

Hamilton’s Paradox revisited: lessons from the euro area crisis for US history

WALTRAUD SCHELKLE¹

(European Institute, London School of Economics and Political Science)

Comments welcome: w.schelkle@lse.ac.uk

Abstract: The lingering crisis of the euro area (EA) has made leading observers call for the completion of the economic and monetary union with fiscal federalism. They point to the US federation as the example to emulate. Opponents can point to evidence from US history that strong fiscal capacities at the federal level lead to free-riding at the member state level, with ‘spectacular debt accumulation and disastrous failures of macroeconomic policy’ (Rodden 2006: 2) in its wake. This paper revisits the historical US evidence with the knowledge of today. It takes lessons from the euro area crisis to see whether they apply to the history of the US dollar area. The first lesson concerns the need for fiscal integration: it is arguably not the federal budget but the FDIC (Federal Deposit Insurance Corporation) that performs the crucial role of a fiscal backstop for state budgets in a systemic crisis. A second lesson asks whether fiscal union should come before monetary union: the paper argues that the US federation would have been less susceptible to rampant financial instability if it had followed the sequencing of the euro area, namely establishing a central bank early on. The final lesson is about fiscal discipline: soft budgets at the member state level can perform better in terms of stabilisation than strictly balanced state budgets with a sizeable federal fiscal capacity. Lessons from the euro area crisis reveal tradeoffs that neither monetary union can evade.

1 Hamilton’s Paradox and the euro area crisis

The lingering crisis of the euro area (EA) has made even the IMF call for the completion of the economic and monetary union with fiscal federalism (Cottarelli and Guerguil 2015). Many economists, for instance Krugman (2011, 2013: 446) and Gaspar (2015), compare the euro area (EA) unfavourably with the US and call for a transfer union in line with Optimal Currency Area theory. However, these proponents of a fiscal union simply assume that the US conformed to the prescriptions of the theory and that transfers played a key role in dealing with the fiscal problems of states. The evidence does not lend much support to these assumptions as we will see.²

Opponents to fiscal completion can point to insights by political economists that draw a rather different lesson from US history: “federalism can lead to spectacular debt accumulation and disastrous failures of macroeconomic policy.” (Rodden 2006: 2; cf Rodden and Wibbels 2002) Jonathan Rodden summarised his intricate analysis in *Hamilton’s Paradox: the problem of*

¹ Parts of this paper were presented at the EUI workshop on “Fiscal federalism for the euro area?” on 12 December 2016. It draws in turn on chapter 4 of Schelkle (2017).

² A nuanced case for a fiscal union that does not depend on idealised US evidence can be found in Enderlein et al (2012).

federations may not be so much that the federal level is weak but that it is not credibly weak. This undermines market discipline and incentivises lower-tier governments to free ride, forcing the federal government's hand to bail them out with central resources. However, the EA crisis is a great puzzle for this view. After all, the central bank was not underpinned by any joint fiscal capacity at the central (EA) level. The fiscal centre was credibly weak and should therefore be safe from exploitation by member states. The solution to this puzzle lies in the neglected role of financial markets.

Scholars obviously draw very different lessons from US history for the EA. This paper suggests an alternative methodology to assess the claims in this debate. It revisits the historical US evidence with the knowledge of today, asking whether and how US policymakers and institutions avoided three recognized pitfalls of the EA. There is, above all, its vulnerability to diabolic loops; secondly, the protracted involvement of the central bank in quasi-fiscal policies; and, last but not least, member states' precarious fiscal situations. This exercise points to tradeoffs that neither monetary union can evade.

The next section looks at the main rationale for why the EA supposedly needs more fiscal integration: all five member states were susceptible to a negative feedback loop between weakening bank balance sheets and weakening public finances. So was it the federal budget in the US that saved, for instance, Nevada from the plight of Ireland and Cyprus? An affirmative answer is at odds with the fact that the federal government in Washington, DC, credibly exercises the no-bailout clause for state budgets (Henning and Kessler 2012). The most recent example is Puerto Rico (Lachman 2017). I take the Savings and Loan crisis of the 1980s and '90s to illustrate how a crisis of systemic proportions, with its latent diabolic loop, was solved. This points to a crucial role of the FDIC (Federal Deposit Insurance Corporation) with its resolution capacity rather than the federal tax-transfer system directly. Until then, US states experienced diabolic loops aplenty, as two detailed examples will illustrate.

The third section deals with the consequences of the missing fiscal backstop for central banking: the EA crisis showed how a central bank that issues non-state money (James 2012) can be forced to undertake quasi-fiscal operations for lack of a central fiscal authority (Mabbett and Schelkle 2017). So, did a different sequencing of fiscal and monetary integration save the US from a similar perversion of monetary policy? The historical evidence suggests that the US federation would have been less susceptible to rampant banking crises if it had followed the sequencing of the euro area, namely establishing and maintaining a central bank early on (Broz 1997: 5). The section looks at the debates around establishing a central bank in the US. The section concludes that there is no inherently best sequence: fiscal integration before monetary integration seems to lead to continuous financial instability while monetary before fiscal integration seems to stoke up the potential for large systemic crises.

The fourth section deals with the question whether more centrally enforced fiscal discipline would help: Greece is the prime example for those who feared fiscal profligacy could bring the EA down. So is it the state balanced budget rules and strict enforcement of no federal bailout in the US that makes the US federation less susceptible to a "Greek problem", that is fiscal profligacy getting out of control and spilling over to rest of the union? The answer is a qualified yes but the qualification is stark: strictly balanced state budgets come at a cost in terms of stabilisation. The states' pro-cyclical balancing counteracts federal automatic stabilisers. Strict enforcement of fiscal discipline at the member state level can only be sustained if there is federal fiscal capacity to compensate for too

little stabilisation at the state level. This has Hamilton's Paradox in its wake. But a more targeted re-insurance capacity at the central level, for financial rather than sub-national fiscal risks, can be a solution.

The concluding section summarizes the tradeoffs that each of the previous sections reveals. It also argues that the proponents and opponents of fiscal federalism for the EA tend to overlook one side of these tradeoffs, typically because they focus too narrowly on monetary and fiscal policy, ignoring the role of financial markets.

2 Negative feedback loops between banks and sovereigns

The shock causing the EA crisis was not asymmetric but followed the *common* shock of the financial crisis. Since this shock was largely created by monetary-financial integration between all advanced economies, albeit particularly intensely in the EA, it created problems for banks in all advanced economies. Some banks were prone to insolvency once their dubious assets were properly priced, others were dragged into the abyss because contagion and fire-sales of assets led to a crash in asset prices that were actually priced correctly before the crisis.³ The common shock wiped out loss-absorbing capital of highly leveraged and sound banks alike. Central banks came to the rescue by providing liquidity against collateral and buying assets, to stabilize the prices of these assets and ultimately to prevent a general melt-down that would have destroyed savings of households.

Governments took a lot of the financial risks on their books, by becoming shareholders and by acting as guarantors of bank liabilities. The commonality of the financial instability became less obvious in the months after the major hit arising from the difficulties of Greece, and this became a problem for collective action. Market observers came to perceive some EA members, rightly or wrongly, as more fragile than others. Bond investors started to differentiate between high risk member states and the rest. Some high-risk members were dragged into a diabolic loop, others escaped.

The US has had its fair share of negative feedback loops in its history, as we now note (Frieden 2016; Schelkle 2017: ch.4). What brought them to an end was not fiscal federalism, however.

To take first the situation of a developed fiscal federation, which is still some way off the ideal of an optimal currency area but as close as it gets: the example is the Savings and Loan (S&L) crisis of the 1990s. It was not a shock on the scale of the recent financial crisis but one with a similar potential to put some US states into a diabolic loop. A change in the monetary regime after 1971 and the Fed's shift to money supply control in 1979 (the "Volcker shock") led to increased exchange rate and interest rate volatility. Interest rates on government bonds rose to double digit levels. This created a major problem for the S&L institutions or "thrifts". Their loan business was in residential mortgages, so they were locked into long-term fixed rate assets. To make up for the losses they had already incurred, rendering many thrifts insolvent, capital requirements were lowered and they were allowed to enter riskier market segments with the Depository Institutions Act (Garn-St. Germain) of 1982 under the Reagan administration (Robinson 2013). Regulators and legislators had an incentive to exercise forbearance because the federal deposit insurance fund for S&Ls (FSLIC) was de facto insolvent and many S&Ls had no access to the Federal Reserve System as the lender of last resort.

Regional recessions were the straw that broke the camel's back: the geographic concentration of investments and lending made the risk that hit the S&Ls uninsurable at the state level (Todd 1994: 9;

³ See Brunnermeier et al (2009: 13-24) for a summary of these propagation and amplification mechanisms.

FDIC 1998: 49). Real estate prices, especially in Texas, fell massively and left mortgage borrowers “under water”. Many S&Ls were wiped out because the low value of the houses and condominiums did not even make it worthwhile to incur the transactions costs of marketing them for sale in severely depressed regions. The Financial Institutions Reform, Recovery and Enforcement Act of 1989 finally acknowledged the problem. A bad bank cum resolution fund restructured the sector, the insolvent deposit insurance fund for the sector was closed down and federal insurance was from then on provided by the FDIC (FDIC 1998: 51-53).

Devastating as the S&L crisis was, a feedback loop from the S&L debacle onto state budgets was prevented. Since the 1950s, many states had sponsored the opening of private deposit insurance funds. Many failed in state-specific crises: first in Mississippi in 1976, then in Nebraska and California in 1983, Ohio and Maryland in 1985, Utah and Colorado in 1987, and finally in Rhode Island in 1991 (Todd 1994: 1).⁴ Three of the biggest calamities, that could have wrecked the state easily, are compared by Todd (1994: 8-13). One way or another, each state got an indirect federal bailout, not of its regular budget but of its financial system.

- Rhode Island received a federal loan guarantee for a bond issue to restructure and recapitalize its S&L sector, not unlike the Spanish bank restructuring programme.
- The way out for S&Ls in Ohio was short term liquidity assistance from the Federal Reserve Bank of Cleveland, aided by the governor’s declaration of a bank holiday “that required all institutions insured by the failed private fund to close until they were either assured of receiving federal deposit insurance or sold or merged into a federally insured institution.” (Todd 1994: 10) This is the situation that the ECB finds itself in, with members of the Eurosystem using ELA in a big way.
- In Maryland, the Federal Reserve Bank of Richmond had to step into the breach and provide support to the S&Ls for more than four years. It bought time for the state government to compensate depositors out of the revenue from state-sponsored bond issues (Todd 1994: 12). Again, it is the central bank system that came to the rescue, not the federal budget directly.

However, Ohio and Maryland relied too openly on offloading their problems unto the federal deposit insurance “without substantial injection of state funds” (Todd 1994: 3). Congress punished what the legislators perceived as acting in bad faith. Substantial amounts of state funds had to be used to restructure the sector. Texas experienced the biggest crisis, counting for more than half of all S&L losses. It was rescued in the so-called Southwest plan, overseen by the FDIC, which guaranteed losses of up to \$50 bn (GAO 1990).

Throughout the S&L crisis, the letter of the no-bailout norm for state budgets was honored in that the federal government did not assume state debt directly (Henning and Kessler 2012: 12). But there was still a federal safety net that prevented a feedback loop by assuring bond markets of a backstop should the state default. A price was extracted for this support: state governments had to cut public goods provision and raise taxes. Assets of about \$519 bn were restructured and the number of federally insured thrift institutions halved between 1986 and 1995. As of 1999, the cost of the S&L crisis was estimated to amount to \$153 bn, over 80% of which was borne by the US taxpayer and the rest by the thrift industry (Curry and Shibut 2000: 26, 33).

Contrast this with banking crises in the absence of federal re-insurance of deposit insurance. When the Anglo-American War ended in 1815, the federal government assumed states’ debt (Henning and

⁴ The sector’s federal deposit insurance fund stopped accepting new claims by early 1989.

Kessler 2012: 10) and a Second (proto-central) Bank of the US was founded to deal with the financial mayhem (see next section). An “era of internal improvement” followed, fueled by state-sponsored financial innovation as well as free (un-chartered) entry of note-issuing banks. States invested massively in physical and financial infrastructure. This raised their (domestic and foreign) debt to levels that were 50% above the debts they had incurred in the two wars before combined (Wallis et al 2004: 1). The borrowing spree ended with the sovereign default of eight states and a Territory (Florida) in the early 1840s, while twelve other states got in serious fiscal difficulties, out of a total of 28 states. Diabolic loops were instrumental in bringing these states down.

The default of the Southwestern states in the early 1840s was due to a particular feedback loop that resembles the disastrous experience of Ireland and Spain 170 years later. The Southwestern states had invested heavily in land (or plantation) banks by issuing state bonds to them in return for a share in their capital stock. The banks were responsible for servicing this debt. The other investors were plantation owners who acquired capital stock by giving the banks mortgages on their land. These private investors could then borrow to buy more land (and slaves) to work the land. Initially, banks financed these mortgage loans by selling the state bonds given to them. In case of default, the holders of these state bonds had to take recourse to the securitized loans: the mortgages of private investors, the plantation owners. This created the perfect conditions for a feedback mechanism between defaulting banks and states (Wallis et al 2004). As long as lending boomed, land values rose, making banks even more willing to lend against this security. But inevitably some event would eventually cast doubt on the valuation.⁵ As land prices adjusted to more pessimistic expectations, mortgage credit came to exceed the value of the underlying security. This put borrowers “under water” (holding negative equity) and led them to default on their mortgages. Their default created difficulties for the banks which needed cash flow to pay interest on their liabilities, the state-issued bonds. When the bondholders approached the state government, they were told that the bonds were secured by mortgages. But they had defaulted or seriously depreciated. Obviously, states could have re-assumed these debts or acted as lenders of last resort, which Alabama did (Wallis et al 2004: 16). But sovereign credit was itself dependent on revenue from property taxes which collapsed with the fall in land prices and defaults on mortgages (Wallis et al 2004: table 7). Issuing new public debt was not possible at a sustainable interest cost. Four out of the five Southwestern states chose to repudiate the state debt by letting the land banks fail.⁶ The financial crash and its financial costs were massive, but the federal government stood firm this time (Rodden 2006: #; Henning and Kessler 2012: #).

The contemporary example of free banking suggests, however, that financial exuberance contributed at least as much or more to the emergence of diabolic loops as the free riding of lower-tier governments. The immediate political motivation of the free banking movement and the Free Banking Act of 1838 was a conservative-libertarian backlash against state chartering of banks: government control at any level was resented (Moss and Brennan 2001: 151, 155-160). The Act allowed banks to enter the market and issue banknotes freely as long as they fulfilled two conditions: every bank had to hold loss-absorbing capital of \$100,000 and had to cover its note issue

⁵ In 1840, the shock arose from credit tightening by the Bank of England that led to a tightening of monetary conditions in the US (English 1996: 263).

⁶ Two states (Arkansas and Louisiana) later repaid most of their debt, presumably in order to resume access to international credit markets at low cost. However, Florida and Mississippi never repaid and got access as well (English 1996: 263-265).

with high-grade bonds or low risk mortgages to be held with the state's comptroller. The high-grade bonds could initially be federal or any state bond but the list of eligible reserve assets was later narrowed down, disqualifying the bonds of other states. This was the opposite of spreading risk across the federation, since note issuing banks and their customers in the state were susceptible to similar risks. If the bonds backing the note issue became dubious, the banknotes lost in value and traded at a discount, at the risk of those holding the notes.⁷

Free banking was meant to be a risk reduction strategy imposed by regulation (Moss and Brennan 2001: 156). The reserve requirement greatly restricted the elasticity of credit supply: "a little like trying to eliminate automobile accidents by reducing the speed limit to zero", in the apt analogy of Moss (2002: 91). To get around the credit constraint, free banks invented a new financial instrument: their innovation was checks to be drawn on deposits. Checks economized on the use of banknotes, which allowed banks to expand their lending. Bank deposits soared relative to the controlled stock of notes and specie.

The 100% reserve on bank notes could not prevent a devastating feedback as soon as notes were no longer accepted as a means of payment. When a bank panic started in 1857 because a large life insurance company could not honor its obligations towards New York banks, several of them were unable to redeem the banknotes in specie. Their attempt to sell the high-grade bonds did not help either. The specie price of bonds was bound to fall when everybody rushed to liquidate bonds in order to get specie (Moss and Brennan 2001: 157). The value of the reserve then dropped below 100%. The fall in bond prices made it less likely that the states could bail out a bank without jeopardizing their own viability, which in turn exacerbated the run on banks. A number of free banks and three safety funds (deposit insurance) failed, creating a nationwide panic in the process (Moss and Brennan 2001: 160).

Such a self-fulfilling panic through "fire sales" can only be stopped by spreading the risk over a larger pool. This requires centralization, either by backing banknote issues with federal bonds (provided the federation can withstand the troubles of individual states), or by creating a central bank that can act as market maker with a non-profit motive and deep pockets, buying the bonds (or more generally the reserve asset) and thus stabilizing their price in legal tender. Neither was done, however. Instead, eleven states wrote debt restrictions into their constitutions which became the norm of balanced budget rules for all states (Wallis et al 2004: 27). These rules amount to a no-bailout clause for the financial system and it is hardly surprising that the US economy experienced many more bank panics until the Roosevelt reforms to end the Great Depression created the FDIC and turned the Federal Reserve System into a proper central bank.

3 Sequence of fiscal and monetary integration

The ECB has been drawn, for almost a decade now, into extraordinary measures that arguably substitute for member states' reluctance to recapitalize domestic banking systems and to stimulate domestic economies. It has attracted much criticism for this quasi-fiscal engagement. Even an arcane institution, the cross-border payments system TARGET2, became the subject of heated debate in Germany (Schelkle 2017: ch.9). It was accused of prolonging a balance of payments crisis of Southern

⁷ A later chapter of my book explains why: there was no payments system based on irredeemable bank notes (fiat money) to assure the unity of the monetary union.

Europe while it was merely operating as a safety valve for frozen wholesale financial markets. Others accused the strictures on the ECB. Paul De Grauwe (2011) wrote in a widely cited paper that governments were in the spotlight of bond markets only because the ECB's role as lender of last resort to governments was not assured, by contrast with the backing enjoyed by the British and US Treasuries from their respective central banks. Tommaso Padoa-Schioppa (2004: 180) had warned presciently that independence based on a strict separation of monetary and fiscal authority may become loneliness, the ECB's hands forced by the inaction of governments (Mabbett and Schelkle 2017).

The contestation over federal monetary powers has, if anything, been more intense in US history. The Federal Reserve was a creation of the early 20th century. Does this prove that the EA got the sequencing of a modicum of political-fiscal integration and monetary integration wrong while the US got it right?

The sequencing of fiscal and monetary integration was forced upon the emerging polity by member states' resentment of federal power. The first finance minister of the US, Alexander Hamilton, proposed a Plan that foresaw both a central bank and a joint debt instrument. On the latter, he wrote in 1781, as the war of independence (1775-1783) was still going on: "A national debt, if it is not excessive, will be to us a national blessing. It will be a powerful cement of our Union." (quoted in McNamara 2003: 10n) The joint liability of federal debt could become a visible symbol for the strength of the federation if the whole was more creditworthy than its parts. He relieved the states from their war-related debt and made the nationalized debt a source of states' revenue for which they in turn agreed to a Constitution which created considerable central powers.

The 1789 Constitution gave the federal government the power to tax as well as the sole right to issue coinage. Because of a lack of minting capacity, Hamilton authorized the circulation of the Spanish dollar as legal tender several times. The Constitution was silent about note issuance by the federal government. There was principled opposition to paper money in the constitutional assembly, which foreshadowed later conflicts between monetary conservatives at the federal level and expansionists in some states (Giannini 2011: 66; Hall and Sargent 2014: 155).

The states were expressly prohibited from taxing exports and imports and issuing paper money (Sylla et al 1987). These provisions took away important sources of state revenue at a time when many states had accumulated more debt during the war of Independence than they could service in peace time. While state representatives were ready to agree to expand the prerogatives of the federal government only if they were relieved of their debt, the federalists, in turn, were willing to concede this demand because they reckoned that the overindebtedness of some states jeopardized the credit of all (Henning and Kessler 2012: 6-8).

An integral part of Hamilton's plan was the foundation of the First Bank of the United States, given a 20-year charter in 1791 (McNamara 2003: 10). Like its model, the Bank of England, it was a privately owned proto-central bank. It issued the US dollar which was, however, not a national currency but only legal tender for fiscal purposes, that is for payments by and to the Treasury. A standard means of payment at the time were bank notes: states had got around the constitutional prohibition on creating money by chartering banks to issue money (Sylla et al 1987: 392). These bank notes had to be redeemable into a reserve medium that the banks could not produce *ad libitum*, so as to prevent the excessive issue of banknotes. Prudential regulation required banks to hold reserve assets in a specified fraction of their banknote issue. The stipulated reserves varied over time, but typically

consisted of specie, such as gold or silver, and legal tender: the dollars issued by the First Bank. The First Bank was meant to centralize the reserve holdings of state banks, allowing the financial system to hold fewer reserves in the aggregate without making any individual bank less safe. Given its size and the function of turning banknotes into specie (coins) if required, the First Bank soon assumed a much more important role than its power to issue legal tender for fiscal purposes would lead one to expect. By setting the terms on which it would exchange banknotes for specie, it could influence the state banks' credit supply (Giannini 2011: 67).

The Hamilton Plan was ingenious but also highly controversial. Many resented the centralization of public debt management and banking in principle (McNamara 2003: 11). There was vocal opposition from agrarian states in particular, even when they themselves got debt relief, because they saw relief as disproportionately benefitting financial interests in urban areas and abroad (Ferguson 1962: 457-459). Handsome profits were made by speculators who had bought some of the wartime junk bonds for next to nothing (Trescott 1955: 131). Moreover, the proto-central bank restricted the supply of credit in order to establish a stable and creditworthy union, but this was seen in many states as holding back their growth.

In the long run, the restricted supply of credit proved destructive for Hamilton's reforms. The number of state banks was expanding rapidly. Governments founded or licensed ever more state chartered banks, giving them the profitable privilege of note issue and in return taxing their capital or holding income-yielding shares in them. At least one-fifth and in most states a third of ordinary revenue came from these state-chartered banks (Sylla et al 1987: 400). However, the fractional reserve system drove them into using the First Bank which in turn could restrict their expansion by controlling the creation of specie/ coinage. Thus, a powerful constituency against the First Bank formed within the state bank system which prevented the renewal of its charter in 1811 (Giannini 2011: 68).

The Anglo-American War of 1812 finally undid much of Hamilton's attempt at restoring the creditworthiness of the public sector. Federal and state governments had to resort to issuing excessive debt again, at deep discounts which made financing the war effort a vast expense (Hall and Sargent 2014: 156-158). A Second Bank of the US was founded to deal with the financial mayhem. It exchanged the inflated banknote issue for specie, writing down debt in the process; as before, it issued a legal tender for fiscal purposes (Broz 1998: 239). Its twenty year charter (1816-1836) coincided with the "era of internal improvement" discussed in the last section. The Second Bank under President Biddle financed some of this infrastructure, thus acting as a development bank, not least to build constituencies in the states.

But this proto-central bank also tried to rein in credit expansion with a view to external stability: whenever the dollar exchange rate fell, state banks were requested to convert their banknotes, thus contracting credit and generating demand for the dollar. This quest for stability put President Biddle at loggerheads with President Andrew Jackson, known still today as the incarnation of populist conservatism. The President challenged the Bank's policies as an exercise of federal power, and rallied the states behind him in a "Bank War" that the central bank was bound to lose (Giannini 2011: 68-71). The charter of the Second Bank was not renewed.

The experiment of a fiscal union without a central bank was backed by those who favored devolution of powers and elastic credit (Helleiner 2003: 123-139; Frieden 2016: 20). But free entry and large-scale chartering of banks made the expanding union very crisis-prone. Some states sought

their own remedies and introduced obligatory insurance for bank liabilities, New York being the front runner in 1829 (Moss and Brennan 2001: 148-151). This safety fund system, with some variations introduced in six states, insured mostly the bank note issue but also deposits, and combined therefore lender of last resort and deposit guarantee functions (FDIC 1998: 3-12). Each fund was paid for by contributions from banks but the state guaranteed the bond issue to set up the fund. Insurance was the pretext for closer supervision, notably that banks had to hold specified assets as loss-absorbing capital. This insurance system worked reasonably well until the crisis of the 1840s; in such a situation, a state-funded deposit guarantee became quickly overwhelmed.

The monetary union came finally about when the political union had ceased to exist, driven apart by the question of slavery. In 1861, seven Southern states responded to the election of the abolitionist President Lincoln by seceding, with four more joining the Confederacy soon afterwards. The Northern states and the President refused to acknowledge a secession that was in contempt of a democratic election. The ensuing civil war lasted until 1865. It was during wartime that the core of a monetary and banking union was re-created.

The core was the National Banking Act of 1863 (Bordo and Wheelock 2011: 5; McNamara 2003: 13), legislated by Congress without the representatives from the secessionist states. Its main purpose was the creation of a system of nationwide operating banks, parallel to the state banks. The Act installed an independent treasury as the sole issuer of national bank notes. As part of the Treasury, the Office of the Comptroller of the Currency was founded, both to supervise federally chartered (national) banks and “to replace the circulation of state notes with a single national currency” (Jickling and Murphy 2010: 15). National banks could issue notes only if these were fully backed by federal government securities; if banks were unable to redeem their notes into legal tender, these bonds would be sold and their proceeds used to acquire dollars. Not only did this “backing” create a larger and more diversified risk pool, the Treasury also guaranteed the notes in full, irrespective of the value of the bonds backing them. The note issues of state banks without a national charter, by contrast, were taxed at a prohibitive rate and fell out of use (FDIC 1998: 10-12).

The US dollar area thus began as a Northern monetary union; the national currency was imposed by the victors on the rest of the country when the war was won. In 1869, this was challenged in the Supreme Court, which initially declared the measure unconstitutional but soon reversed itself (with the aid of the appointment of two new justices) and affirmed “that the federal government was empowered to make a paper fiduciary currency a legal tender.” (Hall and Sargent 2014: 149) The divisive political symbolism of the common currency and the underlying economic conflict resurfaced when, after bitter discussions, the United States rejoined the gold standard in 1879, restoring convertibility into gold at the pre-Civil War parity (Broz 1997: 60-61). The hope was that this would ensure price and exchange rate stability. Yet the regime change gave rise to a “free silver” movement campaigning for a bimetallic standard so as to ease credit conditions and counter the deflationary tendency imposed by the gold standard (Frieden 2015: 68-77). Once again, this pitched the mainly agrarian states in the South against the more urbanized and industrialized states of the Northeast. Fights over the monetary regime “were the defining feature of national politics from the 1870s to 1896” (Broz 1997: 61; Frieden 2015: 49-50). This ended in 1896 when William Bryant, the leader of the movement supporting a bimetallic standard, was defeated in the presidential election.

Periodic financial havoc eventually eroded the opposition to a central bank. Between the end of the Civil War and the beginning of the Great Depression in 1929, the US experienced a national banking

crisis in 1873, 1884, 1890, 1893, 1907 and 1914.⁸ The economic damage caused by the 1893 and the 1907 panics each amounted to an estimated 10% of real per capita income (Broz 1997: 166). The President and Congress remained lukewarm regarding the proposal of a Third Bank of the US, but a group of New York bankers set up a commission to advance the proposal, against opposition from bankers in Chicago, and managed to get a sympathetic hearing in relevant parliamentary committees (Bordo and Wheelock 2011: 8-13; Broz 1997: 140-159). The Federal Reserve Bank came into existence in 1913, owing its name to the animosities that the term “central bank” or “the Third Bank of the United States” would have aroused among devolutionists.

The newly established Fed was not yet operational when the panic of 1914 started; this was quelled by the Treasury. There were no provisions for how the Fed should respond to a banking panic, apparently because legislators believed that they had created a safe banking system (Bordo and Wheelock 2011: 15). The Fed focused on developing the discount market. The dollar rapidly became an internationally accepted currency, a success helped by the First World War which stimulated export markets and increased reliance on national banks (Broz 1998: 254-56). In domestic affairs, the Fed did not commend itself, but confirmed the worst expectations of the devolutionist camp. Between 1921 and 1929, an average of 600 banks failed per year, 10 times as many as in the years before (FDIC 1998: 20). Most of them were small rural banks that defaulted together with their clients, farmers, whose businesses were the victims of difficult world market conditions after the war and unusual droughts (White 2015: 10). The Federal Reserve Board remained complacent, attributing the failure of these provincial banks to bad management even as bank runs spread. When the Great Depression finally erupted in systemic financial collapse, it notoriously failed to provide the liquidity that domestic banks desperately needed (Friedman and Schwartz 1963: 357-359). The lender of last resort was fiscal, which continued financial instability until the post-World War II era. It stands to reason that financial repression helped as well (Reinhart and Sbrancia 2011).

4 Fiscal discipline, stabilisation and redistribution

The EA is a union of mostly mature welfare states. Governments are expected to provide comparatively robust safety nets to their citizens and to stabilize the economy for business. This makes for inherently soft budget constraints, especially when local levels help finance national public goods (Rodden 2006: 65). Monetary union was expected to reduce fiscal discipline further because deeper and more integrated financial markets would reduce the cost of financing government debt; hence, the perceived need for fiscal surveillance. There was indeed a distinct lack of market discipline on public finances although it is worth distinguishing two patterns: capital flows from Northern Europe to Southern Europe sustained high public and current account deficits in Greece and Portugal, and they fed housing booms and fiscal *surpluses* in Ireland and Spain. Once the crisis hit, the socialization of private debt materialized as liabilities of government and international accounting standards made this very transparent.⁹ Market mechanisms – rising interest rate costs and a depressed economy – added rapidly more debt. The Independent Evaluation Office of the IMF criticized the Fund for missing the highly adverse effects of the recession and pro-cyclical fiscal consolidation (‘austerity’) on growth and the ensuing debt dynamic (IEO 2016: para’s 65-68).

⁸ I am grateful to Andrew Walter (University of Melbourne) for making his database on US banking crises available to me. See also Chwioroth and Walter (2013).

⁹ Mabbett and Schelkle (2016) go through concrete examples of how the fiscal accounting rules treat bank rescue packages and the public sector in a recession.

Moreover, EU fiscal surveillance does little to dispel the suspicion that rising debt is always a sign of governments not trying hard enough (Mabbett and Schelkle 2016: 131-136).

How has the US federation evaded this trap of a self-created fiscal illusion of the financial crisis? After all, federal risk pooling excludes state debt, established in the early 1840s (see section 2). The federal government refused to assume failing state bonds, after it had done so twice with no lasting signs of gratitude from the states. The resolve of the center was helped by the fact that “the vast majority of creditors were foreigners” (Rodden 2006: 63). While Hamilton saw the assumption of state debt by the federal government as the ‘cement’ of political union, it was not used on the construction site of the US federation. For decades afterwards, the exercise of the no bail-out norm came at the price of financial panic, with feedback between bank default and a collapse of state finances.

Once modern central banking and the FDIC were in place to bail out the financial system, the federal budget could focus on income stabilization. Twenty years after the legislation for it had been passed, an income tax was finally implemented in the Great Depression. The legislation in 1894 was a triumph for the Progressive movement, which had lobbied the Democratic Party for a redistributive tax to replace tariffs (Steinmo 1993: 69-77). But the law was ruled unconstitutional by the Supreme Court and could come into effect only once the 16th Amendment allowed the federal government to levy direct taxes that were not apportioned among the states (Sbragia 2008: 251). This allowed not only redistribution from rich to poor individuals but also redistribution among states. The first income tax levied a 1% tax on incomes above \$3,000 and 6% on income over \$20,000, both catching only a small minority of rich citizens. In the first World War, the top rate rose in quick steps to 77%. The war effort justified these extraordinarily progressive rates (Scheve and Stasavage 2015). But overt redistribution also immediately engendered lobbying for exemptions, and the revenue from income taxes remained low. Only towards the later stages of the Second World War did the Roosevelt administration succeed in broadening the tax base and introducing modern income and corporation taxes that were, again, surprisingly progressive if low in volume (Steinmo 1993: 101-102). This laid the foundation for fiscal federalism; until then, “federal funds bulked large .. [only] .. [to] particular states at particular times” (Trescott 1955: 245).

Fiscal policy in the US is still far from a complete and effective insurance mechanism. The negative effect of states on stabilisation is well documented for the US, most recently by Follette et al (2008) and Svec and Kondo (2012). They find that state and local budgets are “modestly procyclical”. Balanced budget rules play a role in forcing state authorities to reducing expenditure in a recession, and they do not resist the temptation to expand in a boom. But since these rules have to be obeyed in most states with respect to budget forecasts, not actual data, subnational governments have some leeway and can engage in limited countercyclical measures without projecting imbalances. Many state governments also have rainy day funds they can run down in bad times and fill up in good times. But neither fiscal technique seems to be used sufficiently to prevent the pro-cyclicality of subnational budgets.

The widespread adoption of pro-cyclical discretionary measures to balance state budgets can be inferred from the study of Dolls et al (2010: 31-32). Their estimates for the contribution of states to automatic stabilization in the US suggest that state income taxes could compensate about 5% of the 32% of an income shock and contribute 4% to the 34% compensation of an unemployment shock, but these in-built contributions do not materialize because states neutralize them under the pretext

of balanced-budget rules. The comparable figures for the EA are 38.5% of an income shock absorbed on average and 48.5% of an unemployment shock. Automatic stabilizing capacities vary enormously between member states, however.¹⁰

In the US, the debt of states is bound to emerge on the federal government's books, given that state legislatures enforce balanced budget rules with authority. If there is a shortfall in severe recessions, the federal administration initiates discretionary stimulus programmes, such as a top-up of unemployment insurance, and operates an income tax system that is highly geared (progressive) for automatic stabilisation. In other words, the US has a fiscal illusion of its own, namely that it is always the government in Washington DC that is fiscally lavish. This gives rise to political phenomena like the Tea Party movement but this has so far not led to a complete obstruction of counter-cyclical stabilisation.

Conclusion: Hamilton's Paradox revisited

The EA crisis has arguably revealed a stark tradeoff. Weak or non-existent fiscal capacity at the federal (EA) level, makes a monetary union susceptible to negative feedback loops between financial market panic and weak public finances (De Grauwe 2011). Strong fiscal capacities at the federal level entail an implicit bailout guarantee that has a weakening of market discipline in its wake (Rodden 2006: 93-94): credit ratings are too optimistic and debt accumulation of member states is too cheap. The institutions that have evolved in each monetary union put the US dollar area and the euro area at different locations on this tradeoff: the US has stronger central capacity to avoid catastrophic dynamics in systemic crises, the EA with stronger collective stabilising capacities in normal times. The avoidance of diabolic loops in severe crisis times comes at the cost of stabilisation in normal times and vice versa. But it is not clear which welfare-economic metric could tell policymakers which location to choose if it can be chosen at all.

The US has been historically more susceptible to financial instability because it built a fiscal union before a monetary union.¹¹ While the Hamilton Plan foresaw simultaneously a common debt instrument and a central bank, his plan did not survive politically. A fiscal lender of last resort is less effective at short-term stabilisation. When a monetary union finally emerged, between 1863 (greenback as first national currency) and 1913 (Federal Reserve System), the no-bailout clause was firmly established. These hard budget constraints for member states can be implemented because of potentially sizeable fiscal capacity at the federal level. But this capacity has still left a moral hazard problem unresolved, which is that of actors in financial markets.

Turning back to lessons for the EA, this paper has shown that banking crises are solved by the Federal Reserve and the supervisor with resolution authority, the FDIC, rather than federal transfers as the OCA proponents of a European fiscal union claim. The stock of Treasury bonds rather than fiscal flows provide a back-up; this insight of Hamilton has stood the test of time, even though he envisaged this to work more directly. The FDIC is invested in Treasury bonds that can be liquidated at low cost when needed. Treasury bonds also provide indemnification to the Federal Reserve when

¹⁰ Even among Northern and Western European members, unemployment schemes absorb between 25% and 60% of a shock to employment; this absorption rate goes down to under 10% for Estonia, Greece, Italy and Slovenia (Dolls et al 2016: 13).

¹¹ This was the case before the Great Depression (Broz #) and after financial liberalisation; between 1970 and 2010, the US spent more quarters in a banking crisis than any European country (Babecký et al 2012: fig.2).

it buys dubious assets in the course of lending of last resort operations. This feature of US risk pooling points to an alternative to a federal budget for the EA: a monetary union that wants to keep its stabilising properties, built- into the welfare states of its members, could establish more targeted re-insurance mechanism for catastrophic risks rather than go for the scatter-gun of an EU budget.¹²

This lesson also entails an important qualification of *Hamilton's Paradox*: The original paradox seems to state that the more devolved spending powers are in a fiscal federation, the more state governments will rely on federal bailout capacity. We see this paradox in financial-fiscal-monetary unions as well, where state fiscal authorities have banking systems underpinned by a common monetary standard. The most readily available central capacities will be relied upon when disaster strikes. In the US, this tends to involve the federal budget, if primarily in the sense of providing Treasury bonds to back up the FDIC and the Federal Reserve. In the EA, the only available central capacity is the ECB with its deep pockets: it was pushed into quasi-fiscal interventions by the inaction of exactly those member states that insisted on the ECB's independence and a narrow price stability mandate (Schelkle 2012). This reliance on central bailout capacity can be called a dynamic commitment problem triggered by moral hazard of the members. But a wider framing that includes financial integration shows that the commitment problem is a consequence of externalities of financial instability. It can turn any state crisis, whether caused by excessive risk taking or not, into a systemic crisis of the union. Hence, a full account of fiscal debt problems that states in a federation encounter must include the role of the financial sector and central banking. Ultimately, this is because fiscal crises are almost always fiscal-financial crises, often starting with a financial crash as Rodden (2006: 58) explicitly mentions but does not consider for further analysis. Babecký et al (2012) find, looking at banking, sovereign and current account crises in rich developed economies between 1970 and 2010, that banking crisis typically lead the other two but not vice versa. A banking crisis is the threat that the fortunate in a monetary union face (IMF 2013) when they renege on their side of a commitment to risk sharing through a common currency. One can see a kind of poetic justice in this extension of *Hamilton's Paradox*.

This leads to a theoretical point. All existing theories of fiscal federalism have the problem that they are confined to *fiscal* federalism. Rodden (2006) goes beyond the Keynesian income flow analysis by Musgrave (1959) and notices that debt finance involves financial markets and their perceptions of implicit guarantees by the centre. But in the tradition of fiscal federalism, he sees the problem of excessive debt only on the demand side of subnational units, not on the supply side of finance. Yet, the lessons from the EA crisis applied to US history provide ample evidence that financial markets were typically the source and rarely the pure victims of fiscal recklessness at lower levels of government. The commitment to no-bailout has a lack of commitment to mutual insurance as its flip side. This comes at a cost, in the EA and in the US before the Great Depression in the guise of letting a containable crisis escalate and engulf the federation/ union as a whole. In this view, the limitations of risk sharing can be the cause for the lingering EA crisis as much as any excesses.

US monetary and financial history is arguably counter-evidence, not supporting evidence, for the idea that state-building will eventually lay to rest fragmentation and factionalism, lead to political identity and convergence on centralized standards (McNamara 2003: 6-8). Underlying conflicts

¹² Just to give an example: a banking license to the European Stability Mechanism, possibly to be activated under exceptional circumstances only, is such a targeted re-insurance mechanism. This has been discussed but was not pursued because this reform would require a Treaty change.

remain intense. So yes, the sequencing of financial-fiscal and monetary integration in the US differed from that of the EA but it is not clear from the evidence that this makes much of a difference in terms of political identification with the union. EA member states engage continuously in creating a common legal sphere, in coordination of their policies and in comparing their achievements and failures in socio-economic policies. This is different from patriotism and nationalism from the bottom-up. But it constitutes political integration, too.

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