

Institution: University of Cambridge		
Unit of Assessment: 16 – Economics & Econometrics		
Title of case study: Designing unconventional monetary policy interventions and debt sustainability programmes to stabilize large tail risk shocks		
Period when the underpinning research was undertaken: 2010 to date		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Giancarlo Corsetti	Professor of Macroeconomics	September 2010 to date
Period when the claimed impact occurred: 2014 to date.		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>This case demonstrates the impact of Professor Corsetti's research, in collaboration with officers at policy institutions, related to a new generation of models for the assessment and design of stabilization policies in response to large downturns and sovereign debt crises in the United Kingdom (UK) and the European Union (EU). First, the impact of collaborative research with the European Central Bank (ECB) staff is evidenced by the ECB's new unconventional monetary policy measures. Second, Corsetti's research, in collaboration with European Stability Mechanism (ESM) staff, on debt sustainability analysis impacted the design of eurozone financial assistance programmes and its response to the Covid-19 crisis. Third, Corsetti's research on monetary policy in small open economies, conducted with Bank of England (BoE) staff, impacted the Bank's view on the optimal policy mix.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>This case builds on collaborative research on stabilization policies in response to sovereign debt crises and large downturns that Corsetti, as Professor of Macroeconomics at Cambridge, pursued by directly engaging with policy institutions and central banks in the UK and in the eurozone.</p> <p><u>Sovereign debt crises and unconventional demand management policy</u></p> <p>Corsetti [R1, R2] pioneered research (with ECB staff) on a new class of debt crises models in which a sovereign risk crisis raises the borrowing costs and worsens the financial conditions of a country. Contrary to the polarized views prevailing at the outset of the European debt crisis in 2010, his research showed that the destabilizing effects of the crisis in the eurozone stemmed from interactions between fundamental economic weaknesses and self-fulfilling expectations. The models established that, first, fiscal austerity alone cannot restore 'confidence' and financial stability; second, in the absence of effective reciprocal support between fiscal and monetary authorities, fiscal expansions may be counterproductive; third, stabilizing this type of tail risk requires unconventional monetary policy interventions.</p> <p>Elaborating on these interventions, research by Corsetti [R3] and Luca Dedola from the ECB, presented in the Schumpeter Lecture at the annual meeting of the European Economic Association in Mannheim in 2015, identifies the institutional and economic conditions under which a central bank can be an effective provider of last resort in government debt markets, addressing fundamental and non-fundamental (speculative) default risks. The research identifies concrete unconventional demand management policies that can reduce vulnerability to self-fulfilling default expectations while avoiding inefficient exposure to credit risk, supporting the</p>		

unconventional monetary policy initiatives of the ECB through the European debt crisis, as well as the strategies that the Bank of England followed after the Global Financial Crisis.

Debt sustainability and official lending

In response to the European debt crisis, which made the need for new policy tools urgent, Corsetti developed, in collaboration with Aitor Erce from the European Stability Mechanism (ESM) (2015-18), new theoretical and quantitative models to study how lengthening the maturities and lowering the spreads on official loans (relative to International Monetary Fund (IMF) standards) affect a government's decision to service its debt versus defaulting, and, by extension, sovereign bond pricing and market access conditions [R4]. This research pioneered a new generation of Debt Sustainability Analysis (DSA) models [R5]. These DSA models combined rollover and fundamental risk and emphasized management of cash flow obligations as opposed to paying attention only to the stock of debt as practised by most official lenders at the time of the crisis. The research thus called for a redefinition of the measures of sustainability. It unveiled fundamental trade-offs between liquidity management and long-run resilience to negative shocks and proposed a reconsideration of conditionality.

Corsetti's research on DSA models took place within the Horizon 2020 project 'A Dynamic Economic and Monetary Union' (ADEMU) and the Economic and Social Research Council (ESRC) sponsored 'Centre for Macroeconomics in the UK'. ADEMU brought together between 2015 and 2020 eight research groups from leading European institutions, promoting collaborations with European policymakers with the aim of reconsidering the overall monetary and fiscal structure of the EU and the eurozone, and the mechanisms of fiscal policy coordination among member states.

Monetary policy in small open economies

Most recent analyses of liquidity traps have been conducted using closed-economy or large open economy models, leading to policy prescriptions that may be unfeasible or counterproductive in a small open economy. Corsetti's research in this area from 2017 [R6, R7], joint with Bank of England (BoE) research officers, Eleonora Mavroeidi and Gregory Thwaites, identifies which expansionary measures the central bank of a small open economy following a flexible inflation targeting policy can benefit from, even if such measures have very limited effect on real interest rates, as these are determined in global markets.

3. References to the research (indicative maximum of six references)

- R1. Corsetti, G., Kuester, K., Meier, A., & Müller, G. J. (2014). Sovereign risk and belief-driven fluctuations in the euro area. *Journal of Monetary Economics*, 61, 53-73. DOI: [10.1016/j.jmoneco.2013.11.001](https://doi.org/10.1016/j.jmoneco.2013.11.001)
- R2. Corsetti, G., Dedola, L., Jarociński, M., Maćkowiak, B., & Schmidt, S. (2019). Macroeconomic stabilization, monetary-fiscal interactions, and Europe's monetary union. *European Journal of Political Economy*, 57, 22-33. DOI: [10.1016/j.ejpoleco.2018.07.001](https://doi.org/10.1016/j.ejpoleco.2018.07.001)
- R3. Corsetti, G., & Dedola, L. (2016). The mystery of the printing press: Monetary policy and self-fulfilling debt crises. *Journal of the European Economic Association*, 14(6), 1329-1371. DOI: [10.1111/jeea.12184](https://doi.org/10.1111/jeea.12184). Presented as the 'Schumpeter Lecture' at the annual meetings of the European Economic Association in Mannheim in 2015. Available at: https://www.youtube.com/watch?v=NEDF_w_LWPg
- R4. Corsetti, G., Erce, A., & Uy, T. (2018). Debt sustainability and the terms of official support. *CEPR Discussion Paper 13292*. Available at: https://cepr.org/active/publications/discussion_papers/dp.php?dpno=13292. Invited to present this paper at the Annual Research Conference of the IMF in Washington, 7-8 November 2019. Available at: <https://www.imf.org/external/mmedia/view.aspx?vid=6103003123001>
- R5. Corsetti, G., (2018) "Debt Sustainability Analysis: State of the Art" Study requested by the ECON Committee of the European Parliament, Economic Governance Support Unit Directorate-General for Internal Policies of the Union. Available at:

[http://www.europarl.europa.eu/RegData/etudes/STUD/2018/624430/IPOL_STU\(2018\)624430_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2018/624430/IPOL_STU(2018)624430_EN.pdf)

- R6. Corsetti, G., Mavroeidi, E., Thwaites, G., & Wolf, M. (2019). Step away from the zero lower bound: small open economies in a world of secular stagnation. *Journal of International Economics*, 116, 88-102. DOI: [10.1016/j.jinteco.2018.08.003](https://doi.org/10.1016/j.jinteco.2018.08.003). Also as Staff Working Paper No. 666 (2017) at the Bank of England. Available at: <https://www.bankofengland.co.uk/media/boe/files/working-paper/2017/step-away-from-the-zero-lower-bound-small-open-economies-in-a-world-of-secular-stagnation.pdf>
- R7. Corsetti, G., Dedola, L., & Leduc, S. (2020). Exchange rate misalignment and external imbalances: What is the optimal monetary policy response?. Federal Reserve Bank of San Francisco, Working Paper 2020-04. DOI: [10.24148/wp2020-04](https://doi.org/10.24148/wp2020-04)

Research quality is evidenced by rigorous peer-review from leading academic journals [**R1**, **R2**, **R3**, and **R6**] or by being circulated as working papers or reports by highly regarded research centres [**R4**], by central banks [**R7**], or by the ECON committee of the European Parliament [**R5**]. The research has been supported by competitively won grants from the Economic and Social Research Council (ESRC) and the European Commission (EC):

- EC. Horizon 2020: A Dynamic Economic and Monetary Union (ADEMU). June 2015 to May 2018. Total award value: EUR2,499,999 (1-2014) - Resilient and sustainable economic and monetary union in Europe. Giancarlo Corsetti (Researcher). GBP234,809.69 awarded to Cambridge.
- ESRC. Working towards a stable and sustainable growth path – Centre For Macroeconomics. December 2012 to May 2018. Total award value: GBP3,760,802. Lead Research Organisation: London School of Economics. Giancarlo Corsetti (Co-Investigator). ES/L500343/1. GBP523,324 awarded to Cambridge.
- ESRC. Working towards a stable and sustainable growth path - Centre For Macroeconomics ESRC Centres Transition Review. June 2018 to May 2023. Total award value: GBP982,985. Lead Research Organisation: London School of Economics. Giancarlo Corsetti (Co-Investigator). ES/R009295/1. GBP159,704 awarded to Cambridge.

4. Details of the impact (indicative maximum 750 words)

This case documents how Corsetti, as a leader of top-level research groups at the European Central Bank (ECB), the European Stability Mechanism (ESM) and the Bank of England (BoE), collaborated with central bank officials to affect the actual process of policymaking.

Sovereign debt crises and unconventional demand management policy

The European debt crisis peaked in 2012, but required ongoing monetary and fiscal policy interventions to stimulate economic activity. Corsetti's 2016 report, written with ECB staff and subsequently published in a peer-reviewed journal [**R2**] in 2019, outlined a new institutional framework to guide timely responses from central banks to large shocks that require intense fiscal and monetary stimulus. The Chief Economist of the ECB stated that, "*Corsetti and his collaborators [at the ECB] make a set of proposals that provide important benchmarks for the range of possible ways the ECB and member governments...can coordinate...Accordingly, this article [**R2**] represents an excellent example of "translational" research that provides useful policy guidance that is fully backed by underlying basic research.*" [**S1**]. The framework was further developed to meet the challenge of the Covid shock in the 2020 Geneva Report [**S2**]. Drawing on economic theory and historical experiences, the report provides a checklist related to rules and institutional design that speaks directly to the ongoing (Covid related) monetary strategy review at the ECB and other central banks [**S2**, p57 and p103].

Corsetti's research [**R1**, **R2**, **R3**] proposes concrete monetary measures to reduce vulnerability to self-fulfilling default expectations while avoiding unnecessary exposure to credit risk. The research was singled out in speeches in 2017 and 2019 by the vice-president of the ECB, Vitor Constancio, as having been instrumental in defining and developing the ECB's new

unconventional policy measures, including the 'Outright Monetary Transactions' (OMT) mechanism under which the bank purchases bonds issued by eurozone member states in secondary sovereign bond markets and the 'Longer-term Refinancing Operation' (LTRO) mechanism aimed at providing liquidity to the financial sector [S3, S4]. The research was presented at the 2018 [State of the Union conference in Florence](#), with an assessment of the impacts of these unconventional policy measures on the eurozone, in terms of reduced distortions in the sovereign debt markets and creating easier bank and firm market access conditions, ultimately reducing fears of a eurozone break up. This indicates "...significant benefits from OMTs for corporations, banks as well as individuals in all euro area countries." [S5].

Debt sustainability and official lending

The cornerstone of the eurozone's response to the European sovereign debt crisis was the creation of the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM), which became the monetary backstop for eurozone countries no longer able to tap the markets.

The Chief Economist of the ESM states that: "*The work of Professor Corsetti, in collaboration with ESM staff, on the large effect that the terms of official loans have on the level of debt a country can sustain [R4, R5] has allowed us to capture on a sound basis the benefits that ESM lending plays in resolving sovereign debt crises. Providing this conceptual backing of our practical work supports its credibility and facilitates the formulation of an appropriate policy framework. In this context, Professor Corsetti's work on debt sustainability analyses (DSA) is a path-breaking and crucial input in designing euro area financial assistance programmes. Corsetti's [research from 2018 and 2019] is the conceptual basis for our own work modelling optimal lending and debt management strategies...[and his contribution to] the EC-funded ADEMU project...have clearly influenced our own policy thinking.*" [S6].

DSA is also at the core of the eurozone's response to the Covid crisis. During the first months of the crisis, Corsetti's collaborative research on official lending [R4, R5] provided the research case for the European Recovery Fund's short-term bond issuance management programme against calls for reforming it in to a long-term bond (joint perpetuities) issuance programme. The governor of the Bank of Spain told the Spanish parliament in May 2020: "*Concerning the issuance of perpetuities/consols [to fund the European Recovery Fund] ... very good economists [R5], one of whom is a former employee of the Bank of Spain, propose, with very good arguments, that what Europe should do is to issue short-term debt, since the interest rates are low [and the] benefit from low short-term rates will [then] be devolved to the member countries through loans with much longer maturities.*" [S7, translated from Spanish]. In a VoxEU column from May 2020 Corsetti estimated that switching from short- to long-term bonds would raise the interest costs of official lending by 2-3 percentage points [S7].

Monetary policy in small open economies

The International Director at the Bank of England states that "*Corsetti's work on New Open Economy Macroeconomics [R6, R7 from 2019 and 2020] has helped move our thinking about how shocks propagate internationally beyond the traditional trade linkages, to consider the roles of the exchange rate, financial variables and the substitutability of home and foreign goods. His work on optimal monetary policy in open economies [R6], which highlights the need to consider factors that go beyond closed economy output and inflation gaps, was an important influence on a recent Governor's speech, given at the 2019 Jackson Hole Economic Symposium.*" [S8].

He also stated that Corsetti "*has provided expert guidance to Bank of England researchers, in particular for a policy paper on the options for small open economies [S8], like the UK, when at their effective lower bound*", and that he was instrumental in organising [a conference](#) on the 'New Economics of Exchange Rate Adjustment' (March 2019) that "*helped shaping the institutions' view on the optimal policy mix in the global economy.*" [S8].

5. Sources to corroborate the impact (indicative maximum of 10 references)

- S1. Letter of support from a Board member of the Executive and Chief Economist at the European Central Bank (ECB). Received in January 2020.
- S2. Geneva 23 (December 2020). It's all in the Mix: How Monetary and Fiscal Policies Can Work or Fail Together. Available at: <https://cepr.org/content/geneva-report-23-its-all-mix-how-monetary-and-fiscal-policies-can-work-or-fail-together>
- S3. "Completing the Odyssean journey of the European monetary union 2018". Speech by Vitor Constancio, Vice-President of the ECB at the ECB Colloquium on "The Future of Central Banking", Frankfurt am Main 16-17 May 2018. Footnotes 23 and 29. Available at: <https://www.ecb.europa.eu/press/key/date/2018/html/ecb.sp180517.en.html>
- S4. "Role and effects of the ECB non-standard policy measures 2017". Speech by Vitor Constancio, Vice-President of the ECB at the ECB Workshop "Monetary Policy in Non-Standard Times", 11-12 September 2017, Frankfurt am Main. Footnote 1. Available at: <https://www.ecb.europa.eu/press/key/date/2017/html/ecb.sp170912.en.html>
- S5. "Outright Monetary Transactions, one year on". Speech by Benoît Cœuré, Member of the Executive Board of the ECB in Berlin on 2 September 2013. Available at: <https://www.ecb.europa.eu/press/key/date/2013/html/sp130902.en.html>
- S6. Letter of support from the Chief Economist, Economics and Policy Strategy for the European Stability Mechanism. Received on 27 January 2020.
- S7. Appearance of the Governor of the Bank of Spain before the Commission for Economic Affairs and Digital Transformation of the Congress of Deputies on 18 May 2020 (In Spanish). Available at: <https://www.youtube.com/watch?app=desktop&v=VAWuqD0BWn4>. At 3 hours 36 minutes, the Governor of the Bank of Spain, Pablo Hernández, links the Spanish position on the financing of the European Recovery Fund to research by Corsetti, Erce and Garcia Pascual on voxeu.org (14 May 2020). Available at: <https://voxeu.org/article/using-perpetual-bonds-finance-european-recovery-fund>
- S8. Letter of support from the International Director of the Bank of England. Received on 22 January 2020.