

Why Sovereigns Can Default on Local-Currency Debt

Printing Money No Panacea as High Inflation Is a Costly Policy Option

Special Report

Local-Currency Sovereign Defaults: The popular perception that sovereigns cannot default on debt denominated in their own currency because of their power to print money is a myth. They can and do. Examples in the last two decades include: Venezuela (1998), Russia (1998), Ukraine (1998), Ecuador (1999), Argentina (2001) and Jamaica (2010 and 2013). Local-currency (LC) defaults are less frequent than foreign currency (FC) defaults and are unlikely for countries with debt mainly denominated in local currency at long maturity.

Seigniorage and Budget Constraints: Higher inflation can raise seigniorage and remittance of central bank profits to the government, up to a point. However, the basic arithmetic is that in the long run, the ratio of government debt/GDP will rise if the government is running a primary budget deficit (excluding interest payments and including seigniorage), assuming the real growth rate does not exceed the real interest rate, irrespective of the inflation rate.

Surprise Inflation and Solvency: An unanticipated burst of inflation can reduce the real value of government debt as long as the debt is not of short maturity (as higher inflation is quickly reflected in the marginal cost of funding), index linked or denominated in foreign currency (as the exchange rate would depreciate). Thus countries with such characteristics – which give them “monetary sovereignty” – do have some capacity to inflate away their debt.

High Inflation Shock Required: The report uses Fitch Ratings’ debt dynamics model to illustrate the impact of different inflation shocks on public debt ratios. For a country with a large primary budget deficit, gains to the debt ratio from quite high inflation would be short-lived. For a country with a debt ratio of 100%, primary deficit of 1%, real growth equal to the real interest rate and a 10-year average debt maturity, it would take a jump to 30% inflation (from 2%) for three years and 10% thereafter to bring the ratio below the 60% Maastricht threshold.

Inflation Costly Policy Option: Inflation is economically, socially and politically costly. Thus, even if a sovereign has a capacity to inflate away its debt, it might choose not to. The velocity of circulation of money is unstable so it is unclear how much money a central bank (acting for the government) would need to print to deliver the ‘right’ inflation rate (as the current debate over quantitative easing highlights).

Distressed Debt Exchange Option: A government might view a DDE as a less bad policy option than high inflation and associated instability. Fitch classifies a DDE as a default.

Local Ratings not Irrelevant: The myth that sovereigns that can print money (particularly those rated ‘AAA’ or high-grade) cannot default on debt in their own currency has fed the proposition that such ratings are irrelevant. Fitch disagrees that default is impossible.

Monetary Sovereignty and Ratings: Fitch believes that countries with strong monetary sovereignty and financing flexibility (eg, Japan ‘A+’ and the UK ‘AA+’) are unlikely to default, hence their high-grade ratings. These are important factors in Fitch’s sovereign rating methodology that improve both local- and foreign-currency ratings.

Local Currency Rating Notches: Fitch does not routinely assign sovereigns a local-currency rating of ‘AAA’. The local rating is typically one or two notches above the foreign-currency rating. The notching reflects the sovereign obligor’s greater capacity to pay debt in local currency (as taxes are usually paid in local currency and it may have better access to a stable domestic capital market, as well as capacity to print money). It may also be more willing to service local-currency debt if more of it is held by local banks and other residents.

Related Research

[Fitch Complete Sovereign Rating History \(April 2013\)](#)

[Fitch Ratings Sovereign 2012 Transition and Default Study \(March 2013\)](#)

[Japan’s Sovereign Credit Ratings: A Primer \(June 2002\)](#)

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Local Currency Sovereign Defaults

Countries can and do default on local-currency debt, even though they could (in most cases) theoretically print enough local currency to repay creditors. Although local-currency defaults are less common than foreign-currency defaults they are more common than is often realised. Fitch recognises eleven since 1994. Of these:

- Seven: Rwanda (1994), Russia (1998), Ukraine (1998), Ecuador (1999), Argentina (2001) and Jamaica (2010 and 2013) were related to traditional economic, financial and/or political crises.
- Two: Sri Lanka (1996) and Venezuela (1998) were technical defaults as payments were delayed due to administrative reasons, though there were no haircuts¹.
- Two: Greece (2012) and Cameroon (2004) were in currency unions and lacked the capacity to print money (Fitch classifies the euro as Greece's local currency; similarly Cameroon defaulted on its bank debt in CFA francs, which is the common currency for Central African Economic and Monetary Community (CEMAC) and is pegged to the euro).

Of these, only Russia, Argentina and Jamaica were rated by Fitch at the time (see Appendix).

Of all the ten Fitch-rated sovereign defaults since 1995, five were on both local-currency debt and foreign-currency debt (including Greece) and five on just foreign-currency debt². Therefore, while local-currency defaults are less frequent, they are not that rare.

Three of the joint defaults were primarily local-currency. The Jamaica defaults were predominantly on local-currency debt, though also included some domestically issued foreign-currency debt. Russia continued to service its senior unsecured foreign-currency debt (Russian Federation Eurobonds) while defaulting on local-currency Russian Federation-era debt (GKOs), though it did also default on Soviet-era foreign-currency debt.

Including sovereigns not rated by Fitch, for comparison with the local-currency defaults listed above, a complete list of foreign debt restructuring (1950-2010) has been compiled by Trebesch (2011)³. The IMF record 16 main country debt restructurings (1998-2010)⁴ to which could be added more recent defaults by Jamaica, Greece, Cote D'Ivoire, Grenada, Belize and St. Kitts and Nevis⁵.

Reinhart and Rogoff have compiled a rich database of domestic debt defaults going back to 1914 for 64 countries and even further back for some of them⁶. They report 68 domestic debt defaults, which they say should be regarded as a lower bound due to a lack of documentation. For comparison, they have catalogued 250 external debt defaults since 1800.

They define domestic debt as issuance under domestic law, and their sample includes some defaults on debt denominated in foreign currency and some cases where the currency denomination is unknown. They also cover some bank deposit freezes or forced conversion, which would not be included in Fitch's classification of sovereign (as opposed to bank) defaults. Nevertheless, even in the context of local-currency debt, their conclusion stands: "Our reading

¹ In Sri Lanka in 1996, there was a delay in payment due to loss of computer systems following a bomb blast at the Central Bank and prohibition of access to the building due to security reasons; all due payments were paid in full as soon as the data and systems were recovered. In Venezuela in 1998, a coupon payment (on securities without a grace period) was delayed by one week due to administrative reasons.

² "Fitch Complete Sovereign Rating History", April 2013 available at www.fitchratings.com.

³ <https://sites.google.com/site/christophrebesch/data>.

⁴ "A Survey of Experiences with Emerging Market Sovereign Debt Restructurings", Das, Papaioannou, Grigorian and Maziad, IMF Working Paper, June 2012.

⁵ EMTA.

⁶ "The Forgotten History of Domestic Debt", Carmen M Reinhart and Kenneth S Rogoff, NBER, April 2008.

Related Criteria

[Sovereign Rating Criteria \(August 2012\)](#)

[Distressed Debt Exchange \(August 2012\)](#)

of the historical record is that overt de jure defaults on domestic public debt, while less common than external defaults, are hardly rare.”

Figure 1
Selected Data from Local Currency Defaults^a

Country	Year	Govt debt (% GDP) ^b	LC debt (% total)	Inflation Exchange rate (%) regime	M2 (% GDP)
Russia	1998	53	43	15 Crawling peg	21
Ukraine	1998	33	33	16 Fixed	13
Ecuador	1999	67	n.a.	36 Crawling band	23
Argentina	2001	51	5	-1 Fixed	32
Jamaica	2010	131	46	10 Managed float	45
Jamaica	2013	132	44	7 Managed float	45

Notes

^a End of preceding year (as data affected by devaluations at end of year of default).

Source: National Sources, IMF and Fitch

One argument is that these were all emerging markets with worse fundamentals than high grade sovereigns (Figure 7) and that a developed country would not default on local-currency debt. However, a similar point was made about Greece, which was the first default of a developed country in the post-war era. While a default by a high-grade country is hard to envisage at the moment, in the event of a severe negative shock, its credit fundamentals would deteriorate if default became a more proximate possibility.

Sovereign Budget Constraints, Seigniorage and Inflation

Thinking about the ability and policy choices of governments to inflate away their debts, it is useful to consider their inter-temporal budget constraint. Current and future spending has to be financed by current and future tax and other fiscal revenues plus seigniorage (the difference between the face value of money and its costs of production, which is effectively zero for notes).

The standard equation for debt sustainability shows that the change (Δ) in the ratio of government debt to GDP (d) in period t :

$$\Delta d_t = -pb_t + ((r_t - g_t) / (1 + g_t)) * d_{t-1}$$

Where pb is the primary budget balance (ie, excluding interest payments); r is the real interest rate and g is the real growth rate of GDP.

Thus if the real growth rate is equal to the real interest rate, the government will need to run a primary balance to stabilise the public debt/GDP ratio, and to run a surplus if the real interest rate exceeds the real growth rate.

The primary balance term can include seigniorage. As the cost of printing money is effectively zero, the value of seigniorage is equal to the change in the monetary base. Another measure of seigniorage is the return on assets (usually government bonds) funded by the central bank's issuance of the monetary base. Central banks usually remit a profit on their operations to finance ministries (though this is not purely related to seigniorage)⁷. Willem Buiter also demonstrates a Laffer curve for seigniorage, whereby its value increases the higher inflation is, up to a point before it starts to decline as higher inflation leads to shrinkage in the demand for money.

The net present value of current and future seigniorage is massive. Citi estimate that, for example, for the eurozone it would be at least EUR2trn (21% of GDP) consistent with the ECB

⁷ See "Seigniorage", Willem H. Buiter, Economics No.2007-10, July 2007, for an account of the different concepts of seigniorage and relations between them.

meeting its inflation target of inflation not exceeding 2% over the medium term, even under conservative assumptions.⁸

Inflation Tax

In exceptional times, a central bank (not the ECB) could provide direct monetary financing of the budget deficit (a different concept from normal seigniorage) and actively seek to generate higher inflation to reduce the real value of the outstanding debt stock. This assumes that the central bank's inflation target or other monetary policy mandate could be amended, or potentially its independence revoked by the sovereign.

We can see the impact of higher inflation in another representation of the standard debt sustainability equation:

$$\Delta d_t = b_t - (g_t/1+g_t) * d_{t-1} - (p_t/(1+p_t)(1+g_t)) * d_{t-1}$$

Where b is the total budget balance (ie, including interest payments) and p is the rate of inflation (the proportional rate of change in the GDP deflator).

However, if higher inflation is anticipated and debt is of short maturity or index linked, it would have little effect on public debt dynamics; the nominal interest rate would rise to offset the impact from the rise in GDP deflator (though it would also be influenced by the central bank policy rate at the short end of the yield curve), with little effect on the real interest and growth rate ($r-g$). Similarly, if debt is denominated in foreign currency, the exchange rate would depreciate in line with (or greater than) the increase in the price level leaving the US dollar value of debt to US dollar value of GDP unchanged (or higher). Thus a government's ability to use surprise inflation to reduce the real value of its debt depends on characteristics of debt structure, economy and financial system, and is related to the concept of monetary sovereignty (see below).

QE Is a Different Sort of Printing Money

QE is often described as printing money as central banks create base money by purchasing securities and expanding their balance sheets. However, QE is fundamentally different from monetary financing of government budget deficits. The motivation is to prevent deflation and to meet an inflation target (or other mandate) when conventional interest rate policy is constrained by the zero lower bound. The central bank retains control over the money supply and interest rates as it can reverse QE and increase interest rates or sell its sovereign bonds (or other securities) in the secondary market thereby reducing liquidity and base money (ie, there is an exit strategy). The treasury or finance ministry will typically pledge to indemnify the central banks against any potential loss arising from such operations.

In contrast, if a central bank buys debt in the primary market and finances the government directly (or deploys 'helicopter money'), then it loses control over monetary policy. Eventually inflation and a currency/balance of payments crisis will follow.

Monetary Sovereignty

Financing Flexibility and Capacity to Print Money

Countries with their own currency and with their debt denominated in it have the capacity to print money to avoid default. However, this capacity is costly and may be limited for some countries depending on their monetary sovereignty. It does not necessarily provide a universal solution or optimal policy choice that entirely negates local-currency default risk.

There does not appear to be a universally accepted definition of monetary sovereignty. According to an IMF paper, it includes: "three exclusive rights for a given state: the right to

⁸ "Looking into the Deep Pockets of the ECB," Willem Buiter and Ebrahim Rahbari, Citi, February 2012. They also note that: "the ECB's loss absorption capacity in euros, unconstrained by an inflation limit, is infinite".

issue currency, that is, coins and banknotes that are legal tender within its territory; the right to determine and change the value of that currency; the right to regulate the use of that currency or any other currency on its territory⁹.” Thus a weak form of monetary sovereignty requires: an independent currency and a floating exchange rate (although a sovereign could abandon a fixed exchange rate regime). A stronger form of monetary sovereignty would also require a country to have no material amount of foreign-currency debt.

Countries with strong monetary sovereignty have (most of) a number of additional favourable characteristics that make them even less likely to default on local-currency debt: low and stable inflation; high domestic savings and financial depth; a rich and stable economy; stable governance and rule of law; a relatively long maturity of sovereign debt and, in exceptional cases, reserve currency and benchmark borrower status.

Monetary sovereignty also means that the risk of a self-fulfilling liquidity crisis is lower than for sovereigns without a central bank 'lender of last resort'. Other benefits from a flexible and independent monetary and exchange rate regime is that policies that can be tailored and respond to country-specific shocks and policy objectives - though the benefits are limited for small open economies. A credible monetary and exchange rate regime can allow the authorities to pursue unconventional policies such as QE in response to crises with less risk of precipitating adverse financial effects (although credible central banks in currency unions such as the ECB can also employ unconventional policies within their mandate).

Countries with strong monetary sovereignty and the above characteristics have high ratings and Fitch views them as highly unlikely to default. In particular, they have strong financing flexibility, which is an important positive factor in Fitch's sovereign rating methodology and Sovereign Rating Model¹⁰. Such factors are reflected in the foreign-currency rating.

Most countries that have defaulted on local-currency debt had pegged exchange rates prior to default and significant proportions of debt denominated in foreign currency (see section above). In addition Greece (2012) and Cameroon (2004) defaulted on 'local'-currency debt as part of common currency areas.

Nevertheless, Fitch does not agree with the proposition that default is impossible or inconceivable for a country even with strong monetary sovereignty. Japan is a good example of country where these benefits do not fully offset its adverse public debt dynamics. Fitch rates its Long-Term Foreign and Local-Currency IDRs at 'A+' / Negative rather than 'AAA'¹¹. On April 19, 2013, it downgraded the UK's ratings to 'AA+', primarily reflecting the upward revision to its medium-term projections for UK budget deficits and government debt with general government gross debt (GGGD) expected to peak at over 100% of GDP¹².

Printing Money: Generally an Unattractive Policy Choice

Even if strong monetary sovereignty gives a country the capacity to inflate away its debts and to restore its fiscal solvency, it would be economically, socially and politically costly to do so, and may not necessarily be a more attractive policy option than debt restructuring.

Sovereigns would need to generate a large inflation surprise to have a material impact on fiscal solvency. We use our debt dynamics model to illustrate the impact of inflation shocks on the government debt to GDP ratio for three hypothetical countries (Figures 2 and 4).

⁹ Current Legal Aspects of Monetary Sovereignty, Francois Gianviti, General Counsel, IMF, 24 May 2004. He also notes that the IMF's Articles of Association imply some relinquishment of strict monetary sovereignty.

¹⁰ "Sovereign Rating Criteria", August 2012 at www.fitchratings.com.

¹¹ The issue of whether a non-'AAA' local-currency rating was merited for Japan, in view of its strong monetary sovereignty, was analysed by Fitch over ten years ago. See "Japan's Sovereign Credit Ratings: A Primer", June 2002 at www.fitchratings.com.

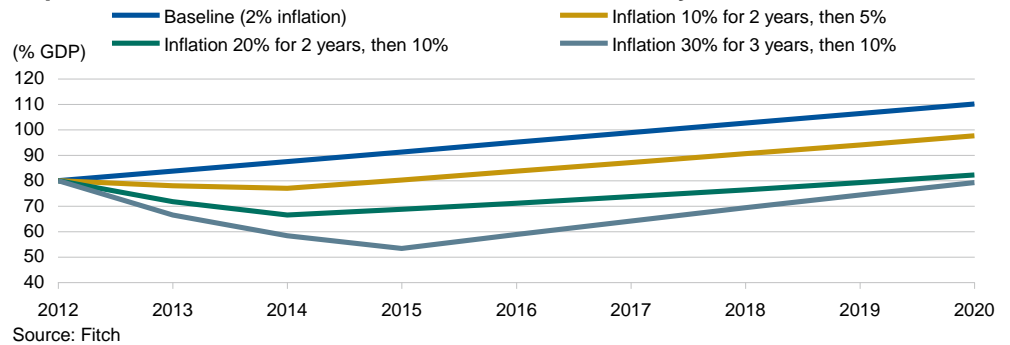
¹² "Fitch Downgrades United Kingdom to 'AA+'; Outlook Stable", April 2013 at www.fitchratings.com.

If the primary balance is in deficit and the real growth rate does not exceed the real interest rate, then in the long term (once the existing stock of debt matures and is refinanced at the marginal cost of funding) the debt ratio will rise regardless of the inflation rate. In other words, printing money provides a temporary solution and does not invalidate the basic arithmetic of the inter-temporal budget constraint.

A Tale of Three Countries

Figure 2

Impact of Inflation on Government Debt/GDP: Country A



The example of Country A with an 80% debt/GDP ratio, all denominated in local currency, an average debt maturity of six years (which is in line with the average of countries in the ‘A’, ‘AA’ and ‘AAA’ categories), and a 7% budget deficit at end-2012) highlights that it would take a large inflation surprise to lower the debt ratio. For example, if inflation was 30% for three years then 10%, relative to 2% in the baseline, then the debt ratio would be 30pp of GDP lower than in the baseline by 2020, though rising and little changed from the end-2012 starting point. For simplicity, Fitch does not assume (in any of the examples) any fall in the real growth rate from the pernicious effects of high inflation, though this would be likely to worsen the debt dynamics.

Country B is identical to country A except that half its debt is denominated in foreign currency. As higher inflation leads to currency depreciation, the gains from eroding the real values are negated on that part of the debt stock. If a higher risk premium on foreign borrowing is also built in, there is virtually no net benefit.

Country C has a higher debt stock (100% of GDP), though is closer to debt stabilisation with a primary deficit of 1% and total balance of 5%; and has a longer average debt maturity of 10 years. It highlights that a persistent moderate shock (20% inflation for two years and 10% thereafter) would lower the debt ratio by 20pp by 2020, but it would take a larger shock (30% inflation for two years and 10% thereafter) to have a more decisive impact and bring it below the Maastricht 60% threshold.

Unstable Velocity of Money

It is unclear how a sovereign would be able to reach a target level of inflation (say 20% or 30% or higher). As the current experiments with QE highlight, there is no stable relationship between either the monetary base (notes and coins in circulation plus reserves held by banks in the central bank) or measures of broad money (including deposits in the banking system) (see charts). Therefore, it is unclear what increase in money supply would be required to deliver a ‘desirable’ level of inflation.

In a country with strong monetary sovereignty (such as Japan or the UK, for example) it is possible that at first rapid expansion of the money supply might have little impact on inflation. But at some point, inflation might shoot up above the new target level and then be difficult to reduce.

Figure 3
Impact of Inflation Shocks on Public Debt (% GDP)

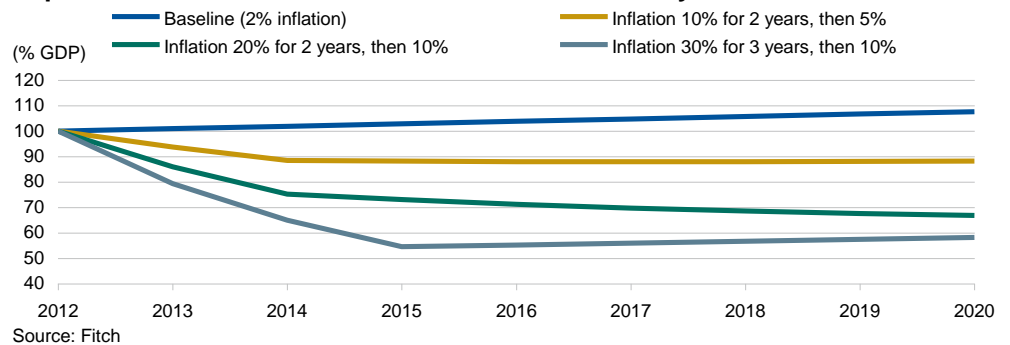
	2012	2014	2017	2020
Country A				
(Average debt maturity 6 years, 100% in local currency, pb= -3.8%, b (2012)=-7%, r=g=2%)				
Baseline (2% inflation)	80	88	99	110
10% inflation for 2 years, then 5%	80	77	87	98
20% inflation for 2 years, then 10%	80	67	74	82
30% inflation for 3 years, then 10%	80	58	64	79
Country B				
(Average debt maturity 6 years, 50% in local currency, pb= -3.8%, b (2012)=-7%, r=g=2%, exchange rate depreciation =p)				
Baseline (2% inflation)	80	89	100	118
10% inflation for 2 years, then 5%	80	84	98	114
20% inflation for 2 years, then 10%	80	81	99	118
30% inflation for 3 years, then 10%	80	78	98	119
Country C				
(Average debt maturity 10 years, 100% in local currency, pb= -1%, b (2012)=-5%, r=g=2%)				
Baseline (2% inflation)	100	102	105	108
10% inflation for 2 years, then 5%	100	89	88	88
20% inflation for 2 years, then 10%	100	75	70	67
30% inflation for 3 years, then 10%	100	65	56	58

Notes

- Where pb is the primary budget balance, b is the total budget balance, r is the real interest rate, g is the real growth rate.
 - It is assumed that the marginal (nominal) cost of funding is equal to the current year's inflation rate plus the r; and the nominal effective interest rate is equal to $(1/\text{average debt maturity}) * \text{marginal cost of funding} + (1-(1/\text{average debt maturity})) * \text{nominal effective interest rate } t-1$. Arguably the real interest rate would also rise to reflect a higher risk premium, worsening the debt dynamics.
 - For Country B, it is assumed that the exchange rate depreciates in line with inflation. However, arguably it would depreciate faster to owing to a higher risk premium, worsening the debt dynamics. The marginal cost of funding on local currency debt is as for Country A and increase to 6% (from 4%) on foreign currency debt to reflect a higher risk premium
- Source: Fitch

Figure 4

Impact of Inflation on Government Debt/GDP: Country C



In a country with weak monetary sovereignty (such as an emerging market), the domestic money supply tends to be lower relative to GDP than in developed countries, so that a given level of monetary financing would lead to a greater proportional increase in the money supply. The demand for (local currency) money may also be much more sensitive to movements in inflation or the exchange rate owing to a history of inflation and devaluation. In that case, inflation, dollarisation and devaluation could be more rapid.

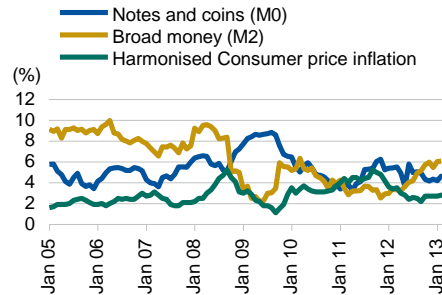
Costs of Inflation Could Outlast Gains to Debt Dynamics

Inflation is costly, which is why low inflation is generally a policy objective: it adds to transaction costs and blunts relative price signals; it can redistribute income from savers (such as pensioners) and creditors to fixed income debtors; it can increase economic and financial uncertainty and volatility, adversely affecting investment and real economic outcomes; and it is costly in terms of lost output and employment to squeeze out of the system. These effects have a high social and political cost underlining that inflating away sovereign debt is not an easy option.

Figure 5

UK Money and Inflation

12-month % change

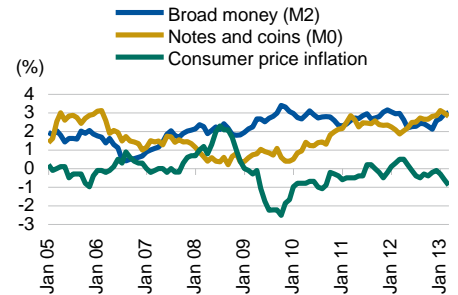


Source: Datastream

Figure 6

Japan Money and Inflation

12-month % change



Source: Datastream

Figure 7

Selected High Grade Sovereigns Data, 2012

	Govt debt (% GDP)	LC share (% total)	Average debt maturity (years)	M2 (% GDP)	Exchange rate regime	Reserve currency status ^a
Australia	30	41	7.2	99	Free float	2
Canada	84	98	5.7	143	Free float	1
Chile	12	84	n.a.	93	Free float	0
China	49	97	5.7	195	Crawling Peg/Band	0
Czech Republic	46	84	5.5	77	Free float	0
Denmark	46	79	10.8	67	Peg	1
France	90	100	7.1	99	Euro	2
Germany	81	99	5.9	89	Euro	3
Hong Kong	38	99	n.a.	419	Currency board	0
Iceland	99	73	5.4	107	Managed float	0
Japan	234	92	3.8	242	Free float	3
Korea	35	75	5.7	142	Free float	0
New Zealand	49	97	5.1	121	Free float	1
Norway	30	100	2.6	61	Free float	0
Singapore	45	100	4.5	141	Managed float	0
Sweden	37	80	5	62	Free float	1
Switzerland	35	100	6.8	144	Managed float	2
UK	91	100	13.5	151	Free float	3
US	101	100	5.5	89	Free float	3

^a As in Fitch's Sovereign Rating Model, 3=highest, 0=lowest
Source: National Sources, IMF and Fitch

After a bout of high inflation, a sovereign would be likely to see the demand for money and local currency evaporate, a rise in dollarisation and capital flight and a collapse in the exchange rate. There would be a degradation of favourable characteristics such as: high domestic savings; the value of seigniorage; the ability to issue debt in its own currency at long maturity and low interest rates; and reserve currency and benchmark borrower status. Ironically, trust in the national money as a store of value gives a sovereign both the potential to exploit that trust to inflate away its debt and a lot to lose if it were to do so. The costs may outlast the benefits of the inflation tax.

Debt Restructuring Is Another Policy Option

Some of these characteristics would also be damaged by a debt restructuring. But overall, it might be a less bad policy option than attempting to inflate away the debt. Under its distressed debt exchange (DDE) criteria, Fitch classifies a debt restructuring as a default if the restructuring imposes a material reduction in terms vis-à-vis the original contracts and the restructuring or exchange is conducted to avoid a traditional payment default¹³.

¹³ "Distressed Debt Exchange", August 2012 at www.fitchratings.com

Local Currency Rating Methodology

Fitch does not, therefore, routinely assign sovereigns a LC issuer default rating of 'AAA'. The local rating is typically one or two notches above the FC rating¹⁴. The differential reflects the sovereign obligor's greater capacity to pay debt in local currency and potentially its greater willingness to do so if, for example, more of it is held by local banks and other residents.

Sovereign creditworthiness in terms of both foreign- and local-currency debt is a function of all the various factors that influence the stand alone credit quality of the government (primarily related to public finances, potential to monetise local-currency-denominated obligations and political stability), and the robustness of the economy's capacity to generate tax receipts and foreign exchange (primarily driven by an assessment of the risks to macroeconomic stability and the strength of external finances). The relationships between the various factors that influence the intrinsic credit quality of the sovereign and the ability to access foreign exchange are complex, change over time and cannot be clearly delineated.

Most sovereigns typically receive nearly all of their income in local currency, while they must purchase foreign currency in the foreign-exchange market (or from the central bank) or borrow it. The government's access to foreign currency therefore depends on the economy's (rather than the sovereign's) capacity to generate foreign currency and the willingness of market participants to exchange it for local currency.

Not only are tax receipts in local currency, but most sovereign governments (depending on their monetary sovereignty) through the central bank have ultimate control over the domestic money supply and some capacity to print currency to fund themselves. Many sovereigns have preferential access to domestic capital markets, which can be a more reliable source of funding than international capital markets, especially during periods of distress.

Consequently, the Local-Currency rating is typically one or two notches above the Foreign-Currency rating. Rarely, the Local-Currency rating may lie below the Foreign-Currency rating due to its payment record on domestic debt or if the sovereign's domestic debt burden dwarfs its foreign-currency obligations and it is judged that in a distress scenario, the authorities may choose not to default on limited foreign debt even as the sovereign restructures its local-currency debt.

The factors that influence the level of notching, if any, of the Local-Currency rating relative to the Foreign-Currency rating, fall into the following categories.

- Strong public finance fundamentals support a Local-Currency rating above the Foreign-Currency rating, especially where the primary constraint on the sovereign ratings stems from vulnerabilities in the balance of payments and external finances.
- An established domestic capital market, which is an ample and reliable source of fiscal funding in local currency at relatively low cost and with medium to long maturities, supports a Local-Currency rating above the Foreign-Currency rating.
- A short or fragile track record of low and stable inflation, reflected in the prevalence of inflation indexation and low levels of monetisation, limits monetary flexibility and hence the extent to which local-currency obligations will be rated above foreign-currency debt.
- Other factors include: the payment record and whether the sovereign has effectively treated local-currency debt more or less favourably than foreign-currency obligations; the exchange rate regime; the participation of non-resident investors in the local market; and the strength of the domestic banking and financial sector.

¹⁴ "Sovereign Rating Criteria", August 2012 at www.fitchratings.com

For sovereigns that do not have their own local currency, such as members of currency unions (notably the eurozone) and fully dollarised economies, the Foreign- and Local-Currency ratings are the same.

Annex

Figure 8
Fitch Rated Sovereign Defaults (1995-2012)

Country	FC Default	LC Default	Summary
Argentina (2001)	Yes	Yes	Defaulted on more than USD80bn of sovereign foreign-currency bonds in December 2001, most of which were held by non-residents. Debt default partially cured in 2005, but some holdout investors remain, constraining the rating to 'RD' until July 2010.
Dominican Republic (2005)	Yes	No	Distressed debt exchange (DDE) in 2005 affected more than USD1.1bn of eligible foreign currency-denominated bond debt.
Ecuador (2008)	Yes	No	Missed coupon payment on its 2012 global bonds followed by an announcement that the government would selectively default on all global bonds. The rating was lowered to 'RD' in December 2008.
Greece (2012)	Yes	Yes	DDE in March 2012 affecting EUR199bn of Greek and foreign law government bonds resulted in each EUR100 face value amount of Greek government bonds being exchanged for new bonds with a face value of EUR31.5, EUR15 of one- to two-year EFSF ('AAA') notes, and short-term EFSF notes to cover accrued, unpaid interest. Bondholders also received a notional EUR31.5bn of Greek GDP-linked securities. The net present value loss relative to the original terms and conditions of the bonds implied by the exchange was estimated to be 74%.
Indonesia (1998)	Yes	No	Paris and London Club rescheduling operations in June 1998; further rescheduling in 2000 and 2002. Indonesia maintained payments on the single Fitch-rated sovereign bond outstanding at the time
Jamaica (2010)	Yes	Yes	DDE in February 2010 affected the country's domestic debt, which was predominantly local currency but also included foreign currency-denominated instruments to which Fitch's foreign currency rating applied.
Jamaica (2013)	Yes	Yes	DDE in February 2013 affected the country's domestic debt, which was predominantly local currency but also included foreign currency-denominated instruments to which Fitch's foreign-currency rating applied.
Moldova (2002)	Yes	No	USD75m Eurobond restructured in 2002, followed by a Paris Club deal.
Russian Federation (1998)	Yes	Yes	Russia defaulted on its local-currency domestic debt (GKOs) in August 1998, terms imposed in December 1998 involved capital reduction, exchange into longer maturity debt and repatriation restrictions for non-residents. It then incurred arrears on foreign-currency debt owed to the Paris Club of official bilateral creditors. And in 1999-2000 it defaulted on former Soviet Union-era foreign currency bonds (PRINs, IANs and MinFin IIIs) held by the private sector, although it maintained payments on Russian Federation-era Eurobonds.
Uruguay (2003)	Yes	No	DDE in March 2003 affecting more than USD5bn of sovereign foreign-currency debt, mostly held by non-residents.

Source: Fitch

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