

Seigniorage or Sovereignty?

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In this chapter, I will explore two competing approaches to analysis of national currency emission. I will call one the seigniorage view, to be contrasted with what I will call the sovereignty view. Before proceeding, let me say that I am not interested in presenting either a historical analysis, nor will I pursue the etymology of these terms. I will first briefly define the terms as I will be using them, and then will identify the views associated with each. I then argue that the view I identify with sovereignty is more useful for understanding operation of most modern national currencies. While much of the discussion will focus on domestic use of the currency, I will also explore issues surrounding an “open economy” and foreign currency reserves.

Seigniorage

Seigniorage is usually defined by reference to a supposed earlier stage in which full-bodied coins were minted by the State. Each coin would contain an amount of precious metal equal in value as a commodity to the coin’s exchange value as well as to the nominal value stamped on the coin. The State’s mint would accept gold for coining, assessing a fee, called a seigniorage charge. So long as that fee exceeded the mint’s costs, the State would receive net revenue from its minting operation—seigniorage revenue. If for example, a gold miner brought a pound of gold to the mint for coining, the State might charge a fee equivalent to one ounce of gold and provide fifteen one-ounce coins. If minting costs were equal to the value of half an ounce of gold, the State would gain in purchasing power an amount equal to half an ounce of gold. In turn, the gold miner would have gained purchasing power equal to 15 ounces of gold, less mining costs.

This speculative history leads one quite naturally to what Goodhart has called the “metallic” view—the notion that the value of a currency depends on the value of the commodity from which it is coined. Note however, that there is a problem that requires resolution because we must somehow transform the relative commodity value of gold to a nominal value. This means that even if this speculative history were accurate, and even if coins were full-bodied, there is still room for what Goodhart calls the “cartalist” or what Knapp called the State Money approach because it might be the state that fixes the nominal value of gold—an ounce of gold is equivalent to so many dollars.

The next logical step would be for the State to try to cheat at the mint, by debasing coins. If the state kept for itself five ounces of gold in addition to the one ounce seigniorage fee, but gave to the gold miner 15 coins containing only 10 ounces of gold, it might be able to fool the miner. It would retain six ounces of gold, which could be minted as six full bodied coins, or a greater number of debased coins. However, markets would soon recognize the debased coins, whose purchasing power would fall. Debasement would thus only lead to inflation and would not over the long run increase seigniorage. To increase long run seigniorage, the State would have to raise its minting charges—but this might be limited due to competition from alternative mints, including private mints or foreign mints, or from circulation of unminted gold.

Such a strict interpretation of the concept of seigniorage, however, suffers from two problems. First, there is scant historical evidence in its favor, but we will leave that to the side as it is not necessary to engage in historical debate. More importantly, even if such a system existed in the distant past, it is not relevant to any economy today. Hence, the definition of the term has been extended to use of a paper money backed by reserves of precious metals and, more importantly, to paper “fiat” monies that are not backed by precious metal reserves. The last case should be divided into subclasses, the first dealing with a fiat money in a fixed exchange rate system and the second based on a fiat money with a floating exchange rate.

The typical extension of the concept begins with the recognition that transactions costs could be reduced by circulating paper rather than gold coins. Some gold would be held as a reserve against the paper notes, but the rest of it could be released to alternative use. As Black argues, “The use of a paper money instead of full-bodied coin by modern governments generates a very large social saving in the use of the resources that would otherwise have to be expended in mining and smelting large quantities of money.” (Black p. 314) This then generates seigniorage, the value of which “can be measured by considering the aggregate demand curve for currency, as a function of the rate of interest.” (ibid) Assuming a fractional gold reserve held against the currency, seigniorage to the State would equal the purchasing power of its total note issue less the cost of providing the paper currency, which includes the opportunity cost of holding the gold reserves. There still remains the potential problem of inflation resulting from State note issue, which forces us to make a distinction between real and nominal seigniorage, but we will ignore that because it is of secondary interest.

The notion of seigniorage is also frequently extended to the international sphere. According to Black, “(s)ubstitution of fiduciary reserve assets such as Special Drawing Rights created by the International Monetary Fund or United States dollars for gold would generate a substantial social gain in the form of seigniorage equal to the excess of the opportunity cost of capital over the costs of providing the fiduciary asset.” (Black p. 314) The issuer of the “currency” used as a reserve asset internationally would reap all the seigniorage gain unless interest were paid on holdings, in which case “the seigniorage is split between the issuer and the holder.” (ibid) Given current international realities, it is often claimed that the USA gains significant seigniorage because the dollar is used as the primary reserve around the world.

Let us return to the domestic economy and briefly consider a closed economy in which government issues a fiat money that is not backed by a precious metal reserve. This is supposed to generate significant seigniorage income to government, but it is not clear why anyone accepts this fiat money. In the “pure” gold standard case, one can understand why the public accepts paper notes that are convertible on a fixed ratio to gold, as they can be exchanged for gold that has intrinsic value. However, if the fiat money is not convertible, it is not clear why it is accepted. There are two possible solutions that have been articulated. The first relies on convention: agent Tom accepts fiat money from government because he expects that agent Sally will accept that same fiat money in

payment. There is an obvious logical, infinite regress, problem that should make this unappealing, as it is difficult to see how such a convention became established. Another possibility, apparently accepted by at least some Post Keynesians, is that the public simply views government fiat money as a government liability that will be retired later. In this case, government fiat money is not essentially different from any other (including private) liability, and the government's position is no different from that of any other economic agent. When government emits money to purchase something, it has not finished the transaction, but remains in debt that it will have to settle at a later date. For example, Rossi argues that no economic agent ("even as powerful as a government might be") can purchase "by simply letting its own IOUs circulate". (Rossi 2001 p. 484) He continues "As a matter of fact, it is plain that no agent whatsoever can really pay by acknowledging his/her debt to another agent. ...the emission of modern money is never a purchase for the issuer." (ibid) In a somewhat similar vein, Mehrling argues that "state money is not a fiat outside money...but, rather, an inside credit money". (Mehrling 2000 p. 401) Hence, Merhling insists that we should think of government-issued money as nothing but "a promise to pay".

A problem immediately rises for Rossi and Mehrling, however. When a private party issues a liability there is a clear "hierarchy of monies", and their analysis correctly predicts that one must retire one's liability by delivering another liability—usually, one issued by an agent higher in the hierarchy. Liabilities of firms are mostly extinguished by delivering liabilities of banks; and banks extinguish their liabilities by delivering liabilities of the central bank. It should be obvious, but it usually does not appear to be so (see, for example Mehrling's confused discussion), that central bank liabilities do not differ in any significant degree from treasury liabilities—in other words, we can treat both as essentially "high powered money" or liabilities of the state (a point to which we will return below). But what is the State liable *for*? Rossi provides no clue, but Mehrling provides an attempt at an answer. The State is *liable* to deliver foreign currencies to extinguish its own liabilities. When the State issues its "fiat money", it is implicitly pledging to convert this to foreign currency. But why would the domestic agent accept the domestic currency solely because it will be converted to a foreign currency at a fixed exchange rate? We again encounter the infinite regress problem—we domestic currency that is convertible because foreigners will accept the foreign currency in payment, hence, we can use the foreign currencies to purchase imports or foreign assets.

Merhling tries to finesse this by offering an argument that is not consistent with his general orientation, and which, more importantly, would seem to apply only to exceptional cases. In his view, government is nothing more than a giant firm that offers goods and services for sale—perhaps a giant Microsoft. The modern state is "the one entity with which every one of us does ongoing business. We all buy from it a variety of services.... Just as we are each individually willing to extend temporary credits to individual business associates to whom we expect to be making payments in the future, so too we are all willing to extend credit to the government. (Mehrling 2000, pp. 402-403) Hence, one accepts government fiat money because one knows one can buy goods and services from government by delivering the same government fiat money in payment. While this is not theoretically implausible, it does require that government, like

Microsoft, is a producer and not a consumer of the nongovernment-sector's output. There may well be governments like that in the real world, but Merhling's theory is not obviously applicable to the case of most governments around the world—which do provide some goods and services, but which are consistently very large net consumers of private sector output.

We now turn to the final issue, the exchange rate regime. On a fixed exchange rate regime, including a gold standard, the state promises to convert its fiat money to the reserve (foreign currency or gold) at a pre-arranged exchange rate. It must, therefore, hold reserves and its seigniorage is thereby reduced by the costs of maintaining this reserve. Further, it must carefully manage its emission of currency so as not to threaten its reserve holdings. Merhling, as noted above, advances the argument that one accepts the domestic fiat money because one's government promises to convert it to foreign currencies. Ignoring the infinite regress problem, this argument is plausible only for a fixed exchange rate system. On a floating currency system, the government makes no such promise. Certainly, those who hold the domestic currency probably do expect that they will be able to convert it to foreign currency in exchange markets, at whatever exchange rate happens to exist at the time the conversion is made. Further, they may well hold some expectations that government will intervene to try to stabilize exchange rates should their currency appreciate/depreciate significantly. But it would be quite a stretch to argue that they accept a fiat money from their State *because* they probably will be able to convert it in exchange markets at an exchange rate that won't deviate wildly from today's exchange rate. Why not simply demand the foreign currency in payments today, and eliminate all the uncertainty? This is not to deny that the State might want to hold foreign currency reserves in order to minimize currency instability, that it might indeed give up its reserves to maintain orderly convertibility to foreign currencies, or that it might limit its emission of its fiat money in an attempt to avoid currency devaluation. However, it seems to be an exceedingly weak argument to maintain that a fiat money with no intrinsic value is accepted in payment for State purchases simply because the fiat money is expected to be marketable in foreign exchange markets in the future at an unguaranteed rate.

Sovereignty

We can develop an alternative view, one that is related to Goodhart's "cartalist" or Knapp's State Money approach. In this view, the value of a currency is not linked to the value of the material from which it is produced. Nor is its value determined by reserves of precious metals or foreign currencies into which it might be converted. Note that the alternative view does not deny the logic of the metalist approach—one can envision a system in which government issues a full bodied coin or a paper money fully backed by precious metals (or foreign currencies) and at a fixed exchange rate. In such a system, one could imagine that government could indeed obtain seigniorage by charging a coinage fee. Again, this is not the place to debate the historical accuracy of this speculative history. However, the alternative denies that this is helpful in developing an understanding of a modern nation, such as the US or Japan, that operates on a "fiat money" and a flexible exchange rate. I will call the alternative view the sovereignty

approach because it links the State's ability to issue a currency denominated in the unit of account it has chosen, and without any explicit guarantee that the currency will be converted to anything (including precious metals or foreign currencies), to a fundamental power that is directly associated with sovereign nations. And, tellingly, this form of sovereign power is almost exclusively held by nation states and their delegates. It is a power that not even a Microsoft can hope to attain.

The easiest way to draw a contrast between the seigniorage approach and the sovereignty approach is to return to our discussion of fiat money as a "liability" of the State. According to the seigniorage approach, so long as the government can emit a currency with greater purchasing power than required to produce it, seigniorage is obtained. And as discussed above, we are left with the perplexing question as to why the nonState sector accepts a fiat money when it is not clear exactly what the State is "liable" for. By contrast, the sovereignty approach, following Knapp, insists that the State is liable only to accept its fiat money in payments made to itself. Yes, the State might decide to make itself liable to deliver precious metals or foreign currencies at a fixed exchange rate, if it so chooses. Thus, in that special case, the State's liability goes beyond its agreement to accept its "liabilities" in payments to the State to include other, self-imposed, conditions. However, as discussed above, that special case is not relevant for most countries today (with the obvious exception of countries operating a currency-board type arrangement, as well as others that operate with a somewhat less constraining exchange rate peg). The general case is that fiat money is a State "liability" only in the sense that the State agrees to accept it at State pay offices. For what payments is the State accepting its fiat money in payment? We have already rejected Mehrling's belief that the State is nothing but a giant Microsoft, supplying goods and services to markets and accepting its liabilities in payment. It is clear that in the real world, most payments to the State consist of payments of taxes, fees, fines, and interest. In all modern States, taxes are by far and away the most significant payments to the State, and easily dwarf sales by the State to the nonState sector.

For our purposes, sovereignty can be defined as the ability to impose tax liabilities, although in the past the ability to impose fees, fines, tithes, and interest was more important than imposition of tax liabilities. Clearly, these payments are not voluntary at the individual level, although in democratic nations tax liabilities are at least in theory imposed by consensus. It should be emphasized that this ability to impose liabilities on the population does not presuppose an autocratic or fascistic State. Even the most democratic of states impose taxes, indeed, it is somewhat paradoxical that the social democratic states (Scandinavian nations, for example) tend to impose relatively larger tax liabilities than do more oligarchically controlled states (the US or Japan). All sovereign nations impose involuntary liabilities on their populations in the sense that the individual cannot choose to avoid the liabilities owed. Of course, many kinds of taxes can be avoided by refraining from behavior that is subject to taxation (by not earning income, one avoids an income tax; by eschewing tobacco, one avoids the cigarette tax, and so on). The simplest tax, the head tax or poll tax, is the most difficult to avoid; a residence tax could be avoided, but only at the cost of a serious diminution of comfort. Unavoidable

taxes are probably better from the perspective that they distort behavior to a lesser extent, and might better motivate the demand for the currency—as discussed below.

Our concept of sovereignty requires one further extension. It is not sufficient that the State is able to impose tax liabilities, for it must be able to designate the manner in which tax liabilities are to be “worked off” or met. In all modern states, one eliminates one’s tax liability by delivering the state’s own liability—what we’ve been calling fiat money—at state pay offices. Why does one accept the State’s liability? Because one is indebted to the state as a result of imposition of tax liabilities, and the State agrees to accept its own liabilities in retirement of the tax liabilities it imposes as a result of its sovereignty.

The sovereignty approach has several advantages over the seigniorage approach. First, it avoids any infinite regress problem—all that is required is the ability to impose an unavoidable liability (such as a tax on one’s head) and to name what must be delivered in tax payment. Second, it resolves the nominal, or unit of account problem: the state names the unit of account (the dollar), imposes tax liabilities in that unit (a five dollar head tax), and denominates its own “fiat money” liabilities in that account (a one dollar note).

We have not yet explained why the fiat money will have any purchasing power in terms of commodities produced in the nonstate sector. If, for example, the state imposed a five dollar head tax, but then distributed buckets of dollar denominated fiat money about, free for the taking, then all could meet their tax liabilities without offering anything to the state. In this situation, the value of the fiat dollar would be close to zero, just sufficient to cover the cost and effort involved in locating buckets of “free” money. More generally, the “real” value of the dollar will be determined by the “effort” involved in obtaining it—the labor services or basket of commodities one must provide to obtain a fiat money dollar. For example, let us presume that the State only wants to purchase labor services—it hires police and firefighters to provide public safety services, soldiers to provide national defense, and IRS agents to collect tax payments—and offers to pay a dollar of State notes per hour of labor services hired. Setting to the side obvious labor heterogeneity complications, the fiat money dollar will be worth an hour of labor. If the State announces that it will offer two dollars per hour of labor it will devalue the purchasing power of the dollar by half; if it lowers wages to half a dollar an hour, it will double the purchasing power of the dollar. Obviously, things are much more complicated in the real world, but further examination is not required to establish our point that “real” purchasing power is maintained by ensuring it is “difficult” to obtain the fiat money that is required to retire tax liabilities.

There are two real world complications that require brief analysis. First, most payments in modern economies do not involve use of a fiat money; indeed, even taxes are almost exclusively paid using bank money. Second, fiat money is not emitted into the economy solely through treasury purchases of goods and services. In fact, the central bank supplies most of our currency, and it supplies almost all of the bank reserves that are from the point of view of the nonbanking public perfect substitutes for Treasury liabilities. Obviously if we simply consolidate the central bank and the treasury, calling the conglomerate “the State”, we eliminate these complications. When one uses a bank

liability to pay “the State”, it is really the bank that provides the payment services, delivering the State’s fiat money which results in a debit of the bank’s reserves. When the State spends, it provides a check which once deposited in a bank leads to a credit to the bank’s reserves. If one subsequently withdraws cash, bank reserves are debited. Note that payments using bank money within the private sector merely cause reserves to shift pockets from one bank to another, thus can be entirely ignored. Ignoring for a second actions initiated by the central bank, only payments to the treasury or cash withdrawals from banks cause a reduction of banking system reserves, while payments by the treasury result in reserve credits.

But the treasury is not the only source of reserve injections or deductions. Central banks principally provide reserves at the discount window or through open market purchases of sovereign debt, foreign currencies, or gold. They also can drain reserves by reversing these actions: unwinding loans at the discount window, or through open market sales of sovereign debt, foreign currencies, or gold. In addition, central banks engage in various transactions with their treasury. However, these internal actions have no implications for the nonstate sector. For example, a central bank might buy treasury debt and credit the treasury’s deposit at the central bank, but this has no impact on banking system reserves until the treasury uses its deposit—for example, by purchasing labor or nonstate sector output. Hence, strictly internal actions involving only the central bank and treasury should be ignored, which is the main justification for consolidating their accounts.

Just as the “external” world does not care about the accounting maneuvers practiced by husband and wife within the household, the internal accounting machinations between the Fed and the U.S. Treasury are not important for our analysis. Many economists find all this so very confusing because they do not understand the nature of the internal accounting procedures followed by the Fed and Treasury—procedures that they have imposed on themselves and which are not dictated by logical necessity. For example, the Treasury spends by drawing on an account it holds at the Fed, relying on the Fed to debit its account and credit a bank’s reserves. It would be more transparent, but would change nothing of significance, if the Treasury simply spent by crediting a private bank account directly. Similarly, taxpayers send checks to the Treasury, which deposits them at the Fed, leading to a credit to the Treasury’s account and a debit to the private bank’s reserves. Again, it might be easier for economists to follow the steps if the payment of taxes simply led to a direct reduction of bank reserves by the Treasury. Things are made even more complex because the Treasury maintains accounts at private banks, depositing its tax receipts, then moving the deposits to the Fed before spending them down. Obviously, so long as Treasury deposits are held within the banking system, there is no impact on banking system reserves, and, hence, Treasury deposits at private banks can be ignored—because the bank simply debits the taxpayer’s account and credits the Treasury’s account.

I do not want to devote a lot of space to all this accounting as it has already been examined in detail in Wray (1998) and Bell (2000). The only logic that is necessary to grasp is that the State “spends” by emitting its own liability (mostly taking the form of a credit to banking system reserves). On the State’s consolidated balance sheet, its liability

increases by the amount of the purchase, and its asset increases by the amount of the purchase. The nonState sector records an offsetting action: its asset is reduced by the transfer of its production to the State, but its balance sheet is credited by the amount of the sale. A tax payment is just the opposite: the State's asset (a tax liability owed by the nonState sector) is reduced, as is the State's liability (banking system reserves); for the nonState sector, the tax liability owed is reduced, and its reserves held as an asset are debited. And all of this works only because the state has first exerted its sovereignty by imposing a tax liability on the nonState sector. The State's ability to purchase by emitting its liabilities is only the second step; by ignoring the State's sovereign power to impose tax liabilities in the first place, analysts like Merhling and Rossi wrongly conclude that the State's position is no different from that of any other agent that issues liabilities.

Treasury procedures followed for its issues of interest-paying debt add another layer of complication that befuddles economists. Economists have long believed that the government must either "print money" or "borrow" whenever it deficit spends. However, as we have shown, government always spends by crediting reserves to the banking system. Taxes drain those reserves, but a government deficit means that some of the created reserves are not drained. The nonbanking public absorbs some of these net reserves as it draws down deposits, resulting in a clearing drain from the banking system. Banks, in turn, use reserves for clearing of accounts among one another—and for clearing with the government. At any point in time, the banking system will likely desire to hold a net reserve position, as each bank holds a positive reserve position to deal with anticipated clearing drains (with the public, with other banks, and with the State). In systems like that of the US, in which reserves do not earn interest, profit seeking behavior of banks will lead to minimization of net reserve holdings. When an individual bank holds more reserves than desired, it will seek to lend the excess in overnight markets—the fed funds market in the US. As is documented in every money and banking text, the US also imposes required reserve ratios on banks, against certain kinds of deposits. While much is made of this, it adds nothing of substance to our analysis. If desired reserve holdings are above legal reserve requirements (as they now are for many US banks), then it is only the excess above desired holdings (and not the excess above legally required holdings) that will place downward pressure on overnight interest rates. If legal requirements are above what is desired by banks for clearing, then only the excess above legally required reserves will pressure overnight rates. Much has also been made of contemporaneous versus lagged reserve accounting. Contemporaneous reserve accounting simply eliminates any "slop"—any excess reserves leads to immediate impacts on overnight rates. Lagged reserve accounting builds a very small "buffer" into the system because banks can try to adjust balance sheets during a brief settlement period in order to bring reserve holdings into line with deposits held at some point in the past. However, the reality is that regardless of the accounting method used, excess reserves above what is legally required or desired will cause overnight rates to fall, while insufficient reserves cause overnight rates to rise.

Post Keynesians have gone to great lengths to demonstrate that reserves are not discretionary from the point of view of the central bank, which supplies reserves "horizontally" or, on demand. If it did not do so, it would not be able to hit its overnight

interest rate target. This has been examined sufficiently that no further exposition is warranted. What has been largely ignored, however, is that “horizontal” central bank operations that add reserves through open market purchases, or that drain reserves through open market sales, account for a rather small proportion of adjustments to bank reserve positions. They are absolutely dominated by treasury impacts on reserve positions. As discussed above, government spending adds reserves, while taxes drain them; hence, deficits result in net credits and surpluses result in net debits. While the central bank can offset such actions if they create excess or insufficient reserves, the central bank’s interventions are necessarily limited. Continuous open market sales to drain excess reserves created by deficit spending are most problematic because the central bank will eventually run out of treasury debt to sell. However, informal procedural rules also limit central bank purchases, although there is no limit implied by double entry book-keeping (since the central bank buys assets by crediting banks with reserves, there is no theoretical limit to its ability to do this). In any case, in all modern economies, there is a division of responsibilities such that the central bank is responsible for draining/adding reserves on a day-to-day basis (often referred to as offsetting operating factors), while the treasury is responsible for draining/adding reserves over a longer run. It does this by selling/retiring sovereign debt. Whenever it runs a sustained deficit, it will be adding reserves to the system, which will likely generate excess reserve positions. Sales of new sovereign debt then drain the excess reserves (in the USA complicated procedures are followed, often involving specially designated private banks, but this changes nothing of substance—see Bell 2000). Banks will almost always prefer interest-earning treasury debt over non-interest earning excess (undesired and/or unrequired) reserves, hence there is no problem selling the treasury debt. Note, also, that if there were a problem, the treasury would simply avoid selling the debt, and, indeed, would not need to sell the debt as the banks preferred to hold non-interest earning reserves. In other words, far from requiring the treasury to “borrow” by selling new issues, government deficits only require the central bank and treasury to drain excess reserves to avoid downward pressure on overnight interest rates. On the other hand, sustained budget surpluses drain reserves and can eventually cause bank reserve positions to fall short of what is desired and/or required. Over the short run, the central bank provides needed reserves through open market purchases; over the longer run, the treasury rectifies the reserve drain by retiring outstanding debt. In effect the public surrenders its interest-earning sovereign debt in order to pay “excessive” taxes that result from budget surpluses and that would otherwise drain required and/or desired reserves from the banking system. Treasury debt could be eliminated entirely if the Fed were to simply pay interest on reserves, or if the Fed were to adopt zero as its overnight interest rate target. In either case, the Fed would be able to hit its target regardless of the size of the Treasury’s deficit, hence, there would be no need for sales of sovereign debt.

This brings us back to the final issue, which is the relation between the exchange rate system and sovereignty. In a flexible exchange rate system operating with a fiat money, the overnight interest rate is exogenous, set by the monetary authorities. The treasury “borrowing” rate will be closely aligned with this rate as arbitrage will keep rates on short term debt essentially equal to the overnight rate target, and long term sovereign debt will have a rate that is largely determined by expectations of future overnight rate targets.

No amount of deficit or surplus spending by the treasury will cause overnight rates to move away from the central bank's target, nor will international capital flows impact the overnight rate—although they may affect exchange rates. On the other hand, a nation that uses a fiat currency but that adopts a fixed exchange rate (based on a gold standard, or a peg against other rates, or a currency board) will not, in general, be able to exogenously set its overnight rate. Because the State in such a system will have to maintain reserves (of gold, or of other currencies, depending on the type of fixed exchange rate adopted) in order to maintain its peg, it faces the probability that it will have to adjust interest rates to try to retain sufficient reserves. An actual or expected drain of reserves (again, of gold or foreign currency) will likely lead to an increase of the overnight interest rate target to stem the drain. For similar reasons, the treasury of such a nation will be constrained in its ability to deficit spend, fearing that deficits that are too large could result in an economy so robust as to generate a clearing drain with other nations (resulting, for example, from a trade deficit). Even in the absence of a trade deficit, the government would face a constraint because its deficit would result in domestic currency emission. On a strict gold standard (with 100% gold reserves) or a strict currency board arrangement, government spending would be rigidly constrained by its accumulation of gold or foreign currency (respectively). But even in a more flexible system (with a pegged exchange rate, but without 100% reserves), government would fear deficits because these would leverage its reserve holdings. Hence, government spending on a fixed exchange rate system is constrained, in addition to the constraints imposed on monetary policy by exogenous interest rates, as discussed above—both fiscal and monetary policy are constrained. In a very real sense, a country that adopts fixed exchange rates surrenders a great deal of its sovereignty.

As we have seen, a nation that operates with a fiat money on a floating exchange rate, treasury debt is really nothing more than reserves that pay interest, and the purpose of sovereign debt issue is to drain excess reserves to allow the central bank to hit its overnight interest rate target. This really cannot be called a borrowing operation—it makes no sense to argue that a government operating in such a system needs to “borrow” its own liabilities in order to deficit spend. Hence, it also makes no sense to speak of “default risk” of home-currency denominated sovereign debt issued by a nation operating a floating exchange rate. Such a government will always be able to pay interest and retire principal by crediting banking system reserves. In contrast, a government operating in a fixed exchange rate regime may be forced to default on its commitment to convert its liabilities to the reserve asset at a fixed exchange rate—whether that reserve is gold or foreign currencies. Hence, there is default risk on sovereign debt issued in a fixed exchange rate regime. Similarly, if a State issues liabilities denominated in a foreign currency, its sovereign debt is subject to default risk for the simple reason that it will not be able to pay interest and retire principal by crediting bank reserves.

Any sovereign State that has the ability to impose mostly unavoidable tax liabilities will be able to issue a fiat money. It will be able to exogenously maintain overnight interest rates. It will be able to deficit spend, purchasing goods and services by crediting bank reserves. It will never need to borrow before it can spend, although if it wishes to maintain overnight rates at a positive level, it will need to offer an interest-bearing

alternative to non-interest-earning excess reserves. This does not mean that deficit spending is always desirable, nor does it mean that it should ignore impacts of deficits or exogenously-set low interest rates on domestic inflation or on exchange rates. While I believe that most economic theories regarding the impact of government spending and monetary policy on inflation, long-term interest rates, and exchange rates are largely wrong-headed, that is beyond the scope of this chapter. Here, it is only necessary to establish the minimum possibilities for the operation of sovereign power.

Many nations have chosen not to exercise sovereign power up to these minimum limits, however. They have chosen to fix exchange rates, to issue government debt denominated in a foreign currency, or to operate with a currency board. When a country chooses, say, to operate a currency board based on the US dollar, it allocates to the US a measure of its sovereignty. Its government will have to borrow dollars or obtain dollars through its tax system (which, ultimately, must come from exports) in order to spend. Economists often claim this gives seigniorage revenue to the US because the demand for dollars allows the US to buy the exports of the nation operating the dollar currency board without ever supplying real goods and services in return. The US is said to get a “free lunch”. There is some truth in this claim, particularly if we ignore the negative impacts on the US economy (possible loss of jobs and industry, depression of aggregate demand) that result only if the US does not adopt policy to ensure full employment at home. If we think of US exports as a “cost” and US imports as a “benefit” to Americans, then a trade deficit that is produced by nations wanting dollars to hold as reserves does generate a free lunch for the US economy taken as a whole, all else equal. By extension, even those nations that have chosen to float their currencies but that attempt to accumulate dollars as a liquid reserve (perhaps to be used as desired to dirty the float) give some “seigniorage income”, or free lunches, to the US economy.

There are two misconceptions about this that must be addressed, however. First, it is necessary to determine who in the US reaps this seigniorage income. Second, it is necessary to determine whether other nations can reap seigniorage income, or, does the US alone gain such income through its “hegemonic” power, as is often claimed.

Within any sovereign nation that operates with a domestic currency and a floating rate regime, only the State has the power to impose tax liabilities. As we have claimed, this is a critical component of sovereign power—although by no means is it the only power claimed by the sovereign. By imposing taxes, the State can move resources to itself. All modern States rely heavily on a monetary system, first imposing taxes to create a demand for the currency, then issuing the currency to buy desired resources. The use of money by the state is what disguises the nature of sovereign power. When the state seizes financial and real assets (sometimes for failure to pay taxes, sometimes as fines for criminal activity, and sometimes through use of eminent domain), the veil of money obscuring the nature of sovereignty is removed. All other economic agents in the sovereign nation must use income or issue debt or rely on charitable giving (including that of the State) or engage in petty production to obtain resources. No other economic agent can issue liabilities that represent final means of payment for itself. Hence, even though the rest of the world wishes to accumulate dollars, this gives no particular advantage to any non-

sovereign economic agent in the US. When a US non-sovereign consumer purchases an imported Toyota, she either gives up income or sells an asset or issues a liability to finance the purchase. The Japanese exporter holds a dollar claim on a US bank that will probably be converted to a yen claim on a Japanese bank, which in turn will convert a dollar reserve to a yen reserve at the Bank of Japan. (Alternatively, the Japanese bank could keep dollar reserves, or could convert them to US Treasury debt—which is essentially just interest-earning reserves.) When all is said and done, the American holds a new auto and the Bank of Japan holds dollar reserves at the Fed. However, from the perspective of the American owning the new Toyota it certainly does not feel like she got “something for nothing”—she used her income, or sold an asset, or committed herself to payments on debt. As economists are fond of saying, there is no free lunch. And if the US does not operate enlightened full employment policy at home, the net result of all this could be lost automobile manufacturing jobs in the US.

By contrast, if the US government chooses to import a Toyota, it truly can “get something for nothing”—issuing dollar reserves that eventually find their way to the Bank of Japan. But is this seigniorage? Not really. Any sovereign State obtains “something for nothing” by imposing a tax liability and then issuing the currency used by those with tax liabilities to meet the obligation. The only difference in our example is that the US government has obtained output produced outside the US, by those who are not subject to its sovereign power—in other words, by those not subject to US taxes. However, even within any nation there can be individuals who avoid and evade taxes imposed by the sovereign power, but who are still willing to offer their output to obtain the sovereign’s currency. Why? Because those who are not able to avoid and evade taxes need the currency, hence, are willing to offer their own output to obtain the currency. The US dollar has value outside the US because US taxpayers need the currency. By this I do not mean to imply that US currency is only used to pay taxes, or that those who hold US currency or reserve deposits at the Fed do so on the knowledge that US taxpayers want high powered money to pay taxes. Analytically, however, it is the sovereign power of the US government that allows it to issue currency and reserves that are demanded domestically and abroad. Take away the US Treasury’s sovereign power to impose dollar taxes, and world demand for dollars would wither away. Hence, whatever “seigniorage” there is, it is at bottom derived from sovereign power.

The question is whether the US government is alone in its ability to issue sovereign currency accepted by those who are not subject to the sovereign’s taxes. Obviously, it is not—other sovereign States operating on a floating rate regime and with a domestic currency are able to obtain the same “seigniorage income” that the US government can obtain. And, just as in the case of the US, the ability to obtain “seigniorage income” is at bottom related to sovereignty—only the State has this power. Surely this cannot be controversial. Still, it can be argued that the US reaps far more “seigniorage income” than other nations, because dollar reserves (including US Treasury debt) relative to the size of the US economy are larger than the relative size of foreign holdings of sovereign debt for most other nations. Here we should distinguish between sovereign purchases and non-sovereign purchases. While “seigniorage income” is sometimes equated to the total quantity of net imports, as we have shown above imports purchased by the non-sovereign

population do not provide any “free lunch”. It is only the portion of a trade deficit that is due to sovereign purchases that can be said to provide a free lunch and seigniorage income.

The remaining question is whether this results from US hegemonic power, or does it result mostly from self-imposed rules adopted by other nations. Let us first recognize that the US is the lone remaining superpower and that it exercises military and political power in its perceived interest. The US can, if it wants to, blow any nation to smithereens and can probably topple any government and impose one more favorably disposed to heed US wishes. It could probably force any nation to adopt a currency board based on the dollar. It could probably annex any nation and subject the population to all the sovereign power imposed on US citizens. This could be done, perhaps has been done, to relatively weak Latin American nations, and with very few global repercussions. It would be more difficult to do this to large OECD nations, and it is doubtful that the US has attempted to do so, or even would attempt to do so. It seems far more probable that most nations around the world that are holding large dollar reserves (again, including Treasury debt) are doing so on the basis of what they see to be in their own self interest.

Yes, this is probably due, in part, to the sheer size of the US economy—the world’s elephant. However, the desire to hold dollar reserves could never be satisfied if the US did not run trade deficits (particularly given the low levels of official aid offered by the US). US trade deficits, in turn, require that the rest of the world, taken as a whole, desires to sell more output to the US than it is willing to buy from the US. It takes two to tango. Given the rest of the world’s desire to accumulate dollar reserves and its lack of desire to consume US output, the US is “forced” to reap seigniorage income. If, say, Japan and Euroland decided to pump up their economies sufficiently to eliminate their trade surpluses, they, too, would be “forced” to reap some seigniorage income—and US seigniorage income would probably decline as exports to those nations rose. The counter argument is that only the US can run persistent trade deficits without causing exchange rate depreciation. Perhaps, but that, too, requires “two to tango”. So long as the rest of the world wants more dollar reserves, the dollar will remain strong even in the presence of a US trade deficit. Under the current “rules of the game” adopted by most nations of the world, national economic success is measured by the quantity of dollar reserves accumulated—just as mercantilist nations measured success by gold inflows. Perhaps if economists understood the principles of sovereignty, the game would be played differently.

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