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Alan de Bromhead (Queen's University Belfast)
David Jordan (Queen's University Belfast)
Francis Kennedy (Queen's University Belfast)
Jack Seddon (Wasada University, Tokyo)

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Queen's University Belfast
185 Stranmillis Road
Belfast BT9 5EE

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How does International Monetary Leadership End? The Sterling Area Revisited*

Alan de Bromhead[†] David Jordan[‡] Francis Kennedy[§] Jack Seddon[¶]

Abstract

How does international monetary leadership end? This paper examines the decline of the Sterling Area between 1945 and 1979 to understand the process of international economic disintegration. Using an original cross-national panel dataset, we conduct survival analysis which systematically evaluates a comprehensive set of economic and political factors about *when* and *why* countries chose to leave the Sterling Area. We find that membership of the Sterling Area was determined by multidimensional aspects. Our results highlight the significance of international economic and geopolitical factors, such as trade and diplomatic alignment, on the decision to leave. However we also find that domestic political and historical factors, such as democracy and imperial legacy, played a role in the Sterling Area's unravelling. Finally, we use our results to examine the experience of individual countries and their decisions to leave the Sterling Area. Revisiting this history of a gradually dissolving economic order, played out in the shadow of Britain's waning imperial and economic power, has cautionary implications for the future of the US dollar order.

Keywords: The Sterling Area; international monetary regime; international currency; sterling; decline; disintegration

JEL codes: N10, F02, F22, F33

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[†] Queen's University Belfast. Contact: a.dedromhead@qub.ac.uk

[‡] Queen's University Belfast. Contact: djordan02@qub.ac.uk

[§] Queen's University Belfast. Contact: francis.kennedy@qub.ac.uk

[¶] Waseda University, Tokyo. Contact: jseddon@waseda.jp

1 Introduction

The US dollar still dominates the global financial order. Yet there appears to be an inexorable decline in US geostrategic power, and cracks have emerged in the liberal international order. In this paradoxical context of dominance and decline, the question of how monetary leadership ends has taken on a new salience.[1] This paper examines the historical case of the Sterling Area, in order to assess theoretical and empirical propositions about international monetary disintegration and currency realignment.

At the end of WWII, the Sterling Area, a remnant of nineteenth century British economic hegemony, still represented the largest multilateral monetary and trading system in the world. Broadly, members of the Sterling Area were expected to maintain a fixed exchange rate with sterling, hold most foreign currency reserves in sterling, and impose common exchange controls. In return, members would be exempt from Britain's exchange control legislation and would enjoy a privileged position with respect to UK capital and trade.[2]

However, the Sterling Area system operated in an era of shifting geopolitical relationships and economic realignment. As it gradually disintegrated over three decades following WWII, member states from the Caribbean to Africa and the Far East debated trade-offs between the benefits of adherence and their costs in terms of forgone alignments with the US, Western Europe, and Japan. Why were some countries more willing and able than others to leave the Sterling Area? In this paper we argue that answering this question requires a multivariate approach that captures the multidimensional nature of Sterling

[1] Cohen, 'Reflections on orders'.
[2] Schenk, 'The Sterling Area 1945-1972'.

Area membership. Using a series of continuous time duration (survival) models and an original panel dataset of more than 30 countries spanning almost 30 years, we take a holistic approach to examining the process of disintegration, that illuminates crucial interactions between international and domestic political and economic factors. International economic ties and network externalities mattered. But so too did politics.

The literature advances three different perspectives on why some countries were more willing and able than others to leave the Sterling Area. Economic historians such as Eichengreen and Schenk locate the sources of the Sterling Area's decline, while acknowledging its artificial props, in transactional drivers such as trade and financial network effects.[3] The main alternative perspective, anchored in the field of international political economy, looks to eroding diplomatic ties, decaying security arrangements, and changing political sentiments that caused countries to diversify their sterling reserves.[4] The third class of arguments, rooted in contemporary debates, maintains that distributional conflicts and discontents were critical determinants of membership. To what extent, if at all, complex judgments on relative country contributions to the system influenced membership decisions nonetheless remains a contested historical question.[5]

Our analysis assesses these three perspectives jointly to identify the relative importance of the factors that led to the demise of the Sterling Area. Furthermore, by taking a dynamic approach in our empirical analysis, we can derive the changing survival probabilities of individual Sterling Area members over time, and thereby identify early- and late-leaving

[3] See Eichengreen, *Global imbalances*; Schenk, *Britain and the Sterling Area* and *The decline of sterling*.
[4] See Cohen, *Currency power*; Strange, *Sterling and British policy*.
[5] See Bhagat, 'Working of the Sterling Area'; Kamarck, 'Dollar pooling'; Schenk, *Britain and the Sterling Area*.

countries relative to the predictions of our model. In conjunction with a close reading of the qualitative evidence on what motivated particular exit decisions, this analysis reveals the importance of politics and imperial legacy, alongside economic factors such as currency peg, trade, FDI, and a competing capital source.

Our analysis also re-evaluates the contemporary distributional concerns. In findings that should worry US leaders tempted to weaponise the dollar for geostrategic gains, we find that constraints imposed on Sterling Area members accelerated exits from the Sterling Area. Meanwhile, distributional asymmetries deriving from the natural pattern of international payments had little discernible impact on withdrawals.

The analysis proceeds as follows. First, we map the decline of the Sterling Area. The next section draws on the established literature to present a comprehensive series of competing hypotheses about the determinants of membership. The third section presents the duration models. The fourth section considers the degree of model fit by comparing actual exits with predicted survival probabilities. The final section concludes.

2 Mapping the Decline of the Sterling Area

We think broadly of the Sterling Area as an informal financial alliance of countries, using and holding sterling in international reserves, in preference to the US dollar, from the 1930s to the 1970s. These holdings—the 'sterling balances'—increased dramatically during WWII, and the resulting mismatch between the UK's sterling liabilities and international reserves became a longstanding postwar concern of British policymakers.

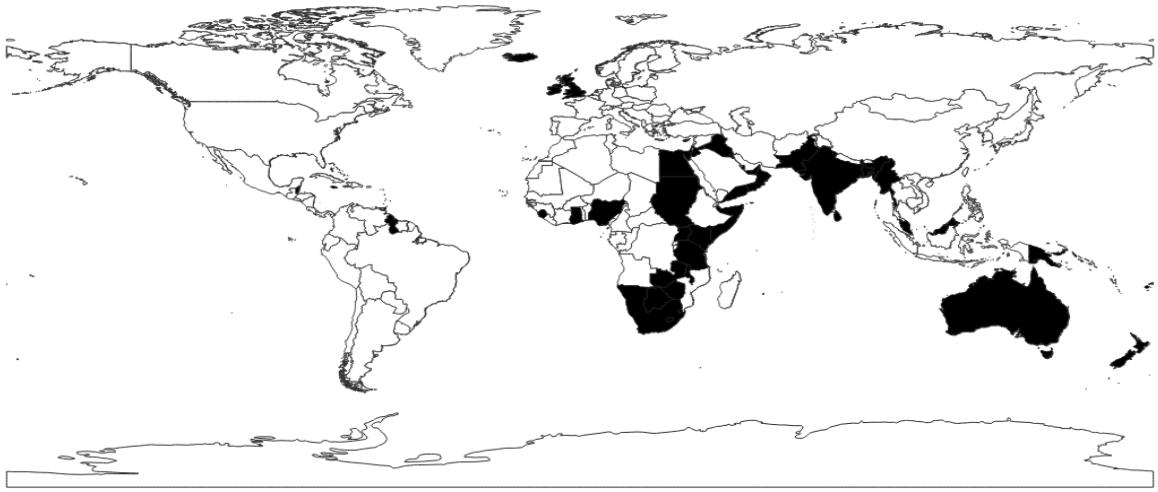
In fact, the Sterling Area had a narrow technical definition. It referred to those countries which were granted a privileged exemption in British exchange control legislation, in return for their formal or informal commitments to use, hold, and protect sterling as an international currency. The privilege of unfettered capital flows from the UK to Sterling Area countries existed between 1939, when UK exchange controls were introduced, and 1972, when full exemption was withdrawn (for all but Ireland and the Channel Islands).[6] After the 1947-48 deletions of Egypt, Sudan and Palestine, and a couple of additions, in the 1950s the list of countries comprised the Commonwealth (except for Canada), the Colonies, Burma, Iceland, Ireland, Iraq, Jordan, Libya, and the Persian Gulf Territories (Figure 1 shows all countries which met our criteria for membership after WWII, in 1965, and in 1975).

The first contribution of our paper is the construction of a new *de facto* definition of Sterling Area membership. Although *de jure* membership has the benefit of being relatively easy to ascertain from the official list of member countries referred to in the Exchange Control Act 1947 as the Scheduled Territories, we consider the established *de jure* definition an inaccurate measure of countries' declining orientation towards sterling in the 1950s-70s. The definition is UK-centric and does not represent the behaviour of Sterling Area countries, because it was rarely in the UK's interest to remove them from the list. The principal *de jure* deletions were exceptional cases: Iraq in 1959, Southern Rhodesia in 1965, Burma/Myanmar in 1966, and Libya in 1971. The 1939-72 period also does not do justice to sterling's historical reach. There was a distinguishable group of 'Sterling bloc' countries

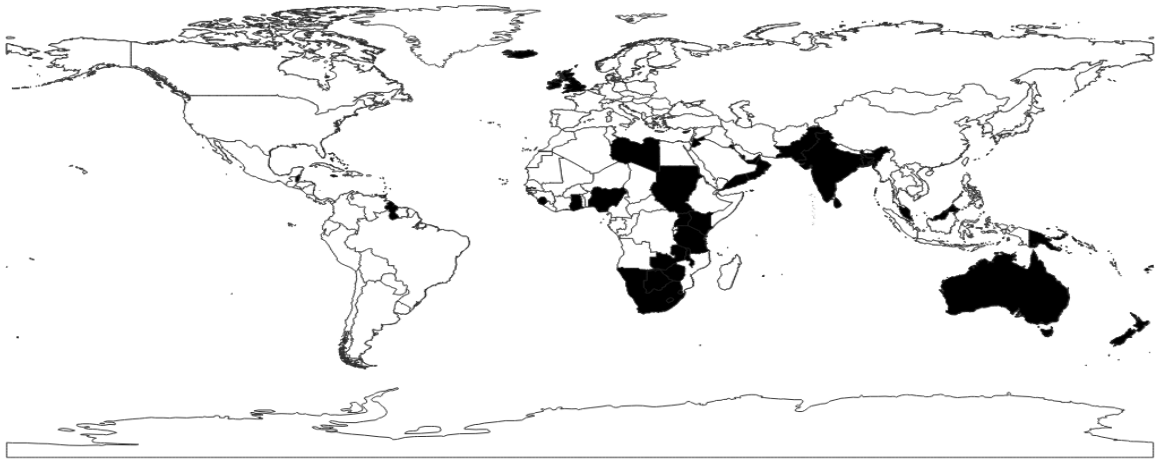
[6] Schenk, *The decline of sterling*, pp.21-22.

pegging to sterling in 1931-39, Sterling Area countries continued to enjoy formal preferential UK exchange control status after 1972,[7] and there were frequent references to sterling countries at least until the termination of UK exchange controls in 1979.[8]

Figure 1: Mapping the Postwar Disintegration of the Sterling Area

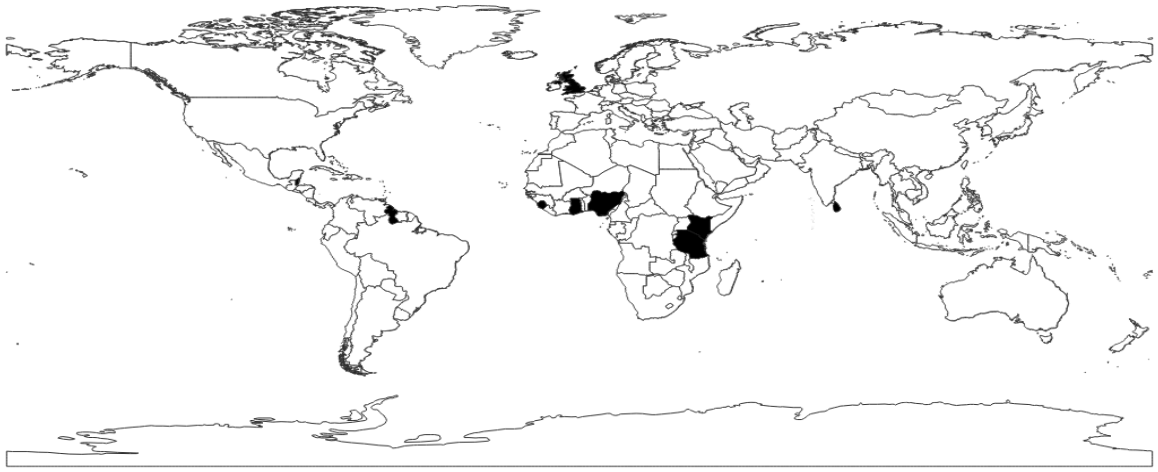


The Sterling Area (1946, *de jure* and *de facto*)
Source: Table A.1 (Reserves)



The Sterling Area (1965, *de facto*)
Source: Table A.1 (Reserves)

[7] TNA, T295/856.
[8] For example, see contemporary IMF country reports.



The Sterling Area (1975, *de facto*)
Source: Table A.1 (Reserves)

To map the postwar decline of sterling's reserve currency use, we employ this new *de facto* definition of Sterling Area membership. In our definition, 'exit' from the Sterling Area occurred when a country decisively reduced the share of sterling in its foreign currency reserves below 50%.[9] Although there are many aspects that could be used to identify exit from the Sterling Area, we argue that a definition based on the composition of FX reserves is the most appropriate. Likewise, we contend that 50% is the most appropriate exit threshold to employ, for three reasons. Firstly, a commonly identified membership requirement was that countries hold the bulk of their reserves in sterling.[10] Secondly, alternative thresholds, such as 40% or 60%, contradict the historical record. A lower threshold of 40% is difficult to justify, given that in 1965 around 90% of sterling area FX reserves were in sterling.[11] A higher threshold of 60% is similarly unconvincing as it would mean excluding Australia as early as 1967, which would be ahistorical given Australia's

[9] For a more detailed discussion of the construction of the dependent variable, including further supporting evidence for the 50% threshold, see Appendix 7.1.
[10] Schenk, 'The Sterling Area 1945-1972'.
[11] Bank of England Archive (BOE), OV53/32, Sterling Area Working Party, 25.1.68.

leading role in the Sterling Area until 1972. Finally, there is a wealth of evidence from archival material that 50% was the significant threshold from a British perspective. For instance, in the preparation of the Sterling Agreements of 1968, a Minimum Sterling Proportion (MSP), in official reserves, of 50% was claimed by UK officials to be 'the lowest figure consistent with meaningful membership of the Sterling Area'.[12]

Three aspects of our exit measure are noteworthy. Firstly, it is an attempt to apply consistency to a system characterised by inconsistency. As such, it does not imply that sterling and the Sterling Area were not important to countries after *de facto* exit, nor that 1972 did not have significance for the Sterling Area, even though many *de facto* exits took place after 1972. Secondly, in adopting reserves orientation as the defining characteristic of membership, we are rejecting other indicators, particularly a sterling peg. This follows the contemporary understanding. In the 1930s, countries pegging to sterling but not holding much sterling in reserves, were not considered part of the Sterling bloc.[13] Similarly, after the 1950s, there was not a strong conformity between pegging to sterling and holding majority sterling reserves, as we will demonstrate in our empirical analysis. Thirdly, our exit measure includes international reserves held by 'non-official' holders, which were largely commercial banks. This is partly for data consistency reasons: sterling's share of official reserves, found in some British archival sources, is not readily calculable for the countries covered throughout the period 1951-79. But, more importantly, movements in (the often large) non-official holdings were an integral part of the 'national' diversification

[12] TNA, T267/33, Symons, 'The Sterling Agreements 1968', 1972, p.12. Some leading Sterling Area countries did negotiate formal MSPs of 40% in 1968. However, MSPs included gold and IMF assets and excluded non-official holdings. With some variation, we estimate that an MSP of 40% was broadly equivalent to sterling being at least 50% of FX reserves using our preferred definition.
[13] Cohen, *The future of sterling*, p.69.

away from sterling.

Our *de facto* definition of exit diverges from the *de jure* history and suggests a wider membership and an extended chronology for the Sterling Area in the 1950s-70s (see Figure 1, and Table A.1 in Appendix 7.1 for full details). After Iraq in 1959, a significant group of countries—successively Egypt, Burma/Myanmar, South Africa, India, Libya, Singapore, Sudan and Jordan—crossed the 50% threshold during the years of crisis leading to sterling's devaluation in November 1967. The aftermath of devaluation, widely seen as a betrayal of trust,[14] followed by a 1968 British decision to abandon military bases in the Middle East and South East Asia, saw major sterling holders, including Kuwait, most other Persian Gulf States and Malaysia, exiting before the end of the 1960s. The exchange rate developments from President Nixon's closing of the gold window in August 1971, to the floating of sterling in June 1972, led more than a score of countries to abandon the sterling peg, but only five, including notably Australia and Pakistan, crossed the reserves threshold in 1971-72. Partly due to the commitments and sterling exchange guarantees in the Sterling Agreements of 1968-74, together with inertia and lingering orientation towards the UK, many *de facto* exits, across Africa, the Caribbean, and Europe, as well as those of Hong Kong, New Zealand, and Sri Lanka, were deferred until the years 1973-76. Finally, a handful of countries exited in the late 1970s or, as in the case of Kenya, Sierra Leone and others, even after the UK's removal of exchange controls in 1979.

[14] Schenk, *The decline of sterling*, p.313.

3 The Political Economy of Exit Decisions

We are interested in explaining the timing and causes of these national reserve-exit decisions. In electing to diversify, countries were abandoning deeply embedded national and international financial practices and long-standing diplomatic and security alignments. What factors conditioned national decisions to exit the Sterling Area and adopt a different path?

We employ a continuous time duration (or survival) model to examine adherence to the Sterling Area for a sample of 31 countries that were in the system from 1965 until 1979, and a sample of 12 countries that were in the system from 1951 (see Appendix 7.2).[15] Duration models assess the time-conditional probability of transition from one state to another and as such are useful for the study of exit from monetary regimes. Our empirical strategy therefore follows studies about how long countries chose to remain on gold in the interwar years.[16] The explanatory variables, whose effect on the survival time in the Sterling Area we wish to assess, are discussed in the remainder of this section.[17]

In the literature, there have been three classes of argument about the determinants of Sterling Area membership. One comes from the economic history literature. The Sterling Area is conceived in this tradition primarily as a liberal and voluntary 'banking club' that

[15] We employ continuous (rather than discrete) time model because this accords with the real-world process of membership exit. The baseline hazard function is assumed to have a Weibull distribution. The dependent variable is the length of time a country remained in the Sterling Area. The only large sterling holder not included in the 1965-79 sample is Hong Kong, due to lack of sufficient data.

[16] Wandschneider, 'Stability of the gold exchange standard'; Wolf and Yousef, 'Breaking the fetters'.

[17] Note there are certain systemic factors relevant to the Sterling Area which our country-level empirical strategy does not address, such as the time-varying attraction of the US dollar: see Schenk, *The decline of sterling*; Singleton and Schenk, 'Shift from sterling'. Another is the role of sterling oil royalties in the Sterling Area: see Schenk, *The decline of sterling*. This is because there are only five oil-producing countries, with diverse reserve-exit dates, across our two samples. Oil export revenues, income and wealth are of course implicitly included in other export, GDP and reserves measures.

benefited from a natural, but slowly decaying, pattern of international trade and payments. The second class of argument, from political economy, contends that sterling was a 'negotiated currency' during this period,[18] with countries agreeing to hold sterling in return for British concessions, such as privileged access to British consumer and capital markets, aid and military support. The third class of arguments, more a feature of contemporary debates, addresses distributional concerns.[19] In this lens, country-level decisions to exit originated in the give and take of international distributional conflict—unequal costs and benefits—and imposed historical constraints.

Here our approach is to separate the economic drivers of membership from the more purely political and geopolitical issues such as domestic regime type and stability, military support, and diplomatic alignments. We then separately address the distributional issues that are claimed to have conditioned departure. Within each category, for analytical purposes, we also distinguish between domestic and international factors (without denying the important interactions between them). The analysis that follows integrates these different arguments into a comprehensive empirical examination of the system's disintegration.

3.1 Economic factors

The experience of adverse domestic economic conditions and performance might be expected to encourage countries to search for alternative international economic alignments.[20] We therefore examine whether countries suffering from relatively poor

[18] Strange, *Sterling and British policy*.
[19] Conan, *The Sterling Area*; Day, *Future of sterling*.
[20] Wolf and Yousef, 'Breaking the fetters'.

domestic economic growth, unemployment and/or inflation exited earlier in order to restore economic performance.

The international economic theories about currency composition of reserves divide into two channels: a mean-variance portfolio approach,[21] and a transactions approach.[22] The transactions approach argues that risk-averse reserve managers simply seek to minimise transactions costs, basing their allocation decisions on a country's currency peg, the settlement currency of trade or imports, and the currency of debt service. The portfolio approach, which is concerned with risk and return, is hard to test in a duration model since all countries faced the same reserve currency instruments.

A particular risk hypothesis applied to low-credibility reserve currencies is the idea that large holders are constrained from selling due to the sheer size of their holdings, which might otherwise precipitate a crash in the value of the asset being sold: a 'currency trap'.[23] Apart from its potential relevance to China and other countries today, this argument has been used historically for important Sterling Area members such as Australia and Malaysia.[24]

A related economic idea is that holders of reserve currencies can be deterred from selling by more general costs of switching.[25] To the extent that switching costs mattered, and were not captured by other specified variables, one might expect countries whose sterling

[21] Ben-Bassat, 'Optimal composition'; Dellas and Chin, 'Reserve currency'; Papaioannou et al., 'Optimal currency shares'.
[22] Dooley et al., 'Currency composition'; Eichengreen and Mathieson, 'Currency composition'; Soesmanto et al., 'Management of currency composition'.
[23] Accominotti, 'The sterling trap'; Eichengreen, *Exorbitant privilege*; Prasad, *Dollar trap*.
[24] Singleton and Schenk, 'Shift from sterling'; Schenk, 'Malaysia'.
[25] See Eichengreen et al., 'Stability or upheaval', who argued that a reduction in switching costs occurred after 1973, the end of Bretton Woods.

holdings were large relative to their GDP to be constrained from diversifying, due to the higher sunk cost of these larger sterling holdings. By contrast, the 'sterling trap' idea is captured through a country's sterling holdings in relation to the aggregate international stock of sterling.

An additional type of economic argument, referenced also by the political economy school of Strange and Cohen, concerns preferential access to UK consumers and to UK capital markets. In country case studies, portfolio, transactions, and (capital) access arguments have been employed to explain reserve allocation decisions.[26] There are obvious overlaps, particularly between the transactions and access arguments in trade and capital. Still, proxy measures may differ slightly. For instance, imports from the Sterling Area speak to the transactions theory, while exports to the UK address a country's access to British consumers.

Overall, it is fair to say that economic factors dominate the historical literature about the Sterling Area. Bangura's study of Commonwealth Africa focused on trade, aid, and investment as the key to understanding relations with Britain.[27] For the Middle East, trade, oil, arms, and investment were highlighted.[28] For Australia and New Zealand, food exports and access to capital predominated.[29] Similar arguments applied to South Africa, together with its role as the world's largest gold producer.[30]

The domestic and international economic determinants of Sterling Area membership can

[26] See Singleton and Schenk, 'Shift from sterling'.
[27] Bangura, *Britain and Commonwealth Africa*.
[28] Brenchley, *Britain and the Middle East*.
[29] Singleton and Robertson, *Economic relations*.
[30] Henshaw, *Britain*.

be summarised by the following hypotheses:

H1.1 *The willingness to exit the Sterling Area increased in the face of worsening domestic economic conditions, including weak growth, high inflation, and unemployment.*

H1.2: *The international motive to remain in the Sterling Area eroded in the face of weakening intra-group trade networks and less successful access to British capital and markets, while more successful access to alternative foreign markets and sources of capital hastened exit.*

H.1.3. *Countries holding large sterling reserves found themselves trapped within the Sterling Area through risk of loss or other costs of switching, while countries with smaller sterling reserves were able to sell them more freely.*

3.2 Political factors

The role of domestic politics in the breakdown of the Sterling Area is less well understood. Nonetheless, we identify several theoretical conjectures from the literature. First, following Accominotti et al.,[31] it is possible to argue that in the Sterling Area greater degrees of local autonomy over economic matters were traded against an extended franchise. Perhaps, then, embedded democratic institutions created a stabilizing coordination problem that delayed the departure from the Sterling Area.[32] In contrast, governments with fewer domestic electoral constraints were able to exit the system earlier.

[31] Accominotti et al., 'Black man's burden'.
[32] Alesina and Tabellini, 'Positive theory'.

This argument about the franchise should be kept distinct from the question of the overall stability of the domestic political environment. Political instability—extraconstitutional changes in government, riots and unrest, frequent turnover of constitutional governments—can be expected to have impeded Sterling Area commitments, especially as newly established governments looked to signal the coming of a new constitutional and economic order.

At the international level, the Sterling Area was more than a purely financial alliance. It was also an association with military, diplomatic, and cultural attributes. Strange argued that, in the 1960s, sterling holders had to be bribed with a variety of inducements, including the financial ones already discussed, but also encompassing the promise of military protection and diplomatic support.[33] Meanwhile Britain was engaged in a difficult military and diplomatic retreat from Empire that affected countries at different times and to varying degrees.

A different geopolitical logic maintains that loyalty served as the glue that held the Sterling Area together.[34] Important to this argument is the notion that Sterling Area members—many of whom were Commonwealth countries—had a shared sense of identity, and emotional bonds, that kept them within the system.[35] Balogh, the British economist, typified this argument when he referred in the 1950s to 'emotional relationships, which are more stable than some economists seem to give credit [in building the] solid basis of mutual interest', that, he believed, secured the Sterling Area.[36] However, the attachment of

[33] Strange, *Sterling and British policy*.
[34] Eichengreen, *Global imbalances*.
[35] On the role of identity in currency preferences, see Helleiner, *Making of national money*.
[36] Quoted in Kirby, *Decline of British economic power*, p.120.

members to Britain was far from uncontested or uniform. Notably, many newly independent Sterling Area countries joined the Non-Aligned Movement (NAM), whose anti-imperial purpose was for countries to reject international relations that served the interests of great powers. The domestic and international political determinants of Sterling Area membership are summarised in three hypotheses.

H.2.1. *The extension of democracy imposed a coordination problem for countries seeking to leave the Sterling Area, delaying the date of withdrawal, while less democratic countries could exit more freely.*

H2.2. *Domestic political conflict and instability weakened the willingness and ability of countries to remain in the Sterling Area.*

H2.3. *British military retrenchment accelerated exit from the Sterling Area, while unbroken imperial diplomatic links and cultural ties, such as those of white-settler colonies, delayed efforts to leave.*

3.3 Distributional factors

A prevalent theme, in the contemporary and some subsequent literature, was the question of intra-area exploitation, under-development, and other perceived injustices. We can divide this question, firstly, into distributional arguments about reserve pooling (particularly regarding countries' balance of payments); secondly, into the limitations implicit in financial institutional arrangements; and thirdly, into the more direct forms of international restraint imposed by Britain on certain countries.

Reserve-pooling schemes such as the Sterling Area are known to offer efficiency savings but suffer from distributional asymmetries and incentive problems.[37] There is clear evidence that a leading country, Australia in the 1960s, was engaging in reserve pooling deliberately rather than inadvertently through transactional motives,[38] so this distributional concern is relevant. If the Sterling Area had winners and losers, one might, other things being equal, expect losers to exit the system earlier than winners.

There has been a balance-of-payments debate about which countries were contributing to, or drawing on, the pooled reserves of the Sterling Area, with an allegation that the UK, Australia and other independent countries were benefiting from the surplus contributions of colonies. The difficulty with this debate is that there has been no agreement about what 'contributing' meant. Some authors focused on a country's balance-of-payments position with the USA and other 'Dollar Area' countries;[39] others on the position with the wider Non-Sterling Area;[40] others, particularly after convertibility, on a country's global balance of payments.[41] The same uncertainties apply to the types of balance-of-payments flow: should the focus be on the goods and services current account (i.e. excluding transfer payments), on current and long-term capital account, or simply on the residual changes in each country's reserves? Largely for reasons of data availability, we have taken the widest measure, and test the idea that countries whose official reserves were increasing were more likely to reduce their aggregate net sterling holdings below 50% of FX reserves.

[37] Williams et al., 'Reserve pooling'; Rajan et al., 'Asian reserve pool'.
[38] Kennedy, 'Sterling's persistence'.
[39] Wright, 'Dollar pooling' and 'Dollar pooling: reply'; Bhagat, 'Working of the Sterling Area'.
[40] Schenk, *Britain and the Sterling Area*.
[41] Kamarck, 'Dollar pooling'; Scott, 'What should be done?' and 'Balance of payments'; Shonfield, *British economic policy*.

The second set of criticisms related specifically to financial institutions and development. Some contemporary critics believed that colonial currency boards hindered development, by requiring nearly full external backing for domestic currency, and limiting scope for independent monetary policy.[42] Commercial banking in developing countries was often dominated by foreign (British and other) banks, focused on trade and exchange (i.e. short-term finance rather than longer-term domestic lending), with a similar orientation towards liquid external reserves.[43]

The argument about currency boards as extractive colonial institutions has been countered by authors suggesting that they were appropriate to the context of developing countries, given the need for discipline, prudence, and confidence in a fixed exchange rate.[44] Often the central banks that succeeded these currency boards were similarly constrained, i.e. the institutional form did not matter.[45] However, within a country international reserves could be held by different institutions, including commercial banks, a currency board, a central bank, or the central government, each with different motivations. A reasonable hypothesis is that greater central government control, either through direct holdings or through influence over a central bank, might allow greater freedom to diversify away from sterling in those reserves. Greater domestic financial development could also plausibly make a country less dependent on the UK. We therefore construct various proxies for government control and financial development.

The third set of arguments relates to specific cases of dissatisfied members arising from

[42] Hazlewood, 'Sterling balances'; Polk, *Sterling*.
[43] Crick, 'Framework'; Jones, *British multinational banking*; Thomas, *Central banking in the Caribbean*.
[44] Hanke and Schuler, *Currency boards*; Schuler, 'Currency boards'.
[45] Schenk, 'Monetary institutions'.

direct and indirect forms of discrimination. Symons, of the British Treasury, in a 1972 historical memorandum,[46] argued that certain countries deriving no benefit from membership subsequently became unreliable holders of sterling. Symons also criticised the highly selective blocking of sterling balances surrounding the 1947 sterling convertibility crisis. He argued that India's experience with blocking led to its diversification away from sterling over the next twenty years.[47] These claims can be tested by applying dummy variables to countries which had sterling balances blocked during the postwar period: Burma, Ceylon, Egypt, India, Iraq, Pakistan, and Sudan. We can add to this analysis countries such as Kuwait and Libya which left sooner because, according to Symons, they 'derived no benefit' from the system. These conjectures about the distributional drivers of membership can be summarised in three hypotheses:

H3.1. *The countries whose reserves were increasing under the prevailing pattern of international trade and payments were more likely to leave the Sterling Area, while countries whose reserves were declining were less likely to exit.*

H3.2. *The development of domestic financial capacity, including government control of reserves, through financial institutional arrangements such as central banks, strengthened the willingness and ability of countries to leave the Sterling Area.*

H3.3. *The experience of bilateral constraints and perception of previous distributional losses, in the form of blocked balances and other legacies of inequity,*

[46] TNA, T267/29, Symons, 'Sterling balances since the war', 1972 (hereafter, TNA, Symons).
[47] TNA, Symons, pp.96-8.

hastened member exit, while gaining more from participation delayed the exit.

4 Examining the Timing and Determinants of Exit

Schenk notes that the Sterling Area's longevity was 'remarkable in itself' and 'offers an interesting case of prolonged disintegration of monetary relations'.[48] Why did some countries stay attached to the Sterling Area for so long, while others broke ties with Britain much earlier? What explains the variable cost-benefit calculations?

To answer this question, we employ duration model analysis. Duration model analysis concerns analyzing the time to the occurrence of an event: in our case regime exit. Specifically, we use a proportional hazards parametric model, with a Weibull probability distribution, to assess the conditional probability of exit (i.e., the hazard rate) over time as a function of covariates selected to interrogate our hypotheses about the determinants of exit. Proportional hazard models in essence assume the effects of the covariates are constant over time. The data are right-censored because some countries had not exited the regime in 1979 when our sampling window ends.

The results of the 1965 sample for each hypothesis developed in section 3 are reported in Tables 1-4. In all the regressions, we include real GDP per capita, and colonial status in 1945, whether countries were independent or in a colonial relationship with Britain, as baseline control variables, in order to capture the underlying capacities of countries to leave

[48] Schenk, 'The sterling area and disintegration', p.4.

the Sterling Area.

4.1 Economic factors

There is little evidence to support *H1.1* as shown in Table 1. The null results for growth, inflation, and unemployment suggest that domestic economic conditions did not affect membership. Limitations on data mean this conclusion must remain tentative. However, in general, we can conclude that few countries were forced out of the Sterling Area by domestic economic distress.

In contrast, the importance of international economic factors finds clear support in models *H1.2(a)-1.2(e)*. The act of switching from a sterling to a non-sterling peg made reserve withdrawal from the Sterling Area almost three times as likely. However, while large, the size of the coefficient demonstrates that reserve and peg orientations were often decoupled in practice. Some countries diversified their reserves years before they switched peg, and others years afterwards (see Table A.1 for details). The policy orientations of Sterling Area reserve managers cannot be entirely reduced to transaction cost considerations.

Sterling Area trade—imports (reported in model *H1.2(a)*) and exports (not reported)—significantly conditioned exit: a 1% increase in Sterling Area imports as a share of a country's total imports decreases the hazard of leaving by around 2%.[49] We also find evidence of large regional network effects, as the departure of a country's largest Sterling Area trading partner other than the UK, made exit about twice as likely. We also considered the role of trade with the United Kingdom. Imports from the United Kingdom (not

[49] We measure Sterling Area trade as defined in 1946 to capture the declining importance of intra-group trade for members.

reported) significantly delayed exit, as did exports to the United Kingdom (reported in model *H1.2(b)*).

Table 1: Economic Hypotheses Testing (Duration Models 1965-1979)

Explanatory Variable	*H:* +/—	*H1.1 Domestic*	*H1.2 (a) Trade*	*H1.2 (b) Trade*	*H1.2 (c) Capital*	*H1.2 (d) Capital*	*H1.2 (e) Network*	*H1.3 (a) £ trap*	*H1.3 (b) £ trap*
Colony 1945	—	0.624	0.588	0.615	0.819	0.733	0.522	0.531	0.619
		(0.370)	(0.347)	(0.360)	(0.616)	(0.531)	(0.298)	(0.333)	(0.391)
Real GDP per capita	+	1.404	1.637**	1.627**	1.680**	1.663**	1.555**	1.623**	1.679**
		(0.360)	(0.326)	(0.345)	(0.440)	(0.334)	(0.292)	(0.327)	(0.350)
Growth	—	0.981							
		(0.018)							
Unemployment	+	0.993							
		(0.035)							
Inflation	+	1.005							
		(0.015)							
Non-sterling peg	+		3.073**	2.954**	1.462	2.941**	2.457*	2.838**	2.796**
			(1.495)	(1.587)	(0.835)	(1.451)	(1.223)	(1.414)	(1.375)
Largest trading partner exit	+		2.285*	1.873	3.069**	2.202*	1.586	2.284*	2.400*
			(1.022)	(0.861)	(1.725)	(0.991)	(0.757)	(1.046)	(1.094)
Sterling area share of imports	—		0.014**		0.000***	0.029*	0.058	0.006***	0.008**
			(0.025)		(0.001)	(0.063)	(0.107)	(0.012)	(0.015)
UK share of exports	—			0.065*					
				(0.093)					
Private capital inflows	—				0.460*				
					(0.221)				
Public dollar capital inflows	+				6.253*				
					(6.706)				
Public sterling capital flows	—				1.15e-06				
					(0.000)				
USA share of aid	+					1.799			
						(3.058)			
UK share of aid	—					0.351			
						(0.518)			
Regional network effects							5.008**		
							(3.523)		
Sterling trap	—							0.529	
								(2.027)	
Costs of switching	—								0.058
									(0.261)
No. of observations		181	236	232	211	236	236	225	225
No. of countries		24	31	29	29	31	31	30	29
Log likelihood		-19.567	-20.332	-18.447	-14.214	-20.024	-17.508	-20.122	-19.895
Wald chi-square (1)		5.02	23.39	20.30	31.44	24.01	29.04	22.93	23.39

Notes: (–) denotes that the variable is hypothesised to reduce the hazard rate, thereby increasing the probability that a country remains in the Sterling Area; (+) denotes that the variable is hypothesised to increase the hazard rate, thereby reducing the probability that a country remains in the Sterling Area. Coefficients less than 1 denote variables that reduce the hazard rate, thereby increasing the probability that a country remains in the Sterling Area; coefficients greater than 1 denote variables that increase the hazard rate, thereby reducing the probability that a country remains in the Sterling Area.

We have considered several types of capital variable (models *H1.2(c)-1.2(d)*). For capital received by the non-government sector, we do not have a consistent series providing a country source. However, since the UK was a large exporter of such 'private capital' (e.g. FDI), a country with a high ratio of aggregate net private capital inflows to gross fixed capital formation (GFCF) would perhaps have been more interested in unfettered access to UK capital through Sterling Area membership.[50] For capital received by central government, we have combined aid grants and government borrowing (bonds and loans) into a 'public capital' measure categorised by US dollar and sterling sources, once again scaled by GFCF. We also consider the USA and UK share of total official aid.

The benefit of privileged access to the London capital market delayed exit as predicted: increasing relative dependence on private capital reduced the hazard of Sterling Area departure by almost half (model *H1.2(c)*). Though the result is just significant at the 10% level, and the coefficient suggests capital market access made a material difference to countries, data and measurement limitations make it hard to precisely isolate this effect of private capital access. The introduction of public dollar capital shortened duration: materially increasing the hazard of exit (model *H1.2(c)*). Greater USA shares of total aid also increased the likelihood of exit though the result is not statistically significant (model *H1.2(d)*). In contrast, access to public sterling capital had no identifiable effect on membership decisions (model *H1.2(c)*). Increases in the UK's share of total aid delayed withdrawal as expected, but not in a statistically significant way (model *H1.2(d)*). While a

[50] There were some voluntary restrictions on UK FDI to Australia, New Zealand, South Africa, and Ireland in 1966-72, and limited Bank of England oversight of FDI to the Overseas Sterling Area from June 1972, but the effect of these measures was uncertain.

particular country such as Australia may have valued private and public capital inflows from the UK, in the context of the whole Sterling Area our results suggest the connections between Britain's aid and capital investment, and its diplomatic objectives, were not straightforward.

The inclusion of a regional network effects variable (showing each year a Sterling Area region's cumulative share of population having exited) affirms that there were very strong regional network effects at work in the disintegration process (model *H1.2(e)*). While we cannot isolate exactly what political or economic channel these regional effects worked through, the variable is highly correlated with the largest trading partner exit, suggesting the importance of regional trade effects.

Finally, we find no clear empirical support for the operation of a sterling trap in this period.[51] As reported, though the sign is as predicted, the effect is not statistically significant (model *H1.3(a)*).[52] We also find no evidence to support the claim that the 'costs of switching' delayed exit in a significant way (model *H1.3(b)*).

4.2 Political factors

Turning to the domestic and international political environment in Table 2, we find strong evidence that a broader political franchise delayed exit. A 1% extension in the franchise reduces the hazard of leaving by 10%. This failure to reject *H2.1* holds under various

[51] This is consistent with Schenk's finding for Singapore: see Schenk, *The decline of sterling*, p.297. Individual country authorities could of course feel trapped for reasons other than the purely risk-based motivations that drive a 'currency trap': see Kennedy, 'Sterling's persistence'.
[52] The null finding holds even when Nigeria (a very significant holder of sterling in the mid-1970s) is dropped from the analysis and when a lag of the mean sterling balances is employed.

measures of democracy (not reported), including a composite electoral democracy index. We also find a significant negative coefficient for party fractionalization in unreported models, providing further evidence that constraints on collective action established by democratic politics and institutions delayed exit from the Sterling Area. In contrast, governments with fewer domestic political constraints were able to break ties with the Sterling Area earlier.

The composite measure of domestic political instability (comprising constitutional crisis, coups, and domestic cabinet changes) is sizeable, positive, and significant, affirming *H2.2*. When this measure is decomposed in unreported models, we find domestic cabinet changes driving the result. The hypothesised desire of new governments to signal a change of direction may therefore have been operative.

Table 2: Political Hypotheses Testing (Duration Models 1965-1979)

Explanatory Variable	*H:* +/—	*H2.1 Democracy*	*H2.2 Political stability*	*H2.3 International relations*
Colony 1945	—	0.715	0.850	0.046
		(0.397)	(0.476)	(0.090)
Real GDP per capita	+	1.670**	1.543**	1.861***
		(0.346)	(0.331)	(0.410)
Democracy	—	0.074***		
		(0.063)		
Political instability	+		4.664*	
			(3.780)	
British retrenchment	+			13.056
				(24.809)
Nonaligned movement	+			2.345
				(1.242)
No. of observations		241	206	241
No. of countries		31	30	31
Log likelihood		-26.311	-25.738	-26.923
Wald chi-square (1)		12.80	7.92	11.57

As posited under *H2.3*, the importance of international political ties has some support. The finding that NAM countries were more than two times more likely to exit earlier from the Sterling Area supports the idea that cultural ties were an important adhesive.[53] But a selective one: for some, notably white-settler countries, cultural affiliations and bonds of friendship probably delayed exit; for others, British ties were associated with a legacy of oppression and exploitation that needed to be cast off.

Model *H2.3* further indicates that British military withdrawal had a very large effect on member calculations, although this is not significant statistically.[54] The size of this coefficient and its stability across other unreported models, in conjunction with strong theoretical reasons to believe that Britain's military retrenchment mattered, suggests that security and financial factors were substantively linked for most states hosting British military establishments.

4.3 Distributional factors

Moving on to address the distributional question of how the Sterling Area benefits and burdens divided in Table 3, the picture is mixed. The absence of any discernible effect of reserve contributions on membership suggests that, if such a distributional factor was relevant at all, arguably the multidimensional nature of the costs and benefits of regime participation made it difficult for countries to orient policy around them.[55]

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[53] Kirby, *Decline of British economic power*.
[54] The often-gradual nature of military retrenchment poses substantial measurement problems. However, we find similar results using alternative measures of retrenchment.
[55] This null result for *H3.1* is supported by an unreported regression that employed a dummy variable for net dollar pool contributors in the 1950s. The finding of course does not rule out the possibility of discrimination in the system over the long run.

Table 3: Cui bono? Hypotheses Testing (Duration Models 1965-1979)

Explanatory Variable	*H:* +/—	*H3.1 Reserves*	*H3.2 Domestic institutions*	*H3.3 Bilateral relations*
Colony 1945	—	0.835	0.760	0.745
		(0.470)	(0.439)	(0.411)
Real GDP per capita	+	1.611**	1.495	1.862***
		(0.355)	(0.397)	(0.369)
Reserves growth	+	1.150		
		(0.151)		
Central bank	+		1.085	
			(0.801)	
Financial development	+		1.008	
			(0.026)	
Commercial holders	—		1.281	
			(0.668)	
Government holders	+		1.607	
			(1.994)	
Bilateral constraints	+			6.142***
				(3.130)
No. of observations		241	239	241
No. of countries		31	31	31
Log likelihood		-29.094	-30.955	-24.265
Wald chi-square (1)		7.23	5.95	16.89

There is some support in model *H3.2* for the conjecture that domestic financial underdevelopment may have frustrated exit. But there is no systematic correlation between enhanced government control over reserves and the willingness and ability to leave the system. The establishment of an independent central bank is likewise not found to have brought forward the date of departure. This dovetails with Schenk's conclusion that the replacement of colonial currency boards with central banks had greater symbolic than operational policy significance.[56]

Considering more direct forms of repression, model *H3.3* reports that the experience of postwar blocking or inclusion in the list of countries that Symons deemed non-beneficiaries from the Sterling Area did lead countries to leave the system earlier, with a large (more than sixfold) increase in the hazard ratio relative to countries not in this group. It is

[56] Schenk, 'Monetary institutions'.

instructive that the blocking experience continued to resonate adversely so long after the postwar crisis had ended. Pakistan's reserve exit in the final quarter of 1971, a year dominated by war over the independence of Bangladesh, was driven by fear of renewed blocking.[57]

4.4 Economics and politics

Table 4 brings the analysis together for the 1965 sample. To minimise the loss of observations and preserve degrees of freedom, we omit domestic economic factors. We also omit other variables such as the institutional holders of reserves that had no discernible impact on Sterling Area participation. To minimise the AIC and BIC goodness of fit indicators and so identify the "best model" specification, we further drop the international capital variables notwithstanding their identifiable role (see Table 1) in explaining certain patterns in the disintegration process. The models then progress sequentially, bringing a baseline set of international economic factors together with domestic political (model 1), international political (model 2), and distributional factors (model 3). Finally, models 4 and 5 present two alternative aggregate models.[58]

The results provide substantive evidence that the determinants of Sterling Area membership were multidimensional. In line with *H1.2*, international trade ties (and pulls) remain significant even after the inclusion of other variables. But, as expected by *H2.1-3*, domestic and international politics remain important. Democracy in particular is highly significant even when including other covariates. Democratic regimes are associated with

[57] TNA, T358/45, FCO59/742.
[58] We also conducted the analysis without including peg exit as a righthand-side variable and the results do not substantively change. We also get consistent results when using peg exit as the dependent variable.

longer membership duration. Political instability is meanwhile associated with bringing departure forward in time. The changing international political relations measured in military retrenchment and membership of the NAM exerted large effects on Sterling Area membership. These effects however cannot be consistently identified as statistically significant.

Table 4: Multivariate Analysis (Duration Models 1965-1979)

Explanatory Variable	*H:* +/—	*(1) Economic and domestic political*	*(2) Economic and international political*	*(3) Economic and distributional*	*(4) Full model*	*(5) Full model*
Colony 1945	—	0.502	0.052*	0.555	0.089*	0.134*
		(0.301)	(0.082)	(0.326)	(0.130)	(0.155)
Real GDP per capita	+	1.615**	1.899***	1.605*	1.748***	1.736***
		(0.308)	(0.396)	(0.403)	(0.315)	(0.328)
Non-sterling peg	+	3.377**	3.237**	3.672**	4.083***	3.426**
		(1.870)	(1.573)	(1.890)	(2.190)	(1.758)
Sterling area share of imports	—	0.020**	0.020**	0.103	0.040	0.015**
		(0.037)	(0.037)	(0.201)	(0.079)	(0.028)
Largest trading partner exit	+	2.339*	2.379**	2.070	2.155	2.452*
		(1.060)	(1.065)	(1.007)	(1.019)	(1.134)
Democracy	—	0.091**			0.171*	0.087**
		(0.086)			(0.184)	(0.087)
Political instability	+	2.001				
		(1.732)				
British retrenchment	+		11.185*		6.165	4.176
			(16.646)		(9.052)	(4.853)
Nonaligned movement	+		1.630			
			(0.853)			
Reserves growth	+			1.179		
				(0.168)		
Financial development	+			1.017		
				(0.033)		
Bilateral constraints	+			4.477**	2.641	
				(2.778)	(1.766)	
No. of observations		202	236	234	236	236
No. of countries		30	31	31	31	31
Log likelihood		-15.596	-18.141	-19.773	-15.384	-16.376
Wald chi-square (1)		27.54	27.77	26.97	33.29	31.30

Notes: The specification of the full models 4 and 5 is based on AIC and BIC minimisation. Although applying this procedure mechanically would have led us to exclude military retrenchment, it was included as an additional variable due to its substantive historical importance and prominence in the literature.

The distributional picture also corresponds with our earlier analyses. There is little evidence to support *H3.1* that the winners and losers, as identified by relative contributions

to reserve pooling, drove membership decisions. Countries able to develop stronger banking institutions were associated with shorter membership durations, although this effect (not reported) is only identifiable when GDP per capita is excluded. Bilateral constraints posited in *H3.3* also mattered: adherence was undermined by the experience of blocked sterling balances, and/or inclusion in Symons' list of countries deriving no benefit from the system. However, perhaps the greatest distributional factor was more structural. There is an identifiable negative impact of still being under colonial rule in 1945 when controlling for other factors. The shadow of still being a colony in 1945 decreases the hazard of withdrawal by 14% in model 5. This suggests that power asymmetries that conditioned the ability of countries to leave the system may have been deeply rooted in the imperial origins and development of the Sterling Area.

Table 5 presents a corresponding analysis for our 1951 sample. The small number of countries in this sample makes it hard to establish statistically significant results, but the factors we identify in the 1965 sample are also relevant over the entire postwar period. The multivariate nature of the drivers of membership is especially apparent, as we find both transactional economic and political institutional factors shaping membership decisions. The role of colonial status in 1945 and democracy in delaying, and domestic instability and bilateral geopolitical constraints in accelerating, withdrawal is consistent with our hypotheses. The main exception here concerns the association of economic strength (GDP per capita) with longer duration. The discrepancy can be explained by the absence of many smaller late-leaving colonies and dependencies in the 1951-1979 sample (compare Tables A.1 and A.2 in the Appendix). In the more stable pre-1964 years, there was greater reason for rich countries to stay, and their larger weight among the 12 countries drives the positive

association. By contrast, in the 1965-1979 sample, this variable measures better the effect of wealth on a country's capacity to abandon a reserve currency lacking in credibility.

Table 5: All Hypotheses Testing (Duration Models 1951-1979)

Explanatory Variable	*H: +/—*	*H1.1*	*H1.2 (a)*	*H1.2 (b)*	*H1.3*	*H2.1*	*H2.2*	*H2.3*	*H3.1*	*H3.2*	*H3.3*	*Full model*
Colony 1945	—	0.000*** (0.001)	0.007*** (0.012)	0.005*** (0.008)	0.006*** (0.011)	0.003*** (0.006)	0.004*** (0.008)	0.004*** (0.006)	0.003*** (0.005)	0.003*** (0.005)	0.004*** (0.007)	0.012** (0.022)
Real GDP per capita	+	0.026*** (0.027)	0.156** (0.138)	0.163** (0.132)	0.151** (0.137)	0.075*** (0.061)	0.073*** (0.074)	0.099** (0.109)	0.068*** (0.056)	0.079*** (0.067)	0.133*** (0.119)	0.332 (0.303)
Growth	—	0.934** (0.028)										
Unemployment	+	0.507** (0.175)										
Inflation	+	0.991 (0.017)										
Non-sterling peg	+		1.345 (0.681)	1.019 (0.690)	1.349 (0.910)							2.250 (1.549)
Sterling area share imports	—		0.016 (0.057)	0.083 (0.281)	0.019 (0.068)							0.078 (0.263)
Largest trade partner exit	+		1.154 (0.696)									
Regional network effects	+			7.075 (8.809)								
Sterling trap	—				0.335 (5.06)							
Democracy	—					0.769 (0.949)						0.117 (0.188)
Political instability	+						1.372 (2.010)					
British retrenchment	+							1.820 (2.839)				
Reserves	+								1.641 (1.308)			
Financial development	+									0.972 (0.134)		
Bilateral constraints	+										3.798 (4.230)	6.856* (8.382)
No. of observations		186	215	215	213	215	182	215	215	215	215	215
No. of countries		11	12	12	12	12	12	12	12	12	12	12
Log likelihood		11.49	9.18	9.14	7.80	6.76	6.13	6.94	6.77	6.76	7.62	9.43
Wald chi-square (1)		23.30	18.16	18.08	15.40	13.33	8.51	13.66	13.32	13.32	15.04	18.66

Notes: The specification of the full model in the final column is selected based on AIC and BIC minimisation and reasonable correspondence with the 1965 analysis.

Overall, two general findings emerge from the empirical analysis. The first conclusion concerns the multidimensional drivers of Sterling Area membership. Most of the expected economic factors, such as trade and capital, mattered, but so too did domestic and international politics, historical-institutional legacies, and distributional concerns.

Secondly, variables such as historical colonial status suggest that political and financial dependence, rather than mere economic convenience (the *H1* factors), played a significant role in adherence to the Sterling Area. While the general patterns we uncover in the empirical analysis help us to make sense of the decline of the Sterling Area as a whole, the way different factors combined to influence the choices of individual members is also important to understand. As such, the next section drills down into the exit decisions of individual countries, and where they departed from the model.

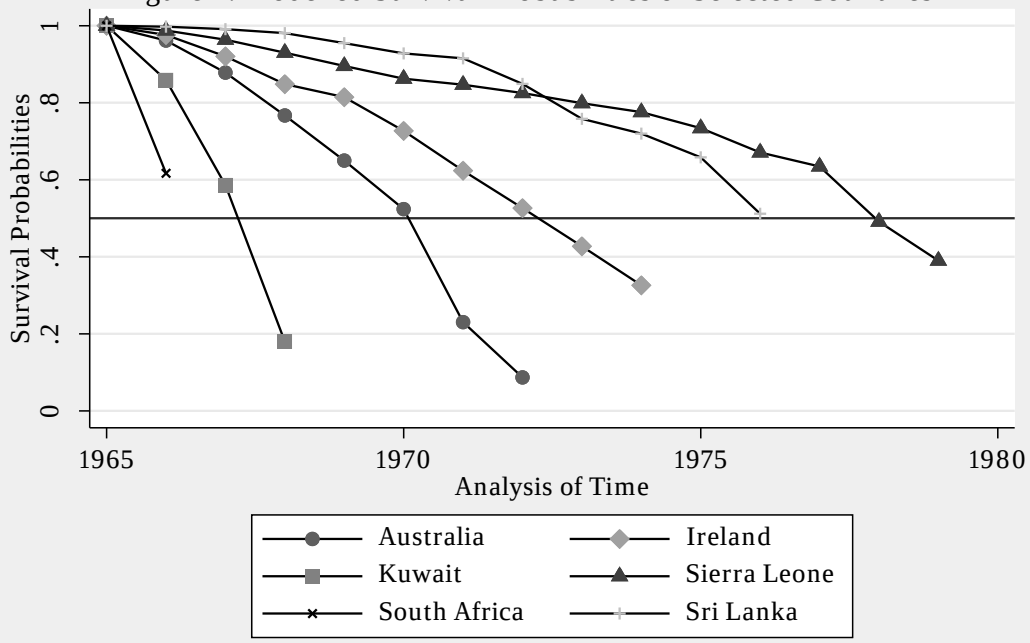
5 Survival Probabilities and Discussion

Our dynamic model offers a means to predict the survival probabilities of individual countries in the sample. Though it is hard to define precisely when a country should reserve-exit, following the approach in Wandschneider,[59] it is possible to argue that when the survival probability of a country shifted below 50% it was probably in the interests of the country to do so.

For illustration purposes, using the full model 5 in Table 4, Figure 2 shows the declining survival probabilities of six Sterling Area countries selected for their diversity in terms of geography and reserve-exit date. Figure 2, in general, captures countries leaving in line with the predictions of our model (with survival probabilities of around 50% just prior exit), illustrating the power of our analysis across the sample period.

[59] Wandschneider, 'Stability'.

Figure 2: Modelled Survival Probabilities of Selected Countries



Source: Table 4, model 5.

Inevitably, however, the model can only give a partial explanation of individual cases, and it accounts for some country exit decisions better than others. This generates another dimension of variation that we can exploit, since examining the differences between predicted survival probabilities and actual exits can enhance our understanding of the drivers of exit. Table 6, again using the model 5 in Table 4, thus categorises countries according to whether they were early or late leavers, relative to the predictions of the model.

Table 6: Reserve Exit from Sterling Area Compared to Model Prediction

Early	Slightly early	Broadly as predicted	Slightly late	Late
India	Pakistan	Tanzania	Gambia	S. Leone*^
Sudan	Cyprus	New Zealand	Ireland	PDR Yemen^
Singapore	South Africa	Sri Lanka	Nigeria	Ghana
Malawi	Guyana	Malta	Jamaica	Kenya*
Malaysia	Trinidad & Tobago	Zambia	Australia	Barbados
Uganda		Mauritius		
Fiji		Kuwait		
Jordan				
Libya				

Notes: Early = predicted survival probability 70% or higher in year of exit; Slightly early = predicted survival probability 55-69% in year of exit; Broadly as predicted = predicted survival probability below 55% only in year of exit; Slightly late = predicted survival probability less than 50% in year of exit and preceding year; Late = predicted survival probability less than 50% for more than two years prior to exit. Countries listed in declining order of survival probability in year of exit.

Early and late outliers should be explained by factors outside the model. One element that misses inclusion in the best fitting final model is capital. Capital probably mattered for some countries. In this connection, it is potentially suggestive that if the pull factor of public dollar capital had been included in the candidate model, the reserve exits of Nigeria, Pakistan and Jamaica would have been better predicted.

*Kenya and Sierra Leone did not reserve-exit in the period.
^Survival probabilities (PDR Yemen 1972, Sierra Leone 1978-9) derived using source-of-imports data in IMF staff reports.

Given high (70%+) survival probabilities in the year of exit, the reserve departures of countries in the 'Early' column of Table 6 should be explained by significant factors outside the model. We begin with South East Asia. For Singapore, sterling's share of total official reserves fell to 50% by October 1967;[60] according to our criteria, the decisive transition into (FX) minority was in June 1967. For Malaysia, the devaluation of sterling in November 1967, coinciding with the discovery of rival Singapore's more aggressive diversification, proved to be the watershed in policymakers' attitudes to sterling.[61] By our criteria, the decisive transition into minority occurred in June 1969.

[60] TNA, T267/33, p.22.
[61] Schenk, 'Malaysia'.

In explaining these early departures, it seems clear that Singapore's exit, ahead of devaluation in 1967, was driven by its 'more forward-looking and independent policy',[62] something that the model does not capture: it came as a surprise to British officials too. Malaysia's policy was more reactive and negotiated with Britain, but highly influenced by Singapore's actions as well as the losses incurred from sterling.

There was a parallel situation in South Asia. Like Singapore, India (reserve exit September 1966) made a deliberate financial decision to diversify, anticipating sterling devaluation.[63] Pakistan's action, in December 1971, was political. A 'fairly steady' holder in the 1960s,[64] Pakistan was suspicious about the UK's stance on Bangladesh, which contrasted with the USA's backing of Pakistan. It refused to continue to deal in sterling, and breached its Sterling Agreement by putting its sterling reserves outside the Sterling Area, beyond the reach of Bangladesh's claims.[65]

Another group of early leavers were members of the League of Arab States, notably Libya (April 1967), Sudan (June 1967), Jordan (November 1967), and Kuwait (March 1968). Of these, only Kuwait's exit was broadly predicted by the model. Sudan, Jordan, and Libya lie in Table 6's 'Early' column.

Political antipathy is the key to understanding these unpredicted departures. The UK Treasury's Symons noted: 'In 1967, Libya was ... pursuing an actively anti-British policy in relation to oil, and [military] bases; we considered whether we should expel her from the

[62] Schenk, 'Malaysia', p.216.
[63] Balachandran, *Reserve Bank*, pp.1147-9.
[64] TNA, Symons, p.64.
[65] TNA, T358/45, FCO59/742.

sterling area but came to the conclusion that this would bring us no material gain'.[66] The exits of Sudan (June 1967) and Jordan (November 1967) were connected to the Arab-Israeli War of June 1967. False rumors of British and American support for the Israelis fed anti-British sentiment that summer. Sudan broke off diplomatic relations with Western powers entirely, while Jordan used postwar aid, granted by regional allies, to diversify.[67] While war and devaluation also contributed to Kuwait's diversification, its transition, on our criteria, occurred in 1968, following Britain's January announcement of withdrawal of British troops from the Gulf by 1971, which effectively curtailed the special relationship. The response from Kuwait[68] suggests that retrenchment, included in the model, was an important factor.

A notable feature of other unpredicted 'early' exits—South Africa (January 1966), Uganda (January 1972), Malawi (July 1973), Cyprus (October 1973), and Fiji (1974)—was that they were significant concentrated switches rather than gradual events. Uganda's occurred under the new regime of the dictator Idi Amin: a major policy rupture with the British took place a few months later. From mid-1972 Uganda was in breach of, and effectively abandoned, its Sterling Agreement with the UK.[69] Cyprus's switch seems associated with a new pivot towards the EEC, and dissatisfaction with UK actions in June 1972 and the Sterling Agreement expiring in September 1973.[70] Malawi similarly withdrew from its Agreement then, complaining about the effect of sterling weakness on its reserves and

[66] TNA, Symons, p.76.
[67] Brenchley, *Six-Day War*, pp.41-43, 63, 150-153; Galpern, *Money, oil, and empire*, p.269; Jones, *Banking and oil*, pp.210-213. See also TNA, T312/1943.
[68] See Galpern, *Money, oil, and empire*, p.273; Smith, *Kuwait 1950-1965*, p.134.
[69] TNA, T358/88, FCO31/1356.
[70] TNA, T358/33 ; IMF *Archives Catalog* (IMF), SM/74/1.

import prices, late payment and an ineffective guarantee.[71] Previously wholly in sterling in 1972, Fiji's 1974 departure coincided with that of its neighbour New Zealand, while simultaneously repegging the currency and centralising reserves under a new Central Monetary Authority.[72] South Africa was a special case in the Sterling Area given that its reserves were dominated by gold, and its net sterling holdings had been negative at times e.g. in the 1950s. But Q1 1966 saw a sizeable shift from sterling into other currencies.

At the other end of the spectrum, the last column of Table 6 lists countries whose reserve exit took place more than two years after the survival probability had fallen below 50%. A common theme among these 'late' leavers seems to have been economic and reserve strains in the two to three years preceding the year of exit. This applied to Barbados, Ghana, PDR Yemen, and Sierra Leone, for instance. For countries with low and fluctuating reserves, it is sometimes hard to pinpoint the month of decisive transition to sterling minority, as there may have been some irreducible legacy aspects to sterling holdings, while US dollar reserves could be more flexible. PDR Yemen is an example: it had been diversifying since the November 1967 devaluation,[73] and there is a case for an earlier year of exit (sterling roughly equal to other FX holdings in 1970-71), the decisive transition only becoming apparent when reserves increased in 1972.

The effect of economic and reserve weakness on late departure is illustrated by the case of Ghana. Ghana had proactively challenged Sterling Area membership in the early years following its independence in 1957.[74] Yet, due to economic weakness, the Minimum

[71] TNA, T358/59, FCO59/870, FCO59/1129; IMF, EBS/73/397.
[72] TNA, FCO59/1139; IMF, SM/74/247.
[73] IMF, SM/70/116 p.41.
[74] Schenk, *The decline of sterling*, p.99.

Sterling Proportion negotiated in its 1968 Sterling Agreement was, at 80%, the highest of its peers.[75] In the years prior to 1977, when it exited, Ghana continued to have significant debt problems. Although, across the whole sample of countries, reserve growth was not found to have significant effects on exit, some aspect of extreme economic weakness, through reduced negotiating power, and a need to make the most of credit channels, seems to have been a delaying factor.

The model may also not be capturing certain geopolitical or diplomatic aspects of British orientation in the policies of late-leaving individual countries. Kenya was not one of Bangura's 'residual sterling bloc' African states (Sierra Leone, Gambia and Malawi) most dependent on the UK for development after 1972.[76] However, Kenya was a special British relationship, reflected not just in aid, trade and UK commercial investment, but through military equipment and training. There was even a secret long-standing 'Bamburi understanding' envisioning the possibility of direct British military support in the event of attack by Somalia.[77] Barbados likewise had a close relationship, e.g. seeking police and coastguard assistance from Britain in 1978 given its anxieties about Cuba.[78]

Finally, 'slightly late' departures occurring in the years 1972-74, such as those of Australia, Jamaica and Ireland, may reflect a delaying effect from the Sterling Agreements. The UK's guarantee was withdrawn for new reserve accruals after September 1973, so this motivation did not apply to Nigeria (exit August 1975). However, Nigeria's General Gowon, overthrown

[75] Schenk, *The decline of sterling*, p.295. This reversal paralleled the experience of Ceylon (see TNA, Symons pp.67-70).
[76] Bangura, *Britain and Commonwealth Africa*, pp.198-200.
[77] TNA, FCO31/2325, FCO31/2326, FCO31/2327.
[78] TNA, FCO99/131.

by a coup in July 1975, was 'a good friend of Britain',[79] while the British Treasury reported in October 1974 that 'familiarity with London as a financial centre' was 'particularly important' for Nigeria.[80]

In summary, outliers can be explained by factors outside the model including war, individual diplomatic relationships, economic weakness, and local pull-factors, such as Singapore's influence on Malaysia, or the EEC on Cyprus. They support our conclusions about the multidimensional drivers of exit, and the significance of geopolitics and financial dependence, alongside conventional economic considerations.

6 Conclusion

Writing at a time when the US dollar's future is increasingly the subject of doubt, what can the Sterling Area tell us about how monetary leadership ends?

The most obvious lesson of this history is that international currencies are not immune from the shifting structures of international economic and political power. There is clear evidence that, albeit with some lag, monetary relations follow shifting patterns of international trade and capital flows. The gravitational economic pull of an international currency cannot be maintained indefinitely, absent the productive base and international flows of real resources that stand behind it. We can also see that the network that supported sterling broke apart in punctuated fashion region by region.

[79] TNA, FCO65/1779, 'Nigeria: annual review for 1975'.
[80] TNA, T358/162, Hedley-Miller to Barratt, 25 October 1974.

But domestic politics also mattered. In the Sterling Area, democracy, and the existence of political divisions within a polity, served to delay regime withdrawal. There are various channels through which this association may have operated. What is clear is that less democratic regimes faced fewer coordination problems when looking to break away from the Sterling Area.

While it is too much to claim that international currency choices are primarily security-driven,[81] the appeal of sterling for individual Sterling Area countries was linked to military and diplomatic relations. For some countries facing acute security threats, such as Kuwait, the prospect of British retrenchment accelerated their search for alternative monetary arrangements. The strong pull of US financial assistance also demonstrates that international currencies can be undercut by strategic rivals.

We also find a place for Commonwealth bonds of loyalty, friendship, and cultural attachments in extending Sterling Area adherence. To be sure, some countries in the Sterling Area were culturally aligned with Britain, but others wanted to rid themselves of their old imperial master. British officials too often underestimated the latter sentiment, as seen in the Sterling Agreements negotiations of 1968 and subsequent exits from them. This is a particular version of what Gallarotti calls the 'power illusion', under which dominant states operate under the misperception that others have affective attachments to them.[82]

The history examined also reveals limits to the exercise of international monetary power. It is possible, and always tempting, to weaponise international payment systems for short-

[81] Norrlof, 'Security foundations of dollar primacy'.
[82] Gallarotti, *The power curse*.

run geostrategic gains.[83] However, just as recent US efforts to sanction and exclude countries from the dollar order have accelerated efforts to find alternatives, so too did Britain's imposition of direct controls and constraints lead to earlier withdrawals from the Sterling Area. Only limited faith can be placed in the idea that dollar holders are 'trapped' by risks of economic loss. The adverse downstream consequences of monetary coercion for the long-term viability of monetary power are material.

Last, the Sterling Area's disintegration causes us to rethink conventional understanding of the relationship between international economics and politics. Many argue that money shapes the political order.[84] This is because the issuers of international currencies are largely free to pursue military and diplomatic initiatives without regard to balance-of-payments constraints. However, when international currencies begin to decline, the established international political order—in particular, embedded structures of hierarchy and dependence, legacies of privilege and exploitation, and patterns of inclusion and exclusion—can exert an equally important influence on the process of monetary disintegration. The established international political order and its discontents may therefore play a greater role in shaping the decline of the dollar than has so far been acknowledged.

[83] Kirshner, *Currency and coercion*.
[84] Khanna and Winecoff, 'Money shapes the order'.

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7 Appendices

7.1 The dependent variable: *De facto* Reserve Exits from the Sterling Area

Due to the obvious problems of the de jure classification, analysis of the Sterling Area has long lacked a consistent measure of when countries abandoned Sterling Area membership. What action might be deemed to constitute withdrawal? There were three behaviours that British Treasury and Bank of England officials expected from countries enjoying the privilege of Sterling Area membership: such countries should peg their currencies to sterling, they should pool their reserves by selling non-sterling reserves to the UK, and they should operate exchange controls aligned with those of the UK.[85]

The last of these can be dismissed quickly. While an alteration in a country's exchange controls (limiting capital movements to the UK, for instance) often had significance as an indicator of a country's changing orientation, the practice of exchange control was so varied throughout the Sterling Area that exchange control cannot form a reliable measure of membership. In Hong Kong and Kuwait, there were free exchange markets, gaps in Sterling Area exchange control that were accepted by the British.[86] Australia, New Zealand and South Africa limited capital flows to the UK from an early date.[87]

The exchange rate peg has superficial attractions, given its role in studies of exits from the interwar Gold Standard. And there has been a recent empirical study allowing the extraction of de facto sterling peg exit dates.[88] However, the Sterling Area was unlike the

[85] Schenk, *Britain and the sterling area*, p.8.
[86] Schenk, *The decline of sterling*, p.216.
[87] Sargent, 'Britain and the sterling area'.
[88] Izetski, Reinhart, and Rogoff, 'The country chronologies to exchange rate arrangements'.

interwar Gold Standard, where any combination of gold convertibility suspension, devaluation relative to gold, and new exchange controls could reasonably constitute exit.[89] The Sterling Area was a fluid discriminatory system favouring sterling's international role over that of the US dollar, and adjustments to the sterling peg occurred without any threat to membership (e.g. Pakistan in 1949 and 1955, India in 1966). While most Sterling Area countries followed the UK's devaluation in 1949, in 1967 UK officials did not even want Australia, Malaysia, Hong Kong, Singapore and others to devalue with sterling .[90] Given sterling's peg to the US dollar under Bretton Woods, countries oriented towards the US dollar did not really need to alter their sterling peg until the fixed exchange rate system began to break up in 1971, forcing them to choose. Thus, after the 1950s, when the sterling peg held more significance for British officials,[91] it seems that pegging to sterling was not a necessary condition for Sterling Area membership (e.g. The Bahamas had a dollar peg while part of the Sterling Area).

By contrast, the prioritization of sterling in international reserves was clearly important. The corollary of the pooling of reserves was that countries should not accumulate non-sterling reserves beyond minimum working balances. Of course, over time they did so, but these accumulations were regularly challenged by British officials.[92] The de jure departures of Iraq, Burma and Libya were associated with significant reserve movements. Sterling's share of reserves is a metric that is widespread in the historical literature, also constituting

[89] Wolf and Yousef, 'Breaking the fetters', p.255.
[90] Cairncross. *Managing the British economy in the 1960s*, p.186
[91] Burnham, *Remaking the postwar world economy*, p.123.
[92] TNA, Symons.

the central obligation of Sterling Area countries in the Sterling Agreements of 1968-74.[93]

The *de facto* measure of exit we use is the (month and) year of decisive transition by a country away from holding a majority of its FX reserves (i.e. not including gold or other reserve assets) in sterling form. The resulting exits, together with peg and formal exit dates, are set out in Table A.1 below. The exclusion of gold and IMF reserves reflects the Sterling Area's discriminatory role in favouring sterling relative to national currency rivals, particularly the US dollar. Gold holdings to varying degrees backed the domestic currencies of Sterling Area countries (e.g. India and South Africa), and the idea of an IMF member holding IMF reserves and SDRs could hardly be challenged by British officials.

The use of the majority threshold is evidenced and supported in a wide range of sources. For example, in repeated country notes in the IMF's *International Financial Statistics* publications during the 1950s, South Africa's position in the Sterling Area, despite large gold holdings, was explained on the grounds that most of its foreign exchange was held in sterling. Ceylon's 1950s intention, that half its central bank reserves could be in US dollars, was rejected by the British as irreconcilable with Sterling Area practice.[94] The British application of a rough threshold effect (or implicit membership rule) can also be identified in the movements of Iraq and Burma, each of which went below 50% around the time of their expulsions (see Table A.1 below). There are also the examples of Singapore taking its official holdings down to 50% in 1967, to the great irritation of the British, and Libya being considered for expulsion in the same year as its reserves passed this threshold (see

[93] Schenk, *The decline of sterling*, p.216.
[94] BOE, OV82/5. 1.9.58.

discussion in Section 5). The 50% threshold represents a rough mid-point between Non-Sterling Area sterling share figures, invariably less than 10%, and the average for members of the Sterling Area, which was around 90% of foreign exchange holdings in 1965.[95] The historiography usually dates the end of the Sterling Area between 1972 and 1974, that is, between the change in British exchange controls and the ending of the Sterling Agreements. As a rule of thumb, with this period providing the focal point of decline, we would have a roughly even spread of exits before and after---and this is what the data reveals using the 50% threshold. The transition is also 'decisive' in order to overlook temporary periods of oscillation in which sterling holdings were in the minority.

There are major difficulties in sourcing data on the currency composition of reserves since the IMF treats such country data as confidential. We calculated the exits by comparing monthly data on sterling holdings from the Bank of England Archive, with foreign exchange holdings using IMF sources. The BOE source, a series of files setting out the UK's liquid external claims and liabilities in sterling, only provides sterling holdings consistently on a net basis (UK liabilities minus claims), amalgamating both official holdings (central monetary institutions and government institutions) and those held by commercial banks and others. By contrast, IMF public online data only readily offers gross official FX reserves. In order to obtain FX data on a basis broadly consistent with the sterling data, we augmented this source with data from the monthly physical *International Financial Statistics* issues, and periodic IMF staff reports. The IMF's physical books and staff reports, the latter containing detailed reserve information gleaned from country visits, and both

[95] BOE, OV53/32, 25.1.68.

providing reserves held by commercial banks, were thus crucial sources for comparing the BOE's sterling and the IMF's FX data. We used straight line interpolation for any elements subject to monthly gaps. By closely analysing the data for each country we were able to determine a month and year of exit for almost all countries. In the case of a few countries where the above process did not yield results, we calculated the year of exit from material in other primary sources (e.g. Brunei and Hong Kong using data from The National Archives).

Table A.1: Timing and Measurement of Member Exits from the Sterling Area

Membership		Measure of exit			
Early file name	**Later name**	**Reserves**	**Peg I**	**Peg II**	**Formal**
Aden (Southern Yemen)	PDR of Yemen	Jun-72	Jan-72	-	
Australia	Australia	Jul-72	Dec-71	Dec-71	
Botswana	Botswana	-	Oct-72	Oct-72	
British Somaliland	Somalia	Jul-60	Jul-60	Jul-60	Jul-60
British West Indies	Bahamas	-	Jan-70	May-66	
British West Indies	Barbados	Apr-78	Jul-75	Dec-73	
British West Indies	Bermuda	-	Jul-72	Feb-70	
British West Indies	Belize	In 1976	May-76	May-78	
British West Indies	Dominica	-	Jul-76	Jul-76	
British West Indies	Grenada	-	Jul-76	Jul-76	
British West Indies	Guyana	Jul-75	Oct-75	Oct-75	
British West Indies	Jamaica	Dec-74	Jan-73	Jan-73	
British West Indies	Saint Lucia	-	Jul-76	Jul-76	
British West Indies	Saint Vincent	-	Jul-76	Jul-76	
British West Indies	Trinidad and Tobago	Jul-74	May-76	May-76	
British West Indies	Other Caribbean Area	-	-	-	
Burma	Myanmar	Dec-64	Dec-71	Jul-74	Oct-66
Ceylon	Sri Lanka	Apr-76	May-76	May-76	
Cyprus	Cyprus	Oct-73	Jun-72	Jun-72	
East Africa	Kenya	After 1979	Oct-71	Oct-71	
East Africa	Tanzania	Apr-76	Aug-71	Aug-71	
East Africa	Uganda	Feb-72	Oct-71	Oct-71	

Continued on next page

Early file name	Later name	Reserves	Peg I	Peg II	Formal
Egypt	Egypt	Jan-61	May-51	In 1950	Jun-47
Fiji	Fiji	In 1974	Feb-74	Feb-75	
Gibraltar	Gibraltar	-	-	-	
Hong Kong	Hong Kong	In 1974*	Jul-72	Jul-72	
Iceland	Iceland	-	Dec-70	Dec-46	
India	India	Sep-66	Sep-75	Mar-79	
Iraq	Iraq	Dec-59	Jul-72	Jul-72	Jun-59
Irish Republic	Ireland	Oct-74	Mar-79	Mar-79	
Jordan	Jordan	Nov-67	Aug-71	Aug-71	
Lesotho	Lesotho	-	Oct-72	Oct-72	
Libya	Libya	Apr-67	Dec-71	Dec-71	Dec-71
Malaya	Brunei Darussalam	In 1977	Jun-72	Jun-72	
Malaya	Malaysia	Jun-69	Jun-72	Sep-75	
Malaya	Singapore	Jun-67	Jun-72	Jun-72	
Malta	Malta	Aug-73	Jul-72	Dec-77	
Mauritius	Mauritius	May-76	Jan-76	Jan-76	
New Zealand	New Zealand	May-74	Dec-71	Dec-71	
Pakistan	Bangladesh	Apr-74	Apr-76	Jan-83	
Pakistan	Pakistan	Nov-71	Sep-71	Sep-71	
Palestine	Israel	Apr-51	Sep-49	Aug-70	May-48
Palestine	Palestine	-	-	-	May-48
Papua New Guinea	Papua New Guinea	-	Dec-71	Dec-71	
Persian Gulf	Bahrain	In 1969	Jun-72	Jun-72	
Persian Gulf	Kuwait	Mar-68	Jun-72	May-69	
Persian Gulf	Oman	May-72	Jun-72	May-70	

Continued on next page

Early file name	Later name	Reserves	Peg I	Peg II	Formal
Persian Gulf	Qatar	In 1969	Jun-72	Jun-72	
Persian Gulf	United Arab Emirates	In 1969	Jun-72	Sep-66	
Rhodesia and Nyasaland	Malawi	Jul-73	Nov-73	Nov-73	
Rhodesia and Nyasaland	Rhodesia (Southern)	-	Feb-70	Aug-71	Nov-65
Rhodesia and Nyasaland	Zambia	Jan-74	Dec-71	Dec-71	
Seychelles	Seychelles	After 1979	Nov-79	Jan-76	
South Africa	South Africa	Jan-66	Oct-72	Oct-72	
Southern/West Cameroon	Cameroon	-	-	-	Apr-62
Sudan	Sudan	Jun-67	Dec-71	Sep-71	Jun-47
Swaziland	Swaziland	-	Oct-72	Oct-72	
West Africa	Gambia	Apr-78	Jan-86	Jan-81	
West Africa	Ghana	Aug-77	Nov-71	Oct-73	
West Africa	Nigeria	Aug-75	Nov-71	Nov-71	
West Africa	Sierra Leone	After 1979	Nov-78	Aug-74	
Western Samoa	Western Samoa	-	Dec-71	Dec-71	

Note: Peg I is our assessment of documented exit from IMF correspondence. Peg II is a more *de facto* measure of exit taken from the work of Izetski, Reinhart and Rogoff, 'Country chronologies' (see Appendix 1.3). Items left blank are not known.

* The estimated exit year for Hong Kong's official reserves was 1975 (see TNA, T358/219). However, taking into account the diversification of the commercial banks in 1973 (see TNA, T358/85), the estimated exit year on the combined basis was 1974.

7.2 The Subsets 1951-1979, 1965-1979

Table A.2: The Sample Subsets

All countries	1951-1979	1965-1979	Omitted
Australia	X	X	
Bahamas			X
Bahrain			X
Bangladesh			X
Barbados		X	
Belize			X
Bermuda			X
Botswana			X
Brunei Darussalam			X
Cyprus		X	
Dominica			X
Egypt	X		
Fiji		X	
Gambia		X	
Ghana	X	X	
Gibraltar			X
Grenada			X
Guyana		X	
Hong Kong			X
Iceland			X
India	X	X	
Iraq	X		
Ireland	X	X	

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All countries	1951-1979	1965-1979	Omitted
Israel			X
Jamaica		X	
Jordan		X	
Kenya		X	
Kuwait		X	
Lesotho			X
Libya		X	
Malawi		X	
Malaysia		X	
Malta		X	
Mauritius		X	
Myanmar	X		
New Zealand	X	X	
Nigeria		X	
Oman			X
Pakistan	X	X	
Palestine			X
Papua New Guinea			X
Qatar			X
Saint Lucia			X
Saint Vincent			X
Seychelles			X
Sierra Leone		X	
Singapore		X	
Somalia			X
South Africa	X	X	

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All countries	1951-1979	1965-1979	Omitted
Southern Cameroon			X
Rhodesia (Southern)			X
Sri Lanka	X	X	
Sudan	X	X	
Swaziland			X
Tanzania		X	
Trinidad and Tobago		X	
Uganda		X	
United Arab Emirates			X
Western Samoa			X
PDR of Yemen		X	
Zambia		X	
Total (61)	(12)	(31)	(27)

Note: The Sterling Area contained some tiny countries. The list of Sterling Area countries ('All Countries') are those which had coverage in the IMF's *International Financial Statistics* in the period 1951-79.

7.3 The Independent Variables

Bilateral constraints

Dummy variable, taking the value of one for countries that had sterling balances blocked in the postwar period or that Symons identified as being non-beneficiaries in the system. Data taken from TNA, Symons and BOE, Series of External Claims and Liabilities in Sterling (Sterling Balances), EID3 – Economic Intelligence Department: Balance of Payments Estimates (henceforth BOE, EID3).

British retrenchment

Dummy variable, taking the value one for any year where Britain's commitment to maintaining its overseas military establishments in a country had been withdrawn. Data taken primarily from TNA, DEFE 4, 5, and 6 series (Ministry of Defence: Chiefs of Staff Committee Minutes); and TNA, T-225 series (Treasury: Defence Policy and Materiel Division: Registered Files (DM and 2DM Series).

Colony 1945

Dummy variable, taking the value one if a country had a colonial relationship with the United Kingdom after 1945. Data taken from CEPII dataset.

Democracy

Index of the share of the adult population with a legal right to vote in national elections (interval from low (0) to high (1)). Data taken from V-Dem Dataset 2019.

Dollar public capital

Three-year average gross drawings on loans and grants received by a country's central government from United States entities, plus its debt securities issued on the New York or Eurodollar market, divided by GFCF. Debt data taken from IMF, *Balance of Payments Yearbooks* (notes) and staff reports in *Archives Catalog* (various years). Also, for Australia, Australian Office of Financial Management, *1974-75 Budget report paper no. 6, Securities on Issue*. Aid data (Official Development Assistance (ODA) grant disbursements [DAC2a]) sourced from OECD Statistics. GFCF taken from Mitchell, *International Historical Statistics* (2013) and staff reports in IMF *Archives Catalog* (various years). Barbados/Gambia 1965-68 GFCF assumed to be 20%/10% of GDP (1968/1969 share) respectively.

Financial development

The development of the domestic financial system of the country measured as the ratio of M2 to total currency in circulation. Data taken from Mitchell (2013).

Government reserve holding ratio

Governmental control over official FX holdings measured as the ratio of government foreign exchange reserves to total official foreign exchange reserves (government and monetary authority). Data largely taken from three IMF sources, IFS online via UK Data Service, IFS physical books, and staff reports in *Archives Catalog*. Any gaps or

discrepancies were filled from IFS physical books and then staff reports or in a last resort, BOE files, again on a like-with-like basis.

Annual real GDP growth

Mitchell (2013) and United Nations *Statistical Year Book* (various years). Measured in USD and in 1970 prices.

Per capita real GDP

GDP and population data taken from Mitchell (2013) and United Nations *Statistical Year Book* (various years). Measured in USD and in 1970 prices.

Independent central bank

Dummy variable, taking the value one when a country had an established and operational independent central bank. Data taken from various central bank websites.

Inflation

Inflation measured as the percentage deviation from the sample average. Inflation rates are based on annual consumer price indices. Data taken from Mitchell (2013) and United Nations *Statistical Year Book* (various years).

Largest trading partner exit

Dummy variable, taking the value one whenever a country's largest Sterling Area trade

partner (excluding the United Kingdom) had left the Sterling Area (on the reserves rule). Data taken from the *Correlates of War* database.

Non-Aligned Movement membership

Dummy variable, taking the value one when countries joined the Non-Aligned Movement. Data taken from "The Non-Aligned Movement Members and Observers" online at https://web.archive.org/web/20190327085806/https://mnoal.org/nam-members/.

Political instability

Weighted index of instability including the number of coups d'état (not counting unsuccessful coups), the number of major constitutional changes, and the number of cabinet changes in the year before, of, and following exit. Data taken from Banks, *The Cross-National Time-Series Data Archive* (CNTS), 2019 Edition.

Private capital

Three-year average net inward movement of non-monetary capital to the private sector, divided by GFCF. Data taken from IMF, *Balance of Payments Yearbooks* ('basic', 'global' or 'standard' tables), and staff reports in *Archives Catalog* (various years), GFCF as for *Dollar public capital.*

Private reserve holding ratio

The degree of private (non-governmental) control over the financial system measured as the ratio of commercial bank net foreign exchange reserves to total official foreign exchange reserves (government and monetary authority). Data sources as for *Government reserve holding ratio*.

Regional network effects

Cumulative share of population in each Sterling Area region which has undergone *de facto* reserve exit from the Sterling Area. The designated regions: Ireland, Caribbean, Mediterranean-Arabia-North Africa, Central & Southern Africa, South Asia, Oceania-South East Asia.

Reserve currency switching costs

Annual mean sterling balances of a country divided by GDP. Data taken from BOE, EID3; Mitchell (2013); and United Nations *Statistical Year Book* (various years).

Sterling currency trap

Annual mean sterling balances of a country as a share of the total sterling balances (including Sterling Area and non-Sterling Area countries). Data taken from BOE, EID3.

Sterling Area share of imports

Imports from the Sterling Area (including UK) countries measured as percentage of total imports. Data taken from IMF, *Direction of Trade Statistics* (DOTS) (various

years). Sterling Area for this purpose contains full and unvarying sample list of Sterling Area countries.

Sterling peg

Dummy variable, taking the value one from the year of the final suspension of a peg to the pound sterling based on a policy statement. Data are taken from IMF, staff reports and correspondence in *Archives Catalog*.

Sterling public capital

Three-year average gross drawings on loans and grants received by a country's central government from United Kingdom entities, plus its debt securities issued on the London market, divided by GFCF. Data sources as for *Dollar public capital*.

United Kingdom share of aid

Three-year average aid from the United Kingdom as percentage of total aid disbursements to a country (grants plus gross ODA loans). OECD source as for *Dollar public capital*.

United Kingdom share of exports

Exports to the United Kingdom measured as percentage of total exports. Data taken from IMF, DOTS (various years).

United States share of aid

Aid from the United States as percentage of total aid disbursements, calculated as for *United Kingdom share of aid*.

Unemployment rate

The unemployment rate defined as the number of unemployed workers as a percentage of the country's total population. Data taken from Mitchell (2013) and United Nations *Statistical Year Book* (various years).

Reserve contributions

Annual percentage growth in official reserves. Official is defined to mean central monetary institution and government entities whose reserves are classified as official reserves. Reserves include holdings of foreign exchange, physical gold (at national valuation), SDRs and IMF reserve tranche. Data sources as for *Government reserve holding ratio*.