

Financial cycles, currency hierarchy and the state

Engelbert Stockhammer, King's College London, engelbert.stockhammer@kcl.ac.uk

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Abstract

IPE theories of currency hierarchy focus on state power, in the form of power to delay and deflect exchange rate adjustment, ability to shape financial norms and explores correlates such as economic size or military power. Financial crises play little role in IPE analyses of currency hierarchy. In contrast this paper puts financial crises at the heart of the currency hierarchy. It takes Minsky's theory of endogenous financial cycles as a starting point and argues that, in an international context, a currency hierarchy arises due to pro-cyclical financial flows to the periphery. In a financial crisis flows will be from the bottom to the top of the hierarchy because of a flight to safety. This has important implications for economic performance of countries in different positions in the hierarchy, but also for their respective state capabilities. First, pro-cyclical capital flows will import global financial crises to the periphery and exacerbate their domestic business cycle. Second, the capital outflows (during a crisis) make counter-cyclical government spending more difficult in the periphery. The opposite holds for the top currency. Third, the management of a financial crisis by the central bank and the government matters for the position in the hierarchy. Letting the crisis spin out of control undermines the hegemonic position of a top currency. The Minskyan perspective on currency hierarchy thus emphasises financial factors, but also highlights the importance of state policies in determining the position in the currency hierarchy.

Keywords: currency hierarchy, financial cycles, financial flows, post-Keynesian economics, International Political Economy

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1. Introduction

The paper explores the links between financial crises, currency hierarchies and the role of the state. IPE theories of currency hierarchy focus on state power, in the form of power to delay exchange rate adjustment and thus deflect adjustment costs (Cohen 2006, 2015), ability to shape financial norms (Helleiner 2006) and explores correlates such as economic size or military power (Norrlof 2014). Strange (1984, 1988) identifies financial power as distinct power dimension and highlights its structural as opposed to relational features. IPE theories are preoccupied with the top of currency hierarchy, in particular the role of US dollar. Perhaps surprisingly financial crises hardly feature only in a secondary role. Largely absent from IPE debates, the post-Keynesian theory of currency hierarchy, has developed Keynes' theory of liquidity preference into a theory of currencies (de Paula et al 2017). Here interest rate differentials play a key role and financial crises have a supporting, but systemic role. The approach uses a core-periphery framework and is specifically interested in the macroeconomic policy space for developing economies.

This paper takes a Minskyan approach to finance that puts endogenous financial boom-bust cycles at the centre of the analysis and derives economic outcomes for the top and the bottom of the hierarchy, but it also argues that the hierarchy shapes state capabilities. It mobilises post-Keynesian economic theory for an IPE analysis of international finance and concludes with a notion of structural power similar to that of Susan Strange. Minskyan theory emphasises the endogenous (systemic) nature of financial instability. While most Minsky models are closed economy models, Grabel 1995, Arestis and Glickman 2002, Akyüz 2014 (among others) have proposed Minskyan analyses that emphasize speculative international financial flows. We systematize these arguments and relate them to the currency hierarchy (broadly in line with existing post-Keynesian accounts). Minskyan theories focus analytically on private sector dynamics and then derive normative conclusions for state policy.¹ The contribution of this paper is that it develops a Minskyan approach to currency hierarchy and considers the differential implications for states at the top and bottom of the currency hierarchy.

Here is the argument in a nutshell. First, Minskyan theory asserts that financial boom-bust cycles are a systemic features of market economies which will arise endogenously unless specific countermeasures (such as regulations during the Bretton Woods era) are in place. Financial assets are differentiated according to their liquidity and safety. During a boom there is increased optimism and thus a growth in debt and decline of risk premia. In other words, financial fragility increases during the boom. In this sense the boom sows the seeds of its own destruction. In a financial crisis, there is a flight to safety. In the international context this means a flight towards centre currencies and financial assets. This means, that peripheral economies will experience outflows, even when the crisis originates from the centre (as happened during 2008). Capital flows (and exchange rates) during a crisis are thus an indicator for a currency's positions in the currency hierarchy. Second, in the international financial stratification peripheral economies are exposed differently to financial cycles. For them capital flows will be strongly procyclical, i.e. they amplify the crisis. The procyclicality can refer to the domestic growth (a domestic boom is fuelled by capital inflows that eventually turns into a capital flow reversal) or with respect to the international financial cycle (a boom in Wall Street leads to capital inflows to emerging economies as part of portfolio diversification). The former leads to an 'import' of the US financial cycle to peripheral economies, the latter amplifies domestic financial cycles (in the periphery). Both enhance the volatility (i.e. instability) of the growth path of peripheral economies. Thus the position in the currency hierarchy impacts economic performance of countries at the bottom of the hierarchy.

Third, the ability of states to conduct countercyclical policies depends on their position in the currency hierarchy. While countries at the top experience capital inflows (during a global financial crisis), which enable government deficit spending, countries at bottom experience outflows, which makes government spending more difficult. To illustrate, during the GFC the USA experienced inflows, in particular high (international) demand for its government bonds, despite being the origin of the subprime crisis. This enables Keynesian policies in the crisis; whether the top country does

¹ While in most formal Minskyan models of the financial cycle there is a symmetry of mechanisms between upswing and downswing, this paper highlights that in practice one would expect an asymmetry due to political economy factors: in a crisis, pressures on the state to act will rise. Thus, actual financial cycles will be asymmetric depending on the ability and willingness of the state to intervene: while the boom will be dominated by private sector forces, the bust will crucially depend how states try to counteract the crisis. This has important implications for the theory of currency hierarchies.

engage in countercyclical fiscal policies will also depend on domestic political factors. In contrast, if the country experiences outflows, it will be harder to pursue counter-cyclical policies. Thus, the position in the currency hierarchy impacts state capacity (de Paula, Fritz and Prates 2017, Fritz, de Paula and Prates 2018). Forth, there is a link between the state's crisis management and its position in the currency hierarchy. For the central currencies, letting the crisis spin out of control (i.e. banks going bankrupt, stock markets collapsing) undermines the hegemonic position of the currency as the value of the financial assets denominated in the currency will decline. This would undermine its ability to provide a safe asset. Thus the willingness of international currencies to stabilise their own financial sector and act as international lender of last resort (see the dollar swaps that the Fed offered to selected central banks) become a precondition to maintain the lead currency.² This can be illustrated with the decline of demand for dollar assets during the Great Depression (Chitu et al 2014), but it is also relevant for the recent experience of the Euro: the management of the Euro crisis weakened the Euro's position as an international currency.

How does the paper go beyond the existing literature and how does it relate to it? It deviates from conventional IPE interpretations (e.g. Cohen 2015) of the currency hierarchy in that endogenous financial cycles play a key part and their management by policy makers impacts the top currency. The paper has a certain affinity to the IPE literature building on the work of Susan Strange (in particular the work by Schwartz 2009, forthcoming), but explicitly derives the currency hierarchy and the resulting power asymmetries from financial cycles. Systemic instability and power are intrinsically linked. The paper builds on the extant post-Keynesian theory of currency hierarchy, but is more dynamic by putting changes in the liquidity preference over the cycles at a prominent place and it generalises its findings of state capabilities.³

The paper presents a Minsky-inspired interpretation of international currency hierarchy, which has financial crises at the centre and concludes with a notion of a financial structural power and asymmetric effects on state capabilities for countries on different positions of the currency hierarchy.

The paper is structured as follows. Section 2 reviews IPE and PKE analyses of currency hierarchy. Section 3 presents the Minskyan argument for endogenous financial instability and also reviews some empirical studies on financial cycles. Section 4 develops the currency hierarchy analysis in the

² This complicates Cohen's claims about the policy autonomy of the top currency countries. The top currency country may have to intervene in the international system even if this contravenes the domestic policy priorities. This point is in line with Strange (1971) and Hardie and Thompson (2020).

³ The following is probably not for this paper. Earlier versions of the post-Keynesian theory of currency hierarchy has used an international version of Keynes liquidity preference, i.e. different currencies have different interest rates. Post-Keynesian theory of currency hierarchy has taken a Minskyan turn over the last years, but this paper pushes it further. So far the Minskyan approach (Bonizzi 2018, Kaltenbrunner and Paineira 2015) has highlighted the liability side implications of the currency hierarchy (ie. FX-denominated debt). This approach also discusses more frequent financial crises in the periphery, but they (e.g. Ramos 2019, Carneiro and de Conti 2022) conceive of these crises mostly as developing countries being affected by the global financial cycle (such a happened in 2008). From the peripheral perspective such a financial crisis can be regarded as an external shock (the endogenous cycle mechanism is operating in the core countries, not in the periphery). The paper agrees that this an important form of financial crisis, but emphasises a different form of financial crisis: one where the domestic financial cycle gets amplified by international capital flows. These crises are closer to the Asian financial crisis and Minskyan endogenous financial cycles with an international component.

context of financial cycles. Section 5 analyses the interaction between the state and financial crises. Section 6 derives the conclusions for the impact of currency hierarchy on states at the top and bottom of the hierarchy. Section 7 discusses some implications for empirical research and section 8 concludes.

2. Currency Hierarchy in IPE and PKE

There is an extensive IPE literature on international monetary regimes which involves a notion of a currency hierarchy and often focusses on the US dollar as the top currency. This literature has a focus on inter-state power relations, which often distinguishes relational, structural and preference-shaping forms ('faces') (Guzzini 1993). While the macroeconomic foundations are not always explicit, a number of IPE contributions are close to mainstream economics, specifically seem to have Mundell Fleming model in the background. Cohen (2015) regards the power to delay and deflect exchange rate adjustments as the core. This approach is best suited (and has its historical origins) in fixed exchange rate regimes where changes in exchange rates are policy decisions. Like much of the literature Cohen uses the functions of money (unit of account, means of exchange, store of value) to structure the analysis and develop empirical measures. Frieden (2015) emphasises that exchange rate regimes affect different social groups and sector differently and thus there is a domestic political economy supporting (or not) policies regarding exchange rate regimes. Norrlof (2014, 2017) conducts extensive exercises in correlating monetary power with military and economic power (or size) indicators, but offers limited explanation of how these power dimensions interact. There is a strong focus on the very top of the currency hierarchy, in particular the question whether the US dollar would remain the top currency (Helleiner and Kirshner 2009). This literature often offers extensive classifications, but it often is closer to a description of the currency hierarchy rather than an explanation.⁴ Perhaps surprisingly, financial instability rarely features in much of the IPE analysis of international monetary hierarchies. This is despite Charles Kindleberger, who is referred to as one of the founding fathers of IPE (e.g in Cohen 2008), being the the author of one of the seminal histories of financial crises (Kindleberger 1989).⁵

There is another tradition in IPE, associated with the work of Susan Strange, who also uses different dimensions of power, but is closer to the Minskyan approach advocated in this paper in terms of the macroeconomic and monetary analysis (Strange 1988). Strange (1984) has a keen sense for

⁴ There are two specific analytical weaknesses. Cohen (2015) extensively discusses (descriptively) the different functions of international money: vehicle (trade), investment (financial assets) and (central bank) reserves. However, there is little in terms of theory that would clarify the relative importance of different functions. As the main question that Cohen asks is which currency is the top currency, and the US dollar happens to come out on top in all of the dimensions, the difficult question of the relative importance of those different functions is avoided. Second, there is no overall theory about the structure of the currency hierarchy. While parts of the currency power analysis suggest a relational notion of power and the currency hierarchy (some countries can externalise the costs of adjustment to other countries), other parts, in particular when analysing the bottom of the currency hierarchy, i.e. the quasi and pseudo currencies, the analysis suggests institutional defects (e.g. lack of domestic trust in the currency) that reflect a weakness that does not seem to be part of an international power relation, which would suggest that all countries could move up the currency hierarchy.

⁵ However that book is neither cited in Cohen (2008) nor in Cohen (2015).

importance of financial instability and hints at endogenous money creation, but does not develop these into a coherent theory. Helleiner (2006, 2014) has a perceptive discussion of financial crises and their management in the context of a currency hierarchy, but stops short of conceptually analysing crisis management as a potential constituent factor of the hierarchy. Again, the overall concern with the future of the dollar rather than the nature of currency hierarchy. Schwartz (2016) relates to post-Keynesian theories endogenous money and financial instability in the theoretical groundwork, but in the more applied analysis these are applied primarily to the USA, whereas the analysis of Germany and China is quick to quote export orientation as the reason why their political economy does not support the ambition to become the top currency. The USA can generate international money, but little analysis if other advanced economies can. Schwartz suggests that Germany and Japan choose not to pursue the role of international money for domestic reasons as that would conflict with their export-led growth models. These IPE analyses, again, have a strong focus on the very top of the currency hierarchy. Financial crises feature in this analysis, but they do not seem to be play a constitutive role for the currency hierarchy.

The post-Keynesian theory of currency hierarchy applies the Keynesian theory of liquidity preference to the context of international money. In Keynesian theory money (a perfectly liquid asset) is held for transactions, but also as a financial asset in the face of heightened uncertainty. In the baseline (closed economy) model liquid assets come with a liquidity premium and less liquid (and typically more risky assets) require higher rates of return to be held. A currency hierarchy emerges naturally in the international version of the model, where some currencies serve as international money, which are used to settle trade as well as financial transactions, i.e. are internationally more liquid. The currencies at the lower end of the hierarchy require higher interest rates and typically exhibit higher exchange rate volatility (e.g. Herr 2008). Financial crises, which are stronger in the periphery feature in this approach, but they play a supporting role to the liquidity preference. This theory has been developed in particular to understand the circumstances of developing economies (de Paula et al 2017). Recent versions of this approach feature Minskyan elements in that the liability (as opposed to the asset) side, i.e. FX-denominated debt, play a more prominent role. This paper builds on the post-Keynesian theory but presents a more Minskyan version in that endogenous financial cycles are at the centre and it adds an analysis of the state capabilities and constraints at the top of the hierarchy.

Short, IPE analyses of international monetary relations has a focus on interstate power relations. It offers a substantive reflection on what is meant by power relations. Strange and other critical approaches emphasise structural power (as opposed to relational power). By structural power they mean shaping the institutional framework. The IPE discussions have a focus towards the top currency (if not to say an obsession with US hegemony). There is very little on the currencies at the bottom of the currency hierarchy (beyond that those monies are not 'proper money'). It is surprising how little financial crises and their management (or absence thereof) feature in the IPE contributions. PK currency hierarchy elaborates the notion of international liquidity preference. The original analyses had a somewhat static flavour (higher interest rates in developing economies), but recent contributions feature financial crises more prominently (Kaltenbrunner 2015, Bonizzi 2017, Ramos 2019, Carneiro and de Conti 2022). Different from IPE, these recent PK contributions have a focus on the bottom of the currency hierarchy. The following sections propose a Minskyan IPE approach that puts financial instability and cycles at the centre of the currency hierarchy and

develops its implications for economic dynamics, but also elucidate constraints and systemic requirements for the state at different points in the hierarchy.

3. Financial cycles and Minsky's Financial Instability Hypothesis

Since the Global Financial Crisis there has been a growing in interest in financial crises. Within the mainstream financial crises are usually explained as due to exogenous shocks or misguided government behavior (excessive borrowing). These shocks are amplified by information asymmetries and price rigidities as well as balance sheet effects. In contrast in heterodox economics crises are typically explained as endogenous, i.e. systemic, features of market economies. In Marxist economics basic class contradiction and overaccumulation tendencies are considered the fundamental causes of crises, in the PK approach financial factors feature prominently, in particular in the Minskyan stream.

Among the post-Keynesian tradition, Hyman Minsky's work stands out as he had long argued that endogenous *financial* instability is an inherent feature of capitalist economies. Minsky offers a rich description of how a period of stable growth with resilient financial structures leads to increased optimism and investment, i.e. a boom. Importantly, during that boom firms will take on more debt to finance investment and thus balance sheets (of businesses and banks) will become more fragile. Firms move from hedge to speculative and ultimately Ponzi structures. This is matched by an increase in risk appetite and decline in the interest spread between safe and risky assets. Debt has to be serviced out of current income, thus with more fragile financial structures demand shocks or changes in interest rates will force some firms to sell off assets or default on their debt. With this turning point asset prices start to decline and risk premia go up; typically this comes with a realisation that balance sheets are fragile and many investments were riskier than realized; a panic with flight to safety sets in. Banks will want to tighten lending criteria, credit will dry up. Thus, in Minsky the financial cycle is an endogenous boom-bust cycle, where the positive growth experience leads to an adjustment of risk appetite that causes subsequent instability. That episode of crisis, after a prolonged period of painful deleveraging with stagnant growth, will induce more conservative borrowing and lending behaviour and thus eventually lead (again) to growth. While the broad strokes of Minsky's argument are clear enough, there have been a variety of ways to build this into economic models, with Nikolaidi and Stockhammer (2017) identifying no fewer than eight families of Minsky models according to the core mechanism. Most of these models are closed economy models. This is in contrast to Kindleberger (1989), who in his analyses of the history of financial booms and busts highlights that international capital flows often play a key role during the boom.

Among the financial crises literature most relevant for our purpose are models of currency crises. These have been developed in waves after the Latin American debt crisis, the EMS crisis and the East Asia crisis. On the mainstream side first and second generations models focused on the government behaviour as the cause of currency crises. After the East Asian financial crisis the so-called third generation models locate the source of instability in the private sector due to market imperfections (asymmetric information, balance sheet spill overs etc) (Agenor and Montiel 2015, chaps 14 and 15 as an overview). On the Minskyan side, the boom bust dynamics have been applied with the modification that lending takes the form of FX-denominated debt (Arestis and Glickman 2001, Grabel 1995; see Kohler 2021 as a survey). FX-denominated debt creates potential imbalances as the

income of firms is in domestic currency, but its debt payments are in foreign currency. A depreciation of the currency will thus increase the real debt burden and make it more difficult to service the debt (the so-called finance channel; Ocampo 2016). A depreciation may then have negative growth effects (normally a depreciation is expected to have positive effects as exports become more competitive, which is called the export channel). A sudden stop of capital flows will thus cause economic crisis.

Among the empirical studies on financial cycles and financial crises, applied research institutions (such as the BIS or central banks) have led the way and provided evidence of regular financial cycles that tend to be longer than regular business cycles (Drehman et al 2012, Aikman et al 2015). Currency crises and banking crises often go hand in hand (IMF 1998, Kaminsky and Reinhart 1999) and high levels of private indebtedness lead to more severe economic crises (Reinhart and Rogoff 2013). There are many studies that tie the East Asian financial crisis to hot (i.e. short-term) capital flows (Rodrik and Valesco 1999). Aldasoro et al (2020) find two cycle frequencies for international financial cycles. The first, shorter one, is linked to the US financial indicators (like US interest rates), i.e. this seems to be a financial cycle that is transmitted from the financial centre; the second, longer one, which is particularly important for developing economies, is linked to domestic financial variables (like credit growth and asset price growth) as well as to capital inflows. Kohler and Stockhammer (2023) present evidence for a Minskyan model of endogenous exchange rate crises where the cycle results from the interaction of domestic demand and international borrowing mediated by the exchange rate.

4. Minskyan financial cycle and the Currency Hierarchy

Let us now situate the Minskyan financial cycle within a world with multiple currencies. This section aims to show how a currency hierarchy will emerge and reveals asymmetries at the top and bottom of the hierarchy. The current version of the PK theory of the currency hierarchy emphasizes interest rate differentials as result of international liquidity preference to identify the position in the currency hierarchy (e.g. Herr 2008). The Minskyan approach presented below is consistent with that, but emphasises endogenous processes of financial instability, which give rise to these interest differentials. At the centre of story is the concept of liquidity preference, which changes in the course of the financial cycle, and the corresponding degree of indebtedness. In Keynesian theory financial investors prefer to hold liquid assets and an interest premium is charged on assets that less liquid. The strength of the liquidity preference depends on economic conditions. If these are considered stable, the liquidity preference is low as the risk of higher yielding assets to collapse in value or become illiquid is judged as low. Conversely in times of heightened uncertainty, e.g. at the onset of a financial crisis, the liquidity preference will increase as risks on high yielding assets materialize, but probabilities are difficult to ascertain. In the basic version the analysis applies to different financial assets within a country (say money versus commercial bonds). In the international context it can be applied to currencies. From the international investors' point of view the question is assets in which currencies their portfolio should be composed of. Liquidity in this context means the ability to settle international contracts, i.e. pay, in a currency. The core insight from the currency hierarchy is that some currencies are more reliable than others. This depends on how many of the contracts (these include trade contracts, but also asset transactions and loans) are written in which currency and how volatile different currencies are. Typically a or a handful of core currencies will

serve as world money, which is what IPE scholars refer to as top currencies. Consequently, interest rates in these currencies will be lower than in the peripheral ones as they carry a liquidity premium.

In the Minskyan view market systems are prone to endogenous financial cycles and during the crisis a flight to safety (increase in the liquidity preference) will set in. In the context of international currencies this corresponds to financial flows from peripheral to core currencies. This means that financial flows to and from peripheral economies will have strongly pro-cyclical pattern: capital inflows during the boom (when liquidity preference is low) and outflows during the downturn (which liquidity preference is high). As we shall see there are two dimensions for the pro-cyclicity, but first, we need to analyse the crisis dynamics in peripheral economies in more depth.

One of the features of the currency hierarchy is that interest rates in core currencies are lower. This creates an incentive (for firms in peripheral economies) to borrow in foreign exchange. This complements and overlaps with what is often referred to as original sin, i.e. the inability of developing countries to borrow abroad in their own currency (i.e. lenders distrusting the peripheral currency) (Eichengreen et al 2007). Borrowing in foreign exchange creates an important asymmetry for firms (or banks): their income is in domestic currency, but their liabilities are in FX. Thus their balance sheets are sensitive to exchange rate movements. A sharp depreciation will increase the real debt burden and may drive a firm into bankruptcy. This means that in FX-indebted economies a depreciation will have a negative impact rather than the positive one due to improved competitiveness of exports (called balance of payments dominance; Ocampo 2016). Note that firms in core economies do not have an equivalent problem and thus the export channel will dominate the finance channel.

We have established that capital flows in peripheral economies will be procyclical. But procyclical to what? The procyclicity of capital flows takes two forms. First, they are pro-cyclical with respect to the financial cycle in the top economy. Thus, in the course of a boom in the USA, American financial investors will, as part of the diversification of their portfolios and in search of yield, invest in assets in peripheral economies. Thus, the financial boom in the centre will spread to the periphery. The converse holds when the core financial booms turns into a bust. As balance sheets of financial institutions in the core are hit by the crisis and risks get reassessed, they will divest from riskier assets from peripheral economies. This is a mechanism that has featured in Helene Rey's work (Rey 2013) and is often measured as the impact of the Federal Funds rate or the VIX on peripheral economies.⁶

The second form of pro-cyclicity is with respect to the financial cycle in the peripheral economy. This cycle takes on a different form from that in the core as it will involve FX-denominated debt. Thus the emerging cycle will itself have an international element (i.e. capital inflows), which amplifies domestic forces. Kohler (2019) provides a formal model and Kohler and Stockhammer (2023) offer empirical evidence for these cycles. Aldasoro et al (2020) provide evidence for the existence of cycles at different periodicities. They refer to the first one, i.e. the one emanating from the US financial system, as 'global financial cycle' and find that it is more pronounced in advanced

⁶ Rey is frequently using the term 'global financial cycle', but in her analysis she is using the VIX and the US funds rate as measures of the global financial cycle. There is nothing in these measures that makes them akin to a cycle. Rey's measures can, from a peripheral perspective, equally be interpreted as exogenous non-cyclical shocks.

economies. They refer to the second cycle as ‘domestic financial cycle’ and identify real estate prices and credit growth as key variables. They find that capital flows are more closely associated with this cycle frequency in developing economies.⁷ Thus their labels are potentially misleading from a peripheral perspective: the ‘domestic’ financial cycle in peripheral countries does have a strong international component as it relies on capital inflows. It is not a purely domestic cycle, but gets amplified by capital flows that are pro-cyclical with respect to domestic growth.

5. Minskyan financial cycles and the state

Minsky’s policy suggestion in the face of endemic financial instability was what he referred to as ‘big government’. Spending by the government was essential as in times of private sector deleveraging, only the state could engage in countercyclical spending. Minsky thus offers a normative theory of state behaviour: government should spend countercyclically. In contrast, (and in line with much of PKE more generally) analytically the theory of the state is underdeveloped. There is little in Minsky that would tell us what actual states do over the financial cycle. Two exceptions are worth noting, but lead in a different direction from this paper’s focus. Palley (2011) and Dafermos et al (2022) use the notion of Minsky super-cycles that flags that government regulation would change over long periods. Extended booms would erode government countercyclical interventions, thus over longer periods government regulations (as opposed to spending) would work such as to give way larger cycles until a particularly severe crisis (like the great Depression) would create the pressure for financial regulation. The argument pursued here, however, focusses on discretionary policy during a crisis.

Pistor (2013) offers an illuminating discussion of the role of governments in a Minskyan world. She argues that in the crisis the power relations underpinning monetary relations and the critical role of the state therein become apparent. In the crisis some rules will get suspended and some firms will be bailed out by the state – the question is which institutions get rescued or receive emergency liquidity. Pistor thus elaborates the power dimension usually only implicit in the Minskyan approach but has little to say about actual economic policies and the differences across states. The argument of this paper is that the currency hierarchy will lead to differences in state capabilities.

The starting point for the political economy of economic policy in a Minskyan world of endogenous financial instability is clear: during the bust there will be increasing pressure on the state to act, whether in the Keynesian sense of full employment policies, in a narrower sense of attempting to rescue banks (as happened in 2008) or an orthodox sense with (pro-cyclical) austerity. But Minsky offers little in analysing actual policies. In fact, empirical studies do suggest that public debt rises substantially after financial crisis, which suggests that, be it via automatic stabilisers or via deliberate policy, in most cases states do intervene during a major financial crisis. Tooze (2014) argues that the extent of state intervention during the Global Financial Crisis was historically unprecedented in peace time. Stockhammer et al (2019) provide evidence that differences in fiscal policy explain a large part of weaker performance of southern European economies during the euro crisis. Thus fiscal

⁷ Aldasoro et al (2020) are careful to distinguish between exposure and impact: advanced economies are more exposed to the global financial cycle in the sense that capital flows are more closely correlated. However, they are also in a better position to deal with financial flows.

policy seems to be a potential factor in how the full economic crisis plays out. This leads to the question: how much do states intervene and are there systematic differences across the currency hierarchy?

6. Currency hierarchy and the state

This section argues that the position in the currency hierarchy impacts state capabilities and ultimately policies. First, consider the states at the bottom of the currency hierarchy. During a financial crisis, i.e. exactly when Keynesian counter-cyclical policies would be needed most, peripheral countries face capital outflows, thus it is more difficult for governments in these countries to borrow (internationally). Governments also face pressure to stabilise the exchange rate as a depreciation will reduce living standards (as prices of imported goods increase) and may cause serious balance sheet problems for the businesses and financial institutions with substantial FX-denominated debt. In addition, allowing a depreciation is usually perceived as a sign of weakness. The ability of states to pursue independent policies will depend on a variety of factors. One of the most important is their foreign exchange reserves. Governments in financially peripheral economies tend to defend the exchange rate, which involves fiscal austerity and increasing interest rates, which have pro-cyclical effects, i.e. they amplify the crisis (de Paula et al 2017). Structurally, financially peripheral economies are pushed towards anti-Keynesian policies.

In practice countries affected by balance of payment crises usually turn to the IMF, which restricts their policy space further and, again, imposes austerity policies.⁸ Countries can also deviate from the liberal rule book and impose capital controls or default on their debt. Both cast them outside the respectable financial world and will impede their access to international capital markets for some time, i.e. it comes with substantial costs. After the East Asian financial crisis many Asian countries pursued a strategy of undervaluation and currency reserve accumulation in order to avoid having to submit to IMF conditionality in the case of future crises. Finally, some countries have begun to apply market-consistent capital account management, i.e. taxing capital inflows during the boom.

Second, the situation for economies at the top of the currency hierarchy is very different. They experience capital inflows and increased demand for their government bonds. Thus it is comparatively easier to issue government debt and they are much better positioned to pursue Keynesian (i.e. counter-cyclical) fiscal policies. They thus do have the ability to manage a financial crisis. Indeed, if they want to maintain their position in the currency hierarchy, they indeed face systemic pressure to manage the crisis, even if that is potentially costly to them (in the short run) (This point is also highlighted, for a different historical context by Strange 1971). Thus, the USA Federal Reserve offered currency swaps in the course of the Global Financial Crisis to selected central banks (McDowell 2012), as an international illustration of Pistor's (2013) argument of the power relation embedded in the lender of last resort function, gives the Fed the power to decide who it wants to provide dollars to.

It is clear that core economies are better positioned to pursue countercyclical policies during a crisis, but our argument goes beyond that. This state intervention itself may influence to what extent a core country can maintain the international standing of its currency. Core countries must manage

⁸ There is thus a dual effect of the hierarchy: first, the economic impact of the capital flows, which is influenced by the currency hierarchy; second, the hierarchy embedded within the governance and policy of the IMF itself.

(their) financial crises or their currency may lose the status of safe asset. Investors may then shift their portfolios away from the currency. Whether that shift occurs will of course depend on the availability of alternative candidates for top currencies. Eichengreen and Flandereau (2009) and Chitu et al (2014) provide evidence that the US dollar had begun to replace the British Pound as international currency and the US' failure to contain its financial crisis led to a shift back to the Pound. Germain and Schwartz (2014) argue that the ECB slow, and initially counterproductive, reaction to the Euro crisis weakens the Euro as the international top currency. Top currencies have to stabilise (their) financial crises, otherwise they are unable to provide safe assets, which is the basis for their currency status.

Thus, not only are abilities of the states to intervene countercyclically at the top different from those at the bottom of the currency hierarchy; maintaining a position at the top requires some management of the crisis to ensure that the value of assets in its currency remain stable.

7. Some empirical implications of the argument

The main concern of this paper has been a conceptual one: to clarify the role of endogenous financial cycles for the emergence of currency hierarchy and how they affect state capabilities. There are some implications for empirical analysis that follow from the argument developed. The first set of implications is about the operationalisation of the currency hierarchy or the measurement of position on the hierarchy. The conventional IPE approaches (such as Cohen) focus on the share of a currency in trade, bonds and official reserves. The post-Keynesian currency hierarchy usually first points to interest rate differentials across countries. Our approach suggests the size of capital inflows or outflows (say in response to an increase in the VIX) as a measure of the position in the currency hierarchy. Depending on the sign of the flows (inflows or outflows) a core-periphery classification would be possible, but it would also allow a cardinal measure within these groups. A hypothesis to explore is whether the original sin, i.e. the ability to issue international debt in domestic currency coincides with the core-periphery distinction. Such an analysis would presumably also identify a group of countries that receive so little capital inflows in the first place that there is little potential for capital flight, i.e. there would be 'sub-peripheral' group.

Our approach also lends itself to another graduation in the position in the hierarchy. The management of a crisis critically depends on the extent of FX debt. This has two levels, first, whether the state itself has FX debt (as in the Latin American debt crises) and, second, whether and to what extent the private sector has FX debt. Less technically put, does the state itself need to be bailed out? And, is the state able to bail out (or provide emergency liquidity) to its private sector? This second question will depend on the FX reserves of the central bank as well as the degree of indebtedness. What this illustrates is that any currency other than the top currency may have difficulties in saving its own banks if they are internationally active and have FX obligation. This was effectively the situation that the Euro area and Japan found themselves in. They had no problems of issuing sovereign debt, but they would not have been able to provide emergency liquidity to their banks without the currency swaps the Fed granted.

8. Conclusion

This paper has proposed a Minskyan approach to currency hierarchy. It established, first, that in an international context the Minskyan theory of endogenous financial cycles leads to currency hierarchy; second that this currency hierarchy creates a specific form of financial cycle in peripheral countries that has no corresponding cycle in the core currency countries as the capital will flow out to the periphery to the core, which has pro-cyclical effects in the periphery and (at least potentially) counter-cyclical effects in the core. Peripheral economies will thus be economically and financially more volatile than core ones (which justifies higher risk premia). Third, the currency hierarchy has straightforward implications for the state capabilities of core and periphery states as counter-cyclical (Keynesian) policies are more difficult in the periphery. Thus the currency hierarchy creates a structural power asymmetry between the states and the firms of peripheral versus those in core economies. Fourth, the management of financial crises becomes an important feature of the top currencies. If crises are not managed, they may lose the status of safe assets and consequently (if there are alternative candidates) the position at the top of currency.

This paper has explored the borderlands between Minsky theory of financial instability, theories of currency hierarchy and the IPE of international money. It has flashed out how exploration of that terrain can be mutually beneficial. IPE of international money has highlighted power relations, but has had a focus on the top of the hierarchy and has only at the fringes analysed financial crises. Much of post-Keynesian currency hierarchy has been based on liquidity preference theory and been concerned more with asymmetric positions, but has not explored dynamics. Minskyan theory of financial instability has mostly focused on domestic dynamics and it has only provided a normative theory of the state. The paper has proposed a Minskyan political economy of currency hierarchy. It has interpreted currency hierarchies in the context of endogenous financial cycles. This suggests an empirical identification of the position of a country in currency hierarchy in terms of the capital flows in the face of global financial shocks (as measured, say, by the VIX). While this paper has had a conceptual focus, its argument leads to an empirical research agenda. It has analysed asymmetries in terms of economic dynamics (e.g., higher FX debt in the periphery) and economic impacts (e.g., the financial channel overpowers the export channel of a depreciation at the bottom of the hierarchy). It has also highlighted different implications for state abilities (in particular excess to international finance during a crisis) and systemic pressures at different positions of the hierarchy.

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