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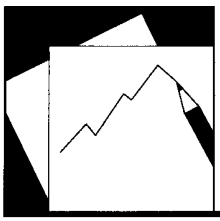

IMF Working Paper

Estimating Iceland's Real Equilibrium Exchange Rate

Robert Tchaidze

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Estimating Iceland's Real Equilibrium Exchange Rate

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Abstract

Given recent developments in Iceland, this paper evaluates its real exchange rate disequilibrium. It discusses three approaches to estimating the equilibrium values and suggests that the adjustment needed to bring the real exchange rate in line with fundamentals is in the range of 15-25 percent, although timing and manner of this adjustment is unclear.

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I. INTRODUCTION

Recent developments—widening of the current account deficit (reaching 27 percent of GDP in 2006) and a sharp increase in gross external debt (reaching 450 percent of GDP or 206 percent in net terms in 2006)—have raised concerns about the sustainability of Iceland's external position. Hence, the question arises as to how much REER adjustment will be required to restore external balance?

This paper addresses this question by using methodologies developed by the IMF Research Department (IMF, 2006) for evaluating exchange rate disequilibria. These methodologies comprise three analytical approaches that tackle the issue from somewhat different angles. All approaches suggest a number in the range of 15–25 percent, although they are silent on how or when this correction could occur.

The paper is organized as follows: Section II provides background information on recent macroeconomic developments in Iceland; Section III describes the analytical approaches used (methodology, results, caveats); and Section IV concludes.

II. BACKGROUND

The deterioration in indicators of external balance reflects the macroeconomic boom driven by investments into aluminum-smelting facilities and soaring private consumption demand. Investments coincided with a series of tax cuts and structural changes in the mortgage market that stimulated consumption (Figure 1). As the Central Bank of Iceland (CBI) pushed up interest rates to cool the economy, the nominal exchange rate appreciated, boosting consumer confidence even further. Meanwhile, Icelandic commercial banks diversified their portfolios by purchasing businesses abroad and greatly increasing external indebtedness.

These events are similar to the previous boom of 1998–2002 that was also driven by expansion of power-intensive industries.[2] During that cycle, the REER appreciated reaching its peak at about the same time as the current account deficit (Figure 2). As the exchange rate appreciated, imports increased substantially as consumers took advantage of their increased purchasing power and relatively cheap imported consumption goods. When the projects neared completion, the REER depreciated, and the current account deficit quickly shrunk as imports of the consumer and investment goods sharply declined (Figure 3). It is believed that in the current cycle the current account deficit peaked in 2006 and will significantly shrink over the next two-three years.

[2] See Sighvatsson (2003).

Figure 1. Consumption and Investment as a Share of Potential GDP

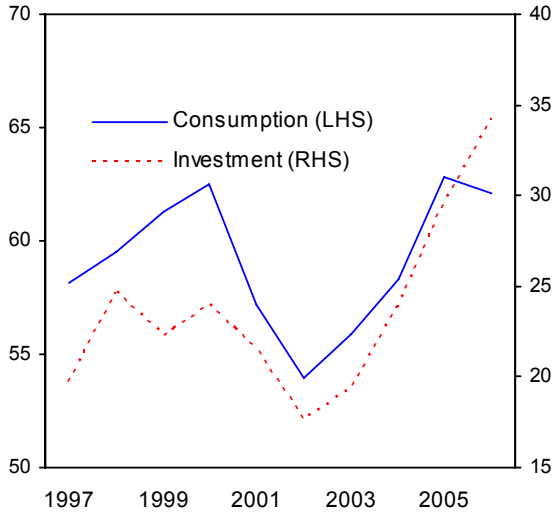


Figure 2. Current Account and REER

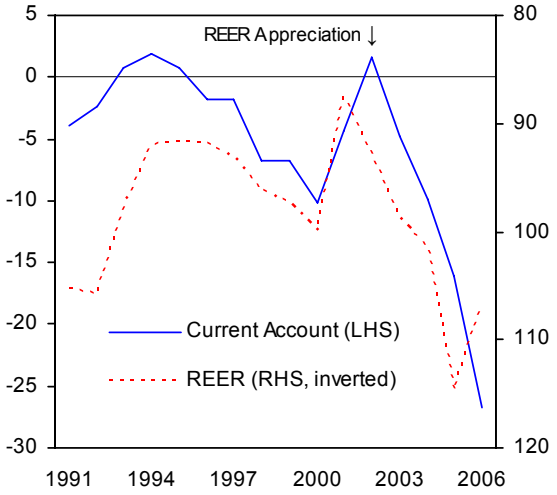
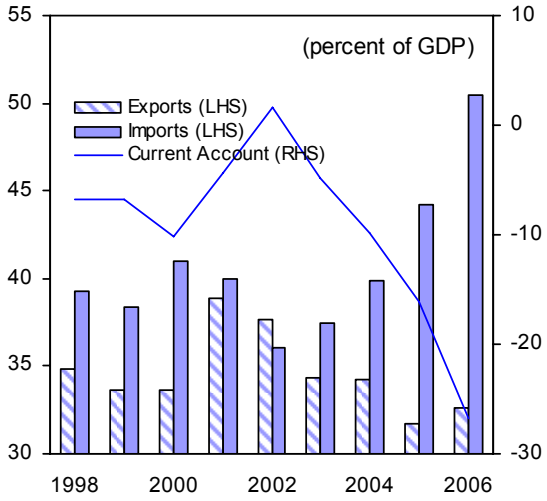


Figure 3. Contributions of Exports and Imports to Current Account



Until recently the trade balance was the main driving force of the underlying current account. Now the income balance has begun to play a significant role. In 2006, it fell to -8.9 percent of GDP (Figure 4), while in the previous cycle it bottomed out at -3.2 percent of GDP in 2001. This is the highest deficit since 1984 when it fell to -4.6 percent of GDP. While the trade account would be expected to reverse as the current cycle turns, the deficit on the income balance could be long-lived as it reflects interest payments on the large stock of accumulated debt (Figure 5).

Figure 4. Contributions of Current Account Sub-Components

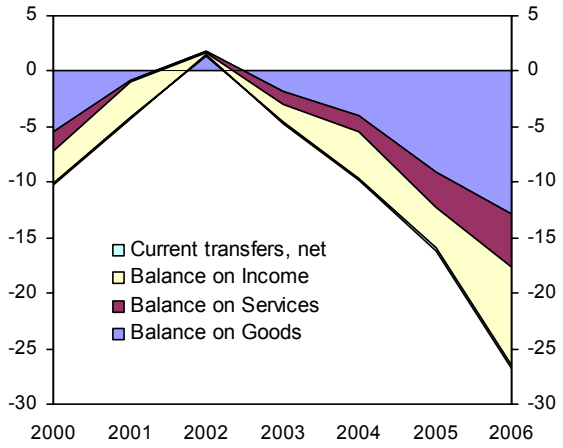
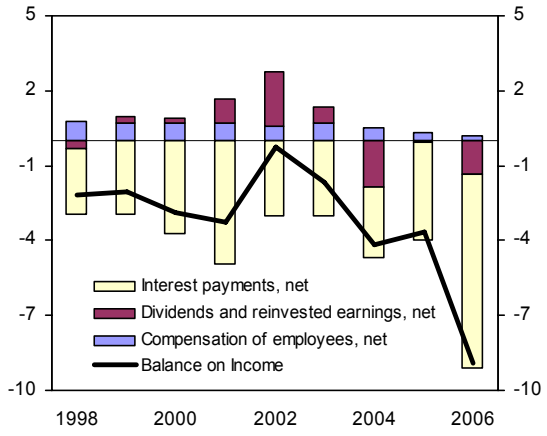


Figure 5. Balance on Income and its Components



The surge in interest payments reflects a dramatic increase in external borrowing used to finance increased consumption and housing as well as expansion of the commercial banks. In 2003-6 the net debt flows into Iceland ranged between 33 percent and 95 percent of GDP, while in the previous cycle they remained below 15 percent (Figure 6). Consequently, external debt increased to 450 percent of GDP, with a big chunk of it—370 percent of GDP—being external debt of the commercial banks (Figure 7).

Figure 6. Current Account Financing

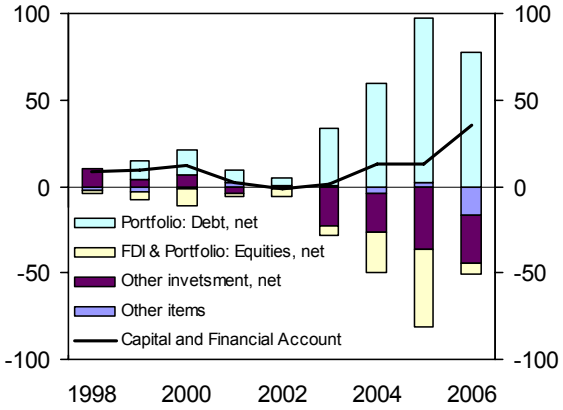
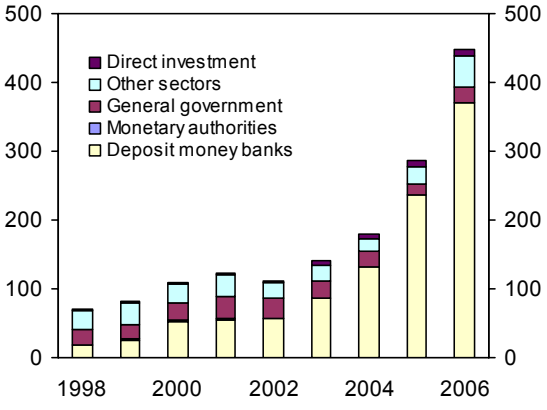


Figure 7. External Debt, percent of GDP



III. Data, Methodology and Results

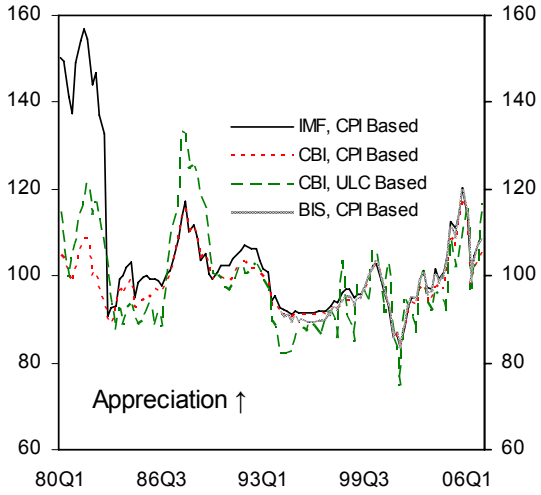
Looked at in several ways, the Icelandic króna is above its historical averages when measured in real terms. The degree of overvaluation varies depending on the particular measure used and a period considered. The IMF and the BIS produce a CPI-linked measure of the REER, while the CBI produces two measures—one, linked to changes in CPI, and the other, linked to changes in unit labor costs (Figure 8). Table 1 compares the latest available

values (2006Q4 for the IMF estimate and 2007Q1 for the rest) with the historical averages over four periods.[3] CPI-linked measures suggest overvaluation by 7–16 percent, while the ULC-linked measure suggests much higher degree of 18–25 percent.

Table 1. REER Overvaluation Compared to Average Values

	1980Q1-2007Q1	**1990Q1-2003Q4**	**1998Q1-2002Q4** (previous cycle)	**2001Q2-2007Q1** (inflation targeting)
REER measured by IMF (CPI)	8.3	11.9	14.0	7.4
REER measured by BIS (CPI)	...	16.3	14.8	8.0
REER measured by CBI (CPI)	7.4	11.0	12.3	6.9
REER measured by CBI (ULC)	18.1	25.3	24.9	20.2

Figure 8. Real Effective Exchange Rate



The methodologies used in this paper for estimating REER equilibrium are summarized in IMF (2006), while further details can be found in Isard et al. (2001) and Isard and Faruqee (1998). The first approach—the Macroeconomic Balance Approach (MB)—constructs a current account norm based on an empirical relationship between the current account and a set of fundamentals. The necessary adjustment in the REER is calculated given the elasticity of the current account with respect to the REER. The second approach—the Equilibrium Real Exchange Rate Approach (ERER)—is more direct, based on an empirical relationship between REER itself and a set of fundamentals. Finally, the third approach—the External Sustainability Approach (ES)—evaluates the current account that would stabilize the level of net foreign assets. While the details of each of the approaches are explained further in the text, the differences and results are summarized in the table below.

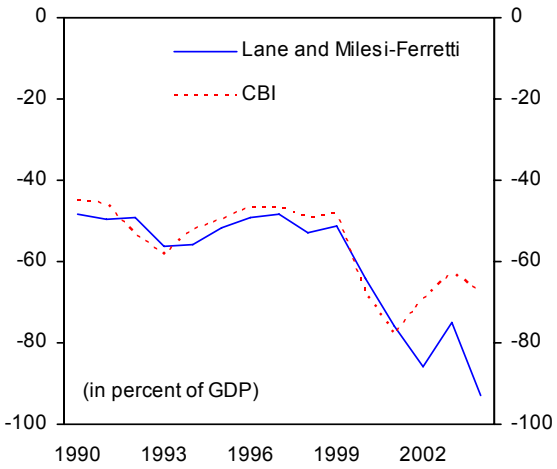
[3] The IMF's REER series starts in 1984Q1, as prior to that values are too high, distorting the picture. The BIS' REER series are available only since 1994Q1.

Table 2. Methodology Summary

	Macroeconomic Balance	Equilibrium Real Exchange Rate	External Sustainability
Variable	Current Account	Real Exchange Rate	Trade Balance
Equation[4]	A cross-country equilibrium empirical relationship between the current account and a set of fundamentals.	A cross-country equilibrium empirical relationship between the REER and a set of fundamentals.	A theoretical equation that determines the trade balance that would stabilize external assets and liabilities.
Fundamentals	Population growth, old-age dependency, fiscal stance (all relative to trading partners), oil trade balance, relative income, NFA.	NFA, productivity relative to trading partners, terms of trade, government consumption.	Stocks of external assets and liabilities, rates of return, the Iceland GDP growth rate, the World GDP growth rate, the U.S. inflation.

Most of the series are from IMF databases. In particular, the REER data are constructed using the methodology in Bayoumi et al (2006); while the NFA data are constructed using the methodology in Lane and Milesi-Ferretti (2006). Other variables are drawn from the WEO database.[5] While there are small differences between the CBI and IMF CPI-based REER series, there are substantial discrepancies between the NFA series estimated by Lane and Milesi-Ferretti and the CBI's International Investment Position series, which reach 25 percent of GDP in 2004 (Figure 8). When applicable, both series are used for calculations.

Figure 9. Net Foreign Assets /International Investment Position



[4] Empirical relationships are estimated for a set of countries excluding Iceland. Alternatively one could use an Iceland-specific equation. However, estimating such an equation is rather difficult given high data volatility, changes in exchange rate regime and other structural breaks.

[5] As of May 2007.

A. The Macroeconomic Balance Approach

Under this approach, the current account is linked to a set of macroeconomic fundamentals. In particular, the set includes: the deviation of the ratio of the general government budget balance to GDP from the average budget balance of trading partners; an old-age dependency ratio (ratio of population above 65 to the population aged 30–64) and the population growth rate (both in deviation from trading-partners averages); the oil trade balance as a ratio to GDP; the ratio of PPP-based per-capita income to the U.S. level, referred to as relative income; and the ratio of net foreign assets (NFA) to GDP.

Most of these fundamentals have an unambiguous effect on the current account. An increase in the government budget balance increases national savings and improves the current account, unless there is the same increase in the country's trading partners. A higher share of dependent population, i.e., higher old-age dependency and higher population growth (hence, higher share of young inactive people), reduces national saving and worsens the current account. Countries in the early stages of economic development (and lower relative income), are likely to run current account deficits, as they finance investments through external borrowing. Finally, higher oil prices negatively affect current accounts in oil-importing countries.

The level of the NFA affects the current account in two ways. On the one hand, countries with higher NFA can afford to run a trade deficit for longer, which would produce a negative association between the variables. On the other hand, higher NFA implies higher income balance and hence, higher current account balance, producing a positive association. Pooled estimation (IMF 2006), done for a large set of countries (excluding Iceland), suggests that the second effect dominates.[6]

$$\textit{Current Account} = 0.19^{***}\ \textit{Fiscal balance} - 0.14^{**}\ \textit{Old-age dependency} - 1.22^{***}\ \textit{Population Growth} + 0.23^{***}\ \textit{Oil Trade Balance} + 0.02^{*}\ \textit{Relative Income} + 0.02^{***}\ \textit{NFA}.$$

This relationship is used to construct a current account norm, based on WEO projections for 2012. Two estimates are constructed based on two sets of trading partners. One set includes the Euro zone, the United States and the United Kingdom. The second adds Norway and Denmark. These countries were chosen based on trade data available from Iceland Statistics for 1988–2005. While the choice of the number of trading partners impacts only the magnitude of the fiscal stance and old-age dependency, it changes the sign of population

[6] The symbols *, **, and *** indicate significance at the 10, 5, 1 percent level, based on standard errors robust to serial correlation. The original specification also included dummy variables for banking crisis, Asian crisis, and financial center.

growth relative to trading partners, as populations of Norway and Denmark are projected to grow more slowly than that of Iceland, while populations of U.S., U.K. and Euro area are projected to grow on average faster.

Table 3. Iceland's Trade Partners

Average trade shares, 1988-2005		
	Imports	**Exports**
Euro	33.8	39.7
US	10.1	12.1
Norway	9.4	3.5
Denmark	8.9	6.3
UK	8.5	20.3
Euro, UK, US	52.4	72.0
Euro, UK, US, Norway, Denmark	70.7	81.8

The difference between the current account norm and the projected current account determines the necessary adjustment. To convert current account adjustment into REER adjustment, the elasticity of current account with respect to REER is constructed based on a non-oil export volume elasticity of 0.71, a non-oil import volume elasticity of 0.92, and the 2006 ratios of exports and imports to GDP (see Isard et al, 2001).

For Iceland, the current account deficit is projected to be 5.6 percent of GDP in 2012. Depending on the number of trading partners chosen, and the estimate of NFA, the estimated current account norm is a deficit of 1.0–2.2 percent of GDP, which translates into a depreciation of 17–23 percent in the real effective exchange rate. If estimates are constructed using the 2006 stock of NFA, then the current account deficit norm is estimated to be 0.7–2.0 percent of GDP with the depreciation in the range of 18–25 percent.

These estimates depend on a number of assumptions. Varying these assumptions affects the estimates of the adjustment. For example, an improvement of one percent of GDP in the fiscal budget, relative to trading partners, increases the current account norm by about 0.2 percent of GDP, and hence, implies a slightly bigger depreciation of 18–24 percent. An improvement of one percent of GDP in the oil trade produces a similar result. An increase of relative income by 10 percentage points would increase the current account norm by 0.4 percent of GDP and imply an adjustment of 19–25 percent. Finally, note that the elasticity of the current account with respect to changes in the real exchange rate is constructed using shares of exports and imports in GDP as of 2006. Using 2012 projections implies the current account deficit norm of 0.8–2.0 percent of GDP and hence, depreciation of 18–24 percent.

B. The Equilibrium Real Exchange Rate Approach

In this approach, the REER itself is linked to a set of fundamentals. These include a productivity differential, defined as the difference between output per worker in tradables

and non-tradables (each of them measured relative to trading partners and assumed to remain constant over the medium term); a terms of trade variable defined as a ratio of the weighted averages of the main commodity export prices to import prices; government consumption measured as a ratio of public expenditures to GDP; and the NFA position measured as the stock of net foreign assets scaled by trade (average of exports and imports).[7] Again, estimates are constructed for two sets of trading partners and for two NFA series.

The terms of trade reflect the prices of sea food, non-ferrous metals, and petroleum. Using 1979–2005 trade data from the COMTRADE database (with a breakdown at SITC IInd digit level), sea food and non-ferrous metals are identified as the main export commodities (with average weights of 64.3 and 13.0 percent), while petroleum is identified as the main import commodity (with an average weight of 9.8 percent). Prices for these commodities are extracted from the WEO database and are measured relative to prices for manufacturing exports of industrial countries. As the table below shows, the composition of exports has somewhat changed in recent years with sea food having a smaller share and non-ferrous metals having a bigger share.

Table 4. Commodities Trade

Trade weights:	1979-2005	2005
Exports of		
Fish, crustacean and molluscs, and preparations thereof	64.3	51.9
Non-ferrous metals	13.0	18.6
Feeding stuff for animals (not including unmilled cereals)	6.1	4.4
Imports of		
Petroleum, petroleum products and related materials	9.8	8.8
Road vehicles	7.6	13.7
Electric machinery, apparatus and appliances, and parts	5.8	6.3

All of these variables are expected to have an unambiguous effect on the real exchange rate. A positive productivity differential should appreciate the REER due to Balassa-Samuelson effect. An increase in the terms of trade should have a positive impact as well through a wealth effect. Increased public spending appreciates the real exchange rate as it is likely to fall more on non-tradable goods than on tradables. Finally, NFA are positively associated with the REER: a debtor country needs to run trade surpluses, and hence, a depreciated real exchange rate; while a creditor country can afford an appreciated real exchange rate and trade deficits. Pooled estimation, done for a large set of countries (excluding Iceland), confirms these expectations (IMF, 2006):

[7] The original specification also included trade restriction and price control indices.

$$\ln(REER) = constant + 0.04^{***}\ NFA + 0.15^{**}\ [\ln(Relative\ Productivity\ in\ Tradables) - \ln(Relative\ Productivity\ in\ Non\text{-}Tradables)] + 0.46^{***}\ \ln(Terms\ of\ Trade) + 2.64^{***}\ Government\ Consumption.$$

Comparison of the current REER and REER using the medium-term projections along with the above equation produces an estimate of the misalignment. Plugging in the projections from the WEO database for 2012 produces an equilibrium value of 95–98, while the 2006 value is 106.7, which implies a depreciation of 8–11 percent.

Comparing the 2006 value of REER against the 2006 fundamentals implies a smaller depreciation of 6–9 percent. This reflects the fact that projected fundamentals are expected to cause a depreciation in the equilibrium real exchange rate between 2006 and 2012. First, the NFA position is projected to worsen. Second, the terms of trade are expected to deteriorate as the prices for metals are expected to fall. Both factors imply a depreciation in the equilibrium real exchange rate over the medium term, and hence, a bigger gap than when compared to the 2006 values.

If the stock of NFA was to remain the same as in 2006, the adjustment estimate would fall slightly (to 6–10 percent), but if the terms of trade were to remain the same, the gap would be almost eliminated with the adjustment estimated between -1.8 and 1.6 percent. A decrease in government expenditures of one percent of GDP (compared to current projections) would imply extra two percent of real exchange rate depreciation.

The estimates of the gap depend on the choice of a reference time frame since the constant is chosen so that the averages of the actual REER and fitted values are equal. The results reported above are obtained with averages taken over the 1992-2006 period (due to the data limitations). Using the 1998-2002 period (the previous business cycle) produces larger disequilibrium estimates: a depreciation of 13–16 percent against the 2012 fundamentals and 9–12 percent against the 2006 fundamentals.

C. The External Sustainability Approach

Similar to the MB approach, the ES approach estimates a trade balance norm and then translates it into the required REER adjustment based on import and export elasticities. This time, however, the norm is linked to the levels of foreign assets and liabilities. These are split into equity instruments (direct investment and portfolio equity investment) and debt instruments (portfolio debt investment, other investment, and international reserves in the case of assets). Assuming zero capital gains, the following relationship is derived:

$$TB = -\frac{i^{E,A} - n}{1+n} EqAsst - \frac{i^{D,A} - n}{1+n} DAsst + \frac{i^{E,L} - n}{1+n} EqLblt + \frac{i^{D,L} - n}{1+n} DLblt\ ,$$

where the trade balance *TB* is linked to the stocks of assets and liabilities, respective rates of return, and nominal GDP growth *n*.

The logic behind the equation is straightforward. As long as rates of return on assets are higher than the growth rate of nominal GDP, a country can afford to run a trade deficit. If rates of return on liabilities are higher than the growth rate of nominal GDP, a country has to run trade surplus to cover the difference. The rate of return on equity assets is given by projected World real GDP growth in 2012, plus projected U.S. inflation, plus 100 basis points, which translates into 8.2 percent. The rate of return on equity liabilities is given by Iceland's projected real growth rate in 2012, plus projected U.S. inflation, plus 100 basis points, which translates into 6.9 percent. The rate of return on debt instruments is assumed to be 6 percent.

Three norms are constructed given the stocks of assets and liabilities in 2004–6. Given 2004 values, when NFA (excluding the CBI's reserves) stood at -93 percent of GDP (according to the CBI estimates), the trade balance norm is calculated to be -0.8 percent of GDP. As the level of NFA decreased to -109 percent of GDP in 2005, and then to -144 in 2006, the trade balance norm decreases to -1.6 and -2.1 percent of GDP. The trade balance projection is -4.3 percent of GDP, and hence, as the necessary trade balance adjustment changes from 3.4 percent of GDP to 2.6 and to 2.2, the estimate of the REER adjustment changes from 18 percent to 14 to 11.

This is counterintuitive, as in general, an increase in liabilities would require a country to run a bigger trade surplus. In this case, the result is driven by the differences in the rates of return. The difference between the rate of return on debt instruments (both assets and liabilities) and the nominal GDP growth is assumed to be 0.6 percent, on equity liabilities 1.5 percent, and on equity assets 2.8 percent. Hence, a sharp increase in the stock of liabilities has less of an impact on the trade balance norm than an increase in the stock of assets. The table below specifies contributions of each of the components to the trade balance norm. As the stocks of liabilities increase, their contributions to the trade balance norm increase from 1.3 percent of GDP to 3.5, a change of 2.3 percent of GDP. Meanwhile, as the stocks of assets increase their contributions to the trade norm decrease from -2.1 percent of GDP to -5.6, a change of -3.6 percent of GDP. If the rate of return on equity assets were to fall by 150 basis points, then the trade balance norm would have been the same across the three scenarios (-4.4 percent of GDP, requiring a 23 percent depreciation of the REER).

Table 5. Contributions of Foreign Assets and Liabilities to TB Norm

Stabilizing at the level of	2004	2005	2006
Assets: Equity	65.1	119.9	162.1
Contribution to the TB norm	-1.7	-3.2	-4.3
Assets: Debt	59.6	125.1	232.1
Contribution to the TB norm	-0.3	-0.7	-1.3
Liabilities: Equity	18.9	50.9	74.9
Contribution to the TB norm	0.3	0.7	1.1
Liabilities: Debt	173.4	277.8	437.9
Contribution to the TB norm	1.0	1.6	2.5
TB Norm	-0.8	-1.6	-2.1

The assumptions on the rates of return are quite different from the values observed in 2006. CBI (2007) estimates that in 2006 the rates of return were: 9.8 percent for direct investment assets, but 24.4 percent for direct investment liabilities; and 3.5 percent for debt assets, but 4.2 percent for debt liabilities. If these rates were to prevail, a much sharper depreciation (40 percent) would be required, as, for example, the trade balance norm required to stabilize the stocks of assets and liabilities at their 2005 level would be a surplus of 3 percent. Note however, that these assumptions imply rates of return on debt instruments which are lower than the growth rate of the nominal GDP.

Calculations are also sensitive to changes in assumed growth rates. If Iceland's growth was one percentage point lower in the medium term, then the trade balance norm would increase by about 0.4 percent of GDP requiring an additional depreciation of about 2 percent. If the world economy were to grow by one percentage point less in the medium term, then the trade balance would need to improve to 0.7–1.5 percent of GDP requiring 19–21 percent of depreciation.

The ES approach suggests smaller REER adjustments than the MB approach. That is due to the fact that the ES approach evaluates the trade balance needed only to stabilize the stocks of foreign assets and liabilities, without taking into account other fundamentals. Meanwhile, the MB approach, even though also based on the 2006 level of NFA (i.e., implicitly assuming that the stocks remain constant), takes into account an array of additional factors, which suggest that the current account deficit should be smaller than the ES approach suggests.

D. Limitations and Caveats

These results should be treated with caution. One reason is imprecision of data, whether it is national accounts data (where one of the recent revisions changed the real GDP growth rate by two percentage points), or financial flows data (where net errors and omission were at a level of 11 percent of GDP in 2006). Another reason is that results depend on medium-term projections for several countries that are highly uncertain. As discussed above, the ES approach makes assumptions on future rates of return that are highly subjective. The empirical relationships, on which the MB and ERER approaches are based, are estimated for a large pool of countries. Large differences between the countries imply that there may be

significant differences between a resulting 'average' country and Iceland. Also, these equations reflect equilibrium relationships rather than causal ones.

Both the MB and ES approaches assume that correction occurs via the trade balance. However, in the last year, the income balance deficit constituted about a third of the current account deficit, and while it is rather difficult to predict its evolution, its improvement could mean a smaller REER adjustment needed to restore external balance.

As adjustment occurs, the stock of NFA does not remain invariant to changes in the REER. If a country has most of its external liabilities in domestic currency and most of the external assets in foreign currency, then depreciation of the REER would in fact improve its net external position. Similarly, the composition of assets and liabilities matters. In the case of Iceland, about 40 percent of its assets are direct investment and equity, which are recorded at book or transaction, but not market value, while 6 percent are debt securities. At the same time, only 15 percent of liabilities are direct investment and equity and 63 percent are debt securities.[8] Revaluation of equity could improve the NFA position, which, however, could have different implications under different approaches. Under the MB approach, a better NFA position would imply a higher current account norm (as the higher NFA is associated with better income balance), and hence, a bigger depreciation. But a better NFA position would also improve the current account projections and hence, the net impact would be unclear. Under the ERER approach, the better NFA position would imply a more appreciated equilibrium real exchange rate, and hence a smaller depreciation. Finally, under the ES approach, if rates of return on assets are higher than the nominal GDP growth rate, then the trade balance norm would decrease and hence, a smaller depreciation would be needed.

Table 6. Distribution of Foreign Assets and Liabilities

	Percent of GDP	Share
Assets:	394	100
Direct Investment and Equity	162	41
Debt Securities	24	6
Loans	152	39
Trade credits, currency, deposits, reserves, etc.	55	14
Liabilities:	513	100
Direct Investment and Equity	75	15
Debt Securities	321	63
Loans	83	16
Trade credits, currency, deposits, etc	34	7

[8] See Svavarsson and Sigurdsson (2007) for discussion on Iceland's IIP position and related measurement issues.

IV. CONCLUSION

Generally, the three approaches could be suggesting various estimates of disequilibrium (Tables 7 and A1). In this particular case, under plausible assumptions they all suggest a depreciation of about 10–20 percent, which is broadly in line with estimates based on long-term trends as well.

The overvaluation estimates are based on the 2006 level of the real exchange rate. In the first half of 2007, the króna has appreciated further. Given the level of nominal appreciation and inflation developments in Iceland and its trading partners, the real appreciation is likely to be around 5 percent, and hence the adjustment falls in the range of 15–25 percent.

Table 7. Summary of the Results

	Averages	Macroeconomic Balance	Equilibrium Real Exchange Rate	External Sustainability
Adjustment	12–14 percent (compared to 1988-2002 period)	17–23 percent	13–16 percent (constant chosen over 1988-2002 period)	11–18 percent

However, neither of these approaches implies anything about manner or timing of the adjustment. Theoretically it could occur via lower inflation or depreciation of the nominal exchange rate. Given that over the short term inflation in Iceland is likely to remain above that of its trading partners, one would expect greater adjustment in the nominal exchange rate than that predicted for REER by the CGER methodologies. How long would such an adjustment last or what exactly would trigger it, is beyond this analysis.

Appendix Table A1. Estimates of Overvaluation

Approach	Assumptions	Overvaluation
Historical Comparison	1980-2006 sample; IMF series for REER; CPI based series	8.3
	1990-2003 sample; IMF series for REER; CPI based series	11.9
	1998-2002 sample; IMF series for REER; CPI based series	14.0
	2001-2006 sample; IMF series for REER; CPI based series	7.4
	1980-2006 sample; BIS series for REER; CPI based series	...
	1990-2003 sample; BIS series for REER; CPI based series	16.3
	1998-2002 sample; BIS series for REER; CPI based series	14.8
	2001-2006 sample; BIS series for REER; CPI based series	8.0
	1980-2006 sample; CBI series for REER; CPI based series	7.4
	1990-2003 sample; CBI series for REER; CPI based series	11.0
	1998-2002 sample; CBI series for REER; CPI based series	12.3
	2001-2006 sample; CBI series for REER; CPI based series	6.9
Macroeconomic Balance	IMF series for NFA; 3 trading partners; 2006 stock of NFA	22.5
	IMF series for NFA; 5 trading partners; 2006 stock of NFA	18.3
	CBI series for NFA; 3 trading partners; 2006 stock of NFA	24.2
	CBI series for NFA; 5 trading partners; 2006 stock of NFA	19.5
	IMF series for NFA; 3 trading partners; 2012 stock of NFA	23.7
	IMF series for NFA; 5 trading partners; 2012 stock of NFA	19.4
	CBI series for NFA; 3 trading partners; 2012 stock of NFA	25.8
	CBI series for NFA; 5 trading partners; 2012 stock of NFA	21.0
Equilibrium Real Exchange Rate	IMF series for NFA; 3 trading partners; 2006 fundamentals	10.8
	IMF series for NFA; 5 trading partners; 2006 fundamentals	11.9
	CBI series for NFA; 3 trading partners; 2006 fundamentals	8.9
	CBI series for NFA; 5 trading partners; 2006 fundamentals	10.5
	IMF series for NFA; 3 trading partners; 2012 fundamentals	14.8
	IMF series for NFA; 5 trading partners; 2012 fundamentals	15.9
	CBI series for NFA; 3 trading partners; 2012 fundamentals	13.1
	CBI series for NFA; 5 trading partners; 2012 fundamentals	14.6
External Sustainability	2004 stock of NFA as estimated by CBI	18.0
	2005 stock of NFA as estimated by CBI	13.8
	2006 stock of NFA as estimated by CBI	11.3

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