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A Tale of Two Crises: Greece and Iceland

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Not for quotation

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In the fall of 2008, Iceland suffered a severe shock when its largest banks collapsed. Relative to the size of the economy the shock was enormous. The Icelandic government immediately began addressing the difficult problems that arose, entering into an IMF program in November 2008.

In the fall of 2010, the newly elected government of Greece announced that a predecessor government had misreported and hidden the true magnitude of the prospective fiscal deficit (over 15 percent of GDP) for the fiscal year then in progress. By that time, Greek government debt was already well over 100 percent of GDP and markets immediately closed. The new government initially sought support solely from its fellow Eurozone members. Given scale and complexity of the situation, the Europeans quickly brought the IMF into the picture, and a "troika" was formed of Eurozone members, the European Central Bank (ECB) and the IMF to work jointly to support Greece.

At first glance, the two situations appear to have been very different. In Iceland, there had been a huge credit boom fueled by practically unrestricted lending by the three large local private banks that had in turn been financed by overseas borrowing of large sums from

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foreigners at comparatively high interest rates. The boom ended and the banks collapsed when they could no longer persuade creditors to roll over and expand their lines of credit. The total debt owed by the three banks was a large multiple of Icelandic GDP. At the sovereign level however, the Icelandic fiscal situation appeared reasonably sound, with an overall general government budget surplus of 4.9 percent of GDP in 2007 and gross general government debt of 27 percent of GDP.

Hence, the origins of the Icelandic crisis lay in inadequate regulation of the banks, and the huge foreign debt was incurred by the private sector. By contrast, the Greek crisis resulted from large fiscal deficits even in years of rapid growth; the Greek structural fiscal deficit was even larger than the actual deficit and the problem clearly lay in the public sector.

What the two countries had in common was an acute crisis, with international access to markets closed and an urgent need to adjust. Their subsequent fortunes were and are markedly different. The ways these economies have evolved offer a number of insights into issues surrounding policies for crisis resolution and management and the restoration of growth.

Because of Iceland's small size, some are inclined to discount its experience as irrelevant for other countries. But, in fact, despite its small size the Icelandic economy is a national economy in every sense of the term: Iceland has its own currency (the Islandic krone), its own monetary system and policy, and its own fiscal policy. It was and is a member of NATO and the OECD but was not and is not a member of the Eurozone (it is a member of EFTA). Because of Greece's membership in the EU and more importantly as part of the Euro currency zone, it could even be claimed that Iceland is more economically independent than is Greece! And as will be seen, the Icelandic economy displays all the properties of most other economies in the world, with a larger fraction of its GDP in exports and imports than the average country and perhaps more vulnerability to external events due its small size but not much else to distinguish it from other economies.

I shall start with a very brief outline of the background of the two economies and thereafter, focus on the respective IMF programs, other policy measures, and the most importantly the results achieved so far. But it is not enough to describe planned reform measures; the quality of implementation is critical and is a key difference between the outcomes for the two countries. A conclusion assesses the reasons for the striking differential in performance.

Background

It is well known that Greece joined the European Community in the 1980s, and was one of the founding members of the Eurozone in 2001. Interest rates it paid on its sovereign debt fell abruptly upon membership; the 2004 Olympics were coming, and the Greek economy soared fueled largely by fiscal expansion and very low interest rates for the sovereign and similarly for its banks.

The fact that the Greeks had already incurred fiscal deficits during the boom years meant that countercyclical fiscal policy could not be used to address difficulties when the crisis erupted. Likewise, the fact that Greece had adopted the euro meant that there was no scope for monetary expansion or exchange rate depreciation to offset any of the contractionary pressures that arose.

Even during the boom years, Greek economic policy was neither conducive to, nor focused on, achieving a high level of productivity or growth. In the World Bank's "Doing Business" in 2007, just prior to the Icelandic crisis and the onset of the Great Recession, Greece was ranked 109th out of a survey of 175 countries, just below Nigeria, while Iceland was ranked 10th. On some individual scores, Greece ranked much worse: 166th in "ease of employing workers"; 156th in "investor protection"; 140th in "starting a business"; and 123rd in "ease of trading across borders".

Iceland is, of course, much smaller in population, although its per capita income ($46,320 in 2007) was more than twice that of Greece at that time ($19,760). Being surrounded by sea no doubt increases its unique identity (and appreciation of the importance of self-sufficiency). Until the l990s, Iceland was relatively poor, with fishing serving as the principle livelihood for much of the nation and fish the primary export. But by the early 1990s, a number of factors conspired to result in a major shift in economic policies and the economy rapidly transformed into modern industrial nation over the course of a decade. By the early 2000s, Iceland's per capita income was among the highest in Europe and the growth rate continued to remain high for much of the 2000s. In the same 2007 "Doing Business" from which the Greek numbers emerged just before the crisis, Iceland was ranked 12th overall (recall Greece was 109th).

At the beginning of this century, the three large Icelandic banks began their international expansion, and a major investment initiative got underway in the construction of a very large aluminum smelting facility, based in part on Iceland's very abundant supply of cheap (mostly hydroelectric) energy. With foreign direct investment financing the aluminum undertaking, and capital flowing into the three banks, an economic boom began and accelerated until 2007 with growth rates and credit expansion far exceeding what was sustainable. In each of the three years prior to the onset of the crisis, the Icelandic current account deficit exceeded 15 percent of GDP per year.

The Crises

Hence, the two crises were both destined to be severe. But while one had its origins in a very low sustainable rate of growth with serious disincentives for productive private investment offset by an overly expansionary and unsustainable fiscal policy, the other had its origins in lax monetary regulation and an unsustainable rate of private credit expansion by the three banks.

Rapid Response in Iceland

Iceland's crisis came first. As explained in late 2008 by the IMF's Poul Thomsen, the then mission chief for Iceland,

> Iceland allowed a very oversized banking system to develop – a system that significantly outstripped the authorities' ability to act as a lender of last resort when the system ran into trouble. Only a few years ago, Iceland had a banking system that was normal sized. But after the privatization of the banking sector was completed in 2003, the banks increased their assets from being worth slightly more than 100 percent of GDP to being worth close to 1,000 percent of GDP.
>
> When confidence problems intensified this all, Iceland was one of the first victims because the market realized that the banking system was far too big relative to the size

> of the economy. As investors started to pull out, it quickly spilled over into trouble for the Icelandic krona. Within a week the three banks collapsed, the krona's value dropped by more than 70 percent, and the stock market lost more than 80 percent of its value. For a small economy that is totally dependent on imports, this was a crisis of huge proportions. (IMF, IMF Survey Magazine, "Iceland Gets Help to Recover from Historical Crisis", by Camilla Andersen, October 2008.).

As this quote indicates, the Icelandic crisis hit quickly and was severe. The extent of the depreciation, the stock market crash, and the banks' collapse left little choice but to act quickly, and the Icelandic authorities did. On October 24, the IMF announced a U.S. $2.1 billion package, which was approved by the Board less than a month later. The IMF funds were to be disbursed, subject to satisfactory performance under the IMF program, in 8 quarterly installments; an additional U.S. $2.9 billion was to come from bilateral creditors. It was estimated that these credits would meet Iceland's financing needs if Iceland adhered to the terms of the program.

Immediate needs were to stabilize the krona after its sharp fall and monetary and exchange rate policy were the instruments (including higher interest rates) to be used. Capital controls had almost immediately been imposed (as the authorities were certain to be unable to meet additional demand for foreign exchange) and were to remain in place until the situation stabilized.

The program allowed the fiscal deficit to increase from ½ percent of GDP to 8½ percent of GDP through the workings of the automatic stabilizers, although it was recognized that fiscal consolidation would have to occur as it was expected that the bank failures would cost at least

80 percent of GDP.

Hence, the Icelandic program was primarily aimed at the three major macroeconomic policy variables: fiscal, monetary (including the banks) and exchange rate. There were some aspects of other policies that fed into fiscal policy, such as the housing fund, which basically subsidized mortgage lending enough so that private lenders could not compete and which encouraged a rapid increase in residential investment during the boom years. Those aspects were also agreed between the Icelandic authorities and the IMF, but the program was essentially macroeconomic.

<u>The Onset in Greece</u>

The onset of the Greek crisis was abrupt. A newly elected government took office in the fall of 2008 and shortly thereafter announced that the budget inherited from its predecessor was misleading: the total fiscal deficit for the year already under way would be well over 15 percent of GDP, almost twice what had previously been announced. Markets immediately closed to Greece, whose debt at this point was well in excess of 100 percent of GDP. Without the ability to roll over debt and borrow still more to finance the fiscal deficit, the Greeks had to appeal for official financing or face imminent default.

The initial macroeconomic imbalance in Greece was sharply and immediately reduced as planned spending targets simply could not be financed. The overall fiscal balance in 2008 was negative 10.1 percent of GDP (see Table 3).

Greece's policy choices were constrained by Greek membership within the Eurozone.

The exchange rate could not be altered, and monetary policy was not a possible policy instrument. Hence, not only did the fiscal deficit have to be reduced, but there was no offsetting monetary policy instrument that could be used. The lack of Greek competitiveness had to be addressed if there was to be any hope of restoring macroeconomic equilibrium, and that had to be achieved by removing structural rigidities within the economy – difficult at any time, and even more so in times of economic downturn.

Initially, the other members of the Eurozone began addressing the crisis and Greek's needs. But it was quickly recognized that the IMF was needed to undertake the technical work involved in estimating macroeconomic variables and policy changes needed if macroeconomic balance and growth were to be restored.

The IMF, the ECB, and the Eurozone countries jointly negotiated with Greece on the terms and amount of lending, and the IMF adopted a traditional program for Greece. It entailed not only the macroeconomic targets to be achieved, but also a commitment to undertaking structural reforms deemed necessary if growth was to be resumed. The IMF was part of the "troika" of lenders to Greece, and undertook the monitoring of the program as well as lending a portion of the monies to Greece.

Although many observers believed that Greek debt was unsustainable (and it was widely believed that IMF staff were of that view), the first program envisaged financial support sufficient for debt rollover and financing of the fiscal deficit without any resort to debt restructuring.

Greece's adjustment had to come entirely through changes in policies to improve prospects for growth and through fiscal adjustments. Although Greece agreed to take both macroeconomic and microeconomic reforms in connection with Troika programs (administered by the IMF), implementation generally lagged.

As noted earlier, Greece's business climate was far from "business-friendly". This was directly manifest in the numbers already cited, but there were other policies that constrained the economy. Largely as a result of distortions in the economy, Greece was exporting far less than might have been expected in a small open economy. Greece's exports were just under 20 percent of GDP. Greek regulations and laws did not provide sufficient incentives for exports, or indeed, for domestic production more generally. Some firms had even moved offshore prior to the Greek crisis. There were significant rigidities in other markets, some of which are discussed below.

Responses to the Programs

Iceland

For Iceland, there were few delays in program implementation. The government in power when the crisis hit fell soon after the onset of the crisis, and there was a delay as a new government was elected, took office, and met with IMF officials. But, by and large, the new authorities took ownership and adhered closely to the program.

As can be seen in Table 1, real GDP fell by about 10 percent from 2008 to 2010, and then began increasing. Poul Thomsen, during the interview quoted above, not long after the onset of the crisis, indicated that the IMF had expected Icelandic GDP would fall by about 10 percent in 2009. It indeed did fall, but by 6.9 percent in 2009 and another 4 percent in 2010. It began rising again during 2010 and rose above its earlier 2008 peak by 2015. As the earlier peak had clearly been unsustainable, that was quite an achievement.

Inflation was held in check to a 2-3 percent range despite the huge depreciation of the currency. After falling in 2009, exports of goods and services began increasing rapidly, almost 15 percent in 2010 and by 17 percent in 2011, and reaching more than double their 2008 level by 2015 (with a very large increase in tourism). Imports fell sharply and by 2013, the current account turned positive. Real GDP fell by more than 7 percent in 2009, and further still in 2010, but by late 2010 the economy bottomed out. Growth gradually accelerated after 2012 and by 2015 real GDP was almost 14 percent above its nadir in 2010 and about 2 percent above its previous peak in 2008.

Under the program, Iceland's primary balance (Table 3) as a percent of GDP went from -13.3 percent in 2008 to -6.6 and-7.0 percent in 2009 and 2010 as automatic stabilizers kicked in and offset much of the impact of the sharp downturn. The primary balance deficit was then reduced to -2.9 percent in 2011, and subsequently turned a positive plus 0.4 percent in 2012, rising to +3.6 percent in each of the following two years. By 2015, even Iceland's overall general government budget was in slight (+0.3%) surplus.

Meanwhile, the real effective exchange rate depreciated from an index of 150 in 2007 to 118 in 2009 (Table 5) and 95.2 in 2009 before stabilizing at 100 in 2010. It remained within two percent of that rate for the next two years, and in 2014 was still only 112.8, implying a sustained effective real depreciation of about 25 percent (Table 5).

The Icelandic goods and services balance had been in deficit by 17 percent of GDP by 2006 ands the deficit had shrunk to 2.1 percent of GDP in 2008. By 2009 it was in surplus by 8.9 percent of GDP and it remained in that range for the next several years, rising to 11.4 percent of GDP in 2012. Only in 2013 did it begin falling and was still 6.4 percent in 2014.

As mentioned earlier, the Icelandic general government debt had been low before the crisis, with gross debt at 27.3 percent of GDP at the end of 2007. By the end of 2008, it had risen to 67.6 percent, and continued rising until 2011 when it reached 95.1 percent of GDP (Table 4). It then began falling and stood at 67.6 percent at the end of 2015.

As noted above, inflation remained subdued at a low level and the krone stabilized, while real GDP resumed growth. The only objective set forth in the program that was not met within the first few years after the crisis was the removal of capital controls. Shortly after the crisis began, the authorities had divided the three failed banks, putting the good assets in new banks and leaving the bad assets in the old banks. All the assets and liabilities were, of course, private. Many of the assets in the old banks were denominated in domestic currency; it was expected that if capital controls were lifted the foreign owners of these assets would seek to convert their domestic Icelandic krone into foreign exchange. It was not until late 2015 that a settlement was reached with the creditors that enabled the release of foreign exchange assets, but a taxation of domestic-currency denominated assets in the old banks. While it still remains to remove the last of exchange controls on overseas holdings of Icelandic krone and the local pension funds' ability to purchase foreign exchange denominated assets, a clear path lies ahead for the remainder of the controls to be removed.

While some program targets had to be adjusted during the course of the IMF program, the Icelandic authorities generally adhered to, or even surpassed, the program targets in all dimensions (except the relaxation of capital controls, but even then, the Fund agreed to the delay). In October 2009, the IMF Survey reported that:

"Following elections in April 2009, the new government has been working with quiet determination to rebuild the country's crisis-hit economy in consultation with the IMF. The government was able to agree a fiscal package with social partners, and good progress has been made on the immensely complicated task of restructuring Iceland's failed banks." (IMF Survey Magazine, Camilla Anderson "Iceland: Quiet Progress on Key Reforms", October 2010). It went on to note that the huge macroeconomic imbalances had largely been unwound and that, while unemployment had risen from 1 percent in 2007 to 7 percent in 2009, the peak appeared to be near. Iceland was able fully to repay the IMF ahead of schedule, and has continued growth since then.

The process of starting to remove capital controls certainly took longer than the authorities and the IMF had anticipated in the early days after the crisis. But prospects appear favorable for the removal of the remaining restrictions in the not too distant future. The outlook for continuing sustainable growth appears favorable.

The Greek Economy's Response

From the outset of the program, Greek economic performance was disappointing, and the history of negotiations with the Troika has been one of continuing tension and disagreement.

Real GDP fell more than anticipated in the program. It fell almost 5 percent in 2010, by .9 percent more than expected, 7.1 percent in 2011 (with a program target of a 3 percent drop) and 6.4 percent in 2012 (Table 6). Unemployment rose to over 25 percent, and the recession has proven both severe and prolonged.

As indicated, Greek public debt was high even before the crisis. With no access to private markets, Greece's debt nonetheless increased as funds from the Troika were received. But, with rising debt and falling GDP, the debt statistics worsened.

By early 2012, Greek debt to private entities was restructured with a long period of forbearance before interest service becomes large.[2] Even so, Greek gross public debt as a percentage of GDP rose in every year (except for restructuring) since 2008, and stood a 178.4 percent of GDP at the end of 2015 (see Table 4). Most analysts believe that another restructuring of public debt will become necessary; at the time of this writing (May 2016), it is reported that an agreement has been reached between the Greece and the Troika to complete a program review with the understanding a further debt restructuring will be addressed in 2018 at the end of the program (almost all remaining Greek debt is official; the restructuring in 2012 eliminated most public debt to private entities).[3]

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[2] For an account and analysis of Greek debt and the 2012 restructuring, see Jeromin Zettelmeyer, Christoph Trebesch and Mitu Gulati, "The Greek Debt Restructuring: An Autopsy", Pp. 515-563 in Economic Policy, July 2013.
[3] See IMF, Country Report NO. 15/165, "Greece: Prelimxinary Draft Debt Sustainability Analysis", June 26, 2015.

Contrasting Outcomes

There were three big differences between the economic situations of the two countries. The first was in initial macroeconomic conditions. In 2007 Iceland started with a fiscal surplus of 4.9 percent of GDP and had gross public debt of only 27 percent of GDP. Greece in 2009 had a fiscal deficit of 15 percent of GDP and gross public debt of 126 percent of GDP. Hence, Iceland had much more fiscal space to work with than did Greece. The second was Iceland's ability to use exchange rate and monetary policy which Greece could not do. Thirdly, Iceland's general stance towards economic policies had been conducive to economic growth to a far greater extent than had Greek policies.

There were also similarities. Each crisis erupted when markets came to recognized that the fundamental macroeconomic stance was unsustainable. In each country, there was an unsustainable boom accompanied by huge macroeconomic imbalances and each country had double digit current account deficits. Iceland's macroeconomic imbalance originated from private sector banks, a result of insufficient regulation and monetary policy whereas in Greece it was largely from the shortcomings of fiscal policy, but in both cases the scale of adjustment required was huge.

To date, the outcomes are indeed very different. The Greek crisis began when the global economy was beginning to recover whereas the Icelandic crisis started just as the Great Recession was hitting the world economy – surely the timing was in favor of Greece. But three factors made the Greek performance far more disappointing: there could be no resort (short of leaving the Eurozone) to monetary easing or exchange rate depreciation; there were and are significant uncertainties about Greek policies and prospects because of the troika arrangement and continued delays in debt restructuring; and the Greeks have been highly resistant to undertaking the sorts of economic policy reforms that could improve their long-term growth prospects.

These three circumstances were largely responsible for the differences in outcomes. The Icelandic history since 2008 is one of committing to programs and then carrying them out, whereas the Greek history is one of delays, failure to implement, and resistance. By 2010, Greek debt was clearly unsustainable. Had the IMF been “in charge”, some form of debt restructuring would almost surely have been part of the initial program for Greece.

Moreover, because many of Greece’s economic policies were so antithetical to growth, prospects for reaching a new sustainable path depended largely on Greek policy reforms for restoration of growth. Iceland had experienced a growth rate in excess of 3 per cent in the decade just before the unsustainable bank expansion began, and other related policies were conducive to growth. Greece’s long-term rate of growth had not exceeded 1 percent, except for the few years just after Euro entry and the lowered borrowing rates that it enabled. Given the mountain of Greek debt, it was clear that growth had to resume; even then reforms had to be undertaken to reduce the degree to which the country was living beyond its means. For that to happen, the Greek government had to undertake a series of measures that were inevitably painful. These ranged all the way from improved tax collection to removal of structural rigidities in the labor market.

Unfortunately, on the macroeconomic side in Greece, reforms were not undertaken,

undertaken only with great delay, or undertaken in lesser magnitude than had been committed to in the program. An example is pension reform. The OECD estimates that the Greek replacement rate of pensions for final salary for a single person was about 96 percent in 2008 and fell to 65 percent by 2014. However, even that was still well above the OECD average of about 54 percent, and there were a number of factors that made the differential even greater (such as different pension regimes for different groups of workers, provision for early retirement, etc.). (OECD Survey 2016 P. 83).

In addition, and despite some significant reforms, the OECD concluded that the Greek labor market remained one of the most highly restricted among OECD countries. It concluded that "…labour market rigidities also explain the adjustment dynamics in the Greek labor market in the aftermath of the crisis, characterized by a significant increase in unemployment and a rather gradual adjustment in private sector wages. For example, while the unemployment rate soared from 7.7 to 17.9 percent between 2008 and 2011, private sector wages only declined 4 percent in nominal terms during the same period." (OECD 2016 Survey P.86).

In its March 2016 Survey of Greece, the OECD estimated that Greece had met just 63 percent of prior actions and structural benchmarks that had been in programs, excluding those that had been modified or waived (OECD Economic Surveys Greece, 2016 P. 45). By contrast, Portugal had met about 83 percent of its commitments on time and failed to implement only two of them.

The OECD estimated that the Greek reforms that had been implemented by 2016 would increase real GDP about 5.6 percent over ten years, while those that had not yet been implemented could add another 7.8 percent. But, even when agreed-upon reforms were undertaken, complimentary reforms that could have increased the payoff were lacking.

An example was the agreement to create “one-stop” shops for opening and starting a new business (recall that Greece ranked very poorly earlier in the Ease of Doing Business in this dimension). While reforms were undertaken accomplish this (reduction in registration fees, reduction from 15 to 5 procedures, reduction from 20 to 15 days in the time necessary, and abolished minimum capital requirements), nothing was done to change property registration, dealing with construction permits, getting electricity, or health inspections. The OECD concluded that “the regulatory burden continues to be heavy”.

The litany of Greek economic distortions and reforms needed to spur growth could continue for a long time. For example, licensing restricted the number of persons engaged in each of approximately 750 different professions and some these restrictions were quite severe. To mention just one, the number of licenses for truck drivers was set in l970 and had not been increased at all over the subsequent 37 years!

Finally, it should not be forgotten that in the summer of 2015, five years after the onset of the crisis, events led to the necessity for imposition of capital controls, which remain in place. The capital outflow that led to the controls was itself the result of hesitation and uncertainties surrounding Greek economic policies and its commitment to fulfill previously agreed to reforms. In that regard at least, Greek economic policies are even less conducive to growth than they were at the outset of the crisis.

Were the Programs Appropriate?

Because Iceland had been in structural fiscal balance prior to the crisis, the needed magnitude of the fiscal adjustment was slightly smaller than in Greece, and the fiscal space available to serve as a buffer was much larger. Iceland was able to keep the bank-incurred liabilities off the public sector balance sheet, so that the fiscal adjustment was considerably easier than in Greece. On the other hand, capital controls served as a distortion to economic activity, and it is not possible to estimate their cost as yet.

In both countries, unemployment rose, although Iceland's rose less (from a lower base) and the turnaround came much sooner. In contrast, real wages fell sharply in Iceland (and then recovered relatively rapidly) whereas in Greece real wages have fallen very slowly.

But the biggest difference was in implementation. The Icelandic authorities negotiated a program with the IMF and then proceeded to implement the program package in a timely fashion. While not all targets were met, most of the reasons for lapses came from changes in international conditions, and the rate of compliance within the program was relatively high. By contrast, the Greek authorities delayed in getting the necessary legislation or regulations to meet their commitments, and even when they did, implementation lagged in many instances. There were even discussions in Parliament of reversing reforms that had already been undertaken.

To a fair degree, it is possible to consider the Icelandic outcomes and evaluate the appropriateness of the IMF program on that basis, since programs and actions were fairly similar. Certainly relative to expectations, the Icelandic programs must be judged to have been largely successful.

In the Greek case, it is unreasonable to consider the outcomes and judge the programs on that basis. Not only was the IMF at least somewhat constrained by its troika partners, but even leaving that aside, the programs for Greece as agreed are not an accurate reflection of what happened. The failure to implement must be assigned blame, not only because specific actions were not taken, but also because the lack of sufficient "ownership" by the authorities. This deficiency by the authorities no doubt contributed to uncertainty as to whether reforms would be implemented and, even if they were, whether they would be implanted, and even if they would be sufficient to restore growth.

For Greece, it seems almost unarguable that: l) Greece had to undertake strong fiscal measures to restore fiscal sustainability, especially in the absence of any meaningful economic policy instrument to affect monetary conditions or the real exchange rate; 2) Greece could not and cannot restore macroeconomic stability without the prospect of reasonable growth, which in turn required and continues to require serious fundamental reforms in many of the microeconomic regulations restricting economic activity (and many of those reforms are still to be undertaken); and 3) Greece and Greeks would surely have been worse off if international support from the Troika had not been forthcoming; the idea that Greece was harmed by the programs is not tenable since, without that support, the fiscal correction would have had to be deeper and quicker.

Little international attention has been paid to Iceland's recovery path, while copious attention has focused on Greece. Lack of attention to Iceland is probably partly attributable to the country's small size and partly the result of the relatively smooth (but no less painful) recovery from crisis. The enormous attention paid to Greece has been natural given the depth and duration of Greece's difficulties, Greece's membership in the Eurozone, and the extent to which Greece's economic performance fell short of expectations.

There were some factors in Iceland's favor that must surely have contributed to the more favorable outcome: chief among them is the flexible exchange rate regime. Greece's membership within the Eurozone (aka fixed exchange rate regime) certainly made adjustment far more difficult and all the more so in light of the rigidities within the Greek economy.[4] But the fixity of the exchange rate made the necessity of undertaking economic policy reforms even more urgent. The contraction in domestic demand in Iceland was partially offset by the increase in exports that was certainly larger because of the real depreciation of the Icelandic krone.

As well, there was no question in either country that adjustment had to occur. Iceland's small size may have helped because it was and remains an extremely open economy and the costs of failing to remain so would be have been unacceptably high and were apparent to most Icelanders. By contrast, Greek economic policies had resulted in reduced exports and relative competitiveness. The need for openness (despite EU membership) was less apparent. Moreover, the fact that exports had already been so repressed made the needed adjustment even more difficult and less evident than in the case of Iceland.

[4] It should be noted, however, that Latvia undertook a successful "internal devaluation" without an exchange rate change. There was a deep short run drop in economic activity but it was short-lived.

It is clear that some austerity was essential. The question many have raised was whether it was too much. One part of the answer is surely that there was much less actual austerity in Greece than many claim. Greek final consumption expenditure rose, as a percentage of GDP, from 89.9 in 2008 to 93.7 in 2010 and peaked at 96.1 in 2012, dropping slowly thereafter to 91.8 in 2014. Consumption clearly fell, but by less than GDP. Moreover, consumption was arguably unsustainably high prior to the onset of the crisis, and so there was much less room for maneuver than there would have been had its macroeconomic policy been more conducive to investment in earlier years. By contrast, Icelandic consumption even in the boom years did not rise above 82.5 percent of GDP in 2005, was 79.1 in 2008 and fell to 75.6 by 2010. Although the proportionate drop in GDP was less than in Greece, the drop in consumption was almost the same but lasted a shorter time. Not only did the Icelandic economy resume growth after 2010 but consumption rose modestly as a percentage of GDP after 2010. The pain may have been almost as great over the first two years for Icelanders, but it was surely of shorter total duration.

Conclusions

In wrapping up, I should first repeat the two caveats mentioned at the beginning of this talk. The first is that I did not deal with the politics of either case. The then Icelandic government fell within a few months of the onset of the crisis, and caught much of the blame as it had been in office for several years prior to the onset. Greek political resistance to reform efforts appears to have been greater, but the crisis began just after a new Greek government took power and announced the enormous discrepancy in the budget numbers. It, too, fell when recovery did not appear on the horizon. In both countries, the political costs to those who had been in power were high.

The second caveat is, I did not discuss the complications that have arisen in the Greek case because of the triumvirate nature of the official response. While there has been difficulty for the Greeks in agreeing on a reform program, there has also been disagreement, sometimes significant, among the troika members as to what is acceptable and appropriate. Any multi-lateral troika-like arrangement raises questions for the international financial architecture and especially for the IMF that go far beyond this paper.

Nonetheless, the Icelandic-Greek contrasts are interesting and instructive. In my mind, perhaps the difference that stands out the most is the smoothness with which the Icelandic recovery proceeded after the initial period of shock. Targets in programs were generally met or exceeded, the downturn was less severe than had been anticipated, and recovery was fairly complete within five years of the initial downturn, with the exception of course being the removal of capital controls. By contrast, Greek performance has and remains subpar, both because the Greek authorities were clearly reluctant to undertake necessary reforms and because implementation proceeded very slowly if at all. Whereas periodic reviews under the Icelandic programs proceeded largely on schedule except when there was a change of government, the Greek programs experienced significant delays, even to this day.

It can be argued that the initial macroeconomic impact of the crisis in Iceland was similar in magnitude to, if not greater than, that in Greece. However, the alacrity and deep commitment of the Icelandic response (which may in part have been the result of the absolute necessity of reacting quickly) differentiates it from its Greek counterparts. Clearly, the pain in

Iceland was severe, but of much shorter duration than that in Greece. Greece's prolonged recession probably has more to do with the inability or unwillingness to address issues early and decisively than it has to do with the degree of austerity imposed under the two programs.

That Iceland was able to ring fence the problems in the banking sector and protect taxpayers from the banks' debts was doubtless a significant factor in Iceland's favor, only partly offset by the costs of ongoing capital controls. Whether it was ring fencing that made the difference, or whether it was the clear determination of the authorities to address the issue is not entirely clear. That said, in Greece, by contrast, continued uncertainty about the degree to which the programs would be implemented has been a decisive factor since the outset of the crisis.

It seems clear that the Icelandic commitment to a modern open international economy was sufficiently strong so as to enable it to undertake politically difficult and painful measures. In the Greek case, the commitment to an open modern economy appears to be much weaker. While the adjustment would have been painful in the best of circumstances, the lack of willingness to make the choices needed for an open modern economy itself has made the challenge all that much more difficult.

Finally, even as we speak, the next tranche of funds for Greece is being held up over wrangling over the debt and continues to be debated between the IMF and the other official sector creditors.

Much more will be learned as Iceland and Greece, and other countries in the Euro area, address their problems. And given the high costs of crisis, learning as much more as we can about the factors contributing to the onset of crisis and the most suitable approaches to dealing with them once they occur (and they will occur) is imperative.

Table 1. Growth and Inflation, Greece and Iceland, 2005-2015

Indices, 2010 = 100

	Real GDP		GDP Deflator	
	Greece	Iceland	Greece	Iceland
2005	98.7	99.5	86.0	67.2
2006	104.2	104.7	88.4	73.1
2007	107.4	111.4	91.4	77.3
2008	107.2	111.9	95.7	86.3
2009	103.7	104.2	98.5	94.0
2010	100.0	100.0	100.0	100.0
2011	93.0	103.1	105.8	103.9
2012	84.0	103.2	100.4	106.4
2013	81.5	107.2	97.9	108.2
2014	82.1	109.2	95.7	112.6
2015	81.9	113.8	95.1	118.9

Note: Real GDP and deflators are taken from International Monetary Fund, International Financial Statistics Yearbook, 2015. (hereafter referred to as IMF, IFS Yearbook 2015"). Real GDP is GDP volume and the GDP deflator is from line 99bip. The 2012 data are given with a base of 2005. Earlier data were rebased to 2010

Table 2. Exports and Imports of Goods and Services, Greece and Iceland

Billions of U.S. dollars

	Exports		Imports	
	Greece	**Iceland**	**Greece**	**Iceland**
2005	51.5	3.0	67.0	7.2
2006	56.0	3.4	81.0	8.2
2007	67.1	4.9	115.1	9.2
2008	79.7	5.3	133.6	8.2
2009	59.2	4.1	89.2	5.6
2010	60.2	4.7	80.2	6.1
2011	68.2	5.8	85.4	7.1
2012	63.2	5.2	69.7	5.0
2013	72.9	8.6	79.6	5.0
2014	76.8	9.2	82.1	8.1

Source: IMF, IFS. 2012 and 2015 Yearbook

Table 3. General Government Primary and Overall Balance, 2007-2015
Percentage of GDP

	Primary Balance		Overall Balance	
	Greece	**Iceland**	**Greece**	**Iceland**
2007	-2.2	+5.2	-6.7	+4.9
2008	-5.4	-13.3	-10.2	-13.1
2009	-10.1	-6.6	-15.2	-9.7
2010	-5.4	-7.0	-11.2	-9.8
2011	-3.0	-2.9	-10.2	-5.6
2012	-1.4	-0.4	-6.5	-3.7
2013	+1.1	+1.7	-3.0	-1.8
2014	0.0	+3.6	-3.9	-0.1
2015	-0.6	+3.7	-4.2	+0.7

Source: International Monetary Fund, IMF Fiscal Monitor 2016, Pp. 75 and 77.

Table 4. Gross and Net General Government Debt, 2007-2015
Percentage of GDP

	Gross Debt		Net Debt	
	Greece	**Iceland**	**Greece**	**Iceland**
2007	102.8	27.3	na	17.6
2008	108.8	67.6	na	53.3
2009	126.7	82.9	na	66.3
2010	145.8	88.3	na	65.7
2011	171.6	95.1	na	61.7
2012	158.9	92.6	155.2	63.8
2013	176.9	84.8	174.1	62.2
2014	178.6	82.5	176.3	55.9
2015	178.4	67.6	176.6	49.2

Source: IMF Fiscal Monitor 2016, Tables A7 and A8 (pp 81 and 84).

Table 5. Real Exchange Rate and Goods and Services Balance 2003-2015

	Real Exchange Rate 2010=00		Goods and Services Balance Percent of GDP	
	Greece	Iceland	Greece	Iceland
2003			-10.8	-2.9
2004			-8.9	-5.4
2005	93.7	152.8	-8.2	-11.8
2006	94.5	142.1	-10.3	-17.0
2007	96.0	150.0	-12.5	-8.7
2008	98.8	117.8	-13.0	-2.1
2009	100.1	95.2	-10.3	+8.9
2010	100.0	100.0	-8.6	+9.0
2011	100.7	101.4	-6.8	+8.0
2012	97.6	101.0	-4.5	+11.4
2013	96.8	108.7	-3.0	+8.1
2014	94.7	112.8	-2.4	+6.4

Sources: IMF, IFS Yearbook 2015, country pages.

Table 6. GDP Projections and Outcomes for Greece, 2010-2015
(percent change from previous year)

	Real GDP		Nominal GDP	
	Projected	*Outcome*	*Projected*	*Outcome*
2010	-4.0	-4.9	-2.8	-3.9
2011	-3.0	-7.1	-1.5	-6.1
2012	-3.0	-6.4	-2.8	-7.2
2013	-4.2	-3.5	-0.2	-2.3

Source: OECD, Economic Survey, Greece. November 2013, P.13.