EUROPEAN UNEMPLOYMENT BENEFIT SCHEME:

A QUALITATIVE ASSESSMENT

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Abstract / Executive Summary

"European Unemployment Benefit Scheme: A Qualitative Assessment"

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In the recent years, we have witnessed a discussion on whether the Economic and Monetary Union has been prepared to deal with crises that emerge from asymmetric shocks across European countries. Specifically, arguments for and against a possible fiscal union have been brought to the debate. In truth, a wide set of alternative automatic stabilisers can be considered, but we focus here on the potentialities of unemployment as a suitable adjustment variable. Then, trying to materialize a possible unemployment based automatic stabilizer in a concrete solution, we choose to follow closely the one presented in Beblavý et al. (2017), which specifies an European Unemployment Benefit Scheme. The proposal is divided in two fundamentally different options: equivalent variant and genuine one. After defining both alternatives, we perform a qualitative assessment of the strengths and vulnerabilities not only of the general idea but also of detailed alternatives. Issues like subsidiarity, national sovereignty, stabilisation capacity, labour mobility, heterogeneity and harmonization of national unemployment benefit schemes, among others, are assessed. Next, we analyse two kinds of perverse incentives that may arise with these schemes' implementation, namely permanent transfers and institutional moral hazard. Here, we refer mechanisms as experience rating, claw-back, minimum requirements and a trigger as possible options to tackle an unbalanced incentives structure. We finalize making some remarks on the idea that if the equivalent variant may well become viably implemented in the medium term, the genuine one would probably be damaging and negative, not only in economic but also in political terms.

Keywords: Economic and Monetary Union; fiscal union; automatic stabiliser; unemployment; European Unemployment Benefit Scheme; equivalent variant; genuine variant; permanent transfers; institutional moral hazard.

Resumo / Sumário Executivo

"Sistema Europeu de Subsídio de Desemprego: Uma Avaliação Qualitativa"

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Nos anos recentes, assiste-se a uma discussão acerca da capacidade demonstrada pela União Económica e Monetária para lidar com as crises provenientes de choques assimétricos entre os países europeus. Especificamente, têm sido trazidos para o debate argumentos a favor e contra uma possível união orçamental. Na verdade, um leque alargado de estabilizadores automáticos alternativos podem ser considerados, mas aqui focamo-nos nas potencialidades do desemprego como uma variável apropriada para esse ajustamento. Posteriormente, procurando materializar um possível estabilizador automático baseado no desemprego numa solução concreta, escolhemos seguir de perto a solução apresentada em Beblavý et al. (2017), a qual especifica o Sistema Europeu de Subsídio de Desemprego. A proposta divide-se em duas opções fundamentalmente diferentes: uma variante equivalente e uma genuína. Depois de definirmos ambas, levamos a cabo uma análise qualitativa acerca dos pontos fortes e das vulnerabilidades quer do sistema em geral quer das duas alternativas detalhadas. Temas como subsidiariedade, soberania nacional, capacidade de estabilização, mobilidade laboral, heterogeneidade e harmonização dos sistemas de subsídio de desemprego nacionais, entre outros, são abordados. Depois, analisamos dois tipos de incentivos perversos que podem surgir com a implementação destes sistemas, nomeadamente as transferências permanentes e o risco moral institucional. Aqui, referimos mecanismos como 'experience rating', 'claw-back', requerimentos mínimos e um 'trigger' como opções para contrariar uma estrutura de incentivos desequilibrada. Finalizamos com algumas observações sobre a ideia de que se a variante equivalente pode bem ser viavelmente implementada a médio prazo, já a variante genuína seria provavelmente prejudicial e negativa, quer económica quer politicamente.

Palavras-chave: União Económica e Monetária; união orçamental; estabilizador automático; desemprego; Sistema Europeu de Subsídio de Desemprego; variante equivalente; variante genuína; transferências permanentes; risco moral institucional.

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1. The EMU, its architectural fragilities and the way towards a common fiscal capacity

When already a decade has passed since the global financial and economic crisis of 2008, and despite having survived the enormous pressure it faced, it may be said that the Economic and Monetary Union (EMU) was not sufficiently prepared to address robustly all the challenges raised by the consequent sovereign debt crisis of several euro zone members (Sapir & Wolff, 2015; Wren-Lewis, 2013).

In fact, with the introduction of a single currency in the European project, the EMU was built in two blocks: a common monetary policy and differentiated national fiscal policies (Poghosyan, 2016). So, in a currency union, with the disappearance of national monetary policies, member states lost traditional adjustment mechanisms like exchange rate and interest rate definition (De Grauwe, 2003). But, additionally, trying to respond to asymmetric shocks within countries with a single monetary policy can reveal some difficulties in order to deliver the stabilisation capacity that is intended (Beblavý & Lenaerts, 2017).

Even so, at the time of the inception of the EMU, there was a spread believe that, even with less degrees of freedom in economic policy, countries would be able to use national fiscal policies in order to address the economic shocks that their economies may suffer (Pisani-Ferry, 2018). However, with highly indebted sovereign states which are obliged to comply with strict fiscal rules, the scope for the national fiscal policies to efficiently counteract shocks of asymmetric nature was very reduced (Alcidi & Thirion, 2016; Corsetti et al., 2016).

In a first attempt to correct EMU's institutional failure in response to the 2008 crisis, a series of measures were taken to strengthen the EMU's operational framework with new instruments. In terms of policy coordination and enforcement of economic and fiscal rules, we saw the creation of the European Semester and of the Macroeconomic Imbalance Procedure (integrated in legislation like the six-pack, two-pack and fiscal compact). In order to provide stability to sovereigns' spreads crisis, the Outright Monetary Transactions programme was announced by the ECB, and even though it did not come into action, it revealed an enormous efficiency to address the instability focus (Gouveia, 2018). In another perspective, namely to go forward in the ability to properly manage and resolve crisis in European economies without access to financial markets, mechanisms like the European Financial Stabilisation Mechanism and the European Financial Stability Facility were built up, then being converted into a permanent intergovernmental tool, the so called European Stability Mechanism (ESM).

Lastly, trying to break the excessive link between domestic banks' risk and sovereign risk, the Banking Union was put up based on its three constituent pillars: the Single Supervisory Mechanism, the Single Resolution Mechanism and the European Deposit Insurance Scheme[1].

Despite the fact that, as we have seen, important steps have already been taken towards a greater integration and clear strengthening of the EMU's potential for shock absorption, there are more improvements to be explored. For instance, it may be necessary to go further in the field of supranational fiscal policy, seeking to deepen an effective risk-sharing in the EU, in order to promote financial and economic stability and, consequently, social and political cohesion.

Contrary to what one might think, the discussion about the need for a supranational automatic stabilizer isn't recent at all. In the so called MacDougall Report[2] (1977), it already appears the reference to a possible future development of fiscal stabilisation policy. Also Padoa-Schioppa et al. (1987) refers the emergence of stabilisation as one of the fundamental functions of macroeconomic and public policies. Brunnermeier et al. (2016) reminds us that, even earlier, in 1969, the prominent Princeton scholar Peter Kenen[3] had defended that, in order to provide to a currency union the necessary safety valve, a kind of fiscal redistribution scheme is needed to substitute a flexible exchange rate adjustment.

Recently, there's some significant literature supporting this determination to go deeper on the development of supranational fiscal policy. For example, Tabellini (2017) states that: "One of the main lessons of the financial crisis is that, to preserve full financial integration and financial stability, the Euro area needs to build elements of a common fiscal policy". The same author, in 2018, adds that one of the Euro area's fragilities is not having a fiscal stabilisation tool to help monetary policy when interest rates are at the zero lower bound[4]. Obstfeld (2013), in turn, also points the lack that a 'centralized EMU fiscal capacity' does, particularly to contribute to financial stability of banks and to be a possible liquidity supplier in sovereign crisis. Bénassy-Quéré et al. (2018) addresses the importance of having an European fiscal mechanism with power to absorb large economic downturns that affect one or more countries. Farhi & Werning (2017) even consider fiscal unions as optimal risk-sharing arrangements, especially in a currency union context.

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[1] This last pillar, however, has been opposed by several member states and has thus lagged behind in its effective implementation. For further discussions see Bénassy-Quéré et al., 2018; Pisani-Ferry, 2018.
[2] MacDougall et al. (1977).
[3] Kenen (1969).
[4] Tabellini (2018).

However, the need for a fiscal union is far from being consensual even in the academic field. For instance, Gros & Belke (2015) argues that no fiscal union is needed if we completely implement a capital market union and a banking union with a common system of deposit re-insurance in place. In such case, most financial crises' losses will be absorbed by those risk sharing channels that are already foreseen. Beetsma & Bovenberg (1998) claims that, in a case where both fiscal policy discipline and monetary policy commitment are weak, a currency union without a fiscal union may become optimal[5]. Keuschnigg (2012) points that given the significant cultural heterogeneity and different preferences over the scope and size of government activities that characterizes European countries, it's better if fiscal policy is leaved in the realm of national sovereignty.

In reality, the debate about developments on new common fiscal instruments isn't only an academic one, but it's also object of strong discussion within the political arena. Above all, that debate matters because further integration issues, namely decisions about whether to centralize or not to centralize policies, are one of the core topics of the existence of the Union. On the one hand, there are some voices emerging against a 'ever closer union', clearly positioning their selves as anti-federalist, asking for the need to answer to the people's claims in several European countries that are criticizing an European Union which is centralizing in itself all the powers that normally are prerogatives of sovereign national states. This, in a certain way, confirms the popular feeling that decisions that have much impact on their lives are taken by decision-making bodies that are too far away from them, reducing their ability to exercise an acceptable scrutiny. On the other hand, at the political level of the European Union decision-making institutions, there appears to be a desire to advance the discussion about the strengthening of the EMU's institutional framework with a fiscal union. In 2012, the so-called Four Presidents' Report[6] stated that:

> "The smooth functioning of the EMU requires not only the swift and vigorous implementation of the measures already agreed under the reinforced economic governance framework (…), but also a qualitative move towards a fiscal union."[7]

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[5] Although, in this theme of fiscal policy discipline, there have been significant improvements in the EMU institutional design (as we have shown above) and the recent years are likely to be a proof that fiscal rules enforcement brought considerable achievements to EMU resilience over times of crisis.

[6] This report is presented by the President of European Council, the President of the Commission, the President of Eurogroup and the President of ECB.

[7] Van Rompuy et al. (2012).

Three years later, after enough time had passed since the European response to the 2008 crisis and with some important lessons learned, the similarly called Five Presidents' Report[8], in one of the listed steps towards the completion of the EMU by 2025, detailed that:

> "Finally, in case of a very severe crisis, national budgets can become overwhelmed, as was the case in some countries in recent years. In such situations, national fiscal stabilisers might not be enough to absorb the shock and provide the optimal level of economic stabilisation, which in turn can harm the whole euro area. For this reason, it would be important to create in the longer term a euro area-wide fiscal stabilisation function."[9]

Furthermore, in that political report, four guiding principles are laid down for any proposal of automatic stabilizer that may arise: (1) it shouldn't be designed in such a way that leads to permanent transfers between member states; (2) it shouldn't create perverse incentives to abandon efforts on national fiscal policy making and on reforms of national structural weaknesses; (3) it should be created in consistency with the existing EU framework, reinforcing coordination of economic policies; and, finally, (4) it should be focused more on prevention than on crisis resolution (the function of ESM), contributing to strengthen overall economic resilience of the EMU (Juncker et al., 2015).

2. Unemployment as a proper variable for a new automatic stabilizer

Truly, it would be relevant not only to discuss the need to complete the institutional design of the EMU with a proper automatic stabilizer that can empower its fiscal capacity, but also to examine the specific form a possible stabilisation mechanism would take. In the literature, there are some studies about possible solutions to achieve that goal.

Tabellini (2017) explores the idea of Stability Bonds, which would allow the Euro area to manage its intertemporal aggregate demand without having to rely on fiscal policy coordination. A European Fiscal Institute would be created in order to manage this new debt instrument and to function as a Eurozone fiscal policymaker (in a certain way, it would represent an evolution of the current intergovernmental European Stability Mechanism).

Enderlein et al. (2013) presents the solution of a cyclical shock insurance scheme, tied to the output gap. It would function in such a way that the countries contribute to the fund

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[8] This report is presented by the same four president of 2012's one, adding the President of European Parliament.
[9] Juncker et al. (2015).

when their business cycle is performing better than the Eurozone average and receive from the fund when it's performing worse. Being focused only on asymmetric shocks, this proposal is also designed to be a stabilizer across space rather than across time (Spath, 2016). In this work, it's also considered the possibility of having a European debt agency, which would be an instrument through which EMU countries may issue part of its debt – the commonly called 'euro-bonds'.

Gouveia (2018) also lists some other possible mechanisms as an investment protection scheme, through which it can be avoided that relevant investment projects in skills or infrastructures are abandoned in bad economic times; a pan-European investment plan financed by joint borrowing is as well proposed by Claeys et al. (2014); and even an empowered Euro area budget, that can enlarge current own resources and increase spending capacity (Rubio, 2016).

After enumerating this possible alternatives' set, it's important to note that all of them present enormous obstacles and difficulties in practical implementation, both in economic policy terms and in its respective political perception. However, in this chapter, we want to focus our analysis on the potentialities of unemployment as one of the most relevant variables on which to develop a possible automatic stabilisation mechanism. Given this, it would be important to study what are the advantages of choosing unemployment as the adjustment variable in an enhanced fiscal union[10].

In a first glance, it's pertinent to note that unemployment benefits are, by nature, counter-cyclical and also present a high responsiveness to shocks, since they are a first consumption smoother by providing income sources to the unemployed citizen. Moreover, unemployment benefits tend to be applied quickly and automatically (Beblavý & Lenaerts, 2017).

Also, Zandi (2008) shows that unemployment benefits have relatively high multiplier effects, when compared with tax cuts or other expenditures' types[11]. In other perspective, Vetter (2014) refers that unemployment is an economic indicator reasonably easy to measure

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[10] It should be noted that labour market is one of the economy's dimension where culture, uses and tradition are more influent, being probably the most human element of it. Therefore, different countries imply different labour markets, and those differences should not be underestimated or ignored by any new fiscal instrument.

[11] It estimates a multiplier of 1.64 for extended unemployment benefits and only 1 (or less) to tax cuts. However, it's important to point that the literature about multipliers is very much divergent.

regularly and it's also perceived more naturally by the general public when compared, for example, with indicators like the output gap.

Pasimeni (2015) points that, given the fact that in a monetary union countries do not have the exchange rate as an adjustment mechanism and have their fiscal policies highly constrained by fiscal rules, it's very likely that the burden of adjustment will fall on unemployment. More than that, with strong wage rigidities, this tendency is likely to deepen.

In terms of social and political perception, it's also relevant to choose unemployment as the axis of a new step in the integration project, given the importance of this 'dimension' in the daily life of European families (with special impact on the high levels of youth unemployment). Also historically, it's highly useful to have the experience lessons of other countries in these policy areas, like the US systems of common unemployment benefits schemes: Regular Unemployment Compensation Programme, at states level; Emergency Unemployment Compensation, at federal level; and Extended Benefits Scheme, at state and federal level (Alcidi & Thirion, 2017).

Now that we have already listed some advantages of using unemployment as our variable, we need to confirm a determinant characteristic for the feasibility of this mechanism: that the probability of suffering unemployment shocks is similar in the different countries of the EU. Being realistic, it's very difficult to believe that this probability will ever be the same in rich and poor countries, even if some scientific studies point to that. Nevertheless, for the purpose of investigating those probabilities, we take as reference the study performed by Beblavý et al. (2017)[12], in which, not only graphically but overall by different normality tests[13], the normal distribution of short-term and total unemployment shocks across European countries is tested. Indeed, if unemployment shocks are normally distributed it means that all member states will benefit from the scheme with equal probability. It's crucial in political terms not to start a solution of fiscal policy that creates since the beginning a structural disequilibrium between different countries, allowing the existence of chronical net beneficiaries and net contributors.

In Table 1, we present normality test for total unemployment in EU and Euro area in different periods (including and excluding crisis years). In Table 2, we present different

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[12] Beblavý et al. (2017), p. 11 – p. 22.
[13] The normality tests performed are the skewness and kurtosis test and the Shapiro-Wilk test.

member states distributed in groups based on the skewness[14] and kurtosis[15] tests that were performed (crisis years included).

Table 1 – Normality test for total unemployment, EU and Euro area

	Prob>chi^2		Prob>chi^2
EU (96-14)	0.2275	EU (96-08)	0.1464
EU-15 (91-14)	**0.0425**	EU-15 (91-08)	0.1171
EA (98-14)	0.6909	EA (98-08)	0.9477

Data: AMECO

In this table, we can observe two normality tests of the unemployment distributions, one that includes data until 2008 and other until 2014, trying thus to verify in what extent the crisis affected the distribution shape. In analysis, for a significance level of 0.1 (10%), the null hypothesis is not rejected[16] for all the distributions that we have considered (thus meaning that the total unemployment shocks present a normal distribution) with exception of EU-15 (1991-2014), which includes crisis years.

Table 2 – Classification of countries into groups according to the distribution of unemployment rates (Panel A and B)**[17]**

Panel A: Classification based on distribution of short-term unemployment (1990-2014)

	Symmetric distribution	Asymmetric distribution	
		Left-skewed (negative)	Right-skewed (positive)
Normal Tails	BE (-0.32/2.74) FR (0.45/2.04) NL (0.56/2.81) FI (0.14/1.92)		
Flatter Tails		IT (-0.10/1.71)	LU (0.18/1.69)
Thicker Tails			DE (0.93/3.73) LV (1.36/4.52)

Data: Eurostat

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[14] Skewness classification: Symmetric or asymmetric distribution; if asymmetric, left or right-skewed.
[15] Kurtosis classification: Normal tail or non-normal tail; if non-normal, flatter or thicker tail.
[16] In this normality test, the null hypothesis will not be rejected if p-value (prob>chi^2) is higher than significance level (in this case, we consider it as 0.1). If it is lower than the significance level, we reject the null hypothesis.
[17] Between the brackets presented, the first number respects the skewness and the second one respects kurtosis.

Panel B: Classification based on distribution of total unemployment (1980-2014)

	Symmetric distribution	Asymmetric distribution	
		Left-skewed (negative)	Right-skewed (positive)
Normal Tails	BE (0.24/2.12) DE (0.11/2.01) GE (-0.10/2.68) ES (0.13/2.27) IT (0.36/2.32) NL (0.56/3.21) AT (-0.05/2.76) FI (0.79/2.99)		
Flatter Tails		IR (-0.39/1.61) SE (-0.26/1.66)	LU (0.61/2.08) UK (0.25/1.81)
Thicker Tails		FR (-0.74/3.58)	GR (1.96/6.35) PT (1.20/4.05)

Data: AMECO

Source: Beblavý et al. (2017).

In these two panels (for short-term and for total unemployment), we start separating the countries[18] whether the shocks are normally distributed (symmetric distributions with normal tails) or not (various options: flatter tails and left-skewed, flatter tails and right-skewed, thicker tails and left-skewed, thicker tails and right-skewed). Here, we consider the entire period with years of crisis, from 1990 to 2014. For panel A, we observe four countries with normal distribution and other four with non-normal one. Italy (IT) and Luxembourg (LU) have flatter tails (so, presenting no larger shocks) and Denmark and Latvia show a significant difference in skewness compared to the normal distribution. For panel B, we observe eight countries with normal distribution and seven with non-normal one. Ireland (IR), Sweden (SE) and UK have significantly flatter tails, whereas Greece (GR) has significantly thicker tails (which means that it has larger shocks more frequently). Also, Greece and Portugal (PT) present a right-skewed distribution (showing more frequency of positive shocks).

Analysing the results, it's difficult to make clear-cut conclusions, but it may be said that unemployment shocks are normally distributed in the EU, in the Euro area and, at least,

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[18] There are some countries that do not appear in both panels. The authors of the study refer that, in order to cover a sufficiently long period (1980/90 – 2014), it implied that data were not available for some countries and so the analysis was limited to a subset of them (overall EU-15 members).

in half of the countries (as the panels show, it's not obvious which 'type' of countries present a normal distribution)[19]. Regarding this conclusion, it can constitute a positive point to the promotion of risk sharing across member states through unemployment benefit mechanisms. Despite this, even with tests with more robust results than these, it will be difficult to counter a certain suspicion that these probabilities could hardly become similar between the European economies.

3. The idea of an European Unemployment Benefit Scheme and the specification of its possible design

At this point, we have already assessed the emergence of the need to create new mechanisms of fiscal policy to better prepare the EMU to future financial and economic shocks and we also studied the importance of unemployment as one of the most relevant variables of adjustment on the occasion of those crisis. Thus, following this perspective, we will now present in this chapter the specification of a possible model that comes up with a stabilisation mechanism that focuses on unemployment benefits: the European Unemployment Benefit Scheme (EUBS).

In fact, the idea of having a common scheme of unemployment insurance already emerged in ancient studies which the object was "to undertake an analysis of the problems raised by the achievement of EMU taking into account the major changes to be expected by 1980" (Marjolin et al., 1975). After that, there were a significant number of papers that deepen the debate on the need and the design for such a common European automatic stabilizer (as for example, Italianer & Vanheukelen (1993), Dullien (2013), Beblavý & Maselli (2014) and Beblavý et al. (2015b)). Also, we have some literature on the implementation of similar policy solutions in countries as the US and Switzerland (Beblavý et al. (2015a) and O'Leary & Barnow (2016)). Moreover, this is also a political intention previously stated: "Special attention will be paid to the issue of automatic stabilisation through discussions on the possible establishment of an Economic and Monetary Union wide unemployment benefit system as a tool for asymmetric shock absorption at central level"[20].

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[19] Here, it should be reminded that when we aggregate (or across space, EU, or across time, long-term), we tend to obtain a normal distribution. This is the so called 'central limit theorem' and it may well be the main driving force at stake.

[20] (Italian Presidency of the Council of the EU, 2014).

In order to be able to study a specific proposal of EUBS, we choose to follow closely the proposed design in the report from the Center for European Policy Studies commissioned by the European Commission, the Directorate-General for Employment, Social Affairs and Inclusion and the European Parliament (Beblavý et al. (2017))[21].

Broadly defined, a European Unemployment Benefit Scheme could be stated as a supranational, unemployment-based mechanism for automatic stabilisation that can take several forms. Here, we will divide our scheme in two major types: equivalent EUBS and genuine EUBS. The first one only involves financial transfers between the member states and the supranational fund, which is responsible for the management of the EUBS, and it's active only in times of crisis (functioning as a reinsurance scheme). On the contrary, the genuine one contemplates direct financial transfers to the unemployed agents from the supranational fund, being active permanently (no matter if a country is an crisis with unemployment pressure). In a certain way, the genuine option functions as a complete new system of unemployment benefits, because national schemes will be totally adapted to the new settings of genuine system. As we will see, there are a significant number of differences between these two kinds of schemes, not only in its specific design but also in its consequences for several political and economic dimensions. Let us define both equivalent and genuine systems.

3.1 Equivalent EUBS

A generic equivalent system is activated by means of a trigger, which is a condition that indicates when the funds are disbursed from supranational to national level. It's defined[22] by choosing an indicator and a threshold, and when the former at a specific time (t) and country (i) surpasses the latter, the supranational fund pays to the member state the agreed claim.

Pay claim if: $UR_{i,t} - \overline{UR}_{i,t-40,\ldots,t-1} > \tau$,

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[21] Actually, we choose this study about EUBS because it looks one of the most complete works that already have been presented about this issue. It is significantly built on top of other previous studies about EUBS (Beblavý & Maselli (2014), Dolls et al. (2014) and Dullien (2013), among others), but it goes one step forward by completely formalizing one specific proposal of the scheme.

[22] (Beblavý et al., 2017), p. 23.

considering UR as the short-term unemployment rate[23], $\overline{UR}$ as the moving average short-term unemployment rate in the last 40 quarters (and thus, representing the structural level of unemployment)[24] and τ as the cut-off – in percentage points – that depends on the degree of sensitivity to economic shocks of the system.

Then, it emerges the question of how will be financed the supranational fund. For that end, each member state contributes $\varkappa$% of its GDP every quarter, until it cumulates to z% of EU GDP[25], when member states stop contributions to supranational fund. When balance is less than z%, contributions restart (we consider here as base scenario, $\varkappa$ = 0.1% and z = 0.5%[26]).

Basic pay-in$_j$ = $\varkappa$ * GDP$_{i,t}$* C, iff Sum Basic pay-in$_j$ <= z . GDP$_{EU}$

In order to prevent long-term redistribution across member states, we include two mechanisms that link the use of this scheme to the basic pay-in that each member state is due: the experience rating and the claw-back. The first one guarantees that the payments of each country are based on their past experience with unemployment. So, a single coefficient applies to all contributions from a given member state at a given time:

C = 1 + 0.025 * F$_{i,t-40,…,t-1}$,[27]

considering F$_{i,t-40,…,t-1}$ as the absolute frequency that the system was activated during the last 40 quarters for a given member state[28].

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[23] Short-term unemployment rate (ratio of individuals unemployed for less than one year to the labour force's size) is preferred to total unemployment rate (ratio of individuals unemployed to the labour force's size, thus including structural unemployment) for the indicator. This choice is caused by the fact that short-term unemployment rate is less endogenous to national policy options and more concentrated in the recent performance of the economy, being thus more sensitive to the economic cycle – unlike total unemployment which, by including structural unemployment, takes into account unemployment's components which are not the result of the shock which this mechanism is supposed to absorb (see Gouveia (2018), Dullien (2013) and Vetter (2014)).

[24] Actually, it's important to be aware that the use of $\overline{UR}$ may be a very sensitive political topic due to the fact that it will end up making a classification of countries between low and high unemployment. For instance, using real unemployment averages for 2010-2019, although Spain will not trigger the mechanism with 20% of unemployment, Germany will do it (and get the consequent support) with only 5% of unemployment. So, the perception of unfairness that this may generate will most probably culminate in a significant political turmoil.

[25] This z% reserve functions as a buffer for bad economic times.

[26] These values are estimated in Beblavý & Maselli (2014).

[27] So, 0.025 ends up being the marginal impact on the pay-in's experience rating weight of each system's activation.

[28] In Beblavý et al. (2017), it is not clearly specified how the experience rating will function in the first ten years. In Beblavý & Lenaerts (2017), this issue is somewhat addressed, asking if, in fact, the EUBS should start blind to the past performance of each country, but no clear answer is given. However, this would be an important aspect that needs further clarification.

The claw-back assures that a member state cannot be a long-term net beneficiary to the supranational fund and so if the cumulative balance vis-à-vis the latter is bigger than 1% of GDP for more than 3 years, the claw-back is activated for a given country, taking the value of a single coefficient that applies to all contributions:

$C = 2$ (the maximum value, when $F_{i,t-40,\ldots,t-1} = 40$). So, the pay-in is doubled.

Computing the formula for pay-in with extra-clauses:

Basic pay-in$_j = \varkappa * GDP_{i,t} * C = \varkappa * GDP_{i,t} * (1 + 0.025 * F_{i,t-40,\ldots,t-1})$,

with $1 \leq (1 + 0.025 * F_{i,t-40,\ldots,t-1}) \leq 2$ and if $(1 + 0.025 * F_{i,t-40,\ldots,t-1}) = 2$[29], the claw-back is active.

We also need to address the benefits which will be due to the unemployed citizens (and the conditions to receive them) of a country which will obtain funds from the supranational system when the trigger is pulled[30]: the duration – benefits are paid from the beginning of 4th month of unemployment situation to the end of 12th month[31]; the reference wage – the last gross monthly wage; the replacement rate – 50% of the reference wage will be paid out as unemployment benefit; the eligibility rules – only workers who became unemployed after working 3 months of the last 12 are entitled to benefits; capping – unemployment benefit has to be equal or lower than 150% of the average national gross wage.

Additionally, we must also contemplate the possibility of issuing debt to pay negative global balances of the EUBS[32]. In the case where it's possible to borrow, it should be done in financial market; if we design a debt issue prohibition, the achievement of annual balance is only possible with the increase of contributions by member states.

Beblavý et al. (2017) presents four possible alternatives for an equivalent system, specified as in Table 3. One of the most determinant issues on these different proposals is the

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[29] This maximum value 2 applies in the case in which the system was triggered 40 times in the last 40 quarters: thus $C = (1 + 0.025 * F_{i,t-40,\ldots,t-1}) \Leftrightarrow 2 = (1 + 0.025 * F_{i,t-40,\ldots,t-1}) \Leftrightarrow F_{i,t-40,\ldots,t-1} = 1/ 0.025 = 40$. So, we can see that the maximum value of the experience rating coincides with the coefficient of the claw-back, making them in fact substitutes of each other.

[30] Beblavý et al. (2017), p. 55.

[31] Just considering stabilisation purposes, it may make more sense to start paying benefits since the 1st month of unemployment. However, this gap of 3 months is important to take into account frictional or seasonal unemployment, which in a certain period may be high even if the country is in good economic conditions. In the end, this will be much more an issue of labour market reforms than of stabilisation.

[32] To have a clear perspective about the financial sustainability of the system overall, namely how frequently would debt issuing be needed, would be a significant determinant for the political acceptancy of the tool.

distinct cut-off points (0.1, 1, 2), which were chosen to represent several degrees of easiness with which the system will be triggered[33].

Table 3 – Overview of different proposals for equivalent schemes

	V1 – Stormy day	V2 – Rainy day with debt	V3 – Rainy day without debt	V4 – Reinsurance of national UBS
Trigger	$UR_{i,t} - \overline{UR}_{i,t-40,\dots,t-1} >$ 1p.p.	$UR_{i,t} - \overline{UR}_{i,t-40,\dots,t-1} >$ 0.1p.p.	$UR_{i,t} - \overline{UR}_{i,t-40,\dots,t-1} >$ 0.1p.p.	$UR_{i,t} - \overline{UR}_{i,t-40,\dots,t-1} >$ 2p.p.
Experience rating	No	Yes	Yes	Yes
Claw-back	Yes	Yes	Yes	No
Debt-issuing possibility	Yes	Yes	No	No

Source: Beblavý et al. (2017).

In chapter 4, we will perform an analysis of the benefits and weaknesses of this proposed scheme, trying to understand how can it help to improve EMU tools for stabilisation and what kind of obstacles exist to build an EUBS like the one presented here.

3.2 Genuine EUBS

A generic genuine system is continuously in place, needing no trigger for activation. It substitutes entirely the previous national scheme in use. In this case, the supranational fund will be financed directly by the individuals (both workers and employers), contributing with α% (divide equally between workers and employers) of the gross monthly salary (w)[34]:

Basic pay-in = (α /2) * w * C,

with (α /2) defined to be revenue neutral[35] – supposed to vary between 0.35 and 1.36 for the Euro area (Dolls & Lewney, 2017).

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[33] The specific values of the cut-offs were driven from a study based on the frequency that the trigger would be activated during 2000-2014 in EU countries (see Beblavý et al. (2017), p. 32-4).
[34] (Beblavý et al., 2017), p. 36.
[35] Being revenue neutral here means that, on average, the supranational fund will be balanced (approximately, in deficit half of the times and in surplus in the other half).

Once again, in order to prevent long-term redistribution across member states, we include the experience rating and the claw-back, although with different specificities compared with the equivalent ones. In a genuine solution, the experience rating is proposed to be implemented since the beginning. So, a single coefficient applies to all individual pay-ins from a given member state at a given time:

$$C = \frac{\overline{UR}_{i,t-40,\dots,t-1}}{\overline{UR}_{EU,t-40,\dots,t-1}} \,,$$

considering $\overline{UR}$ as the average short-term unemployment rate in the last 40 quarters (of each country and of the EU, respectively)[36]. This ratio will be maintained for 3-year periods in order to avoid permanent changes on the contributions of millions of individuals.

For the claw-back, it will be applied to the member states' governments (and not to the employers and employees) if the cumulative balance vis-à-vis the supranational fund is bigger than 1% of GDP for more than 3 years. This additional contribution is proposed to be 0.2%[37] of the GDP of that country, to be paid annually, until the imbalance returns to the permitted values.

Computing the formula for pay-in with extra-clause:

$$\text{Basic pay-in} = (\alpha /2) * w * C = (\alpha /2) * w *(\frac{\overline{UR}_{i,t-40,\dots,t-1}}{\overline{UR}_{EU,t-40,\dots,t-1}}),$$

with $0 \leq \dfrac{\overline{UR}_{i,t-40,\dots,t-1}}{\overline{UR}_{EU,t-40,\dots,t-1}} \leq \infty$.

Then, as in equivalent scheme, we also need to specify some crucial settings of proposed genuine option. However, as we will see shortly, we have a bunch of alternative specifications of genuine systems. So, here we will consider a kind of baseline situation, which will be the basis of the many possible derivations: the duration – benefits are paid from the beginning of 4th month of unemployment situation to the end of 12th month; the reference wage – the last gross monthly wage; the replacement rate – 50% of the reference wage will be paid out as unemployment benefit; the eligibility rules – only workers who became

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[36] Note that, in this way, we include in the weight both the recent behaviour of each country but also its behaviour relative to the European average.
[37] This 0.2% value is associated with the Stability and Growth Pact rules, where the penalty for the violation of preventive/corrective measures is 0.2%. Also, estimations of average annual gross contributions from the EUBS are between 0.1-0.4% of GDP (Beblavý et al., 2017).

unemployed after working 3 months of the last 12 are entitled to benefits; capping – unemployment benefit has to be equal or lower than 150% of the average national gross wage.

Furthermore, in the genuine scheme, there are two other characteristics that need to be defined carefully[38]. First, we can choose to introduce a mechanism that induces variations in some parameters of the scheme in response to the economic cycle, being able to add 'extended benefits' – it's called cyclical variability[39]. In our baseline option, we do not contemplate the activation of such mechanism. Then, we also have to consider two opposite options that fundamentally define the nature of the chosen genuine scheme: basic vs top-up. In the former case, the supranational fund pays out the benefits to the unemployed person according to predefined replacement rate and duration, being each member state free to be more generous in the amount or in the time extension, but bearing these extra costs – this is our baseline option. In the top-up solution, each unemployed person that is eligible to receive benefits has ensured a determined duration and replacement rate; after that, or the national unemployment scheme is sufficiently generous to cover that costs – and so, the supranational funds plays no role in paying benefits to unemployed citizens –, or the national unemployment scheme is not able to achieve the minimal requirements – and thus, the supranational funds does the missing financial effort to meet determined parameters[40].

In what regards debt-issuing, what applies to the equivalent option can be applied here. We just have to add one detail: in the cases in which to issue debt is forbidden, increasing contributions may be done through special contributions by member states or through temporary increases in individual contributions from each worker and employer.

Beblavý et al. (2017) presents fourteen possible alternatives for a genuine system, specified as in Table 4.

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[38] (Beblavý et al., 2017), p. 55.
[39] US experience with common unemployment benefits schemes greatly inspires this option (see Whittaker & Isaacs, 2014).
[40] In fact, this top-up solution ends up creating a perverse incentive for the member states to be less generous than they would be at the expenses of the supranational fund (Delpla, 2012). Although it asks for fewer contributions, it introduces a race to the bottom dynamic, which may be problematic.

Table 4 – Overview of different proposals for genuine schemes

	Basic or top-up	Duration	Replacement rate (%)	Eligibility	Capping (%)	Cyclical variability	Experience rating	Claw-back	Debt
V5	*Basic*	*M3-M12*	*50*	*3M out of 12M*	*150*	*No*	*Yes*	*Yes*	*Yes*
V6	**Top-up**	M3-M12	50	3M out of 12M	150	No	Yes	Yes	Yes
V7	Basic	**M0-M12**	50	3M out of 12M	150	No	Yes	Yes	Yes
V8	Basic	**M3-M6**	50	3M out of 12M	150	No	Yes	Yes	Yes
V9	Basic	M3-M12	**35**	3M out of 12M	150	No	Yes	Yes	Yes
V10	Basic	M3-M12	**60**	3M out of 12M	150	No	Yes	Yes	Yes
V11	Basic	M3-M12	50	**3M out of 6M**	150	No	Yes	Yes	Yes
V12	Basic	M3-M12	50	**12M out of 24M**	150	No	Yes	Yes	Yes
V13	Basic	M3-M12	50	3M out of 12M	**100**	No	Yes	Yes	Yes
V14	Basic	M3-M12	50	3M out of 12M	**50**	No	Yes	Yes	Yes
V15	Basic	M3-M12	50	3M out of 12M	150	**Yes**	Yes	Yes	Yes
V16	Basic	M3-M12	50	3M out of 12M	150	No	**No**	Yes	Yes
V17	Basic	M3-M12	50	3M out of 12M	150	No	Yes	**No**	Yes
V18	Basic	M3-M12	50	3M out of 12M	150	No	Yes	Yes	**No**

Source: Beblavý et al. (2017).

We can verify in this table that these fourteen different alternatives are quite similar just varying in small details. In fact, from V6 to V18, we have variations of the baseline V5 in relation to the different parameters of the genuine scheme (generally, being presented a more generous option and a less one than the baseline; or, in the case of dichotomous parameters, a no instead of a yes – and vice-versa). In this work, we are not focused in doing a specific

investigation of all the eighteen alternatives presented in this chapter, because it goes beyond our scope of analysis[41]. Although, giving just a first glance on how EUBS compares with national unemployment benefits schemes (NUBS), Figure 1 presents the coverage ratio of NUBS compared with the most generous genuine option presented above in coverage terms (V7)[42].

Figure 1 – Comparison of NUBS' coverage[43] with the one attained by EUBS option in which unemployment benefits begin in M0 (V7)
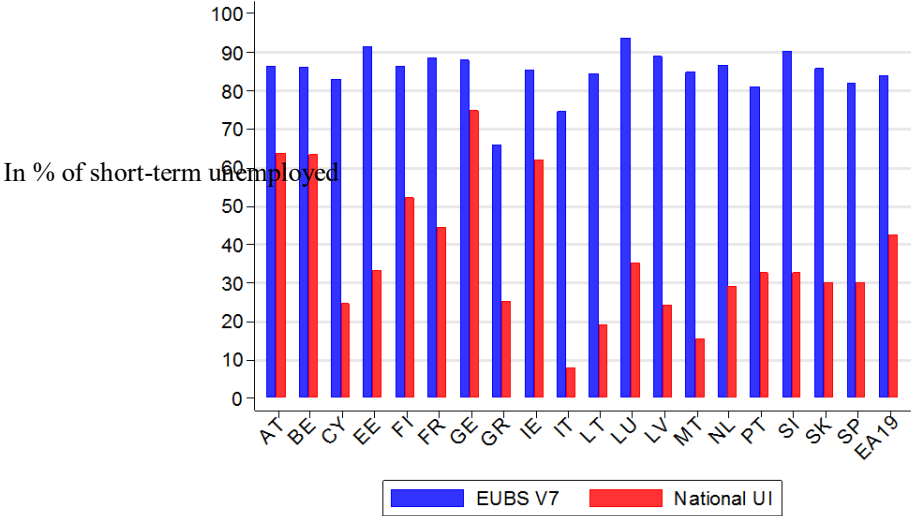
Source: Beblavý & Lenaerts (2017)

As we can observe in Figure 1, putting in place an EUBS, for example, as it is proposed in V7 would mean that NUBS would be significantly enhanced, in this case, for all countries[44]. More than that, according to this study, EUBS would make the coverage of short-term unemployment 45 percentage points higher when considering EA19. As it may be perceived, this would most likely imply a high level of harmonization between different NUBS and also a significant higher amount of contributions by individuals or even member states. As we would see, this raises relevant issues both in economic and political terms which need to be tackled. As in the equivalent section, further evaluations of the advantages and

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[41] A detailed discussion of each alternative is done in Beblavý et al. (2017), p. 71 – 128.
[42] V7 is used to compare with NUBS because, by starting to pay benefits on M0, it reproduces in the most similar way the situation in most NUBS.
[43] It is an average from 1995 to 2013.
[44] However, it should be noted some differences between the NUBS' coverage ratio values presented in figure 1 when compared to the numbers of Table 5. Thus, we must be careful on taking clear cut conclusions on this issue.

limitations of genuine scheme here presented and its contribution to an enhanced common fiscal policy will be done in the next chapter.

4. The strengths and weaknesses of an European Unemployment Benefits Scheme

After having sought to define a concrete model of automatic stabilizer based on unemployment benefits as the adjustment vehicle, it's important to make a careful analysis of the strengths and weaknesses, the opportunities and risks that are created by this proposal to strengthen the EMU instruments. But before we enter in specific evaluation of both equivalent and genuine solutions, let us take a more global perspective in order to make sense not only of the value added that an EUBS can bring but also to the general challenges that will most probably arise if such a tool would become really implemented.

Before we start the concrete assessment, it's relevant to refer an idea from Persson et al. (1997) that, according to the principle of Subsidiarity that was amongst the founding values of the European project, the burden of proof always lies on the side of further integration and centralization of public policies, thus bringing an additional responsibility of 'scrutiny' to any proposal of fiscal union.

For that purpose, we can begin by ascertaining whether the proposed mechanism fulfils the four criteria listed in the Five Presidents' Report – enumerated in Chapter 1 –, which are supposed to limit any discussion about possible new common fiscal tools. So, (1) the requirement that permanent transfers cannot be generated between countries is addressed by the introduction of parameters like the experience rating and the claw-back, as we will see in more detail in the next chapter; (2) the condition that it shouldn't incentive the countries to quit a serious reform agenda on national policy fragilities (namely, here, in labour market policies) may be accomplished if the implementation of the EUBS is effectively supplemented by some form of minimum requirements. In fact, they would be promoted not only on the unemployment benefits side (generosity, coverage) but also in terms of the quality of activation policies within member states (which will be determinant to avoid moral hazard, as we will also see in chapter 5), and even in its supranational coordination[45]; then, (3) although the development of common fiscal policies with the introduction of the EUBS is far from being politically consensual, it's fair to say that it appears as an economically reasonable

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[45] Likely, this will be a demanding political step to be surpassed, since the introduction of minimum requirements will reduce a lot the national labour market policy degrees of freedom.

option, well integrated in a possible desire of increasing the scope of action of the EMU. Also, it may be difficult to contradict that the EUBS is a movement towards having more coordination of policy mechanisms, thus accomplishing one of the goals of the political report cited above; finally, (4) it can also be said about EUBS that is more prevention oriented than a new tool to solve crisis, most of all due to the absence, in the scheme, of any kind of component that would really allow this new mechanism to function as an empowered rescue fund for countries in need.

Equally contributing to the description of the EUBS's potentialities, we have to take in consideration the macroeconomic stabilisation effects that this new mechanism may deliver to the European economies. Gros (2016) and Beblavý & Lenaerts (2017), for example, present three different channels through which that intended stabilisation capacity may function: given that an EUBS may become more generous and may have larger coverage when compared to the national schemes (as Figure 1 supports), it's expected to end up being more counter-cyclical; also, if EUBS is allowed to have deficits at recession times (hoping it's able to accumulate funds in expansion times)[46], it would be able to reallocate resources across time, and so it would also potentiality function as an intertemporal smoothing[47]; and finally, if we have an EUBS that's able to harmonize the different national schemes' conditions, thus allowing the risks and costs of unemployment to be pooled across member states, we may have a spatial smoothing, being able to reallocate resources between countries within the same period[48].

In addition, we should also refer the possibility that an EUBS may have some impact on labour mobility across European borders (by making EUBS benefits portable between countries), which is something normally perceived as good for the EMU given it's a kind of natural adjustment mechanism. As Brunnermeier et al. (2016) puts it, greater labour mobility makes it easier for a monetary union to absorb asymmetric shocks. For instance, Alcidi et al. (2016) studies this issue in depth and concludes that the institution of the EUBS would likely have a marginal and limited impact on labour mobility. Not only due to the very low use of unemployment benefits' exportability in current times, but also because the key barriers for a

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[46] And this may be possible, as we have seen, or because the fund has a starting fund sufficiently big to afford the deficits or because the scheme is able to issue debt.

[47] This kind of stabilisation function is very much useful in situations where we have symmetric or extended downturns.

[48] In this case, this smoothing vehicle is oriented to cover asymmetric shocks in small and medium countries – in fact, there are some doubts that it would be effective in the event of a shock in a major economy (Gros, 2016). Also, it should promote reallocation across countries only inside the business cycle, because the mechanism is not intended to allow long-term redistribution.

higher labour mobility in Europe, which are the language and the imperfect recognition and transferability of qualifications between countries, aren't expected to be solved with the EUBS introduction.

Furthermore, there are some works that points out the fact that an EUBS will probably promote convergence between labour markets (Claeys et al., 2014; Vandenbroucke, 2016). In fact, EUBS will previously require some "significant degree of economic convergence"[49] to be established as a possible automatic stabilizer and it may also end up pushing forward a real convergence of national schemes towards the European schemes, thus guaranteeing a smoother transition between the different schemes. Indeed, in the long term, perhaps the best way to make EUBS a balanced and fair mechanism among countries is to be able to achieve the least possible imbalance between the labour market conditions across member states. More than that, with similar labour market institutions, it's possible that the administrative costs of corporations will be reduced and that its capital will be more efficiently allocated in a context of 'single' European labour market. Also, a more efficient labour market may have positive impacts on the conduction of monetary policy (Claeys et al., 2014).

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[49] (Juncker et al., 2015). Actually, the full quote is quite relevant: "Such a step should be the culmination of a process that requires, as a pre-condition, a significant degree of economic convergence, financial integration and further coordination and pooling of decision-making on national budgets, with commensurate strengthening of democratic accountability." Probably, this may well become a significant obstacle to the introduction of EUBS.

On the other hand, let us now examine some challenges and limitations that EUBS may generally face. Probably one of the biggest obstacles to an EUBS is the huge heterogeneity that characterizes different labour markets in European countries. Claeys et al. (2014) present a comparison between different national unemployment benefits systems, which is reproduced in Table 5, giving us a perspective of that significant heterogeneity.

Table 5 – Heterogeneity of national unemployment benefits scheme

	AT	BE	BU	CR	CY	CZ	DE	ES	FI	FR	GE	GR	HU	IR
Max. duration (months)	12	48	12	15	6	5	48	12	16	36	24	12	3	8
Replacement rate[50] (%)	55	65	60	70	50	65	60	50	45	75	60		60	
Coverage ratio[51] (%)	49	58	23	23	25	36	49	41	56	49	82	29	31	
	IT	LV	LI	LU	MA	NE	PO	PT	RO	SK	SN	SP	SE	UK
Max. duration (months)	14	9	9	12	6	38	12	12	12	6	25	24	14	6
Replacement rate (%)	75	65		80		75		65		50	80	70	80	
Coverage ratio (%)	16	29	29	36			17	41	18	19	28	41	25	33

Source: Claeys et al. (2014), using data from The EU's Mutual Information System on Social Protection (MISSOC) comparative tables for duration and replacement rate and data from the Eurostat's Labour Force Survey for coverage ratio.

As we can observe, the degree of heterogeneity is visible in the considerable distance between the upper and the lower level of duration (from 3 months in Hungary (HU) to 48 months in Belgium (BE) and Denmark (DE)), of replacement rate (from 45% in Finland (FI)[52] to 80% in Luxembourg (LU), Slovenia (SN) and Sweden (SE)) and of coverage ratio (from 16% in Italy (IT) to 82% in Germany (GE)).

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[50] The replacement rate is the unemployment benefit as a percentage of previous wage.
[51] The coverage ratio is the number of short-term unemployed receiving benefits to total number of short-term unemployed (%).
[52] Finland has a particular case since it provides an indefinite unemployment stipend after other benefits have been exhausted (Belgium does the same).

In fact, this heterogeneity may become a challenge to introduce an EUBS because it requires a relevant degree of harmonization of national benefit schemes in order to be able to 'merge' the different schemes (even if, as we will see shortly, this need for harmonization varies between different EUBS options). Therefore, the more harmonization is needed, the higher will be the difficulties not only in political but also in legal and operational terms. The barriers to harmonization are, thus, both from a conceptual and from a technical order.

Actually, one important consideration that should be made about those divergences between the different national unemployment benefits and eligibility conditions is that they most probably reflect the different country preferences, historical political options and even intrinsic economic characteristics. Hence, attempts to harmonize these national schemes will end up reducing the degrees of freedom of each national government to do its own policy choices. Authors like Tabellini (2017) put in question the real desirability of strict harmonization, proper of genuine variants, like the one presented in chapter 3.

And here, it could be useful to look deeper into one crucial issue of EU's nature: sharing sovereignty. In reality, the sovereignty of member states is not just a theoretical, empty concept. It has a fundamental importance, even in the definition of the democratic accountability between the political institutions and the citizens. And, in fact, that sovereignty is in part translated into concrete tools of public policy that are in the jurisdiction of the national governments. When we complement an already existent monetary union with a fiscal union, enforcing the European countries to follow strictly common rules and dispositions in wider public policies dimensions, we are diminishing the effective materialisation of national sovereignty (Keuschnigg, 2012). Truly, this may well be a political will of the supporters of an ever closer union, but it will naturally generate significant social and political tension, which can be solved, but cannot be ignored nor diminished.

However, we should note that, in principle, to be able to have an automatic stabilisation mechanism like EUBS, we need a minimum degree of harmonization which will be fundamental to attain the stabilisation effects that we presented above. But regarding this issue, Beblavý & Lenaerts (2017) presents a study[53] based on backward- and forward-looking simulations that brings some results on the stabilisation behaviour of our scheme. For now, it's relevant to notice that the contribution to stabilisation that the wide number of possible

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[53] Beblavý & Lenaerts (2017), p. 36-47, 92-96

alternatives (18 in total) affords would be limited[54] and the macroeconomic stabilisation effect is in its maximum at the start of the downturn[55]. These findings, particularly the first, may well be used by opponents of fiscal union tools to state that, in the end, it would have been too much political discussion and legal and operational efforts for too small benefits.

Also on stabilisation issues, Enderlein et al. (2013) notes that one fragility of EUBS is that, unlike other alternatives of automatic stabilizers (as the cyclical shock insurance already mentioned), it will only be able to smoothen income from labour, and not from capital, thus reducing its power to provide efficient macroeconomic stabilisation in times of crisis.

Finally, one last potential difficulty that the EUBS's proponents will face when trying to harmonize labour market conditions may be the political and social resistance of national social partners, that used to be closely involved on the negotiations of labour market policies. On the one hand, it may be good news for labour unions in poorer countries if harmonize means converging faster to higher standards of rights. But on the other hand, it may become bad news for national labour unions if these developments of labour market structures significantly reduce their power of bargaining. This is especially relevant to be taken into account given that we know how labour unions normally have a high capacity for social and political mobilization.

Now that we already looked in a general perspective to the pros and cons of this fiscal union tool, we will analyse in more detail the two specific options presented in chapter 3, which were proposed by Beblavý et al. (2017).

Regarding the equivalent variant, we can start by noting that it is a considerable less demanding option than the genuine one. The degree of flexibility that it guarantees to the member states is much higher, given it will not operate in a continuous basis but just when the trigger is pulled. So, it would be a common fiscal tool which will better protect the principle of subsidiarity between countries and the EMU, leaving more freedom to each country to run their own scheme in normal times.

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[54] This may be a consequence of the small scale of the scheme (typically, less than 1% of EU GDP) when compared with the scale of GDP reduction.

[55] In equivalent option, this happens because, with a trigger, payments will be done in the beginning of the crisis when short-term unemployment is high and then they will diminish. In genuine one, due to the continuously operation, the contrast between bad and good times are not so relevant.

Vandenbroucke (2015) states that, in political terms, a reinsurance option, as the equivalent EUBS, will be closer to the idea that a European Social Union should be a 'union of welfare states' rather than a European Welfare State (as, in a certain way, the genuine option may be perceived).

Equally relevant in practical terms, Beblavý & Lenaerts (2017) refers that equivalent schemes will have much fewer legal and operational barriers to be implemented. Legally, it would, in principle, be possible to set up this mechanism within the scope of existing EU treaties, namely the Treaty on the Functioning of the European Union (TFUE)[56], or even if some changes to the treaties are needed, they will be reduced (Gros, 2016).

Also in administrative issues, an equivalent option will be less problematic since it will not have to create any new direct liaison between the individual European citizens and the supranational fund. In times of crisis, the money will be disbursed from the supranational fund to the national governments that then will follow the same path until the money reaches the unemployed person. One observation here is that it's important to guarantee that the governments of each member state really uses the funds that it receives from this supranational fund to pay the agreed unemployment benefits and not to supplement other fiscal needs (an effective control of the funds' destination has to be made – as it's already done in the existent EU funding programmes).

Another positive point of this type of scheme is one more conclusion that the already cited study from Beblavý & Lenaerts (2017) shows: the stabilisation capacity of the equivalent EUBS variants will be bigger than that of the genuine EUBS variants, given that this kind of reinsurance scheme has its activity concentrated in crisis' times, and so it's supposed to be more efficient in providing the immediate consumption's smoothing that economies may need. In fact, one of the most important determinants of the stabilisation impact of an equivalent option and its consequents costs in GDP terms is the trigger.

So, based on the same study, if we choose a 'low' trigger threshold of 0.1 p.p., we would get a GDP stabilisation of 0.21% (when compared to the EA19 GDP level in 2009[57]) with a correspondent gross cost[58] of 0.13% of GDP. Alternatively, if we opt for a 'high'

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[56] This would raise further discussion which will be done in the next chapter.
[57] The percentage difference between the level of GDP in the variant and the baseline (actual historical) value of GDP in 2009.
[58] Total value of benefits paid out over the whole period expressed as a proportion of total GDP over the whole period.

trigger threshold of 1 p.p., we would get a GDP stabilisation of 0.09% (again, when compared to the EA19 GDP level in 2009) with a correspondent gross cost of 0.05% of GDP. Thus, we may conclude that the lower the threshold of the trigger and so the higher respective cost, the more effective will be the intended stabilisation effect (even if, as we have seen above, overall that effect would be very limited).

Considering the information of table 5, we can observe that the proposed duration in equivalent schemes (8 months, from the 4th to 12th) is not particularly generous when compared with the national benefits scheme's duration of nineteen of the twenty-eight countries considered. Therefore, it may well be questioned if a system that, in the end, may bring so few improvements on generosity to the majority of countries worth the political tension it may provoke. Observing the same table, identical remark could be done about the proposed replacement rate (50% of the last gross monthly wage) which could be perceived as too small for a considerable number of countries.

It's also significant to refer that the use of the last gross monthly wage in this proposal is not free of discussion. Actually, its use may open the door to fraud in some countries by artificially inflating that last month. It can be said that this perverse incentive is already present in the national benefits schemes and so we would just assist to a transfer of that situation to a higher level. However, we have to take in consideration that with this new scheme, national governments, in a certain way, will lose the incentive to monitor strictly abuses in this field, given that they will be no longer responsible for paying those unemployment benefits when the trigger is pulled. Hence, this may require further reflection on how to avoid artificial increases in last month salary in a multi-tiered system, where there's a mismatch between the institution that pays the benefits and the institution that controls eligibility conditions.

Moreover, equivalent variants will also be disadvantageous when considering labour mobility. Alcidi et al. (2016) notes that, given the fact that this type of scheme requires in comparison a lower harmonization of national labour market conditions, it would be less likely to promote labour mobility than genuine variants. In fact, the reduced labour mobility that it can contribute to will come via the minimum requirements that may be imposed both to the national benefits scheme (in terms of eligibility conditions and generosity) and to the effectiveness of national activation policies (trying to foster important labour market reforms).

Regarding the genuine variant, our considerations will be in a large extent a kind of reverse situation of the ones performed in relation to the equivalent ones. Firstly, let us note that one positive aspect of this scheme's option is that it will generate a transfers' flow clearer than in the equivalent case, since the supranational fund directly cashes out benefits to any eligible unemployed person. And exactly due to this specific design, it may be expected that a genuine EUBS would be more visible and perceivable by the European citizens, which may have some impact on confidence indicators, even if very limited. Claeys et al. (2014) defends that a genuine scheme may be seen as direct solidarity link between European citizens, thus contributing to a deepening of the social dimension of the European project.

Once again, in what concerns labour mobility, Alcidi et al. (2016) states that genuine option will be more powerful in promoting a higher integration of labour markets across boundaries, even in the context of reduced overall impact that EUBS will have. The cause is that it will have a direct convergent impact on the characteristics' design of the different national schemes whereas in equivalent option that convergence will only be fostered in an indirect way by the minimum requirements' process (Vandenbroucke, 2016).

However, a genuine scheme will be much more demanding than other options. In fact, it is, in a certain way, a proposal of all or nothing, since it would replace the existing national unemployment insurance schemes. Thus, it ends up leaving much less flexibility for countries to decide their own labour market policies, raising problems of subsidiarity principles.

Contrary to the equivalent system, to opt for a genuine one will require a lot of changes to the treaties, which may become a huge legal puzzle. Administratively, it would be needed to create a new mechanism to disburse unemployment funds directly from the EUBS to each unemployed citizen, which is expected to be a challenging logistical barrier. Furthermore, the operational complexity will also be present in the efforts to harmonize national schemes to the degree which is required by the introduction of genuine system.

Also considering here again the study on stabilisation capacity from Beblavý & Lenaerts (2017), let's remind that genuine EUBS stabilisation capacity is lower than equivalent one and that may be because it functions continuously throughout time and so it loses the efficiency in its consumption smoother function given that it spreads its funds between good and bad economic situations. Actually, the major determinants of stabilisation impact of this kind of schemes are characteristics defining the system's generosity and coverage.

Therefore, equally based on the referred study, if we choose a 'less generous' option of paying benefits only between the 3th and the 6th month of unemployment, we would get a GDP stabilisation of 0.03% (when compared to the EA19 GDP level in 2009) with a correspondent gross cost of 0.11% of GDP. Alternatively, if we opt for a 'more generous' option of no waiting period before payment starts, we would get a GDP stabilisation of 0.18% (again, when compared to the EA19 GDP level in 2009) with a correspondent gross cost of 0.43% of GDP[59]. Thus, we may conclude that the more generous the features of the scheme and so the higher respective cost, the more effective will be the intended stabilisation effect (even if, as we have seen above, overall that effect would be very limited).

Truly, the points made above about the comparison of the content of table 5 with the proposed features of the schemes are also valid to the genuine analysis. Additionally, we may say that the two different duration proposals apart of baseline (V7 and V8) will be or less generous for the totality of countries (except for Hungary which also has 3 months of duration) or equally or less generous for 19 out 28 countries (in V7, where duration is 12 months). The same reasoning could be applied to replacement rate (now, we have two more options: V9 with 35% and V10 with 60%). Hence, it can also be asked here if so few generosity improvements really compensate all the efforts that will be needed to put genuine EUBS in place.

Tabellini (2017) defends that an European system of unemployment insurance (of a genuine type), although being symbolically attractive[60], would involve great difficulties and would end up having few economic benefits, because each country is already able to guarantee a direct insurance of its citizens. Also, in the case member states have market access, they should be able to ensure their own insurance against small shocks and fluctuations of business cycles.

One last point is related with the possibility to issue debt. As we can see in table 4, almost all of the eighteen alternatives of a genuine scheme would allow the system to use debt as a way of financing their deficits (with the exception of V18). According to Beblavý & Lenaerts (2017), the genuine variants will tend to have more countries accumulating larger

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[59] This is a positive proof to the conclusion above mentioned that genuine EUBS is less effective in delivering stabilisation when compared to equivalent one. In fact, for a gross cost of 0.43% of GDP it delivers 0.18% of stabilisation, whereas equivalent option only needed 0.13% of GDP as gross cost for a 0.21% of stabilisation.
[60] This symbolic attraction must be understood in the context of the development of the European Pillar of Social Rights.

deficits, above all under the more generous schemes. So, this will be most probably a significant political obstacle to the possible implementation of a genuine EUBS[61].

5. Permanent transfers and institutional moral hazard: a question of incentives

As Brunnermeier et al. (2016) notes it, one of the big concerns of some Northern countries' public opinions about advances in fiscal union is that it may evolve into a 'transfer union', which will end up having chronical net beneficiaries and net contributors (and certainly Northern economies do not expect to be among the permanent recipients). As we would imagine, this may develop a considerable political and social tension that cannot be ignored.

And, in fact, the experience of EU's recent history most likely shows that concerns about the misconduct of Southern countries in some EMU mechanisms and rules enforcement are not unreasonable. In addition, that apparent tension has also some basis in a kind of clash between different purposes that constitute the fundamental treaty of the EU's activity, the TFUE. In its preamble and in several articles, there's a clear statement for the solidarity principles between countries which are proper to EU's spirit; but, at the same time, in article 125, it appears the reference to the idea that EU was not designed to be a union of transfers. Brunnermeier et al. (2016) frames such 'clash' as an opposition between 'Solidarity vs. Liability' or even 'Fiscal Union vs. No-Bailout Clause'. More than that, Begg (2011) points also that, according to some national constitutional law (as in Germany), there are significant doubts that developments on fiscal union have room to go forward.

Therefore, given these considerations, a possible implementation of EUBS will only be politically viable if it addresses the fact that no fiscal union would be allowed to create permanent imbalances between member states. In fact, EUBS is an automatic stabiliser mechanism that has as a consequence in the short-run a certain degree of redistribution across countries in order to absorb asymmetric economic shocks. However, in the long-run, EUBS

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[61] We should have in mind that the crisis of 2008 was transformed for several countries in a crisis of sovereign debt. So, for an EUBS to be politically acceptable, it's fundamental that it does not raise excessive debt concerns. However, despite all the reasonable warnings, it should also be said that to issue debt is to manage short-term imbalances in the supranational fund without having to rely immediately on contributions' increases or on generosity reduction. Thus, in the short-term, debt-issuing option brings both enhanced stabilization and diminished pro-cyclicality.

should have the capacity to enforce country-level fiscal neutrality being able to avoid the referred creation of permanent net contributors and recipients.

Here, there's first an important incentives related issue: permanent transfers. Having already defined their nature, we should investigate how they may possibly emerge. Actually, if permanent transfers occur, they are expected to be from the richer countries (which will have fewer unemployment shocks and thus will have a lower use of EUBS) to the poorer countries (which, on the contrary, will suffer more from unemployment and so will be expected to use more the EUBS)[62]. Hence, a viable EUBS would have to strengthen its structure with any kind of mechanism that corrects the perverse incentive that poorer countries may have to try to take as much benefits as possible from EUBS stabilisation capacity[63].

In that sense, in chapter 3, we already presented two crucial mechanisms that may well be significant in reducing the room for permanent transfers between member states: the experience rating and the claw-back, which will link pay-in with pay-out[64].

As noted by Beblavý & Lenaerts (2017), some important characteristics of the experience rating are to be automatic, non-discretionary and counter-cyclical. The need for our mechanism to be based on a clear and defined rule that is automatically put in place is very much explained in the abundant literature on rules vs. discretion in economic policy[65]. In fact, it could be an important feature to increase the political acceptancy of EUBS by those member states which are afraid that counter-incentive mechanisms based on discretionary decisions may end up harming their economies permanently. Also, the need for counter-cyclicality comes from the intrinsic stabilisation nature that such a mechanism should have. In experience rating, such desire is tried to be fulfilled by considering long-term periods of unemployment behaviour in the mechanism design, in order to smooth eventual changes on

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[62] With high probability, this rough classification between richer and poorer countries will more or less coincide respectively with northern countries (and some eastern countries) and southern countries (and the others eastern countries), which may give some support to the initial worries of public opinions of the contributors' countries.
[63] Truly, it could be argued that such mechanisms are superfluous in an EUBS given the fact that it is an automatic stabiliser based on one of the most important economic variables taken in consideration when public opinion evaluates a government – unemployment. Thus, those mechanisms could end up being redundant because national governments would have a lot of difficulty to survive excessively high unemployment rates and so, that political accountability by national public opinions will be the best guarantee that governments will not try to become permanent net recipients. However, even if this reasoning is true, there are strong legal arguments for the mandatory presence of experience rating and/or claw-back (in fact, from V1 to V18, all variants have at least one of them).
[64] For further descriptions of both mechanisms' design report to chapter 3.
[65] Some examples, even if some of them are specifically related to monetary policy, are Simons (1936), Kydland & Prescott (1977), Barro & Gordon (1983) and Modigliani (1986).

unemployment rates. With this decision, we may be able to avoid intertemporal inconsistency on the application of experience rating, thus also avoiding pro-cyclicality, gradually implementing a counterweight to the perverse incentives above mentioned[66].

In another way, the claw-back mechanism functions more as a secondary mechanism that ensures no long-term imbalances vis-à-vis the supranational fund. As Andor (2014) proposes, clawbacks could "neutralise net transfers ex post" by adjusting future net contributions based on net-transfers' history. It should also be designed to ensure some counter-cyclicality, and for that reason it would only be activated after three years of persistent negative imbalances.

One other significant incentives related issue arises when we focus our analysis in the circumstance that in EUBS there's a multi-tiered level of government being responsible for different tasks on the execution of a single policy. Based on the concept of moral hazard[67], we can articulate a more particular one which is called institutional moral hazard. Vandenbroucke & Luigjes (2016) frames it as a situation in which the governance of a social risk is performed by two government levels while only one of them covers that same risk (which could be, in fact, also a task of the other level).

After we have defined it, let's look to how it may emerge in EUBS reality. Hence, institutional moral hazard may be installed between EU government level, which is responsible to finance directly increases in unemployment benefits, and the national government level, which is responsible to manage activation policies and to implement labour market reforms. So, here, institutional moral hazard could be materialized by having national governments being lax on the effort to activate the unemployed individuals at the same time that they are benefiting from not having to pay immediately for the pecuniary consequences of such attitude (which will be on the supranational side). As Persson & Tabellini (1996) puts it, a cross country risk-sharing solution may reduce the incentives for national governments to enact national policies that decrease national risk, thus creating a permanent and likely unavoidable trade-off between moral hazard and risk-sharing.

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[66] Here, it can be discussed if it makes sense to increase the gradualism of the experience rating implementation by performing a transformation in the coefficient from $F_{i,t-40,\ldots,t-1}$ to $F_{i,t-40,\ldots,t-\beta}$, being $\beta>1$, so lagging even more the payment of the benefits in relation to their reception. Maybe, this would be more appropriate to be able to synchronize better the adjustments in the mechanism with the changes in economic cycles. However, if this new β would not become defined since the beginning and can be discretionarily chosen, it would jeopardize the desire for an automatic mechanism.

[67] Moral hazard occurs when a person takes more risks because someone else bears the costs of those risks. It means that the insured individual can manipulate the liability that the insurer incurs, by influencing the frequency and the importance of the insured risk (Vandenbroucke, 2016).

However, as with permanent transfers, EUBS must be equipped with some different mechanisms that can counteract excessive moral hazard between different levels of government. Here again, both experience rating and claw-back have a crucial role on addressing perverse incentives, by discouraging member states to shift the burden of responsibility to the EUBS. In fact, linking the contributions to the scheme with the frequency of its use or with the likelihood of using it will generate the correct incentives for countries to promote reforms that can reduce the vulnerability of its labour market to asymmetric shocks.

Also, Vandenbroucke & Luigjes (2016) points that one of the best strategies to counteract institutional moral hazard is to introduce EUBS with some minimum requirements (or in the level of generosity and coverage or only in the activation policies' quality, depending on the scheme) that can reduce the scope of national governments to free-ride on a multi-tiered government system. Furthermore, the existence of a trigger in the system (which is proper of the equivalent schemes) may also become a very useful mechanism since it is the guarantee that the system isn't continuously operating, thus implying that member states will suffer the costs of ineffective activation policies when they aren't in a situation in which the trigger is pulled.

In the end, we must be aware that dealing with these incentives' issues in the analysis of a possible common policy tool like EUBS is mainly a question of finding a proper equilibrium to the trade-off between stabilisation capacity and both permanent transfers and institutional moral hazard. To have the former more effective, we will most likely have a higher scope for the perverse incentives to prevail. If we want to reduce as much as possible the latter ones, we may have to be ready to accept a weaker stabilisation tool. Probably, that is a price EUBS should be ready to pay.

6. Final comments

Almost thirty years after Maastricht Treaty was signed, it's interesting to note how much EMU has changed and developed. There's always much debate on whether it has been able to deliver the prosperity and stability which are in the basis of the European integration project. Probably, there were times when the necessary reforms were postponed more than they should and others where the will to have an 'ever closer union' went too far. Despite all

that, it is fair to recognize that a lot have been done in the recent years to strengthen EMU's capacity to deal with several types of shocks and, truly, it has produced some visible results.

After all, focusing on the EMU's development studied here, the hard challenges about the introduction of EUBS will likely be much more in the political than in the economic field. In fact, economically considered, an EUBS with the proper mechanisms to avoid free riding may well be rightly contested for several reasons, but it doesn't look like a complete unreasonable policy. Hence, the decision to go forward with EUBS implementation (being it equivalent or genuine type, which brings different consequences) would be much more dependent on political equilibria among European countries than on very deep economic analysis.

One important aspect that emerged during our work is related with the fact that EUBS is generally presented in the literature as a proposal for common fiscal policy. Actually, that clearly seems to be the case in equivalent scheme, where the tool is focused in performing some economic stabilisation by absorbing shocks in crisis' times. Therefore, equivalent EUBS would emerge as an incremental step on the recent developments in EMU's fiscal framework. On the contrary, in the case of genuine variants, it looks to appear more as a new common social policy than a fiscal one given it has the intention to end up unifying the different national unemployment schemes. This may fairly raise the question of knowing if it's appropriate to present and study equivalent and genuine schemes as a pair of options, given that their structure, consequences and scope are so significantly different.

Currently, with the reflection already elaborated on EUBS, it looks more suitable to invest in the future in a deeper discussion about the feasibility of an equivalent EUBS since it appears not only more robust but also more in line with the current EMU's needs. Furthermore, equivalent variants seem much more politically viable than genuine ones, since its change's scope is much less ambitious and more limited. It's true that, more than acting as an empowered stabilisation tool, a genuine EUBS could give a relevant push to effective convergence of labour markets across European countries. However, with the disposable information, it's doubtful whether such a scheme would bring sufficient benefits for so many costs and so much political discussion.

In the end, what really matters, once again, is to continue reflecting on the EU capacity to address its current challenges, while promoting not only the European project but also each European country on its specificity.

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