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The Euro and the global crises: finding the balance between short term stabilization and forward looking reforms*

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Abstract

This paper analyzes reforms and adjustments in the context of the Euro and the global financial crises. Taking the perspective of the evolutionary approach to institutions, the formation of a new currency area is not unidirectional. The process leading to the euro is an example of a common upbeat and optimistic attitude to the formation of new institutions. Such a Panglossian attitude to policies may reflect built-in fiscal myopia, possibly both at the level of the principal [the policy maker] and of the agents [consumers and households]. Next, the paper reviews the evolution of institutions buffering the stability of unions in the aftermath of crises, where fiscal restraints and the allocation of significant bargaining clout to the Federal Center increase the stability of a union. The paper concludes with an overview of the challenges associated with finding the proper balance between financial integration and financial regulations.

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A few years after the US-originated global crisis, the world economy finds itself grappling with another crisis emanating from the OECD countries. The anaemic recovery of the US economy, and the fears of the slowing down of Emerging Markets leave the global economy vulnerable. Against this background, the euro zone sovereign debt crisis currently poses the single biggest downside risk to the global outlook. The crisis is rooted in the uneven growth performance of the different Euro countries, the unsustainably large public debts of some EU periphery countries, and the European banks' exposure to these debts. These developments exposed the possible dynamic inconsistency of the Euro project, dubbed by Pisani-Ferry (2012) as the *Euro Impossible Trinity*.¹

The US financial crisis and the Euro Sovereign debt upheaval raise important questions regarding the balance between short term stabilization and forward looking reforms. While this question applies to all countries, it is especially relevant for the Euro area, as the crisis is threatening the integrity and the viability of the euro. The short history of the euro project has been remarkable and unprecedented: during the last fifteen years the Euro project moved from the planning board, into a vibrant currency. Earlier concerns about the stability of the transition from national currencies to the euro, and skepticism regarding the gains from forming the euro, were deemed overblown during the 2000s. The global share of the euro increased rapidly from about 18% to about 28% in its first decade. After a short initial depreciation against the dollar, the euro appreciated substantially. This remarkable performance of the euro during its first decade was celebrated by the ECB and other European institutions in 2008.

Jonung and Drea (2010) exemplified the buoyant view regarding the Euro. "Never before have some of the world's largest economies surrendered their national currencies in favor of a common central bank. The euro is one of the most exciting experiments in monetary history."

¹ The three attributes of the Euro project hindering the adjustment capabilities of the Euro countries are: the strict no-monetary financing; the bank-sovereign interdependence, and the no co-responsibility for public debt in the Euro zone. Pisani-Ferry (2012) pointed out that at least one of these attributes should be modified to enhance the stability of the Euro project.

Deutsche Bundesbank president, Axel Weber, remarked in a Keynote address, May 2008, “What are the determinants of the Eurosystem’s success? ...the bulk of confidence in the fledgling European single currency was generated by the Eurosystem’s institutional framework... Key elements have been transferred to the Eurosystem from the national central banks, including the Deutsche Bundesbank.”

The markets in 2008 seemed to agree with this assessment, attaching low risk premia to the sovereign debt of the euro members. Beyond the universal low risk assessment of Germany, negligible risk premia were attached to the other 16 euro countries. However, the 2008 Euro first decade celebrations were premature. The real test of a currency union happens at times of sizable asymmetric shocks, like recessions impacting some states in the Union, while other states boom. The first test of the Euro occurred at the aftermath of the 2008-9 global crisis. The slowing down of Peripheral Eurozone at a time when Germany kept growing, awakened the market in 2010 to the growing debt overhang of the Peripheral Eurozone, and the incompleteness of the Euro project. The resultant euro crisis is testing the viability of the Euro project. As articulated by Pisani-Ferry, it is not too late to fix the necessary issues, but it would require the will to engage in deep structural changes of the European Monetary Union institutions.

Beyond the challenges of the euro, the near collapse of financial intermediation in the US, and the ensuing global crisis revealed the fault lines of the global financial system. Understanding the process that led to the vulnerabilities exposed by the global crisis is a pre-condition for grasping the needed short term stabilization and reform.

The generic answer to the timing of short term stabilization and forward looking reform is simple -- it is best to enact the reforms in a forward looking manner, during good times, reducing the cost of short term stabilizations. A good example for this prescription is the structural budget Institutions pioneered by Chile since 2000 (see Frankel, 2012). But, as with any generic answer in Economics, reality is more complex. Chile adopted forward looking reforms following a painful learning process, including the economic collapse of the 1980s. In practice, unlike the generic answer, reforms are rarely enacted in a forward looking manner, during good times. A multitude of reasons may account for the failure of the generic answer.

Taking Chile's historical perspective, and looking at the experience of other countries, one may deduce that "no pain, no gain." This paper analyzes two fundamental challenges facing reforms and adjustment. First, I will review evolutionary aspects of economic changes - illustrated in the context of the formation of the euro and the history of other currency unions. Second, I will discuss the paradox of regulation, providing an interpretation of the history of financial regulations in the US, and the challenges facing financial globalization.

1. Evolutionary aspects of currency unions:

The formation of the euro is an example of a common Panglossian attitude to policies and the formation of new institutions – an upbeat optimism that may help overcome the opposition. The hope is that the formation of a currency union (like the euro) may lead to dynamic forces inducing 'ever closer union' [Hass, 1958], as the processes of market integration and cooperation do mutually reinforce each other. This approach reflects also an optimistic assessment of the 'bicycle theory' of unions (Moravcsik, 2005), and the 'Endogenous OCA Theory' (Frankel and Rose, 1997).

Frequently, a Panglossian attitude to policies may reflect built-in fiscal myopia, possibly at the level of both the principal [the policy maker] and the agents [consumers and households]. Individual fiscal myopia may reflect hyperbolic discounting, where the present-biased consumer excessively discounts future consumption relative to the conventional expected utility [Leibson, 1997]. Belt tightening is delayed for tomorrow, but "tomorrow never comes." Policy makers' fiscal myopia may reflect the 'short-termism' associated with a limited time in office, and the possible short-sightedness of hyperbolic discounting voters.² Both patterns are associated with probable time inconsistency. In these circumstances, proper institutions may help. Yet, effective institutions can't be imposed in a *Deus EX Machina* fashion from the outside. Forming the institutions dealing with fiscal myopia frequently requires painful learning from crises, which in turn may galvanize the will to reform.

² See Aizenman (1998) for a model of the moral hazard associated with policy makers' short-termism and states' overspending in a union; and the papers in Sturzenegger and Tommasi (1998).

These considerations suggest an alternative perspective to the formation of institutions and policies: *The Evolutionary Approach*, where the formation of a new currency area is not unidirectional.³ Evolutionary pressure purges arrangements and institutions that do not survive the realized shocks. Yet, survival does not necessarily imply the ability to withstand future turbulences. Thus, convergence to ‘ever closer union’ is not assured. Taking this perspective, ‘the Optimal Currency Area’ literature has been too simplistic. Unions and Regional Cooperation arrangements are challenged by exogenous forces, testing the willingness and ability to persevere during bad times. Market integration and cooperation may overshoot the willingness to integrate. The collapse of Yugoslavia, and the move towards more limited fiscal federalism in Canada provides vivid examples of these patterns. Frequently, the reasons for the formation of currency unions and regional cooperation blend economics and politics. The Euro has been the outcome of Europe’s 19th and 20th century history, rather than the ‘optimal currency areas’ logic [see Bordo and Jonung (1999) and Bordo, Markiewicz, and Jonung (2011) for detailed overviews of the history of unions].

Putting the euro crisis in the proper historical context, the US \$ is a ‘successful’ union of 50 states. Yet, this is the outcome of painful learning and a turbulent history of more than 200 years. Key chapters in this history include defaults of 8 US states on sovereign debt in the early 1840s; the Great Depression; the Civil War; the emergence of the Federal Reserve System (FED) as a key institution, and the greater fiscal role of the federal system in post WW II. The Euro is a ‘baby union,’ facing its first painful maturing crisis. The spectrum of options facing the euro project includes progressing towards a Canadian or US type of a union, with a more significant role of the fiscal center than the one framed by the euro founding fathers, or scaling down the euro project. Euro countries attempted to ignore the learning process of the US and other unions, at their own peril. The crisis forces the emerging Euro to move fast on the learning curve. The process is quite painful, as has been the learning process of the US.

Reflecting on the history of the US dollar union, there are alternative views of the fiscal factors contributing to the stability of Unions.

³ Applying evolutionary logic in Economics goes back to Veblen (1899) and the Austrian evolutionary school, with further developments applying Evolutionary Game Theory [see Hodgson (1998) and Young (2001) for overview and references].

a. *Adding built-in fiscal restraints.*

Wallis (2005) attributes the success of the US \$ union to the institutional changes following the sovereign debt default of 8 US states, leading to fiscal prudence: "After the fiscal crisis of the early 1840s, states changed their constitutions to eliminate taxless finance in the future."

b. *Are built-in fiscal restraints enough? Not necessarily.*

von Hagen (1991) is skeptical about the effectiveness of fiscal restraints on states in the US: "*Fiscal restraints significantly affect the probability of fiscal choices and performance, without however preventing extreme outcomes.*"⁴

c. *Fiscal restraints supported by the proper allocation of bargaining clout.*

An alternative perspective may combine the above two takes on the stability of a union. When the fiscal center gets sizable taxes from the states, and provides significant discretionary transfers to the states, the Union's Center has plenty of bargaining clout. If a state misbehaves, the center may cut the transfers to a degree that would prevent such behavior. The center's bargaining clout strengthens the fiscal restraints on states' over-borrowing. If this mechanism is powerful, the threat is enough to impose the needed discipline. The states would refrain from running a large public debt/GDP, and the threat of cutting transfers would be rarely used. In the US, this mechanism seems to be potent, as state governments receive a hefty share of their general revenue directly from the federal government -- about 32% in 2009.⁵ Yet, if the credibility of the

⁴ Some observers view California as 'Greece in the US,' an example of extreme fiscal outcomes in the US ["California is a greater risk than Greece, warns JP Morgan chief," *The Telegraph*, 26 Feb 2010]. Yet, the facts are much more involved. The needed fiscal adjustment to deal with the debt overhang of Greece was estimated by the IMF to be about 15 % of the GDP, whereas the needed fiscal adjustment of California is modest, less than 2 % of its GDP. Thus, California's fiscal fiasco is the outcome of a war of attrition regarding who will make a modest adjustment in a rather rich state where the tax base relies heavily on taxing capital gains. In contrast, in Greece the fiscal challenges are associated with a much larger debt overhang, in a poor country (relative to the US), with low tax compliance and a sizable income inequality.

⁵ See *State and Local Government Finances Summary: 2009*
http://www2.census.gov/govs/estimate/09_summary_report.pdf.

threat is questionable, it would be tested and used. Intriguingly, this mechanism was enacted in Brazil, and is credited for stabilizing provincial overspending and overborrowing there (see Melo, Pereira and Souza, 2010).⁶

Implications for “stabilization versus reform”

Granting more bargaining clout to the center will help the euro project to move forward. There are numerous ways of doing so, and it is up to the members to choose a way fitting their vision.

Improving fiscal discipline will help: *Don't eat more than you can chew and digest*: borrow only if your tax base is big enough to support serving it. The fiscal distortions of the euro project go back to the Maastricht Treaty criteria of fiscal prudence, where public debt/GDP below 60% and fiscal deficit/GDP below 3% were determined as key indicators of fiscal fitness. Yet, Aizenman and Jinjarak, (2011) and Aizenman, Hutchison and Jinjarak (2011) pointed out that more robust and informative criteria for fiscal exposure are low Public debt/average tax revenue and low fiscal deficit/average tax revenue. While deflating public debt and fiscal deficits by the GDP has been used frequently, the *de facto* fiscal burden is better measured by deflating public debt and fiscal deficits by the average tax base. Ideally, the ratio of public debt to the net present value of future primary surpluses is a good measure of fiscal burden. Yet, properly estimating this net present value is elusive.⁷

In practice, the average tax revenue provides a good statistics on the *de facto* taxing capacity, being the outcome of the tax code and its effective enforcement. While the public debt/GDP ratio may increase rapidly at times of peril [see Ireland in the recent crisis, more than doubling its public debt/GDP in one year], the *de facto* taxing capacity changes slowly at times of peril, as parties tend to be locked in a war of attrition, attempting to minimize their adjustment burden. Thus, the *de facto* tax base is hard to change overnight, as it reflects a social contract. This contract depends on the tax enforcement capacities of a country, which are anchored by the

⁶ In Minas Geras (1999), and Rio (2003), the newly sworn-in state governors blamed their predecessors for passing budget imbalances, and declared a moratorium on the pre-election state debt, prompting the federal government to withhold federal transfers.

⁷ Estimating the net present value of primary surpluses hinges on good estimates of the future growth rates and future real interest rate, both of which are notoriously hard to estimate tightly.

public's perception of tax fairness and the gains from public sector expenditure, factors that are hard to change at times of peril. As the present crisis illustrates, increasing the *de facto* tax base in a recession turned out to be unfeasible for most countries. This view is consistent with recent empirical literature finding that tax compliance and individual's willingness to pay taxes is affected by perceptions about the fairness of the tax structure. An individual taxpayer is influenced strongly by his perception of the behavior of other taxpayers [see Alm and Torgler, 2006, and the references therein]. If taxpayers perceive that their preferences are adequately represented and they are supplied with public goods, their identification with the state increases, and thus the willingness to pay taxes rises [Frey and Torgler, 2007].

We can illustrate this point by noting that, had Panama been part of Europe, there is a good chance that it would have passed the Maastricht treaty criteria, despite being a country with a very low tax base. Specifically, in 2005, the public debt/GDP of Austria (a euro member) and Panama were about 60%, implying that both countries were viewed by the Maastricht criteria as having a comparable fiscal burden. Yet, Austria's tax collection was about 45% of its GDP, whereas Panama's only 10%. Thus, Panama's public debt/tax revenue was about 6, whereas Austria's was about 1.5. The substantially higher tax base of Austria implies that it has greater capacity to serve the given public debt/GDP than Panama. By revealed preferences, Austria manages to enforce and collect sizable taxes, whereas Panama, as most Central American countries, does not. For a given similar unanticipated adverse fiscal shock, Austria would have considerably more room to adjust by reallocating its priorities of using the relatively high tax base, in contrast to Panama. This logic suggests that public debt/average tax collection and fiscal deficits/average tax collections account better for the sovereign risk than indicators deflating public debt and fiscal deficits by the GDP. Indeed, Aizenman, Hutchison and Jinjark (2011) confirmed this observation.⁸

To sum up, improving fiscal discipline in the euro block would help, but would not substitute for the need to increase the bargaining clout of the center, and for mitigating the moral hazard associated with the presumption that the center will bailout the states.

⁸ This result reflects the fact that the cross country coefficient of variations of public debt/average tax revenue and fiscal deficits/average tax revenue are substantially higher than the coefficient of variations of public debt/GDP and fiscal deficits/GDP.

II. The challenge of financial reforms: The paradox of regulation

The global crisis came at the end of the illusive “Great moderation.”⁹ The “Great Moderation” period coincided with a long spell of financial deregulations in the US. This chain of events provides a vivid example of the tendency to under regulate during a prolonged period of ‘good times,’ and of the challenges of creating and maintaining a balanced Goldilocks regulations, “not too cold, not too hot, but just right!” These challenges are the outcome of the paradox of regulation [see Aizenman (2011)], where dynamically there is a resistance to regulate, due to a built-in bias against financial regulation.

The essence of this bias is that all the crises that were avoided by tighter financial regulations are imperceptible and not credited to the policy maker – it is hard to gauge the losses that did not occur because of the regulations enforced by the policy maker. Yet, the cost of financial regulation is transparent and debited to the policy maker.¹⁰ When regulations are the outcome of a political process, the longer the spell of no crisis, the greater would be the erosion of regulation intensity relative to the socially desirable level, as the counterfactual becomes illusory for the public. The less informative is the public’s prior regarding the probability of a crisis, the faster will be the drop in regulations induced by a no-crisis, good luck run.¹¹ The support for financial regulations is further eroded in systems where the financial sector can channel its rents to lobby against regulations that may cut its profitability. While the regulator may point out the hazard of the deregulation process, its access to lobbying resources is frequently outgunned by the financial sector.

⁹ The great moderation referred to the drop in volatility and risk premium during the 1990s and early 2000s. See Stock and Watson (2002) for an analysis of the Great Moderation hypothesis. Recent observers refer to 1987-2007 as the “Great Moderation” period.

¹⁰ The direct budgetary cost of regulating institutions is the most visible budgetary outlay. Jackson (2002) noted “The total budgets of financial regulatory authorities in the United States in 2002 was in excess of \$5.6 billion, and staffing levels were reported at 43,244.” In addition, compliance results in private costs that are hard to estimate tightly. Coates (2007) reviews the costs/benefits associated with the Sarbanes-Oxley Act, concluding that the act should bring net long-term benefits. Yet, he noted some alarming estimates of overall market reactions to the costs of the Sarbanes-Oxley legislation.

¹¹ See Aizenman (2011) for a model and further discussion.

Arguably, the above dynamics characterize well the process of financial deregulation in the US during 1985-2005. The substantial drop in macroeconomic volatility during the “Great Moderation” provided the impetus for the acceleration overtime of financial deregulations. Observers and markets were tempted into reading the declining macro volatility as an indication of improved policies. Notwithstanding concerns raised by minority views, financial deregulation was promoted as part of a win-win strategy for the households and the financial system.¹² While supposedly we are aware that correlations are not indicative of causality, the longer is the observed favorable regularity, the greater is the tendency to attach causal interpretations, and for policy makers to take credit for it.

The reverse side of the paradox of regulation is that a crisis that leads to a cost of higher order of magnitude than the anticipated one, may induce the pendulum to shift from under-regulation to over-regulation. Large unexpected economic depression may put in motion a process where the cost of erring on the side of over-regulation is viewed as being lower than the cost of erring on the side of under-regulation.¹³ The interpretation for over-regulation is the reverse side of the paradox of regulation. In repressed financial systems, the stakeholders that would have benefited from financial intermediation are under-represented in the decision making process.¹⁴ Over-regulation may lead to a static economy, where the benefit of crisis avoidance comes with a large cost of stagnation, a cost that is under-represented in the political discourse.

¹² The moderation trend reduced the appetite for regulation, with growing acceptance of Greenspan’s seductive “market-stabilizing private regulatory forces,” exemplified in his April 12, 1997 speech, www.bis.org/review/r970502b.pdf .

¹³ While it is premature to know the ultimate impact of the 2008-9 crisis on financial regulation, the overregulation hypothesis has clearer validity for the post Great Depression than for the present crisis. The globally coordinated macro stabilization in the aftermath of the collapse of Lehman Brothers, preventing a deep economic depression, probably had the side effect of mitigating the support for deep regulatory changes.

¹⁴ This happens in the presence of uncertainty regarding the individual incidences of successful investment, analogues to Fernandez and Rodrik (1991).

Steps that can mitigate the risks associated with the paradox of regulations include:¹⁵

Information gathering: a necessary condition for regulation is mandatory periodic confidential reports of the balance sheet exposure of all financial institutions above a minimum size, operating in the domestic market.

Greater independence of the regulatory agency from the political process helps. Due to principle-agent problems, the regulator's independence is needed to avoid "regulatory capture." Interested parties prefer under-regulation as a way to facilitate excessive risk taking subsidized by the tax payers [see Rajan and Zingals (2003) and Rajan (2005)].¹⁶

Adopting global standards of minimum prudential regulation and information disclosure, enforced by the domestic regulator. Global minimum standards increase the costs of deregulation, acting as a commitment device. Such a minimum prudential standards of regulation mitigate "regulatory arbitrage" across countries. Under-regulation attracts capital inflows in search of higher returns induced by the implicit subsidy provided in more under-regulated countries. A vivid example of this configuration was the pre-crisis insurance market in the US. Under-regulation allowed AIG to sell underpriced insurance contracts to European institutions, arrangements that were subsidized by US tax payers. This episode exposed a common fallacy is the naïve interpretation of the gains from financial deepening, presuming that it allows approaching full insurance against macro calamities. Yet, complete markets allow

¹⁵ See the Geneva Report (2009) for an in depth discussion and references of blueprints for reforming the global financial system.

¹⁶ Common wisdom is that the US FED is independent. Yet, the chairman and vice-chairman of the FED are chosen by the President from among the sitting Governors for a four-year term, without a formal term limit. This opens the door to a 'continuation game' of the chairman, adjusting his views to the administration, in order to increase the probability of reappointment. Similarly, Federal Reserve Bank Presidents are appointed by the board of directors of the Bank, for a term of five years. This implies that the presidents are appointed by a board impacted by the banks that are regulated by them, raising the odds of regulatory capture. Chances are that appointing the FED Chairman for a single fixed one term, appointed by publically elected officials may help. To provide a proper balance, the power of the chair or president may be constrained by an impeachment process, subject to a strong majority rule.

insuring fully only idiosyncratic risks. Promises to deliver macro insurance, if large enough, expose the tax payer to costly bailouts and higher future taxes.¹⁷

To conclude, a major fault line exposed by the financial crisis of 2008-9 is that financial globalization was successful in globalizing arbitrage, yet the tax base remains national. The globalized arbitrage increases the odds that at times of trouble, the national tax bases will be saddled with costly bailouts of big financial players, some of them off-shore based. Failure to tame the globalized arbitrage increases the risk that a large enough future crisis will induce overshooting the needed regulatory adjustment. Crises are testing the capabilities to stabilize *and* to adopt forward looking reforms that will prevent similar crises down the road. Failure to do both will bring about evolutionary pressure that will purge ineffectual systems. Most reforms take place under the gun of history, during or in the aftermath of a crisis, as long as the memory is fresh. The challenge is to form a resilient system that will be immune to the paradox of regulation.

¹⁷ Similarly, the May 2012 losses of JP Morgan probably reflect the observation that giant financial institutions are “too big to hedge” effectively [see *Lessons From Trades Big and Bad* NYT, May 17, 2012].

Reference

- Aizenman, J. (2009), "Financial Crisis and the Paradox of Under - and Over-Regulation," NBER WP # 15018; in *Annual World Bank Conference on Development Economics*, Volume, eds. Lin and Pleskovic, 2011.
- Aizenman J. (1998), "Fiscal Discipline in an Union," in *The Political Economy of Economic Reforms*, by F. Sturzenegger and M. Tommasi, eds. (1998), pp. 185-208. A preliminary version: NBER Working Paper # 4656.
- Aizenman J. and Y. Jinjarak (2011), "The Fiscal Stimulus in 2009-10: Trade Openness, Fiscal Space and Adjustment" *NBER International Seminar on Macroeconomics 2011*, Frankel & Pissarides, eds.
- Aizenman J., M. Hutchison and Y. Jinjarak (2011), "What is the Risk of European Sovereign Debt Defaults? Fiscal Space, CDS Spreads and Market Pricing of Risk," NBER Working Paper # 17407.
- Alm, J. and B. Torgler (2006) "Culture differences and tax morale in the United States and in Europe," *Journal of Economic Psychology* 27: 224–246.
- Bordo, D. M., A. Markiewicz, and L. Jonung (2011) "A Fiscal Union for the Euro: Some Lessons from History," NBER Working Paper No. 17380 September 2011.
- Bordo, D. M. and L. Jonug (1999) "The Future of EMU: What Does the History of Monetary Unions Tell Us?" NBER Working Paper No. 7365, published in Capie, Forrest and Geoffrey Wood (eds). *Monetary Unions*. London: MacMillan, 2003.
- Brunnermeier M. K., A. Crockett, C. A Goodhart, A. Persaud, H. S. Shin (2009), "The Fundamental Principles of Financial Regulation", *Geneva Reports on the World Economy* # 11.
- Coates, C.J. (2007), "The Goals and Promise of the Sarbanes-Oxley Act," *Journal of Economic Perspectives*, 21 (1), 91-116.
- de Mello, Luiz and Erwin R. Tiongson, 2006, "Income inequality and redistributive government spending," *Public Finance Review*, 34 (3): 282-305.
- Fernandez R. and D. Rodrik (1991), "Resistance to Reform: Status Quo Bias in the Presence of Individual-Specific Uncertainty." *American Economic Review*, 81 (5), 1146-55.
- Frankel J. and A. Rose (1997), "Is EMU more justifiable ex post than ex ante?" *European Economic Review*, 41 (4) 753-760.

- Frankel J. (2011), “A Solution to Fiscal Procyclicality: The Structural Budget Institutions Pioneered by Chile, NBER WP # 16945.
- Frey S. B. and B. Torgler (2007) “Tax morale and conditional cooperation” *Journal of Comparative Economics* 35: 136–159.
- Hass E. B. (1958), *Uniting of Europe*, Stanford: Stanford Univ. Press.
- Jackson, H. E. (2005), “Variation in the Intensity of Financial Regulation: Preliminary Evidence and Potential Implications,” Discussion Paper No. 521, Olin Center for Law, Economics, and Business, Harvard.
- Jonung L. and O. Drea (2010), “U.S. Economists on the EMU and the Euro, 1989-2002,” *Econ Journal Watch*, 7(1), 4-52
- Leibson, D. (1997), “Golden eggs and hyperbolic discounting”, *Quarterly Journal of Economics*, 112 (2), 443-478.
- Melo, M., C. Pereria and S. Souza (2010), “The political economy of fiscal reform in Brazil,” IDB Working paper 117.
- Moravcsik A. (2005), “The European Constitutional Compromise and the neofunctionalist legacy” *Journal of European Public Policy*, 349–386.
- Pisani-Ferry J. (2012) “The Euro Crisis and the new impossible trinity” Bruegel report # 674.
- Rajan R. (2005), “Has Financial Development Made the World Riskier?” *Proceedings, Federal Reserve Bank of Kansas City*, 313-369.
- Rajan R. and L. Zingales (2003), *Saving Capitalism from the Capitalists*. Random House.
- Stock J. H. and M. W. Watson. (2003) “Has the Business Cycle Changed and Why?” *NBER Macroeconomics Annual*, 17 (2002), pp. 159-218.
- Sturzenegger, F. and M. Tommasi (1998), eds. *The Political Economy of Reform*, MIT Press.
- von Hagen J. (1991), “A note on the empirical effectiveness of formal fiscal restraints,” *Journal of Public Economics*, 44 (2), 199–210.
- Wallis J. (2005), “Constitutions, Corporations, and Corruption: American States, 1842 to 1852.” *Journal of Economic History*, 211-256.
- Weber, A. (2008), “The Eurosystem and its Prospects - History in the Making” <http://www.bundesbank.de/download/presse/reden/2008/20080530.weber.php> .
- Young P. H. (2001), *Individual Strategy and Social Structure: An Evolutionary Theory of Institutions*, Princeton Press.