

ADEMU

PART B

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1. Excellence

This proposal addresses the Horizon 2020 work programme topic: ***EURO-1-2014: Resilient and sustainable economic and monetary union in Europe***, with a primary focus on the key dimension, *Effective mechanisms of fiscal policy coordination in Europe*, and a secondary focus on the dimension *The impact of macroeconomic and social imbalances on economic stability*. The full structure of the proposal is explained in detail below.

1.1 Objectives

Introduction and Overall Objective

The successive financial and sovereign debt crises that affected large parts of the world economy between 2008 and 2013, together with the deep recession that they brought about, have exposed a number of significant new challenges in the design of appropriate macroeconomic policy. Nowhere are these challenges greater than in the euro area, where weaknesses in the existing institutional architecture – particularly in coordinating and managing the sustainability of member states’ fiscal policy – were evident from the start of the Greek debt crisis from 2011 onwards. The Van Rompuy Report (2012) acknowledged the need for reform, and provided a roadmap for “A more resilient and integrated EMU [that] would buffer euro area countries against external economic shocks, preserve the European model of social cohesion and maintain Europe’s influence at the global level”. But much work remains to be done, at both the academic and institutional levels, before this vision can be realised.

In particular, the project of constructing a resilient and sustainable EMU has the potential to benefit substantially from the major developments in dynamic macroeconomic theory that have taken place over the last three decades. But there remains a gap between the precise challenges faced by the EU, and the current state of academic research. The overarching purpose of ADEMU is to help bridge this gap by setting up a network of eight research groups from leading European academic institutions. The main focus of the project is the fiscal policy architecture of the euro area, both current and potential. It will investigate the means by which more effective **fiscal policy coordination** can advance the goals of (a) long-run **sustainability** of EMU and (b) short-run **resilience** to macroeconomic disturbances, in the context of growing economic **interdependence**. This interdependence demands a particular focus on the empirical relevance and implications of macroeconomic and financial **spillovers** and **imbalances** between the euro area states. In addition to these theoretical and empirical dimensions to institutional reform, ADEMU will give due focus to **policy implementation** – specifically the legal and political issues associated with strengthening EMU.

To summarise: *The Overall Objective of ADEMU is to provide a detailed analysis of fiscal policy as currently practised in the EU/euro area, and to propose credible institutional innovations at the union level that will reduce countries’ short-run economic vulnerability and improve the long-run sustainability of EMU.*

Overview of structure

The proposal is organised into six work packages (labelled WP1 to WP6). Of these, WP1 to WP4 are of relevance to the Excellence component of the proposal, whilst WP5 and WP6 are addressed in the Impact and Implementation sections respectively. We now explain the proposal’s detailed scientific objectives, and how these relate to the division among work packages.

Each of WP1 to WP4 is associated with what we label a Main Objective, targeted at a key aspect of the fiscal policy challenge that the EU currently faces. To achieve greater clarity, we then identify a small number of specific Objectives that will be pursued within each of the four work packages.

Detailed objectives

In this subsection we specify and describe, in turn, the detailed objectives associated with each of WP1 to WP4. A fuller explanation of the concepts and approaches used is contained in section 1.3 below.

WP1

Main Objective 1: *To conduct a rigorous investigation of risks to the long-run sustainability of EMU, and to develop detailed institutional proposals aimed at mitigating these risks.*

The long-run sustainability of EMU faces two important threats. The first is the risk of public debt crises: that public indebtedness within a subset of EMU countries will become sufficiently great as to threaten the commitment and ability of euro area policymakers to moderate inflation. The second is the existential risk of union break-up: that one or more countries will decide it is no longer in their interest(s) to remain a part of EMU. Our aim in WP1 is to develop institutional proposals that will help ensure sustainability in both of these two forms.

The first specific objective for WP1 focuses on sustainability in the first sense. In particular, it addresses the crisis episodes that result when public debt levels cannot be sustained:

*Objective 1.1: To clarify the determinants of **sovereign debt crises**, to develop new indicators that could be used to assess the risk of such crises occurring, and to devise new strategies for reducing this risk.*

The second objective retains focus on the sustainability of public debt, but addresses the longer-term issue of how public debt levels can be kept manageable:

*Objective 1.2: To devise credible rules and strategies for **sustainable public debt management** appropriate to the institutional and demographic characteristics of the EU/euro area.*

The final objective for the research in WP1 relates to the construction of sustainable institutions to manage fiscal risk at the union level. Sustainability here is in the second sense, of ensuring that continued membership of the monetary union itself remains advantageous to all countries:

*Objective 1.3: To provide detailed institutional proposals for optimal **fiscal risk-sharing** among EMU member states, subject to the constraint that participation cannot be enforced, and to contrast these proposals with the existing institutional framework (e.g. the ESM).*

WP2

***Main Objective 2:** To assess the short-run stabilising potential of alternative approaches to conducting fiscal policy in a currency union, so as to improve **resilience** to macroeconomic shocks.*

In addition to the problem of long-run sustainability, a crucial question for institutional reform in the EU is how best to design short-run stabilisation policy, and in particular what role fiscal policy has to play in building macroeconomic resilience. For the purposes of the proposal we distinguish alternative fiscal policy strategies along two dimensions. The first of these is coordinated versus uncoordinated policy, which is clearly a relevant distinction for understanding the potential benefits from improved institutional design. The second is the traditional distinction between ‘active’ and ‘passive’ – or ‘discretionary’ and ‘automatic’ – fiscal policy: the wide variation in social welfare and labour market policies across European states makes it crucial to understand how far automatic stabilisers will affect the resilience of different economies to macroeconomic shocks.

The first specific objective for WP2 addresses the merits of coordinated fiscal policy:

*Objective 2.1: To determine the most appropriate forms of macroeconomic **policy coordination** among EU and euro area countries, and to quantify the risks associated with uncoordinated policymaking.*

The second objective is of relevance to an important aspect of discretionary fiscal policy:

*Objective 2.2: To provide an empirical assessment of the **multipliers associated with active fiscal policy**, and to clarify the theoretical channels through which these multipliers work.*

The third objective then focuses on the extent of automatic stabilisation:

*Objective 2.3: To explore the theoretical channels through which **social insurance and labour market policy** can serve as automatic stabilising – or destabilising – devices.*

WP3

Main Objective 3: *To develop new understanding of the fiscal policy implications of cross-border economic interdependence within the EU, particularly in the form of spillovers and imbalances associated with macroeconomic and financial variables.*

Clearly the appropriate design of fiscal policy institutions depends critically on the nature of interdependence among EU and euro area economies. The research in WP3 seeks to clarify two distinct dimensions to this interdependence. The first is the spillover effects between member states that are caused by shocks to fiscal and financial variables: clearly such spillovers affect the benefits from improved policy coordination in the EU. The second dimension is the role of international imbalances in macroeconomic and financial variables caused by asymmetric patterns of interdependence. The extent to which these imbalances have contributed to recent macroeconomic instability, and how far mechanisms should seek to control them, remains an important question. This is particularly true of imbalances in the financial and banking sector, which played a very significant role in the recent deep recessions suffered by Ireland, Spain, Cyprus and other EU states.

The two objectives for WP3 address these two dimensions in turn:

*Objective 3.1: To provide new evidence on the cross-border **spillover effects** of fiscal and financial shocks in the euro area, to understand exactly how these shocks propagate from one country to another, and to explore the implications of this for the conduct of fiscal policy in EU countries.*

*Objective 3.2: To assess the role of **macroeconomic and financial imbalances** in the recent crisis, to analyse the existing institutional mechanisms for controlling such imbalances (in particular the SGP, MIP and EIP), and to consider strategies for their effective improvement, including reform of the European banking sector.*

WP4

Main Objective 4 (WP4): *To assess the practical hurdles associated with **implementing** institutional reforms for the better management of fiscal policy within the EU, with a particular focus on the legal and political constraints that alternative proposals may face.*

Significant redesigns of the European fiscal policy architecture cannot be considered in isolation from the legal and political constraints that are present at the EU and national level. The research in WP4 brings these issues to the fore, ensuring that ADEMU will provide insights at all levels of the reform process, from analysis to implementation.

*Objective 4.1: To identify the **legal and constitutional challenges** posed at both a European and national level by recent institutional innovations (including the Fiscal Compact, ESM Treaty and SSM), and to identify similar challenges and potential loopholes associated with the proposals made as part of the ADEMU project, which will benefit from having a critical legal perspective.*

*Objective 4.2: To explore the **political economy** interactions between democratic elections and the ease with which fiscal sustainability can be achieved. More generally, to analyze the socio-political challenges that the fiscal and financial governance of EMU faces and the ADEMU proposals should account for.*

Objective 4.3: To examine experimentally the viability of specific theoretical models and policy proposals considered under the ADEMU project.

1.2. Relation to the work programme

Overview

The proposal relates to the work programme topic *EURO-1-2014: Resilient and sustainable economic and monetary union in Europe*, with a principal focus on key dimension 1 of this call: *Effective mechanisms of fiscal policy coordination in Europe*. The analytical challenges raised in this part of the call are addressed in WP1 and WP2 of the proposal, whilst WP4 analyses relevant aspects of policy implementation. Our aim is that ADEMU will conduct comprehensive research across all areas of relevance to reforming the fiscal architecture of EMU. For this reason we include an additional, secondary focus on key dimension 3 of the call: *The impact of macroeconomic and social imbalances on economic stability*. This is addressed in WP3 of the proposal.

The next subsection explains in detail each of the components of the proposed project, and the manner in which they relate to key dimension 1 of the call (part (a)) and key dimension 3 of the call (part (b)).

Specific challenges addressed

(a). Effective mechanisms of fiscal policy coordination in the EU

The main theme of the call is the need to complete the process of economic and monetary integration in Europe, along the lines proposed by the Van Rompuy Report. In order to achieve this, improved institutional mechanisms for fiscal policy coordination are needed. This is the subject of key dimension 1 of the call, and is the principal focus of the ADEMU proposal. In each of WP1 to WP3, the proposal incorporates a detailed economic analysis of existing institutions for conducting fiscal policy (both at the union level and nationally), and a focus on the benefits deriving from alternative institutional arrangements.

Sovereign crisis and public debt

The interrelationships between monetary, financial and fiscal crises are multiple and complex. As the recent European sovereign crises have demonstrated, excessive private-sector risk may be a key factor in exacerbating unsustainable sovereign debt dynamics, for instance through public bailouts of private-sector financial institutions, or the impact of crisis-induced recession on public finances. In order to address comprehensively the call's requirement for the problem of fiscal sustainability to be understood, it is vital to develop a rich understanding of crisis dynamics. This will be pursued under Objective 1.1.

Work led by Giancarlo Corsetti will conduct a comparative study of the dynamics of recent monetary, financial and fiscal crises in the euro area – including both the 2008–13 crisis and the 1992–3 ERM crisis – with a particular focus on the role played by weaknesses in the institutional framework in worsening outcomes. By placing explicit focus on the evolution of the institutional environment over the course of the latest crisis, this project can help address the question posed in the call: to what extent the stabilisation mechanisms already put in place form a sufficient framework to achieve long-term sustainability and stabilisation. In addition, and consistent with the call's requirement that the problem of sustainability should be studied by comparison with other major world economies, the project will compare the two European crises mentioned above with the Japanese crisis of the early 1990s and the East Asian crisis of 1997–8. This comparison will allow for easier identification of the aspects of crisis response that are more challenging in a monetary union with no major centralised fiscal authority.

Another component of this project, led by Luca Fornaro, will address the interrelationship between crises and inequality. This is important foundational work in understanding the benefits to improved debt sustainability: whilst many studies have investigated the aggregate implications of financial crises, their impact on inequality has remained largely unexplored. Given the potential role played by rising inequality in eroding consensus on the benefits of monetary union, this research is addressed to the call's emphasis on political feasibility. In particular, it will contribute to a fuller understanding of the potential political consequences if mechanisms for ensuring debt sustainability remain inadequate at the European level.

Given the key interrelationships between crisis and debt sustainability, an important practical consideration for the design of improved EMU institutions is the manner in which public-sector risk should be identified and assessed. Work led by Jürgen von Hagen will address the call's requirement to consider the practical aspects of fiscal supervision in the EU. It aims at developing an analytical approach to the assessment of risk in public sector balance sheets. In the business world, balance sheets are extensively used to measure and evaluate risk, in particular by factoring in the pricing of assets and liabilities. Balance sheet stress tests, for instance, make extensive use of such models to devise risk-management strategies. But there are no comparable developments of analogous instruments in the context of public finances. This component of the project would aim at precisely such instruments, developing balance-sheet assessments of the risk of sovereign debt crisis. It would devise model-based, flexible frameworks to assess the riskiness of public sector balance sheets, providing a rigorous analytical scheme that could be used for practical decision making at the Union level.

Research led by Pedro Teles will build on this theme to consider the specific possibility that sovereign debt crises may have a 'self-fulfilling', belief-driven component, complicating a standard risk assessment. It may

well be that for some countries default risk is high because interest rates are high, but interest rates are high because default risk is high. Designing mechanisms to break this cycle will be an important challenge if the problem of fiscal sustainability in the EU, central to the call, is to be resolved. The main candidate mechanism is a monetary backstop for sovereign debt, provided by the central bank: in this regard the separation between monetary and fiscal policy is not clear-cut. Addressing the call's request for the problem of sustainability in the EU to be treated in comparison with other world economies, the research will focus on the differences between the role of a monetary backstop in a currency union, and its role in countries with separate currencies. It will additionally provide a specific assessment of the benefits of lending policies of the sort announced by the ECB in 2012.

A final dimension to ADEMU's pursuit of Objective 1.1, led by Robert Ulbricht and Christian Hellwig, addresses the more fundamental question of the origins of financial and sovereign debt crises – and in particular the role of uncertainty and incomplete information in sustaining financial distress and asset mispricing (relative to fundamental value). By clarifying the basic mechanisms through which uncertainty affects financial variables – including credit supply and asset prices – this frontier-level research will enable a deeper fundamental understanding of the destabilising loops between expectations, policies and macroeconomic outcomes. Hence it has the potential to provide important new considerations for the designing of effective fiscal stabilisation at the Union level.

Fiscal consolidation and public debt management

Objective 1.2 of ADEMU is concerned with ensuring sustainable long-run debt management at the Union level, thereby mitigating the risk of sovereign debt crises occurring in the first place. Clearly this relates directly to the problem of fiscal sustainability in the EU, central to key dimension 1 of the call. In pursuit of this objective, a number of projects will consider appropriate rules and institutions for managing European sovereign debt over the long term.

First, work led by Giancarlo Corsetti will explore a potential tension between the long-run and short-run objectives highlighted in the call, and will suggest practical measures for addressing it. When long-run debt sustainability is pursued through economic reforms that raise taxes and reduce public spending, there is an implicit transfer of wealth from current to future generations. The reduced wealth of current generations is likely to contract their consumption – potentially to the detriment of the effective short-run stabilisation of the economy. Hence sustainability and stabilisation may come into conflict with one another. Addressing this conflict is a vital challenge in arriving at the comprehensive and coherent vision for reforming the European fiscal policy architecture that the call demands. The proposed work will consider how fiscal policy can be used in a manner that stabilises current demand, mitigating the negative wealth effects of economic reforms that are geared towards fiscal sustainability. In particular, it will consider the scope for reforms that reduce income and employment uncertainty at the individual level, providing the necessary confidence for private-sector consumption to be sustained.

This aspect of the project also responds to the call's request for the practical aspects of fiscal policy coordination and fiscal rules to be considered. It will aim at formulating a workable set of norms and standards for running fiscal policy within EU states, so as to reduce uncertainty about future fiscal policy, potentially stimulating consumption, for the reasons just mentioned. In particular it will address the call's request for an assessment of the existing mechanisms for fiscal coordination within the EU, considering the extent to which these could benefit from institutionalising short-run stabilisation as a means to ease the burden of achieving sustainability.

Having addressed this tension between long-run and short-run objectives, the project will conduct a detailed analysis of two of the central questions of debt sustainability: what is the appropriate long-term debt level for countries to pursue, and at what rate should it be targeted? Clarity on this issue is clearly essential to resolving the main problem of fiscal sustainability highlighted in the call. ADEMU will build on the existing literature in two important regards. First, research led by Piero Gottardi will investigate the role played by public debt in enabling households to self-insure, as a means to protect themselves against precisely the sort of income and employment risk just discussed. Household income risk in the absence of perfect insurance markets is at the heart of modern understandings of consumption and wealth dynamics: it provides a strong incentive for consumers to accumulate assets, so as to insulate themselves against adverse outcomes. This

matters for optimal debt levels, because the total stock of assets available to the private sector will affect the extent to which this partial form of insurance is available to households. In particular, it is possible that a positive stock of public debt is in the public interest: this would contrast with the usual result from complete-markets models in which optimal government debt levels should be negative.

Related research, led by Charles Brendon, will address the appropriate speed of debt reduction in EU economies. It will place particular focus on the appropriate way to think about designing long-run government policy commitments (such as the commitment to future tax and expenditure policies), responding to the call's requirement for practical institutional challenges to be given due consideration. Specifically, it will assume that debt-management institutions at the EU level cannot be designed in a time-inconsistent manner, applying instead a novel concept of 'time-consistent institutional design'. This ensures that long-term institutions are designed in a way that is meaningfully optimal, but also a plausible product of political systems in which past decisions are open to challenge.

The political and cultural context of enforcing long-term fiscal discipline is further explored in work led by Giancarlo Corsetti. Political support for debt service on the part of sovereigns is likely to depend on the share of the population that relies on accumulated wealth for its annual income. In the European context, a key role is bound to be played by the rapidly ageing population, potentially weakening support for one-off measures to reduce debt overhang. But this equilibrium has economic costs: placing a high debt service burden on future generations may, for instance, reduce human capital accumulation. This research will consider how policy design can account for such mechanisms, correcting social inefficiencies that may otherwise be associated with high levels of public liabilities.

A final, crucial consideration for any comprehensive understanding of long-run fiscal sustainability in the context of EMU – as demanded by the call – is the interplay between national debt stabilisation and monetary union. Work led by Pat Kehoe and Marco Bassetto will explore the constraints and challenges for long-run sustainability that are particular to the euro zone in this regard. Research will focus on two particular features that complicate debt management in currency unions. The first is that devaluations and inflation cannot be relied upon to reduce the burden of public debt in the same fashion as when monetary policy is autonomous. The second is the risk that countries forced to endure deflation in order to regain international competitiveness will see the real value of their public debt grow, potentially lengthening the painful austerity episode. ADEMU research will look at the implications of both of these considerations for the design of Union-level debt stabilisation mechanisms – the central focus of the call.

Fiscal risk-sharing

Objective 1.3 of WP1 turns to the means by which fiscal risk can be better shared among EU states. The main idea here is that such risk-sharing, if successful, will improve the sustainability of all member states' finances, by improving countries' resilience to asymmetric shocks. It is the part of the ADEMU project that responds to the call's request for an exploration of alternative models for a fiscal union in Europe.

A major part of Objective 1.3 is to analyse the optimal design of a Financial Stability Fund (FSF), which would allow countries within EMU to manage their expenditure needs through a form of mutual insurance, rather than being forced to respond to unexpected economic disturbances through conventional debt accumulation. As the Van Rompuy Report acknowledges, and as highlighted in the call, there is a need for a 'shock-absorbing' mechanism at the Union level to prevent asymmetric shocks from generating long-term unsustainability in member states' public finances. With a common monetary policy and no large fiscal capacity at the Union level, mutual debt insurance provides an innovative way to achieve this. The idea is that countries' outstanding liabilities would be made contingent on the fiscal stress that they presently face, with mutualisation thus reducing sustainability risk in those states whose current expenditure needs are high.

As in any insurance scheme, there is of course a moral hazard problem associated with an FSF: some form of conditionality may need to be associated with insurance provision. This is acknowledged explicitly in the Van Rompuy Report, and will be given central prominence in the ADEMU analysis. In addition, a realistic FSF cannot expect countries' participation to be compulsory, and this limits the total quantity of debt that can plausibly be mutualised. Unidirectional and permanent transfers are clearly not a feasible option. By considering both of these factors, the aim is to ensure that an appropriately designed FSF is politically

feasible: struggling countries could not be portrayed as receiving unconditional transfers, and by design it would be in the interest of all states to participate, and to continue participating, at all times. Hence the project grants central prominence to the practical questions of implementability highlighted in the call. Political feasibility also motivates the proposal's specific focus on relatively simple rules that will implement a 'near-optimal' FSF, and on a consideration of the political economy of the governance of such a fund. Consistent with the requirements of the call, the project will additionally consider the institutional structure of risk-sharing that has emerged from the recent crisis, assessing whether the separation of funds between 'crisis management' (ESM) and broader risk sharing is appropriate. The Van Rompuy Report endorses such a separation, but the economic justification for it remains somewhat unclear.

In order to provide the required comprehensive analysis of the benefits of fiscal risk-sharing in EMU, research in this area will again place explicit focus on the interaction between reformed fiscal institutions and monetary union. In principle fiscal risk-sharing should be of benefit to all EU countries, regardless of their membership of the euro-zone: it offers beneficial insurance against adverse domestic economic developments. But members of a currency union stand to benefit more extensively from the scheme, as they do not have access to domestic monetary policy as an alternative device in the face of asymmetric shocks. Work led by Marek Kapička will analyse the specific gains to risk-sharing on the part of currency union members. This makes an important contribution to the institutional design problem that is central to the call, as it allows a more informed consideration of whether a fiscal union is best pursued at the EU level, or exclusively among euro area states.

In addition to long-term mechanisms for addressing debt sustainability – of the FSF type – a second form of policy instrument considered under Objective 1.3 of WP1 is the mutualisation of short-term debt in the form of 'Eurobills'. This provides an alternative – though potentially complementary – model of risk-sharing to an FSF, again meeting the call's request for a variety of models of fiscal union to be considered. Building on recent theoretical developments in the asset pricing literature, Christian Hellwig will lead work that explores the benefits of mutualising short-term public debt in Europe. If the provision of liquidity on short-term debt brings countries' borrowing costs closer in line with their fundamental risks – which is consistent with the presence of information frictions in debt markets – then there need not be a trade-off between liquidity provision and fiscal discipline. This makes Eurobills a plausible mechanism for meeting the call's twin objectives: effective economic stabilisation and long-term sustainability.

Macroeconomic policy coordination

WP2 of the ADEMU project is concerned with the shorter-term question: how to construct coordinated stabilisation mechanisms for improving the resilience of EMU in the face of macroeconomic shocks? The Van Rompuy Report draws a distinction between two alternative approaches for achieving this: a 'macroeconomic' approach, where the evolution of the economic cycle governs coordinated contributions from, and disbursements to, national budgets, and a 'microeconomic' approach based on the provision of funding for more specific social insurance objectives, such as unemployment support. The aim of ADEMU is to provide a comprehensive assessment of these alternatives. Provisional work under Objective 2.1 will first conduct a comprehensive assessment of the benefits from macroeconomic policy coordination in delivering improved resilience, whilst Objectives 2.2 and 2.3 address relevant factors for understanding the two alternative mechanisms for shock-absorption.

Under Objective 2.1, research is focused in particular on the benefits from improved international coordination of fiscal policy, addressing the deficiencies in existing mechanisms highlighted in the call.

To this end, research led by Gernot Müller will revisit applied New Keynesian analyses of the appropriate form of fiscal policy coordination within the EMU, taking particular account of lessons imparted by the recent crisis. In order to assess the potential stabilising effects of fiscal policy coordination, as the call requires, it is important to allow for the possibility that the stabilising role of monetary policy may be constrained in adverse economic circumstances by the zero lower bound. In this event the gains from fiscal policy coordination are far greater than in 'normal' times, since a collective fiscal expansion on the part of member governments is the only way to stabilise output at full capacity. Pre-crisis analyses of fiscal policy within the union suggested that its role was limited to insulating countries against asymmetric shocks, and hence may have under-stated the appropriate scope for mechanisms to improve coordination. This research

will add an understanding of the ‘active’ role that a fiscal union could play in combating adverse macroeconomic developments within the EU, complementing the more ‘passive’ mechanisms for mutualising country-specific risk that are investigated as part of Objective 1.3. In this regard it helps meet the call’s requirement for research that will provide a comprehensive understanding of the different functions a fiscal union could fulfil.

In addition to the coordination of fiscal expenditure policy, tax policy coordination is a vital consideration for governments seeking to stabilise public debt. Although this topic falls more directly under key dimension 2 of the call (‘Fair and sustainable taxation’), its inclusion in the ADEMU project will allow a more comprehensive articulation of the scope and purpose of a fiscal union in Europe. Work led by Pedro Teles will explore the factors that motivate countries to compete with one another in setting taxes, and in particular the extent to which fiscal insurance arrangements – of the type analysed under Objective 1.3 – can be used to incentivise countries not to pursue ‘beggar-thy-neighbour’ strategies. In this regard the work will deepen understanding of the practical devices that can be used to enhance fiscal policy coordination, consistent with the call’s emphasis on political feasibility.

A final piece of research under Objective 2.1, led by Pat Kehoe, considers the benefits to countries in a currency union of coordinating policy instruments beyond the conventional devices of fiscal expenditure and taxation. Of particular relevance in the wake of recent experience is the coordination of banking policy. A major reason for the asymmetric macroeconomic experiences among euro area states during the recent recession was the variable size and stability of their banking sectors. The failure of private-sector banks in Ireland, Spain and Cyprus in particular played a huge role in the deep recessions that these countries experienced. For this reason measures that improve financial stability are integral to ensuring macroeconomic resilience and fiscal sustainability, and should be viewed as necessary preconditions for a viable fiscal union of the sort envisaged by the call. But banks are highly internationally mobile, and therefore can escape from national policies that restrict their actions unless such actions are appropriately coordinated. Research will shed light on the mechanisms that can achieve this coordination.

Fiscal policy multipliers

There remains an active debate among macroeconomists about the size of the multipliers associated with discretionary fiscal policy, and the theoretical channels through which they operate. In order to provide a comprehensive technical assessment of the benefits derived from improved fiscal policy coordination in Europe, ADEMU will provide frontier research that deepens our understanding of the multipliers both empirically and theoretically. This work falls under Objective 2.2 above, and will provide foundational understanding of fundamental relevance to the institutional design challenge that the call highlights. The size of the multipliers is of particular relevance to the benefits resulting from coordinating discretionary fiscal expenditure policies among EMU states, and hence in understanding the first, ‘macroeconomic’ approach to designing an EMU stabilisation mechanism as set out in the Van Rompuy Report.

The first line of ADEMU research in this area is empirical, focused on some of the many open questions regarding fiscal multipliers: are the multipliers positive? Are they greater than one? Does government expenditure crowd in private consumption, or crowd it out? How do the values of the multipliers vary in booms as against recessions? All of these questions are of first-order importance to understanding the appropriate form that should be taken by deeper EMU fiscal cooperation.

A first strand to this work, led by Alban Moura and Patrick Fève, will consider potential biases that may have affected past estimates of the multipliers, and provide means to reconcile the vast range of such estimates that exist in the literature. This research will first reconsider the appropriate methods for identifying fiscal policy shocks in reduced-form (SVAR) analyses, investigating whether conventional approaches have been biased by failing to account fully for the evolution of new knowledge about future economic conditions and government responses to it. It will then aim to provide a coherent theoretical account for the wide range of estimated multipliers in the literature, based on the observation that the estimation procedure behind these results does not exploit key structural interactions present in widely-used macroeconomic (DSGE) models. It will provide estimates for the multipliers in the euro area based on an appropriately-estimated version of such a model. Given the extent of uncertainty about the multipliers that remains, work that is able to reconcile

these estimates will be of first-order relevance to the design of a fiscal union in Europe – allowing a clear view of the role discretionary policy ought to play.

The joint focus of the call on fiscal sustainability and macroeconomic stabilisation, together with ongoing austerity policies in a number of heavily indebted European countries, justifies a specific focus in the ADEMU project on the size of multipliers when public expenditure is being reduced. In foundational work that complements strongly the research led by Giancarlo Corsetti under Objective 1.2, Evi Pappa and co-authors will consider differences in the size of the fiscal multipliers depending on the precise component of expenditure that is being reduced. Are all components equally harmful in reducing demand, or are some ‘levers’ stronger in their effects than others? This is an important practical consideration for the design of European fiscal policy, but one on which remarkably little research has been conducted to date. In light of the importance placed by the call on the social and cultural implications of enforcing fiscal discipline, this aspect of the project will give extensive focus to the unemployment losses from fiscal contractions, as distinct from the output losses that are the principal focus of most analyses of the multiplier.

A comprehensive analysis of the fiscal multipliers requires not just empirical knowledge of their magnitudes, but also a deep theoretical understanding of the channels through which they operate. Clearly this will allow a fuller understanding of the role that active fiscal policy should be playing in the development of the EMU, providing answers to questions such as: when is the most efficient point in the business cycle to raise/contract expenditure? Is it more effective for governments to spend on infrastructure or consumption goods? Or: how large is the crowding-out effect? Again, these issues are of first-order practical importance to the mechanism design project envisaged by the call.

The first branch of theoretical research, led by Martial Dupaigne, Patrick Fève and Franck Portier, will explore the sorts of amendments that must be made to conventional (neoclassical and New Keynesian) models of the economy in order for the consumption multiplier to be positive and the output multiplier to be greater than one (both of which are true in traditional Keynesian accounts). Particular focus will be given to the role of complementarities between government provision of services and private demand for goods. In addition, the work will highlight a novel mechanism that suggests fiscal expenditures may have a critical impact on the gains to agents from trading in the economy. When workers are not perfectly mobile between sectors, increased government expenditure can give rise to an increase in private consumption, and potentially induce a multiplier greater than one, provided the fiscal package increases agents’ gains from trade sufficiently.

The second theoretical component aims to shed some light on the appropriate design of public expenditure policy during periods of economic and financial distress, during which the private sector engages in liquidation of capital assets and consumer durables accumulated during the preceding boom. This is of relevance to the practical design of fiscal expenditure policy for two reasons. First, the size of the fiscal multipliers is likely to depend on the total stock of assets and durables that can potentially be liquidated, a consideration that has thus far been overlooked. Second, it seems likely that active demand management can reduce the depth of recessions only at the cost of prolonging liquidation. This is potentially an important trade-off for public policy to resolve, particularly in the design of European fiscal rules, but it has been given insufficient attention in recent policy discussions, no doubt due to the absence of a clear theoretical framework within which it can be articulated.

Social insurance, labour markets and stabilisation

Having provided a detailed assessment of the effectiveness of discretionary fiscal policy under Objective 2.2, Objective 2.3 turns to the role of automatic stabilisers in the European fiscal policy architecture. This is of direct relevance to the second, ‘microeconomic’ approach to shock absorption outlined in the Van Rompuy Report. ADEMU Research will exploit the substantial progress made in the last two decades in understanding the behaviour of economies with incomplete insurance markets. In such economies there may be significant scope for fiscal measures to mitigate risk and uncertainty at the household level. The aim is to provide a comprehensive, state-of-the art assessment of appropriate fiscal measures for building microeconomic resilience to macroeconomic risk.

The first aspect of this work, led by Morten Ravn and Pontus Rendahl, will provide an in-depth analysis of labour market risk in the macroeconomy, and its connection with aggregate demand. When unemployment insurance is limited, negative macroeconomic shocks can induce significant income uncertainty on the part of households, providing a powerful motive for them to hold back their spending. This can potentially set in motion a downward economic spiral: lower demand due to risk causes more unemployment, adding still more risk to the economy. The strength and significance of this channel in the European context remains unclear, but previous work has shown that it has an important role to play in accounting for the depth of the recent recession in the United States. It will allow for a comprehensive assessment of the role of ‘microeconomic’ tools in the design of a European stabilisation mechanism, in the form of social insurance in general and unemployment insurance in particular. A key trade-off for the analysis to consider here is between preventing destabilising feedback loops, and reducing the incentive for unemployed workers to search for jobs. More generous unemployment insurance may do both. The work will compare policy measures of this type with ‘macroeconomic’ fiscal expenditure as a means to improve resilience. It will also consider how far non-fiscal measures, such as policies to reduce job separation during downturns, could contribute to effective stabilisation. Overall it will therefore provide rich policy models for understanding the best design strategy for fiscal tools at the European level, as requested in the call.

Further work, led by Juan Dolado, will deepen understanding of a potential micro-level source of economic volatility: two-tier labour markets. There is growing awareness that gaps in employment protection legislation between permanent and temporary workers may have contributed to the volatile labour market dynamics in a number of EU countries during the recent recession, most notably Spain. Yet the precise mechanism by which this works remains unclear. A clearer understanding will inform improved policy design. This is of particular relevance if the ‘microeconomic’ form for a European stabilisation mechanism envisaged in the Van Rompuy Report involves coordinated unemployment insurance payments. In this case the mechanism’s viability will be greatly strengthened if the relative volatility of unemployment between EU countries can be reduced.

In response to the call’s request for the political feasibility of reforms to be considered, research led by Sumudu Kankanamge will raise the question of the dynamic consistency of unemployment insurance programmes. It will explore how closely optimal insurance schemes are approximated by more plausible (‘discretionary’) outcomes of the political process.

A final important factor in assessing the merits of a ‘microeconomic’ model of fiscal union is the extent of variation in asset holdings across EU economies. This is important for two reasons. First, the linkages between unemployment risk and aggregate demand – and hence the stabilising role that improved unemployment insurance could provide – depend crucially on the assets that households have at their disposal. For instance, if wealth levels are high and evenly spread across the population, individuals should be able to draw on their savings in the event that they lose their job, and this should mitigate any reduction in aggregate demand. Second, differential patterns of asset holdings could generate asymmetric responses across countries to common shocks. For instance, a country with high levels of mortgage debt is likely to be more exposed to macroeconomic disturbances that induce house price declines than one that is not. A comprehensive analysis of asset holdings within and across EU states is thus of significant importance in building mechanisms that will improve economic resilience.

To this end, research led by Thomas Hintermaier will consider the portfolio composition of private households across EU countries, with a particular focus on housing prices. The project will document the historical variation in house prices and mortgage debt from country to country, and seek to identify country-specific drivers of these variables. It will then provide quantitative assessments of portfolio differences, testing the extent to which these can be explained by differences in national social insurance schemes. Among other outcomes, this will allow greater clarity regarding the impact that a Union-level unemployment assistance scheme could be expected to have on wealth levels within member states: could such a reform induce reductions in real estate prices, for instance? To what extent is this beneficial?

Legal and political aspects of policy implementation

In addition to the technical analyses above, the ADEMU project will include an explicit focus on questions of policy implementation: this is the focus of WP4. The aim is to identify potential loopholes in the realisation of improved fiscal coordination, consistent with the requirements of the call.

With this in mind, Objective 4.1 is to consider the legal and constitutional implications of the various mechanisms evaluated in WP1 and WP2, in response to key dimension 1 of the call. Work led by Giorgio Monti will consider questions such as: how can coordinated fiscal policies be implemented in the macroeconomic imbalance procedures? Should alternative indicators of sovereign risk – of the sort pursued under Objective 1.1 – be translated into a reformed SGP, and how can this be done?

A number of particularly important constitutional questions are raised by the proposed FSF. How, for example, to accommodate such a Fund in the existing legal structures in a way that ensures its compatibility with EU law? What legal vehicle could best be chosen for its establishment (international or EU law)? And what role should be played by what institutions? ADEMU research will provide novel insights into these fundamental aspects of the design process.

An important focus of this research, which has been overlooked in much of the existing literature, will be the various legal and constitutional challenges that exist at the *national* level: these include fundamental rights issues, limits posed by national constitutions, national challenges of – and obstacles to – constitutional change. In providing this focus, the project will further strengthen an understanding of the multi-layered legal system in place and the limits and opportunities this creates for different models of fiscal coordination and crisis resolution.

In addition to legal implementation, ADEMU will also place an explicit focus on the political problems associated with enforcing fiscal discipline, as requested in the call. A key issue highlighted in the Van Rompuy Report is the need for any reformed EU architecture to be accompanied by strong mechanisms for ensuring democratic legitimacy and accountability. But to what extent does the democratic process affect states' willingness to achieve fiscal sustainability? Research led by Andrea Mattozzi will revisit the well-known 'political business cycle' prediction that government spending as a share of GDP should increase in election years. The evidence to support this prediction is not as strong as was originally expected, and the theory appears to require more nuance if it is to deliver sound results. This work will ask how elections interact with a government's tenure in office in order jointly to determine expenditure. Preliminary results suggest that elected governments increase spending not just towards election time, but throughout their time in office. Insofar as elections bring to an end this tenure, they may assist in ensuring fiscal sustainability in EU member states.

(b) The impact of macroeconomic and social imbalances on economic stability

It is very difficult to obtain a comprehensive view on appropriate reforms of the EMU fiscal architecture without a formal assessment of the spillovers and interdependencies that exist among member states. WP3 places explicit focus on these interdependencies, with a particular emphasis on the lessons that can be drawn for appropriate mechanism design. This work has clear relevance to the problem of fiscal coordination raised under key dimension 1 of the call, and we highlight where this is the case, but here we additionally emphasise the aspects of the ADEMU project that will contribute under key dimension 3.

Macroeconomic and financial spillovers

The research associated with ADEMU Objective 3.1 will provide novel empirical and theoretical insights into the role of macroeconomic and financial spillovers. The empirical component interacts closely with other aspects of the ADEMU agenda investigating the benefits of coordinating government expenditure policies (as under Objective 2.2). But it is of specific relevance to the question of imbalances, as the focus is on understanding the size of spillovers in the context of austerity measures that are intended to address these imbalances. Research led by Fabio Canova and Luca Gambetti will provide evidence of the cross-border transmission of fiscal policy shocks in the euro area, based on two distinct analytical approaches. The first will focus attention on shocks originating in Portugal, Italy, Spain and Greece, testing how far fiscal consolidation in these countries has affected economic outcomes more widely in the Union. A key aim is to construct new indicators of the overall fiscal stance at EU and national levels, abstracting from business cycle

shocks, which will help in identifying the countries whose public expenditure policies pose a sustainability risk.

The second analytical approach will focus on deriving time-varying estimates of size of spillovers, with the aim of understanding whether increased interdependencies driven by EMU have changed the benefits deriving from coordinating fiscal policy, and to what extent spillovers have been affected by the recent crisis. Once again, this research lies at the intersection between key dimensions 1 and 3 of the call.

In addition to fiscal spillovers, an important consideration in light of recent experience is the extent of financial spillovers between EU states. Financial imbalances were clearly significant in a number of member states prior to the recent crisis, but an important feature of the crisis dynamic itself was the ‘contagious’ manner in which volatility spread from country to country. Research led by Peter Hansen will seek to understand the mechanisms by which these sorts of spillovers occur, based on data from the crisis period. Given the focus of the call on improving institutional stabilisation devices, it will place particular focus on the role played by government and central bank interventions in engineering downward movements in financial market volatility.

The final part of the research under Objective 3.1, led by Wei Cui, builds on the empirical projects to investigate novel theoretical channels through which financial spillovers may reinforce international imbalances, by transmitting sovereign bond risk through European interbank markets. This component of the project will directly address the question of linkages between imbalances and financial stability raised in the call.

Managing financial imbalances

Objective 3.2 of WP3 is concerned with the role and management of macroeconomic and financial imbalances in light of the recent crisis. Along with the assessment of spillovers under Objective 3.1, this is the second component of ADEMU’s focus on interdependencies among EU and euro area states. The main purpose of this Objective is to address the call’s requirement for an assessment of the mechanisms by which imbalances could be more effectively addressed in the EU, and in particular to evaluate whether the current mechanisms, including the MIP and EIP, are sufficient.

A first line of research, led by Radim Bohacek, will consider whether excessive leverage in financial markets ought to be subject to closer scrutiny when assessing the extent of imbalances. An important recent line of research suggests that leverage in the financial sector may account better for aggregate economic activity and prices than interest rates can: the rapid rise and fall of the loan-to-value ratio across the economic cycle is a significant source of economic instability, with financial imbalances driving macroeconomic volatility. Devising mechanisms to control excessive leverage is thus of first-order relevance to the call. The contribution of this work will be to propose bounds on leverage that are consistent with a model-informed understanding of the information and commitment frictions present in the lending market. It will analyse how far these bounds can be used as guides to alleviate the negative effects of credit cycles, and propose new data that might be included in improved indicators of macroeconomic imbalances.

Interactions between financial and macroeconomic imbalances will be explored further in work on bank size and money markets led by Hugo Rodriguez and Joachim Jungherr. The large international asset positions that built up in the interbank market during the euro area sovereign crisis drew attention to a market that is not currently covered by any of the MIP (headline or auxiliary) indicators. This research will develop a novel theory to explain how imbalances in the interbank market emerge, with a particular focus on the interaction between the size of domestic banks and their ease of obtaining funding. A further branch of the analysis will investigate the benefits from improved bank transparency, which may be particularly important in ensuring that more integrated money markets do not suffer from damaging information frictions in the years to come. The existing imbalance procedures mentioned in the call have as their main focus the identification and management of existing risk. This work will explore how far policy measures such as public disclosure and improved capital requirements can reduce the risk of financial market imbalances emerging in the first place, as well as analysing the benefits of the proposed Single Supervisory Mechanism.

The contrast between managing risk *ex-post* and preventing its build-up *ex-ante* will be explored in more detail in work led by Ramon Marimon, and which will ask whether financial market imbalances are best

addressed by a radical switch to a ‘narrow banking’ model in Europe, in which deposit-taking institutions are legally differentiated from investment banks, and are required to hold 100 per cent reserves against their liabilities. This idea is based on the observation that if deposit-taking banks are restricted to investing their portfolio in cash, deposit insurance is no longer needed, and hence the moral hazard problems with which it is associated can be avoided.

A final area of work under Objective 3.2 is to consider how far financial market imbalances – and in particular inadequate credit supply – may be perpetuated by uncertainty about the state of the economic recovery. In work that also contributes to research on uncertainty and crisis under Objective 1.1, Ramon Marimon will lead an investigation into the role central bank credit easing can play in encouraging private-sector financial institutions to overcome their reticence to lend in the wake of a recession. This project should result in specific recommendations as to when and how credit easing policies should be implemented by the ECB.

Legal and political aspects of policy implementation

The call requests an assessment of the effectiveness and robustness of the mechanisms in place to address imbalances within the EU. As in the assessment of fiscal coordination, this requires due consideration of the various legal and political challenges that reform is likely to bring.

WP4, which focuses on questions of policy implementation, will include work that examines legal reform of the imbalance procedures: this falls under Objective 4.1 above. How can novel indicators best be incorporated into the existing mechanisms? And what is the appropriate legal design for the sorts of new mechanisms of banking supervision discussed above? ADEMU research will address these questions.

From a political economy perspective, research will place particular focus on how best to design a robust framework to manage financial imbalances. The call’s emphasis on robustness is in this case interpreted as robustness against excessive influence and lobbying from the banking sector. With the establishment of the SSM as part of the ECB’s activities, an important problem is how best to insulate the central bank from this form of lobbying. This is arguably a more pressing concern in the present context than the traditional question of central bank independence from the central government. Research led by David Levine will consider the various political economy considerations that it raises.

1.3 Concept and approach

Core conceptual themes

As the previous section makes clear, the scope of the work that is envisioned under the ADEMU project is broad, and we do not aim to impose conceptual uniformity across all aspects of the research at the outset. This is entirely consistent with the call’s request for a broad range of institutional reforms and approaches to be considered – for instance, we do not take a position *ex ante* regarding the appropriate division between the ‘microeconomic’ and ‘macroeconomic’ approaches to fiscal union laid out in the Van Rompuy Report. We nonetheless identify three core conceptual themes that link the different aspects of the proposal, and which build upon the focus provided explicitly in the call. These themes are: (a) *Means for mitigating sovereign and financial risk ex-ante, in addition to managing it ex-post*; (b) *Financial risk-management as a central component in fiscal risk-management*; (c) *Devices to ease the trade-off between fiscal sustainability and macroeconomic stabilisation*. For the remainder of this subsection we explain these three themes in full.

(a) Mitigating risk ex-ante

The traditional view of macroeconomic stabilisation is to consider a public authority with a fixed set of instruments looking to minimise the disturbances to the economy caused by exogenous ‘shocks’, whether to aggregate demand, technology, prices, or some other variable. Problems of economic management then become particularly acute in a currency union when these shocks are asymmetric across countries.

For many policy questions this framework remains a useful starting point, but it is not clear that it is the best way to think about a new institutional regime for fiscal risk management in the EU. Many of the channels through which the recent financial and sovereign debt crisis affected Member States’ economies were themselves dependent on the policy environment in place. In other words, the shocks to the macroeconomy

were not truly ‘exogenous’ in the traditional sense. This begs the question of how far policy reform can be targeted at the channels through which sovereign and financial risk operate in the first place, rather than simply responding to that risk *ex-post*. The ADEMU project is able to deliver this focus by drawing on frontier research in dynamic macroeconomic theory, which places particular emphasis on the microstructure of the aggregate economy and hence can allow a richer set of policy interventions to be analysed.

The theme of *ex-ante* risk mitigation is reflected across a wide range of the ADEMU projects set out above. We focus on three in particular here. First, a key potential benefit from a well-designed Financial Stability Fund – of the sort analysed under Objective 1.3 – is that member countries’ short-term debt, which may not be sustainable, will be transformed into long-term contingent liabilities. With appropriate ‘conditionality’ measures to prevent against moral hazard, such a reform should eliminate the serious risk highlighted by Conesa and Kehoe (2012) that states might ‘gamble for redemption’ when short-term debt finance is their only recourse, running up large deficits in the hope that economic conditions will improve, even though this increases the ultimate risk of default. Hence an appropriately designed FSF should be a device for reducing the underlying tendency of states to accumulate (potentially unsustainable) debt, even aside from its capacity to absorb fixed international risks more efficiently.

The same theme features prominently in the work on social insurance and labour markets pursued under Objective 2.3. A central question here is how far unemployment insurance – potentially coordinated through a reformed fiscal union – is able to reduce negative feedback loops linking labour market uncertainty to depressed aggregate demand (and hence greater labour market uncertainty). Likewise, to what extent can reforms in employment protection legislation influence the underlying volatility of unemployment in countries where dual labour markets have emerged? In both cases the focus is on how best to reduce structural vulnerabilities, rather than the stabilisation of given disturbances.

Finally, the work on ‘narrow banking’ under Objective 3.2 directly targets the gains from mitigating *ex-ante* risk. It is not apparent that a system of ‘crisis management’ – providing deposit insurance and bank resolution after financial imbalances have emerged – is preferable to simply ‘drawing lines’ that prevent deposit-taking institutions from bearing risk in the first place. This is *ex-ante* mitigation in its purest form, and it provides a crucial perspective on the policy debate.

(b) Financial risk-management as fiscal risk management

The recent crisis has demonstrated quite clearly that financial risks and fiscal risks cannot be separated from one another. This was plainly evident in the widespread assumption of banking-sector risk by European governments, but also in the ‘contagious’ manner in which market premia on sovereign debt spread from country to country, which suggested that market dynamics may play an autonomous role in threatening sustainability. A central thread running through the ADEMU project is a comprehensive analysis of the fiscal-financial nexus. Once again, we highlight here just some of the specific research items for which this is the case.

The theme features prominently under Objective 1.1, analysing the links between sustainability and crisis. The work led by Giancarlo Corsetti, which will provide historical and theoretical lessons from past crises in the euro area and elsewhere, targets a deeper understanding of the transmission mechanism linking financial to macroeconomic instability. From a more theoretical perspective, the research on uncertainty and asset pricing led by Christian Hellwig and Robert Ulbricht will provide greater clarity on the feedback loop(s) linking uncertainty to the persistence of recessions, and hence fiscal distress. Similar themes are explored in the context of credit-easing policy in the work led by Ramon Marimon under Objective 3.2.

A different fiscal-financial linkage is explored in the work led by Thomas Hintermaier under Objective 2.3. This project will pay close attention to the interplay between macroeconomic stability and the distribution of asset holdings across the economy, and in particular the increased vulnerability of countries in which household asset holdings are bloated by inflated house prices, with correspondingly high levels of debt secured against homes. To what extent can fiscal policies which target individual household risk – such as unemployment insurance – also serve to lower systemic risk in the financial sector (for instance by reducing the demand for leveraged home purchases)?

The analysis of ‘Eurobills’ – the mutualisation of short-term European debt – under Objective 1.3 is a further example of work under this theme. The sustainability of EU countries’ debts depends at least in part on the avoidance of non-fundamental liquidity crises. By building on a richer conceptual understanding of the linkages between heterogeneous information and asset pricing, this work will link developments in the understanding of asset pricing to the determinants of sovereign risk.

As a final example, the work led by Peter Hansen under Objective 3.1 focuses on the dynamics of financial contagion from country to country. As mentioned above, there may be an independent role for such contagion in driving sovereign debt crises: a fuller understanding of their role will contribute significantly to the mechanism design agenda of ADEMU.

(c) Easing the sustainability–stabilisation trade-off

As the Van Rompuy Report notes, a well-understood problem in currency unions is that the burden of adjustment to asymmetric shocks must fall to a large extent on fiscal policy, particularly when labour mobility is relatively weak, and price and wage adjustments are sluggish. But if countries must bear the full debt burden from fiscal stabilisation, there may emerge a long-term trade-off between stabilisation and debt sustainability: arguably this contributed in large part to the recent crisis in the euro area. A final, vital theme running through the ADEMU project is the need to ease this trade-off, and ideally to find institutional mechanisms that will render sustainability and stabilisation complements rather than substitutes.

An example of work in this vein is the detailed analysis – under Objective 2.1 – of the multipliers associated with different components of government expenditure, led by Evi Pappa. If the direction taken by fiscal union is towards the ‘macroeconomic’ approach to stabilisation envisaged in the Van Rompuy Report, it will be essential to focus government expenditure changes on the components that deliver the highest overall returns in terms of output and employment, so that the budgetary deterioration associated with any given increase in spending can be kept to a minimum.

The work led by Giancarlo Corsetti under Objective 1.2 seeks to go further and examine feedback mechanisms by which improved fiscal sustainability and macroeconomic stabilisation could go hand-in-hand. The analysis here focuses on the extent to which a credible, stable fiscal outlook will reduce uncertainty in the economy on the part of consumers, which will itself contribute a stabilising force. Very similar dynamics are analysed in the work led by Morten Ravn and Pontus Rendahl under Objective 2.3, although this time with the main focus on social insurance and labour market policy rather than fiscal credibility.

A final example comes in the work led by Piero Gottardi under Objective 1.2. The purpose of this is to obtain an improved theoretical understanding of the optimal level of government debt in economies in which consumers do not have access to complete insurance markets. Any such optimum will be governed by two distinct concerns: first, to ensure that the level of taxation required in order to sustain solvent public finances is not extreme, while second, to ensure that there is a sufficient quantity of assets available to the private sector for households to be able to stabilise their consumption through self-insurance. An excessive debt burden will of course imply that sustainability becomes an issue, but too low a quantity of debt may exacerbate the vulnerability of the macroeconomy, and make stabilisation harder than it needs to be. Again, the focus is on easing the trade-off between the two concerns to the greatest extent possible.

Main models and methodology

The research proposed under the ADEMU project draws from many different strands of the macroeconomics literature and, in the case of WP4, academic legal scholarship. The scope of the proposed network, and the variety of topics addressed, means that it is impossible to cite a single unifying model or set of assumptions. Nonetheless, there is a strong emphasis across each of WP1 to WP3 on applied work in dynamic general equilibrium macroeconomics, with rigorous theoretical foundations. This includes (though is not limited to): the work on uncertainty and macroeconomic stabilisation under Objective 1.1; the analysis of optimal debt levels and adjustment speeds under 1.2; the analysis of an optimal FSF under 1.3; the modelling of fiscal policy coordination at the zero lower bound under 2.1; the exploration of theoretical determinants of high multipliers under 2.2; the treatment of uninsurable unemployment risk under 2.3; the study of sovereign risk transmission through interbank markets in 3.1, and the analysis of bank transparency and financial stability under 3.2.

Across the ADEMU component projects that adopt this theoretical paradigm there is significant variation in the precise modelling assumptions used: some, for instance, place restrictions on price adjustment consistent with the New Keynesian literature, some assume that markets are incomplete, some that information is incomplete, and so on. They nonetheless share the common structural components of intelligent, optimising agents operating in dynamic equilibrium, under the influence of exogenous stochastic disturbances whose transmission through the economy depends – among other factors – on economic policy. The main benefit of this perspective is that it allows for a rich consideration of the microeconomic channels through which fiscal and financial policy reforms can operate, a factor that particularly aids ADEMU’s capacity to assess alternative structural models for the purpose of a proposed fiscal union.

Nonetheless, there are clearly dangers in complete methodological homogeneity, and for this reason many of the ADEMU components are based on different modelling strategies. First, there is a strong comparative-historical component to the research on economic crises in the euro area and beyond, led by Giancarlo Corsetti (under Objective 1.1). This work will give particular prominence to the institutional development of the euro area during the recent crisis, and derive policy recommendations based on the evolution of institutional and political constraints over time.

Second, an important part of the analysis of both fiscal policy multipliers and international spillovers will be based on empirical research that does not adopt a dynamic general equilibrium perspective. This is true, for instance, of the analysis of SVAR evidence relating to fiscal multipliers under Objective 2.2, as well as the empirical assessments of spillovers led by Fabio Canova and Luca Gambetti under Objective 3.1. Although dynamic general equilibrium models are essential components to a full understanding of policy changes, there is clearly a risk that too much structure may prevent empirical work from being as parsimonious as desired. Part of the work under Objective 3.1, for instance, will identify a range of potential fiscal spillover effects – rather than a unique estimate – based on the sign restriction technique.

Finally, as noted above, the ADEMU project includes a relevant trans-disciplinary legal component. WP4 will include frontier research on the legal and constitutional challenges that are presented by the various alternative roadmaps to a deeper EMU. This will include an assessment not just of the ideas for reform presented in the Van Rompuy Report, but also of the more comprehensive proposals devised as part of the project analysis in WP1 to WP3.

Positioning of project

The aim of the ADEMU project is to provide a focal point for academic participation in debates surrounding reform of the EU fiscal architecture. These debates revolve around both issues of practical design (for instance: which indicators are most relevant to the MIP?) and more fundamental questions of policy effectiveness (such as: how large are the fiscal multipliers in euro area economies?). The positioning of the ADEMU project reflects this. Each work programme includes research ranging from fundamental contributions to economic understanding through to practical answers to precise institutional design questions.

In many cases the latter build on the former. In WP1, for instance, the frontier research led by Christian Hellwig and Robert Ulbricht on the role of information frictions in exacerbating economic downturns will provide the necessary modelling foundations for the detailed proposals for ‘Eurobills’ as a means to remedy liquidity problems at the national level. Similarly, fundamental research by Marek Kapička into the analysis of persistent information frictions over time will contribute to the detailed proposal for an optimal FSF.

In WP2 and WP3, the focus likewise ranges from fundamental empirical and theoretical questions – such as the size of the fiscal multipliers, or the scope for unemployment insurance to stabilise the economy – to more practical innovations such as the specification of liquidity bounds to augment the MIP indicators.

But when policy advice does feature in WP1 to WP3, relevant practical constraints will be given due attention. For instance the proposal for an optimal FSF will most likely require a focus on simple rules for obtaining a ‘near-optimal’ scheme, given the complex character that ‘fully optimal’ solutions to dynamic contracting problems generally take. Likewise the analysis of optimal debt stabilisation policy under Objective 1.2 will explicitly seek to model the institutional design problem in a manner that does not permit unrealistic commitments. Hence the ‘fundamental’ character of some ADEMU research will not detract from

the practical implementability of its wider proposals. In addition, policy implementation in the face of relevant legal and political constraints is the explicit focus of WP4, discussed at length above.

1.4 Ambition

As mentioned in the previous section, the principal methodological approach used in the component projects of ADEMU will be applied dynamic general equilibrium theory. There have been a number of important conceptual and computational advances in this area over recent years. These include: the development of more realistic models of heterogeneous households subject to idiosyncratic risk¹; a deeper understanding of the coordination failures that can keep aggregate output below its potential level²; more satisfactory inclusion of uncertainty and risk into macroeconomic models³, and greater understanding of dynamic contracting problems under limited enforcement⁴. Yet there remains a gap between these frontier-level contributions and the analysis of practical policy problems of relevance to the future of EU fiscal policy stabilisation. As mentioned in the introduction, the purpose of the ADEMU project is to bridge this gap. Its chief intellectual ambition thus lies in applying state-of-the-art economic concepts and models to the specific challenges that the sovereign debt crisis in Europe has revealed. As discussed in the previous section, where appropriate this will be done in tandem with the development of additional foundational research on issues of relevance to the fiscal design of the euro area.

Specifically, ADEMU's contributions can be grouped into four categories: (a) *Foundational empirical understanding*; (b) *Foundational theoretical understanding*; (c) *Practical assessments of current policymaking* and (d) *Practical recommendations for improved policymaking*. Each of the component projects described above fits into one or more of these categories, and each will provide a significant contribution relative to the existing state of knowledge. To avoid repeating the full set of component projects, we present in detail below an example of work that fits into each category, with emphasis on the advance provided relative to the state-of-the-art. In each case the nature of this advance is representative of other work in the same category. The detailed work package descriptions will provide a comprehensive technical summary of all of the proposed work.

(a) Foundational empirical understanding

As explained above, the research led by Luca Gambetti and Fabio Canova under Objective 3.1 aims to provide new evidence on the role of fiscal spillovers in euro area countries. A major current debate in the literature centres on the extent to which spillovers may vary over the course of the economic cycle. In particular, Auerbach and Gorodnichenko (2012) have shown that output spillover effects may be substantially larger during recession periods relative to booms. This work will provide new evidence that provides a European perspective on this debate, and will consider new methodological approaches that improve upon existing research. It will first consider in detail the austerity measures adopted since 2011 in Portugal, Spain, Italy and Greece, assessing whether the spillovers have been larger or smaller than conventional estimates. This will shed specific light on the magnitude of the spillovers during periods in which many countries contract demand simultaneously. The work will additionally consider a more general Time-Varying Factor Model for the euro area countries, which allows for the possibility that structural changes in the conduct of monetary and fiscal policy within the EU, as well as institutional change, could have altered the international effects of fiscal policy. In its more systematic allowance for the potential variability of multipliers over time, this work will make a substantial methodological contribution to the existing literature.

(b) Foundational theoretical understanding

The research on liquidations led by Franck Portier under Objective 2.2 has the potential to open an entirely new perspective on the factors that affect the fiscal multipliers. The 'liquidationist' view on the merits of recessions – as opportunities to liquidate bad investments accumulated during the previous boom – has had

¹ Much of this builds on the computational contribution due to Krusell and Smith (1998).

² See, for instance, Beaudry and Portier (2013).

³ For instance Bloom (2009) and Albagli, Hellwig and Tsyvinski (2011).

⁴ Marcet and Marimon (2014).

prominent advocates since the early years of the 20th century, most notably Hayek. But it does not have clear expression in modern dynamic macroeconomic models. This research will develop a simple, coherent theoretical framework in which the view can be analysed thoroughly, and incorporated into policy assessments as a relevant consideration among others. An important consideration in analysing episodes of liquidation is the extent to which market illiquidity may reinforce price falls. For this reason the work will build on existing models of decentralised trading and coordination frictions in the macroeconomy, including Diamond (1982) and Guerrieri and Lorenzoni (2009), but with the aim of incorporating an entirely new concept into state-of-the-art modelling.

(c) Practical assessments of current policymaking

The research led by Jügen von Hagen under Objective 1.1 is novel in its drive to produce model-based indicators of the riskiness of public-sector balance sheets. This contrasts, for instance, with the existing indicators contained in the SGP, which are based on *ad hoc* ratios of public debt and deficit levels relative to GDP, with little basis in modern economic theory. This work uses state-of-the-art models of asset pricing in general equilibrium⁵, but differs from the existing literature in its objective of applying these to define workable frameworks for policy assessment.

(d) Practical recommendations for improved policymaking

The focus on an optimal FSF under Objective 1.3 will build upon important recent work in the dynamic contracting literature. The theory of long-term contracts developed by Thomas and Worrall (1990), Marcat and Marimon (1992, 2014), Kocherlakota (1996) and Atkeson (1991) provides a rich general framework for the analysis of risk-sharing in environments that are subject to limited contract enforceability, limited commitment, and moral hazard problems. All three of these features characterise the relationship among sovereign countries in a risk-sharing arrangement of the FSF form: there are many political and informational constraints that limit how far a contract violation can be ‘punished’ in an international context; a country cannot credibly commit to contingent transfers that would make continued membership of the scheme disadvantageous, and fiscal insurance may risk incentivising excessive borrowing. Yet a direct application of this theory to the practical design of an optimal fiscal risk-sharing scheme remains absent. The advance that this work would provide, therefore, would again be to bridge the divide between state-of-the-art foundational research and applied policymaking.

2 Impact

2.1 Expected impacts

As explained in the previous section, the ADEMU project covers many different aspects within, and related to, the topic of the call. They are all interrelated and the research will be coordinated with the aim of maximizing its impact by providing:

1. *An integrated framework to analyse and quantify the long-term sustainability and short-run resilience of the European economic and monetary union.*

As the financial and euro crises have shown, once again, the analysis of long-term sustainability and short-term resilience of an economic and monetary union requires dynamic general equilibrium models that take into account how different elements – micro and macro, and monetary, fiscal and financial – interact. In spite of relying on a large number of dynamic general equilibrium models, most of them either focus on the US economy or do not take into account specific features relevant to the analysis of the EMU. One corresponds to the real economy: the ‘national component of risk,’ often reflecting that similar shocks affect different economies differently due to structural or policy differences. The other corresponds to the policy framework: the euro area is a monetary union with very limited fiscal capacity and a financial sector fragmented across national borders. While it is not the aim of ADEMU to build a ‘unique comprehensive model of the EMU,’ it

⁵ See, for instance, Bernoth, Von Hagen and Schuknecht (2012)

does aim to develop models that capture its relevant features for the specific question being addressed, such as: *the determinants of sovereign debt crises; the trade-offs between long-run and short-run objectives, and between risk-sharing and persistent transfers among union member states; on how, and to what degree, risk-sharing is achieved by different mechanisms (taxes, private and public debt, conditional transfers with limited enforcement, etc.) in different economic environments, and on how different economic policies (monetary, fiscal and financial) interact – and can be made credible – in these environments, etc.*

2. *A new account of the main lessons that can be extracted from the financial and euro crises in terms of uncertainties, risks, liabilities, fragmentations and imbalances that should be diminished or, at least, be properly accounted for (e.g. debts and risks properly allocated).*

The analysis of long-term sustainability and short-term resilience can be made as if the economy is in a stationary state and only subject to business cycle fluctuations. In such an environment one must also analyse issues such as: what the scope of fiscal policy at the union level should be, and if and how ‘national’ fiscal policies should be coordinated; how fiscal and monetary policies interact and should be implemented, why there may be fiscal and financial spillovers, etc. Our study will cover such steady-state analysis; however, the EMU after the ‘Great Recession’ can hardly be considered to be in the steady-state. For this reason, ADEMU takes as a benchmark the current European economy and, as a reference, the lessons that one can extract from the recent crises. Without pre-determining the final list of lessons, four generic ones onto which the project’s research will shed new light, by modelling and quantifying costs and benefits and, therefore, helping to define policies, are:

- a) *To avoid broken (explicit and implicit) promises.* After almost ten initial successful years, in terms of growth and convergence, the euro crisis has broken many expectations and this has often been perceived as ‘broken promises’ – of employment and security that the European welfare state was supposed to provide, of assets and institutions that had been perceived as safe, of cuts in pensions and in public services, etc. - which, in stressed countries, has created uncertainty and mistrust in policies and institutions (national and EU, an exception being the ECB). The best way to avoid ‘broken promises’ is ‘not to make (unconditional) promises that may not be fulfilled’; for example, in times of crisis. But to know what is feasible, one must...
 - b) *Properly account for (explicit and implicit) liabilities.* The Growth and Stability Pact imposed basic debt restrictions to avoid large public debts becoming a burden on monetary policy, given that ultimately fiscal and monetary policy cannot be disentangled, even if they are distinct and some barriers can be placed. The euro crisis has shown, once more, how private debts and financial crisis can turn into public debt and a severe burden to many policies if proper attempts are made to maintain, or rebuild, the barriers. Therefore, in designing policies and institutions for the EMU (and member states), one must assess, and define, how to take into account the existing liabilities such as: *the debt overhang, the aging population, etc.*, as well as...
 - c) *How to understand existing – and potential – imbalances, spillovers, and fragmentations.* The euro crisis has left a major division between stressed and non-stressed countries, financial markets have become – hopefully, only temporarily – more fragmented, inequality has been on the rise, and there are many other – possibly less explicit – fiscal, financial and macroeconomic imbalances and spillovers which need to be better understood in order to pursue successful policies of cohesive sustainability and resilience.
 - d) *To better assess and manage risks (and minimize uncertainties).* Counting assets and liabilities, of synergies and spillovers, is, to a large extent, an assessment of risks (which becomes more difficult when subjective beliefs about how the risks are distributed may not coincide with their objective distribution). For example, youth unemployment – or widespread temporary employment – is not a severe problem if it is a transitional (non recurrent) state, but becomes a social liability (and a loss of human capital) when ‘the shock becomes persistent’, but often bad policies and labour market institutions are what makes shock persistent.
- 3. *A reassessment of the existing policy and institutional framework (and the proposed Van Rompuy roadmap), based on (1) and (2) and the evidence from other economic and monetary unions.***

In large part as a response to the financial and euro crises, a number of significant steps have recently been taken towards redesigning the institutional architecture of EMU, based on the roadmap outlined in the Van Rompuy Report (2012):

On January 1 2013 the *Treaty on Stability, Coordination and Governance in the Economic and Monetary Union* – better known as the "*fiscal compact*" – entered into force and soon the treaty will bind all EU member states, except the UK.

On November 4 2013 the Single Supervisor Mechanism (SSM) of the Euro area banking system started its preparatory work and it should be fully operational in November 2014.

In December 2013, Ireland and Spain exited, respectively, from their first EFSF and European Stability Mechanism (ESM) programmes.

On March 20, 2014 the European Parliament and the Council reached a political agreement on the Single Resolution Mechanism (SRM) for the Euro area banking system.

These treaties and institutions, together with the ECB, which has played a key stabilization and support role during the euro crisis (and other mechanisms, such as the MIP and EIP), define the pillars of the current EMU. Nevertheless, the roadmap of the Van Rompuy Report still remains to be fully implemented –the Banking Union in particular – and completed: notably, '*a shock-absorption function at the central level*' is still missing. Furthermore, the report also calls for more 'integrated budgetary and economic policy frameworks'. The current state of affairs raises many questions, and a good number of them will be addressed by ADEMU (based on (1) and (2) above), for example:

- a) *On risk-sharing within the union*: can the '*shock-absorption function*' be designed as the proposed Optimal Fiscal Stability Fund? And if so, what should the relationship between the 'risk sharing' FSF and the 'crisis management' ESM be? How do these mechanisms compare with other possible forms of risk-sharing within a monetary and fiscal union, such as *automatic fiscal stabilizers* at the (fiscal) union level, *social insurance and labour market policy*, *public debt*, in particular, *mutualized short-term debt*, etc? How do these different mechanisms perform, not only in terms of risk-sharing but also in avoiding unwanted persistent transfers and/or crises? Should 'specialized' risk-sharing union-wide mechanisms – such as unemployment insurance – be implemented (e.g. following an Optimal FSF design)?
- b) *On the scope of fiscal policy and its coordination*: the resulting EMU institutional architecture is fairly different from existing federal architectures; the general question is whether this puts it at a disadvantage (in terms of sustainability and resilience). In particular, its limited fiscal (and redistribution) capacity, together with the 'fiscal compact' constraints on national fiscal policies, put into question not only whether sufficient risk-sharing can be achieved, but also whether current divisions and fragmentations can be overcome, whether major reforms or crises will not be excessively costly due to the lack of fiscal capacity at the state and union level, etc.
- c) *On the Macroeconomic and Excessive Imbalances Procedures (MIP & SIP)*: these are the main procedures for dealing with macroeconomic imbalances in the current architecture whose performance and design, as already explained, ADEMU plans to reassess.
- d) *On the interaction and coordination of fiscal and monetary policy*: limited fiscal capacity has two specific manifestations: first, fiscal capacity remains at the national or regional level and, second, the union fiscal authority is ill defined. This makes the already complex issue of how fiscal and monetary policies should interact and coordinate, especially cumbersome. In particular, due to the financial and euro crises all the major central banks (including the ECB) have engaged CB balance sheet build-ups, including in so-called 'unconventional monetary policies', as a way to achieve 'financial stability' and 'sovereign debt stabilisation' (not just 'price stability'). These policies make, on the one hand, the separation between fiscal and monetary policies (even in the short-run) blur and, on the other hand, the attempts to read the mandate of the ECB as 'monetary policy cannot have fiscal consequences' is simply futile, or a way to freeze the ECB capacity to implement these policies as other central banks have done. It is because of such a 'blur' that even if ADEMU concentrates on *fiscal policy coordination* these other questions will also be addressed. Similarly, since they also affect 'sustainability and resilience' it will also address two additional sets of questions:
- e) *Regulation vs. contractual and institutional design in the banking union*. As has already been explained, a recurrent theme within the ADEMU project is the need to *mitigate risks ex-ante rather than ex-post*.

The current design of the European Banking Union also moves in this direction but it heavily relies on detailed supervision and regulation (e.g. regulation of the riskiness of banks' assets) rather than defining (and supervising) *ex-ante* contractual and institutional rules according to which financial intermediaries can further self-select and specialize. Although it is too early to assess the performance of the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM) an analytical assessment is part of the ADEMU agenda.

- f) *Governance and the political-economy of the EMU institutional architecture.* As is well understood, what has made the EMU possible (the delegation of certain competences and policies from the member states to the union) also makes it complex and politically weak at the centre, say, compared to more standard federal states. It is not the scope of the project to analyze this issue in all its dimensions, but in just one: how it can affect the performance and credibility of fiscal and monetary policy. As with other issues, a more detailed assessment of the current situation would be the starting point.

4. *New policy and institutional designs – for the EU, euro area and coordination of national fiscal policies – that can help European citizens and Member States “to reap the full benefits of the EMU.”*

Based in (1) - /3), the ADEMU project is conceived of as delivering specific recommendations on policy and institutional design. This will require more detailed implementation-feasibility analyses and legal advice (see WP4). The list follows on from the description of the *project objectives* and the *practical recommendations for improved policymaking*. In particular, it proposes to:

- *devise credible rules and strategies for sustainable public debt management* [Obj. 1.2], as well as the design of *a programme of short-term public debt mutualisation*.
- *Provide detailed institutional proposals for optimal fiscal risk-sharing* [Obj. 1.3]. In particular, the Optimal design of a *Fiscal Stability Fund* and its relation with the current ESM.
- *Determine the most appropriate forms of macroeconomic policy coordination* [Obj. 2.1]
- *Propose reforms that reduce income and employment uncertainty* at the individual level.
- *Propose improvements to the Macroeconomic and Excessive Imbalances Procedures (MIP & SIP).*
- *Propose improvements to the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM)*

5. *New quantitative estimates and proposed measures of public and private risks that may endanger the long-term sustainability and short-run resilience of the EMU.*

The European sovereign debt crisis has shown that sovereign risk is a serious issue in a monetary union, where member state governments have given up the possibility to print money to avert a state of government insolvency. Traditional analysis of fiscal sustainability, which has focused on observed budgetary flows and dynamics of government debt, is inherently backward-looking and does not provide much information about the risks governments face in the future. To complement this analysis, euro-area governments have now begun to develop a common framework for drawing up public sector balance sheets, which should facilitate the comparison of public sector assets and liabilities. Assets represent discounted future streams of revenues, while liabilities represent discounted future streams of expenditures. From this perspective, sustainability means that total assets must exceed total liabilities.

A mere evaluation of expected future streams of revenues and expenditures, however, is insufficient to evaluate the risks embedded in those balance sheets. For example, expected revenues from a source highly susceptible to cyclical shocks should not be regarded as equivalent to expected revenues of the same amount from a more stable source, as the risk of not receiving sufficient revenues to cover an expected amount of expenditures is not the same. Recent research in this area has developed some preliminary ways of accounting for risk in public sector balance sheets. One approach has been to develop (multiple) indicators of balance sheet risk using more or less arbitrary evaluations of public sector revenues and expenditures (Baldacci et al (2011), Bova et al (2013), Cottarelli (2011), Gray et al (2008)). The purpose is to guide policy decisions and evaluations with straightforward quantitative instruments.

Such an approach, however, is not really satisfactory, because it is not derived from economic principles. A better approach would apply asset pricing principles to public sector balance sheets (Barnhill and Kopits (2002), Kopits (2014)). Von Hagen (2013) discusses the link between pricing public sector assets and liabilities and the computation of fiscal limits from stochastic DSGE models as proposed by Bi and Leeper (2013).

Within ADEMU, we propose to take stock of this work and to further develop asset-pricing approaches in this context. For this purpose, we propose to organize a workshop with contributions representing the existing approaches to facilitate a comparison of their strengths and weaknesses. The workshop will result in a new report describing and evaluating methods to assess risks connected with public sector balance sheets. The aim is that this report will represent the launch of **a new Risk Assessment Report on Public Sector Balance Sheets**, which should be financed by the EU or an international organization.

Furthermore, as already explained in Section 1, ADEMU will result in *foundational theoretical and empirical research* which will advance the current state of the art, on topics such as:

- The role of uncertainty and incomplete information in sustaining financial distress and asset mispricing.
- Optimal dynamic mechanism design and the role of simple contracts.
- The role played by public debt in enabling households to self-insure.
- The appropriate speed of debt reduction in EU economies.
- The impact of fiscal multipliers.
- The role of complementarities between government provision of services and private demand for goods.
- The links between unconventional monetary policies and fiscal policies.
- Etc.

2.2. *Measures to maximise impact*

a) Dissemination and exploitation of results

The objective of ADEMU is to produce state-of-the-art research to tackle three fundamental challenges faced by the EU, namely, the *long-term sustainability of the EMU*, the *policy coordination and economic stability within the EU*, and the *risks from macroeconomic and financial imbalances*. One part of the dissemination efforts will be directed towards reaching the academic community. This will take place through presentation of working papers at internal workshops and international conferences as well as publication in leading scientific journals.

However, our approach to dissemination of research will go beyond strict academic communication. The topics included in the project condition, in a fundamental way, not only the functioning of markets but standards of living in general. It is for these reasons that these issues incorporate an essential policy component. Thus, for the project to be successful, ADEMU should be able to affect the process by which the aforementioned challenges have an influence on society, both through influencing the political process and by raising awareness among the general public.

This objective can only be accomplished by preparing an adequate communication strategy with the different agents involved. This means a two-way active interaction process between researchers in the project and policy makers, market participants and societal organizations. Furthermore, the project should also promote contacts between these agents themselves. This communication strategy is a difficult enterprise, as different stakeholders do not necessarily share the same background, culture, language or even interests. Therefore, the dissemination materials produced should be customized to satisfy the target audiences' informative needs in terms of content, design, technical language, frequency, etc. Geographical fragmentation as well as differences in technologies and infrastructure among target groups also render the communication process difficult.

The specific objectives regarding dissemination are:

- a. *making an impact on the frontier of knowledge in the academic arena*. This is a crucial landmark in ensuring the sustainability of the research done in the project. As this research is known within academic circles, other researchers will follow up on this work in the future.

- b. *Ensuring a high degree of visibility of the results of the project.* It is important that the results of the project go beyond our strict area of academic research as it could be applied in other areas or in non-academic circles.
- c. *Creating the basis for a sustainable impact on the corresponding policy-making bodies.* Policy is the chief means by which the EU confronts the challenges addressed in this project. The research done in ADEMU could potentially have a significant effect on the way policy-makers conceive these challenges and produce effective responses that remain valid for an extended period of time.
- d. *Educating the general public with respect to the issues involved in the project.* ADEMU should raise awareness among societal organizations and the general public about how the issues analysed in the project affect society at large. This will give them the means to understand and evaluate policy design in addressing these challenges.
- e. *Tailoring the communication means to the specific target audience.* The dissemination strategy will study how to reach different stakeholders in the most efficient and productive manner, customizing the content, means, language and intensity of the communication to each target group.
- f. *Ensuring feedback from stakeholders, promoting dialogue among the involved parties and obtaining constructive criticism on the project.* It is of crucial importance to gauge to what extent the results of the project are useful for the target groups. Therefore, inputs on the applicability of the results are needed. The dissemination strategy will pursue these inputs and will guarantee they reach, and are used by, the researchers in the group.

To organize the communication strategy, the consortium will prepare an initial dissemination plan within the first 2 months of the beginning of the project. This plan will be continually monitored and updated during the course of the project. The monitoring will be based on key performance indicators. The results of these indicators will provide the necessary information to learn about the project's dissemination experience and to adapt to its needs. This information will be gathered to construct an interim dissemination plan at the midway point of the duration of the project so as to address and correct any shortcomings of the initial plan.

One of the tasks of the dissemination plan will be the identification of stakeholders. In this sense, we have classified stakeholders into categories. These categories could also be divided into sub-categories. This taxonomy is important to the extent that we can recognize differences among them along relevant dimensions such as:

- reasons for the project to reach a particular target group
- the stakeholders' motivation and interest in engaging in the project
- the stakeholders' power to produce responses to the specific challenges studied
- possible limitations in contacting stakeholders or to communicating with them

An understanding of stakeholder differences will enable the consortium to effectively engage, communicate with and promote future dialogue between different stakeholders. Up to now, there are three categories of stakeholders.

1. Academics
2. Policy makers
3. General public

Despite clear differences between stakeholder groups, sometimes their motivation or limitations overlap. Thus an effective dissemination strategy should integrate these common links in a way which enables stakeholders to view issues from one another's standpoint, which can also reduce barriers.

b) Communication activities

To reach stakeholders, the key dissemination tools will be:

1. **Project website.** (Deliverable D.5.3) The project website is one of the main sources of information about the project available to most stakeholders. The website will be constructed at the start of the project and will be maintained after the project ends. The website will contain deliverables produced as part of the

ADEMU project as well as other dissemination and communication items aimed at stakeholders. In order to assess how well the website is reaching stakeholders and acting as a source of information, the website will use standard web traffic analysis tools to track the number of visitors, and similar metrics over the life of the project. The website will be continually updated throughout the course of the project.

Monitoring measure: website hits, deliverable/document downloads, comments received.

2. **Personal communications.** Stakeholders will be reached via e-mail to inform them about events and activities. E-mail will also be used to distribute a newsletter to all stakeholders that draws attention to key milestones of the project. The media and researchers from other projects could also be reached by telephone.

Monitoring measure: e-mail responses, expansion of network of contacts

3. **Leaflets and poster.** (Deliverable D.5.4) Leaflets and a poster will be prepared containing a brief description of ADEMU and its objectives and partners. Leaflets will be distributed at events attended by ADEMU partners in order to increase its visibility and to expand our network of contacts. The poster will be displayed at events.

Monitoring measure: number of leaflets and posters printed and distributed, number of events where they are displayed and distributed

4. **Press releases.** (Deliverable D.5.4) ADEMU will prepare press releases to support the dissemination strategy by generating interest in the project's events, drawing attention to published reports or driving interested parties to sources such as the project website. These releases will be produced in major European languages for distribution to the media and the communications department of the European Commission.

Monitoring measure: number of press releases circulated, media interviews, geographical scope and range of publication, type of media used

5. **Policy briefs.** (Deliverable D.5.11) ADEMU will produce policy briefs in a format tailored towards relevant national and European policy makers. These policy briefs will include key results and policy recommendations and will also be published on the project website.

Monitoring measure: number of policy briefs produced, feedback received

6. **Publications in journals and working papers.** (Deliverable D.5.12) The results of the project will be published as scientific articles in peer-reviewed journals. These will ensure that ADEMU has a long-lasting impact beyond the project duration, particularly in relation to academic research. Although not exhaustive, the following list provides an indication of the target journals: *American Economic Review*, *Econometrica*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Review of Economic Studies*, *International Economic Review*, *Journal of Finance*, *Journal of Monetary Economics*, *Journal of the European Economic Association*. Working paper versions of our research will be openly available via the project's webpage.

Monitoring measure: number of scientific articles submitted and published, journals reached, journal impact factors

7. **Workshops.** (Deliverable D.5.5) Consortium partners will use workshops to discuss, present and deliberate project-related matters and findings. These workshops will be academic in nature and open to researchers outside the consortium. Experts in the area will provide feedback on the project.

Monitoring measure: number of workshops conducted, number of participants, participant feedback

Conferences. (Deliverable D.5.7) The beginning and the end of the ADEMU project are marked by a 'take-off' conference and a 'Final conference.' Ex-ante and ex-post dissemination of these conferences will be a key component of the project. The **Final conference** will take place in the context of the EUI- Florence [The State of the Union](#), which, since its launching in 2011, has become a major EU forum for debate on the current socio-economic and political situation of the EMU project between leading academics and policy leaders. It is an ideal forum to present the final results of the ADEMU project. For the final conference, and as a focal summary of the ADEMU inquire on the current macroeconomic architecture of the EMU, a Report on *The State of the Van Rompuy Roadmap in 2017* will be prepared and presented⁶.

⁶ Or on *The State of the Van Rompuy Roadmap in 2018* if the start of the project is delayed.

Furthermore, throughout the course of the project, consortium researchers will participate in key workshops and conferences such as the *Annual Congress of the European Economic Association*, the *Annual Meetings of the American Economic Association*, or the *Annual Meeting of the Society for Economic Dynamics*, among others. Participation in these events will be helpful to increase project visibility and sharing of results with the academic community as well as to expand the project's contact list. Monitoring measure: number of conference papers and presentations, number of conference workshops, type and size of conference, conference attendance

8. **Forums and policy roundtables.** (Deliverable D.5.6) Two Forums, or policy round tables, are designed to be a simultaneous meeting point between the consortium and different stakeholders to share the development of the project and obtain feedback to enhance the viability to implement ADEMU policy proposals..

Monitoring measure: number of forums organized, forum attendance, number of represented stakeholders, feedback

9. **The ADEMU course and support to Ph.D and post-docs.** (Deliverable D.5.8). With the research of the project a new course on the *The New Macroeconomics of the EMU*, which will be delivered in Summer Schools of the partner institutions and others. This is a novel initiative aimed at maximizing the impact of the research of the project and stimulating new research on EMU issues by PhDs and other participants. In addition, given that among the participants there are most of the large PhD programmes in economics in Europe (CAM, EUI, UCL, BGSE, CERGE and BcnGSE with the PhD programmes of UPF and UAB), as well as the largest post-doctoral programme in the social sciences (the Max Weber Programme at the EUI), ADEMU is designed to provide support to PhD students and post-docs for research in the project's topics and to faculty for mobility to teach on partners' PhD programmes, Summer Schools, etc.

Monitoring measure: number of short courses offered, course attendance, number of scholarships to students and funding for faculty mobility.

10. **The Risk Assessment Report on Public Sector Balance Sheets** and other research materials (Deliverable D.5.10 and D.5.13) As already explained, one of the objectives of the project is to launch a new methodology and measurement of 'public risks', close attention will be placed to support this initiative in its formal design and dissemination. Furthermore, ADEMU will make available the codes constructed to solve our models. The consortium will also produce a database of relevant indicators.

Monitoring measure: Number of codes produced, size of database, database downloads

11. **Educational material.** ADEMU will provide educational material addressed to the general public. This supporting material includes presentations and lectures in audio and video format as well as notes explaining the basic concepts and their relevance for society as a whole.

Monitoring measure: number of visits, document downloads, comments received

12. **Voxeu and Social media (Facebook, Twitter and blogs).** [Voxeu](#) has become a major online forum for policy debate on European economic issues, in which several researchers of the ADEMU project participate. It will also be a channel of communication and debate of the project. Similarly, online social networks are a potentially useful dissemination tool to reach the general public. ADEMU results may be disseminated through popular social networks such as Facebook or Twitter. Furthermore, as part of its social and professional communication strategy, the consortium will target relevant research blogs to disseminate project knowledge. Researchers of the consortium already publish in influential economic blogs such as [vox.eu.org](#), [economonitor.com](#) or [oekonomenstimme.org](#).

Monitoring measure: number of members/followers, network page views, re-tweets, blog posts, blog post views, page comments

3 Implementation

3.1 Work plan — Work packages, deliverables and milestones

Overall structure.

The proposal is organised into six work packages (labelled WP1 to WP6). WP1 to WP4 develop the research, whilst WP5 and WP6 cover the Dissemination and the Management of the project and, therefore, provide support to the previous WPs. More specifically, WP1 focus on *Long-term sustainability of a Monetary and*

Fiscal Union, WP2 on *Stabilisation and Policy Coordination*, and WP3 on *Financial imbalances and spillovers*. Loosely speaking, WP1 deals with long-term risks, WP2 with short-term economic risks, and WP3 with macro-financial risks (short-term risks that can become long-term crisis and recessions). WP4 focus on *policy implementation* and, in this respect, it builds and makes operative the work of WP1 – WP3, by providing a legal, political-economy and behavioural - experimental perspectives; in particular, it analyzes the legal, socio-political and behavioral challenges that the EMU fiscal and financial architecture faces and the ADEMU proposals should account for.

ADEMU Working Papers will be the basic form of dissemination of the research output of the ADEMU project (and it will be complemented by other forms more suitable for non-academic audiences: Policy Briefs, Policy Forums, etc.). In the detailed description of the Work Packages that follows, specific proposals for Working Papers are listed. These lists should help to envision the basic research output of the project – e.g. how different themes will be developed and, in particular, interrelated. Needless to say, the final list of ADEMU Working Papers will be the actual outcome of the ADEMU research. In particular, workshops, conferences, and other forms of communication among researchers in the project should contribute, through peer-criticism, to the development of ADEMU as an integrated research program in the social sciences.

Timing of the different work packages and their components

The activities of the six Work Packages are very interrelated and, as a result, Milestones and Deliverables can also be group across Work Packages. Table 3.1.2 (a) provides an overview of this interrelation as well as of their timing (colour coded) and Table 3.1.2 (b) provides the expected timeline. In particular, Deliverables can be divided in four groups:

- E. **Preparation.** The starting work of WP5 and WP6 and the preliminary requirements for the experimental work of WP4.
- F. **Events.** These are the events of the whole consortium (Conferences) as well as the ones organized within the different first four WPs (Workshops and Policy Forums), together with the corresponding support and dissemination work of WP5 and WP6; the latter also includes the corresponding follow-up work (and, setting its timing, the input from the Advisory Committee which should cover all the activities).
- G. **Documents.** Reflecting the main output of the project: Working Papers (and their supporting data, indicators and software), Policy Briefs and Reports. The result of the research of the first four WPs, with the support of WP5 and the coordination and follow-up of WP6.
- H. **Educational.** ADEMU Lectures and Courses, as well as the support to PhDs and post-docs. Again the work of WP1-WP4 with the support of WP5 and the follow-up of WP6

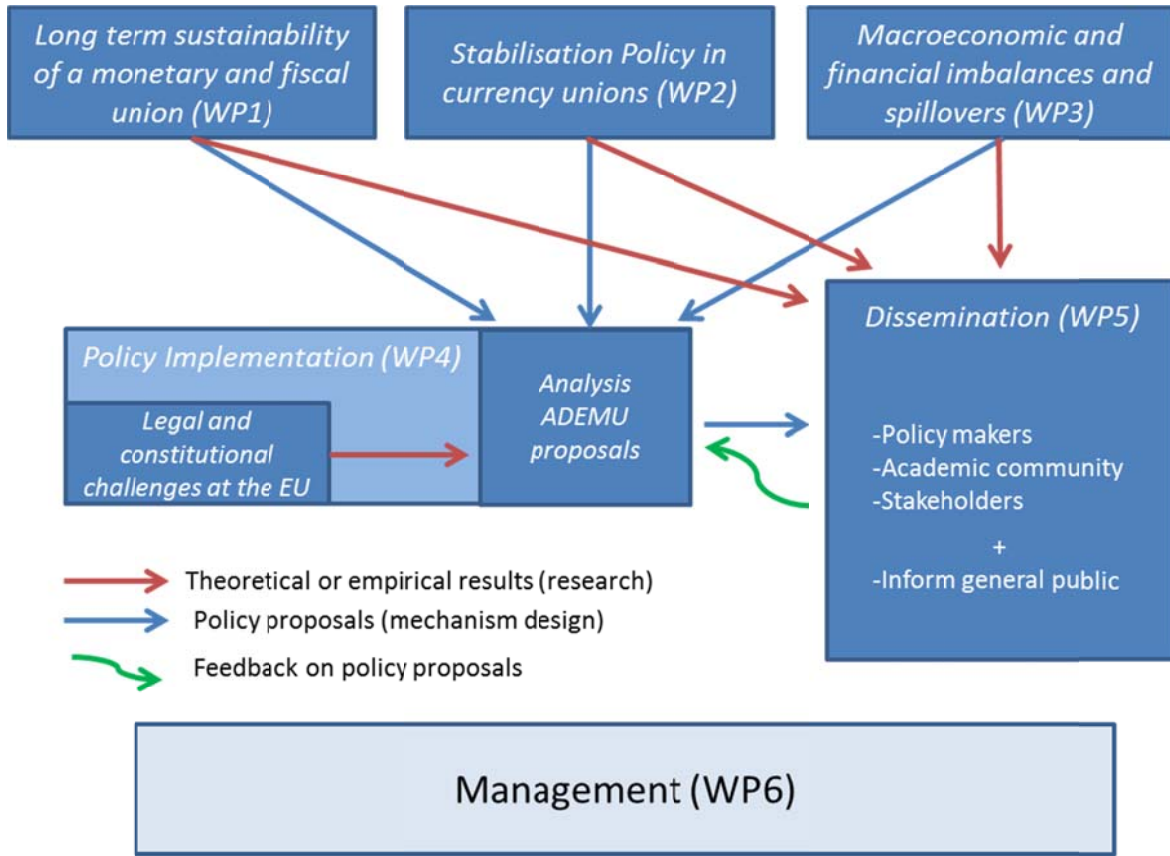
Table 3.1.2.a

Work Package	Category	Activity description	Year 1 (6/2015 - 5/2016)												Year 2 (6/2016 - 5/2017)												Year 3 (6/2017 - 5/2018)													
			6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5		
			M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36		
WP 1	Research	Working papers First cycle																																						
		Working papers Second and Third cycle																																						
	Events	Workshops																																						
		Policy briefs and reports																																						
WP 2	Policy oriented act.	Working papers First cycle																																						
	Research	Working papers Second and Third cycle																																						
		Workshops																																						
	Events	Policy briefs and reports																																						
WP 3	Policy oriented act.	Working papers First cycle																																						
	Research	Working papers Second and Third cycle																																						
		Indicators																																						
	Events	Workshops																																						
WP 4	Policy oriented act.	Policy briefs and reports																																						
	Research	Working papers First cycle																																						
		Working papers Second and Third cycle																																						
	Events	Workshops																																						
	Policy oriented act.	Policy briefs and reports preparation																																						
	Experimental work	Preparation and release of data and software																																						
	Preparation	ADEMU website creation & dissemination plans																																						
	Research dissemination	Working papers results and scope																																						
WP 5		Data and software																																						
	Policy oriented dis. act.	Policy briefs and reports																																						
		Workshops and policy forums																																						
	Events Dissemination	Conferences																																						
WP 6		ADEMU lectures and courses																																						
	Coordination and management	Coordination, management and follow-up																																						
		Meeting Advisory Committee and steering committee																																						
Milestones																																								

Table 3.1.2.b

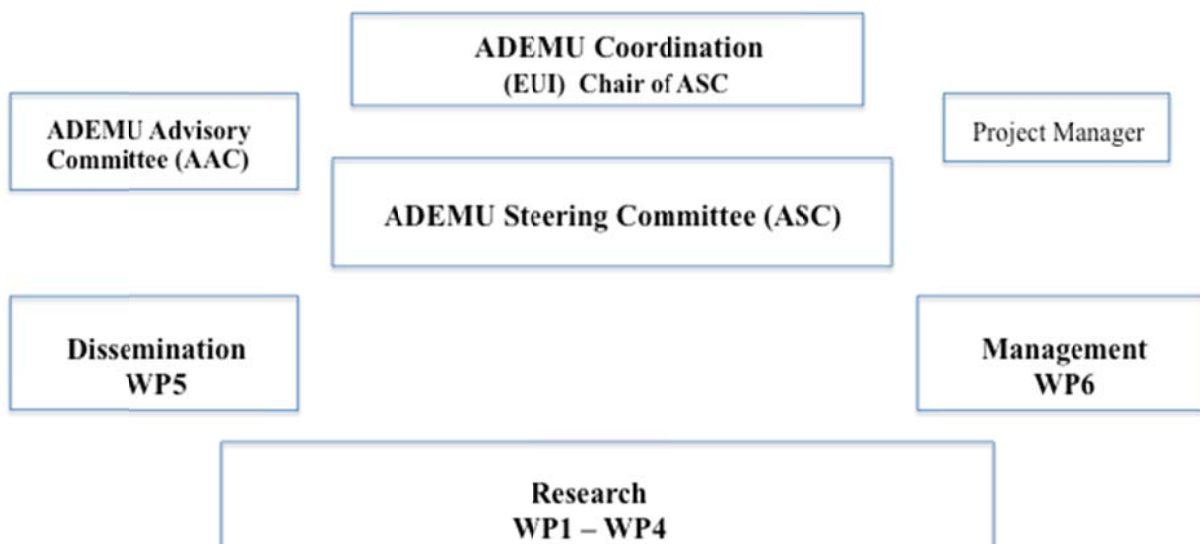
	Month	WP1	WP2	WP3	WP4	WP5	WP6	Milestones
A. Preparation								
Logistics	4					D5.1	D6.1&7	
Experiments & Data Mgmt.	12				D4.7			
B. Events								
Conferences	6	*	*	*	*	D5.2 [8]	D6.5 [8]	MS1
	36	*	*	*	*	D5.12	D6.4 [30]	MS10
Workshops & Policy Forum	12	D1.3	*		*	D5.5	D6.2	MS8
	24	D1.4	D2.3	D3.3	D4.3	D5.6	D6.3&6	MS3
	36	D1.5	D2.4	D3.4	D4.4	D5.11		
C. Documents								
Working Papers	12	D1.1	D2.1	D3.1	D4.1	D5.3	D6.2	MS2
	34	D1.2	D2.2	D3.2	D4.2	D5.4		MS4
Policy Briefs	34	D1.6	D2.5	D3.5	D4.5	D5.8	D6.4 [30]	MS9
Indicators & Exp. Software	34			D3.6	D4.6	D5.9		
Reports (Risk)	34	D1.7				D5.10	D6.4 [30]	MS6
(Policy&Scientifi	36	*	*	*	D4.8	D5.13	D6.4 [30]	MS11&12
D. Educational								
Lectures & Courses	24	*	*	*		D5.7	D6.3	MS5&7
* WP also related to the corresponding MS								

Graphical presentation of the components



3.2 Management structure and procedures

The project will be managed as a Consortium based on a Consortium agreement which will be agreed upon before the commencement of the contract. The EUI as the co-ordinating partner for the Consortium will draw on and strengthen its managerial capacity for the benefit of the Consortium and to ensure close liaison with the European Commission at all stages of the Project.



Scientific direction and management

The European University Institute (EUI) will anchor the management of the project, with Ramon Marimon, as chair of the Steering Committee, working closely with a core team of colleagues at the EUI. He brings a depth of experience and expertise in managing programmes and projects. He has close knowledge of the operating requirements of the European Commission, as well as of national funding agencies and of projects directly commissioned by the practitioner community. The EUI in general is by its very mission and status an interdisciplinary centre of advanced studies with a strong vocation towards supporting policies. Experience at both the academic and administrative level and research management know-how accumulated through the years provides for the right environment for the co-ordination of this project.

In particular, Ramon Marimon will be responsible for monitoring and ensuring the academic quality of final deliverables of the project, keeping contacts with the Commission and with the heads of the research teams, therefore communicating with the partners; considering and proposing any academic or policy re-orientation of the project to the Steering Committee, if necessary in the light of new academic or policy developments; representing the project in academic or policy events, and for the involvement and mobilization of relevant actors.

Ramon Marimon will be assisted by a part-time project manager, who will be responsible for the daily management of the project. The project manager should bring a combination of managerial skills and scientific know-how to the management of the Consortium, and should liaise regularly with all partners, and in particular the Work Package leaders, ensuring that work progresses to schedule, that deliverables are produced, and that appropriate periodic reporting is carried out.

As project coordinators, this management team will lead the related Work Package 6 “Project Management”, provide continuous management over the full duration of the project, taking charge of collective activities for the Consortium, maintaining close liaison with the team leaders, and administering the budget for management and dissemination costs.

This team will draw on further support from: the Research Administration of the EUI (including support for financial management of the Consortium and from the Economics and Law Departments); the communication service of the EUI. Serena Scarselli leads the Research Administration Unit, which comprises an experienced team well conversant with the operations and requirements of the European Commission’s Framework Programme. This team will provide continuous support to the Consortium. The team will also work with the Dissemination team from the Barcelona GSE responsible for WP5.

ADEMU Steering Committee (ASC)

The ADEMI Steering Committee (ASC) will be established, composed of: the ADEMU co-ordinator, Ramon Marimon (also of EUI & WP6), who will chair the Committee, and the other Participants-Work Packages coordinators -- namely, Giancarlo Corsetti (CAM & WP1), Pedro Teles (UCP & WP2), Rabin Bohacek (CERGE & WP3), David Levine (WP4), Luca Gambetti (BcnGSE & WP5) – and the coordinators of the remaining teams: Morten Ravn (UCL), Thomas Hintermaier (BGSE) and Franck Portier (TSE). If necessary, a member of the ASC can be substituted in a meeting by another person of the same participant team, since presence of all teams in the meetings is advisable. The Project and Dissemination managers will usually participate in the ASC meetings with voice but no vote (although decisions are expected to take place by consensus not by vote). The ASC will be responsible for the general co-ordination of activities across the different Work Packages; the development and delivery of the research projects and of supporting dissemination and exploitation activities; for the preparation of the content and timing for press releases and joint publications by the Consortium; for the co-ordination of periodic reports to be delivered to the Commission; for making proposals to the partners for review and/or amendment of the terms of the contract; and for taking initiatives (should they be needed) to replace ‘defaulting’ partners or to block payments to defaulting partners. The ASC will also deal with issues relating to Intellectual Property Rights.

The ASC will meet in conjunction with project workshops or conferences and, if needed, in-between. Otherwise, it will hold virtual meetings and consult electronically.

ADEMU Advisory Committee (AAC)

The ASC will appoint a small ADEMU Advisory Committee (AAC) of independent and experienced experts to provide an external monitoring role for the benefit of the Consortium so as to check the quality of the work of the Consortium and to provide periodic advice to the Consortium. In addition, the Advisory Committee will ensure and supervise the relevance of the project for policy makers, MNCs and other stake holders. Furthermore, it will monitor the policy recommendations extracted from each of the work packages and

validate the final policy recommendations guide. It will meet twice during the three years of the project, possibly in conjunction with the conferences. Members of the AAC will be invited to deliver ADEMU Lectures. Professor Thomas F. Cooley has accepted to Chair the ADEMU Scientific Advisory Committee.

Thomas F. Cooley is the Paganelli-Bull Professor of Economics at the Leonard N. Stern School of Business at New York University, as well as a Professor of Economics in the NYU Faculty of Arts and Science. He served as Dean of the Stern School from 2002 to January 2010. Before joining Stern, he was a Professor of Economics at the University of Rochester, University of Pennsylvania, and UC Santa Barbara. Prior to his academic career, he was a systems engineer for IBM Corporation. He is a Research Associate of the National Bureau of Economic Research and a member of the Council on Foreign Relations. He is also the former President of the Society for Economic Dynamics, a Fellow of the Econometric Society and holds an honorary doctorate from the Stockholm School of Economics. He is a widely published scholar in the areas of macroeconomic theory, monetary theory and policy and the financial behavior of firms. He also frequently writes opinion pieces for a variety of economic and business publications. Responding to the financial crisis of fall 2008, he spearheaded a research and policy initiative that yielded 18 white papers by 33 NYU Stern professors, published as *Restoring Financial Stability: How to Repair a Failed System*, (Wiley, 2009). Together with Stern colleagues he is currently editing and writing a book, *Regulating Wall Street, The New Architecture of Global Finance*, published by Wiley in 2010. He is the co-editor of the *Cooley-Rupert US and European Economic Snapshot*, which provides quarterly information on the state of these economies.

3.3 Consortium as a whole

EURO-I-2014: Resilient and sustainable economic and monetary union in Europe is basically an economic topic with a focus on policy implementation. For this reason the consortium has been conceived from the beginning as a consortium that will integrate some of the best macroeconomists teams of researchers in Europe, but also count with alternative perspectives regarding policy recommendations. The ADEMU consortium fits this aim. EUI, CAM, UCL, BcnGSE, TSE, BGSE, CERGE and CEU form a very strong research network in economics, with four important characteristics. First, researchers among these institutions are already collaborating and, as the description of the Work Packages shows, these collaborations are expected to further develop with the project;⁷ that is, even if the distribution of time across WP also shows certain degree of specialization among teams, work will not proceed in isolation and researchers in the project will benefit of the collaborative nature of the call: the consortium is strong enough as to be able to be ambitious in its research goals and impact. Second, the consortium coherent and, at the same time, diverse: coherent in that all the researchers share the appreciation for work that it is theoretically rigorous and at the same time empirically sound, as well as for the advanced training that this work requires but, at the same time, researchers are diverse on how to set the balance between theory and fact, between mathematical or computational tools and more descriptive work, between different schools of thought; in sum is this coherent diversity which can make research advance through peer-criticism. Third, seven of the eight participants have structured PhD programmes in economics (some among the largest in Europe) and an increasing number of post-docs (with EUI hosting the largest post-doctoral programme in the social-sciences), this means that many of them should be able to collaborate with the project and, in turn, the ADEMU project may help them to define their research – EMU oriented -- agenda for the years to come. Fourth, the consortium is, in turn, part of the larger network of most active research macroeconomists in Europe: some of the institutional participants have other researchers that can collaborate with the project; most research economists within ADEMU form also part of broader research networks, such as the European CEPR, or the US based, NBER; all actively participate in leading international conferences, and, in fact, the participant institutions often host some of these conferences (for example, EEA-ESEM 2014 takes place at TSE).

Nevertheless, the strength of the pure economic research could be a weakness if at the point of making policy recommendations these lacked the level of institutional design needed for their implementation. It is for this

⁷ Regarding the research packages, WP1 and WP4 involve all 8 participants and WP2 and WP3 involve 6 and 4 participants, respectively.

reason that to count with the legal, political-economy and experimental perspective (see WP4) provides an extra peer-review lever to the project. Furthermore, that the strong team of research lawyers, experts in EMU issues, is part of one of the participant institutions, and not a separate partner, provides a better guarantee that the multidisciplinary and interdisciplinary discourse will not be just pure rhetoric. Furthermore, the coordination of ADEMU from the EUI also guarantees an easy access to leading historians and political and social scientists (faculty, post-doctoral fellows and PhDs) with whom to contrast the ideas and research of the ADEMU project.

Finally, it should also be emphasize that the project is also designed to have outside leading social scientists participating in the project. The ADEMU Advisory Committee (AAC), the ADEMU Lectures, workshops and conferences, as well as visiting possibilities for external collaborators broadens the impact of the consortium.

3.4 Resources to be committed

The contribution of the European Commission requested in this proposal covers the following items: (1) research staff, (2) travel and subsistence expenses for project meetings and fieldwork, (3) specific project costs for the organisation of dissemination events, (4) specific project costs for subcontracting (5) management expenses for legal, financial and administrative management .

The total cost of the Research project has been calculated considering the following principles:

- personnel costs: the amount foreseen is based on the actual cost of staff for each partner; partners are assigned a certain number of person months calculated on the basis of their contribution in the different work packages.
- travel and subsistence costs: each participant has been assured a budget for participating in meetings and conferences foreseen in the project plus the travel costs related research activities, field work etc.

The total requested contribution for the project is 2.500.000 Eur. The total direct costs (2.096.205 Eur) can be broken down by type of costs as follows:

- Personnel costs for Research activities:	1.393.710	(66.5%)
- Personnel costs for management and dissemination:	146.000	(6.9%)
- Travel expenses for project team:	183.135	(8.7%)
- Workshops, Lectures, Summer schools:	184.994	(8.9%)
- Dissemination Conference and Policy Forums:	60.000	(2.9%)
- Equipment:	37.500	(1.8%)
- Other goods and services for dissemination activities:	57.866	(2.4%)
- Subcontracting (Experiments)	30.000	(1.9%)

The share of personnel costs is high simply because of the nature of social science research. Nevertheless, staff costs have been kept as low as possible by opting, wherever feasible, for a combination of work by senior academics and less senior researchers working under close supervision. This has the additional merit of enabling junior researchers to gain project experience whilst working with some of the leading experts within their disciplines in Europe.

Management personnel costs are attributed to the coordinator that will have the main responsibility for managing the legal, contractual, financial and administrative aspects of the consortium. Most of these costs are associated with the post of part-time project manager who will have the main responsibility for managing the legal, contractual, financial and administrative aspects of the Consortium.

In terms of resource allocation among partners a bigger share has been reserved to the Coordinator in consideration of its role for both the management of the project and the implementation of many WPs.

Finally, each partner will contribute to the project for its entire duration by providing its own resources, such as personal skills, existing equipment and software, appropriate space and premises etc. and most importantly their know-how in organising, managing and successfully conducting an international research project.

The EUI (participant no. 1) is receiving an operating grant from the European Union, and following article 6.5 (a) of the Model Grant Agreement the indirect costs of this beneficiary are not eligible. Therefore the EUI is not requesting indirect costs for the project; the requested grant will only reimburse the declared direct costs

Table 3.4b: Other direct costs

Participant Number: 1 EUI	Cost (€)	Justification
Travel	84.062	<p>40.062 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project visibility and sharing of results with the academic community</p> <p>14.000 Euro – organisation of Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions. ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political Science.</p> <p>30.000 Euro – Final Conference and Policy Forum. Policy Forums and roundtable are designed to be a simultaneous meeting point between the consortium and different stakeholders to share the results of the project and obtain feedback and new ideas. The Final Dissemination Conference will be a fairly large public event at which all the results of the project will be presented to European policy makers and other stakeholders. It will be organised in the context of the EUI-Florence State of the Union</p>
Equipment	5.000	2 Additional Laptops for project team and specific software for the project
Other goods and services	42.559	<p>30.000 Euro - Subcontracting for Experiments. They form part of WP4 under objective 3. The costs involved include the facilities of the lab, the experts that implement the experiments and the monetary rewards that are given to the subjects that participate on the experiments (see also section 4).</p> <p>12.559 Euro – materials for dissemination workshops and lectures and preparation of policy briefs</p>
Total	131.621	

Participant Number: 2 CAM	Cost (€)	Justification
Travel	64.938	20.938 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project

		<p>visibility and sharing of results with the academic community</p> <p>14.000 Euro – organisation of Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions. ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political Science.</p> <p>30.000 Euro – First project Conference and Policy Forum. The Policy Forums and roundtable are designed to be a simultaneous meeting point between the consortium and different stakeholders to share the results of the project and obtain feedback and new ideas.</p>
Equipment	5.000	2 Additional Laptops for project team, specific software for the project
Other goods and services	5.000	Materials for dissemination workshops and lectures
Total	74.938	

Participant Number: 3 Bonn	Cost (€)	Justification
Travel	37.614	<p>21.614 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project visibility and sharing of results with the academic community</p> <p>16.000 Euro – organisation of Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions. ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political Science.</p>
Equipment	5.000	2 Additional Laptops for project team, specific software for the project
Other goods and services	5.000	Materials for dissemination workshops and lectures
Total	47.614	

Participant Number:4 TSE	Cost (€)	Justification
Travel	40.991	24.991 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project

		visibility and sharing of results with the academic community 16.000 Euro – organisation of Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions. ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political Science.
Equipment	5.000	2 Additional Laptops for project team, specific software for the project
Other goods and services	5.000	Materials for dissemination workshops and lectures
Total	50.991	

Participant Number: 5 UCL	Cost (€)	Justification
Travel	50.725	16.767 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project visibility and sharing of results with the academic community 33.958 Euro – organisation of Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions. ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political Science.
Equipment	2.500	1 Additional Laptops for project team, specific software for the project
Other goods and services	3.344	Materials for dissemination workshops and lectures
Total	56.569	

Participant Number: 6 UCP	Cost (€)	Justification
Travel	32.210	16.210 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project visibility and sharing of results with the academic community 16.000 Euro – organisation of Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions.

		ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political Science.
Equipment	5.000	3 Additional Laptops for project team, specific software for the project
Other goods and services	5.000	Materials for dissemination workshops and lectures
Total	42.210	

Participant Number: 7 BcnGSE	Cost (€)	Justification
Travel	65.640	23.640 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project visibility and sharing of results with the academic community 42.000 Euro – organisation of dissemination Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions. ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political Science.
Equipment	10.000	5.000 Euro – 3 Additional Laptops for project team, specific software for the project 5.000 Euro – Technical equipment: Audiovisuals, videos for 5 days (1.000 euro per day): recording, use of cameras, production
Other goods and services	29.000	17.000 Euro - Materials for dissemination workshops and lectures, printing materials, preparation of policy briefs 12.000 Euro –Project website
Total	104.640	

Participant Number: 8 CERGE	Cost (€)	Justification
Travel	34.912	18.912 Euro - travel costs for project team: research trips, fieldwork, participation in conferences to increase project visibility and sharing of results with the academic community 16.000 Euro – organisation of Workshops, Lectures and Courses. During workshops project-related matters and findings will be presented and discussed. These workshops will be academic in nature and open to researchers outside the consortium. The project short course will present the main research of the project in partner- and other institutions. ADEMU will also host a series of regular Summer Schools for students and young policymakers in Economics and Political

		Science.
Equipment	5.000	2 Additional Laptops for project team, specific software for the project
Other goods and services	5.000	Materials for dissemination workshops and lectures
Total	44.912	

4. Members of the consortium

4.1 Participants

PARTICIPANT 1: European University Institute (EUI)	
Description	<p>The <i>European University Institute (EUI)</i> is a doctoral and postdoctoral academic institution, created in 1972 by the Member States of the founding European Communities. Its main objective is to provide advanced academic training to Ph.D students and to promote research at the highest level. It carries out research in a European perspective (fundamental research, comparative research and Community research) in history, law, economics, political and social science. Its teaching staff, fellows, and researchers following the PhD or LLM programmes, are recruited from all over Europe and beyond. EUI is home to the Robert Schuman Centre for Advanced Studies (RSCAS), an interdisciplinary policy research centre working on issues of European integration and European society and to the Max Weber Programme, the largest post-doctoral programme in social sciences in Europe. Since 2011 has been hosting, together with the City of Florence, <i>The State of the Union</i>, which has become a major policy-academic event to analyse the current situation of the European Union.</p> <p>The <i>EUI Economics Department</i> brings together top scholars from all over the world in an outstanding research and teaching environment. The Department aims at producing the next generation of top-class researchers in Economics, working in academia and in the public and private sector, mostly in Europe but also throughout the world. In fact, a large number of EUI PhDs and post-docs are following successful careers in academia, central banks, and other international organizations. The research objectives are to produce basic and applied research, contributing both to the advancement of our knowledge about the complexity of economic systems and to the debate on economic and social issues in the European Union and beyond.</p>
Staff profile	<p>Ramon Marimon was until recently the Director of the Max Weber Postdoctoral Programme, and is now a Professor of Economics at the European University Institute, as well as being Chairman of the Barcelona Graduate School of Economics, and Professor at Universitat Pompeu Fabra (on leave). He is Chair President of the Society for Economic Dynamics (2012-2015) and Research Fellow of CEPR and NBER. He was previously an Assistant and Associate Professor at the University of Minnesota, Secretary of State for Science and Technology of the Government of Spain (2000-02), and President of the Spanish Economic Association (2004). He was a co-founder of UPF as Dean and Chair of the Department of Economics and Business (1990-91), and founder and director of the Centre de Recerca en Economia Internacional (CREI,</p>

1994). He has also been advisor of the European Commission on R&D policy. His research interests include Macroeconomics, Monetary and Fiscal Theory, Contract Theory, Learning Theory, Labour Theory, Economics of Innovation, Science and Technology Policy. He has published in *Econometrica*, the *Journal of Political Economy*, the *American Economic Review*, the *Journal of Economic Theory*, the *Review of Economic Dynamics*, and others. He also writes frequent opinion columns for *El País* newspaper.

David Levine joined the EUI in September 2013. He is on leave as John H. Biggs Distinguished Professor of Economics at Washington University in St. Louis. He is a fellow of the Econometric Society, an Economic Theory Fellow, a research associate of the NBER, and of the Federal Reserve Bank of St. Louis. His scientific research is supported by grants from the National Science Foundation. He is the author of *Is Behavioral Economics Doomed?* (with Michele Boldrin), of *Against Intellectual Monopoly* (with Drew Fudenberg), and of *Learning in Games*, and has edited several conference volumes. He has published extensively in professional journals, including the *American Economic Review*, *Econometrica*, the *Review of Economic Studies*, the *Journal of Political Economy*, the *Journal of Economic Theory*, the *Quarterly Journal of Economics*, and the *American Political Science Review*.

Fabio Canova has been a full-time professor in the EUI since September 2012. He has taught in numerous universities around the world and given professional courses at central banks, as well as holding consultancy positions with the Bank of England, the ECB, the Bank of Italy, the Bank of Spain, the Norges Bank and the IMF. His research interests are in quantitative macroeconomics, monetary economics, time series econometrics and forecasting, international business cycles, growth policies. He has held editorial positions with the *European Economic Review* and the *Journal of Applied Econometrics*. He is currently co-editor of the *Journal of the European Economic Association* and has participated in a number of international conferences. He has published over 70 articles in international journals and his graduate textbook, *Methods for Applied Macroeconomic Research*, was published in 2007 by Princeton University Press.

Evi Pappa is a full professor in the EUI since September 2011 and also Research Professor of Barcelona GSE. After graduating from UPF, she was an assistant professor of economics at the LSE, 2001-2006, Bocconi University (Milan), 2004-2005, and UAB, 2005-2006. Her main research interests are International Macroeconomics and Monetary and Fiscal Policy. Given Professor Pappa's interest in monetary policy analysis, she has been a visiting researcher in many Central Banks, including the Bank of England, the European Central Bank, the Federal Reserve Bank of Atlanta, and the Riksbank (Sweden). She is a member of the Applied Macroeconomics Network (Amen), is a MOVE (Markets Organizations and Voting in Economics) Research Fellow and a Research Affiliate with Center for Economic Policy Research (CEPR). She received the IGIER Scholarship for Young Researchers in 2003-2004, the Paolo Baffi Fellowship in 2008 and the Ramon Areces scholarship in 2010. She has published in a number of international journals, including the *Journal of Monetary Economics*, *International Economic Review*, *Journal of Public Economics* and *Economic Policy*.

Árpád Ábraham has been a Professor of Macroeconomics at the EUI since September 2009. Before joining the EUI, he held positions in the University of Rochester, Duke University and as a Research Officer at London Business School. He has published in the *Journal of Monetary Economics*, the *Journal of*

the European Economic Association, Theoretical Economics and *Acta Oeconomica* among others. His main research interests are optimal taxation, inequality, and the efficient allocation of consumption.

Piero Gottardi is a Professor of Economics at the EUI, and the current head of the Department of Economics. He has been a visiting professor at Harvard, Yale, Brown, Pompeu Fabra and UAB, teaching in the doctoral programmes of these universities. He is Associate Editor of the *Journal of Economic Theory* and the *Journal of Public Economic Theory* and has published in the *Review of Economic Studies*, the *Journal of Political Economy*, the *Journal of the European Economic Association*, the *Review of Economic Dynamics* and the *Journal of Economic Theory*.

Andrea Mattozzi has been Professor of Microeconomics at the EUI since September 2011. He held previous positions in the Universitat Autònoma de Barcelona and the California Institute of Technology. His main research interests lie in political economy, microeconomics and public economics. He has published articles on the effects of political uncertainty on the adoption of redistribution policies, the selection of politicians under alternative electoral systems, the role of social learning in political games, and the effects of participation requirements in popular referenda. He has published in international journals such as the *American Economic Journal Micro*, the *Journal of the European Economic Association*, the *International Economic Review*, *Games and Economic Behavior*, the *Journal of Public Economics* and the *Journal of Politics*. His research has been supported by an NSF grant (2006-2009) and by a Ramón y Cajal fellowship.

Peter Hansen has been Professor of Econometrics at the EUI since September 2011, having previously held positions at Stanford University and Brown University. His research interests include forecasting, the econometrics of high frequency data and financial volatility, multiple comparisons and model selection. He is Associate Editor of the *Journal of Applied Econometrics* and the *Journal of Econometric Methods*, and his research has been published in international journals such as *Econometrica*, the *Journal of Econometrics*, the *Journal of Applied Econometrics*, and the *Journal of Business and Economic Statistics*.

Richard Portes currently holds the Tommaso Padoa-Schioppa Chair at the EUI. He has previously been a Rhodes Scholar and a Fellow of Balliol College, Oxford, as well as having taught at Princeton University and Harvard University (as a Guggenheim Fellow). He was the founder of the Economics Department at Birkbeck College (University of London) in 1972. In 1999–2000, he was the Distinguished Global Visiting Professor at the Haas School of Business, University of California, Berkeley, and in 2003–04 he was Joel Stern Visiting Professor of International Finance at Columbia Business School. Professor Portes is a Fellow of the Econometric Society and a Fellow of the British Academy. He was the longest serving Secretary-General of the Royal Economic Society (1992–2008) since John Maynard Keynes. He is Co-Chairman of the Board of Economic Policy, and a member of the Group of Economic Policy Advisers to the President of the European Commission.

Charles Brendon is currently a Max Weber Fellow at the EUI, and will become the El Erian Fellow in Macroeconomics at Cambridge University from September 2014. He received his doctorate from the University of Oxford in 2012. He works on questions related to optimal taxation, time-consistent macroeconomic policy, and monetary policy at the zero lower bound.

	<p>Luis Rojas is a PhD researcher at the EUI, writing his thesis under the supervision of Ramon Marimon.</p> <p>Giorgio Monti is Professor of Competition Law and Director of Graduate Studies in the Department of Law at the EUI. He previously taught Law at the University of Leicester (1993-2001) and at the London School of Economics (2001-2010). He is an Italian national but he received his legal training in the UK. He has taught across a diverse set of courses: whilst his main research focus is in the field of competition law, he has engaged in research projects in fields ranging from feminist legal studies to commercial law and comparative tort law.</p> <p>Claire Kilpatrick is Professor of International and European Labour and Social Law at the EUI. She previously held academic positions at the London School of Economics, the University of Cambridge, Queen Mary (University of London) and the University of Bristol. Her research focuses on EU social law and policy, and comparative labour and employment law. Between 2005 and 2009 she was a member of the European Commission's external advisory Group of Societal Policy Analysis. She is currently and editorial board member of the <i>Industrial Law Journal</i> and the <i>European Law Journal</i>.</p> <p>Bruno De Witte has been Professor of European Union Law at the European University Institute since March 2000. Prior to this he was Professor of European Law at the University of Maastricht. His research focuses on constitutional reform and treaty revision in the European Union, relations between international, European and national law, and the protection of fundamental rights in Europe. He is a co-director of the Academy of European Law at the EUI, and series editor of the <i>Collected Courses of the Academy of European Law</i> (Oxford University Press). Professor De Witte is a Member of the Board of Editors of the <i>European Law Journal</i>, the <i>European Human Rights Law Review</i>, the <i>Revista Española de Derecho Europeo</i> and the <i>Revista de Llengua I Dret</i>.</p> <p>Thomas Beukers has been a Max Weber Fellow in Law at the EUI since September 2012. He conducted his Ph.D. research at the Law Faculty of the University of Amsterdam from 2004 until 2009, after which he became a lecturer in European law at Utrecht University. His research interests include the relationship between law and politics, as well as the constitutional law of the European Union, with a particular focus on the constitutional development of the EU's economic and monetary union as a result of the European sovereign debt crisis. Between 2011 and 2012 he worked for the Legal Service of the Dutch Ministry of Foreign Affairs as an advisor on European law.</p> <p>Cristina Fasone has been a Max Weber Fellow in Law at the EUI since September 2013. Her research focuses in particular on the reaction of Constitutional Courts and national parliaments to euro-crisis law, and the institutional impact of the increasing asymmetries within the European Union. She completed her PhD in Comparative Public Law at the University of Siena in 2011.</p>
Relevant publications	<p>Diaz-Giménez, J., G. Giovannetti Ramon Marimon, and P. Teles (2008). Nominal Debt as a Burden to Monetary Policy, <i>Review of Economic Dynamics</i>, 11, 3, 493-514.</p> <p>Levine, D. and T. Palfrey (2007). The Paradox of Voter Participation: A Laboratory Study," <i>American Political Science Review</i>, 101: 143-158, 2007.</p> <p>Gottardi, P and R. Rahi (2013). Risk Sharing and Retrading in Incomplete Markets, <i>Economic Theory</i> 54 (2), 287-304.</p> <p>Canova, F. and E. Pappa (2011). Fiscal Policy, Pricing Frictions and Monetary</p>

	<p>Accommodation, <i>Economic Policy</i>, 26(68), pp. 555-598.</p> <p>Ábrahám, A., N. Pavoni and S. Koehne (2011). On the First Order Approach in Principal-Agent Models with Hidden Borrowing and Lending, <i>Journal of Economic Theory</i>, 2011, 1331-1361.</p> <p>Marcet, A. and R. Marimon. (2011). Recursive Contracts. European University Institute, MWP, 2011/03, ECO, 2011/15, Barcelona GSE wp 552.</p>
<p>Relevant previous projects or activities</p>	<ol style="list-style-type: none"> 1. The EUI Robert Schuman Centre for Advanced Studies (RSCAS) is devoted to inter-disciplinary and comparative research and to promote work on the major issues facing the process of integration and European society. Its main objectives are to produce research of the highest intellectual quality; to collaborate with other centres of research excellence; to provide opportunities for young scholars working in its key fields; and to promote dialogue with the world of practice. The research agenda is organised around a set of core themes and is continuously evolving, reflecting the changing agenda of European integration and the expanding membership of the European Union. RSCAS has actively participated in previous Framework Programmes. Fabio Canova and David Levine are joint Economics - RSCAS Professors and Bruno De Witte is joint Law – RSCAS Professor. 2. The State of the Union has been, since 2011, a yearly EUI – City of Florence initiative that has gathered leading academics working on socio-economic, legal and historical issues of the EMU with some of its main political leaders, becoming a landmark forum where large lectures and debates (in Florence’s Palazzio Vechio) are complemented with more reduced workshops and policy events. 3. The Max Weber post-doctoral Program is the largest post-doctoral programme in the social-sciences and since inception in 2006 there have been conferences, workshops and reading groups, organized by Max Weber Fellows (often involving other Fellows and PhD researchers) on topics related to the EMU, the financial and euro crises. A debate that afterwards follows through international collaborations. The MWP complements the EUI PhD programme, which is one of the largest in the social sciences in Europe. 4. Study on the economic effects of deleveraging in the financial and non-financial sectors is a project funded by the EU – DG Economic and Financial Affairs. The aim of the study is to develop a dynamic stochastic general equilibrium model of the Euro Area, which can account for the interactions between financial and non-financial sectors, and can be employed by the Commission for its own work 5. MaxCap - Maximizing the integration capacity of the EU, lessons and prospects for enlargement and beyond, funded by the EC – FP7
<p>Description of any significant infrastructure and/or any major items of technical equipment</p>	<p>Cadmus is the EUI's open access research repository and contains the EUI-members' academic publications produced during their time at the EUI and those based on research carried out during their time at the EUI. It also includes all publications from any academic series sponsored by the EUI, such as working paper series and theses written by EUI researchers.</p> <p>The repository's content is constantly growing both in number of bibliographic records and full-text publications. The EUI supports the principle of Open Access. Cadmus is searchable in, and harvested by, several European and international networks and portals. Through the EUI Institutional Repository</p>

	CADMUS (which has been certified by the European Commission for fulfilling all the conditions required) http://cadmus.eui.eu , the EUI will ensure that all project reports are included as part of its Green Open Access rules.
PARTICIPANT 2: Cambridge University (CAM)	
Description	<p>Work on the ADEMU project at Cambridge University will be conducted by researchers based in the Faculty of Economics, and associated with with the Centre for Macroeconomics and the Cambridge-INET Institute.</p> <p>Since its establishment by Alfred Marshall in 1903, the Faculty of Economics at Cambridge has been an important base for distinguished scholars in the discipline, including nine winners of the Nobel Prize. It is the central location for economics research in Cambridge, coordinating the university's doctoral programme.</p> <p>The Centre For Macroeconomics is a research centre that brings together a group of world class experts to carry out pioneering research on the global economic crisis and help design policies to alleviate it. Chaired by the LSE's Nobel Prize-winning economics professor Christopher Pissarides, the centre encompasses experts from Cambridge University, the LSE, University College London, the Bank of England and the National Institute of Economic and Social Research (NIESR). Five major research programmes address the key issues of unemployment, fiscal austerity, financial markets, shifts in the world economy and the development of new methodologies. The Cambridge branch, directed by Giancarlo Corsetti, has specialized in the analysis of fiscal multipliers at both aggregate and local level, and fiscal and monetary policy interactions (with the association of 3 post-docs). This expertise will contribute directly to ADEMU's research.</p> <p>The Cambridge-INET Institute was set up in 2013 by Cambridge researchers with the support of the Institute for New Economic Thinking, the Cambridge Endowments for Research in Finance, the Newton Trust, The Queen's College and Mohammed el Erian. It carries out fundamental research in four areas: (a) networks crowds and markets, (b) transmission mechanisms and economic policy, (c) information, uncertainty and incentives and (d) econometric analysis of financial markets. The Institute sponsors research teams on these topics, associating to the regular faculty 12 to 15 postdocs, and visiting professors. The Institute is directed by Sanjeev Goyal, together with Giancarlo Corsetti (deputy), Vasco Carvalho, Oliver Linton, Kaivan Munshi and Hamid Sabourian. The analysis associated with the ADEMU project will build on previous research conducted at the Institute investigating persistent unemployment crises, liquidity traps, the propagation of micro- and macro-economic shocks via supply chains, and production networks.</p>
Staff profile	<p>Giancarlo Corsetti (Ph.D. Yale, 1992) is Professor of Macroeconomics at Cambridge University. He has taught at the European University Institute in Florence, as Pierre Werner Chair; the University of Rome III; Yale University and the University of Bologna.</p> <p>His main fields of interest are international economics and open-economy macroeconomics with contributions covering a wide range of theoretical and policy issues: currency and fiscal instability, international transmission mechanisms, monetary and fiscal policy, financial and real integration and global imbalances. His articles have appeared in the <i>American Economic Review</i>, <i>Brookings Papers on Economic Activity</i>, <i>Economic Policy</i>, <i>European</i></p>

	<p><i>Economic Review, Journal of International Economics, Journal of Monetary Economics, Quarterly Journal of Economics, and the Review of Economic Studies</i>, among others. He has been a long-serving co-editor of the <i>Journal of International Economics</i>.</p> <p>He is co-director of the International Macroeconomic Programme at CEPR. He is a consultant of the Directorate-General for Research at the European Central Bank as well as of the Bank of England. He has been a regular visiting professor in central banks and international financial and monetary institutions. He is a member of Council of the European Economic Association, for which he has served as Program Chairman of the 2007 Annual Congress in Budapest. For ten years, he has been a member of the European Economic Advisory Group of CESIFO, preparing a yearly Report on the European Economy. He is a regular contributor to Voxeu.</p> <p>Hamish Low is a Professor of Economics and Fellow of Trinity College at the University of Cambridge, and a Research Fellow at the Institute for Fiscal Studies in London. He studied at the University of Oxford and University College London before moving to Cambridge. His research is in labour economics, macroeconomics and public economics and he has published widely, including in the <i>American Economic Review</i>, <i>Journal of the European Economic Association</i>, <i>Review of Economics and Statistics</i> and the <i>Review of Economic Dynamics</i>. Professor Low held an ESRC Senior Research Fellowship from 2009–2012.</p> <p>Pontus Rendahl is a Lecturer in Economics at the University of Cambridge. He has previously taught at UC Davis and the Paris School of Economics, and is regularly lecturing MSc courses at the London School of Economics. His main fields of interests are in the area of applied and theoretical macroeconomics as well as methodological advances in the solution methods related to the aforementioned fields. His most recent work focuses on the interaction between government policy, the labour market and the macroeconomy. His articles have appeared in the <i>Economic Journal</i>, <i>International Economic Review</i>, and the <i>Journal of Economic Dynamics and Control</i>. Dr. Rendahl is a research affiliate at the CEPR and the Centre for Macroeconomics (CFM).</p> <p>Coen Tuelings has been the Montague-Burton Professor of Labour Economics at the University of Cambridge since 2013, having previously been Professor of Economics at the University of Amsterdam and President of the CPB Netherlands Bureau for Economic Policy Analysis. His research focuses on applied models of the labour market, and has been published in <i>Econometrica</i>, the <i>Review of Economic Studies</i>, the <i>Journal of Applied Econometrics</i>, the <i>Review of Economics and Statistics</i>, and elsewhere.</p>
Relevant publications	<p>Corsetti Giancarlo, Keith Kuester, Andre Meier, and Gernot J. Mueller (2014), ‘Sovereign risk and belief-driven fluctuations in the euro area’, <i>Journal of Monetary Economics</i>, 61, 53–73, 2014.</p> <p>Corsetti Giancarlo, Willem Buiter and Paolo Pesenti (1998), <i>Financial Markets and European Monetary Cooperation: The lessons from the 92–93 crisis</i>, Cambridge University Press.</p> <p>Buhai, I.S., M.A. Portela, C.N. Teulings & A. van Vuuren (2013), ‘Returns to tenure or seniority’, <i>Econometrica</i> (forthcoming).</p> <p>Low, H., Meghir, C. and Pistaferri, L (2010), ‘Wage risk and employment risk over the life cycle’, <i>American Economic Review</i>, 100(4): 1432–1467.</p> <p>Giancarlo Corsetti (ed.) (2012), <i>Austerity: too much of a good thing?</i>, Voxeu ecollection: http://www.voxeu.org/epubs/cepr-reports/austerity-too-much-good-</p>

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Relevant previous projects or activities	<p>(1) Center for Macroeconomics</p> <p>The Centre For Macroeconomics is a research centre that brings together a group of world class experts to carry out pioneering research on the global economic crisis and help design policies to alleviate it. Chaired by LSE's Nobel Prize-winning economics professor, Christopher Pissarides, the centre encompasses experts from Cambridge University, LSE, University College London (UCL), the Bank of England and the National Institute of Economic and Social Research (NIESR).</p> <p>Five major research programmes address the key issues of unemployment, fiscal austerity, financial markets, shifts in the world economy and the development of new methodologies. It is hoped that new methodologies and better communication with policy makers will enhance the research and will lead to better policy decisions.</p> <p>The Cambridge branch, directed by Giancarlo Corsetti, has specialized in the analysis of fiscal multipliers at both aggregate and local level, and fiscal and monetary interaction (with the association of 3 post-docs).</p> <p>(2) The Cambridge Inet Institute</p> <p>Set up by Cambridge researchers with the support of the Institute for New Economic Thinking, the Cambridge Endowments for Research in Finance, the Newton Trust, The Queen's College and Mohammed el Erian, the Institute carries out fundamental research in four areas: (a) networks crowds and markets, (b) transmission mechanisms and economic policy, (c) information, uncertainty and incentives and (d) econometric analysis of financial markets. The Institute sponsors research teams on these topics, associating to the regular faculty 12 to 15 postdocs, and visiting professors. The Institute is directed by Sanjeev Goyal, together with Giancarlo Corsetti (deputy), Vasco Carvalho, Oliver Linton, Kaivan Munshi and Hamid Sabourian.</p> <p>Work relevant for the Horizon2020 includes the study of persistent unemployment crises, the study of liquidity traps, the propagation of micro- and macro-economic shocks via supply chain and production networks.</p> <p>(3) The Keynes Fund</p> <p>The KF provides resources to the Cambridge research community for high-quality projects, encouraging research into: "capital market mispricing; the design of incentive systems and mechanisms to reduce the incidence and significance of institutional or general economic failure as well as into responsive public policies. The scope of work to be funded shall include interactions between the financial markets and the real economy." The Fund encourages collaboration between social sciences, biology and history.</p> <p>The Fund is relevant to Ademu as it will promote the historical reconsideration of the euro area crisis, along the lines specified in the proposal.</p>
PARTICIPANT 3: University of Bonn, Bonn Graduate School of Economics (BGSE)	
Description	The University of Bonn, founded in 1818, maintains a high profile in research and university-level education. The University of Bonn follows the principles of universitas litterarum, providing for a rich set of diverse subjects covered. The

	<p>university aims for excellence among the peer group of top universities internationally. This endeavour has led to internationally renowned specialisations in some areas.</p> <p>Economics is such a specialisation, and the Department of Economics strives for excellence in research and in teaching. Teaching is performed at all levels: Bachelor, Master, and PhD. PhD-level training is organized in a structured program within the Bonn Graduate School of Economics (BGSE), which has been the starting point of many successful careers in academics. The Department of Economics has a well-diversified portfolio of fields covering all essential methods and areas of application. This provides the prerequisites for solving relevant research questions in the European context and beyond.</p>
Staff profile	<p>Christian Bayer is a macroeconomist who graduated from the University of Dortmund in 2004. Since 2008, he is a full professor at the University of Bonn, where he became the director of the Institute for Macroeconomics and Econometrics in 2013. His research - currently sponsored by an ERC Starting Grant - focuses on heterogeneous agent macroeconomics, in particular on investment, labour and firm dynamics as well as the macroeconomic implications of financial frictions. He has published in leading economics journals, e.g. in the <i>American Economic Review</i>, the <i>Journal of Monetary Economics</i> and the <i>Review of Economic Dynamics</i>.</p> <p>Juergen von Hagen is full-time professor of economics and vice-rector for research and junior academic personnel of the University of Bonn, Germany. He previously taught at the University of Mannheim, Germany, and Indiana University, USA. Von Hagen is a member of the German Academy of Sciences (Leopoldina) and a research fellow of CEPR, London, and was the winner of the first Gossen Prize of the German Economic Association in 1997. Since 2012, he has served as vice-chair of the Portuguese Public Finance Council. He has been an advisor to the European Commission, the European Central Bank, the IMF, the Interamerican Development Bank, the World Bank, and the Federal Reserve Board of Governors. Von Hagen was an editor of the <i>European Economic Review</i> (2002-2011), and serves as associate editor of the <i>Journal of Money, Credit and Banking</i>, the <i>European Journal of Political Economy</i>, and <i>Open Economies Review</i>. His work has been published in leading academic journals including the <i>American Economic Review Papers & Proceedings</i>, <i>Review of Economics and Statistics</i>, <i>Journal of Monetary Economics</i>, <i>International Economic Review</i>, <i>European Economic Review</i>, <i>Journal of Development Economics</i>, and the <i>Journal of Money, Credit and Banking</i>, as well as many books.</p> <p>Thomas Hintermaier is Professor of Economics at the University of Bonn. His research interests include Macroeconomics and Financial Economics. He has published in <i>Journal of Economic Theory</i>, <i>Journal of Economics Dynamics and Control</i>, <i>Review of Economic Dynamics</i>, and others.</p> <p>Gernot Müller has been a Professor of Economics at the University of Bonn since 2008. After graduating from the EUI in October 2005, he spent 3 years as an assistant professor at Goethe University Frankfurt. His main research interests are International Macroeconomics and Monetary and Fiscal Policy. Müller is also a research affiliate at CEPR and a Research Professor at the Ifo institute in Munich. He has published in journals such as the <i>Journal of Monetary Economics</i>, the <i>Journal of International Economics</i>, and <i>The Review of Economics and Statistics</i>. He currently serves as an associate editor of the <i>Economic Journal</i> and <i>Macroeconomic Dynamics</i> and as a panel member of</p>

	<p><i>Economic Policy</i>.</p> <p>Moritz Schularick is Professor of Economics at the University of Bonn. Previously he was a professor at the Free University of Berlin and a visiting professor at New York University and Cambridge University. Working at the intersection of economic history and macroeconomics, his work focuses on credit cycles and capital flows in the 20th century, the causes and effects of financial instability, the evolution of housing markets and housing finance as well as long run trends in financial market integration and the international monetary system. His research has been supported by the Volkswagen foundation and the Institute for New Economic Thinking. His papers have been published in the <i>American Economic Review</i>, the <i>Review of Economics and Statistics</i>, the <i>Journal of Money, Credit and Banking</i>, the <i>Journal of Economic Growth</i>, the <i>Journal of Economic History</i>, and several other journals.</p>
Relevant publications	<p>Christian Bayer and Rüdiger Bachmann, ‘Investment dispersion and the business cycle’, <i>American Economic Review</i>, 2014, vol. 104: 1392-1416.</p> <p>Mark Hallerberg, Rolf Strauch, and Jürgen von Hagen, <i>Fiscal Governance in Europe</i>, Cambridge: Cambridge University Press 2009.</p> <p>Thomas Hintermaier and Winfried Koeniger , ‘On the evolution of the U.S. consumer wealth distribution’, <i>Review of Economic Dynamics</i>, 2011, vol. 14: 317-338.</p> <p>Giancarlo Corsetti, Keith Kuester, André Meier and Gernot Müller, ‘Sovereign risk and belief-driven fluctuations in the euro area’, <i>Journal of Monetary Economics</i>, 2014, vol. 61: 53-73.</p> <p>Moritz Schularick and Alan M. Taylor, ‘Credit booms gone bust: Monetary policy, leverage cycles, and financial crises’, <i>American Economic Review</i>, 2012, vol. 102:1029-1061.</p>
Relevant previous projects or activities	<p>Christian Bayer: 2012 - 2015 Starting Researcher Grant of the European Research Council: Heterogeneity, Uncertainty and Macroeconomics Performance.</p> <p>Moritz Schularick: Grantee of the Institute for New Economic Thinking working on macro-financial linkages and the growth of the financial sector in the 20th century.</p>
PARTICIPANT 4: Toulouse School of Economics (TSE)	
Description	<p>The origins of the Toulouse School of Economics (TSE) can be traced back to the early 1980s, when Jean-Jacques Laffont began gathering economists with a common ambition of scientific excellence together in Toulouse. In 1990, the Toulouse economists created the Institut d’Economie Industrielle (IDEI) and began to establish long-term partnerships with corporations and develop innovative research topics that contributed to establishing the reputation of economists based in Toulouse. In 2007, the French government and the Academy of Sciences chose TSE as one of 13 “Réseaux Thématiques de Recherche Avancée” (across all fields), enabling the creation of a private foundation, the Jean-Jacques Laffont Foundation - Toulouse School of Economics. This Foundation is building an endowment in order to secure long-term financing for a research center that will further attract students and researchers from all over the world.</p> <p>TSE now gathers together around 160 senior and junior researchers affiliated with various research institutions (University of Toulouse, EHESS, CNRS, INRA) and about 100 doctoral students (70% international). Overall, TSE</p>

	<p>students (undergraduate and postgraduate), are made up of 75% of international students coming from over 80 different countries.</p> <p>TSE regularly appears as number one in Europe and among the top in the world in rankings based on publication records. TSE Faculty members are recognized as leaders in their fields and have published many books and articles in top academic journals. Many faculty members are Fellows of the Econometric Society and the European Economic Association. TSE scholars have also received numerous national and international awards. TSE is a dynamic, multicultural research hub, with a high number of international researchers either in permanent residence or as long and short-term visitors. In 2011, TSE hosted about 300 visiting researchers from all over the world. TSE also maintains strong links with a number of EU and worldwide research institutions through its various collaborative projects currently underway. Under the FP7, TSE is managing two Cooperation projects: “Global IQ-Impacts Quantification of Global changes”, led by Jean-Pierre Amigues, and “COEURE” by Marc Ivaldi. In addition, TSE hosts 10 recipients of the European Research Council Grants, of which 5 Starting Grants and 5 Advanced Grants.</p>
Staff profile	<p>Martial Dupaigne is a Professor of Economics at Université Montpellier III and a member of the Toulouse School of Economics. He obtained his Ph.D. from Université Paris I Panthéon Sorbonne in 2000. His main fields of interest are international macroeconomics and the role of factor intensity variability in the business cycle. He has published his work in journals such as the <i>Review of Economic Dynamics</i>, <i>Economics Letters</i> and the <i>Revue d'Économie Politique</i>.</p> <p>Patrick Fève is a Professor of Economics at the Toulouse School of Economics. He obtained his Ph.D. from Université Paris I Panthéon Sorbonne in 1994. His main fields of interest are international macroeconomics, structural macroeconometrics, fiscal and monetary policy. He has published his work in journals such as the <i>Review of Economic Dynamics</i>, <i>Economics Letters</i>, the <i>Journal of Economic Dynamics and Control</i>, the <i>American Economic Journal: Macroeconomics</i>, the <i>Economic Journal</i> and the <i>Journal of Money, Credit and Banking</i>. He has been Junior Member of the Institut Universitaire de France (2008–2013). He is since 2009 Director of the Graduate Studies at TSE, and co-editor of <i>Annales d'Économie et de Statistique</i> since 2013.</p> <p>Christian Hellwig is a Professor of Economics at the Toulouse School of Economics. He obtained his Ph.D. in Economics from the London School of Economics in 2002. He was previously Associate Professor (with tenure) at UCLA. His main fields of interest are imperfect information in macroeconomics, global games, and economic theory. He has published his work in journals such as the <i>Review of Economic Studies</i>, <i>Econometrica</i>, the <i>American Economic Review</i> and the <i>Journal of Political Economy</i>. He holds a European Research Council Starting Researcher Grant: ‘Information Heterogeneity and Frictions in Macroeconomics’ (November 2010 - October 2015). He was editor of the <i>Journal of Economic Theory</i> from 2008 to 2013, and has been a member of the Board of Editors of the <i>Review of Economic Studies</i> since January 2010. He was Scientific Program Co-Chair of the Society for Economic Dynamics Annual Meetings in 2008.</p> <p>Sumudu Kankanamge is a tenured Assistant Professor (Maître de Conférences) at the Toulouse School of Economics. He obtained his Ph.D. from Université Paris I Panthéon Sorbonne in 2008. His main fields of interest are models with heterogeneous agents and imperfect risk sharing in dynamic general equilibrium models. He has published his work in the <i>Revue Économique</i>.</p>

	<p>Alban Moura is a graduate student at the Toulouse School of Economics. He obtained his Master's in economics from TSE in 2012. His research deals with fiscal multipliers and the structural estimation of DSGE models.</p> <p>Franck Portier is a Professor of Economics at the Toulouse School of Economics. He obtained his Ph.D. from Université Paris I Panthéon Sorbonne in 1993. His main fields of interest are business cycle theory, international macroeconomics, structural macroeconometrics, fiscal and monetary policy. He has published his work in journals such as the <i>Review of Economic Dynamics</i>, <i>Economics Letters</i>, the <i>Journal of Economic Dynamics and Control</i>, the <i>American Economic Review</i> and the <i>Journal of Monetary Economics</i>. He is a Senior Member of the Institut Universitaire de France. He was Scientific Program Co-Chair of the Society for Economic Dynamics Annual Meetings in 2003.</p> <p>Robert Ulbricht is Assistant Professor of Economics at the Toulouse School of Economics. He obtained his Ph.D. in Economics from the University of Munich in 2013. He was a visiting Ph.D. student at Northwestern university in 2010-2011 and in the Fall of 2012. His main fields of interest are models with heterogeneous information and dynamic oligopolies.</p>
Relevant publications	<p>P. Beaudry and F. Portier, 2006, 'News, stock prices and economic fluctuations', <i>American Economic Review</i>, 96(4).</p> <p>Dupaigne, M. and P. Fève, 2009, 'Technology Shocks around the World', <i>Review of Economic Dynamics</i>, vol. 12(4), pages 592-607.</p> <p>Fève, P., J. Matheron and J-G. Sahuc, 2013, 'A Pitfall with Estimated DSGE-Based Government Spending Multipliers', <i>American Economic Journal: Macroeconomics</i>, 5, pp. 141- 178.</p> <p>Hellwig, C. and G. Lorenzoni, 2009, 'Bubbles and Self-enforcing Debt', <i>Econometrica</i>, vol. 77 (4), p. 1137-1164.</p> <p>Hellwig, C. and L. Veldkamp, 2009, 'Knowing What Others Know: Coordination Motives in Information Acquisition', <i>Review of Economic Studies</i>, vol. 76 (1), p. 223-251.</p>
Relevant previous projects or activities	<p>TSE is the Projector Coordinator of the FP7 cooperative action on <i>Cooperation on European Research in Economics</i> (COEURE).</p> <p>Through the Jean-Jacques Laffont Foundation, TSE has participated in other Framework Programmes and provided policy advice.</p>
PARTICIPANT 5: University College, London (UCL)	
Description	<p>UCL was established in 1826 to open up education in England for the first time to students of any race, class or religion. UCL was also the first university to welcome female students on equal terms with men. It has more than 4,000 academics and around 29,000 students and has more than 160,000 alumni in more than 150 countries. It was ranked fourth in the world's top ten universities by the QS World University Rankings (2013). UCL is one of the most successful UK universities at attracting funding, with an income of nearly £900 million in 2012. UCL brings together world-renowned experts, from across the academic spectrum, to tackle complex problems presented by an increasingly interconnected world.</p> <p>UCL Economics is the oldest economics department in the world and it is one of the top economics departments in the world. It has an outstanding track record in producing cutting-edge research, informing economic policy and nurturing new generations of leading scholars, with PhD graduates having been placed at top</p>

	<p>academic institutions world-wide. Our key strategic aims are to advance the research frontier and to influence policy. The department has a unique culture where empirical and theoretical research blend seamlessly and where there is a constant dialogue across fields of economics. This has produced a dynamic and vibrant environment conducive to innovative and impactful research, first-rate training, and with a strong link to policy.</p> <p>UCL Economics has a very vibrant macroeconomics research group with interests that span over monetary and fiscal policy, business cycles, labour-market aspects of the macroeconomy, financial markets, and other key topics in macroeconomics. The Department is a partner in the ESRC Research Centre for Macroeconomics and it is closely engaged with economic policymakers – with many members of the group working either as consultants or advisors for central banks or other central policy institutions.</p>
Staff profile	<p>Morten O. Ravn is Professor of Economics and currently Head of the Department of Economics at UCL. He is also co-director of the ESRC Research Centre for Macroeconomics. He also serves as joint Managing Editor of the <i>Economic Journal</i>, is an Associate Editor of the <i>Journal of the European Economic Association</i>, a Research Fellow of the CEPR, and a council member of the European Economic Association. He is a former Professor of Economics at the European University Institute and the University of Southampton, Associate Professor at London Business School and Assistant Professor at Universitat Pompeu Fabra and the University of Aarhus. He is a consultant at Norges Bank. His research interests include fiscal policy, business cycles, international macroeconomics and applied econometrics. His work has been published in the <i>American Economic Review</i>, <i>Review of Economic Studies</i>, <i>Quarterly Journal of Economics</i>, <i>Journal of Monetary Economics</i>, <i>Review of Economics and Statistics</i>, <i>Review of Economic Dynamics</i>, <i>Economic Journal</i> and many other journals.</p> <p>Marco Bassetto is Professor of Economics at UCL and is also a Senior Economist and Economic Advisor at the Federal Reserve Bank of Chicago. He also serves as Editor of the <i>Review of Economic Dynamics</i>, Associate Editor of the <i>American Economic Review</i>, Faculty Research Fellow of the National Bureau of Economic Research and he is a member of the Centre for Macroeconomics. He is a former Assistant Professor of Economics at the University of Minnesota and Northwestern University. His research interests include monetary and fiscal policy, political economy and entrepreneurship. His research has been published in <i>Econometrica</i>, <i>Quarterly Journal of Economics</i>, <i>Review of Economic Studies</i>, <i>Journal of Monetary Economics</i> and other leading journals.</p> <p>Patrick Kehoe is a Professor of Economics at UCL and at the University of Minnesota and a consultant at the Federal Reserve Bank of Minneapolis. He is a fellow of the Econometric Society, a Research Associate of the National Bureau of Economic Research and serves as Associate Editor of the <i>American Economic Review</i>, <i>Journal of Money, Credit and Banking</i>, <i>Macroeconomic Dynamics</i>, and other leading journals. He is a former Professor of Economics at Princeton University and the University of Pennsylvania, and has been a visiting Professor at the University of Chicago. His research interests include monetary and fiscal policy, business cycles, international macroeconomics, and macroeconomics in general. His research has been published in <i>Econometrica</i>, <i>Journal of Political Economy</i>, <i>American Economic Review</i>, <i>Quarterly Journal of Economics</i>, <i>Review of Economic Studies</i> and many other leading journals.</p>

	<p>Vincent Sterk is a Lecturer at University College London and holds a PhD from the University of Amsterdam. He is a member of the Centre for Macroeconomics and has won the KVS medal for the best PhD thesis in Economics awarded every 3 years by the Royal Dutch Society of Economics. His research interests include empirical and theoretical macroeconomics, monetary economics, housing, financial markets and labour markets. His research has been published in the <i>Economic Journal</i> and <i>Journal of Monetary Economics</i>.</p> <p>Wei Cui is a Lecturer at University College London and holds a PhD from Princeton University. He is a member of the Centre for Macroeconomics and holds a BSc with the Highest Honour from Tsinghua University. His research interests include monetary policy, financial frictions, and sovereign debt.</p>
Relevant publications	<p>Karel Mertens and Morten O. Ravn (2014), ‘Fiscal Policy in an Expectations Driven Liquidity Trap’, forthcoming, <i>Review of Economic Studies</i>.</p> <p>Karel Mertens and Morten O. Ravn (2013), ‘The Dynamic Effects of Personal and Corporate Income Tax Changes in the United States’, <i>American Economic Review</i> 103(4), pp.1212-47.</p> <p>V.V. Chari and Patrick Kehoe (2010), ‘Sophisticated Monetary Policies’, <i>Quarterly Journal of Economics</i> 125(1), pp. 47-89.</p> <p>V.V. Chari and Patrick Kehoe (2007), ‘On the Need for Fiscal Constraints in a Monetary Union’, <i>Journal of Monetary Economics</i> 54(8), 2399-2408.</p> <p>Marco Bassetto and Christopher Phelan (2008), ‘Tax Riots’, <i>Review of Economic Studies</i> 75(3), 649-99.</p>
Relevant previous projects or activities	<p>Morten O. Ravn is a co-Director of the ESRC Research Centre for Macroeconomics. The Centre has five major research programmes address the key issues of unemployment, fiscal austerity, financial markets, shifts in the world economy and the development of new methodologies. It is hoped that new methodologies and better communication with policy makers will enhance the research and will lead to better policy decisions.</p> <p>Morten O. Ravn is a co-author of the Swedish Business Cycle Committee’s (Konjunkturraadet, SNS) 2012 report on Fiscal Policy Rules in Sweden. The report recommended several adjustments to the celebrated Swedish fiscal policy framework which have subsequently been implemented.</p> <p>Marco Bassetto is a Senior Economist and Economic Advisor at the Federal Reserve Bank of Chicago. In this role he has advised the President of the Federal Reserve Bank of Chicago on many topics related to monetary policy.</p> <p>Patrick Kehoe is a former monetary advisor at the Federal Reserve Bank of Minneapolis in which role he has advised current and former Presidents of the Federal Reserve Bank of Minneapolis on topics related to monetary policy.</p> <p>Patrick Kehoe has held numerous NSF grants related to the project including most recently one on “Credit Frictions in Business Cycle Models” in which he investigated the impact of frictions in credit markets on aggregate fluctuations.</p>
PARTICIPANT 6: Catholic University of Portugal (CUP)	
Description	The Catholic University of Portugal (UCP) is a non-state-run, non-profit institution of public utility.

	<p><u>Católica-Lisbon School of Business and Economics</u> (Católica-Lisbon) was founded in 1989. The school enrolment is around 1,000 full-time undergraduate students and over 100 lecturers. Católica-Lisbon is active in both education and research, and is nationally and internationally recognized as one of the finest schools of business in Portugal.</p> <p>At the beginning of 2008, Católica-Lisbon became the first Portuguese Business School to win the coveted Triple Crown status. Membership in this elite group means Católica-Lisbon is among the top 1% of business schools worldwide to be accredited by all 3 management education associations; EQUIS, AMBA and AACSB.</p> <p>CUBE, the Research Unit of Católica-Lisbon, was created in 1997 to pool the efforts of tenured and tenure-track faculty engaged in scholarly research. The research team members are professors and researchers very active in publishing in the top refereed journals. Most work with co-authors from top universities around the world. The research topics addressed by CUBE members cover almost every branch of economics and business.</p> <p>The main goal of the research unit is to increase the quantity and the quality of the academic research produced at the school, in the pursuit of excellence as measured by international standards. The unit has always been awarded the highest rank (Excellent) by the panel of international experts in periodic assessments sponsored by FCT (Portuguese Science and Technology Foundation).</p>
Staff profile	<p>Pedro Teles is a Full Professor at Católica-Lisbon. He is also a researcher at the Bank of Portugal and a Research Fellow of the CEPR. He holds a PhD in Economics from the University of Chicago, and was a Senior Economist in the Research Department at the Federal Reserve Bank of Chicago between 2001 and 2004. He has taught in the Ph.D. programs at Universitat Pompeu Fabra and University College London, and has worked on various issues of monetary and fiscal policy, including the optimality of the Friedman rule, time consistent policies, optimal stabilization policy, optimal currency areas, and instruments of monetary policy. His work is published in the <i>Journal of Political Economy</i>, <i>American Economic Review</i>, <i>Review of Economic Studies</i>, <i>Journal of Economic Theory</i> and <i>Journal of Monetary Economics</i>.</p> <p>Bernardino Adão is an Associate Professor at Católica-Lisbon. He has been a researcher at the Bank of Portugal since 2005. He has a PhD in Economics and a MA in Mathematics from the University of Minnesota. He has published work in the <i>Journal of Economic Theory</i>, <i>Review of Economic Studies</i> and <i>Journal of Monetary Economics</i>.</p> <p>Isabel Correia is a Full Professor at Católica-Lisbon, which she joined after obtaining her Ph.D from Universidade Catolica Portuguesa. She is also a researcher at the Bank of Portugal and a Research Fellow of the CEPR. Her main area of research is macroeconomics, more specifically growth, business cycles, fiscal and monetary policy and distribution. She has published in the <i>Journal of Political Economy</i>, <i>American Economic Review</i>, <i>Review of Economic Studies</i>, <i>Journal of Economic Theory</i> and <i>Journal of Monetary Economics</i> among others.</p> <p>Catarina Reis is an Assistant Professor at CATÓLICA-LISBON. She has a PhD in Economics from MIT. Her main area of research is macroeconomics, with a focus on optimal policy. She has published in the <i>Journal of Economic Theory</i>, <i>Economic Theory</i> and <i>Macroeconomic Dynamics</i>.</p>
Relevant	Correia, I.H, E. Farhi, J.P. Nicolini and P. Teles (2013), ‘Unconventional Fiscal

publications	<p>Policy at the Lower Bound', <i>American Economic Review</i>, 103(4): 1172-1211.</p> <p>Reis, C. (2012), 'Social Discounting and Incentive Compatible Fiscal Policy', <i>Journal of Economic Theory</i>, 147 (6): 2469–2482.</p> <p>Correia, I.H. (2010), 'Consumption, Taxes and Redistribution', <i>American Economic Review</i>, 100(4): 1673-94.</p> <p>Adão, B., I.H. Correia and P. Teles (2009), 'On the Relevance of Exchange Rate Regimes for Stabilization Policy', <i>Journal of Economic Theory</i>, 36(5): 1468:1488.</p> <p>Correia, I.H, E. Farhi, J.P. Nicolini and P. Teles (2008), 'Optimal Fiscal and Monetary Policy: Equivalence Results', <i>Journal of Political Economy</i>, 116 (1): 141-170.</p>
Relevant previous projects or activities	<p>CUBE, the research unit of Católica-Lisbon, has a wide experience in the implementation and management of research funding mechanisms. Since 1997 CUBE has received national public funding support, which represents a substantial part of the research unit budget. CUBE's organization structure includes a Management Office (MO) whose role is to provide administrative support to ensure that the research resources are allocated and used as effectively as possible. The MO manages institutional contacts and provides a centralized information system, administrative and financial services, expertise in project funding applications, non-scientific management of the group's projects, recruitment of research assistants, and assistance in strategic planning and reporting.</p> <p>Pedro Teles, Isabel Correia and Catarina Reis all have experience in research project coordination and external funding management.</p>

PARTICIPANT 7: Barcelona Graduate School of Economics

Description	<p>The Barcelona Graduate School of Economics is an institution for scientific cooperation for research and graduate education in economics and the social sciences. It was founded in July 2006 by four academic institutions: Universitat Pompeu Fabra (UPF), Universitat Autònoma de Barcelona (UAB), CSIC and the Center for Research in International Economics (CREI), whose reputations, faculty, and resources underpin the School and its activities. The School is legally a private foundation and has been recognised by the Government of Catalonia as an Interuniversity Research Institute attached to the UPF and to the UAB.</p> <p>The Barcelona GSE is founded on the ideal of relentless pursuit of higher education and research excellence, and it is driven by a world-class faculty of 161 affiliated professors. The School's faculty includes a number of researchers at the forefront of the European economic research community. It offers eight master programs, three of which are specialized in Macroeconomics and Finance. It also offers a variety of Summer Schools and targeted programs for professionals. Graduate education at the Barcelona GSE is completed upon two renowned international PhD programs in Economics: the Graduate Program in Economics, Finance and Management (GPEFM) and the International Doctorate in Economic Analysis (IDEA).</p>
Staff profile	<p>Luca Gambetti is affiliated professor at Barcelona GSE and associate professor of Economics at Universitat Autònoma de Barcelona. He was awarded a Ph.D. in Economics from the Universitat Pompeu Fabra. His research interests are in Quantitative and Applied Macroeconomics, Monetary Economics and Time Series Analysis. In particular he has worked on empirical models about the effects of monetary policy on stock market bubbles or about the structural</p>

	<p>dynamics of output and inflation. He has publications in the <i>Journal of Monetary Economics</i>, <i>American Economic Journal: Macroeconomics</i>, and the <i>Economic Journal</i>.</p> <p>Jordi Caballe is affiliated professor at the Barcelona GSE as well as professor of Economics and ICREA researcher at the Universitat Autònoma de Barcelona. He holds a Ph.D. in Economics from the University of Pennsylvania. His main research interests are Macroeconomics, Decision under Uncertainty, and Financial Economics. In particular, he has studied the implications of habit formation, consumption spillovers, and altruism for macroeconomic dynamics and fiscal policy. He has also developed techniques of decision under uncertainty and has applied them to the tax evasion problem. Finally, he has analysed the performance of financial markets under insider trading and imperfect competition. He has published his research in leading international journals including <i>Econometrica</i>, <i>Journal of Political Economy</i>, <i>Review of Economic Studies</i>, <i>Economic Journal</i>, <i>International Economic Review</i>, <i>Journal of Economic Theory</i> and <i>Journal of Public Economics</i>. He is currently a member of the editorial boards of the Portuguese Economic Journal and the Journal of Macroeconomics.</p> <p>Davide Debortoli is affiliated professor at the Barcelona GSE and assistant professor at Universitat Pompeu Fabra. He obtained his Ph.D. from the Universitat Pompeu Fabra. He has also been assistant professor at University of California-San Diego. His research interests are Macroeconomic Theory, Monetary Policy and Fiscal Policy. In particular he has analysed how the evolution of public debt is affected by lack of commitment, and what factors could be behind observed regime switches in interest rate rules. He has already published in the <i>Journal of the European Economic Association</i> and the <i>Journal of Economic Theory</i>.</p> <p>Luca Fornaro is affiliated professor at the Barcelona GSE, Researcher at CREI and Adjunct Professor at Universitat Pompeu Fabra. He obtained his Ph.D. in Economics from the London School of Economics. He works on International Macroeconomics and Monetary Economics. He has already published in the <i>Scandinavian Journal of Economics</i>.</p> <p>Joachim Jungherr is affiliated professor at Barcelona GSE and a post-doc researcher at the Institute for Economic Analysis of the Spanish Council for Scientific Research (CSIC). He holds a Ph.D. in Economics from the European University Institute. His main research areas are in Macroeconomics, Corporate Finance and Financial Intermediation.</p> <p>Hugo Rodriguez is affiliated professor at the Barcelona GSE and tenured scientist at the Institute for Economic Analysis of the Spanish Council for Scientific Research (CSIC). He obtained a Ph.D. in Economics from the University of Chicago. He has contributions in International Finance and Macroeconomics. His main research deals with how monetary policy implementation by central banks may influence the behaviour of short-term interest rates. This work led Prof. Rodriguez to work as a consultant of the ECB. He has published, among other journals, in <i>European Economic Review</i>, <i>Journal of Money, Credit and Banking</i> and <i>Journal of Economic Dynamics and Control</i>.</p>
Relevant publications	<p>Acemoglu, D. Carvalho, V. M., Ozdaglar, A., and Tahbaz-Salehi, A. "The network origins of aggregate fluctuations". <i>Econometrica</i>, 80(5), 1977–2016.</p> <p>Besley, T. and Mueller, H. "Estimating the peace dividend: The impact of violence on house prices in Northern Ireland". <i>American Economic Review</i>,</p>

	<p>102(2), 810–833.</p> <p>Guner, N., Kaygusuz, R., and Ventura, G. “Taxation and household labour supply”. <i>Review of Economic Studies</i>, 79(3), 1113–1149.</p> <p>Jiménez, G., Ongena, S., Peydró, J.-L., and Saurina, J. “Credit supply and monetary policy: Identifying the bank balance-sheet channel with loan applications”. <i>American Economic Review</i>, 102(5), 2301–2326.</p> <p>Martin, A. and Ventura, J. “Economic growth with bubbles”. <i>American Economic Review</i>, 102(6), 3033–3058.</p>
Relevant previous projects or activities	<p>Severo Ochoa Program: In 2011, Barcelona GSE was distinguished as one of only eight top research institutions of excellence with an international impact in the framework of the Severo Ochoa Program, sponsored by the Spanish Ministry of Economy and Competitiveness. The program grants €4 million to each centre to promote frontier research and distinguish those institutions that are defining the global scientific debate. The evaluation was done by a selection committee composed of international researchers and led by three Nobel Prize laureates (in Social Sciences: Prof. Roger B. Myerson, University of Chicago). Candidates in three areas were considered: Physical Sciences and Engineering; Life Sciences and Medicine; and Social Sciences and Humanities. The Barcelona GSE was the only centre in the latter category to be recognized by the program.</p> <p>ERC grants: The faculty of the BGSE has been awarded a total of 15 ERC grants (6 advanced grants, 2 consolidator grants, and 7 starting grants)</p> <p>FP7 grants: Researchers of the Barcelona GSE were granted the Collaborative Project Grant no. 612796 under the 7th Framework Program of the European Commission</p> <p>EEA-ESEM 2009: In 2009 the BGSE hosted the 24th Annual Congress of the European Economic Association and the 64th European Meeting of the Econometric Society. The conferences involved 3,300 submissions with 1,443 accepted and 1,800 participants from universities, research centres and central banks.</p> <p>Summer Forum: Each year, for the last two years, the BGSE has organised a Summer Forum. The Barcelona GSE Summer Forum is a series of independent workshops and policy events that cover the main fields of Economics. The objective of the Summer Forum is to bring top researchers from around the globe to Barcelona to debate the present and future of the frontier of knowledge in Economics and its implications for policy. The 2014 Summer Forum spanned for 20 days and included 23 workshops with 226 presentations and over 310 participants.</p>
Significant infrastructure	<p>LEEX: the BGSE has access to the LEEX, acronym for <i>Laboratori d’Economia Experimental</i> (Experimental Economics Laboratory).</p>
PARTICIPANT 8: Center for Economic Research and Graduate Education, Charles University in Prague (CERGE)	
Description	<p>The Center for Economic Research and Graduate Education of Charles University in Prague (CERGE) is the leading institution in economic research</p>

	and education in the Czech Republic. Founded in 1991, CERGE conducts most of its activities jointly with the Economics Institute of the Academy of Sciences of the Czech Republic (EI) under a joint workplace. CERGE offers Masters and Doctoral programs in Economics taught by its international faculty. Researchers affiliated with CERGE publish in top international economic journals and participate in international research projects.
Staff profile	<p>Radim Bohacek is a Senior Researcher at CERGE at the Charles University and the Economics Institute of the Czech Academy of Sciences. He holds a PhD in Economics from the University of Chicago. He serves as a country team leader for the Survey of Health, Retirement, and Ageing in Europe (SHARE ERIC) in the Czech Republic. His research interests include general equilibrium models with heterogeneous agents, dynamic macroeconomic policy, and optimal government policies. He has published in journals such as the <i>Journal of Monetary Economics</i>, the <i>Economic Journal</i>, the <i>Journal of Money, Credit and Banking</i>, and the <i>Journal of Macroeconomics</i>.</p> <p>Marek Kapicka, PhD (M) is an Associate Professor at CERGE at the Charles University and the Economics Institute of the Czech Academy of Sciences, and an Associate Professor at the University of California in Santa Barbara. He holds a PhD in Economics from the University of Chicago. His research interests include optimal government policies with asymmetric information, dynamic contract theory, and optimal human capital policies. He has published in journals such as the <i>Review of Economic Studies</i>, the <i>Journal of Monetary Economics</i>, the <i>Review of Economic Dynamics</i> and the <i>American Economic Journal: Macroeconomics</i>.</p>
Relevant publications	<p>Kapicka, M. (2013), 'Efficient Allocations in Dynamic Private Information Economies with Persistent Shocks: a First Order Approach', <i>Review of Economic Studies</i> 80(3), 1027-1054.</p> <p>Kapicka, M. (2010), 'How Important is Technology Capital? Measurement and Theory', <i>American Economic Journal: Macroeconomics</i> 4(2): 218-48.</p> <p>Bohacek, R., and J. Zubricky (2012), 'A Flat Tax Reform in an Economy with Occupational Choice and Financial Frictions', <i>Economic Journal</i> (122): 1313–1345 .</p> <p>Bohacek, R., and M. Kapicka (2008), 'Optimal Human Capital Policies', <i>Journal of Monetary Economics</i> (55): 1-16.</p> <p>Bohacek, R. (2006), 'Financial Constraints and Entrepreneurial Investment', <i>Journal of Monetary Economics</i> (53): 2195-2212.</p>
Relevant previous projects or activities	<p>CERGE is the leading investigator in numerous grants from the Czech Science Foundation, the Grant Agency of the Czech Republic and the Grant Agency of the Charles University. It also serves as the East European centre of the Global Development Network grant projects. Recent international and national funding awards include:</p> <p>SHARE (Survey of Health, Ageing and Retirement in Europe): FP5 QLK6-CT-2001- 00360; FP6 SHARE-I3, RII-CT- 2006-062193, COMPARE, CIT5-CT-2005-028857, SHARELIFE, CIT4-CT-2006-028812; FP7 SHARE-PREP, 211909, SHARE-LEAP, 227822; U.S. National Institute on Aging (U01 AG09740-13S2, P01 AG005842, P01 AG08291, P30 AG12815, Y1-AG-4553-01 and OGHA 04-064, IAG BSR06-11, R21 AG025169) (2005-2011).</p> <p>SHARE ERIC (European Research Infrastructure Consortium): Ministry of</p>

	<p>Education LM2010003 (2010-2015).</p> <p>Economic Effects of European Integration on the Czech Republic (EICZ): Ministry of Education MSM00216208460 (2005-2011).</p> <p>Dynamics of Institutions and Markets in Europe (DIME, European Commission 513396) (2005-2010).</p> <p>Europe Meets China – A Broader Picture of Contemporary China (EUMECH Seventh Framework Programme, European Commission, FP7-PEOPLE-2010-IRSES-269165) (2012-2013).</p>
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4.2 Third parties involved in the project (including use of third party resources)

EUI

Does the participant plan to subcontract certain tasks (please note that core tasks of the project should not be sub-contracted)	Y
<p><i>The experiments form part of WP4 under objective 3. The experiments will be designed by members of ADEMU, in collaboration with Professor Marco Casari and his collaborators from the University of Bologna and the experiments will be conducted in the Laboratory of Experimental Economics (LES) of the University of Bologna, according to an existing agreement with the EUI. The implementation process is carried by LES under the subcontracting figure; the design of the experiment and analysis of the results is done directly by ADEMU members. The costs involved in the implementation of such experiments comprehend the facilities of the lab, the experts that implement the experiments and the monetary rewards that are given to the subjects that participate on the experiments, according to the normal procedures and standard practices of the research community.</i></p> <p><i>The subcontracted part will only cover a limited part of the project work.</i></p> <p><i>The partner remains responsible for all its rights and obligations under the grant agreement, including the tasks carried out by the subcontractor. The partner will ensure that the intellectual property that is generated by the subcontractor reverts to the partner so that it can meet its obligations towards the other consortium partners.</i></p> <p><i>The internal rules for tenders of the partner will be applied.</i></p>	
Does the participant envisage that part of its work is performed by linked third parties	N
<p><i>If yes, please describe the third party, the link of the participant to the third party, and describe and justify the foreseen tasks to be performed by the third party</i></p>	
Does the participant envisage the use of contributions in kind provided by third parties (Articles 11 and 12 of the General Model Grant Agreement)	N
<p><i>If yes, please describe the third party and their contributions</i></p>	

For all other institutions there are **no third parties involved**

5. Ethics and Security

5.1. Ethics

(Note: Research involving activities marked with an asterisk * the left column the table below will be referred automatically to Ethical Review)

Research on Human Embryo/ Foetus		YES	Page
*	Does the proposed research involve human Embryos?		
*	Does the proposed research involve human Foetal Tissues/ Cells?		
*	Does the proposed research involve human Embryonic Stem Cells (hESCs)?		
*	Does the proposed research on human Embryonic Stem Cells involve cells in culture?		
*	Does the proposed research on Human Embryonic Stem Cells involve the derivation of cells from Embryos?		
	I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	*	

Research on Humans		YES	Page
*	Does the proposed research involve children?		
*	Does the proposed research involve patients?		
*	Does the proposed research involve persons not able to give consent?		
*	Does the proposed research involve adult healthy volunteers?	*	WP4
	Does the proposed research involve Human genetic material?		
	Does the proposed research involve Human biological samples?		
	Does the proposed research involve Human data collection?		
	I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL		

Privacy		YES	Page
	Does the proposed research involve processing of genetic information or personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)?	*	42
	Does the proposed research involve tracking the location or observation of people?		
	I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL		

Research on Animals		YES	Page
	Does the proposed research involve research on animals?		
	Are those animals transgenic small laboratory animals?		
	Are those animals transgenic farm animals?		
*	Are those animals non-human primates?		
	Are those animals cloned farm animals?		
	I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	*	

Research Involving Developing Countries		YES	Page
	Does the proposed research involve the use of local resources (genetic, animal, plant, etc)?		
	Is the proposed research of benefit to local communities (e.g. capacity building, access to healthcare, education, etc)?		

	I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	*	
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Dual Use		YES	Page
	Research having direct military use		
	Research having the potential for terrorist abuse		
	I CONFIRM THAT NONE OF THE ABOVE ISSUES APPLY TO MY PROPOSAL	*	

Ethic Issues

Does this research involve human participants? Yes

The research involves testing the theoretical models which make assumptions on how agents form expectations and take decisions in socio-economic environment with human subjects. This is done in an Experimental Laboratory equipped with a network of computers. The questions being asked only concern predictions (e.g. ‘future prices in a market game’) and decisions (e.g. ‘savings’) that do not involve any personal information or value judgments.

Through an existing agreement with the University of Bologna the EUI team will perform the experiments in an Experimental Laboratory at the U. of Bologna. In the case that experiments are run in another institution, the same procedures described below will be followed in relation to the institution hosting the Experimental Laboratory.

Specific Procedures to be Followed:

- Before any experiment would be conducted, ethics approval will be requested to the EUI Ethics Committee:

<http://www.eui.eu/About/Organization/Committees/EthicsCommittee.aspx>

- When subjects arrive for a lab experiment, they will be asked to sign a consent form before they participate in the experiment.
- Once all forms have been signed, the experimenter reads a set of written instructions regarding the experiment. The instructions are written in the main language used in the institution hosting the Experimental Laboratory, or in English if participants are fluent in English. In the methodology of experimental economics, subjects are never deceived. The instructions fully and honestly explain the experimental procedures and objectives, as well as how subjects are rewarded.
- When subjects are logged onto the network, their identification numbers are not linked to their actual identity. Experimental sessions will employ many subjects simultaneously, generally between 10 and 32.
- Sessions may last between one and three hours. At the end of the session subjects are paid privately in cash to compensate them for their participation (see below).

Are they volunteers for social or human sciences research? Yes

Type of Subjects to be Employed. Subjects will be drawn from different populations:

1) Undergraduate students either from the University of Bologna or other universities in Italy or abroad. All students 18 years old or older are eligible.

2) General adult population.

Does this research involve personal data collection and/or processing? Yes

Confidentiality. Subjects will be coded in the data with identification numbers (i.e., “subject 7”—not their official student or worker identification number). These identification numbers are never associated with specific subject names, either electronically or on hard copy. Therefore, it is impossible to link any action by any subject on the recorded data with a specific individual.

Does it involve the collection and/or processing of sensitive personal data (e.g. health, sexual lifestyle, ethnicity, political opinion, religious or philosophical conviction)? Yes

Actually only the personal data needed for the payments is required, there is NO other sensitive data involved. More specifically:

Data protection. Data from the experiment are collected using randomly assigned identification numbers, so individual subject choices will always remain confidential. The data will be stored on a secure location on a faculty member, post-doc, or graduate student computer at the University of Bologna. Subjects' names, social security numbers (e.g. tax id codes) and addresses may be provided to the administrative offices of the University of Bologna for the purpose of facilitating the payment for participating in the study. While choice data files from the experiment will be stored indefinitely, the file with names, social security numbers and addresses of participants will be deleted from the faculty member, post-doc, or graduate student computers after the results will be published and the study completed.

Regarding the experimental subjects, as described below, the signed consent forms will be provided and the personal information needed for payments is exclusively used for this purpose. No sensitive personal data or generic data is requested and subjects only participate in the experiments for a reduced amount of time in the Experimental Lab or, possibly, through Internet connection (i.e. there is no tracking or observation of subjects, beyond the experiment and only for the purpose of generating anonymous simulated socio-political-economic data.)

Procedures for Payment of Subjects. Subjects will be paid in cash at the completion of their session. For some sessions with subjects 1) and 2) payment may be done through bank transfer, check mailing, phone credit or credit transfer on a card. As required by the methodology of experimental economics, the amount subjects are paid depends on some of the decisions they make in the experiment; payment varies according to the role of a subject in a session; roles are assigned randomly; typically a subject earns between €10 and €25 in a session. A subject cannot lose money.

Ethics Requirements

E

Details on the procedures and criteria that will be used to identify/recruit research participants must be provided R

Procedures for Recruitment of Subjects.

1) The undergraduate student subjects will be recruited to volunteer through announcements at the conclusion of classes not taught by the researchers. After the instructor ends and dismisses class, the

principal investigator, a post-doc or a graduate student assistant will then ask the class to listen to a recruitment pitch. The students will not be captive to research recruitment. The announcement states the nature of the research in broad terms (e.g., “to study decision making in economic situations”), how subjects will be paid, and where and when to go to participate. The announcement also identifies the name and address of an investigator, and subjects are asked to sign up before leaving if they are interested. An alternative procedure will be via a general email sent to all students of a given school or course of study.

2) General adult population will be recruited to volunteer through flyers posted at public places or internet announcements. The announcement states the nature of the research in broad terms (e.g., “to study decision making in economic situations”), how subjects will be paid, and where and when to go to participate. The announcement also identifies the name and address of an investigator, and subjects are asked to sign up through email or phone call.

Detailed information must be provided on the informed consent procedures that will be implemented.

Procedures to Obtain Informed Consent. Subjects will be asked to read and sign the informed consent form in Italian upon their arrival at the lab. If the experiment is carried out abroad, instructions and consent form will be in the national language. The researcher or his assistant will be present to answer any questions. If the experiment takes place online, the consent form will be available online and there will be an email address and a phone number had there be any question. An example of a translated consent form is reported below:

RESEARCH PARTICIPANT CONSENT FORM

Professor David Levine
European University Institute
Department of Economics

Purpose of Research

To help understand how people make economic decisions, using human subjects as participants.

Specific Procedures to be Used

As a participant in this experiment, you may make investment decisions, transfer money between subjects, and make other economic decisions using a computer.

Duration of Participation

The entire experiment (including instructions) is expected to vary between 1 and 3 hours.

Benefits to the Individual

None

Risks to the Individual

Risks are minimal and are no greater than those encountered in everyday activities.

Compensation

You will be paid in cash at the end of the experiment. The amount of money earned depends upon your decisions and decisions of other subjects in the experiment. The amount usually ranges between €10 and €25 per person. You are guaranteed to receive a participation fee €4 regardless of your decisions. You will receive the participation fee even if you choose to withdraw from the experiment.

Confidentiality

Data from the experiment are collected using randomly assigned identification numbers, so individual subject choices will always remain confidential. The data will be stored on a secure location on a faculty member, post-doc, or graduate student computer at the University of Bologna. Your name, social security number and address may be provided to the administrative offices of the University of Bologna for the purpose of facilitating your payment for participating in this study. You will need to complete a Privacy and Payment Form in order to be paid.

Voluntary Nature of Participation

You do not have to participate in this research project. If you do agree to participate you can withdraw your participation at any time without penalty.

Human Subject Statement:

If you have any questions about this research project, contact Professor Marco Casari (051) 209 8662, email marco.casari@unibo.it.

I HAVE HAD THE OPPORTUNITY TO READ THIS CONSENT FORM, ASK QUESTIONS ABOUT THE RESEARCH PROJECT AND AM PREPARED TO PARTICIPATE IN THIS PROJECT.

_____	_____
Participant's Signature	Date

Participant's Name	
_____	_____
Parent's or Legal representative's Signature (for minors)	Date
_____	_____
Researcher's Signature	Date

Copies of ethical approvals for the collection of personal data by the competent University Data Protection Officer / National Data Protection authority must be submitted to the REA
Given the nature and object of the personal data collected it does not seem necessary to involve the University Data Protection Officer. However, if the EUI Ethics Committee indicates that it is necessary, then the corresponding ethical approval will be requested EUI Data Protection Officer and the corresponding copies will be submitted to the REA.

Detailed information must be provided on the procedures that will be implemented for data collection, storage, protection, retention and destruction and confirmation that they comply with national and EU legislation

See Data protection above.

The applicant must explicitly confirm that the existing data are publicly available.

All the data used in the ADEMU project is either already publicly available (e.g. Eurostat, etc.) or if it will be generated through the experimental research only data that it does not identify the participants

will be made publicly available through the web site of ADEMU (see Data protection). Relevant data generated through simulations and computer code will also be made available through the web site.

Regarding Meeting national legal and ethical requirements. The experiments will be run at the Experimental Lab of the University of Bologna, to this end the EUI has a formal agreement of collaboration with the U. of Bologna. To the best of our knowledge, the Italian legislation exempts from ethical review all those studies on human subjects that do not involve a physical or psychological risk for participants. Economic experiments fall into this category. Ethical review is required for medical studies or invasive psychological studies. For these studies, the most important piece of legislation is the Law n. 211 of 24 June 2003 (Decreto Legislativo) that applied the European Directive 2001/20/CE on medical experiments for pharmaceutical products. There exist also a Ministry Decree 18 March 1998 about “Guidelines for the set up and functioning of Ethical Review Boards (Comitati Etici). The Decree was published in the Official Bulletin n.122 on 28 May 1998. At the University of Bologna there exists an Ethical Review Board for medical experiments: Comitato Etico Indipendente dell’Azienda Ospedaliero - Universitaria di Bologna Policlinico S. Orsola-Malpighi (<http://www.unibo.it/Portale/Ricerca/Servizi20Docenti20Ricercatori/ServiziDocRic/comitatietici.htm>). There also exists an Ethical Review Board for experiments in psychology: Comitato Etico della Ricerca Psicologica (http://www.psicologia.unibo.it/Psicologia/Ricerca/Comitato_Etico.htm). The status of this latter Comitato Etico is very different from the former because it was set up by the initiative of the Department of Psychology (not because of a University of Bologna policy) and its opinion is neither necessary nor required by national legislation. Experiments in economics for this project are similar to experiments in psychology with two important exceptions. First, we never use deception, so there is no ethical need of ex-post debriefing of subjects. Second, no clinical or invasive technique is employed. In conclusion, to the best of our knowledge the Italian law exempts experiments in economics from approval and the University of Bologna imposes no additional requirement. Nevertheless, this will be confirmed – or, alternatively, the documentation will be provided – as part of the Deliverable D.4.7: Preparation for experiments.

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