. Based on this data, Schenk & Singleton (2015) and Eichengreen et al. (2014) have described a progressive decline of the sterling.

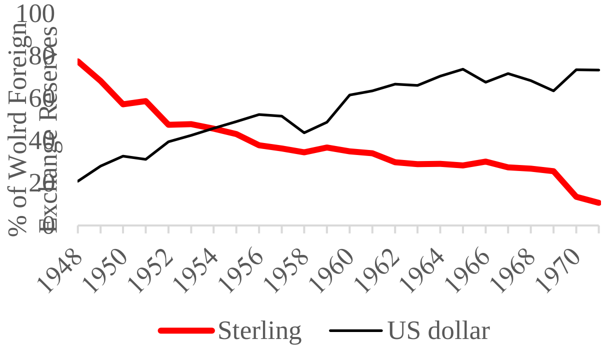

Figure 1: Sterling share of World Foreign Exchange Reserves, compared the US dollars. (1948-1971, %).

Source: Eichengreen et al. (2014), share of globally disclosed foreign exchange rate reserves, current exchange rate.

Working with IMF data does not allow to observe the currency composition of foreign exchange reserves at country level and erase the difference in countries' choices on their reserves. To analyze the international use of sterling as reserve currency, I study central banks' reserves of both European countries and sterling area countries. I reconstruct the foreign exchange reserves of seven western European countries using their central banks' archives for the period 1950-1970, the core Bretton Wood era. I collect the data from handwritten ledgers or typewritten accounting forms retrieved from their archives. Table 1 provides a description of the archives consulted and the period considered.

Table 1: Coverage

Country	Source	Period
Austria	Oesterreichische Nationalbank	1950 - 1970
France	Banque de France & Fonds de Stabilisation des Changes	1950 - 1970
Germany	Bundesbank	1952 - 1970
Norway	Norges Bank	1950 – 1970
Portugal	Banco de Portugal	1950 – 1970
Switzerland	Banque Nationale Suisse	1950 – 1970
United Kingdom	Exchange Equalization Account	1950 – 1970
Belgium	Banque de Belgique	1950 – 1970

Using documentation from the BIS archives, the Bank of England Archives and Her Majesty's Treasury Archives, I also reconstruct the composition of the official reserves of the main countries of the sterling area and measure the share of sterling in these countries' reserves. Because sterling liabilities were a concern of these institutions, reports were regularly made on the volume of such liabilities. My sample consists of 32 sterling area countries[25] whose reserves represented on average 73% of all sterling holdings of the sterling area.

I investigate the motives for the holdings of sterling as international reserve currency using both econometric analysis and historical narratives built from archival research from British, Irish, IMF and BIS archives as well as secondary literature. I conduct comparative case studies to analyze the management of sterling holdings of sterling area countries, mainly from the point of view of British authorities.

3. The use of sterling as reserve currency

2.1. A new perspective from country level data

[25] Missing countries include the ones from the Caribbean and English Islands.

Sterling holdings were composed by UK Treasury bills and government securities as well as liquid deposits at the Bank of England and other UK banks. In the mid-fifties, most of the balances were held either as liquid deposit or 0-5 years securities.[26]

Using the sources described above, I compare the share of the sterling within official reserves of the sterling area countries and western countries, as displayed in figure 2.

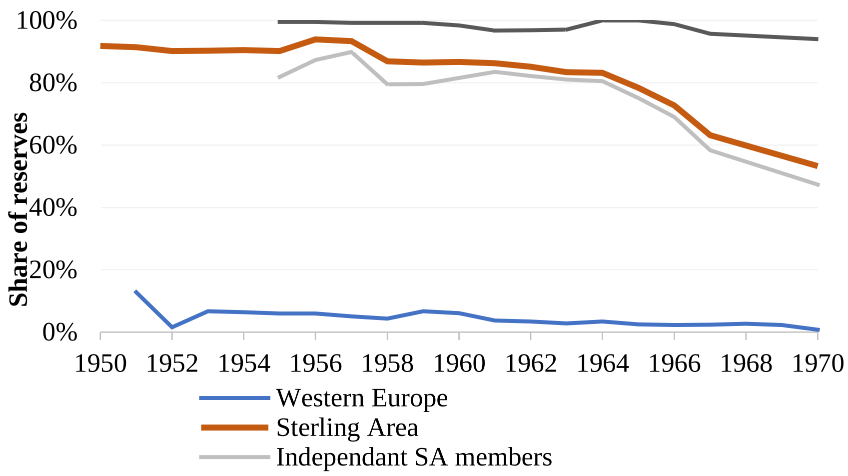

Figure 2: Shares of sterling in central banks' reserves (gold + foreign exchange)

Reading: In 1955, sterling represented 89% of the official reserves of Overseas Sterling Area and 6% of the official reserves of Western Europe countries.

Note: Western Europe covers the central banks of Austria, Belgium, France, Germany, Switzerland, Portugal and Norway. Sterling Area covers Ireland, Australia, New Zealand, India, Brunei, Ceylon, Ghana, Hong Kong, Jordan, Kenya, Kuwait, Libya, Malawi, Malaysia, Nigeria, Pakistan, Sierra, Leone, Singapore, Tanzania, Uganda, Zambia, Bahrain, Qatar, Abu Dhabi and Dubaï.

Source: see text.

Figure 2 shows that sterling represented less than 10% of the reserves of Western Europe countries already by 1952, while it accounted for more than 60% of sterling area reserves until 1967. This contrasts with the view of an ongoing decline in its relative position in the 50s and 60s. Outside of the sterling area, the shift away from sterling was already completed by the early fifties. Even though less spectacular, the decline also occurred within the sterling area. Whereas sterling represented 90% of reserves at the beginning of our sample, it lost more or less 30% in just 30 years. Breaking down between independent members of the sterling area and colonies shows that the diversification away from sterling occurred only in independent

[26] See *Length of maturity of sterling area sterling balances, 1954–6 (£m)* in Schenk (1994), p. 43.

members' portfolios. This suggests that had they been free to choose colonies would have divested from sterling too.

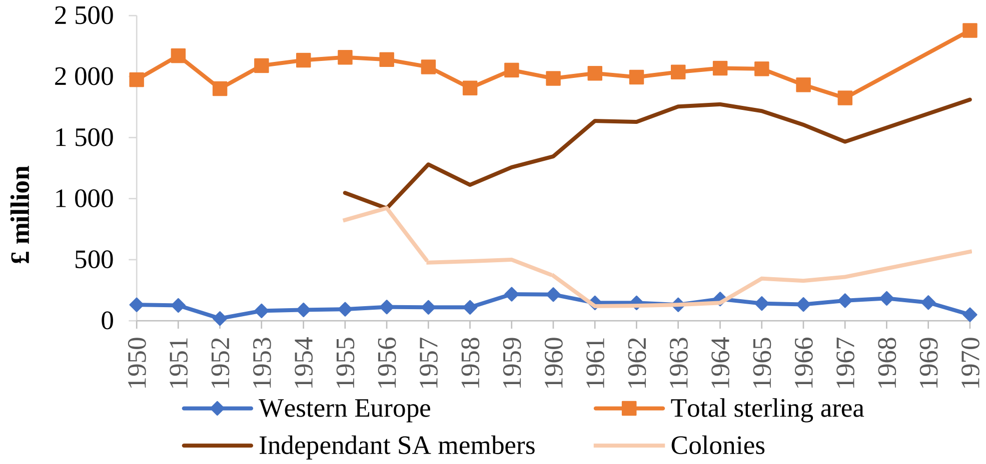

Figure 3: Volume of sterling holdings in central banks' reserves.

Reading: In 1955, sterling holdings amounted at £2159 million in official reserves of Overseas Sterling Area and £95 million in the official reserves of Western Europe countries.

Note: Western Europe covers the central banks of Austria, Belgium, France, Germany, Switzerland, Portugal and Norway. Sterling Area covers Ireland, Australia, New Zealand, India, Brunei, Ceylon, Ghana, Hong Kong, Jordan, Kenya, Kuwait, Libya, Malawi, Malaysia, Nigeria, Pakistan, Sierra, Leone, Singapore, Tanzania, Uganda, Zambia, Bahrain, Qatar, Abu Dhabi and Dubaï.

Source: see text.

Figure 3 displays the distribution of the volume of sterling held in Western Europe central banks and in the sterling area. Sterling held in Western Europe central banks represented on average 6% of sterling held within the sterling area. The volume of balances held in the sterling area was remarkably stable whereas the share of sterling as foreign exchange decreased, indicating that sterling area countries diversified their portfolio by accumulating new reserves and not converting their sterling holdings into gold or other foreign exchange reserves. The strong decrease of volume held in colonies can be explained by the decreasing number of colonies across the period.

This is coherent with the fact that sterling didn't play anymore a pivotal role in the international monetary system as, according to the Bretton Wood agreements of 1944, the US dollar was the only key currency of the system, convertible to gold at a fixed parity while currencies of other members guaranteed the convertibility of their currency in dollar only. This pyramidal system, with dollar and gold at his center, left not much room for an international currency role for the sterling. However, the sterling played an international reserve function for sterling area countries until the mid-1970s as it represented more than 50% of the reserves on average, for all the period. This new data confirms the interpretation of a regional role of sterling as reserve currency in the postwar period.

2.2.A Zombie International currency

The international demand for sterling as reserve currency is closely linked to the state of the British economy. According to Cohen (1971) reserve currency should have the following characteristics: convertibility, credibility in the fixed-parity, liquidity (high ratio of reserves/liabilities) and surplus on the current account of the balance of payments of the issuing country. Similarly, the recent literature identifies two families of factors explaining the use of a currency as foreign exchange: macroeconomic performance factors guaranteeing the credibility of the issuer country - such as monetary stability, fiscal balance and economic performance of the issuing country, and frictions factors such as inventory costs, information coasts and bilateral trade.[27] If the United Kingdom had strong macroeconomic fundamentals in the 19th century, the course of the WWII severely weakened Britain's position, in particular turning it from the world's largest creditor into the world's largest debtor.[28]

Previous macroeconomic and historical studies such as Bean & Crafts (1995) or Broadberry & Crafts (1996) pointed the difficulties of the UK economy during the Bretton Woods era. I review here the low performances of indicators which matters most for the issuance of a strong international currency. The United Kingdom stopped being the leading economy in Western Europe in the late forties and its GDP per capita grew by 7% on average over the period 1950-1970, slower than most Western countries which experienced an average growth of 11%[29]. Although the UK government progressively succeeded in reducing the debt/revenue ratio from more than 700% after the war to 171% in 1971, it experienced a low surplus of 2% of GDP[30] on average between 1950 and 1970. The postwar period was also characterized by the breakdown of the British Empire. The Suez crisis revealed how tensions on sterling overvaluation limited British military expenses needed to defend Britain's world role.[31] These difficulties along with mild economic performances were badly perceived by the markets, as

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[27] Flandreau, Jobst (2009)
[28] May (2013), p.30
[29] Number calculated on the a sample covering Austria, Belgium, Switzerland, France, Italy and West Germany. Source: CEPII, *Tradehist*.
[30] Source: A millennium of macroeconomic data for the UK, Bank of England.
[31] Cain & Hopkins (2016), p.677

reflected in the strong increase in yields on British government bonds from 3% to 9% over the period 1950-1970 .

The United Kingdom was also a declining trade power during this period: even if its exports increased during the period, its share in the World Trade was decreasing steadily from more than 10% in 1950 to 6.2% in 1970. It ran a persistent trade deficit, especially in the sixties, as seen figure 4 and repetitively experienced current account deficit, with deficits appearing more than 50% of the years between 1945 and 1971 and no stable surplus ever appeared in this period.

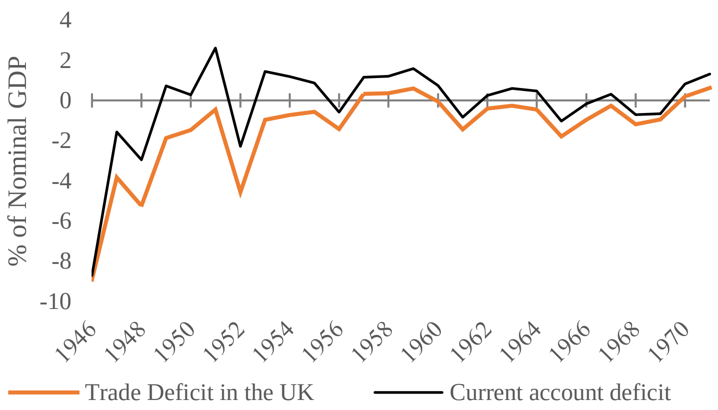

Figure 4: Trade & current account deficit in the United Kingdom,

Note: Annual, Not Seasonally Adjusted, in % of nominal GDP

Source: A millennium of macroeconomic data for the UK, Bank of England

In terms of monetary stability, the Bank of England failed to maintain a fixed exchange rate with the dollar and devaluated twice, in 1949 and 1967 but it resisted better to inflation than continental Europe, with an average annual rate of 4% between 1950 and 1970. However, the sterling was not a very liquid asset as several exchange controls were implemented during the period. These controls aimed at protecting the gold foreign exchange reserves of the Bank of England which were very limited. The Bank resorted to window dressing of its foreign exchange reserves in the sixties[32] by organizing very short-term swaps with the Federal Reserve just before reserve publications in the press and in its Quarterly Bulletin to artificially inflate its reserves. Figure 5 displays these manipulations. The Bank declared to the Treasury up to 5 billion window dressing in May 1968 to hide reserve losses[33].

[32] This is notably described by Capie (2010) and Naef (2018).
[33] Naef (2018), p.275.

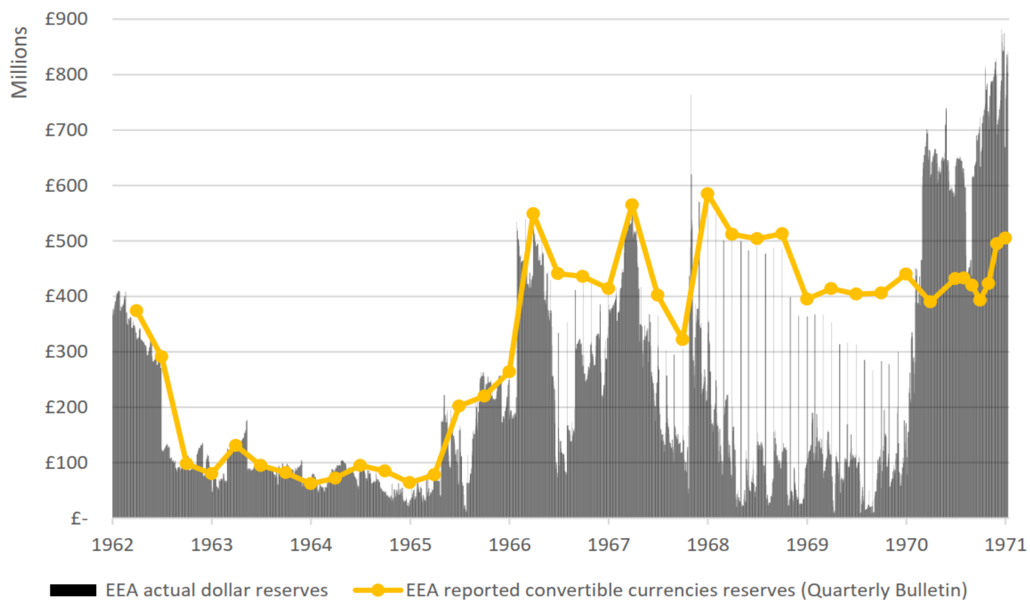

Figure 5: Published Exchange Equalization Account (EEA) convertible currency reserves vs. actual dollar reserves held at the EEA

Source: Naef (2018), p.276.

The Bank of England also increased significantly its interest rate throughout the period, which can be interpreted in this context as difficulties to maintain investors' interest in sterling.[34]

The indicators point toward high risks of holding sterling as a reserve currency as mild macroeconomic performances and low British reserves supported the hypothesis of a devaluation[35]. Sterling and the UK did not display the fundamental characteristics of international reserve currency. This can explain the low share of sterling in European countries' reserves. But the regional role of sterling within the sterling area cannot be explained by these indicators.

2.3.Bilateral drivers of the demand for sterling: an empirical investigation

I test if the difference of sterling holdings between the Sterling Area and Western Europe countries can be explained by the difference of trade with the UK. I test equation (1) in which the share of sterling holdings in a country's reserve portfolio is explained by the intensity of bilateral trade with the UK, measured by an index of trade intensity (see appendix 1) and the

[34] But the relation between interest rate and demand for foreign currencies is non-linear, for a discussion see Flandreau & Jobst (2009).
[35] For a discussion on macroeconomics indicators predicting currency crisis, see Budsayaplakorn, Dibooglu, & Mathur (2010)

size of the holding economy measured by its nominal GDP. I also test for membership in the sterling area. I match my data on foreign exchange holdings with the Historical Bilateral Trade and Gravity Dataset (TRADHIST) that was put together by Fouquin and Hugot (2017) which gathers bilateral nominal trade flows, country-level aggregate nominal exports and imports, and nominal GDPs. I use the dummy for being a member of the sterling area to create an interaction with the trade intensity and the GDP and observe the specificity of the relation of sterling area members with sterling.

$$
\begin{aligned}
&(£share_{i,t}) = b_1 sterling\ area\ membership_{i,t} + b_2(Trade_{i,t}) + b_3(GDP_{i,t}) + \\
&b_4\left(sterling\ area\ membership_{i,t} * (Trade_{i,t})\right) + \\
&b_5\left(sterling\ area\ membership_{i,t} * (GDP_{i,t})\right) + controls_{i,t} + e_i + \epsilon
\end{aligned} \tag{1}
$$

As using trade and GDP may rise endogeneity problem, I instrument GDP and trade intensity by the usual gravity model instruments of the product of the populations and weighted distance. Table 2 displays the results of such analysis for a panel of 29 countries, 7 European countries 27 sterling area countries over the period 1945-1971. Column 1 reports parameter estimates for a baseline panel regression, column 2 includes an interaction for sterling area membership. Columns 3 and 4 show the results of the IV estimations.

Table 2: Factors explaining the share of sterling in portfolios of reserves

	(1) Baseline Panel	(2) Panel	(3) Baseline IV	(4) IV
trade intensity w/UK	0.01*	0.05***	0.49***	0.55**
	0.08	0.00	0.00	0.04
GDP	0.00	0.00	0.01	0.02**
	0.23	0.85	0.67	0.04
Sterling area membership		0.76***		1.03***
		0.00		0.00
trade intensity * SA membership		-0.04***		-0.55**
		0.00		0.05
GDP * SA membership		-0.01***		-0.02***
		0.00		0.00
Controls				
Not a colony	Yes	Yes	Yes	Yes
FE				
Year	Yes	Yes	Yes	Yes
Country	Yes	No	No	No
R^2	0.939	0.871	-1.031	0.896
Observations	427	427	406	406

Note: The dependent variable is the log share of sterling in reserves of monetary authorities of sterling area countries. Trade and GDP are also used in logs. The interactions of sterling area membership with the two *control variables were included. All specifications have robust standard errors.*

While the theory of international reserve currency defines trade as a key determinant of reserves holding, sterling holdings in the sterling area members compared to Western Europe countries were less reactive to variations in the intensity of bilateral trade and more to economic development of the holding country. Economic growth was negatively correlated with sterling shares of reserves showing that a growing size of a sterling area country was correlated with a diversification of their reserves. Being a sterling area member had an important impact on the share of sterling, independently of the size of the economy or trade link with the UK, notably due to institutional constraints imposed on the portfolio of sterling area countries. Similarly to the market distortion created by the 'colonial effect' on borrowing costs described by Accominotti et al. (2011), there was a 'sterling area effect' in the international distribution of sterling holdings. I argue that the mechanism at play behind this effect was the exchange controls surrounding the area and the fact that the sterling area was not a free market in which one could enter and leave voluntarily. The following section details this argument.

4. The sterling area as a captive market

Sterling and the British institutions occupied a central place in the area: sterling was used for the settlements of the trade and other transactions. Member countries maintained a constant exchange rate between their currency and sterling. In British policymakers' words, the sterling area worked similarly to Bentham's panopticon[36], a central authority controlling well-kept ones who would surrender their earnings:

> *At the end of the war therefore, the sterling area consisted of a named list of countries, with a strong exchange control fence around them, who surrendered their currency earnings, pooled their reserves in sterling, had complete freedom for all payments within the area and limited convertibility outside; the whole system subject to control at the center.*[37]

British authorities fought against diversification project in the sterling area to keep an undisputed control on the management of the international role of sterling:

> *All primary producers are wedded to the idea of <u>diversifying</u> their economics: the principle of <u>spreading risks</u> in reserves has a natural attraction to them. This motive is*

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[36] Bentham (1791)

[37] The Sterling Area", S.W.P. note, 29 July 1966, BoE Archives, OV44/33.

> *of course incomparably stronger when they had genuine fears (however irrational) about the future of sterling. Moreover memories are long: occasions in the past, in the 1930's and in the 1947-8 when we denied R.S.A. countries credit or sharply restricted their access to the central reserves still rankle. This country, having so incomparably the longest trade of any sterling area member, cannot escape the consequence that the other members rightly feel sterling to be dependent mainly on our policies, and outside <u>their</u> control.*[38]

From 1947 to 1972, exchange controls between the sterling area and the rest of the world were in place, based on the Exchange Control Act of 1947[39]. The objective of the exchange control was to conserve UK's gold and foreign currency assets and to protect and assist the UK balance of payments so any action which could reduce the UK's gold and foreign exchange currency asses required consent from the UK Treasury, except for members of the sterling area.

For a resident of a country outside the Sterling Area, permissions would be needed from the Treasury[40] for each of the following commercial transactions[41]:

- Receive a payment/borrow from investors in the UK and British investors, even though a company located in the Area,
- Issue and nominate securities registered in the UK,
- Transfer securities or coupons registered in the UK,
- Export securities to the UK,
- Import from the UK notes, Treasury bills, postal orders, gold, securities, policies of assurance or bills of exchange denominated in terms of a currency other than sterling,
- Become a shareholder of a UK company;
- Buy a UK company;
- Lend an Area resident with any currency except sterling already held in the UK

[38] Independent Gold and Dollar Reserves, 26th October 1955. TNA T236/4691
[39] Exchange control Act, 1947, "In December 1958 the advent of the formal current account convertibility of sterling to the US dollar pertained only to residents of countries outside the United Kingdom and the sterling area. The distinction between the sterling area and the rest of the world persisted until June 1972", Schenk (2010), p.22.
[40] De facto, most of the Treasury's responsibilities under the Act were delegated to the Bank of England, who delegated some responsibilities to banks.
[41] Similar controls applied to private transactions, except for small amounts.

Failing to obtain permission from the Treasury for any of these operations, meant that the sum payable or to be credited would end up into a blocked account. Offenses to this exchange control act could be punished by imprisonment and forfeiting of concerned properties.

The great majority of the sterling area countries were also members of the Commonwealth which, as such, granted preferential treatment by the UK.[42] The Commonwealth preference dated from the interwar: Britain raised its tariffs, including a general 10% tariff through the Import Duties Act of 1932 but granted exceptions to colonies and Dominions. This trade policy had reinforced the trade intensities between the UK and the Empire, which accounted for less than 30% in the late twenties and around 45% in the late thirties.[43] The postwar negotiations and the institution of the GATT prohibited new trade preferences in the Commonwealth, but existing preferences remained in place until after 1973, when Britain joined the EEC.[44]

Leaving the Sterling Area implied that capital and exchange control would be imposed on the leaving country. It also threatened participation in the Commonwealth. Departing countries would thus be facing new tariffs on their exchange with the UK.

To make these restrictions acceptable, the sterling area was promoted by the British authorities as an international payment system aiming at simplifying trade and payments for its member countries.[45] The Bank of England was presented as the banker of the Area, it organized multilateral payments and held gold and foreign exchange reserves. Members of the area were theoretically allowed to use their sterling balances to draw on the UK's gold and dollar reserves to settle payment with a country outside of the Area but were not allowed to build up independent reserves in foreign currencies and gold[46].

Members of the Sterling Area were supposedly enjoying free flow of private capital from the UK as well as access to the London market for private and public purposes. Government loans were reserved for Governments of Sterling Commonwealth. The British authorities advocated that the membership of the Sterling Area allowed governments to borrow on satisfactory terms.

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[42] Bank for International Settlements. « The Sterling Area », January 1953. Box 671672200, Archives of the Federal Reserve Bank of New York.
[43] See Bromhead et al. (2017)
[44] Cain & Hopkins, (2016), p. 678
[45] *The advantages of membership of the Sterling Area*, Confidential, T.L. Rowan 2nd October 1958 TNA T236/5362
[46] At the exception of gold producing countries such as South Africa and Australia, see Kennedy (2018) & Henshaw (1996)

Banks and other financial institutions of member countries could freely access the London money market to meet short-term liquidity needs. [47]

But from 1952, British authorities conditioned investments in the Commonwealth to projects that would "contribute to the improvement of the sterling area's balance of payments with the rest of the world"[48] and thus decreasing the pressure on the UK reserves. This "criteria" also applied to London Market borrowing by governments and private agents, which were reviewed by the UK government.

When many colonies were moving toward independence, causing fears on the cohesion of the area, the Treasury considered publicizing the advantages of sterling area membership, so a draft on "The Advantages of Membership of the Sterling Area"[49] was put together[50], stressing that the following points:

> *All members co-operate to maintain the strength of sterling. [...] [Sterling] is acceptable universally as method of payment for trade and it is backed by [...] joint stock banks with their overseas branches and merchant banks and houses; the commodity markets and exchanges; the "bill" drawn on London with its attendant bill and discount markets, and finally the London capital market.*
> *All these help to foster trade and development worldwide. [...]*
> *Since the war Commonwealth sterling governments have received from U.K private investors £265 million through loans raised on the London Market.*

They also emphasized the surviving of the Commonwealth preference "it is […] doubtful whether Commonwealth preference would survive […] if the sterling area did not exist", and underlined that the system of pooling of reserves allowed members to avoid to hold interest free gold reserves and limited a waste of resource in building national reserves. They argued that "the U.K. has never restricted the freedom of its own residents to transfer their own capital

[47] Taylor, A.W. Letter to D. Rickett. « 1. The question put by Sir Leslie Rowan... », 27 September 1957. T236/5362. The National Archives, (TNA) Kew.

[48] "Commonwealth development; and United Kingdom assistance to the Commonwealth and elsewhere", p.2-7, T.2665-54. BoE Archives, OV44/53.

[49] *The advantages of membership of the Sterling Area*, Confidential, T.L. Rowan 2nd October 1958 TNA T236/5362

[50] This pamphlet was however never circulated as it was considered to be technicalities mattering only to ministers, officials and academics who had other resources on the sterling area while it would be a "waste of time to try" convince the "uncommitted" who were still believing in the "progress [in] the Soviet Bloc". Source: Letter to Leslie Rowan, 21st August, 1958. TNA T236/5362

without to any limit to any part of the Sterling Area; on the other hand specific sanction is required for any transfers to non-Sterling Area countries" and that winding up the Sterling Area would "be a major disruption of world trade" and create liquidity difficulties due the scarcity of gold and dollars.

To sum up, access to the City and the London capital market as well as Commonwealth preference and sterling as medium of exchange were the advantages put forward, at the condition of cooperation – reserve pooling, and respect of the exchange controls.

5. Exit, voice, loyalty: Strategies to cope with the constraint of the Sterling Area

Maintaining balances in the sterling area became harder with the increase in the number of independent countries within the sterling area. In the fifties, the British authorities supported the creation of central banks in colonies and assigned them with the mission of managing carefully the balances.[51] The Bank of England tolerated limited diversification on a case by case basis but discouraged any important drawing from central reserves to convert sterling held in the sterling area. Newly independent territories were eager to diversify their reserves. After their independence in 1947, India and Pakistan rapidly liquidated their reserves through the partition, the payments of British imports and pensions capitalization[52]. Holdings of sterling increased within the formal African colonies and the informal ones in the Far East and the Middle East. African colonies also reduced their sterling holdings when becoming independent, between 1957 (Ghana) and 1965. Figure 6 displays the transfers of sterling holdings within the area.

[51] Cain & Hopkins (2016), p.677. These balances were constituted of private and official liabilities.
[52] Abreu (2017), p.596.

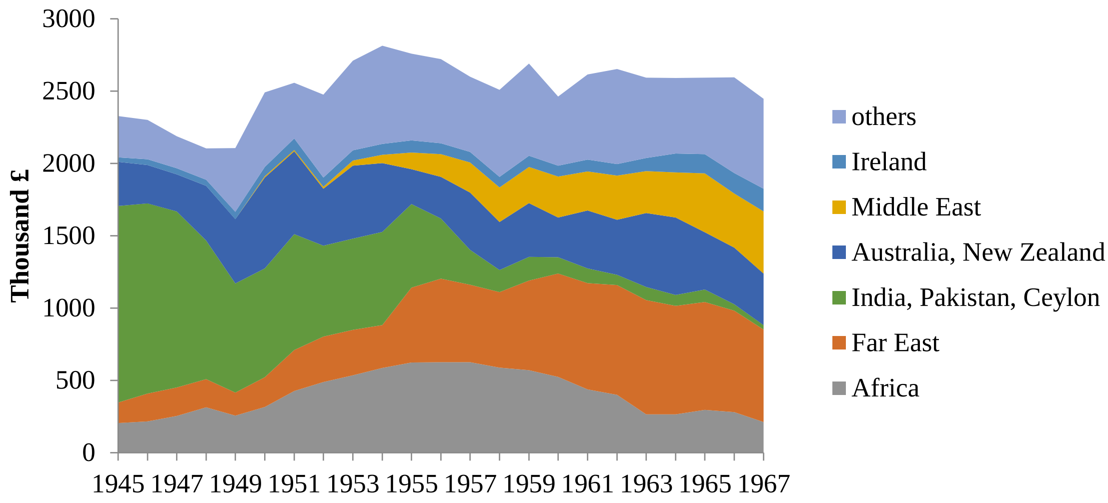

Figure 6 Distribution of official sterling liabilities within the sterling area.

Source: Author's dataset, see text.

I argue that the Bank of England used the institutional framework of the sterling area to systematically threaten countries who showed signs of willingness to reduce their sterling balances and punishing who refused to keep sterling as their main reserve currency. I distinguish three groups of countries: the exiters (Egypt, Iraq, Rhodesia and Burma), the challengers (India, Singapore, Ghana, Bahamas and South Africa) and the trapped ones (Australia, New Zealand, Ireland).

5.1.The Exiters

Four main cases of departure/exclusion from the sterling area, Egypt (1947), Iraq (1959), Rhodesia (1965) and Burma (1966) show the treatment that the British Authorities reserved to Exiters. In each case, I use UK archives to describe how British authorities negotiated bilaterally with the exiting countries the conditions of the departure and managed to avoid 'no deal' exits.

Egypt was the second holder of sterling balances after India: in 1946 it held £440 million, of which £345 million was held by Egyptian public authorities. £400million came from British military expenditures during the war[53]. Egypt asked for reconstitution of a gold reserve of 25% of the circulation of its currency or a partial release of its blocked sterling balances, such demands were qualified of "completely unacceptable"[54] by the British authorities which were

[53] Notes from Report made to the Egyptian government by M. Paul van Zeeland on Egypt's Sterling balances. 19th November 1946 TNA T236/761

[54] Secret minute sheet, 20th January 1947, TNA T236/761

willing to accept only a progressive release of £10 million a year[55] and were asking for cancellation of part of the war debts. Negotiations started in 1946 but by the 2nd of June 1947, British authorities started to consider blocking Egyptian balances:

> *If the negotiations break down, […] we must block the whole account, i.e. not only National Bank holdings, but those of commercial banks and private persons, to bring the whole of Egypt's external trade to a standstill and of course affect confidence in their currency. […] To make blocking effective we should probably have to put Egypt outside the Scheduled territories.*[56]

On the 4th of June, British authorities concluded that exclusion of Egypt from the sterling area was necessary in order to guarantee the rate of liquidation of the Egyptian balances, a top secret note stated that:

> *A major British interest in the forthcoming Sterling Balance negotiations with Egypt will be to secure adequate control to prevent the Egyptians drawing down their balances or realizing their securities faster than the agreed rate. We cannot be content to rely on administrative action by the Egyptians since we have not sufficient confidence in their machine […] as a long-term control, to operate for the duration of the agreement, only the exclusion of Egypt from the Sterling Area (in the Exchange Control meaning of the phrase) will suffice.*[57]

From there, British authorities restated the term of the negotiations with Egypt between leaving the area with or without an agreement on partial release of their holdings, as an agent of the Treasury advised:

> *(1) If there is a real row, we must put them out to make a block effective.*
> *(2) If there is full agreement, Egypt should ask to go out in order to carry out the agreement inforce fact.*
>
> *But between the two may be a debatable area, in which Egypt would plea to stay in. Here we shall need to cajole them out*[58]

[55] Letter to Sir Wilfrid Eady, 15th April 1947 TNA T236/762
[56] Letter to M. Trend, 2nd June, 1947 TNA T236/767
[57] Top secret Treasury, OF.36/10/9 "Egypt and the sterling area" T 898-47, TNA T236/767
[58] Letter to Sir Wilfrid Eady,9th June, 1947. TNA T236/767

From the 12th of June, the UK Treasury decided to circulate a narrative that Egypt would choose to leave the sterling area due to technicalities on the exchange controls as they feared that the news of exclusion could negatively affect ongoing negotiations with the rest of sterling area independent countries:

> *We feel that, if it is possible, it would be a good thing to get a statement from the Egyptians that they want to leave the sterling area. I suggest, therefore, that, before this matter is remitted to the technical committee, you should say something on the following lines in a plenary session:*
>
> > *"The nature of the controls which we shall ask the technical committee to devise will obviously vary depending upon whether Egypt remains inside, or goes outside, the scheduled territories."*[59]

By the 24th of June, it was agreed among negotiators that Egypt would leave the sterling area by agreement and that £5 million would be released i.e. made convertible[60]. The Egyptians government refused the offer and the Chancellor offered a £8 million release or a full blocking, so, on the 28th of June, the Egyptians accepted what was perceived as the last change offer[61]. Egypt was officially forced out of the sterling area on the 15th of July 1947 - along with Sudan who was pegging its currency to the Egyptian pound - after the publication of the Anglo-Egyptian financial agreement of the 30th of June. But when faced with rarefication of their dollar reserved due to the 1947 convertibility crisis[62], the British authorities decided to limit the amount of sterling they would accept to convert at only £1.5 million despite the number of £8 million had been agreed a few weeks before.[63] Egypt faced a dollar shortage but British authorities argued that:

> *Egypt left the sterling area at her own request with effect from 15th of July, 1947. There is therefore no obligation on the United Kingdom to assist her in her dollar difficulties. […] It is clearly out of the question that we should make up in full the Egyptian dollar deficit. Egypt must be asked to accept some further degree of dollar austerity.*[64]

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[59] Letter to Sir Wilfrid Eady, 12th of June 1947, TNA T236/767
[60] Letter to Mr. Trend, 24th of June 1947, TNA T236/767
[61] Untitled note, *The Chancellor of the Exchequer saw the Egyptian Ambassador…* 30th of June, TNA T236/767
[62] See Newton (1984) for more details on this event.
[63] Telegram from Foreign office to Cairo, 18th of August 1947. TNA T236/769
[64] Letter to … Dollars, Egypt, 26 of August, 1947. TNA T236/769

Egyptian authorities tried to argue that their difficulties "had largely arisen because dollar contracts had been entered into in the honest belief that after July 15th 1947 sterling would be freely expendible in the dollar area"[65] but their argument didn't go through. Egypt reached its maximum dollar drawing on the 20th of October and was refrained from drawing more until the end of the year, which resulted in an exchange crisis and planted the seeds for the conflicts on the Suez Canal:

> *The Egyptians are already "scraping the pot" for every source of dollar income and are trying to get their hands upon the Suez Canal Company's earnings from dollar ships.*[66]

The Bank of England maintained a full freeze on Egyptian sterling balances until the next calendar year when another short-term agreement with a limited release of sterling was signed. A long-term agreement on the settlement of sterling balances was reached only in 1951 at the conditions of the British authorities: they would make only £20 million a year convertible[67]. The narrative of a "chosen" departure from the sterling area appeared in the press as *The Economist* wrote on July 1947:

> *Egypt's decision to leave the sterling area is a product of circumstances which are peculiar to her particular case. […] Not should the formal step of Egypt's withdrawal from the sterling area regarded as anything more than a technical change. […] the whole of Egypt's external reserve will still be held in sterling – albeit unavailable sterling – and that the bulk of her trade will continue to be done with sterling countries.*[68]

The case of the depart of Egypt shows that the British authorities used the possibility to block sterling balances held in London to drastically limit the convertibility of sterling balances into dollar and choose the path at which war debts could be liquidated.

The second major case of departure from the sterling area is Iraq, which held around £100million of balances. In 1955, the Iraqi demand for diversification of the currency cover of the Iraq dinar was considered in the following term by the British Authorities:

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[65] Telegram from Cairo to Foreign office, 23rd September 1947. TNA T236/769
[66] Egypt, note for C.N.C. undated, TNA T236/769
[67] Letter to M.E. Johnston from J.A. Ford, Iraq government's intention of leaving the sterling area: U.K.'s attitude towards the Iraq sterling balances. 22nd September, 1958. TNA T236/4793
[68] The Sterling Agreements, *The Economist* (London, England), Saturday, July 5, 1947, Vol. 153, Issue 5419, p.27.

It is my impression that when Iraqis speak of diversifying their currency cover they are thinking of gold as well as of other currencies. Whether this is because of the innate Oriental love of gold or not I cannot say but there is undoubtedly a feeling that prestige is enhanced if part of the national currency cover is held in gold.[69]

However, Iraq kept pushing and obtained the signature of an Anglo-Iraqi Financial Agreement. The Agreement allowed the conversion of £5 million of their balances into gold between 1955 and 1957 to diversify their reserves and cover their currency, arguing that India and Ceylon had been allowed to accumulate some reserves in gold. At the end of this period, Iraqis reportedly approached Germany to start building Deutsch Marks reserves and mentioned leaving the sterling area. British authorities considered this as a rumor[70] but feared the possibility for sterling reputation and potential snowball effects on other members of the area:

We gain from Iraq's membership of the Sterling Area in that we obtain oil from her for resident sterling and Iraq keeps most of her foreign exchange reserves in sterling. […] Iraq's departure from the Sterling Area and the conversion of her present Sterling Balances into other currencies would be damaging to sterling as well as a blow to the prestige of the U.K. in the world at large. Moreover it would immediately result in further Kuwaiti suggestions that some part of Kuwait's balances (about £180m) should be invested in dollars […]. For these reasons, if the Iraqis raise with us their wish to still further diversify their currency cover, we should be prepared to fight a sustained though friendly rearguard action […].[71]

Financially, Iraq's departure from the Sterling Area would mean adding £127 million to total non-resident holdings of sterling; and might lead to pressure from Iraq, and later from other Middle East States, for oil revenues to be paid in dollar. Politically, it would be a blow to our position at a very critical time.[72]

While demands for partial conversion of the sterling increased, the Chancellor of the Exchequer pleaded that such move could put sterling under pressure, which subsequently would hurt Iraqis interest:

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69 Letter to Belgrave from W.J.M. Paterson, June 20, 1955. TNA T236/4691

70 Telegram from Foreign Office to Bagdad n°48. January 7th, 1957.

71 "Iraq: Diversification of currency cover". OF. 58/204/04, by J.A.Ford. July 1957. TNA T236/4796

72 Letter to R. Littder, M.E. Johnston, "Iraq: Diversification of currency cover", 17th September 1957, TNA T236/4796

at present, while the pound was under pressure, Iraq should not sell sterling and put it into dollars. Members of the Sterling must try to help each others [...] this was no time to get out of sterling. The [Iraqi] Minister agreed in it was in Iraq's interest not to do anything which would weaken sterling. He would not wish to make to the switch at a bad time. [73]

A further agreement of conversion in gold of £10 million to Iraq over a period of two years was reached in October 1957 between Iraqis authorities and the British ones.[74]

In September 1958, the new Iraq government announced they planned to leave the Sterling Area. British authorities couldn't prevent it from leaving the sterling area but considered blocking her sterling holdings:

We can, however, block her sterling balances, [...] and ensure that they are only released to her over a period of time, e.g. at the rate of £20 million a year on the analogy of the sterling Releases Agreement with Egypt. [...] It would show other countries such as Jordan and Libya that they could not get immediate free control over their sterling balances and thus reduce the incentive for their attempting to do so by leaving the sterling area. [...] The main arguments against blocking Iraq's balances would seem to be [...] it might undermine confidence in the inherent strength of the sterling.[75]

Eventually, the blocking strategy was given up by British authorities to protect confidence in sterling and they allowed conversion of sterling for the purpose of current payments[76]. During formal financial negotiations, in June 1959, Iraqis asked for a gold guarantee or a minimum a convertibility guarantee of their sterling holdings which was refused[77].

Iraq finally decided to leave the sterling area, to be able to make an independent decision on its reserves and to be free to decide which proportion of sterling they would keep in their reserves. They had about £100 million sterling reserves, £20 million of gold and other foreign exchanges and couldn't obtain guarantees against devaluation or suspension of convertibility from the British authorities. They left the sterling area on the 23rd of June 1959 without formal agreement on the rate of release. The statement of the Iraqi minister of finance proved a very good

[73] Phone call between the Iraqi Minister of Finance and the Chancellor of the Exchequer on 26th September, 1957 at 3.30 p.m. Note for the record, Iraq, A.W.F. 28th September 1957, TNA T236/4796
[74] Letter to Dr. J.A.Ford from C.D. Smith, 6th November 1959, TNA T236/4796
[75] Letter to M.E. Johnston from J.A. Ford, Iraq government's intention of leaving the sterling area: U.K.'s attitude towards the Iraq sterling balances. 22nd September, 1958. TNA T236/4793
[76] Draft minute to the prime minister, Iraq and the sterling area. M.E.Johnston. 21st May 1959. TNA T236/4794
[77] Telegram from Bagdad to Foreign Office, June 1, 1959. TNA T236/4794

understanding of the costs of staying within the sterling area and the impossible conduct of a full independence of the Iraqi currency within the area:

> *Iraq was unable to acquire what she needed of currencies unless through the Sterling Area. The amount of foreign currencies at Iraq's disposal were subjected to negotiations carried out at intervals. These used to depend on the position and strength of the Sterling Pound. […] It was not possible to acquire varied reserves except during the past few years and at a very meagre level at that. That situation also let to the accumulation of the Sterling balances in England. It was not possible to dispose of these balances except within certain limits.*[78]

British authorities made sure to publicize Iraq's departure being primarily driven by the specific political context of Iraq instead of the costs of staying within the sterling area:

> *You should, in informing [Kuwait][…]play down as much as possible the outcome [and its] significance. You should emphasize that Iraq's move is primarly political and arises out of the new Government's declared intention to assert its independence. […] it is outside any questions of economic and financial advantage.*[79]

Upon departure, Iraq lost preferential treatment for its imports to the UK and was given to the most favorable treatment accorded to countries outside the sterling area and imposed exchange controls applicable to countries outside the area, as described in section 4.1.[80] However, by the end of August 1959, they managed to increase their gold reserve by 154% and their non-sterling foreign exchange reserves by 150% compared to June 1959. The share of sterling holdings in their reserves dropped at 26%[81].

The case of Iraq is interesting because it shows how the British authorities were refusing any gold or convertibility guarantee to sterling holders, whereas, in economic theory, these guarantees represent a key component of international reserve currency. It also shows that the solution of blocking sterling balances employed in the case of Egypt constituted again their first reaction when being challenged. However, British authorities eventually decided to let Iraq convert its reserves out of sterling to avoid a confidence crisis in the currency, especially to other Middle East countries which were becoming significant holders, see figure 10.

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[78] Statement by minister of finance, Iraq times, 7th June 1959. TNA 236/4794
[79] Note on *Kuwait, Baghdad and Bharein, [probably early June 1959]* TNA 236/4795
[80] Letter to Mr. M.E. Johnston, 18th June 1959. TNA 236/4795
[81] "Bank's asset increase", *Iraq Times*, 19th August 1959. TNA T236/4796.

The third major case of exit of the sterling area was Rhodesia who declared unilaterally its independence in November 1965. The departure of Rhodesia from the sterling area was not driven by monetary issues, but its implementation of strong exchange controls demonstrates the credibility of sanctions available for British authorities. On the 12th of November 1965, 24 hours after the declaration of independence, the British authorities imposed punitive exchange control measures. These measures had to be applied by all sterling area countries and consisted of restrictions in dealings of Rhodesian pounds, freeze of accounts of residents of Rhodesia, limits in settlements of export to Rhodesia, freeze of transactions of securities payable in Rhodesian pounds, restrictions on transactions in gold and Treasury bills to Rhodesia, freeze of any new credit line or loan or overdraft to Rhodesia.[82] British authorities also made sure that the sterling area countries imposed the same control and suspended payment transactions with Rhodesia.[83] This arsenal of measures was exceptionally strong and unique to the Unilateral Declaration of Independence.

The last case of exclusion from the sterling area is Burma in 1966. Not much has been written on this case, but it appears to be similar to the one of Egypt in 1947 as a brief from the Central Bank of Ireland describe the situation with the following words:

> *Burma announced her withdrawal from the sterling area yesterday in order to be free to take necessary protective measures, such as the purchase of gold and investment in hard currencies, to conserve her exchange reserves obtained from exports […]. Burma's withdrawal from the sterling area was virtually at the request of the British Government […][as their]policies were inconsistent with membership of the area.*[84]

The Economist mentioned that London warned Burma was they could not "reasonably expect to enjoy the privileges of membership in the sterling club if it did not observe the rules cut little ice. […] So, pushed, Burma opted out. It was this or expulsion."[85]

5.2.Voicing concerns and challenging sterling area membership

[82] Telegram n°2677 from Commonwealth relations office to Ottawa, 11th Novembre 1965. TNA T326/439
[83] Telegram n°2937 from Commonwealth relations office to Canberra and to certain other posts, 11th Novembre 1965. TNA T326/439
[84] Burma leaves Sterling Area, summary of reports and comments in British newspapers, 18 October 1966. Circulated to directors on 21 October 1966. Archives of the Central Bank of Ireland, 51/65 « External Assets »
[85] "Sterling Are, One Down…" *The Economist,* 22nd October, 1966.

Some countries of the sterling area didn't go as far as exiting the area but voiced their concern several times to the British authorities and some eventually managed to diversify part of their reserves, such as India. Sterling balances held in India amounted to £1,321 million by the end of 1945[86]. India authorities negotiated with British authorities against a partial cancellation of the war debt and for protection of the purchasing power of sterling balances. With the independence of the country, financial talks in 1947 and 1948 were difficult, India was pressing for a release of some blocked sterling into dollars and British authorities considering excluding India from the sterling area to prevent such conversion. Exclusion was eventually ruled out as Indian exports were reportedly essentials to British and Overseas sterling area countries. An agreement was reached in 1948, which Abreu (2017) describes as "releases in 1948–51 [amounting] to a total of £80 million in equal installments on 30 June 1950 and 30 June 1951. Drawing of hard currency reserves was limited to £15 million in the first year. The Indians had wanted a release of £200 million in three years, of which half was to be convertible"[87]. He adds that India made a £40million of losses due to the low rate of interest paid by Britain compared to the market rate. Despite a slower release of sterling balances than desired, Indian authorities progressively managed to divide their sterling holding by ten between 1955 and 1967 and to diversify their portfolio so that sterling represented only 20% of their reserves by 1967.

Singapore also managed to diversify significantly but in a very shorter period: the share of sterling within its reserved dropped from 94% in 1965 to 39% in August 1968. Schenk (2010) provides a narrative for this case: The Bank of England had not been aware of the diversification before 1967 because Singapore diluted its sterling in a growing portfolio instead of converting them. In early 1968, British authorities tried to halt this dynamic by conditioning their financial help to Singapore to the end of diversification but they never received a formal answer from Singapore.[88] Because Singaporean authorities feared another sterling devaluation, they started to convert sterling in gold and US dollars and British authorities were on the verge of freezing Singaporean balances: "the time has come to consider seriously the possibility of leaving [the] Singapore negotiations suspended and being prepared at the end of the day to exclude and block Singapore".[89] Eventually, Singapore accepted to stop its diversification against a guarantee of the value of its sterling balances, through the MSP agreement (see section 5.a).

[86] Abreu (2017), p. 586
[87] Abreu (2017), p.594
[88] Schenk (2010), p.296-299.
[89] Telegram no. 815 from Fogarty and Haslam to CO, Bank of England OV44/247, cited by Schenk (2010)

Ghana, Kuwait and Bahamas were other cases where sterling area membership was questioned. As Ghana was approaching independence, the Treasury officials developed propaganda rhetoric to discourage it to leave the sterling area. They pointed that by exiting the area, Ghana would be erecting between themselves and the sterling area an exchange control barrier, it would lose free flows of private capital from the United Kingdom, the access the London market for raising loans and that the departure could create a disturbance of confidence for investors and creditor:

> *The effect of Ghana of leaving the Sterling Area was worked out a few months' ago when Dr. Krumah threatened to do unless he was guaranteed certain financial assistance. The disadvantages to Ghana [...] included:*
>
> a) *Handicaps to the free flow of private capital to Ghana*
> b) *Imposition of exchange control,*
> c) *Adverse reactions on trading relations*
> d) *Injury to credit and confidence*[90]

In the case of the Bahamas, they also pointed that the source of dollar from US tourists was very unstable and that the Bahamas would lose access to central gold and dollar reserves from the Bank of England, so they would be more vulnerable to adverse circumstance affecting the tourist trade.[91]

British authorities always conducted discussions bilaterally, as it was seen as the most efficient way of convincing on the advantages of membership of the sterling area: "For general propaganda purposes it is possible to sing the praises of sterling. […]it is very much more difficult to make a hymn out of the glories of membership of the Sterling Area, as a general proposition. […] Even if we are seeking to slow up any defections, we do better to address ourselves to the weak member rather than to the world at large."[92]

In the case of South Africa, a departure from the Sterling Area was considered several times, as discussed by Henshaw (1996). In 1947, expulsion was considered on the British side because large amounts of capital were flowing in South Africa. But because "[British] paramount interest in the gold mining industry must be protected", they instead negotiated an agreement in which "South Africa would directly cover hard currency drawings from the central reserves

[90] Letter to D. Rickett "Leaving the Sterling Area" from A.W.Taylor, 27th September 1957. TNA T236/5362
[91] Secret outward telegram from the secretary of state for the colonies, to Bahamas (Sir R. Arthur), sent 8th April, 1958 TNA T236/5362
[92] Letter to Mr. Johnston, Mr. Cower & Mr. Atkinson, The Sterling Area as an instrument of Propaganda, from H.L.Jenkyns, 3rd February, 1959. TNA T236/5362

by sales of the equivalent amount of gold."[93] This created a unique case in the sterling area where South Africa could quickly diversify its reserves: by 1955, sterling represented only 25% of the reserves and by 1967 it fell to 3%.[94] In the mid-1950s, South Africa showed some willingness to depart from the area to signal economic independence but the British authorities directly threatened cutting imports from South Africa. Because Britain was the largest market for its exports and because the Afrikaners could not lose access to the London capital market when the Apartheid policies were frightening existing and prospective investors and creditors, South Africa remained in the sterling area and kept sending a much-needed gold to the Bank of England.[95] In 1960, during the intensification of the Apartheid policies, and despite the statement of British Prime Minister Macmillan in the South African Parliament that Britain could not support South Africa's racial policies[96], the Bank of England defended South Africa membership: its departure would be a major crack in the Sterling Area system, and they could sell its "gold somewhere other than London, with damaging effects for the City's position as an international financial centre".[97] Even if South Africa left the commonwealth in 1961 - when becoming a republic- the final and effective end of its sterling area participation came in I972 "when both the flow of British capital to South Africa was officially restricted and South Africa's currency was pegged to the United States dollar."[98]

5.3.Loyal ones? A sterling trap

The big independent players of the area, Australia, New Zealand, Ireland appeared to remain loyal to the sterling throughout the period but internal debates occurred and some hidden measures were taken to try decrease exposure to sterling. These three country had in common to be white settlers societies.

In Australia, the Reserve Bank voiced concerns to the Australian Treasury on the stability of the sterling between 1962 and 1968, calling for greater diversification of the reserves, but the Treasury refused to comply[99]. In July 1965, the Reserve Bank (RBA) called for a reduction of sterling risk "without attracting attention"[100], which indicates that they knew that British

[93] Henshaw (1996), p.210
[94] Author's calculation. See data source section 2.
[95] Henshaw, (1996) p. 216 – 217.
[96] For more details on the "Wind of change" speech, see Ovendale (1995).
[97] Henshaw (1996), p.218.
[98] Henshaw (1996), p.221.
[99] See Kennedy (2018)
[100] RBA: IT-a-642-1 [c], cited in Kennedy (2018) p.23.

authorities might sanction them. Similarly, in July 1967, the Governor of the Australian Reserve Bank was writing to the Bank of England "'we are very conscious of the possible effect which a rapid change in our figures or our practices could have and we have been . . . very careful to avoid going so fast or so far in currency re-arrangement as to attract undue attention to the moment"[101] Australian officials anticipated the sterling devaluation, but they could not liquidate significantly their sterling reserves: as they were a big player on the market, their liquidation would have dramatically reinforced the speculation. They found themselves in the situation of a 'sterling trap' similar of the one France experienced in 1931, described by Accominotti (2009). Few weeks before the devaluation, Australian officials were writing:

> *On pragmatic grounds an attempt by Australia to make a very large switch [out of sterling] quickly would at once become common knowledge, and would be likely to start a flood of speculation against sterling. […] we see no alternative to the present policy of changing the balance of the holdings rather more slowly than, on investment grounds, we might wish.*[102]

Kennedy (2018) describes that "in July 1968, the Research Department's view was still negative towards sterling and it regarded a 2 per cent interest premium as insufficient compensation for the risks. It argued, 'sterling is not very attractive as a reserve asset… There is a case for holding some sterling, but not too much. That case rests largely on desires for access to capital markets and on political associations'"[103]. Limited action was taken by the RBA to accumulate IMF liquidity – the IMF 'gold tranche' to diversify their reserves without touching at the pool of the sterling balances held in London. Schenk & Singleton (2015) mention that tensions arose between the RBA board in Sydney and the Treasury in Canberra, with the former adopting the more aggressive stance on the issue of diversification away from sterling due to the weakness of the British economy, noting that "one's currency only stays in demand as a reserve currency when one is a dominant trader" while "'The prospects for the US economy (and therefore the US dollar), whilst not overly rosy, were better than for Britain"[104]. However, for the Australian

[101] RBAA, letter from H. C. Coombs to L. O'Brien (Bank of England), 18 July 1967, cited by Schenk & Singleton (2015), p.1166.
[102] RBAA, BM-Pe-87, memo for governor by International Department, 6 Nov. 1967, cited by Schenk & Singleton (2015), p.1166.
[103] Kennedy (2018) p.22.
[104] RBAA, BM-Pe-95, board meeting minutes, 31 July 1968. Phillips became chairman on 22 July 1968, , cited by Schenk & Singleton (2015), p.1168.

Treasury the priority was continued access to the London capital market for government borrowing, which implied following closely the sterling area rule of reserve pooling[105].

In Ireland, the situation was very similar. In July 1966, the Governor of Central Bank was suggesting writing to the Bank of England to express their willingness to "increase the proportion of [their] external reserves held otherwise than in sterling" up to "the equivalent of £25 million" by "drawing from the International Monetary Fund" and purchase "foreign currencies accruing to Irish commercial banks"[106]. This strategy could have allowed them to diversify their portfolio without drawing on the closely kept Bank of England gold and foreign exchange reserves, even if these reserves were supposedly available to the sterling area members. But the Irish authorities knew that any move against the sterling area principles would displease the Bank of England so the head of the department of Finance T.K.Whitaker replied to the Governor of the Central Bank of Ireland in the following terms:

> *The events of the past few days, while they show how precarious sterling is, also portend an unwelcome reception for any signal of waning faith on our part. It would, perhaps, be politic not to write anything that might be so interpreted […].*
>
> *As we both fully understand, what we can (or need, in reason) do to protect ourselves against the ill-effects of a devaluation is marginal.*[107]

However, the 1967 devaluation changed their perspective. Early 1968, Whitaker stated that sterling became "less valuable as an international currency" and that purchase of U.S. dollars should continue "with sufficient delicacy and time" as they didn't "wish to cause a blow to sterling".[108] They rapidly decreased their sterling holdings from £123millions in April 1968 to £85millions at the end of August 1986, investing mostly in gold and to a lesser extend in dollars; the share of sterling in their portfolio thus decreased from 77.3 to 60%.[109]

New Zealand remained mostly loyal to sterling up to the devaluation, holding more than 80% of its reserves in sterling in 1967. Schenk & Singleton (2015) explain that the Reserve Bank of New Zealand reconsidered its position in 1968 and worked on a new scheme with the following

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105 Schenk & Singleton (2015), p.1168.
106 Draft letter to the Bank of England, 20 July 1966, Archives of the Central Bank of Ireland, 51/65 « External Assets » part.3.
107 Letter from T.K.Whitaker, Irish department of Finance to the Governor of the Central Bank of Ireland, 25 July 1966, Archives of the Central Bank of Ireland, 51/65 « External Assets » part.3.
108 External assets, points made by directors at Board minute 31 January 1968. Archives of the Central Bank of Ireland, 51/65 « External Assets » part.4.
109 External reserves of legal tender note fund and general fund, market value, circulated to Directors at meeting on 28tb August 1968. Archives of the Central Bank of Ireland, 51/65 « External Assets » part.5.

decomposition: sterling (50–60 per cent), US dollars (20–5 per cent), European currencies (10 per cent), and gold (10–15 per cent), as sterling would still be "usable" currency as "London continues to offer the best interest rates and the best facilities for the investment of funds, and most of our trade will continue to be denominated in sterling. We should continue to regard sterling as the basic component of our reserves"[110]. But London refused to let them diversify to that extend and accepted a diversification limited to 70% of their portfolio.[111]

5.4. *An absence of credible British commitment*

Long-term trust between countries members of the sterling area and Britain was challenged several times.

First were the EEC applications: the UK applied twice, in 1961 and in 1967. The Treaty of Rome required that members would eliminate customs duties between member states and establish an external Common Customs Tariff. This was a serious threat for the sterling area principle, the preferential access of the sterling area to the London capital markets as well as the Commonwealth preference would not be compatible. This was one of the reasons for which UK application was refused, De Gaulle declared in November 1967 "a Common Market [is] incompatible … with the state of the pound sterling."[112] The repetition of UK applications to EEC, despite this incompatibility, acted as a negative sign to sterling area countries.

Another confidence breach came from the implementation to new special measures aiming at compensating for the UK balance of payment deficit: restrictions to capital investment in "developed" sterling area (Australia, New Zealand, South Africa and the Irish Republic), as well as non-sterling area countries, for direct investments over £25.000/year were implemented between 1966 and 1968.

The Irish Treasurer had tried to convince British PM not to include Ireland in these restrictions, to no avail:

> *Capital movements have been free between the two countries for nearly two centuries. […] Any restriction on portfolio investment by British private industrialists to postpone direct investment in Ireland would have most damaging effects, not only economic but political as well. The adverse consequences would completely overshadow any possible balance of*

[110] RBNZA, Box A0088, memo for minister of finance: 'The sterling balances—a proposed scheme', 20 June 1968, pp. 3–4., cited by Schenk & Singleton (2015), p.1168.
[111] RBAA, BM-I-60, memorandum for International Committee, 30 July 1970, cited by Schenk & Singleton (2015), p1169.
[112] Cited by Schenk (2010) p.137.

payments advantage to the United Kingdom. There would be a serious setback to the improvement in relation set in motion by our Free Trade Agreement.[113]

Finally, in the late sixties, some countries such as Malaysia understood that a devaluation was about to happen and pressed the Bank of England for guarantees, but the Bank reassured against any devaluation prospects. The 1967 devaluation wasn't announced in advance to the sterling area and many countries felt betrayed by the Bank after this episode.[114]

6. Private gains and public losses of the long life of the Zombie

6.1. Sedation of sterling holders and burden for the international monetary system

After the second British application to the EEC and the1967 devaluation, there was little hope for a continuation of the sterling area. Its members were trying to diversify their reserves outside of sterling by buying gold and the US. dollars from local banks, on Euromarkets and by reducing the pooling of their gold and dollars reserves. The Bank of England, under important market pressure, was reviewing its mains options: threatening to exclude, stronger exchange controls, blocking, providing an exchange guarantee and asking for support from the Group of 10.

> *Traders and bankers are reluctant to continue holding sterling […] we must be prepared to use all our powers of persuasion, […] to discourage them. In some cases, it may be necessary to consider […] a reduction in economic aid. Threatening to exclude offending countries from the Sterling Area would be unproductive; it would probably suit them very well and lead to other application to withdraw. Imposing Exchange Control […] would precipitate such applications. Blocking would be equally dangerous unless it were universal and amounted to a moratorium on our debts. […] giving exchange guarantees to sterling holders […] should not be contemplated […].*[115]

Eventually, Uk officials asked for international support to G10 and IMF. Schenk (2010) provides a detailed account of the rescue operation which was sealed in September 1968:

[113] Letter from Sean F. Lemass to Harold Wilson, 30th April 1966. Archives of the Central Bank of Ireland, 51/65 « External Assets » part.1.
[114] Schenk (2008) notably reports the case of Malaysia who lost around $80mn in reserves with the 14.3% devaluation of sterling, p.203.
[115] Sterling area working party, conclusions, draft 09.01.1968. Bank of England Archives OV44/116.

“Under the Basle Agreement, the G10 central banks agreed to provide a safety net line of credit of $2 billion on which the Bank of England could draw to offset declines in its central reserves due to the diversification of overseas-held sterling reserves. As a quid pro quo, they insisted that the United Kingdom negotiate bilateral Sterling Agreements with thirty-four countries to keep a minimum proportion of their reserves in sterling over the term of the Basle Agreement. In return, the United Kingdom offered holders a guarantee of the US dollar value of 90 per cent of each of these countries’ official sterling reserves so long as the minimum sterling proportions were met. Countries could break the agreement and diversify, but they would lose the US dollar exchange guarantee.”[116] The agreement also included a guarantee to the maintain, at least to a degree, the outer sterling area’s privileged access to British capital exports.[117]

Minimum proportions of sterling (MSP) were negotiated bilaterally. For example; New Zealand was offered a MSP of 80% which was perceived as unacceptable for it would penalize New Zealand “for having played the game” while other sterling area countries have been diversifying their reserves as rapidly as practicable[118]. New Zealand eventually secured a MSP of 70% while Australia managed to get away with 40% and Ireland who had more than 75% of its reserve in early 1968 got 55%. The outcome of the negotiations was heterogeneous, colonies and recent newly independent countries got the higher MSP while developed sterling area countries were allowed to diversify more.

The MSP succeeded in stopping the run on sterling from sterling area countries. I would disagree with both Cohen (1971) who argues that the MSP were “a kind of ransom paid by Britain to keep the sterling system going”[119] and Schenk & Singleton (2015) who argue that sterling holders “were eventually rewarded with a dollar value guarantee for their official sterling reserves.”[120] In my view, the MSP agreements worked as a way of “acceptable freeze” on sterling balances to allow for a continuation of the sterling area. Already in 1966, British policymakers knew that they would soon face a sterling crisis due to the low level of UK reserves compared to sterling balances, as “the sterling area is a bank with insufficient assets to

[116] Schenk p.273.
[117] Cohen (1971) p.85.
[118] Archives New Zealand,Wellington (hereafter ANZ), AALR 873, Acc.W3158/84, 61/4/2/1, pt. 1, memo from N. R. Davis to minister of finance, 19 July 1968, p. 3. cited by Schenk & Singleton (2015), p.1169.
[119] Cohen (1971), p.85.
[120] Schenk & Singleton (2015) p.1166.

meet its deposit liabilities"[121]. The solution they reached was to "slow down the erosion [of the sterling area] to a manageable pace" i.e. "the sedation of holders of sterling"[122].

In the long run, the persistence of sterling balances constituted more a liability than an asset for the international monetary system. At first, in the immediate postwar situation, the need to reduce the dollar gap acted as a driver in the crafting of the 1947 exchange control act. The pooling of dollar as well as the coordinated efforts to reduce dollar expenditures limited the dollar drain that could have occurred if all sterling area members would have piled up their own dollar reserves.

But instead of creating a temporary system like the European Payment Union in which monetary convertibility would have been delayed for a few years to allow for a gradual absorption of the shock of WWII, the US accepted to let Britain institutionalize the sterling area. Cain & Hopkins (2014) argue that the US needed strong allies in Europe on the onset of the Cold War, so "the Sterling Area had to be maintained and that the empire had to be encouraged to play its part in the recovery of the British economy by supplying essential raw materials and by earning much-needed dollars. This meant, in turn, that imperial preference, long an irritant in Washington, had to be left in place, at least in the short term."[123] Eventually, Commonwealth preferences lasted until 1973, when Britain joined the EEC, and sterling balances remained partially blocked until 1976 with three consecutive MSP agreements[124].

Long-lasting trade discriminations were not the only costs from the persistence of the sterling area. Soon after 1958, when sterling convertibility outside the sterling area returned, the UK faced multiple exchange crises and sought for international help in managing the diversification of reserves of sterling area members. The Bank of England put in place a system of swaps with the IMF, the BIS, the G10 and the Gold Pool to be able to draw gold and foreign exchange liquidity when needed. In 1966, British authorities planned than "Balance of payment equilibrium and a diversification support scheme should keep the City markets in business and ensure the continuation of a sterling system […]. Given the assurance of a sound balance of payments and international underwriting of the sterling balances, we need not lead the way on interest rates whose present levels are in part a reflection of the confidence factor."[125] But the

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[121] "The Sterling Area", S.W.P. note, 29 July 1966, BoE Archives, OV44/33.
[122] Letter to the chief of overseas, « The Sterling Area. "S.W.P. note of 29 July 1966). 3rd of August 1966, BoE Archives, OV44/33.
[123] Cain & Hopkins (2014), p. 670.
[124] See Schenk (2010)
[125] To Mr Rootham, « Working party on the future of the sterling area", draft (6th October 1966). BoE Archives, OV44/33

equilibrium of the UK balance of payment was not reached so interest rates rose and the Bank of England drew on international liquidity, as displayed in figure 13. The US support to sterling exposed the dollar to sterling's problems and sterling devaluation in 1967 dramatically fed market uncertainties about the gold-dollar parity[126]. In 1968, the run of sterling from sterling area members caused an important drain on international liquidity, forcing the BIS committee to condition their support to the concluding of the MSP agreements.

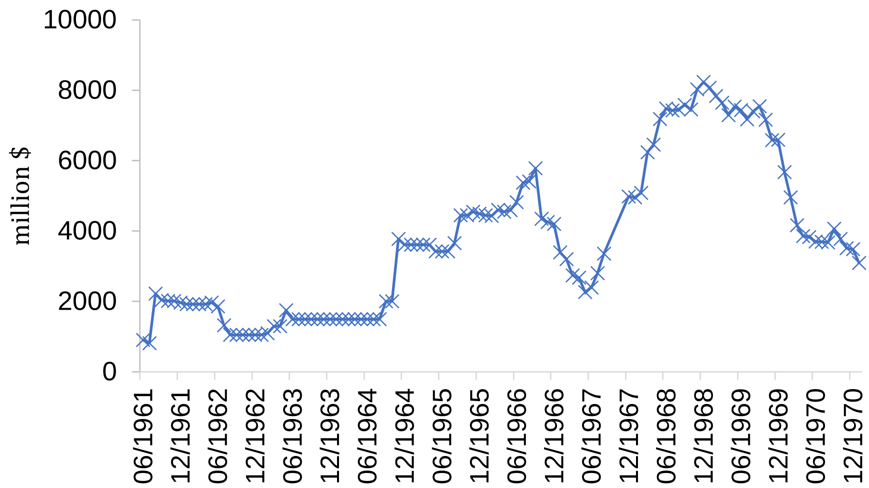

Figure 13: International assistance to the Bank of England

Source: BIS archives – LAR2 F02

According to Strange (1976), the role given to sterling and London in the postwar world was the original sin of the US. I agree with Strange's argument as the captive market of the sterling area provided relative security to the British authorities who delayed adjustments and resisted external pressure to work on reducing their balance of payments deficits. As a result, their wartime legacy weighted on the stability in the international monetary system more than twenty years after the end of the war.

6.2.British gain: sterling over evaluation and the City

The persistence of the sterling area after the immediate postwar years benefited mostly Britain and the City. The area worked as a mechanism to restrict sterling conversion into dollar and gold when British reserves were low, firstly after the sterling crisis of 1930-1 and then, after WWII. Most of the external sterling balances were held in the sterling area and formed "an

[126] See Bordo et al. (2019)

important part of the inherent weakness of sterling"[127]. In the late thirties, the UK had managed to accumulate enough gold and foreign exchange to cover 100% of its liabilities[128] but they were never able to replenish durably their reserves after the war and struggled to maintain a credible coverage of its liabilities: except in the immediate post devaluation period, their reserves represented less than 50% of the liabilities. Figure 8 displays the total of UK liabilities with the ratio of gold and foreign exchange held by the Bank of England and the EEA with the sterling balances. On the contrary, the large western economies had a full and large coverage of their foreign liabilities by their reserves, as displayed by table 3.

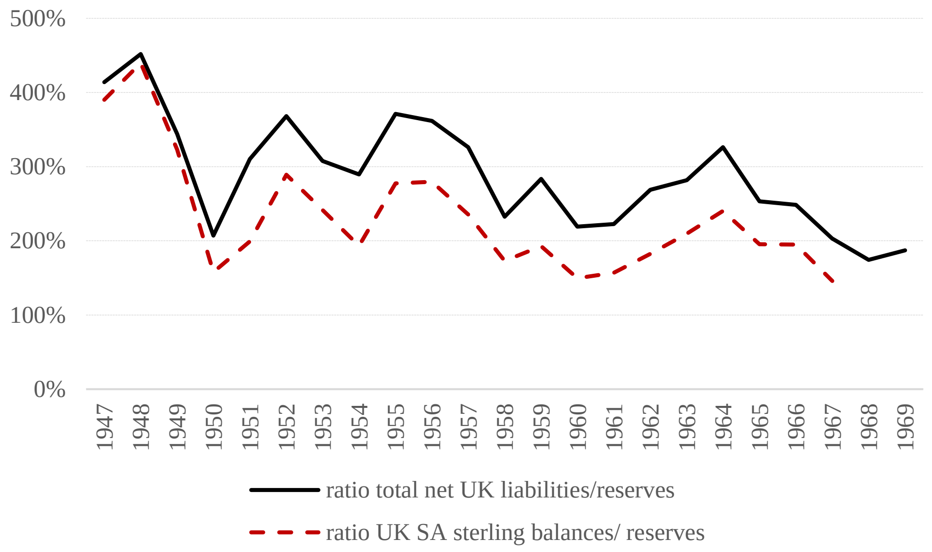

Figure 8: Reserves and liabilities of the UK.

Source: author's dataset, see text, and Bank of England, Statistical Abstract, n°1, 1970.

Country	Foreign liabilities/Reserves *average - 1955-1970*
United Kingdom	263,9%
United States	1,3%
Switzerland	0,7%
Germany	2,8%
France	6,6%

Table 3: Foreign liabilities is the country total of foreign liabilities to monetary authorities; reserves is the total of gold and foreign exchange reserves.

127 "The Working of the balances of payments". Sterling Area working party, 30th October 1956. BoE archives OV44/33.

128 "Problems of the Sterling Area, report by a working party of the Treasury and the Bank of England", 25th June 1956. BoE Archives OV44/33.

Note: Data for Foreign liabilities comes from the IFS, indicator 16C and from the, Statistical Abstract, n°1, 1970. Data for reserves comes from the author's database, see text.

The existence of the sterling area and the authoritative enforcement of its principles by British authorities allowed to maintain this unique setting of international sterling across the period. If the sterling balances would have been liquidated earlier / more rapidly, the Bank of England would not have been able to cope with the inflow of sterling and would have had to devaluate sterling. In the words of UK officials, capital and exchange controls aimed at supporting the international use of sterling to "give [the UK] command of resources" and help them "remain first-class power"[129].

Another advantage for the UK is that the pooled reserves of sterling area countries helped to "finance its own deficits" and "a continuing expansion of its own expenditure" to the point in the mid-sixties, where sterling area members could "put the U.K. into liquidation at any time if a run on the bank] were to start"[130], i.e. a run on the reserves of the Bank of England, like what happened after the 1967 devaluation. Treasury authorities worked on propaganda on the advantages the sterling area membership while not commenting on sterling weakness: "The argument that a Sterling Area should not withdraw precipitately for fear of weakening sterling is not one of which we would wish to use outside confidential discussions".[131]

By supporting the international role of sterling, the sterling area also benefited the City of London.[132] The Bank of England considered that relieving the UK of "the burden of an international currency" would be "at the expense of destroying the financial mechanism of the City. […] Obviously this could not be the Bank's answer. The U.K. economy needs the City's financial and commercial acumen […]. Trade still follows the flag (or the £)."[133] But the reality was that the flag was mostly gone, trade was mostly gone but sterling balances persisted.

Conclusion:

In this article, I analyze the decline of sterling as international reserve currency during the Bretton Woods era and conclude that it was a zombie international currency. The UK didn't

[129] Letter to the Deputy Governor, 8th February 1955. BoE Archives, OV44_53.
[130] « The Sterling Area", S.W.P. note, 29 July 1966, BoE Archives, OV44/33.
[131] Letter to Mr. Johnston, Mr. Cower & Mr. Atkinson, The Sterling Area as an instrument of Propaganda, from H.L.Jenkyns, 3rd February, 1959. TNA T236/5362
[132] See Krozewski (1993) and Schenk (2010) pp. 212-219.
[133] To Mr Rootham, « Working party on the future of the sterling area", draft (6th October 1966). BoE Archives, OV44/33.

have the economic fundamentals of an issuer of international currency, so countries who could access alternative foreign exchange reserves, such as Western Europe or Iraq, held only very limited amounts of sterling. The case of postwar sterling supports the idea that economic fundamentals of the issuing country are good predictors of the future trajectory of an international currency. Even if sterling appeared in the IMF data as the first international reserve currency at the world level in the immediate postwar years, the interwar predictions of its death due to poor economic fundamentals and declining trade power occurred rapidly.

The second contribution of this article is the novel narrative that sterling area countries constituted a captive market for sterling. The UK artificially maintained holding of sterling reserves through capital controls, commercial threats and economic sanctions. This policy allowed the UK to delay postwar economic adjustments while incurring reserve portfolio losses for sterling area countries, stress on the foreign exchange markets and a waste of international liquidity. Where some described a collective interest of sterling area members in sticking together, my analysis show that most countries were individually trying to avoid the losses from their sterling holdings and were free-riding the area as much as possible by hiding diversification and avoiding central reserve-pooling. The argument of this article can be summed up twisting Schenk's carrots & sticks metaphor: the British authorities held sterling area members between a rotten carrot and a sledgehammer.

A lesson for current policy from this research is the need for an international lender of last resort. Because the IMF was not equipped to deal with postwar monetary disorders, the sterling area was maintained as a way of managing the UK war debts. But this allowed the UK to delay the necessary adjustments needed to liquidate sterling balances and transferred most of adjustments costs on sterling holders. Whereas an international lender of last resort could have lent liquidity to the UK in the immediate postwar years to liquidate sterling balances in the fifties, through an asset management vehicle, and allow for a full return of sterling convertibility in the late fifties. Such bail in of the Bank of England could have allowed it to clean its balance sheets from problem assets and liabilities from the war and could have offered a different trajectory for sterling in the sixties and later.

Appendix

1) <u>Measuring trade intensity</u>

To measure trade intensity between two countries, I use the Koijma index presented by Drysdale (1982):

$$I_{i,j} = (\frac{X_{ij}}{Xi})/(\frac{M_j}{M_w - Mi})$$

Where: X_{ij} is country *i*'s exports to country *j*

X_i is *i*'s total exports

M_j is j's total imports,

M_i is *i*'s total imports, and

M_w is total world imports.

M_i is subtracted from M_w in the above expression because a country cannot export goods to itself.

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