

## Iceland on the brink?

### Options for a Small, Financially Active Economy in the Current Financial Crisis Environment

**Daniel Gros**

*Iceland has developed an oversized banking system – with assets valued at 8 times its GDP – which has effectively transformed the country into a hedge fund. Domestic banks have borrowed heavily abroad to buy foreign banking assets, leveraging their capital base several times over. As a bust is following the global boom in the banking sector, the country is highly exposed to the current crisis. The lender of last resort in Iceland would not be able to save even one of the large domestic banks should write downs in the value of foreign assets bring any one of them into difficulties. Other European countries with financial centres have either avoided becoming lender of last resort for their banks (Luxembourg) or accumulated large foreign assets as a cushion (Switzerland). By contrast, Iceland's extremely high net foreign debt ratio adds to the vulnerability of the country, which thus resembles a hedge fund with negative capital.*

*Moreover, Iceland has experienced a construction/housing boom even more extreme than in the US or the one now ending in Spain.*

*This exposes the country to the classical combination of an exchange rate cum banking crisis coupled with a long real estate bust.*

*Exchange rate devaluation can provide only limited compensation for the housing construction bust that seems unavoidable because Iceland is a rather closed economy, with manufacturing exports accounting for less than 10% of GDP.*

#### Introduction

For small financially active countries the exchange rate assumes particular importance, not only as a shock absorber, but potentially also as a source of shocks during financial market crises. This is very much in evidence today in the case of Iceland which is being hit hard by the recent turbulence in financial markets.

In March of 2008, the Icelandic Central Bank was forced to increase interest rates to unprecedented levels in an effort to stem a rapid depreciation of the currency. This raises the question of whether the authorities in the special case of Iceland would have eliminated one source of shock to the economy and thus helped to stabilize the currency if it had abandoned the national currency.

Euro area members, including Luxembourg, which is also home to large internationally active banks, have so far been spared the worst effects of the ongoing 'subprime' crisis. But this positive experience of member countries of the euro area might not be relevant for Iceland since its economy differs in some key aspects from that of the 'average' euro area member – and even that of Luxembourg, as will be documented below.

The prime example of a country adopting the euro outside the euro area is Montenegro. The euro in Montenegro has been a success so far. Even the European institutions (especially the ECB), which were very hostile at the start, have now come to the conclusion that Montenegro should keep this

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arrangement for the time being. Montenegro is also a very small state (with a population of  $\pm 600,000$ ) but it offers few lessons (except that unilateral euroisation is technically feasible) for Iceland because it practically did not have any banking system and was not integrated in the global financial system.

Iceland has two features that distinguish it from most euro area members (apart from size): its limited degree of trade integration and the extraordinary degree of financial integration. Both features are relevant for the choice of an exchange rate regime. On both counts joining the euro should be advantageous for Iceland.

In short the argument would be that adopting the euro should stimulate trade. Moreover, adopting the euro could avoid large shocks that arise from the mixture of very large onshore and offshore banking activities in domestic banks, which have become 'too big to be saved'. However, it is also clear that the choice of the currency cannot affect the fundamental problem of Iceland, namely that the country as such is highly exposed to the international banking market. Whatever the choice of the currency, living standards in Iceland will have to adjust to the real value of the banking assets bought in recent years.

The remainder of this note elaborates on these two points keeping in mind that the most useful comparator countries for Iceland are Luxembourg, Switzerland and Cyprus, all of which have very large financial systems and share a high degree of financial integration. So far it seems that Luxembourg, which is a member of the eurozone, is the most successful.

## 1. Real openness

The main economic argument for euro area membership has always been that it facilitates commerce.<sup>1</sup> Recent research indicates that this has indeed been the case, but the effects are only now slowly building up.

For Iceland the limited degree of trade integration suggests that the static gain from eliminating transaction costs on trade might be limited, but the potential dynamic gain from an increase in trade

<sup>1</sup> The fiscally weaker member countries had an additional reason to join EMU, namely to forestall potential speculative attacks and participate in the credibility of the new institution (itself based initially on that of the Bundesbank). Given its very strong fiscal position (essentially zero public debt) and the high quality of its strong institutions in general, Iceland would also not need to import the credibility of the ECB.

integration might be very large. Despite its small size Iceland has a smaller trade/GDP ratio than Germany or many other EU member countries. It is possible that euro area membership might lead to a quantum change in the degree of trade integration, as predicted by a large body of research, but progress in terms of trade integration within the eurozone itself has in reality been gradual.

The tables below show that both in terms of the importance of trade (for both imports and exports) and the composition of trade, Iceland is relatively closed relative to its size. Exports of manufacturing goods in particular seem to be very small relative to its comparators.

*Table 1a. Iceland's import boom (% of GDP)*

	1995	2000	2006
Imports of consumption goods	8.8	8.6	9.8
Imports of capital & consumption goods	13.4	15.4	20.3
Imports of capital goods	4.6	6.8	10.5
Imports of intermediate goods	11.5	11.9	16.4
Imports	24.9	27.3	36.7

*Source:* UN trade database.

An often commented feature of the Icelandic economy is its large trade deficit, which is mainly due to the surge of capital goods imports in 2006. However, most of this is destined for the construction of an aluminum smelter, which will export most of its production. Hence, the 2000 data give a better idea of the degree of import penetration of Iceland, which for its size was rather low in 2000, at around 27% of GDP. Table 1b provides a comparison with Germany, which shows that despite the huge differences in size, Germany is, on most measures, more open to imports than Iceland.

*1b. Germany and Iceland: Comparing degrees of openness (% of GDP)*

	Imports of intermediate goods		Total Imports	
	1995	2006	1995	2006
Germany	20.0	18.5	30.4	30.8
Iceland	11.5	16.4	24.9	36.7

*Source:* Ameco.

More importantly, Iceland stands out even more in its extraordinarily low level of exports. The export-to-GDP ratio is much below the average euro area member country, and only a fraction of the smaller euro area countries, or that of Switzerland (also financially active) or even that of Germany, as shown in Table 1c.

Table 1c. How important are exports?(% of GDP)

	Goods		Goods and services	
	1995	2007	1995	2007
Iceland	26.0	20.4	35.5	35.6
Germany	8.5	14.4	24.0	46.6
Cyprus	1.8	2.1	50.0	46.8
Luxembourg	4.8	5.6	106.4	172.0
Switzerland	25.7	38.1	35.9	54.7

Source: AMECO.

Table 1d shows that especially in terms of exports of manufacturing goods, Iceland (which amount to less than 9% of GDP) is a rather closed economy. The distinction between manufacturing goods and other, resource-based goods, is important because the supply of the latter is really not influenced by domestic wage and cost elements. An adjustment in the real exchange rate can stimulate the economy mainly by making domestically manufactured goods more competitive on the world market. However, this mechanism seems to be less important in Iceland than one would expect given the small size of the economy. For Germany, Luxembourg and Switzerland, exports of manufacturing goods are more than three times as important. Only Cyprus has an even lower export ratio for manufacturing goods, but Cyprus exports mainly services (tourism) to an extent that could never be replicated in Iceland.

Table 1d. The importance of manufacturing exports (% of GDP)

	1995	2006
Iceland	5.7	8.6
Germany	19.0	33.5
Cyprus	5.9	4.2
Luxembourg		29.0
Switzerland	24.6	34.0

Source: UN trade database.

## 2. Financial integration

The most remarkable feature of Iceland's economy in recent years has been the explosion of financial openness. In a very short period of time Iceland seems to have reached the level of Switzerland (on a per capita basis) as shown in the table below. For Luxembourg, the gross foreign investment positions would be an order of magnitude larger, but this would be a misleading comparison given the special 'offshore' nature of its banking system.

Table 2. Net foreign investment positions (\$ billion)

	Iceland			Switzerland	
	2000	2006	Change	2006	Scaled to size of ISL
Net FDI	0.2	5.7	5.5	314.1	9.5
Net PI	-1.9	-37.8	-35.9	119.1	3.6
Net PI Eq	2.1	7.9	5.8	262.5	-8.0
Net PI debt	-4.0	-45.7	-41.7	381.6	11.6
Net banks	-2.0	14.6	16.6	-55.1	-1.7
Net other	-1.3	-4.0	-2.7		
Net IIP	-5.3	-19.5	-14.1	459.2	13.9

Source: IMF, IFS.

The key difference between Switzerland and Iceland is that, on a per capita basis, Switzerland has accumulated a surplus position that is equivalent in size (close to one full year of GDP) to Iceland's net debtor position. Moreover, Icelandic banks have issued a total of over \$40 billion in debt securities in the last few years of which 'only' \$14 billion were needed to finance the cumulative current account surpluses since 2000, with the remaining funds (around \$28 billion) used to finance foreign equity acquisitions (about \$11 billion) and \$17 billion in banking assets abroad.

One concern about large gross foreign asset and liabilities positions is that the reported returns might be variable and thus distort the measured current account. However, this does not seem to be the case for Iceland since the reported rates of return (calculated as investment income divided by the gross position) all seem reasonable. On average, Iceland pays an interest rate of about 7% on its net foreign debt.

Table 3. Rates of return on foreign assets and liabilities of Iceland

	2006
Assets	3.8%
Liabilities	-4.7%
NIIP (net/net)	7.4%

Source: IMF, IFS.

## 3. Consequences of financial openness

### 3.1 Shift in sources of foreign exchange earnings-outlays

One implication of the foreign financial activities of Icelandic firms is that the importance of 'normal' exports of goods and services as key sources of foreign exchange income (and outlays) has diminished rapidly in recent years. Since

investment income does not respond to the exchange rate, this implies that movements of the exchange rate have a relatively smaller influence on the current account, and that larger movements might be required to adjust to shocks (whether to investment income or just to the availability of foreign capital).

The tables below show this for Iceland and provide a comparison with three European economies that are also engaged in global financial activism. It is apparent that the financial sector is even more important in Luxembourg, but Iceland seems to have surpassed Cyprus and reached the level of Switzerland.

*Table 4a. Evolution in the structure of foreign exchange sources in Iceland*

	Foreign exchange earnings		Foreign exchange outlays	
	1999	2006	1999	2006
Goods	65.5	45	64	47
Services	30.3	24	28	21
Investment income	4.2	31	8	32

*Table 4b. Distribution of foreign exchange earnings (2006): A comparison*

	ISL	CH	LUX	CY
Goods	45	51	10	14
Services	24	16	31	77
Investment income	31	33	59	8

*Table 4c. Percent distribution of foreign exchange outlays (2006)*

	ISL	CH	LUX	CY
Goods	47	63	13	57
Services	21	11	19	29
Investment income	32	26	68	14

Source: IMF, IFS.

### 3.2 Lender of last resort responsibility for the banking sector

One key aspect of the stability of a banking system is the credibility of the lender of last resort (lolr). Under normal circumstances, this not an issue because the public institutions that provide this function (either central banks or national treasuries) have deep pockets compared to the size of any individual bank. In an economy that functions as a global financial centre, however, this might no longer be the case. For example, the Swiss National

Bank is increasingly concerned that the cost of support for the large global Swiss Banks might be beyond its capacity.

In Luxembourg, where the banking sector is even larger (compared to the local economy), the problem does not arise because the Luxembourg authorities have always insisted that the subsidiaries of foreign banks have a clear owner that is also a bank so that the home country remains the lolr.

Liechtenstein has retained responsibility for lending of last resort, but has a special arrangement with the Swiss National Bank in order to be able to dispose of Swiss francs, its national currency.

In Cyprus the main foreign financial activity is not via banks, but investment via Cyprus-domiciled enterprises that take advantage of existing favourable double-taxation treaties to re-cycle savings from Russia and other Eastern European countries.

How large is the risk for the lender of last resort? One indicator of the risk is the loan-deposit ratio because it indicates to what extent banks depend on sources other than (usually very stable) deposits to finance their business. Given the large size of the Icelandic banking system it might not be useful to compare it to other large OECD countries, but Iceland constitutes an outlier even among financial centres such as Switzerland or Luxembourg.

*Table 5. Loan-deposit ratios*

	ISL	CH	LUX
2007/11	3.42	2.22	0.52
2003/11	1.93	1.04	0.48

Source: IMF banking statistics.

Given that banks everywhere are facing problems at present in raising funds on the capital markets, this extreme dependency of Icelandic banks on the capital market constitutes a potentially very serious problem. There might not be a short problem à la Northern Rock, since Icelandic banks have secured sufficient long-term financing and stand-by facilities for the coming year, but in the longer term the risk remains.

### 4. Has financial integration paid off? The growth record so far

The special feature of the Icelandic economy that dominates all other aspects is the (recent) explosion of global financial activity. This is why one has to compare Iceland to the other European countries with large financial sectors: Luxembourg and Switzerland. Cyprus can also provide a useful

comparison since it also has a population only twice that of Iceland, but as a recent member country and an even more recent member of the euro area, it is difficult to draw already any conclusions.

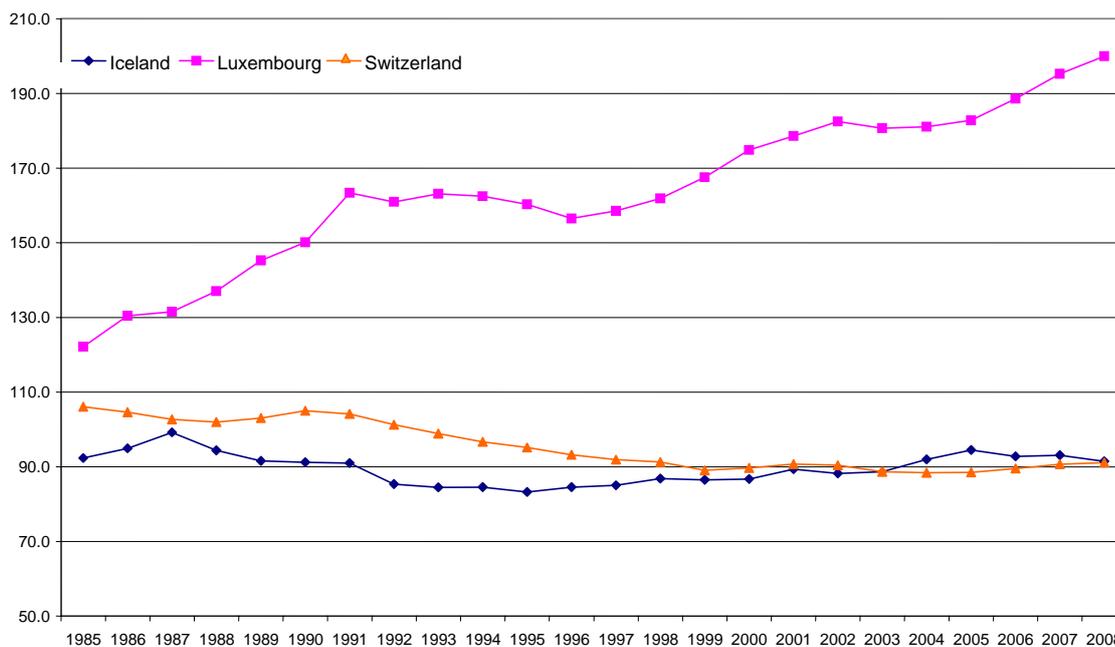
Since Switzerland is not in the eurozone, it is also difficult to draw direct lessons from its experience, but a triangular comparison (ISL, LUX, CH) might be useful. In short it seems that Luxembourg has in the medium term benefited strongly from euro area membership, performing much better than Switzerland since the euro's launch.

Financial centres or economies with a very large globally active financial sector face the problem of how to insulate the domestic economy, which depends on regular flows of production of goods and services, from the large shocks that might come from shifts in the values of the stock of assets

and liabilities in the financial sector. In Luxembourg this problem has been resolved by joining the eurozone and making the banking system offshore. (Cyprus has recently made the decision regarding the currency). In Switzerland the domestic economy has so far been large enough to absorb the shocks in the financial sphere, and the national currency has been managed, de facto, very tightly. Moreover, the country has consistently run large current account deficits, providing an extra cushion.

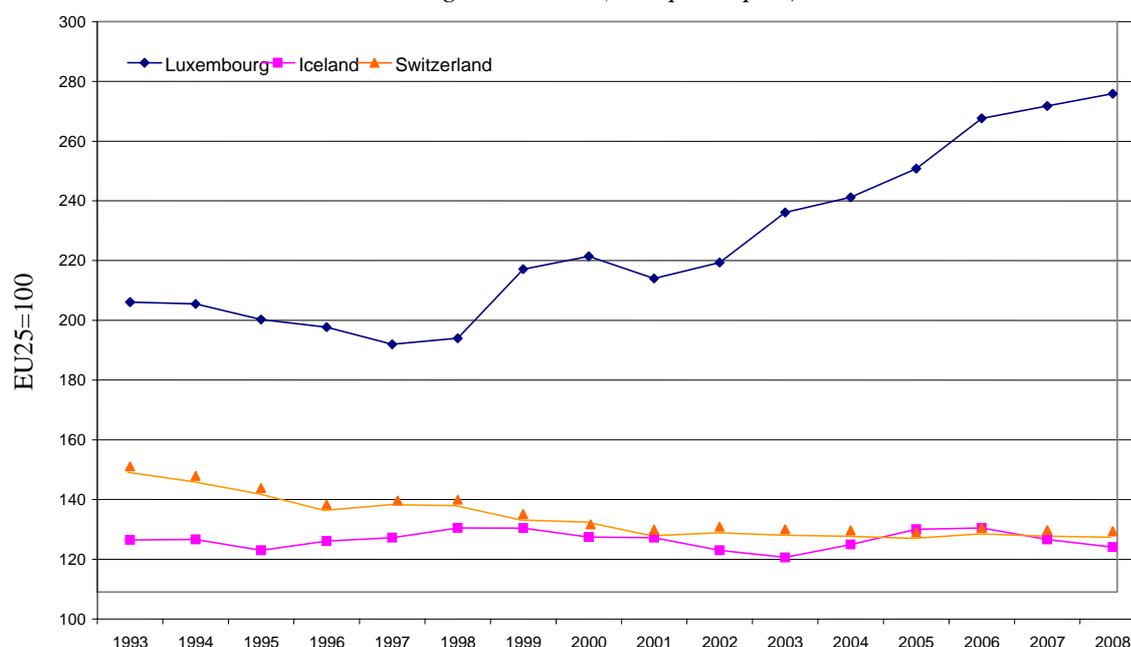
How have these three economies performed over the last decade? In terms of GDP per capita (at purchasing power parity) Luxembourg has grown far more strongly than either Iceland or Switzerland, both of which seem to be in relative decline.

Figure 1. GDP as % of US GDP (PPP per capita)



Source: Ameco.

Figure 2. GDP (PPS per capita)



Source: European Commission.

## 5. Housing/construction boom

Iceland has recently experienced a housing boom, which does not seem to have an equivalent anywhere else among OECD countries. Two figures below provide a graphic description of the phenomenon.

Figure 3 shows that the overall construction investment has now reached 20% of GDP, which is almost twice the value of the US and higher even than the value reached by Spain (18% of GDP).

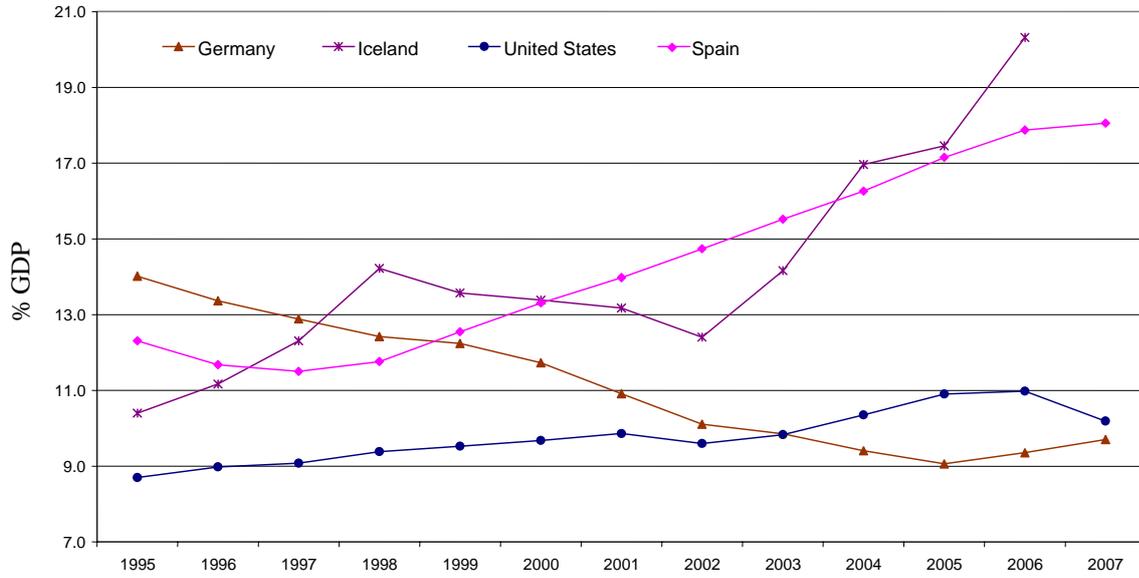
It might be argued that part of the construction activity in Iceland will create productive capacity for the export sector (hydro-electricity capacity coupled with aluminum smelters). Hence one might want to look at investment in housing alone to measure the extent of the real estate boom. However, even on this metric, the boom in Iceland beats all records. Investment in dwellings is still close to 11% of GDP, which is almost twice the US value and much higher than the Spanish value (which is the highest among the euro area countries). See Figure 4. Since investment in housing has been above the norm required for an essentially stable population for some time, it follows that a substantial housing overhang is likely to have been built up. The coming housing slump thus promises to be long and deep – as in the case of Germany whose values are also shown for purposes of comparison.

The loss of domestic demand from the construction sector alone could easily amount to 10% of GDP over the next few years. This will be difficult to compensate for with exports, given that manufacturing exports amount only to less than 10% of GDP, as documented in Table 1d above. These exports (the only ones that respond to the exchange rate) would have to double if the adjustment to the unavoidable retrenchment in the construction sector is not to leave to a large drop in demand and GDP.

Sweden during the 1990s constitutes a similar case: housing investment had also been increasing in that country until the early 1990s. However, when the crisis broke, the currency had to be devalued massively and interest rates rose to extremely high levels and the banking system was under intensive stress. As a result housing investment fell from over 6% of GDP (still far below the current value for Iceland) to less than 2% of GDP. See Figures 5 and 6.<sup>2</sup>

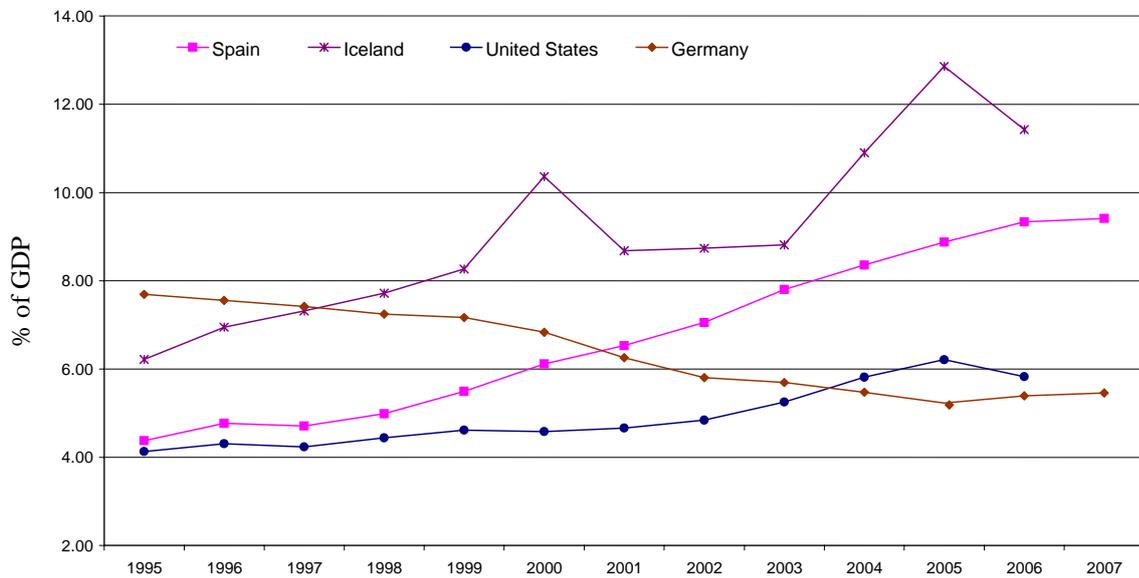
<sup>2</sup> The busts in Scandinavia (not only in Sweden as discussed, but also in Finland and Denmark) during the 1990s were sharper, but also shorter than the real estate-induced slowdowns in Germany (post-1995 and Japan (since 1990). For more details, see Daniel Gros (2008), *Bubbles in real estate? A Longer-Term Comparative Analysis of Housing Prices in Europe and the US*, CEPS WD No. 276, CEPS, Brussels.

Figure 3. Investment in construction (% of GDP)



Source: Ameco.

Figure 4. Investment in dwellings (% of GDP)



Source: Ameco.

Figure 5. Investment in dwellings

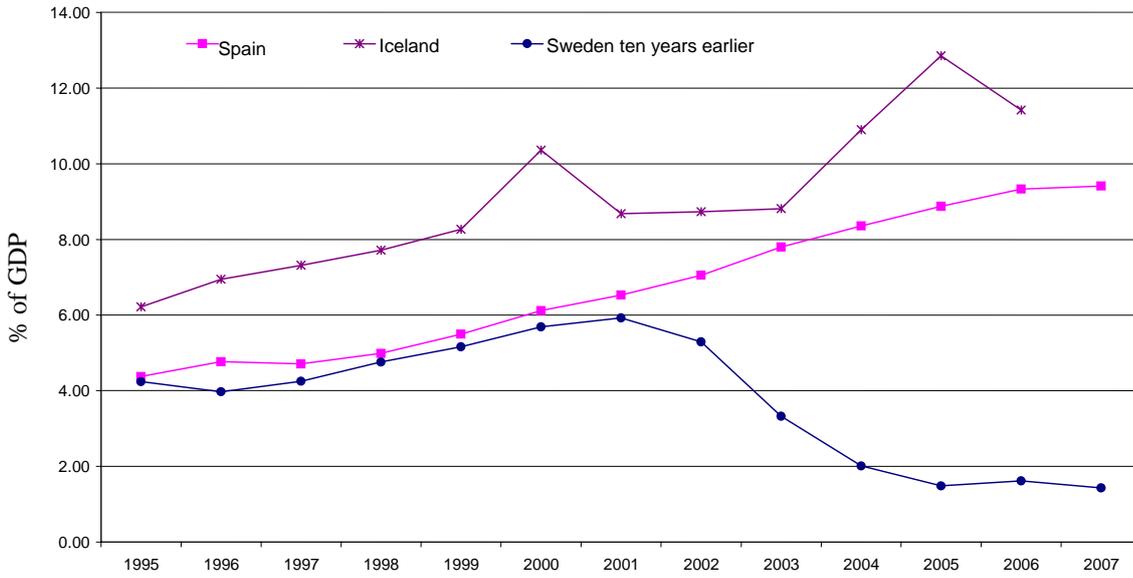
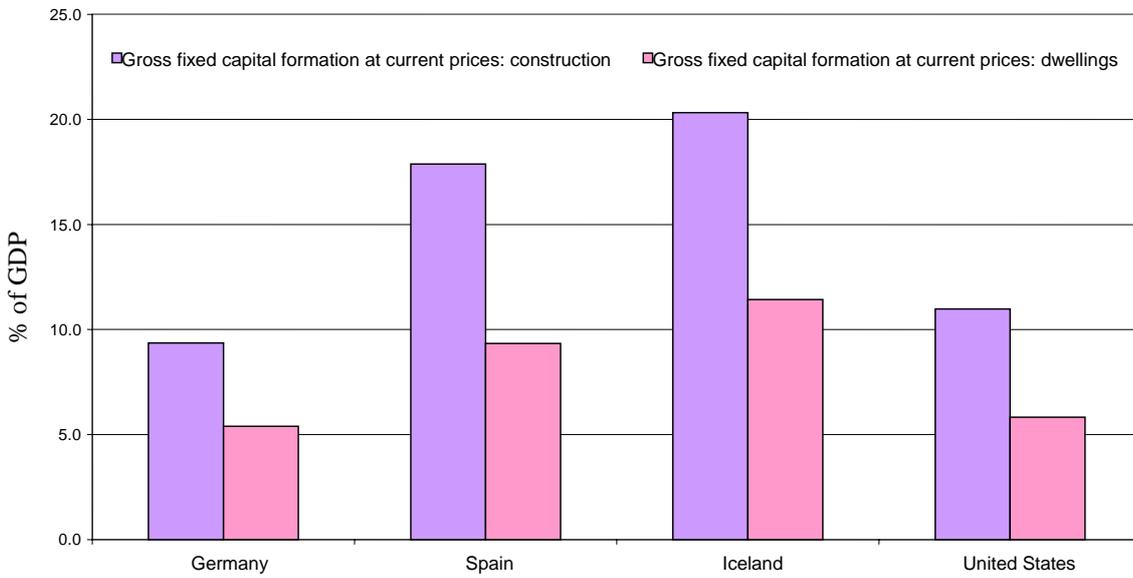


Figure 6. Investment in constructions and dwellings in 2006



## 6. Concluding remarks

This note has argued that a priori the most useful comparators for Iceland should be other small economies with large and sophisticated financial sectors. Hence, Luxembourg (founding member of the eurozone), Switzerland (outside) and possibly Cyprus (recent eurozone member). However, Iceland differs even from these comparators because of its lower degree of trade integration, the concentration of its foreign financial activity in the banking sector (here Switzerland is most similar) and its very large foreign debt (unique).

What do the special features of the Icelandic economy imply for the choice of the exchange rate system?

The low degree of trade integration of Iceland might be related to the small size of the national currency area. Joining EMU might bring large dynamic benefits, but experience so far suggests that these benefits will take time to materialise.

The high degree of financial integration in Iceland could be problematic and here the details matter. If the onshore and offshore parts of the banking system were neatly separated, fluctuations in the exchange rate might not be a cause for concern. However, the mixture of both elements, moreover concentrated in just three very large banks, creates a potential for serious problems. A particular reason for concern is that the correlation between the stock market (i.e. the market value of domestic banks) and the exchange rate is close to unity. The foreign activities of the banks now provide a large proportion of their profits. In principle, the euro value of these foreign profits should be independent of the exchange rate of the Krona against the euro. Hence the correlation between the stock market and the exchange rate should in principle be negative (this is why some banks would like to list their shares in euro). However, the strong positive correlation between the stock market and the external value of the krona suggests that in reality the market expects that a depreciation has a negative impact on bank profits. This could happen only through the one channel that always renders domestic lending in foreign currency problematic: when the exchange rate devalues, domestic enterprises have difficulty servicing their foreign exchange debt.

The financial markets themselves thus suggest that exchange rate fluctuations might be an important source of shocks (rather than a shock absorber). This suggests that Iceland might want to follow the example of Luxembourg and Cyprus in opting for the euro, or it would have to clearly separate the onshore and offshore parts of its banking system.

In going for the euro, Iceland would face the additional difficulty that it is particularly difficult at present to determine the appropriate exchange rate. The ongoing boom in the real estate sector is likely to have boosted domestic demand above the level sustainable in the long term. This suggests that a very large adjustment of the real exchange rate will be needed once the housing market turns. Germany experienced a much smaller construction boom after unification and, despite being a much more open economy than Iceland, it took ten years to digest the bust that followed that boom.

While adopting the euro might be an optimal long-term approach for Iceland, it is also clear that the country faces a fundamental problem that is independent of the choice of the exchange rate regime: Over the last few years, its banks have leveraged a relatively small capital base to buy up banking assets worth several times the country's GDP. These assets were bought close to the height of the global credit and banking boom. Now that the boom has turned to a bust and banking assets have to be revalued everywhere, the key risk for the country is that these foreign banking assets will turn out to be worth much less than what Icelandic banks paid for them. If this scenario materialises, the country would incur an even larger foreign debt and the authorities might be called upon to save Icelandic banks from insolvency. As this would clearly overstretch the financial capacity of both the central bank and the ministry of finance, the best solution to this looming problem would be arrange for the sale of these banks, which are 'too large to be rescued' to foreign banks groups. The currency question could then be solved rather easily.