Invesco

The Survivability of the Euro

Part II: Analysis, Analogies and Antecedents

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The Future of Europe series

Invesco's Future of Europe series aims to address some of the most pressing questions surrounding the euro, the eurozone (EZ) and the European Union (EU). Grounded in economic and political reality and drawing on both theory and experience, it seeks to provide investors with an informed and practical framework for assessment and decision-making.

Co-authored by Jacek Rostowski, a former Deputy Prime Minister and Finance Minister of Poland, and Arnab Das, a Global Market Strategist and member of Invesco's Global Thought Leadership team, the series examines Europe's troubled past, uncertain present and possible future. The second paper in the series, The Survivability of the Euro, comprises three parts, of which this is the second. Naturally, the planned development of the series as a whole is subject to the evolution of European affairs:

- A Map for the Future of the Euro: Navigating Political Conflicts
- The Survivability of the Euro, Part I: Reform, Relevance and Robustness
  The Survivability of the Euro, Part II: Analysis, Analogies and Antecedents
  The Survivability of the Euro, Part III: The Architecture of EMU
- The Internal Politics of the EU: Protest, Populism and "Peak Europe"
- Geopolitics: Economic Giants, Political Pygmies and the Scope for a "Money for Muscle" Deal in the EU
- From Brexit to the Balkans: Peripheral Perspectives on the Eurozone

The euro, the EZ and the EU arguably represent a unique experiment in the annals of economics and politics. The Future of Europe series is intended to shed light on the challenges and opportunities presented by this unprecedented and ever-contentious effort to achieve integration across a continent whose history has been one of almost continuous political competition and conflict.

1. Executive summary

- In this second part of The Survivability of the Euro, Analysis, Analogies and Antecedents, we locate European Economic and Monetary Union (EMU) within the theory, history and current context of monetary unions.

- Our theoretical "straw man" is the "Optimal Currency Area" (OCA) – the idea that regions become better off by joining a monetary union under circumstances that resemble the full political and economic union of a single state:

  Zero or very low barriers to the mobility of goods, services, capital and labour (including price and wage flexibility) – in line with the "Four Freedoms" of the European Union single market – and inter-regional budgetary risk-sharing mechanisms to help manage the impact of economic shocks.

- We conceptualise the challenge of restructuring EMU by conceiving a "common currency matrix" along two dimensions:
  1. A currency continuum from a free float to fully monetary union
  2. An institutional spectrum from full autonomy to full integration

  We locate the eurozone (EZ) within this matrix as a full monetary union but near the middle of the range from national autonomy to fiscal and political union.

- Two sets of historical experience – the early United States and many past efforts at European monetary integration – serve as historical benchmarks.
  - In response to regional fiscal and financial crises in 1787, with striking parallels to the EZ sovereign debt crisis of 2010-2012, the United States metamorphosed from a confederation (i.e. voluntary pooling of sovereignty) to a federation with a strong union government. Member states' debts were federalised into what we today call US Treasuries.
  - Past efforts at European monetary integration have come and gone with alarming frequency over the sweep of history. They corroborate the US experience: economic and political shocks tend to lead to the break-up of monetary unions among sovereign states more frequently than of politically and economically more integrated monetary unions.

- Based on our reading of contemporary and historical experience, we believe that the OCA construct is excessively "economistic", with inadequate emphasis on political economy. We believe that few if any monetary unions have been OCAs and that most require concerted economic reform and management to function – which themselves have required significant political will.

- We therefore believe that the theory and experience elsewhere and through time of monetary unions point to persistent doubts about the euro's survivability, offset by the high costs of exit, increasingly entrenched by economic and financial integration, amid challenges due to the inadequacy of risk-sharing mechanisms.

- Our review of theory and experience supports our main conclusion: the euro's likely survival amid continuing weaknesses in its design despite crisis-management fortifications. All of this points to continued diversity and variability in economic performance and financial risk premia across member states during the current, third decade of the euro, in stark contrast to the convergence of its first decade and the divergence of its second.

2. Introduction

In this second part of The Survivability of the Euro, which follows Part I: Reform, Relevance and Robustness and precedes Part III: The Architecture of EMU, we place the euro within the theory, history and current context of monetary unions.

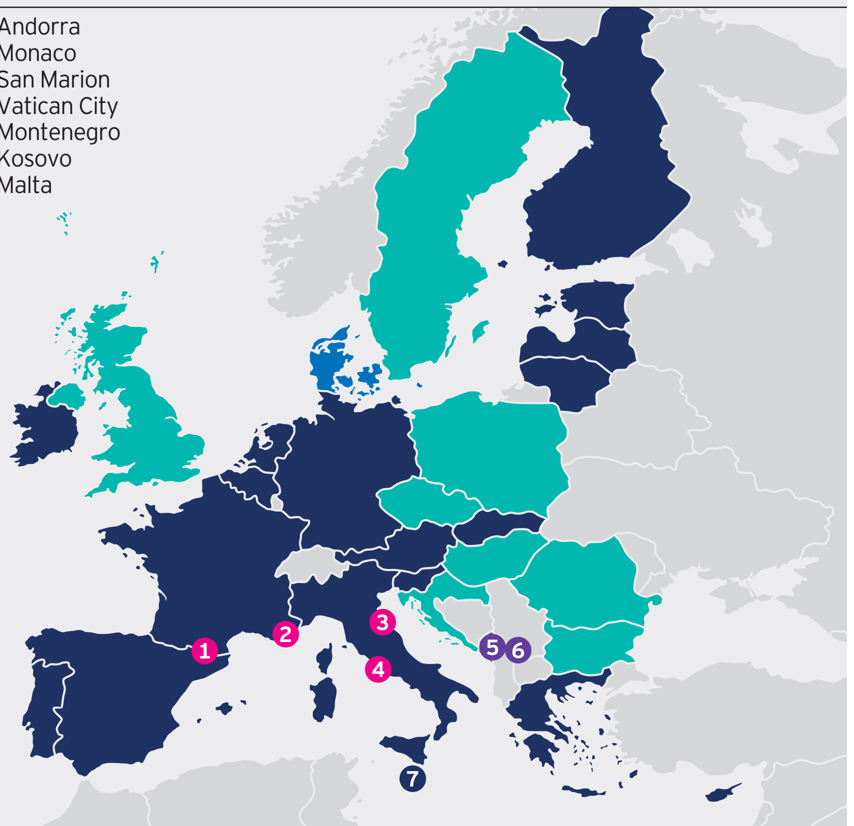
We start with our political-economy framework of a common currency matrix, within which we locate Economic and Monetary Union (EMU) and several other contemporary and historical exchange-rate arrangements in relation to institutional and political structures. We then turn to the theory of the optimal currency area (OCA) as a basis for what works and what tends not to work for monetary unions in general and the eurozone (EZ) in particular. We next consider the striking parallels between early US history and the EZ crisis and look back to earlier European experiments at monetary union. Finally, we present a brief history of Europe's quest for EMU.

As the European Parliament acknowledges, the EZ is not an OCA. Moreover, it may never become one. It also lacks many of the key features of other long-lasting currency unions, such as automatic fiscal transfers. On balance, then, as few commentators would dispute, it is in many ways suboptimal. We therefore endeavour to address a critical question that inevitably arises: what do theory and experience have to offer about whether and how the euro can survive?

Figure 1
The Eurozone, European Union, and other countries using the euro

The Eurozone
Current Eurozone
ERM II (pre-member)
Non-euro EU countries

Non-EU countries using euro
With EU approval
Without approval



Source: www.polgeonow.com, as at 30 June 2016.

3. Mapping monetary and political union: a currency continuum and institutional spectrum

A truly successful monetary union – one that survives the tests of time, political change and economic shocks – requires far more than simply a single currency as legal tender, as a unit of account or as a store of value. It even requires far more than a single monetary authority. The same is true even when economies use currencies that are in effect proxies for another currency, as in a peg, a currency board or a gold standard. Furthermore, the more deeply intertwined the home currency and the base currency, the more monetary conditions at home are driven by the circumstances or policies of the base currency. This idea is central to our assessment of the viability of the euro.

Therein lies the crucial link between a shared money and shared policy – and, by extension, politics. It is also central to the ongoing saga of the euro, as Milton Friedman presaged more than 20 years ago when he suggested: "Political unity can pave the way for monetary unity. Monetary unity imposed under unfavourable conditions will prove a barrier to the achievement of political unity."

These two concepts – monetary union and political union – are the poles of our currency continuum and institutional spectrum, which we represent as two dimensions of a monetary and policy matrix. As shown below, we deliberately include both contemporary and historical arrangements. Monetary union – that is, a "common currency" – resides at the far right of our continuum, while at the origin on the far left sits a free float. Total political union – or simply a "single state" – occupies the top of our institutional spectrum, with full national sovereignty at the bottom. Stretching between them is the path from the greater flexibility of independent currencies towards ever-deeper union.

Our currency continuum is arranged from left to right in order of rising entrenchment and greater difficulty of exit. Similarly, our institutional spectrum is arranged in ascending order of central or federal authority over regional constituents, starting with both fiscal and structural autonomy at the origin.

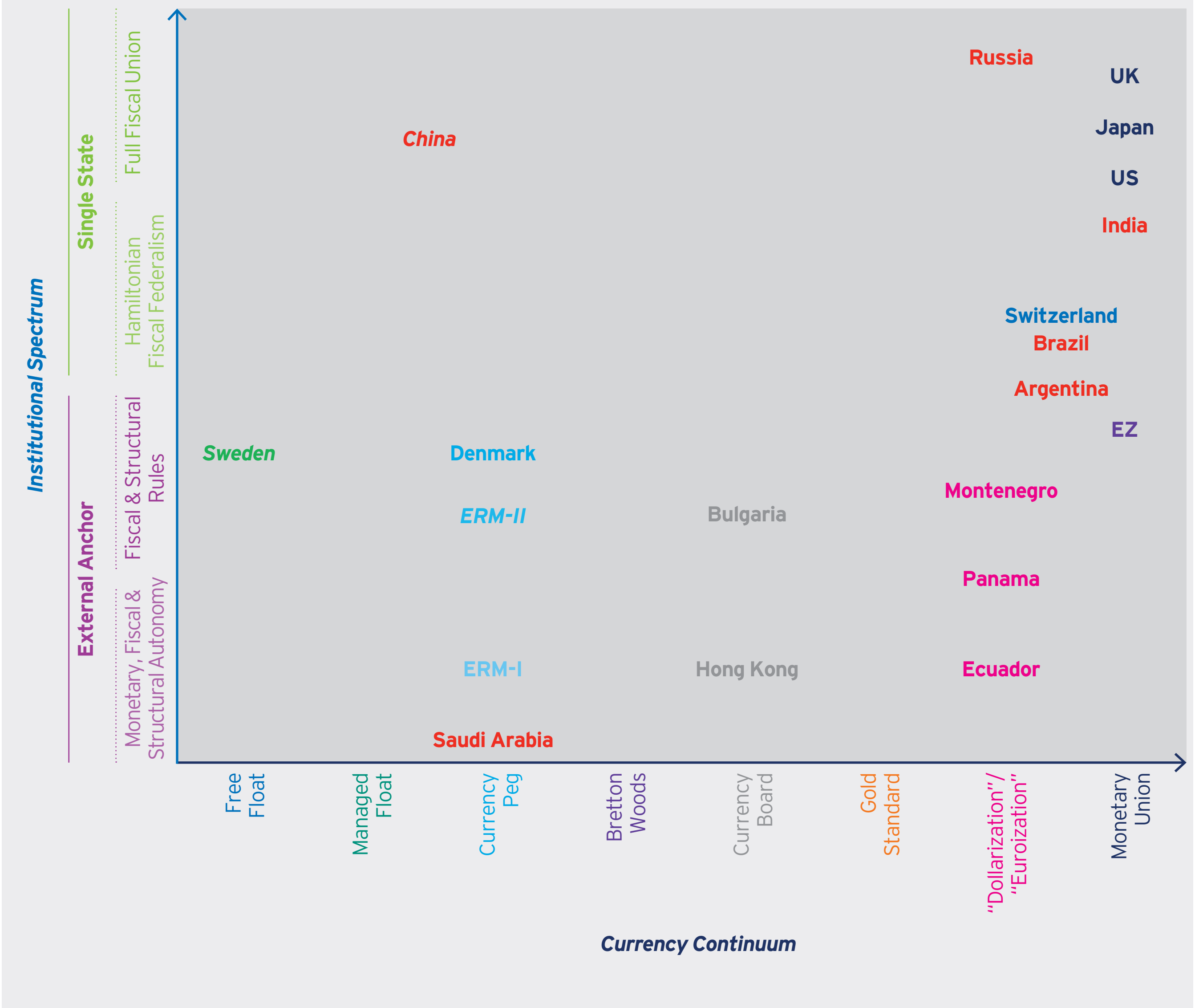
We locate different economies within the currency continuum based on their official exchange-rate arrangements; and on the institutional spectrum based on our assessment of exchange-rate flexibility with respect to the base or reference currency, whether a foreign currency or a shared, national currency.

Such flexibility may be financial (e.g. Saudi Arabia, whose foreign assets and capacity to generate foreign exchange have conferred room to maintain a fixed exchange rate to the dollar while running large domestic imbalances and structural economic rigidities that other fixed exchange rate countries cannot sustain) or constrained by rules or political arrangements within the monetary/political union in question (e.g. China, the US or Russia, all of which limit the borrowing capacity of constituents). Some unions are lower down on the vertical axis because constituents have demonstrated considerable capacity to borrow and spend (e.g. India, Brazil, Argentina and the EZ itself).[1]

Friedman argued that, rather than adopting a common currency and relying on it to underpin political union in due course, it may be safer to establish political union as the foundation of a monetary union. As we shall see, this is a theme that runs throughout US political, constitutional, economic and financial history. The reality, however, is that many journeys go from the lower left towards the right – although not all go up. The euro in some ways turns out to be a project for which hopes – even, arguably, the imperative – of an eventual transition from a "common currency" confederation towards the ever-deeper union represented by a "single state" quickly give way to the economic and political equivalent of a map of the London Underground, complete with twists, turns and dead ends.[2]

Where does the euro stand on our continuum today? Probably not far from the midpoint. It is still edging – some might say stumbling – towards "single state"; but, as we remarked in The Survivability of the Euro, Part I: Reform, Relevance and Robustness, it is moving neither very quickly nor very far. Moreover, its trajectory is not linear: several competing paths have emerged, and these are developing at different speeds and even heading in different directions. We endeavour to unscramble this tangled web in the following chapters.

Figure 2
A matrix of monetary and political union: Currency Arrangements vs. Institutional Structure



Dark blue	Represents autonomous single-state monetary unions, which in some cases are fiscal federations like the US and in other cases are closer to unitary (e.g. the UK).
Bright red	Denotes single-state monetary unions that feature major elements of fiscal federalism but whose monetary autonomy is significantly constrained by exposure to the dollar. China is a special case, in transition from a dollar peg to a (managed) float with capital controls.
Light blue	Represents a currency peg.
Purple	Denotes monetary unions or discretionary fixed exchange rate arrangements where monetary sovereignty has been restricted or pooled with other countries.

Blue	Denotes fiscal "quasi-federalism" – small federal budgets relative to constituents.[3]
Green	Represents free floats that are formally non-permanent arrangements.
Grey	Represents a credible monetary union with another state through a currency board.
Pink	Represents full dollarisation or euroisation (i.e., the use of a foreign currency).
Italics	Represent a transitional arrangement from a current to a longer-term currency status.

The upper half of the y-axis pertains to currency arrangements with domestic orientation and so conceptually greater monetary sovereignty; the lower half to those with external anchors.

Colours along the axes represent categories of currency and institutional arrangements.

Source: Invesco.

4. The optimal currency area conundrum

4.1. A chicken-and-egg problem

Many critics have attributed the EZ's travails to the idea that EMU is not what is known as an optimal currency area (OCA). In the wake of the global financial crisis and the European sovereign debt crisis, both of which exposed EMU's design flaws, even a European Parliament report noted: "The euro area is far from being an optimal currency area."

Canadian economist Robert Mundell made many seminal contributions to growth theory and to international and monetary economics. He formulated the OCA theory in the early 1960s, proposing that a region in which a shared currency serves to maximise per-capita output should have a number of fundamental attributes – foremost among them labour mobility, price and wage flexibility, capital mobility, a cross-region risk-sharing system and similar business cycles among its constituents.

Mundell's conceptual requirements for an OCA served as the basis for several of the so-called "Maastricht criteria" for EZ accession. The OCA concept and its characteristics are why he is considered an intellectual father of the euro, in the wake of whose creation he was awarded a Nobel Prize.

We would agree that the requirements that he outlined should help cement the constituents of a monetary union. However, we do not believe that all of these elements of the OCA hypothesis are strictly essential for either the establishment or the survival of a monetary union, even if they are helpful.

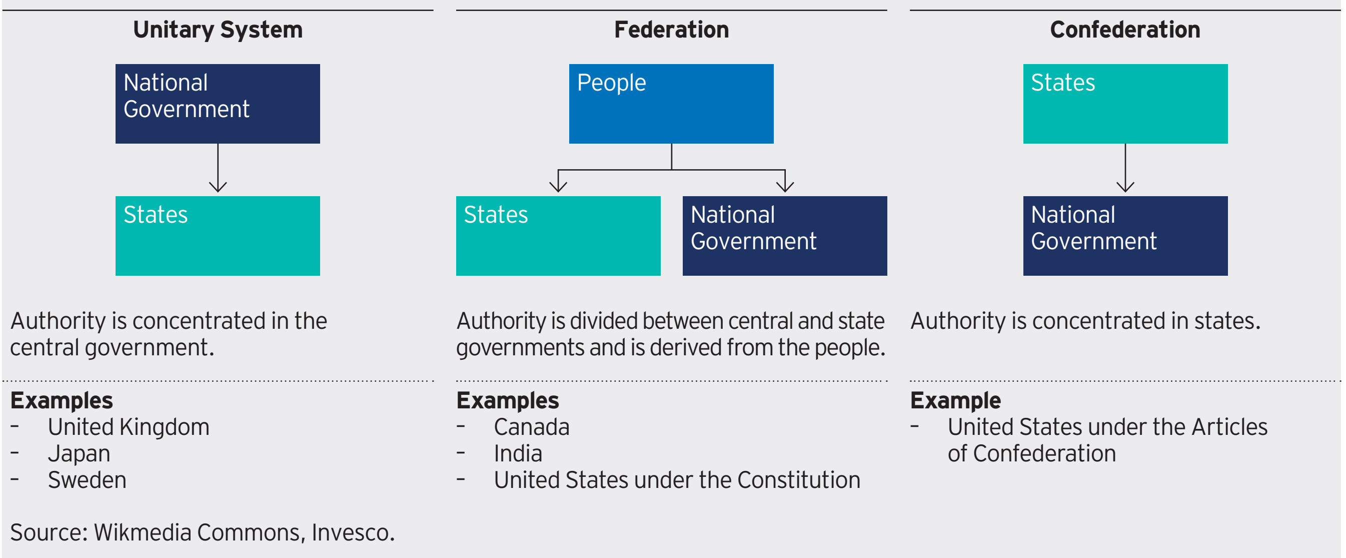
For instance, in the absence of an integrated single market or business-cycle and trend-growth convergence, price and wage flexibility should be enough, together with a cross-region risk-sharing system, to tide a single currency over most destabilising asymmetric shocks. This has been the case in many currency unions that have experienced regional shocks, shifts or trends in growth, employment or per-capita income that have diverged significantly across constituent regions of the union.

Conversely, over time a monetary union/common currency area with a single monetary authority should see constituent regional economies converge towards a common business cycle, as long as a fully-fledged single market in goods, services, labour and capital prevails.

4.2. Convergence, divergence and EMU's missing link

The logic linking a shared business cycle with monetary union is clear and intuitive – whether through its presence at the outset, as a basis for establishing a monetary union, or as the outcome of a common currency or a shared base currency (as in the case of dollarisation or euroisation). If regional business cycles start off aligned and remain aligned then they should move largely in tandem with the business cycle of the monetary union as a whole, with demand management performed in the usual way – mainly by a common central bank. If the currency is shared or tightly pegged then monetary and financial conditions would line up with those in the base-currency country.

Figure 3
The EU and EZ have elements of different political systems



Source: Wikmedia Commons, Invesco.

If business cycles are not aligned or become de-synchronised due to regional or sectoral "asymmetric" shocks then the presence of a fully-fledged single market should induce realignment. Capital and labour would move from regions or sectors that remain relatively capital-rich or labour-constrained to those where asset values – including land, physical, financial or human capital – have fallen because of the shock. Inter-regional or inter-sectoral trade and investment would thereby ensure economic cohesion and a high degree of convergence.

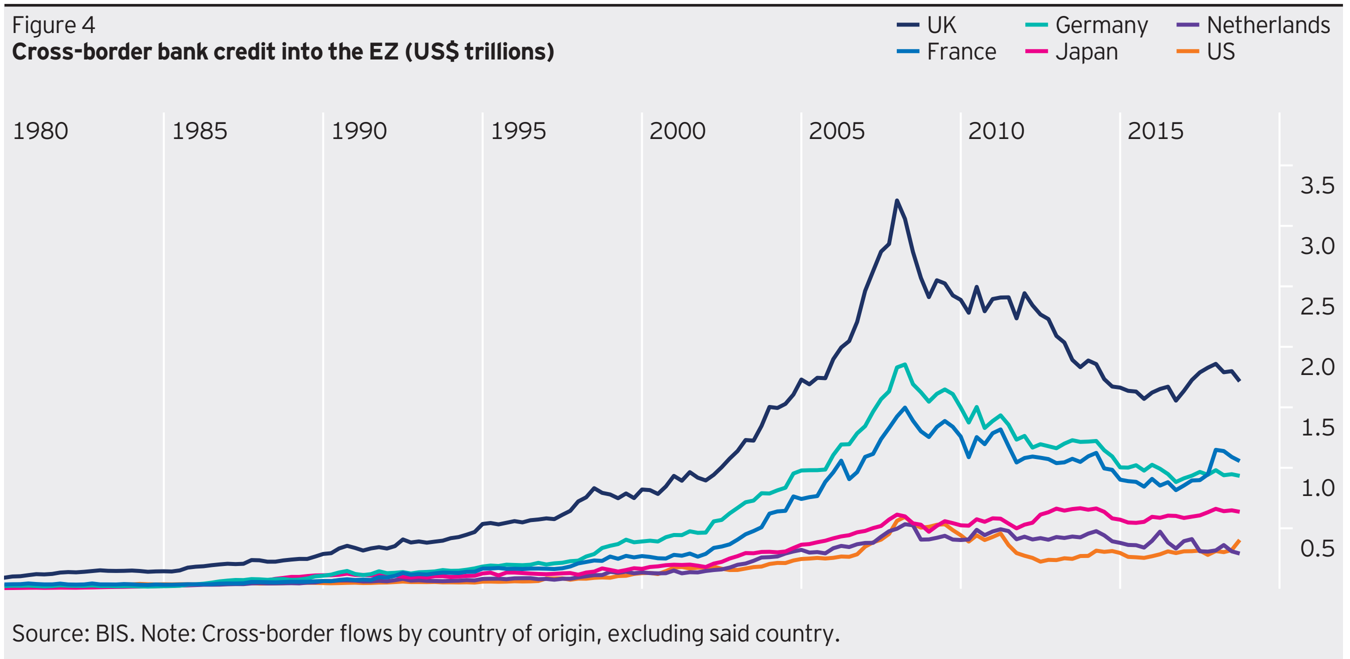
None of this is to say that the constituents of a monetary union do not, cannot or should not experience business-cycle divergences – or even sustained divergences in trend growth. These might occur because of demographic or productivity differentials (changes in labour and total factor productivity and endowments of labour and capital are the essential ingredients of growth). Many monetary unions – single-state, multinational, relatively small or continental – have survived for centuries despite cyclical and structural divergences.

For example, the UK – which has been a unitary state from a fiscal perspective, though it is nowadays increasingly federal from both political and fiscal points of view – has been composed of four nations and has even experienced partial exits from its economic and monetary union (by the Republic of Ireland when it adopted the euro). It has also witnessed a multitude of asymmetric regional and sectoral shocks that have been both cyclical and structural, such as the agricultural and industrial revolutions of the 18th and 19th centuries and the successive rise and fall of industries that have been crucial to growth, employment, trade and prosperity.

Much the same is true of the US, which is a federal fiscal, monetary and economic union. It is also true of Japan, which is a unitary, single nation across an archipelago, with elements of fiscal federalism.

This all said, we acknowledge that EMU left out what has proven to be a vital feature of most longstanding monetary unions: a cross-regional risk-sharing mechanism. As we discuss in the following chapter, Alexander Hamilton's introduction of such a mechanism stabilised the newborn and crisis-torn US. EMU has in effect gone in the other direction, with the EZ's founding Maastricht Treaty actually banning such European Union (EU) or mutual support (article 104b, paragraph 1) and the 1997 Stability and Growth Pact and subsequent reinforcements making no provision for direct inter-state risk-sharing. Furthermore, with the onset of the 2008 global financial crisis, national business cycles, which had been converging since the signing of the Maastricht Treaty in 1993, began to diverge – in some cases sharply.

Figure 4
Cross-border bank credit into the EZ (US$ trillions)



Source: BIS. Note: Cross-border flows by country of origin, excluding said country.

4.3. Beyond the OCA

By no stretch of the imagination, then, does the EZ qualify as a fully-fledged OCA. Moreover, Mundell's formulation implies that self-regulation should suffice to bring the constituent parts of a monetary union into equilibrium with each other – if it is an OCA.

Yet the experience of most monetary unions that are widely thought to qualify as OCAs shows that this cannot be taken for granted in monetary unions that are economically complex and diverse, geographically large and therefore likely to experience asymmetric cyclical shocks or idiosyncratic structural trends as industries decline and rise. This begs the question of whether, applying Mundell's rules of thumb, the euro is doomed to failure and disintegration.

We think not. Even though we fully expect the euro's viability and the continued presence of some members to be questioned during future downturns or crises, we believe that various institutional innovations allow a non-OCA at least to survive and possibly even to prosper. This paper is based on precisely that assessment.

Challenges such as downturns and crises, in our view, demand coordinated monetary and fiscal policy. They also demand the institutional and political capacity to correctly identify, design, implement and sustain structural changes that improve resilience and drive recovery – a consideration at the heart of this paper.

In the final reckoning, there may never have been a monetary union that has genuinely met all the criteria of a full OCA. This alone offers significant hope for the euro. In the next chapter, by way of illustration, we consider perhaps the most successful monetary union of all – one that saw a number of states come together to pool economic and political sovereignty and which was forged in a crisis profoundly similar to the events experienced in the EZ from 2009 to 2012.

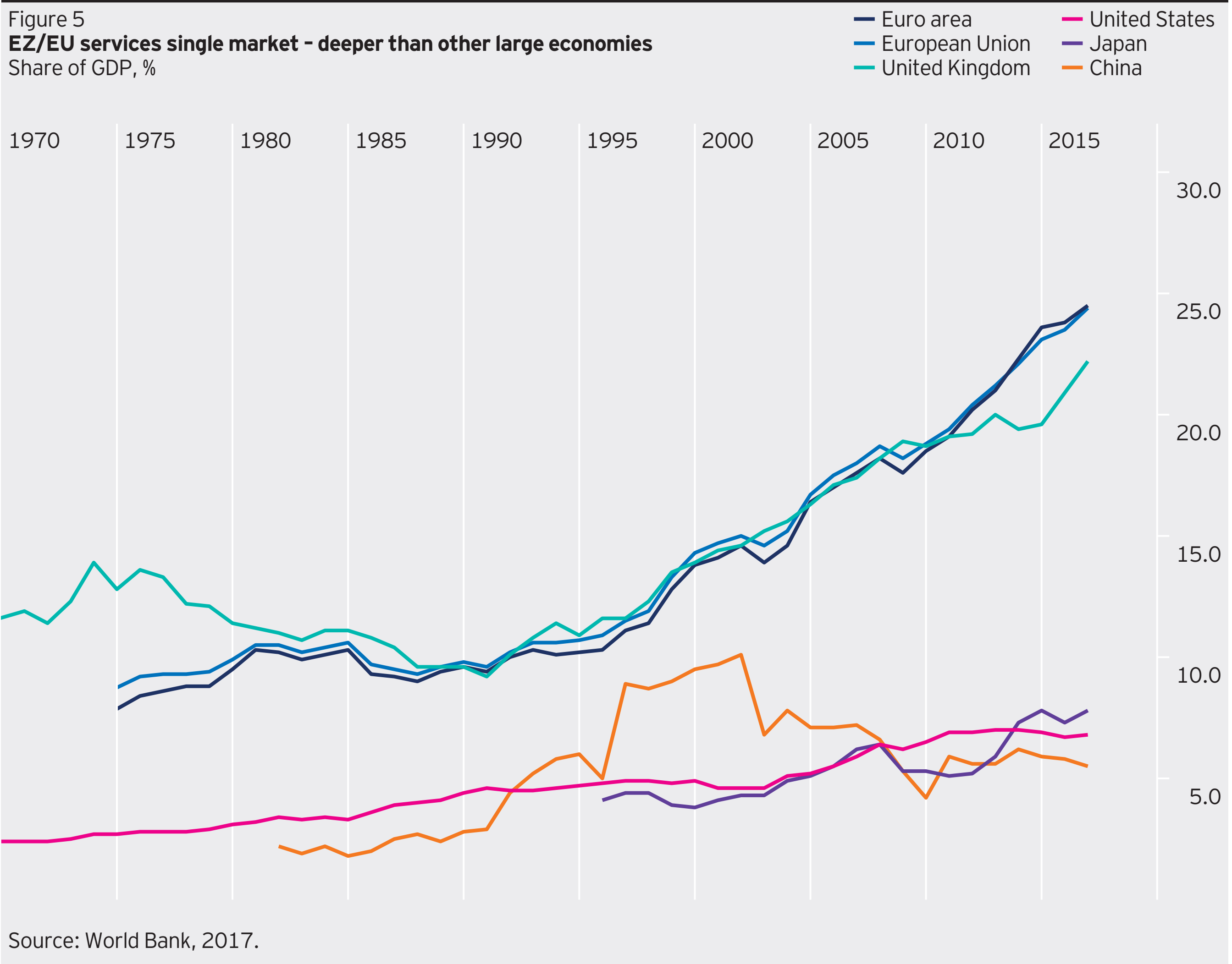


Figure 5
EZ/EU services single market – deeper than other large economies
Share of GDP, %

Source: World Bank, 2017.

5. The United States then, Europe now: Hamiltonian federalism and Jeffersonian democracy

5.1. Does history repeat or rhyme?

The US is a young country in the historical sweep of civilisations and nation-states, yet it is also among the longest-lasting states in the modern world. Because of the strength of its joint political and fiscal union, its size and complexity, its periodic enlargement with the accession of new states and its weight in the world economy, it is the most obvious example of a fully-fledged monetary union that has stood the test of time – which is why we choose to compare and contrast it with the EZ here.

Yet the US was not ever thus. It has nearly disintegrated because of economic and financial fractures that came to a head in two Civil Wars – the first not well known, in the late 1700s, and the second more familiar, in the mid-1800s.

In early 2012, at the height of the European sovereign debt crisis, Paul Volcker, a former chairman of the US Federal Reserve, remarked that the EZ was "at an Alexander Hamilton moment". Hamilton, a Founding Father and first Treasury Secretary, rescued the United States from its first financial crisis – one with striking parallels with the EZ crisis. In his 2011 Nobel lecture, United States Then, Europe Now, Thomas Sargent applied the financial logic of public debt dynamics to the political economy of Hamilton's federalisation of the excessive regional debt of the newborn United States and effectively offered up the American experience as a template for resolving the EZ crisis. Here we take a fresh look at what can be learned from US history and what might or might not be applicable to the EZ today.

5.2. The seminal US crises – not one but two Civil Wars

For the first decade of the new republic, 1776 to 1787, each of the 13 United States was sovereign. Each had its own legislature and governor. What few federal institutions there were lacked teeth, since there was no true political union. What amounted to the "First Republic" under the Articles of Confederation, the first Constitution, had no federal president. The confederation had a legislature, the Continental Congress, later, the Confederation Congress, which could legislate but could not tax, nor therefore spend; nor could it compel the 13 sovereign states to boost or cut spending or debt; nor, for that matter, could it otherwise bring them to heel. The US then was strikingly similar to the EZ now.

The EU has no fewer than five presidents – one each of the European Commission, the European Council, the Eurogroup, the European Parliament and the ECB. This, a cynic might say, is tantamount to having no president at all, for there is no particular desk where the buck – or, indeed, the euro – can stop, creating a power vacuum akin to that under the US Articles of Confederation. Like the hamstrung Continental Congress, EU institutions have much less power in practice than on paper in dealing with sovereign states.

The original United States also lacked a federal central bank – one area in which the EZ is far closer to a complete currency union – but back then there was no monopoly on money and no fiat money. There were different commercial issuers of dollar banknotes trading at various exchange rates to gold, which all reflected the credit risk of individual issuers. In effect, there was a monetary union based on gold.

In the absence of a unified monetary policy, the absence of a common fiscal policy in the new republic was all the more dangerous. It exposed the infant confederation to the vicissitudes of the markets and the availability of gold or credit. Easy financial conditions implied plentiful, cheap credit; tightening financial conditions would choke off public and private spending.

To its great cost, the state of Massachusetts was about to learn a harsh lesson. Not unlike Greece today, Massachusetts had overborrowed and overspent. The market realised that the state had become less creditworthy than its counterparts and far less so than Great Britain. Borrowing costs rose sharply. The market eventually closed to Massachusetts, precipitating contagion to other states, and soon the only source of credit became the Kingdom of France – historically a strong source of support for the new American republic via the Marquis de la Fayette.

With an eye on Canada, France spied an opportunity to outflank Britain in its former colony; but it had its own problems. It was just two years from its own revolution, its fiscal space curtailed by la Fayette's earlier support for US independence. Besides, the United States had no wish to surrender new sovereignties to a kingdom – even one other than Britain. In the absence of a sugar daddy of last resort, a troika, an International Monetary Fund (IMF) or a central bank, Massachusetts had no choice but to go cold turkey and curtail its spending – leading to a recession that eventually prompted Shays' Rebellion, also known as the First Civil War.

Hamilton, a soldier turned political philosopher and statesman, was the principal architect of change in this chaos, which bears many similarities to the challenges that confront the EZ today – not least the spread of a regional debt crisis. Current debates over "legacy problems", "burden-sharing", bailouts and moral hazard clearly echo the controversy that attended Hamilton's proposal that the federal government nationalise state debt.[4] Using reason and equations, Sargent has shown how and why Hamilton achieved his goals, of which we see three as crucial – among much else – to US survival and success:

1. Unity, via the Assumption Act of 1790: a new federal Treasury would fully assume state debt incurred in the "Glorious Cause" of the Revolutionary War, based on shared national purpose and origins.
2. Credibility, via repayment: the debt would be honoured in full at par, despite the ugly politics of windfalls for early vulture investors – many of them Hamilton's friends in New York City, the fledgling financial centre of the new republic – who had bought deeply discounted debt.
3. Creditworthiness, via revenue: specific import tariffs and sin taxes, initially on whiskey, would establish a small but federal revenue base and eventually enable budget balance and even surplus.

Hamilton's construct demonstrated decisively the full faith and credit of the United States, far superseding that of its fiscally challenged constituents. Hamilton clearly saw the constructive role that a strong federal centre could play in confronting and solving shared challenges, rendering the whole greater than the sum of its parts.

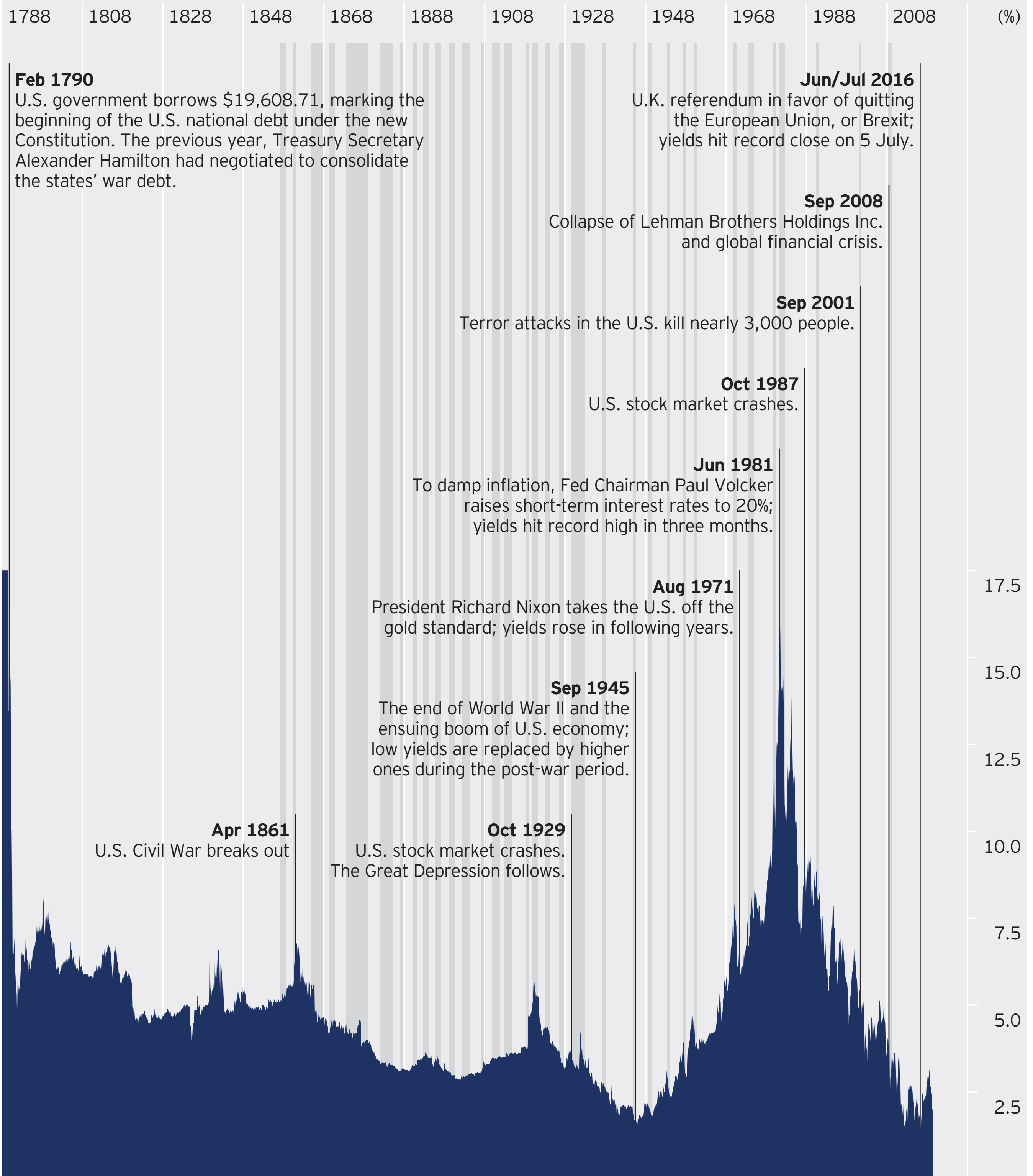
Not unlike the EZ case today, this was no easy feat. There was strong resistance in the rich southern states to assuming the heavy debts of northern states. The underlying political views of Hamilton and the federalists and the anti-federalists, led by Thomas Jefferson, were arguably just as irreconcilable as the opposing positions in the EZ now. Jefferson went so far as to endorse a periodic, epochal "Jubilee" bonfire of rules, debts and contracts to prevent the entrenchment of a tyrannical central power over local autonomy. Jefferson desired such a Jubilee at quarter-century intervals, lest Hamilton's permanent federal authority – to which state and local authorities were subordinate – led to monarchical, imperial or dictatorial fiat, even in a system with the trappings of democracy and constitutional and legal codes.

Unlike the EZ case two centuries later, compromise between the federalists and the anti-federalists saved the day. Hamilton made horse trades, exchanging his planned, prized northern capital in New York for a new city on a marsh in the south and conceding a constitutional separation of powers that balanced the power of centre and states in exchange for fiscal and political union. Jefferson contributed much to the new Constitution, but the Jubilee was left out. The Assumption Act of 1790 enabled the formation of US Treasury debt from state debt, and specific revenues were earmarked to finance both the legacy debt and the operations of the new federal government. The financial machinery was set in motion for a strong federal state that would come to manage the economy in the national interest, often balanced in tension with state and local governments.

Thereafter US federal governments did not bail out state or local debt, clearly distinguishing between debt incurred for national Glorious Causes and debt incurred for regional reasons. States encountered idiosyncratic debt crises throughout the 1800s and even defaulted, yet the US remained intact and continued to add new states. State defaults and a string of financial crises recurred, with excessive leverage widely attributed to moral hazard due to the precedent of Hamilton's original sin. Accession to the fiscal union came to require a commitment to ex ante balanced state budgets in state constitutions (though states would run deficits as a consequence of economic performance) – a precursor to Maastricht Treaty/Growth and Stability Pact debt-and-deficit limits on EZ member states.

Despite ensuing depressions, these serial crises did not precipitate secession or disintegration; but conflict between the federal government and states' rights came into sharp relief nearly a century and an industrial revolution later. The South wanted to perpetuate an American feudalism – plantation slave labour – whereas the North wanted to industrialise and therefore required a flexible and mobile labour market. The republic once again almost splintered along political, fiscal and monetary lines. The South sought to restore states' rights under the Confederacy, opting out of fiscal and monetary union; the North sought to keep the Union intact as a federation, retaining the dollar, federal Treasuries and the Constitution, imposing federal law through force. The Fourteenth Amendment, among other provisions, reasserted the primacy of US Treasuries in the aftermath of the Civil War, requiring that the validity of federal debt should not be questioned, even when incurred in the suppression of rebellions.

Figure 6
US yields collapse following federalisation of state debt



Source: Global Financial Data, L/S blog; Invesco. Notes: 10-year, constant-maturity US Treasury nominal yield. US recession dating corresponds to NBER [National Bureau of Economic Research] recessions, defined as two consecutive quarters of negative growth. US GDP data, formally the system of national income and product accounts dates to the early 20th century, produced by the Bureau of Economic Analysis, US Commerce Department. NBER recessions have been backdated to 1854. A simpler version of this time series is featured in the addendum to The Survivability of the Euro, Part I: Reform, Relevance and Robustness. We thank Paul Jackson, Global Head of Asset Allocation Research, Invesco, for help with this chart.

5.3. Lessons past, present and future

So, what can we infer from US experience for the EZ today? Perhaps most significantly, Hamilton's conspicuous construction of the federal government's role was part of the path towards a more perfect, political union.

The American debate about the role and responsibilities of – and limits to – the power of the federation as against states' rights did not end there. Indeed, it goes on to this day. Even so, in retrospect, it is arguably worth going much farther than Sargent in assessing the applicability and the limitations of US experience to the EZ.

Two angles stand out as most directly relevant to the EZ here and now vis-à-vis our monetary matrix. First, was the US then or is it today an OCA and, by extension, is it necessary to move towards an OCA to enhance the prospects of viability and prosperity? Second, if not an OCA, what of the US model of fiscal integration is useful and portable to the EZ today?

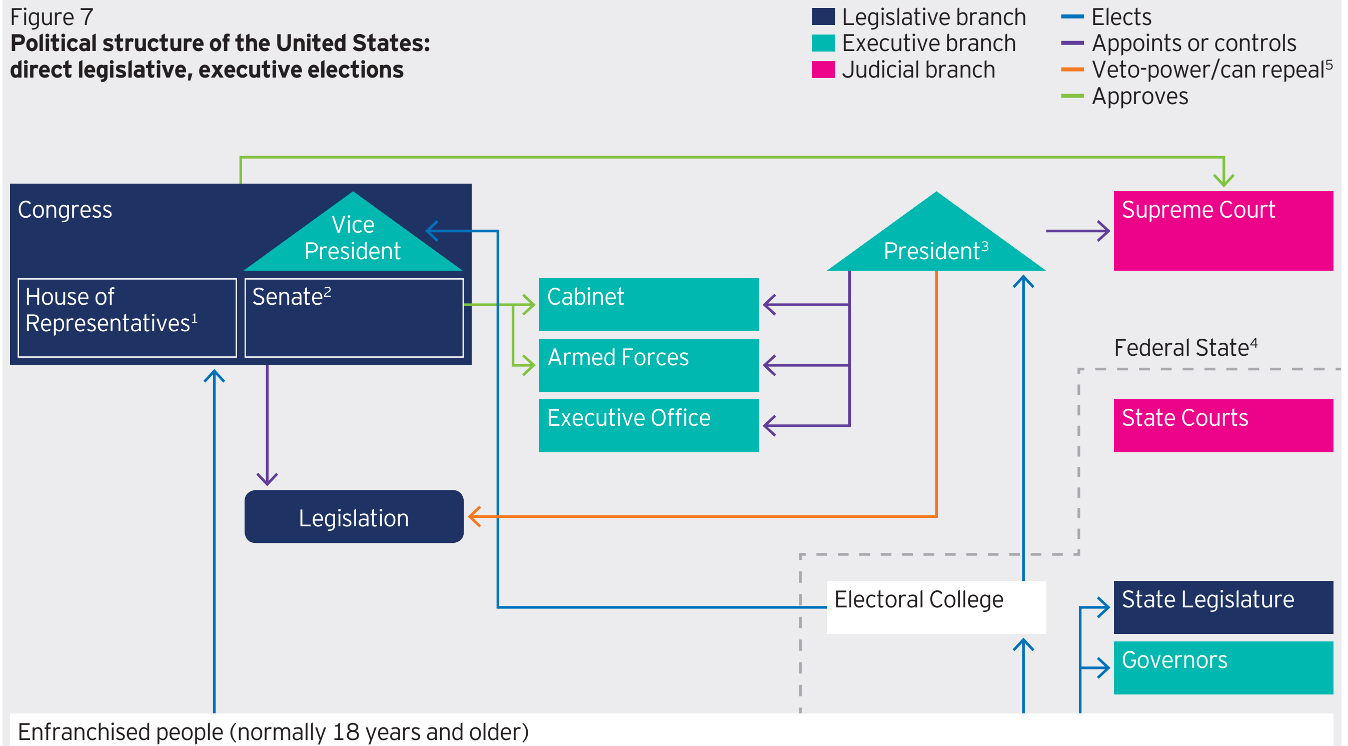
We very much doubt that the United States then or even now would qualify as an OCA, at least not in the strictest sense of ensuring internal economic stability and survival without resorting to major macro management and structural adjustments. We would go so far as to say that there is no successful modern monetary union that has endured for a substantial period without resorting to such policies. At a minimum, there have been active monetary policies to manage demand in "normal" economic cycles, as well as both automatic and active fiscal policies. In many crises, both in the US and elsewhere, there have been major structural reform programmes to assist external and internal adjustment in monetary unions suffering asymmetric shocks and to address trend divergences in the long-run performance of regions and sectors.

For example, the liberalisation of labour markets and the deregulation of business and finance in the 1980s aimed to make the supply side of the economy much more flexible and responsive to economic shocks and technological change. These two features of US economic history – active cyclical demand management and changes to the operating environment for firms and banks – alone confirm that the US was nowhere near a self-regulating OCA and repeatedly had to reform.

Looking further back – before the establishment of the Fed's active monetary policies and the use of active fiscal policy or, for that matter, the presence of automatic fiscal stabilisers through income tax, unemployment insurance etc – there was a high degree of labour mobility and flexibility, with great variability in unemployment, yet there was also high macroeconomic volatility, with asset price booms and deflationary financial busts with frequent depressions. It requires a great leap of imagination to describe this experience as an economy that automatically smoothed out shocks and crises...

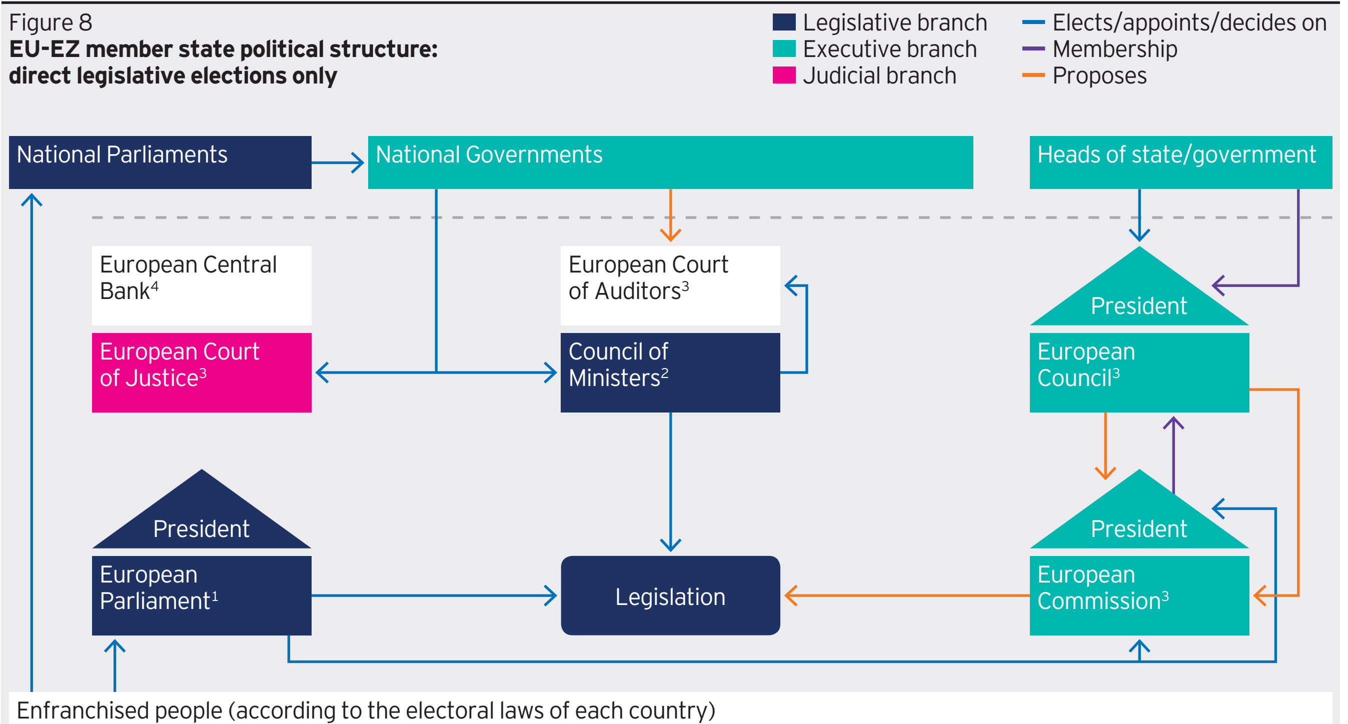
Maybe more pertinently, does the Hamiltonian model of American integration represent the best roadmap out of the EZ's ills? Yes and no: Hamiltonian fiscal federalism would probably work, because it would address core challenges in EZ viability by constructing the fiscal and political union that is currently missing; but the unfortunate reality is that the model that we know can work is unlikely to be feasible in today's EZ, given that the focus of democracy is at national and local rather than eurozonal or EU levels. Furthermore, the framework of European politics redirects crucial issues back to member states rather than centralising them in Brussels – which, despite housing most EU political institutions, is still far from representing the "capital" of Europe.[5]

Figure 7
Political structure of the United States: direct legislative, executive elections



Source: Wikimedia Commons, Invesco. [1] Elections are every 2 years. Apportionment is based on each states population. [2] Each state is represented with 2 senators. Senators serve 6-year-terms, but one-third of the seats are up for election every two years. [3] Head of state and government, as well as commander-in-chief. [4] The state levels can vary from state to state. [5] Presidential vetos can be overridden by a two-thirds vote in both house. The Supreme Court can declare laws as unconstitutional and thereby repeal them.

Figure 8
EU-EZ member state political structure: direct legislative elections only



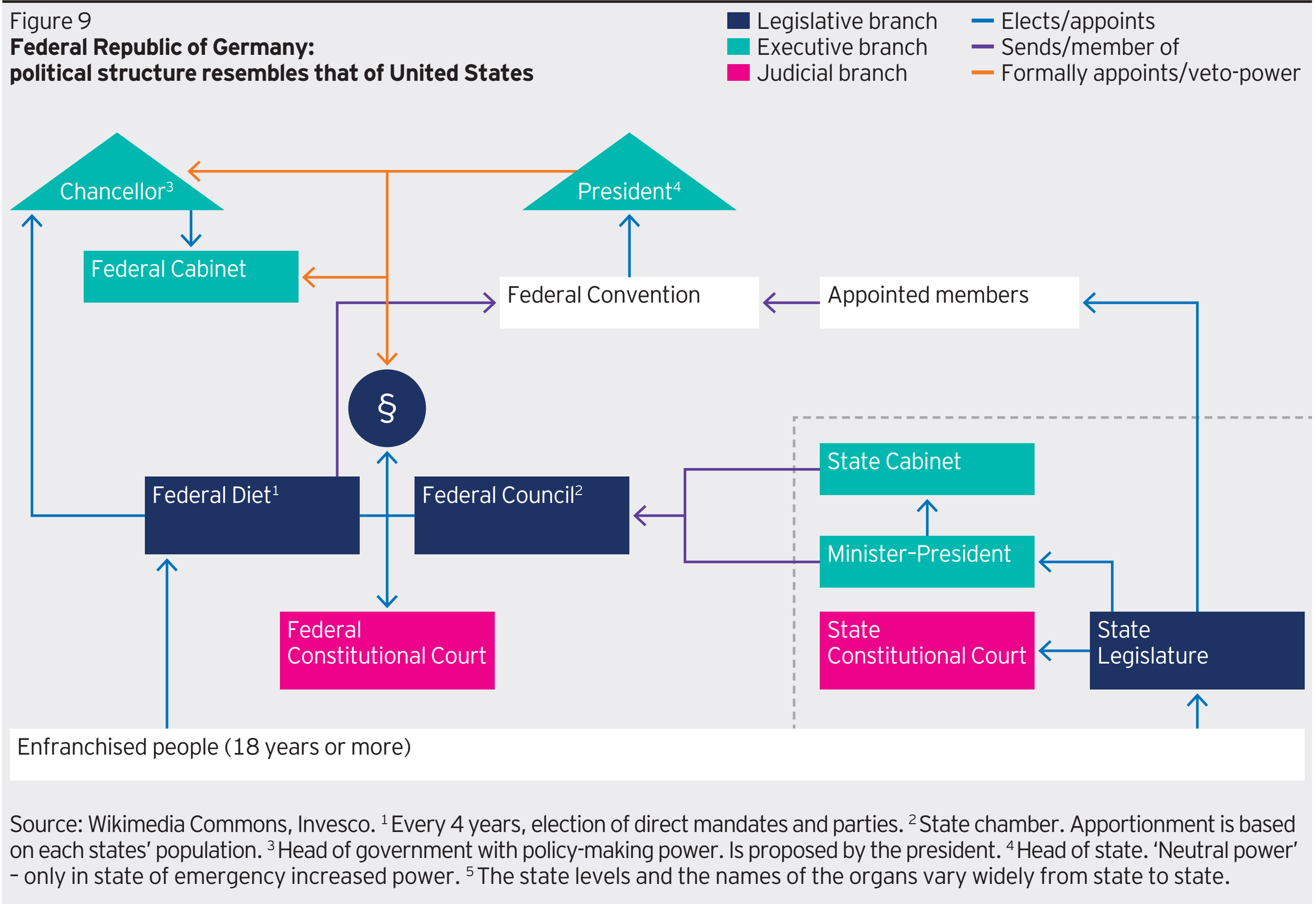
Source: Wikimedia Commons, Invesco. [1] Elections are every 5 years. The right to vote may be different depending on the country. [2] State chamber. Convenes in varying composition depending on the policy area. Each country is represented by one member per department. [3] Each country is represented by one member. [4] The European Central Bank is composed of representatives of the national central banks. Its Board is elected by the European Council on the proposal of the Council of Ministers.

Followers of the EZ debate about Eurobonds will recognise that this concept is precisely what Hamilton accomplished in his "assumption" – really the nationalisation or, more precisely, the federalisation of state debt. Advocates point out that it worked wonders; opponents object that it created moral hazard for states that overborrowed and creditors that overlent; those in the middle would say that debt crises recurred repeatedly without future bailouts and that financial and credit bubbles occurred everywhere else, too.

Wherever one falls on the merits of this debate, Europe's political structure resembles a Jeffersonian democracy at the level of the individual member states. Political and civic responsibility is mainly national rather than even remotely European or eurozonal – and, if anything, is clearly far more entrenched than it was in the US at the time of that first American crisis.

Furthermore, a sense of national preference is gaining ground at the expense of shared sovereignty and destiny. It could be argued that the Hamiltonian equivalent in the EU and the EZ is a federal "super-state" that lacks a sense of adequately local or national control or democratic legitimacy – even if one stops well short of the occasional crisis implicit in Jefferson's Jubilee. We will turn to these issues of zonal versus local control in a later paper, but for now suffice it to say that the tension between a federal money and a preference for national politics stands squarely in the way of Hamiltonian federalism in the EZ.

Figure 9
Federal Republic of Germany: political structure resembles that of United States



Source: Wikimedia Commons, Invesco. [1] Every 4 years, election of direct mandates and parties. [2] State chamber. Apportionment is based on each states' population. [3] Head of government with policy-making power. Is proposed by the president. [4] Head of state. 'Neutral power' – only in state of emergency increased power. [5] The state levels and the names of the organs vary widely from state to state.

6. Europe then, Europe now: lessons from European monetary unions past

EMU is by no means the first instance of states in Europe pooling monetary sovereignty or sharing a common currency. Thus no account of the relevance of theory and experience for EMU as a concept and a construct, for the EZ as it stands at present or for the survivability of the euro is complete without some discussion of European monetary unions past.

There is considerable policy and academic – not to say wonky – debate about which of these unions qualified as monetary in the modern sense, which in many respects has come to be defined by the features and framework of EMU itself. We take a rather more practical approach, reasoning that if it quacks and waddles then it fits the bill – all puns intended. If more than one sovereign entity band together and pool autonomy over monetary and exchange-rate policy then the undertaking qualifies as having several of the key features of monetary union. This would be all the more pertinent in many of these historical cases, some of which had a supranational or federal central bank but most of which had fiscal and monetary sovereignty that resided with the participant members rather than at union or (typically) confederate level.

Below, addressing them chronologically, we delve into these prior attempts at European monetary union, examining the most relevant specifics and considering what worked and what did not. The inferences we draw are instructive for assessing the future of the euro.

Single-state monetary unions: Switzerland (1848), Italy (1861) and Germany (1871)
Several states were unified and proceeded with monetary union during the Europe of the 1800s. These endeavours were in important respects in the manner of our monetary matrix, involving transitions from smaller political entities to larger, more unified ones – both territorially and economically larger, more diverse and more complex economies. Several evolved into fiscal federations, as well as becoming fully-fledged monetary unions.

Austro-Hungarian Monetary Union (circa 1867 to World War I)
Austro-Hungarian Monetary Union provides in concept a case with several similarities to today's EMU and to the US "First Republic". To elucidate the implications for the survivability of the euro, some historical context is useful.

A-HMU was underpinned by a new political arrangement that began in 1867, following Prussia's defeat of the Austrian Hapsburg Empire and consequent Magyar threats to secede. Under the Compromise of 1867, Vienna and Budapest accepted the distinct sovereignty of both Austria and Hungary under the Austro-Hungarian Dual Monarchy.

One crucial similarity with EMU was the sway of a single central bank – the Austrian National Bank (today's OeNB) – over the entire monetary union. The confederate dual monarchy had very limited spending power and no borrowing authority or capacity, although Austria and Hungary each retained national parliaments, fiscal authorities with independent budgets, deficit spending capacity and national public debts.

At the confederate level, the dual monarchy was arguably closer to a single state in some political areas than the EU. The head of state (the Austrian emperor), the armed forces, foreign policy and diplomats and, significantly, the legal system as a whole were all shared.[6] This concordance represented the origins of A-HMU: it arose from a partial separation of an integrated whole, in which its successor states opted to retain monetary union along with legal and economic union yet with fiscal autonomy and a degree of domestic political autonomy. As such, A-HMU moved from the upper right of our monetary matrix, somewhat closer to the origin.

A-HMU survived for many decades, but it suffered considerable instability and required reforms and renewed compromises. It ended, like some other attempts at European monetary union, as a result of World War I and the general breakdown of the international monetary system; but it was also weakened by its own internecine conflicts. Both members significantly loosened fiscal policy during the union's early decades, undermining their perceived creditworthiness and ability to maintain currency stability against gold standard currencies with stronger gold reserve backing. The Austrian florin, a silver standard currency, had weak credibility from the outset, as the coinage, paper currency and public debt used to finance the unsuccessful Prussian war had only 20% silver reserve backing – considerably less than the 40% gold backing in Germany's Reichsbank at the time.

The confederate imperial level was banned from running deficits. Its balanced budgets were financed by customs duties that were insufficient to meet military-related and foreign-policy-related spending, for which it was responsible. Austria and Hungary were therefore obliged to supplement the imperial level, on top of the national deficits that they each ran for domestic purposes. Market doubts about currency and price stability initially led to a shift from domestic currency debt to issuance in more credible gold standard currencies, notably sterling, but this only moved the risk from a combination of exchange rate and credit risk to mainly credit risk – and a debt trap loomed.

Hungary's threats to secede or to establish its own central bank became more dangerous under these circumstances and led to an effective federalisation of the Austrian National Bank. This became the Austro-Hungarian National Bank, with a major branch in Budapest in addition to its Vienna HQ. Eventually, the heavy financial pressure required adopting the gold standard; a sustained fiscal adjustment in both countries to bring deficits and debt down so as to reduce credit risk premia; and raising reserve backing to reduce devaluation risk premia.

So what lessons can we learn from the A-HMU experience for EMU? A-HMU was not forged as a monetary union so much as a fiscal divorce, whereas EMU represents a monetary union with at most a compact for fiscal abstinence. Also, fiscal incontinence contributed to severe challenges in the early decades of A-HMU, and political compromises that were necessary to maintain the monetary union were no substitute for fiscal and financial adjustment – in the context of a gold standard, which limits the flexibility of a federal central bank with a fiat currency. Finally, the example of A-HMU shows that internecine political struggles between the constituents of a "confederate" (i.e. extremely limited) fiscal union, as well as fiscal incontinence within a monetary union, weaken their underpinnings.

Universal currency for worldwide monetary union (attempted 1867)
France attempted to lead the coordination and establishment of a formal universal currency in 1867 through the issuance of common gold coinage by three leading economies – France, Great Britain and the United States. Under the gold standard of the time, the French 25-franc, the British sovereign and the American half-eagle five-dollar coins all had very similar gold content. Twenty countries came together to give this a serious shot. However, with Britain not present and the United States ultimately holding back, the effort was aborted.

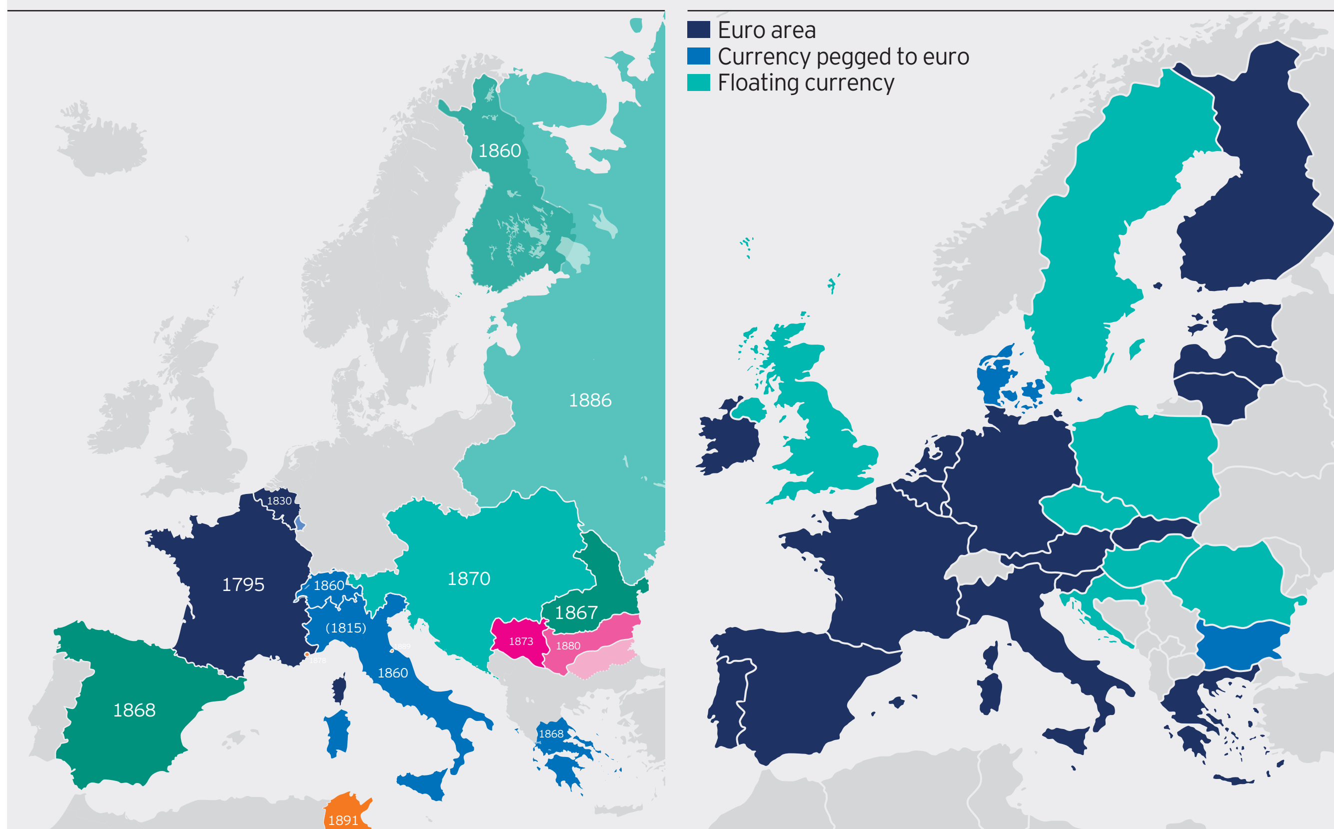
The main message of this experience is that the relevant major economic and financial players must participate for monetary union to be viable. It is perhaps worth noting at this point that the Maastricht Treaty on European Monetary Union remains the only treaty without an exit clause under the Vienna Convention of Treaties

Latin Monetary Union (circa 1867-1914; formally dissolved in 1927)
In 1867, following the abortive attempt to establish a universal currency, France was joined by Switzerland, Belgium and Italy in the Latin Monetary Union, under which the coinage of all members was standardised as to silver and gold content under a "bimetallic standard". By 1865 the other members had already begun to shadow the French franc – both as to precious metal content and denomination; Switzerland and Belgium even used the same name for their domestic currency. Italy joined in stages across the north and south, following political unification. Greece formally joined in 1876, and several other economies participated – whether via bilateral treaty, by unilateral adoption or as a result of their status as colonies. So far, so good.

However, despite straddling much of continental Europe for nearly half a century, LMU could not function as originally conceived. Unlike A-HMU and EMU, it lacked common institutions. It depended heavily on the credibility of France, which had large stocks of gold (and initially silver) to back currency in circulation and broad money for most of the period. After Prussia's victory over France in 1870, when Germany went on to gold on the back of French reparations payments paid in gold, the union's bimetallic (silver-cum-gold) standard had to be shifted to an almost pure gold standard.

Despite the notion of a union, members also frequently pursued their own interests and/or broke agreements. France and Italy exploited a failure to outlaw the printing of paper money, while successive Greek governments decreased the amount of gold in their coins in light of the country's chronically weak economy (ultimately leading to Greece's temporary expulsion). With Gresham's Law about the competition between good money and bad seemingly holding true, what became known as the "limping gold standard" staggered on until the international monetary system collapsed during World War I. Having endured de jure for several more years, LMU was at last formally dissolved in 1927.

Figure 10
Latin Monetary Union versus EMU and contemporary EU arrangements



LHS Source: Wikimedia Commons. Note: Years indicate date of accession to the currency union (France used the currency it had had since the French Revolution). Northern Italy joined before the unification of Italy, the rest of Italy after. Dark blue shows original members; blue shows members that joined later. Shades of green indicate years of accession based on bilateral treaties. Pink indicates unilateral adoption. Orange represents participation via colonial status.

RHS Source: The Economist. Note: EU member states in blue are pegged to the euro; Denmark is pegged to the euro but has an opt-out from joining; Bulgaria has a currency board backed by euro foreign exchange and fiscal reserves. EU member states in green have floating currencies but fall into two broad categories with respect to EMU:
- The UK has an opt-out from the euro (and at the time of writing is opting out of the EU itself via Brexit).
- The other member states in green, though floating for now, have a treaty obligation to join EMU, which is expected to take place via an ERM-II-type mechanism – wide and narrow bands fixed to their national, nominal euro exchange-rate cross, with the requirement that the currency trades freely within the narrow band for two years before euro adoption.

Scandinavian Monetary Union (circa 1873-1914; formally dissolved in 1931)
Sweden and Denmark formed the gold-standard-based SMU in 1873. Norway joined in 1875. Like LMU, SMU also used standardised coinage – but this was made more reliable by opting for a uni-metallic standard rather than a bimetallic one. The krone served as a common unit of account, and the coinage of all three members served as legal tender in any and all of them from the outset.

Any member's paper money and bank drafts and bills of exchange also became legal tender across SMU from 1885. For the subsequent two decades the three SMU members shared the benefits of a single money that in effect served all the functions of a money – that is, a unit of account, a medium of exchange and, by extension, a store of value (albeit with domestic assets in domestic moneys that were full proxies for each other).

As with LMU, the onset of World War I disrupted SMU. The convertibility of many currencies was abrogated, and many fixed exchange rates with gold were floated. Efforts to restore SMU continued throughout World War I and during the inter-war period until the financial crises of 1929 and 1931, after which it was finally abandoned.

Belgium-Luxembourg Monetary Union (1922-1999; dissolved on EMU)
Perhaps the most successful multinational monetary union in European history, at least in terms of longevity, prevailed between Belgium and Luxembourg from 1922 until the establishment of the euro. It is worth noting that this arrangement saw through the gold standard after World War I; its breakdown after the Great Crash and the Great Depression, a period encompassing hyperinflation and deflation in neighbouring countries and major trading partners; the upheaval of World War II, despite Belgium's early fall; the dollar-exchange standard Bretton Woods variant of the gold standard, as well as its breakdown; the turbulence of major currencies during the Great Inflation of the 1970s and the Plaza and Louvre Accords of the 1980s; and the establishment and breakdown of various EU exchange-rate arrangements, such as the Snake and ERM I.

The critical distinguishing feature of this arrangement was that Belgium dominated and Luxembourg was more or less a silent, junior partner. Belgium is a small and very open economy by global (or, for that matter, European) standards; but Luxembourg is even more so, representing only a small fraction of the economic size and population of Belgium. So in BLEU Belgium dominated the decision-making: it had a fully-fledged national central bank, while the Luxembourg Monetary Institute was but a pale shadow. The Belgian franc served as legal tender in Luxembourg – but not vice versa.

Unfortunately, the success, stamina and survival of BLEU are likely to be inapplicable to the EU and the EZ. As a bilateral partnership between only two countries, it was arguably the most successful but also perhaps the least transportable experiment of its kind. Unlike BLEU, the EU and the EZ consist of several large economies and many small ones and require a balance to be achieved between the rights and interests of each of the partners and the reality of the far greater political, economic and financial weight of a few members – or even just two.[7]

The key implications of these earlier European experiments for EMU are as follows:

1. **All major member states must be fully involved**
   The French-led attempt to create a universal currency for worldwide monetary union floundered in the absence of Great Britain and the United States, while the credibility of LMU (to take one example) was repeatedly undermined by the insufficient commitment of some members. These downfalls still resonate today. In concrete terms for the present European context, we doubt that the euro could survive without one or more of Germany, France, Italy or Spain – especially now that all the major players are so deeply and clearly stuck in, not least through their TARGET2 exposures. We can conceive of the euro maintaining a kind of critical mass for the European project without some of the smaller member states (which we doubt would leave in the first place) but not without its largest members. Even so, the exit of even a small member state might be interpreted as a signal that EMU is turning out to be just another fixed exchange rate regime.

2. **The smooth survival of multi-state monetary unions for extended periods of time benefits from coherent leadership from the top down rather than the bottom up**
   A supranational/federal central bank, supported at the very least by substantial political commitment and coordination among major member states, helps a great deal, as in A-HMU. Confederations are weaker than leadership by a federal or dominant member state; but shared rather than conceded sovereignty requires member states to participate willingly, as in BLEU. Increasingly autonomous behaviour by constituent member states would tend to undermine market confidence in the construct, as repeatedly occurred in the case of A-HMU.

3. **A rules-based system naturally suffers credibility losses when the rules are broken or bent**
   This was the case with the fiscal incontinence exhibited by the two member states of A-HMU and both the monetary and fiscal wrongdoing of the likes of Italy and Greece in LMU. In a fiat-currency system, of course, rules are clearly less binding than a pegged or commodity-standard, reserve-backed system.

While the Hamiltonian model of fiscal federalism would tick all the boxes for the resilience/survivability of a monetary union, these European historical experiences show that, although subject to constant tensions and periodic crises, these proto-EMUs required a World War to sweep them away. Furthermore, the ECB, TARGET2 and QE are major innovations that hold the edifice together while reinforcements continue to be designed and built.

All of this said, a caveat emptor remains in order. All of the historical experience suggests that few monetary unions between sovereigns survive and that doubts about the rules, the quality of the instruments or the credibility of the institutions point to a high likelihood of survivability being questioned by the market – and therefore a strong need for reforms that address the problem head-on.

The thinking of EMU's architects was that self-regulating markets would naturally correct any imbalances between member states as long as the ECB could keep inflation in check and national governments could maintain fiscal discipline.[8] Key to this rose-tinted, hands-off approach were expectations that the least productive countries would derive the greatest benefit from EMU through "factor-price equalisation", which was expected to result in the convergence of real income per capita.

Abolishing national currencies would also do away with FX risk and transaction costs. Economic union would obliterate barriers to trade in goods, services, migration and corporate investment. Productive capacity would diffuse across the EZ. Capital would flow from richer to less affluent countries, where it could be best employed. Borrowing costs in the Periphery would fall, prompting more private investment and boosting productivity and growth. Living standards would in time become much the same everywhere, with Greece flourishing and catching up to Germany, which would merely trundle along.

Several of these effects did take place, though not in quite the way that had been hoped. It was already known – from the experience of the US, once again, decades earlier – that lowering barriers to trade would not necessarily lead to factor-price equalisation.

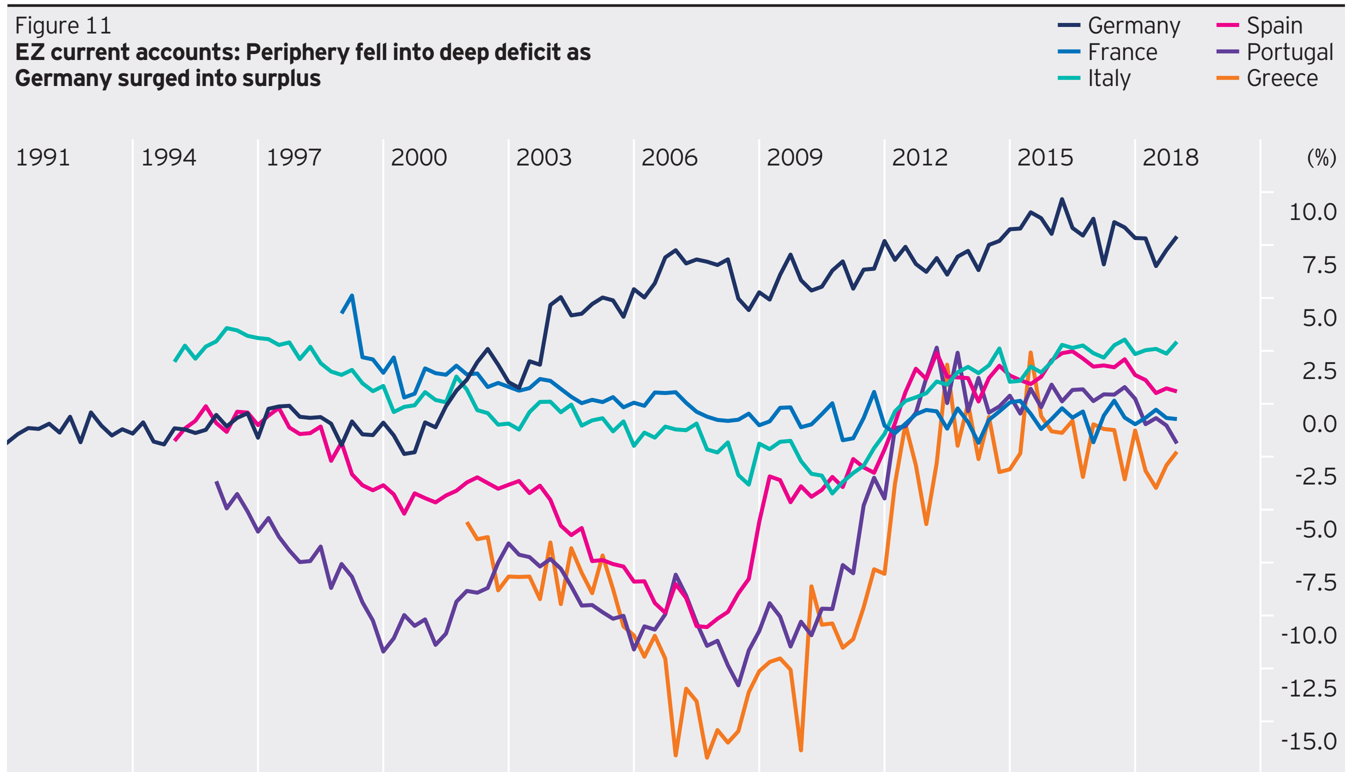
In 1953 Wassili Leontief discovered that after the trade liberalisation that followed World War II the US tended to export labour-intensive goods rather than the capital-intensive ones that had been expected given its far better endowment in capital than its European and Asian trading partners. Leontief explained his "paradox" by suggesting that, once differences in skill levels (called "human capital endowments" today) were taken into account, the US economy actually had more labour relative to capital than the rest of the world. If this was indeed the case then freeing up trade would lead to a divergence in US and European and Asian labour (plus human capital) incomes, not convergence.

Freeing capital flows does not change this prediction, as capital will then flow to where its marginal productivity is highest; and this will be where it can work with the larger stock of the joint factor of labour plus human capital, thus increasing its overall productivity. Furthermore, so-called "total factor productivity", which is partly due to the endowment of countries in the "social capital" embodied in their legal systems, business cultures and other institutions, may lead to capital flowing to already high-income countries rather than in the other – conventionally predicted – way.

It so happened that EZ integration was not the only thing going on in the world after 1999. The first decade of the euro was also a decade of globalisation, marked by China's advent to the WTO and the reintegration of many other emerging markets into the world economy and into the EU with waves of expansion in 2004 and 2007. The establishment of the euro eliminated currency risk, yet country risk premia persisted in national debt so that financial capital flowed from north to south just as the south was outcompeted in global and regional markets by countries with far more abundant cheap labour, which attracted corporate investment. Market forces were at work, but the resulting macro imbalances and structural shifts were quite different than expected.

Although it remained a central plank of the European project, self-regulation appealed to neither France nor Germany from the outset. France dismissed the idea as a fantasy and insisted that what it called "economic government", entailing many of the characteristics of a genuine state, would be necessary for the common currency to function to best effect. Germany argued that self-regulation might be possible but that it could not occur without the right initial conditions.[9] The collective scepticism of Europe's twin spearheads of integration stemmed in no small part from a fear of what might happen in a crisis; and this, of course, is exactly what was waiting down the road.

Figure 11
EZ current accounts: Periphery fell into deep deficit as Germany surged into surplus



Source: OECD, Macrobond, Invesco.

Even in the early years of the 21st century, when the EZ seemed to be delivering very positive economic outcomes for its member states, growth was markedly uneven. One problem was that the components of demand and drivers of growth in different countries contributed to ever-growing imbalances between EZ members, which might have been indefinitely sustainable in a single state but would prove to be anything but in a confederal monetary union. Italy and Portugal were already starting to stagnate. Greece, Ireland and Spain were touted as the poster children of convergence, but their "success" was propped up by unsustainable public debt in the first instance and unsustainable private debt in the second and third. Large financial and trade disparities gradually built up. Cross-border investment flows surged, as was expected, and capital moved from the Core to the Periphery, as was planned, yet the prosperity engendered was in many cases an illusion: cheap credit was channeled primarily into consumption, construction and real estate rather than used to enhance long-term productivity. Bond yields converged, as did living standards, but productivity and unit labour costs diverged, not least because corporate investment did not flow across borders anywhere near as much as household-consumption-related credit flows – and also because labour rules and business operating conditions remained very different. While the high-productivity, high-savings EZ Core was busy ratcheting up exports and net trade, the lower-income and lower-productivity Periphery was becoming ever less competitive. A crash was in the making.

All of this meant that almost a decade after the euro's introduction, contrary to the forecasts of EMU's advocates, the EZ had become a fragile muddle of inequalities and divergences; and then the global financial crisis struck. An abrupt reduction in cross-border lending led to government bailouts of banks in a number of debtor countries, further widening imbalances and shifting debt from the private to the public sector. An issue that had once revolved mainly around current account deficits and net international liability positions "mutated" – to use the parlance of the European Parliament – into one that revolved mainly around government debt.[10] With the myth of self-regulation exploded, a cycle of rising borrowing costs, deteriorating budget deficits, higher interest rates and severe credit downgrades rocked a number of nations. By May 2010 it was clear – even to EMU's staunchest proponents – that Europe's dream of monetary union could no longer be left to stand on such flimsy foundations, and a glut of new measures was unveiled at pace.

France and Germany clung to the positions that they had held in the early 1990s. The former was still keen to push for economic government, while the latter still felt that a remedy for the EZ's woes could be derived from returning to a suitable set of economic conditions for integration. Their stances have changed little since. Today France is at the forefront of calls for initiatives such as banking union and a common deposit insurance scheme, while Germany leads efforts to thwart innovations that could move the euro farther along the common currency continuum but which might involve "legacy problem" compromises that could burden its taxpayers.

A timeline of Economic and Monetary Union – 1970-1999
The notion of a common currency for Europe has been raised many times in the past, including numerous attempts before, between and after the World Wars , However, the idea of EMU as we know it today can be traced back to the late 1960s, when the heads of state of the then EU member states – somewhat optimistically, as it turned out – resolved to draw up a plan to achieve monetary union by the end of the following decade.

1970
The Werner Plan sets out a formative process for achieving European monetary and currency union

1979
The Exchange Rate Mechanism (ERM) is established to reduce volatility between Europe's currencies

1986
The Single European Act mandates the creation of a single market in the European Economic Community by 1992

1989
A report led by European Commission president Jacques Delors maps out a three-stage route to EMU

1990
Stage one, involving closer economic policy coordination and the liberalisation of capital flows, begins

1992
The Maastricht Treaty formally establishes the European Union and commits member states to joining EMU*

1994
Stage two of EMU sees the creation of the European Monetary Institute (EMI), a precursor to the ECB

1995
Meeting in Madrid, Europe's leaders announce that the new common currency will be called the euro

1997
The Stability and Growth Pact, intended to ensure budgetary discipline among EMU members, is agreed

1997
ERM II, which links the euro and the currencies of non-participating EU members states, is introduced

1999
With 11 of the 15 members deemed able to meet the criteria for joining the euro, the ECB replaces the EMI

1999
Stage three of EMU sees the launch of the euro as a virtual currency through the "permanent" fixing of exchange rates

* The UK and Denmark obtained permanent opt-outs.

8. Theory, experience and monetary unions

Debate about the public policy choice between autonomy in monetary/currency policy and entering a monetary union continues to revolve around the original Optimal Currency Area theory, boiling down to essentially economic trade-offs. On one side lie the efficiency, income and wealth gains from coalescing into a single market with flexibility and mobility in goods, services, capital and labour and in prices and wages, complete with a fiscal risk-sharing mechanism. The combination would prevent the emergence or persistence of divergences that might otherwise prove unsustainable. On the other, greater autonomy over various policies – monetary, fiscal and structural – at the probable cost of lower growth, income and wealth gains, stemming from smaller market size, greater friction in economic exchange encompassing employment, trade and investment, including currency and other transaction costs.

Crucially, however, we find the OCA theoretical paradigm to be excessively "economistic", in that it places insufficient emphasis on the weight of political economy – in particular, the commitment to establish and maintain an economic and monetary union in all its facets, for political reasons. The historical reality is that single states often first adopt a single currency and only then evolve towards an OCA rather than the other way around, as OCA theory would have it.

Furthermore, not all long-surviving or thriving currency unions are OCAs, full-blown fiscal federations or single states. Indeed, many of the world's most important, successful and longest-lasting monetary unions have lacked many of the essential features of OCAs; or have had to construct them, including mobility and flexibility in the factors of production and free economic exchange, as well as fiscal systems. This includes the US, which we have discussed in depth, and others that we have not, including the UK, China, Russia, India, Brazil and Argentina, among others.

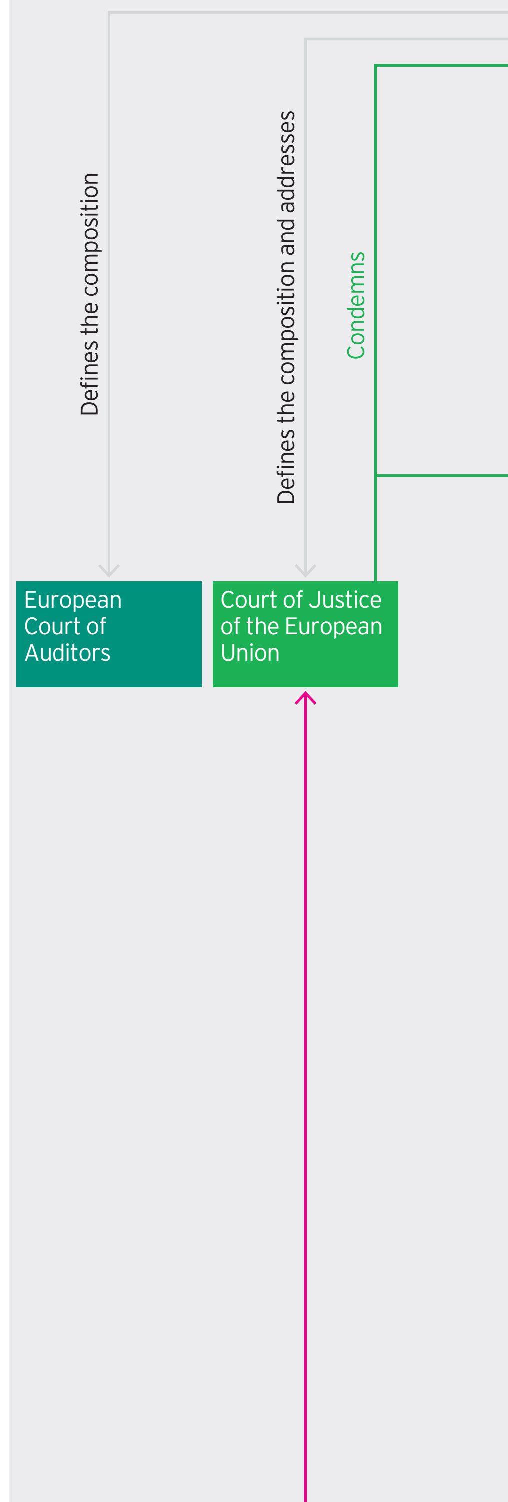
What is more, several of these long-surviving monetary unions, despite constructing essential OCA ingredients, have nonetheless experienced many of the challenges that OCA status is supposed to obviate. Some, such as Argentina, Brazil or Russia, have had great difficulty adjusting to major economic shocks and ended up in severe and in some cases serial crises. Despite overall success at the union level, others, including the US and the UK, have experienced persistent regional economic divergence, leading to occasional regional crises or sustained degradation.

Yet, despite occasional regional secessionism, all of these monetary unions have remained intact for many decades and in some cases for centuries. We fully acknowledge that the risk of disintegration or exits stalks the UK, because Brexit has exposed fault lines about EU membership and integration for economic, geopolitical, social and philosophical reasons – not because of problems with the survivability of the sterling monetary union per se.

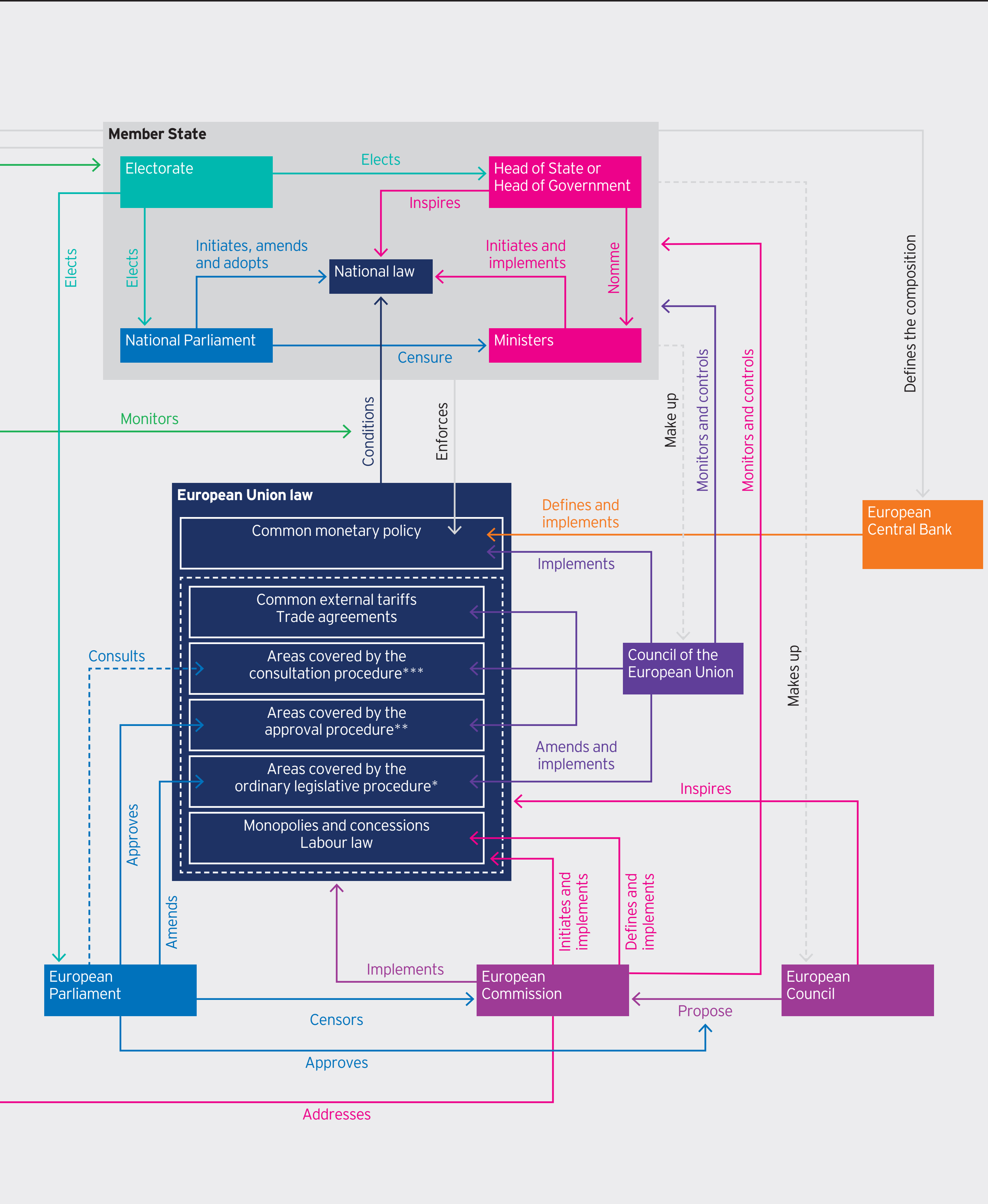
In addition, long-surviving quasi- or non-federal, multi- or transnational currency unions tend to be few and far between and relatively small. Indeed, currency unions that are coterminous with strongly unitary or federal states, whether multinational or national, tend to survive longer and absorb shocks better than multi-state currency unions or fixed exchange rate systems.

True, there are important exceptions, notably Switzerland. If anything, though, this exceptionally prosperous, stable and extremely long-lived union proves the rule. Multinational/multilingual, with distinct if not separate Swiss German, French and Italian regions, with limited federalism – the federal budget is a small share of GDP, with significant political authority vested in its constituent cantons – Switzerland might seem to defy the logic of the OCA and the experience of most other monetary unions. Many might say that Switzerland is a microcosm of the EU and EZ, and that durability of the Swiss franc monetary union could represent if not a template for EZ evolution then at least a confirmation that it can work very well in the long run. While there might be some truth in this, we must also note that its exceptional circumstances are unique: politically neutral for ages; providing at once a planetary bank vault for anyone and everyone, regardless of any dubious provenance of their funds; a headquarters for world-beating corporates; tiny and landlocked yet highly protected both by mountains and political barriers; and therefore a uniquely endowed and wealthy place.

Figure 12
Multiple, overlapping layers and levels of EU/EZ sovereignty and governance



Source: Wikimedia Commons, Invesco.
Please see page 22 for Asterisks definitions.


Member State
Electorate
Elects
Head of State or Head of Government
Inspires
Elects
Elects
Initiates, amends and adopts
National law
Initiates and implements
Nomme
National Parliament
Censure
Ministers
Monitors
Conditions
Enforces
Make up
Monitors and controls
Monitors and controls
Defines the composition
European Union law
Common monetary policy
Defines and implements
Implements
European Central Bank
Common external tariffs
Trade agreements
Consults
Areas covered by the consultation procedure***
Council of the European Union
Makes up
Areas covered by the approval procedure**
Amends and implements
Areas covered by the ordinary legislative procedure*
Inspires
Monopolies and concessions
Labour law
Approves
Amends
Initiates and implements
Defines and implements
Implements
European Parliament
European Commission
European Council
Propose
Censors
Approves
Addresses

*** Areas covered by the ordinary legislative procedure:**

- Non-discrimination on grounds of nationality (Art. 12);
- Combating discrimination (encouragement measures) (Article 13 (2));
- Freedom of movement and residence (Art. 18,1);
- Free movement of workers (Art. 40);
- Social security for migrant workers in the Community (Art. 42*);
- Freedom of establishment (Art. 44);
- Right of establishment: special scheme for foreign nationals (Article 46 (2));
- Access to self-employed activities and their exercise; recognition of diplomas (Art. 47 and 47,2*);
- Right of establishment: services (Art. 55);
- Free movement of third-country nationals on visas (Art; 62,3* See Schengen Convention);
- Measures against illegal immigration (Art. 63,3 b*);
- Civil judicial cooperation (except family law (Art. 65);
- Transport (iron, road, inland waterways, air transport, maritime transport) (Art. 71,1 and 80,2)
- Internal market (Art. 95);
- Employment (incentive measures) (Art. 129);
- Customs cooperation (Article 135);
- Social policy (Art. 137,1-2); equal opportunities, gender equality (Art. 141);
- European Social Fund (application decisions) (Art. 148);
- Education (encouragement measures) (Art. 149);
- Vocational training (Art. 150,4);
- Culture (encouraging measures) (Art. 151*);
- Public Health (measures; incentive measures) (Art. 152,4);
- Consumer protection (Art. 153,4);
- Trans-European networks (Art. 156);
- Industry (specific support measures) (Art. 157,3);
- Economic and social cohesion (specific actions outside the funds) (Article 159 (3));
- European Regional Development Fund (ERDF): implementing decisions (Article 162);
- Research (Art. 166 and 172);
- Environment (Art. 175,1-3);
- Development aid (Art. 179);
- Political parties at European level (political status and rules) (Art. 191);
- Access to documents of the institutions (Art. 255,2)
- Prevention and fight against fraud (Art 280,4);
- Statistics (Art. 285,1);
- Establishment of an independent supervisory body for the protection of personal data (Art. 286,2).

(Asterisks (*) denote areas where the Council votes unanimously)

**** Areas covered by the approval procedure:**

- Ratification of certain agreements negotiated by the European Union;
- Membership of new members;
- Methods of withdrawal from the European Union;
- Adoption of anti-discrimination legislation;
- Adoption of an action by the Union which appears necessary within the framework of the policies defined by the Treaties to achieve one of the objectives pursued by the Treaties, without the Treaties having provided for the powers of action required for that purpose.

***** Areas covered by the consultation procedure:**

- Exemptions from the internal market;
- Competition law;
- Some financial matters;
- Certain aspects of administrative matters and intellectual property;
- Adoption of recommendations and opinions of the Council and Commission.

9. Conclusion

How, then, does the Eurozone stack up against theory and experience? Well, it must be acknowledged that the EZ it may never become an OCA, a federation or a single state. As a peacetime effort by disparate sovereigns to share a fiat currency and financial, economic and political stability and growth while retaining large swathes of national political, fiscal and structural autonomy, it is perhaps the most complex currency union ever created.

The theory of monetary unions and the vast majority of experience across the world and through time are confronted with EZ exceptionalism and EU fault lines on three levels: the confederation that is the EU, with partial, voluntary pooling of sovereignty; the monetary federation that is the EZ, complete with a federal central bank and full subordination of autonomy in monetary/currency policy to the ECB; and the crux of European politics – the nation-states are accountable for politically sensitive policies, including fiscal and structural economic policies that constrain factor mobility, factor price flexibility and inter-regional risk sharing. This combination begs a critical question: can the euro survive?

We believe so. As demonstrated during the European sovereign debt crisis, sufficient political commitment can ensure the survival even of a suboptimal currency union in the face of an existential threat – partly because the alternative would be so catastrophic.

Yet the combination of theory and experience, which leads us to believe that evolution towards an ever-deeper or more perfect union is possible given sufficient political will and commitment, also reconfirms that EZ survival may be more likely than disintegration but cannot be taken for granted. We reiterate our conclusion from Part I of The Survivability of the Euro: the euro's survival will likely continue to be questioned along with the continued participation of some member states from time to time, when in distress.

In our next and final segment of this white paper, The Architecture of EMU, we will explore in depth how the multifarious unions of EZ reform and reintegration stack up against the demands of the theory and the historical experience of monetary unions. Prevention may in principle be far better than cure; but the concern of northern EZ states is to avoid the moral hazard of preventatives and insurance policies, in favour of using the fear of national recession and insolvency to change economic behaviour, as perhaps befits a union forged in crisis.

10. References and suggested further reading

References

1. China is a special case in our matrix. It is a single-state, multinational monetary union, but it has multiple exchange rates, capital controls and a transition from a dollar peg, through a near-trade-weighted basket, presumably to a float. Fiscal and debt-financing constraints on local authorities are formally binding, but much of China's public spending has consisted of projects funded by off-balance-sheet borrowing via Local Government Financing Vehicles (LGFVs) and revenue generated by asset sales, including local government lands. China is therefore located somewhere between full fiscal union and fiscal federalism on our institutional spectrum; and between a peg and a managed float.
2. Switzerland is a key example today, with its federal fiscal budget small relative to GDP and to the budgets of constituent cantons. This was also true for much of US history before the introduction of federal income tax and peacetime deficits and spending programmes, notably the New Deal, the Great Society in the 1930s and 60s, extending social safety nets like public unemployment and health insurance.
3. See our map of the "EZ Underground" in The Survivability of the Euro, Part I: Reform, Relevance and Robustness.
4. It could be argued that the problem of moral hazard persisted in the US for almost half a century after Hamilton's reforms. It was not until the 1840s, when Congress rejected petitions to assume the debts of states that had spent recklessly on railroads and canals, that balanced-budget provisions were passed into state constitutions in all cases but one – Vermont.
5. The European Parliament is directly elected across the EU but in practice has limited authority over the decisions of member states, except via legislation in areas that are designated as EU rather than national competencies, like trade, single market rules etc. This leaves crucial areas of economic policy, such as fiscal affairs, to member states (subject to EU or EZ rules).

   The European Commission is in effect an appointed cabinet of ministers with executive authority – to the extent delegated by member states. The European Council brings together the EU heads of government, and the Eurogroup brings together the finance ministers of EZ member states – and it is here where the real power in Europe arguably resides. It is also worth noting that most of the EU institutions are aimed at the whole EU rather than the EZ (the exceptions are the Eurogroup; the ECB; crisis management mechanisms such as the European Stability Mechanism/European Monetary Fund; and those associated with the various unions, such as the Single Supervisory Mechanism under banking union).

   As we have noted before, if Brexit happens then the EU and the EZ are treaty-bound to become coterminous (except for Denmark). This would make it easier to align EU and EZ institutions over time, without the UK, as the EU's third-largest economy, standing in the way of ever-deeper union – so long as national politics, whether in current EZ member states or others delaying membership, allows for it...
6. In contrast, EU law supersedes the laws and the court system of member-states in areas of EU competency – but not in all areas. US federal law operates similarly.
7. We refer here, of course, principally to France and Germany, whose concordat is at the heart of the EU and the EZ. We explore this issue in depth in our earlier white paper, A Map for the Future of the Euro: Navigating Political Conflicts (2018).
8. The prospect of this working in practice had been called into question many years earlier when Nicholas Kaldor, of the University of Cambridge, criticised the Werner Plan, a 1970 blueprint for what would one day become the euro. Kaldor cautioned that imposing carefully specified, one-size-fits-all fiscal and monetary policies on diverse nations might result not in convergence, as EMU's champions supposed, but in divergence. Harkening back to Churchill's seminal 1949 speech, he reasoned that political union should precede economic and monetary union in order to form a United States of Europe. In 1971 he wrote: "If the creation of a monetary union and Community control over national budgets generates pressures which lead to a breakdown of the whole system... it will prevent the development of a political union, not promote it." Kaldor's comments foreshadowed not only Friedman's later criticism but elements of what came to pass during the European sovereign debt crisis – and maybe even the subsequent desire for greater national fiscal and political autonomy. This opens a whole new chapter on the euro and populism, to which we will turn in our next white paper.
9. This vision became central to the so-called "convergence criteria" of the Maastricht Treaty. Member states were obliged to exhibit "sound fiscal policies", with debt limited to 60% of GDP and annual deficits to 3% of GDP. However, no constraints regarding countries' balances of payments were imposed. On the other hand, the federal ECB – so often and so importantly described as "supranational" – would pursue a one-size-fits-all monetary policy aimed at a zonal, harmonised headline CPI inflation target of 2%.
10. Fiscally prudent Ireland and Spain were hit as hard as Italy, with its heavy public debt burden, and Greece, with its excessive public debt and deficits (which proved to be considerably larger than stated).
11. We describe these in detail in the Appendix.

Suggested further reading

- Committee for the Study of Economic and Monetary Union: Report on Economic and Monetary Union in the European Community, 1989
- Council and Commission of the European Communities: Report to the Council and the Commission on the Realisation by Stages of Economic and Monetary Union in the Community, 1970
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