Europe and the Logic of Hierarchy

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Abstract: Building on the view that financial systems from contract and trading structures through regulation are artifacts of law and politics, this paper analyzes the fundamental reasons for the observed hierarchy in all financial systems. Why are financial systems hierarchical? The answer offered here is *mutualization at scale*: balance sheets with access to larger economic catchment areas impart liquidity discipline or elasticity on smaller balance sheets, thereby setting the terms on which the latter operate. Hierarchy then sets the logical limit to the constructive power of law viz. finance. Yet because hierarchy is an abstract, functional requirement, the concrete institutional form that expresses this function is indeterminate *a priori*. This openness is a key predicate of the constructive power of law and politics in finance, allowing us to conceptualize systems that are democratic even while they attend to the specific logic of financial systems. These themes are explored in the context of the European Economic and Monetary Union and its recent crisis.

In outlining a "Legal Theory of Finance," Katharina Pistor[1] attempts to account for several stylized facts about any financial system: financial contracts are legally constructed, finance is inherently unstable and hierarchical, financial markets are venues for the operation of power embedded in social structure, law is differentially "elastic," financial systems are essentially state/market hybrids, the future is inherently unknowable, and liquidity is not a free good. Welding these insights together, Pistor produces a stunningly paradoxical axiom of law and finance: finance is not thinkable without the commitment device of formal law, yet strict contract enforcement in the face of uncertainty and crisis-induced scarcity of liquidity would result in system failure. There is a fallacy of composition in law and finance: what is good for the constituent elements is not necessarily good for the system.

This paper attempts to place the same set of facts in a theory that, at its most general level, relates politics to economics, function to form, and logic to contingency. Thus if finance is constructed by law, we must ask what, if any, are the logical bounds of the constructive power of law viz. finance? If fundamental uncertainty generates systemic instability, how does politics amplify or dampen this inherent instability? Why are financial systems essentially hybrid? Why are financial systems hierarchical? What might a democratic financial system have to include?

In order to flesh out these questions, the paper will turn briefly to the European case. Given its inchoate and currently-imperiled state, the European experiment provides an ideal ground to situate these critical questions. It turns out that the last question--*why are financial systems hierarchical?*--provides the key to the others. This question therefore forms the backbone of the paper.

The following is in two main sections. Section I deals with the theory of hierarchy in finance as it relates to the problems of instability, hybridity, elasticity, and politics in financial systems. Section II runs these elements through the European prism before concluding.

I. **The Elements of Finance**

Credit systems--complexes of "banks" that are tied together in a hierarchical fashion--have a logic of operation that sets expansion against control: a tendency for destabilizing over-expansion of constituent balance sheets (the Minskian economic *logic*) generates the requirement for social control over such expansion. Deployed at the system's apex, this macroeconomic control is subject to intense political competition. The outcome of this competition--a deeply *contingent* fact--determines the configuration of certain key control mechanisms that have evolved to deal with the system's inherent instability. These control mechanisms--price-based control, non-price-based control, and lender of last resort--have to be fashioned for the particular institutional context if they are to have traction.[2] In other words, the control mechanisms are merely *functions*; the particular *form* they take depends on context.

It is no coincidence that this form/function distinction viz. control mechanisms operates with money itself. Money might be seen as a set of functions: medium of exchange, store of value, unit of account. These functions are borne by different forms of instrument and institution depending again on *context*: time and place; politics, thought, and law. Form is to function as history is to logic, context to system, or politics to economics.

1"Towards a Legal Theory of Finance," this issue.

2See Anush Kapadia, "Choose Your Weapons: Control Mechanisms for a Market-based Credit System," in Chris Desan ed., *Inside Money*, (University of Pennsylvania Press, forthcoming).

The legal construction of finance is thus very much that of the engineer, just as Pistor suggests. *That* finance has to be rule-bound is a feature of economic logic. *How* these rules come to be be constructed is a matter of historical and political contingency. But further, the shape and content of these rules must themselves obey some basic logical elements of finance that set the bounds within which the engineering effort can be exercised. Law might thus be differentially elastic depending on one's distance from the system's core, as Pistor suggests, but even at the core the law is not infinitely elastic. This is not merely because infinite elasticity renders the rule-bound nature of markets a contradiction in terms.

Macroeconomic outcomes can in large measure be understood by the politics of money, that is, the political struggle over the configuration of monetary control mechanisms. A workable theory of finance would give us the range of possible tendencies of any system. These would be logical and transhistorical. But it is politics, thought, and law that determine exactly how these abstract tendencies would play out in concrete, particular circumstance. *Politics picks out the actual from a space of the possible marked out by economics.*

This space of the possible is not defined by economic laws in a deterministic sense. Rather, the institutional logic of credit systems defines an abstract *range of motion*, the degree of institutional flexibility or elasticity that could potentially be exploited in the attempt to build and run the institutions of economic life. It is a space of functional variation wherein the logic of certain economic functions--inherent instability, hierarchy, control, scale--sets the bounds of institutional imagination and legal construction.

This range describes an elasticity of a somewhat different, albeit complimentary kind to that suggestively outlined by Pistor. This range expresses an "elasticity" *between abstract function and concrete form*: many distinct legal institutions can be the functional equivalents of each other even though they have different forms. Yet if they are to achieve certain ends, these diverse legal constructions will have to travel along functional rails laid down by the logic of the system. Thus, for example, there is elasticity in determining the type and configuration of the lender of last resort function, but there is no choice to have a lender of last resort function in the first place.

The key thing to note is that in the abstract, these functional bounds are quite wide. Politics and context then enter to delimit the range of possible outcomes. But these bounds never become determinative: there is always room for contingency, luck, chance, play.

The Politics of Scale

A key logical attribute of the system for Pistor is the fact of liquidity constraints: by definition, a crisis is a situation in which all positions cannot be refinanced. This implies that the entity that has the ability to generate liquidity at will wields system-altering degrees of power. This entity is the state: for Pistor, this power comes from the state's ability to generate its own currency. Yet this begs the question: why are some state monies better than others? Why is there a hierarchy among state monies themselves? Why do some states have to reach "outside" themselves in a crisis, as Pistor notes, whereas others do not? What defines the core and periphery of the global financial system?

The source of the hierarchical nature of credit systems, both within and between nations, is *scale*. Balance sheets with access to larger *economic catchment areas* are able to impart discipline or generate elasticity for those entities with access to smaller areas. This begs the question: what is the source of scale? And what exactly does "access" entail?

Seen from the economic theory, one source of scale is a kind of economic pooling or *mutualization*: individuals have pooled resources to generate balance sheets of scale that can act as matching mechanisms to solve search problems at the collective level where doing so at the individual level is extremely costly. The result is a collective mechanism that can be either the payments system or a private banking/market system. This view is consistent with the economic theory's methodological individualism.

There is another view of the source of scale. This too can be rendered in individualist terms although more problematically. Political communities can be seen as collectives that pool together resources for the commonweal. Only the most individualist mythologies of "social contract" render these communities as the result of individual calculation. Most rational history and anthropology see them as *sui generis*: community prefigures the "individual." The institutional expression of the collective is of course the state.

An economic catchment area can be constituted by at least two kinds of flows: domestic and international. Domestic bonds are political: taxation binds domestic economic activity to the state. Domestically, taxation welds together the monetary apparatus and economic life through the hybrid construct of the central bank, both the government's bank and the banker's bank. As the government's bank, the central bank performs a merchant banking function, making sure that the state's debt is floated on the market in an optimal fashion. This is the banking end of the fiscal function of state borrowing. As the banker's bank, the central bank acts as lender of last resort and regulator, thereby more able than any other balance sheet to ease or tighten liquidity conditions because it has explicit access to the largest balance sheet in the system, that of the fisc.

These are political bonds turned economic. Political pooling is the ultimate source of the robustness of mutualization at scale. Thus the "essential hybridity" of financial systems itself has its source in political scale because *the economic need for scale (big balance sheets eat little balance sheets) is most supremely met by the political construct of the state*. No private form of mutualized contracting can match this robustness-at-scale by definition. This does not give the state unlimited resources, to be sure, but sets the bounds of state economic power to the economic catchment area to which the state refers. The logical limit point of the state's economic power is the its ability to subsume the entire economy onto its own balance sheet, including the financial system itself along with the central bank. This of course is the state of emergency that obtains in war time or financial crises.

International bonds are economic: balance sheets across nation are tied together through private contract, even contracts that involved sovereigns themselves. Internationally, trade and investment flows can act as the functional equivalent for constituting a domestic economic catchment area of grand scale, but the equivalence goes only so far as transnational economic bonds are able to substitute for domestic political bonds. Clearly there is a qualitative difference in the strength of these forms of mutualization: when put under strain, political bonds subsist whereas economic bonds break down. The global order then retreats back to the minimum threshold of robust mutualization. The case of Europe best exemplifies this distinction between political and economic bonds, as we will see below.

Thus you can get the economic scale required to move up the hierarchy of money by either of two forms of mutualization: economic or political. Yet these are completely heterogeneous kinds of mutualization: political bonds are, by definition, simply more robust--more stable in the face of uncertainty--than economic or private-contractual bonds. Thus the political entity that can weld together the largest economic catchment area finds itself at the apex of the hierarchy of money. Axiomatically, this entity is the state in the domestic sphere and the hegemon globally.

That said, many large private-contract blocks of mutualization at scale--significant financial and non-financial firms- will be near the top without even while being constitutively unable to claim the apex.

All of this bears on the question of the hierarchical structure of credit systems--international and domestic--and therefore on the normative question of how we ought to reconstruct them. If the deep source of hierarchy is "economic scale," then we ought to be able to disentangle our states from these systems, allow the constituent private entities to mutualize to scale, and regulate them to prevent them using the state's balance sheet to bail them out: the lender of last resort ought always be the bankers' bank and never the government's bank. The present entanglement of banking and the state can be seen merely as a contingent historical fact, a vestige of particular histories with no deep economic logic undergirding it and therefore no in-principle reason not to break the "lethal embrace."[3]

If, however, the deep source of hierarchy in credit systems is "political scale," as is the argument here, then it is the poisoning of the embrace between banking and the state that is contingent, not the embrace itself. It may well be the case that credit systems existed in the past that did not have states at their apex, but then the modern state is not just any state: in normative theory and widespread though far from universal practice, the state is the legitimate exponent of collective action, not the patrimonial outcrop of an over-mighty feudal power. This gives the modern state a scale that is unmatched by any other species of institution: most developed nations have tax revenue that takes about 40 percent of GDP; the US is a dangerous outlier at 26 percent.[4] State debt can stably run in to multiples of national GDP.

The ultimate source of this scale is *political* rather than economic. The state achieves unmatchable economic scale because of its unique political character. The modern state is the most solid financial intermediary precisely *because* it is the central political intermediary, namely a sovereign.

The centrality of the state to credit systems comes down to its uniqueness as an economic and therefore financial animal.[5] State finances are secured by taxation that is legitimate, in theory, because exchanged for representation. Taxes, in turn, make the state a shareholder in every single economic entity in its jurisdiction. Thus precisely because it encodes the legitimate *political* settlement, the state has unbeatable *economic* scale within its own territory, and therefore unbeatable creditworthiness as a domestic borrower. Between national territories, scale again applies, whether in imperial or quasi-

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3Perry Mehrling, "Lethal Embrace? A Thought Experiment," *The Money View blog*, June 19, 2012, http://ineteconomics.org/blog/money-view/lethal-embrace-thought-experiment.

4OECD Revenue Statistics - Comparative Tables, at http://stats.oecd.org/Index.aspx?QueryId=21699.

5Perry Mehrling, "The State as a Financial Intermediary," *Journal of Economic Issue*s, Vol. 34, No. 2, 2000, p. 365-368.

imperial form.

Weber's definitional claim was that "a state is a human community that (successfully) claims the *monopoly of the legitimate use of physical force* within a given territory."[6] Rearranging, we might say that *a state is a human community that successfully claims the apex of a hierarchical credit system because it is legitimate within a given territory*.

In modern open economies, "territory" must be thought of as the economic catchment area that the state refers to rather than physical territory; this can of course be domestic or international, depending on where one is in the international hierarchy.

Thus it may be the case that, in the early modern period, territorial states came to be retrofitted with a credit apparatus that emerged from private bankers, but this retrofitting had sublime economic logic to it as well that put both the state and the credit markets on firmer footing. Politics gave the state scale that rendered it more functional for the operation of credit systems than erstwhile private pooling because the pool in question was now every economic entity within national space. A hierarchy between national economic spaces would then express itself in a hierarchy of international money.

While scale is critical, we have seen that reaching the apex of the credit system demands a further critical element to render scale functional for determining the domination of credit systems: *mutualization*. A pool of resources called the global credit market might well be larger than an individual state in absolute terms, but no other entity can command greater resources at the flick of a single switch than the state. By definition, the market pool is after all made up of individual entities linked together by counter-party relations formed between and across levels of the hierarchy. In short, while we might conceive of a banking system as a mutualized bloc--"a single big bank"[7]--for the purposes of abstraction, it actually matters that this pool can and will *disarticulate* under conditions of stress. Shared mental models--culture--can make the pool function like a herd and generate self-fulfilling prophecies that are both stabilizing and destabilizing, but these bonds are definitionally weaker and more ambiguous than the bonds of law and are therefore not the functional equivalent in a crisis.

Put differently, private mutualization and coordination that is impervious to crisis-born disarticulation can only exist at a scale that is *too small* to mitigate the crisis itself: this is the lesson that led to the belated founding of the Fed. But to say this is merely to repeat the very raison d'etre of the state going back to Hobbes: The state exists precisely because complex social systems require the credible and highly coordinated deployment of certain functions that are creatures of scale. *This only happens when coordination is solid enough that ties of mutualization do not dissolve under pressure*. That national sovereignty has proved to be a winning response to this problem thus far is no reason to assume that other forms of binding mutualization at scale might not be invented, but clearly we're not there yet. Arguably, it is in this light that we might view the European experiment rather than shoehorning it into the federated-nation-state narrative.

6"Politics as a Vocation," in H.H. Gerth and C. Wright Mills ed., *From Max Weber: Essays in Sociology*, (Routledge, 1991), p. 78.

7Perry Mehrling, *The New Lombard Street: How the Fed Became the Dealer of Last Resort*, (Princeton, 2011), p. 93.

Thus hierarchy comes from the ability of politics to wield economic scale with coordination. It is because the most economically robust scale comes from building political communities that financial systems are state/market hybrids.

This political predication of money and finance goes beyond the sociological view that these markets are "embedded" in social structures of trust and reciprocity, or that markets have a "performative" dimension. Politics is constitutive of finance precisely because finance is a creature of scale-generated hierarchy. But further, politics amplifies or dampens the inherent instability of finance depending on how the control mechanisms of finance are engineered and calibrated by law.[8] The socio-political is thus more than an extrinsic element to be factored in *post festum*: it is part of the very warp and weft of the financial system.

The Hierarchy of International Money

If the interest rate is the price of time then the exchange rate might be seen at the *price of (economic) space*. Exchange rates equivocate the liabilities of states that reference different national economic catchment areas. And the national space that the global foreign exchange (FX) market is built on is the United States: the price of the dollar is the price of world money.

The above argument from scale and coordination allows us see why this is the case. The two single largest economic entities in the world are the US economy and the EU economy, representing a quarter of global GDP each. Yet these entities are not equal in terms of their status as world money. The dollar is of course backed by a single, coordinated sovereign whose assets are the juggernaut of the US economy. Taxation welds together state and economy; in exchange, the American people are said to have representation. The EU, by contrast, has no singular, coordinated institutional mechanism to tie the currency to the economy. This is why the Euro is not world money on par with the dollar.

In many ways, the EU is a grand experiment to explore different mechanisms for binding mutualization at scale, mechanisms that do not look like a federated national state even though they aspire to be the functional equivalent. Poverty of imagination and path dependency of politics has meant that a United State of Europe is the only model of robust mutualization at scale that is being discussed. In the fog of war, national states are being drafted in to backstop faltering banking systems on iniquitous terms with no commensurate *quid pro pro*. This is why the degree of mutualization that is sought by European elites remains elusive, and why world-money scale remains unachievable.

As we have claimed, the argument from scale allows us to understand the hierarchical organization of money markets as a consequence of the credit character of the payments system. But this merely begs the question: *why can the payments system be run as a credit system*? For settlement ("payments") to occur through "credit" rather than "money," economic entities have to be willing to accept credit notes, IOUs, as credibly fulfilling the money-function. This is no mean achievement: its takes a system. More specifically, it takes an entire arrangement of hierarchical refinance to make plain old IOUs bear the functional properties of money, most especially the attributes of stability and liquidity. Private mutualization gets one only so far and no further: private liabilities, even when pooled in private clearing houses, are either of insufficient scale to accommodate modern, democratic economic life or

8See Kapadia, "Choose Your Weapons."

too fragile to be stable and liquid enough to function as money.

In short, *the payment system can be a credit system because it is underwritten by the most substantial payment community, namely the political nation*. At the apex of the global economy, that payment community maps on to the national state: the liability of the global hegemon references the largest robustly mutualized economic catchment area; the US economy is still about a fifth of world GDP.[9] The institutional means of underwriting the global payments system is the national state of the hegemon. Pseudo-sovereigns like the EU make up for their relative weakness of mutualization through sheer size, but they cannot be complete functional equivalents.

As one goes down the hierarchy of global power, political bonds come to be substituted for economic ones in the underwriting function as the domestic economic catchment area is too small to operate at scale. International trade and investment flows must generate a positive balance of payments to ensure the fidelity of the payment systems within the periphery catchment areas.

The global “periphery” can therefore be defined as those spaces where state power and economic development have not generated mutually-reinforcing scale. Political borders can force international flows into the liability of the relevant national state in order to do business locally, but outside these borders, these areas have to transact in the liability of the hegemon in a post-imperial arrangement of global finance. Here of course is the source of the exorbitant privilege of the global core.

The credit crisis, when all financial activity reset with a “flight to quality,” expresses this basic political and economic fact. It shows how the international payments system is a complex amalgam of public and private balance sheets, with public balance sheets of the economic core forming the pillars on top of which private balance sheets--largely of the core but also of the emerging periphery--construct their own systems. Economic mutualization *across* borders rests on political mutualization *within* the borders of the core nations that have the functional scale.

This is a dynamic arrangement: peace and prosperity strengthen ties across borders as economic mutualization expands to such heights that a kind of amnesia regarding the system’s foundations sets in. Crisis and war expose transnational economic bonds as dependent on these national-political foundations as activity recedes back to the core and to the nation, that is, to the minimal functional scale of financial power.

The normative problem is when the scale of the core political communities is deployed without consulting the political community in question. But here is a Triffin-esque dilemma writ large. Given their size, the catchment areas of the core are willy nilly undergirding *global* public goods, namely the global reserve currency and the global payments system. Yet these functions are tethered to the *domestic* political and economic institutions of the core. The more general problem of the globalization of the economy in the context of national polities raises its head again. The EU is operationally at the vanguard of muddling through this dilemma, even though it does so with the ideational inspiration of the late nineteenth century.

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9 *IMF World Economic Outlook Database*, October 2012, at http://www.imf.org/external/pubs/ft/weo/2012/02/weodata/index.aspx.

II. **Democratizing Europe's Complementary Funding Machine**

The European case is one in which the key functions of finance can be viewed in a clear light without being overwhelmed by the figure of the nation-state. The dynamic of European politics means that abstracting away from the nation-state is a necessity: the people of Europe do not want to be part of a single nation. As such, Europe is charting a new course in mutualization at scale, one that will allow us to see that what is really driving hierarchy and hybridity in financial systems. The nation-state is but one form of such robust mutualization: it is a contingent historical formation that successfully expresses the transhistorical logic of mutualization at scale. Europe's historical task is to prove that the nation-state is not the only possible institutional expression of the logic of hierarchy.

Funding the Gap

The proximal cause of the European crisis lies in the collapse of the European credit system that renders it incapable of playing the institutional role assigned to it by the experiment that is the Economic and Monetary Union (EMU). This role was to *fund the gap* between the "coordinated market economies" of the north and the "mixed market economies" of the south, to use Peter Hall's terms for these national economic models.[10] In the vocabulary of the "varieties of capitalism" literature,[11] a critical "institutional complementarity" developed between the European banking system and the very project of monetary union. The only way to run a monetary union between divergent national economic models--where one model generated balance of payments surpluses and the other deficits--was for some institution or set of institutions to function as liquidity-transformer from the surplus nations to the deficit ones while ensuring that the gap did not get too big to fund. Europe was thrown into crisis when its complementary funding machine broke.

The European credit system mobilized global and especially northern savings to invest in the debt of southern governments, driving a convergence in European bond spreads in the process. When the blowback from the US financial crisis hampered the European banking system from playing this role, the complementary liquidity-transforming function was initially dropped, to drastic effect, only eventually to be picked up at one level higher in the credit system, namely the ECB and the new, hastily-built European Financial Stability Facility (EFSF) and its successor agency, the European Stability Mechanism.

Yet the tenuous degree of mutualization at the apex of the European credit system means that these institutional solutions continue to be seen as inadequate by the financial markets. The argument in Section I above indicates that some institution performing this liquidity-transforming function at the system's apex with a sufficiently-robust degree of mutualization at scale is going to have to be fabricated if the crisis is to be overcome. Given the European people's political preferences, this solution will not be a federated nation state or indeed fiscal union. However, a resolution to the crisis needs only involve a form of mutualization that funds a gap of a reasonable size.

10"Varieties of Capitalism and the Euro Crisis," Harvard University, mimeo, September 2012. My thanks to Professor Hall for sharing this paper.

11See Peter A. Hall and David Soskice ed., *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, (Oxford, 2001). I am using the term in a somewhat distinct fashion: Hall and Soskice define complementary institutions as efficiency-enhancing for each other. I would add that such enhancements have a cyclical dimension as well, especially in financial institutions.

The progenitors of the EMU, Hall notes, were possessed of an economic ideology that told them that *convergence* between national economic models was on the cards even in the medium term. The key variable here is *time*: convergence in terms of economic models is clearly utopian in the medium term, but convergence in terms of performance rather than actual models is conceivable in the long-term--as the history of some developing economies illustrates--so long as the institutional complementarity between the banking system and monetary union is adequately curated. Even in the medium term, the key element is not convergence per se but a fundable gap plus a healthy, well-regulated credit system to fund it.

Yet because this development of institutional complementarity between the banking system and monetary union was not developed by design (indeed, it no doubt appears pathological to some), EU elites do not view the function of the European banking system in these terms. A durable exit from the crisis might mean that they ought to do so.

Hall allows us to see that Europe was divided in a very specific way: in the north, there were a set of economies whose historical propensities lent themselves to innovative export-led growth through wage coordination, vocational training, and neutral macroeconomic policies; in the south, demand-led growth was the net result of only episodic "social pacts" between capital and labour resulting in lower levels of skill-development institutionalization and consequently competition based on low-cost labour rather than innovation. Expansionary fiscal policy and periodic balance of payments crisis necessitating currency devaluation was thus the pattern in the south.

The fixed exchange-rate regime of the Euro therefore placed the north at a significant advantage to the south in terms of productivity growth. Contrary to the expectations of the European policy elite, convergence between national economic models was emphatically not the result of entry into the EMU. Rather, implicit cross-subsidization of government borrowing costs meant at entry into the EMU gave southern nations even less incentive to alter their growth models by further softening their budget constraints even while a critical dimension of institutional flexibility--a national exchange-rate--was no longer available inside Europe. The resulting southern inflation damaged the low-cost growth model, further affecting competitiveness. Large fiscal and current account deficits in the south resulted.

A key contribution of the varieties of capitalism literature is to teach us how differences in national economic strategies are of long vintage and extremely durable: "the organizational structure of the political economy is neither superficial nor ephemeral. It develops over long periods of time, out of myriad political struggles, and becomes fundamental to how firms organize their endeavors. While subject to incremental reform, these features of the political economy are social facts."[12] While this view may somewhat understate the degree of plasticity in social formations, institutional asymmetry is a key feature of the European experiment. Yet this then begs the question: *how was it possible for the European project to proceed this far without a systemic crisis*?

The answer, arguably, is the European credit system. The asymmetries between the north and the south that Hall points to were clearly sustainable up to a point but not beyond that. The solution to the crisis in the near term, therefore, is to get back to a world where these asymmetries are sustainable. So long as the credit system kept debt flowing into the south, Europe could paper over the asymmetries almost indefinitely so long as two conditions were met. First, some degree of structural reform proceeded in

12Hall, "Varieties of Capitalism and the Euro Crisis," p. 6.

the south so the gap remained within funding range. Hall notes that this was in fact occurring, but it is *a long-term process*. Secondly, the European banks had to be sure not to over-leverage themselves so that they could continue to roll-over funding the gap between north and south in successive *short-term periods*. This meant banking supervision and regulation at the European level.

Given the short-term rigidities in economic structures, the European financial crisis is a liquidity problem, not a solvency problem. These asymmetries are not set in stone: the south is not insolvent but in the the midst of a transformation. But its takes *time* to change, and the south needs liquidity during that time. That's what a credit system does. Banks span different time-scales, borrowing short-term and lending long-term by pooling and scaling liquidity.

Indeed liquidity is merely an index of a time-bound economic process itself: "producing" is an illiquid activity as cash inflow is suspended while the timely process of creating "value" is underway. Banks fund long-term, illiquid assets ("production") with short-term, highly-liquid liabilities ("deposits"). This "liquidity and maturity transformation" is what makes them inherently fragile, hence the requirement for the full set of monetary control mechanisms. Without them, profit-driven banks will stretch liquidity to the maximum, overleveraging and fueling systemic risk.

Thus while the European crisis is in may ways a familiar debt crisis that results from over-exuberant lending, we can trace this overleveraging to two key dynamics. First is the native tendency of profit-seeking banks to overleverage when left unsupervised. But secondly, that which European banks were invested in, apart from the US mortgage market that side-swiped them when it blew up, was southern Europe. *The European banking system was implicitly providing the long-term funding for southern structural transformation by funding southern debt at northern prices*. This was the carrot, perhaps too much of one as transformation did not occur at a sufficient pace when funding was cheap and plentiful. There was, however, very little stick until now, when we have too much of one. Typically, a market based credit system is lurching from one extreme to the other, sometimes performing a key institutional role within the European matrix.

When the US mortgage market blew up, Europe's banks were heavily exposed. This was the impetus for the significant swap lines between the Fed and the ECB: European banks had to fund dollar-denominated mortgage assets but their liabilities were in Euros. The ECB cannot create dollars, of course, and the money markets had frozen, so some institution had to take on the currency mismatch. The currency swaps between the two apex central banks was the emergency institution that stepped into the void.

Similarly, once the European banking system was overleveraged, some other institution has had to perform the role of funding the gap between the north and the south. Belatedly, and only once much pain had been exerted on the south thereby *increasing* the gap, the ECB came in with its own version of quantitative easing, augmented by the TARGET2 imbalances: this liquidity was then recycled to the southern fisc.

Yet this is a temporary fix. Going forward, European banks have to be repaired so that they can return to their role of funding the gap, but now leavened with a kind of industrial policy so that credit comes with specific incentives to induce structural change. This means a bank bailout of significant magnitude. This in turn means that northern states have to find the fiscal space so that no bank is "too big to bail."[13]

And this, in turn, means getting the politics right in the north. There is a constituency in the north, such as elements of German labour,[14] that seems to see merit in a long-term investment in the south. This investment is not for its own sake, of course, but because it is a means to hold the EU together, something that is critical for this constituency in the north given that the EU keeps northern currencies low, thereby subsidizing their export-led growth model.

This constituency could find an ally with a reform constituency in the south. Their combined strength might break insider control in the south and set structural change on a long-term course. Having been unburden, the banks could then return to their job of funding the gap, now fortified by an intra-European rather than domestic political coalition.

Europe and Democratic Funding[15]

While the European crisis calls into question the democratic legitimacy of the European project, it has brought to the fore a concern that afflicts many parts of the world at present, namely the financial foundations of moderns states. The lopsided nature of the European project has merely served to highlight the potentially undemocratic side of the financial undergirding of state power itself. It also foreshadows a potential solution to the problem of making our present form of mutualization at scale somewhat more democratic.

It is not hard to notice that while scorn is routinely reserved for the unelected Eurocrats who want to squash national sovereignty, very little seems to be said about the legitimacy of unelected markets dictating terms to sovereign states. Morality, it seems, is on the side of the creditor: sovereigns, like ordinary folk, ought to pay their debts.

But political communities have a responsibility to maintain their own autonomy to the extent they can, even those that have entered a monetary union with other communities. When governments fund themselves in ways that put their autonomy at risk, they are abrogating their democratic duty. This is the double-edged nature of government borrowing: democracy can be aided by the flexibility and liquidity of putting government debt to market, but beyond a point debt turns to poison.

So how can democratic states take advantage of the bond markets without being consumed by them?

The answer from creditor-morality is simple: don't borrow beyond your means. And there is truth in this homily. The problem of course is that the very extent of ones means is subject to the judgment of the self-same creditor. To a large degree, solvency is in the eye of the creditor.

For any economic unit, the pattern of cash inflows rarely maps perfectly on to the pattern of cash

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13See Mark Blyth and Stephen Kinsella, "Spain Is Now Making Ireland's Mistakes," *Harvard Business Review Blog*, http://blogs.hbr.org/cs/2012/06/spain_is_now_making_irelands_m.html.
14Wolfgang Streeck, "Markets and Peoples: Democratic Capitalism and European Integration," *New Left Review* 73, January-February 2012, p. 63-71.
15A version of this section appeared in *The Current Moment blog*, http://thecurrentmoment.wordpress.com/2011/10/27/guest-post-europe-and-democratic-funding/.

outflows. Individual cash (dis)hoarding can of course mitigate this mismatch; what we call "banking" is merely the socialization of this liquidity-matching function. Units with excess inflow build up hoards of liquidity. They lend to units facing outflow constraints via the intermediation of a bank; the bank is both a borrower, from its depositors, and a lender to its loan customers. If the matching process stops, a borrowing unit's cash commitments could swamp its cash inflows: the unit is insolvent. If your creditors stop rolling over your debt, the music stops very quickly indeed. If the unit is perceived to be insolvent, its access to life-giving liquidity is cut off and the suspicion of insolvency becomes a self-fulfilling prophecy.

Prudence dictates that any economic unit steer clear of such peril. Yet when faced with myriad constraints, units will load up on credit if that dimension is eased. The market price of the unit's debt is meant to be an indicator of proximity to peril. Yet as we have seen, this indicator is notoriously fickle: one day the unit is extremely creditworthy, the next day it's bust.

This was the case with southern Europe: faced with a particular national economic model that generated pressures for expansive fiscal policy, the political settlement in these locales pushed the national economies to the limit even as their budget constraints were soften by soft-headed markets looking to recycle the global savings glut. This could only have led to danger, yet both short-term political incentives and long-term structural constraints combined to drive the south down this route.

Now especially if the economic unit is a democratic state, it has a solemn duty to avoid such peril. This means that it has a solemn duty to avoid fickle funding. And this in turn means avoiding the bond market beyond the point of democratic prudence.

In the wake of the crisis, this is exactly what Europe has been groping towards, willy nilly. Ironically, it is precisely because Europe lacks a common fiscal authority that it is seeking a novel solution of this kind. In so doing, it foreshadows a more democratic method of state funding for all states.

Most see Europe as an unfinished federal project and indeed weak on that score. From this point of view, the solution to the crisis is the completion of that project via full fiscal union. This of course would imply that every European state would undertake to be jointly and severally liable for the debts of others via the intermediation of a common fiscal authority, the dreaded "transfer union" that no German wants.

What those with this view miss is that Europe is something new in the world, a totally novel experiment in interstate relations rather than a slow-motion replay of American history. The people of Europe do not want to be part of a federal state. This is axiomatic; it renders the nation-state analogy for Europe nugatory. Our imaginations are constrained by this nation-state frame. This frame blinds us to the key function in finance, namely mutualization at scale. We fetishise the form at the risk of ignoring the function, thereby ignoring resolutions to crises that could be both workable and more normatively preferable.

The impossibility of federated nationhood is what ultimately ties the hands of the ECB as an effective lender of last resort; the institution's paranoid ideology is merely icing on the cake. A prudent lender of last resort mitigates the fickle nature of market funding by stabilizing the credit system as a whole, for a punitive price, when the market's mood inevitably turns. This function can only be performed if undertaken by an institution with credibility; a central bank has credibility, in turn, not because of its ideology but because of the material fact of scale: it is backed by a balance sheet bigger than any private balance sheet, namely a fiscal authority. The ECB's ideology bought it some credibility given the absence of a European fisc as long as the system remained untested. The hollowness of its position in the absence of a common fisc, and therefore the relative irrelevance of its hawkish ideology, is now exposed.

If the ECB had acted as an adequate lender of last resort at the beginning of this crisis, it would have *implicitly* called into being the absent European fiscal authority. Germany in particular would have been doing the underwriting. And this could happen because the European people do not want to be the United States of Europe. The Bundestag is merely the outward institutional expression of this resistance.

Of course, if the ECB had acted as a lender of last resort in this crisis *without* at least implicitly calling into being a common fiscal leviathan, ie without getting a blank cheque from its constituent sovereigns, Germany in particular, the ECB *itself* would have taken the place of the impaired sovereigns as the target for the markets. A lender of last resort without fiscal backing is simply not credible; the markets would have gnawed away at it until it perishes or until the implicit backing is made explicit. The assets that the ECB purchases might lose value to the point where the ECB's own balance sheet will start to look shaky; the Euro itself would have started to melt away.

In the event, Germany did its best to make explicit that no fiscal leviathan would be erected, so the southern economies had to be *shrunk down to a size* at which the ECB's eventual response absent fiscal backing could appear credible. While this obeys the logic of scale, it does so at huge cost to people in the south and therefore at the cost of increasing the gap between north and south that some institution will have to play going forward.

The ECB has an *implicit* political community--the shadow nation of Europe--undergirding its action. This community is implied by the structure of the European monetary system, an implication that has a quantitative expression in the price of constituent nation's debt, just as the implicit backing of Fannie and Freddie by the US Treasury had a dampening effect on its price. And just like Fannie and Freddie, the markets are pushing the ECB/EU to its limit to test whether this implicit backing by the shadow polity can indeed be made explicit. Whence the narrative for fiscal union: it is the path of least resistance for the markets to get the scale it wants. The backing could be, and finally was, rendered explicit in the case of the US because the polity behind the Fed was explicitly and effectively mutualized to operate in a highly coordinated fashion at scale. This is why the EU crisis expresses itself as a crisis over the kind of mutualization that the EU will have and on what terms it will have it.

Hence the centrality of the EFSF. One can see how this institution might be the kernel of a common fiscal authority, at least in its borrowing power if not (yet) its taxation power. And that's what the fight was about at its inception. The Germans wanted to keep it small and limited so that it won't prefigure some kind of common fiscal mechanism, but then it became too small to be credible enough to function as a lender of last resort. And the markets were too roiled in any case to accept the debt it attempted to sell, leaving it short of funds. These were eventually beefed up even as the ECB eventually came to play much of the liquidity-transferring role outlined above.

The structure of the EFSF makes it a kind of collateralized debt obligation: it pools together the creditworthiness of sovereigns through proportionate contributions and issues highly-rated bonds, the proceeds of which are used to buy encumbered sovereign debt; at present, a quarter of all Greek debt is owned by the EFSF, with the "official sector" of the International Monetary Fund, ECB, National Central Banks, and the Bank of Greece holding seventy percent.[16]

Conceivably, sovereign wealth funds and other "international public investors" could be induced to come in as the patient, long-term, institutional capital, in other words, not the fickle market money. Since these new investors have very deep pockets and have their eye on the very long-term (some of them are sovereigns themselves after all), they are not subject to the same incentives as normal players in the bond market. The latter tend to be highly-leverage and work on the narrowest of margins. Having drastically underpriced sovereign risk in the run up to the crisis, the fickle money markets are now drastically overpricing it; yesterday's promise of growth has turned in today's demand for austerity. Long-term investors look at long-term value rather than short-term prices; think Buffet not Bear. These investors would typically hold the bonds to maturity and can ride out short-term fluctuations because of their deep pockets. And at the moment they are getting a deal.

The absence of a common fiscal authority in Europe has led to a credibility crisis at its heart. Most see the solution to this as an aping of the history of the nation-state. But that way is closed to Europeans. They are charting a new history, yet one that is going to have to stick to the logic of hierarchy. Because of their constraints, the Europeans are finding that another route to stability is in effect to *de-marketize* some portion of their sovereign debt and place it with buy-and-hold institutions like the EFSF that are being fabricated to replace the relatively unregulated and short-termist credit system.

A new institutional balance sheet is being geared to be the functional equivalent of the debt markets, at least at the margin. It might not replace the entire private credit system, but it can set the terms on which the sovereign borrowing operates by being the fiscal lender of last resort. Along with a revamped banking system, this might lead to more stable and thus more democratic funding. That is but a necessary step, far from sufficient. Once the European credit system is rebuilt on these lines, southern states will then have to execute some kind of industrial policy to make that bet pay off this time. All credit does is buy you time.

What we might consider is that Europe's *ex post* crisis response might be a way of insulating democratic states from the fickle markets *ex ante*.

The analogy with bank funding is clear: part of the problem with banks in both the US and the EU leading up to the crisis was that they were sourcing funds in highly liquid markets at ever-shorter maturities and in ever-greater proportions. This made them even more vulnerable to a run; the subprime burst the bubble and the inevitable run followed. What is the one proposed solution? Mandatory funding durations imposed by the regulators (to be enshrined in Basel III): *long-term assets ought to be funded by long-term liabilities to the extent possible*; this is the so-called "Net stable funding ratio." In effect, this means finding a form of mutualization at scale that maintains autonomy and sovereignty even though the catchment area is broader than the national economy.

16Masa Serdarevic, "So, who's going to sell their Greek bonds?" *Financial Times Alphaville blog*, November 29th 2012, http://ftalphaville.ft.com/2012/11/29/1287493/so-whos-going-to-sell-their-greek-bonds/.

Democratic Discipline?

There is another important bank analogy that helps to reframe the question around austerity and highlight the new path that Europe might be charting. The current plan, traveling under the title of a "fiscal compact," is all about exacting commitments from states that bind tighter than existing treaty terms. Once this is in place, the moral hazard of an ECB bailout is deemed to be minimized.

On one level, this mimics the compact between banks and sovereigns in domestic settings: local banks issue liabilities bearing the state's insignia--for which the state is ultimately liable--and states regulate banks for this privilege. Money was nationalized, not banking.

In the postwar period, the politics behind this was simple: unfettered private banking led to war generating crises that states ended up paying for *ex post*, so banks had to be tied up in regulations if not *de facto* nationalized *ex ante*. Private money was made public, but banking remained private but tightly regulated. Unstitching this compact characterized the politics of the neoliberal period that followed.

This logic of regulating constituent entities (banks) that have the privilege of issuing a liability on the common-pool (mutualized polity or the state) is being applied in Europe today with this fortified fiscal compact. Yet the politics of its application are reversed. Whereas the postwar application of this logic saw states regulate constituent banks in the name of democracy, undemocratic Europe seeks to regulate constituent sovereigns whose central banks issue Euros in the interest of the north. As an ideal type, this disciplinary compact works in democratic states because of a kind of public-private partnership between states and banks, albeit one with pretty good terms for banks that are then pushed to public service. Disciplining banks is legitimized in the name of democracy and executed by a balance sheet bigger than the constituent banks.

At one level up, the partnership between constituent states and superstate-Europe is missing both the ideological prop of legitimacy and the institutional mechanism of the big fiscal stick. Full fiscal union--joint and several liability rather than merely a stricter austerity club--is after all still off the table despite the magnitude of this crisis because the Germans, correctly, guess that this would be a transfer union with the north crosssubsidizing the south. West Germans might have done that for their co-nationals in the East, but they don't seem to be happy do repeat the effort for their co-Europeans to the south. This is largely because cross-subsidization has been framed in German public discourse as a deadweight loss rather than an investment in a European project that subsidizes the German economic model by keeping its currency lower than a solo-German currency would be.

The locus of democratic politics remains the nation-state, in Europe too. Set on current institutional rails, democracy therein currently calls for "less Europe," not more. By tying themselves to the Euro, sovereigns have locked themselves into the logic of credit that calls for the common pool to regulate the constituent elements. This is the unimpeachable financial logic of the politics of fiscal control. The irony is that where common-pool discipline qua bank regulation failed, leading to our present crisis, common pool discipline qua national fiscal austerity has only strengthened.

But the application of this logic is one-sided in Europe because of a too-ready application of the nation state frame. Constituent units issuing a common liability do indeed have to be disciplined for the sake of the common pool, but when these units are sovereign, democratic states, they must also find the means to fund themselves in a manner that does not overdo austerity in the name of stability. While the need for discipline does indeed arise from the lack of discipline either by the markets or by Maastricht, to see the solution merely in terms of discipline of constituent elements is inadequate.

The divided nature of the European economy has precluded the embedding of necessary common-pool discipline in a narrative of give and take. This narrative has to change before things can move forward in a sustainable manner. The south has to be allowed to invest and grow its way out of this, and do so on through a model that suits each community: convergence of *performance* should not be mistaken for convergence of *institutions*. There are many paths to growth other than the German. It will take disciplined investment to find those paths. But find them they must, else Europe is doomed to a prolonged slump that it might not survive.

The state is a long-term asset, the people's long-term asset. It needs a funding structure adequate to its long-term democratic duties. By definition, a legitimate state cannot allow itself to be bossed around by the markets or by unfair treaty terms. This means that the state (and the banks it underwrites) should not be allowed to seek funding in fickle markets beyond a certain point; no matter how cheap and liquid this funding appears, the cycle will turn and austerity will result.

The East Asians learned this after their crisis and responded by constructing the biggest cash hoard in history. But this is globally suboptimal: banking was invented so that we wouldn't all have to keep our cash under our mattresses. Better lend it out to those who need it; if we are long-term savers, we can afford to lock it up for a while.

That is what pension funds do; that is what sovereign wealth funds do. We know that how we fund our governments matters for its legitimacy, but our democratic common sense ties only taxation to representation. Yet the *structure of state borrowing* is equally critical. Grasping for institutional solutions, Europe's experiment has unreflectively turned to this patient structure of funding, albeit only at the margin. There might be a lesson in there for all democratic nations.

And given where in the world the savings are located, democratic national funding might entail *more globalization*, not less. Or rather, it would entail a different version of the globalization we now have, namely one that renders pooling between nation states merely in terms of austerity and discipline, creating a terrible choice between austerity and democracy. Thinking about democratic funding means denying the necessity of this choice.

Conclusion: The Impossible Arbitrage of Space

The dynamic centrality of core national economic space provides us with another route to the answer to one of the more vexing empirical questions in international finance, namely why does the arbitrage condition of uncovered interest parity fail? Why does the forward rate not adjust to equal the expected future spot rate and thus eliminate an arbitrate opportunity? The answer is liquidity risk, and this depends on access to a lender of last resort in the currency in which the bank/dealer has incurred a liability.[17] Because such access is differential over time and space, liquidity risk persists and the

17Perry Mehrling and Daniel H. Neilson, "A new measure of liquidity premium," Columbia arbitrage condition does not hold.

Unified economic space naturally eliminates this liquidity risk by eliminating exchange rates themselves; this is the European route. Thus at the limit, eliminating liquidity risk that emerges from the basic fact of diverse economic space across the globe and thus realizing the utopia of the no arbitrage condition can only be achieved by an equally utopian world state, namely some institutional entity whose economic catchment area is the world economy itself. Note that this is the spatial equivalent to the idealized provision of totally free liquidity by a central bank domestically with the aim of eliminating risk in the pricing of time.[18] Both are dangerous utopias as the Credit Crisis and the European crisis show respectively. If liquidity is not a free good, then the diversity of economic space cannot be wished away. This is the deep lesson on the "varieties of capitalism" literature.

The next best thing, in terms of this spatial idealization, would be to seamlessly backstop all key currencies by mutualizing central bank liabilities at the apex of the system. Such episodic mutualization is of course the function of central bank swap lines in times of crisis. The regulatory equivalent would be coordination of banking policy across nations for that set of interlocking activities. This is what the Europeans are trying with their banking union.

At the global level, this would be the mother of all coordination games, ie impossible. In the wake of the failure of this idealization, the state continues to function as the backstop for credit systems precisely because it expresses the *maximum scale* at which robust coordination is currently possible.

Thus hierarchy of scale and coordination explains risk premia in the FX markets. Only a few states have effectively integrated themselves with economic spaces at the scale required to have their liabilities function as world money. Other economic state spaces remain relatively demutualized, relatively uncoordinated, and therefore have their liabilities tradable only at premia that violate uncovered interest parity. In other words, "parity" implies the impossible elimination of difference in economic space.

The key point is that elasticity and discipline can still be exerted from the apex of this jerry-built international system for a price. Central banks, individually or collectively, might not have a choice as to whether they support liquidity in the forward markets or not. But they do have a choice as to the terms of refinance and the conditions under which market making more generally operate. That is where all the political action is. And this is the logical arena within which the elasticity of law can be exercised to serve either the public interest or the money interest.

Financial systems are always hierarchical, a brute technical fact that can lead to adverse normative consequences. The normative task is to mitigate this hierarchy with structures of accountability that are not unlike those of the judiciary. For instance, the normative right to appeal a trial verdict generates a technical hierarchy in the judiciary: appeals are made to superior courts, stopping at some ultimate point in the system. This technical fact has to be mitigated by structures of accountability as one goes up the judicial hierarchy least power at the apex is abused.

Thus democratization is not synonymous with a flatter structures although it may coincide with them.

University, mimeo, 31 January 2008; Mehrling, this issue.

18On this idealization, see Mehrling, *The New Lombard Street*, p. 65.

Accountability per se is not unthinkable in hierarchical systems; the fact of hierarchy just makes democracy even tougher. This paper has tried to illustrate both the *logical necessity* of the function of hierarchy in financial systems and the relatively *abstract* nature of that function, abstract enough that concrete institutional modes of democratic funding are in fact thinkable even while adhering to the logic of hierarchy.

Given this logical necessity, there is a grave danger in thinking without hierarchy. Thinking through hierarchy enables more robust democratic outcomes precisely because it defines the logical terrain within which we must engineer a positive outcome.

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