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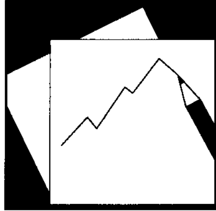

IMF Working Paper

Lessons from High Inflation Episodes for Stabilizing the Economy in Zimbabwe

Sharmini Coorey, Jens R. Clausen, Norbert Funke, Sònia Muñoz, and Bakar Ould-Abdallah

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Abstract

This Working Paper should not be reported as representing the views of the IMF.
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Zimbabwe has currently the highest rate of inflation in the world (an annual rate of 1,730 percent in February, 2007). The high rates of inflation have contributed to the contraction of the economy, which has declined by about 30 percent since 1999. This paper examines the stabilization experience of countries that experienced similar rates of inflation (above 1,000 percent) during 1980-2005 and draws lessons for Zimbabwe. First, with appropriate stabilization policies, the fall in inflation can be very rapid and output normally recovers within the first year or two of stabilization. Second, while reforms need to be comprehensive, a strong upfront fiscal consolidation, including elimination of quasi-fiscal activities, is a critical element of a successful stabilization program. Third, although stabilization itself can be done without significant external financing in the first year, most countries benefited from external policy advice and technical support, including from the IMF, during stabilization and from an increase in financial assistance in subsequent years.

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I. Introduction

Hyperinflations are largely a modern and rare phenomenon generally associated with printing money to finance large fiscal deficits due to wars, revolutions, the end of empires, and the establishment of new states. According to Cagan's (1956) definition, hyperinflation begins in the month inflation first exceeds 50 percent (per month) and ends in the month before the monthly inflation rate drops below 50 percent for at least a year. By this definition, during 1920 and 1946 there were eight hyperinflations, while between 1947 and 1984 there were none. Since 1984, however, there have been fifteen hyperinflation cases.[2]

Zimbabwe has currently by far the highest rate of inflation in the world. Inflation, as measured by the official CPI, soared to 1,730 in February 2007. Since monthly inflation is still officially under 50 percent, Zimbabwe currently does not qualify formally as a hyperinflation case by Cagan's definition. To closely align the cross-country experience with the current situation of Zimbabwe, this paper uses a 12-month inflation rate of 1,000 percent—rather than hyperinflations, strictly defined—as the threshold for identifying periods of very high inflation. While the 1,000 percent threshold may be somewhat arbitrary, the move from three-digit to four-digit rates of inflation can be seen as passing a psychological barrier.

It is worth mentioning, however, that the official CPI in Zimbabwe is likely to substantially understate inflation because about a third of the basket reflects price-controlled items and the consumption weights are outdated. Many in the private sector believe that the true rate of annual inflation was closer to 3,000 percent in February 2007. Monthly inflation rates in informal private indices—which are more heavily weighted by food—have exceeded 50 percent for several months. To the extent that the fall in real incomes has shifted the average consumption basket towards food, transport, and other basic items that move in line with the rapidly depreciating parallel market rate the understatement of inflation by the official CPI is likely to have increased over time.

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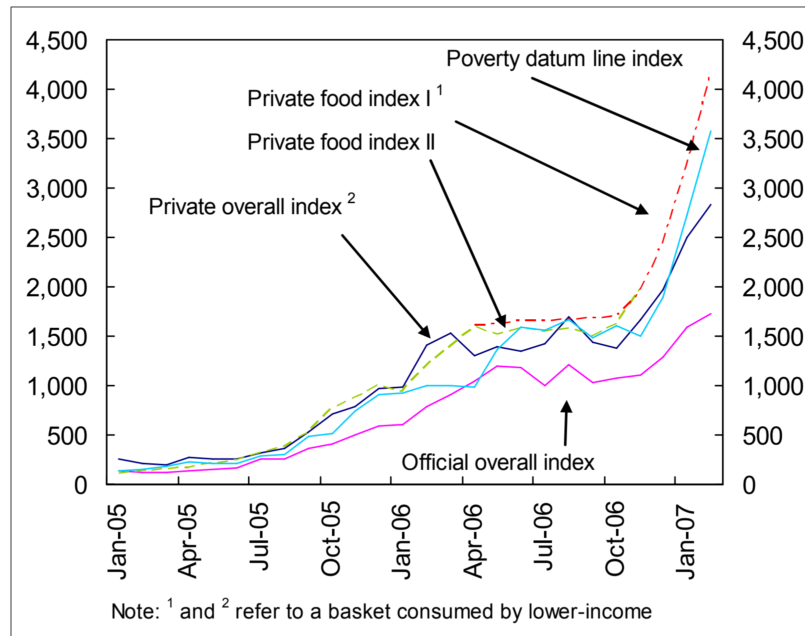
[2] See Fisher, Sahay, and Végh (2002) for details.

Figure 1. Official and Private Inflation



Another distinct feature of Zimbabwe's economy is the sustained contraction in output. Real GDP is estimated to have declined by about 30 percent since 1999. While the initial output collapse is widely attributed to the chaotic seizure of commercial farms—the backbone of the economy—other factors have also contributed in recent years: (i) high and accelerating inflation; (ii) price distortions due to extensive controls and regulation, particularly relating to the exchange rate which is fixed by the Reserve Bank of Zimbabwe (RBZ) at a highly overvalued rate; (iii) the collapse of investor confidence due to unpredictable policies and lack of respect for property rights, particularly in agriculture and mining; and (iv) minimal external financing because of poor relations with creditors and donors and deteriorating economic and social conditions.

Without an immediate stabilization package and comprehensive medium-term structural reforms, prospects are for Zimbabwe's inflation to continue accelerating and for the economic crisis to deepen. Do the countries that have gone through similar episodes of high inflation in recent decades have lessons to offer for Zimbabwe? Section II of this paper examines high inflation episodes internationally during 1980-2005 and presents some stylized facts of successful stabilization programs. Section III analyzes reform elements that have been particularly critical for successful stabilization in other cases. Guided by these findings, Section IV identifies a set of policy actions specific to Zimbabwe that are essential, as a first step, to stabilize the economy. Section V looks at the role of official external financing during the stabilization process. Section VI concludes.

II. High Inflation Episodes: Some Stylized Facts

Using a 12-month inflation rate of 1,000 percent as the threshold for defining a period of high inflation, we identify 30 such inflation episodes in 24 countries between 1980 and 2005.[3] Our sample comprises 5 Latin American countries, 17 Central and Eastern European countries / former Soviet Union (FSU) countries, and 2 African countries (see Appendix Table 1). Six countries (Argentina; Brazil; Democratic Republic of Congo; Macedonia, FYR/SFRY; Nicaragua; and Tajikistan) out of the 24 countries experienced two periods of high inflation, for a total of 30 high inflation episodes.

Table 1. High Inflation Periods (Annual Inflation>1,000 percent): 1980-2005

	Total	Central and Eastern Europe/ Former Soviet Union	Latin America	Others
Number of episodes	30	19	8	3
Number of countries	24	17	5	2
Minimum length (months)	2	2	3	5
Median length (months)	13	11	23	20
Max length (months)	34	25	34	24
Maximum annual inflation rate (percent)	91,253	27,020	63,776	91,253

Source: IMF International Financial Statistics and World Economic Outlook.

The median length of high inflation periods in the whole sample exceeded one year, though the duration and severity of high inflation differed significantly across countries and regions. High inflation periods tended to be shorter in Central and Eastern European countries and the FSU (close to one year),[4] while in Latin American economies the median was twice as long. In almost a third of the cases inflation exceeded 10,000 percent; in two cases (Democratic Republic of Congo, Nicaragua) it exceeded 60,000 percent.[5]

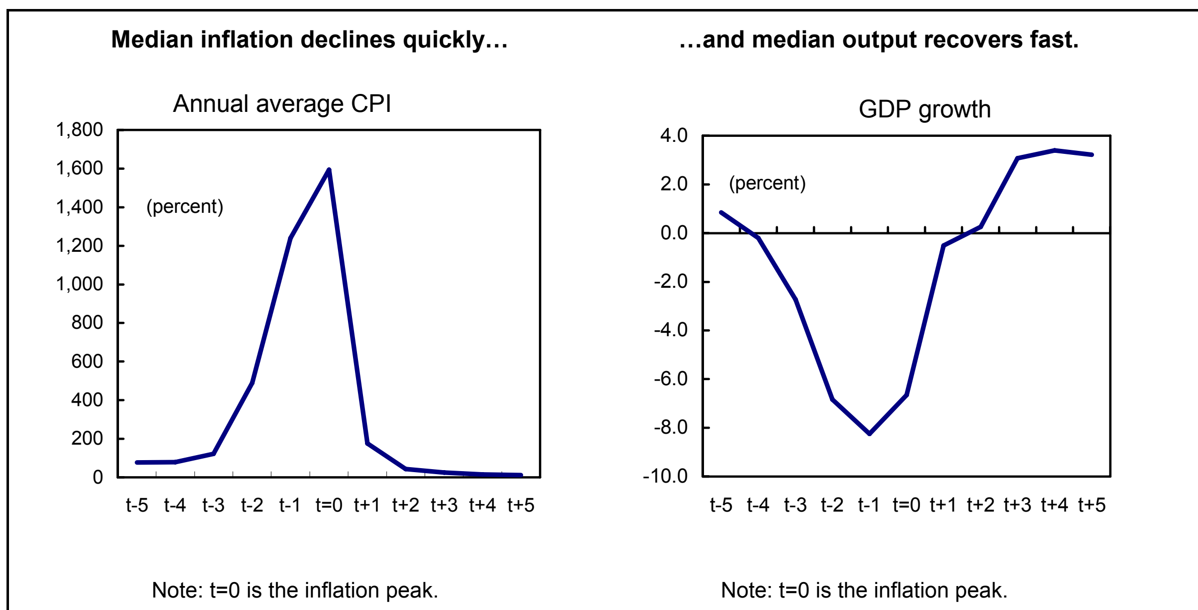
[3] Our sample includes all countries that pass this threshold for which data are available. All data are taken from the IMF's International Financial Statistics and World Economic Outlook database, except for the data on external official financing, which is obtained from the World Bank's World Development Indicator database. Baumann (2000), Fischer, Sahay, and Végh (2002), and Reinhart and Savastano (2003), among others, provide selective reviews of high and hyperinflation periods.

[4] In Central and Eastern European and FSU countries, the period of high inflation was related mainly to the transition to a market-oriented economy and the initial price liberalization.

[5] Serbia's inflation peaked at a monthly rate of 175,093 percent in the period February 1993–January 1994, but is not included in this sample due to the lack of data.

The stylized facts show that in a successful stabilization inflation tends to fall very rapidly while output recovers within the first or second year of stabilization (Figure 2).[6] The median annual inflation fell from a peak of about 1,600 percent to 180 percent 12 months after the peak. While the period of accelerating inflation was typically characterized by declining real GDP, the median output decline slowed significantly, from some -7 percent to about - ½ percent, in the first year of stabilization and positive output growth in the second year of stabilization. The evidence thus suggests that high inflation can be brought down rapidly without substantial output costs, and even with output gains.[7] This is likely because—as well established in the literature and confirmed in Figure 2—high inflation is highly damaging to output, so that the reduction of inflation itself has a positive effect on output.

Figure 2. Stylized Facts



III. Critical Reform Elements and Sequence

This section examines more closely the most common reform sequence of successful stabilization programs within the sample, and compares it with previous evidence on sequencing for developing countries and transition economies in the literature[8] (Table 2). Following the literature, we identify several broad areas of reform. Using IMF Country Reports, we identify each country's reform sequence by ranking it according to the starting time of reforms. Number 1 denotes the highest priority reform area (i.e., the area where action was taken first) and number 5 the lowest (i.e., the area where action was taken last).

[6] In Figure 2, *t=0* is the year of the inflation peak, *t–5* the fifth year before the peak, and *t+5* the fifth year after the peak, etc.

[7] This finding is supported by the literature (Sargent, 1982; Fischer, Sahay, and Végh, 2002; Easterly, 1996).

[8] For a more detailed discussion of sequencing issues, see, for example, Nsouli, Rached, and Funke (2005).

We then establish a "most common" sequence for the sample of high inflation episodes.[9] More than one ranking in Table 2 indicates that the distribution of rankings for that reform area was more widespread. An identical ranking between reform areas indicates that reforms in these areas were initiated at roughly the same time.

Table 2. Sequencing of Reforms[1]

	Institutional Reform[2]	Fiscal/ Monetary Stabilization	Domestic Price Liberalization	Domestic Financial System	Privati-zation	Trade Reform	Capital Flow Liberalization
Developing Countries							
Edwards (1990)	...	1	...	2	...	3	4
Economies in Transition							
Fischer/Sahay (2000)	1	1	1	4	1/3	2	5
High Inflation Countries							
Sample of 24 countries (most common)[3]	1	1	1	1/2/3	1/2/3	1/2/4	...

Source: As indicated, and IMF staff research.

[1] The number 1 denotes the highest priority reform area, number 5 the lowest.
[2] Refers to reforms in the public sector, labor market, central bank, and in property rights.
[3] Based on the interpretation of IMF staff reports for each of the countries in the sample.

The analysis of the cross-country sample[10] as well as the literature suggests:

a. Most successful stabilization programs were characterized by fairly **broad-based reform agendas**. Institutional reforms as well as a program of fiscal stabilization and price liberalization were started at the same time. To restore confidence and establish credibility, a dramatic shift in policy was needed.

b. **Fiscal and monetary tightening** was critical for a successful stabilization program. A sharp reduction in the fiscal deficit was needed to end periods of very high inflation. For example, in Nicaragua the adjustment of the primary fiscal deficit was 23 percentage points of GDP within one year, while Armenia achieved an adjustment of 9 percentage points of GDP within one year. In Bolivia, the general government fiscal deficit (excluding quasi-fiscal deficits) declined in two years from 27 percent of GDP to 3 percent. A recent cross-country study (Tsibouris et al., 2006) confirms that large upfront fiscal adjustments were the most successful in reducing inflation. Large

[9] Needless to say that such an effort involves some judgment calls. The ranking refers to the starting point of reforms. Different reform steps may overlap. If one specific ranking is found in more than half of the cases in the sample, this ranking is established to be "most common". If the distribution of rankings within our sample is more widespread, the three most frequently found rankings are provided in Table 2.

[10] Country examples below relate to the disinflation periods in Appendix Table 1.

adjustments, unlike small consolidations, generally had a positive macroeconomic impact (with output recovering within one to two years).[11]

c. Fiscal consolidation needs to include the reduction and elimination of **quasi-fiscal activities**, which played an important role in more than half of the 30 countries in our sample.[12] Before stabilization, quasi-fiscal deficits had frequently arisen because central banks had provided financial support to loss-making state-owned enterprises (e.g., in Bolivia; Croatia; and Macedonia, FYR/SFRY) or bailed out banks in distress (e.g., in Angola and Bulgaria). Enforcing greater discipline on state-owned enterprises through hard budget constraints was therefore an important step in reducing the public financing requirement.

d. Besides fiscal and monetary stabilization, **price and exchange regime liberalization** was often a high priority (e.g., in Azerbaijan and Bolivia). Although liberalization may have contributed to a one-time increase in the price level, it helped allocate resources more efficiently and stopped the government from providing subsidies that had previously fueled inflation.

e. In the majority of cases, particularly in transition economies, **institutional reforms**, such as improvements in the rule of law, reforms of the public sector, the central bank, and the labor market, were started immediately (countries such as Nicaragua and Peru also initiated similar reforms). These reforms helped make the stabilization package credible and boosted the confidence of domestic and external investors.

f. Countries differed on the timing of reforms of the **financial system, privatization of state-owned enterprises, and trade reform**. While some countries initiated reform steps in these areas at the start (e.g., Nicaragua and Georgia), others postponed them (e.g., Turkmenistan and Ukraine).

IV. Achieving Macroeconomic Stabilization in Zimbabwe

Accelerating inflation in Zimbabwe has been fueled by high rates of money growth reflecting rising fiscal and quasi-fiscal deficits. Quasi-fiscal losses reported by the RBZ, which have increased sharply since 2004, have reflected mainly large foreign exchange subsidies to public enterprises and government, price supports to exporters (to partially compensate them

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[11] The sample in Tsibouris et al. (2006) covers 165 countries from 1971 through 2001 and indicates a median tightening of the primary fiscal balance of about 12.5 percentage points of GDP (and a range of 6.3-29.9 percentage points of GDP) in one year.

[12] The extent of fiscal adjustment may be understated in the sample, to the extent that the fiscal data did not systematically include the quasi-fiscal activity of the central bank and other public entities, which in many cases was sharply reduced during stabilization.

for the highly overvalued exchange rate), and interest payments on open market operations.[13] These losses now dwarf the traditionally measured government deficit. For instance, although the government reported a small primary surplus of around 2 percent in 2006, when the fiscal accounts are adjusted to include the quasi-fiscal activities (QFAs) of the RBZ, the adjusted primary balance shifts to a deficit of almost 25 percent of GDP—a more accurate picture of the true fiscal position (Table 3). The adjusted overall fiscal deficit or financing requirement, including government and RBZ interest payments, is estimated to have amounted to about 80 percent of GDP in 2006.[14] These large and rising deficits have been partly financed through money creation, giving rise to accelerating rates of inflation. In fact, money growth and inflation in 2006 would have been even higher without the implicit taxation of the banking system via a lengthening of the maturity of treasury and RBZ bills and payment of highly negative real interest rates on these bills.

Table 3. Adjusted Fiscal Position

(Percent of GDP)

	2004	2005	2006 Est.
Central government			
Revenue	33.8	43.7	51.3
Expenditure	41.5	49.6	58.6
Of which: wage bill	15.3	18.1	17.1
Overall balance [1]	-4.7	-3.1	-5.4
Primary balance	-1.7	3.7	2.3
Adjusted fiscal position			
Primary balance	-26.9	-17.2	-24.7
Financing requirement	-29.9	-64.3	-80.3

Sources: Zimbabwean authorities; IMF staff estimates and projections.

[1] Including grants, excluding interest arrears.

The 2007 budget substantially increased government spending in real terms. In his budget speech, the Minister of Finance also announced that all QFAs would be transferred to the budget, with the RBZ no longer undertaking new QFAs. However, no measures were announced to credibly lower QFAs, even though the budget itself made only minimal provision for the newly-absorbed QFAs. Total spending in 2007 is likely to increase (via supplementary budgets) beyond the amount stated in the current budget. There is no evidence so far that the RBZ has refrained from QFAs in 2007. The recent announcement by the RBZ

[13] The RBZ's quasi-fiscal activities are discussed in greater detail in Muñoz (2007).

[14] Interest payments include the effects of inflation. The adjusted financing requirement gives an indication of the overall deficit that must be financed by creating money or issuing domestic treasury bills; external financing of public sector deficits is limited in Zimbabwe.

that it would create a fully-owned subsidiary called FISCORP to carry out QFAs, possibly on a transitory basis, would not address the fundamental issue—the massive price and exchange rate distortions and poor governance in the public sector (including public enterprises) that place an unsustainable burden on the public finances.

The international experience suggests that in countries such as Zimbabwe, with high inflation and extensive relative price distortions, strong upfront adjustment through a broad-based policy package is needed to establish credibility and minimize the cost of adjustment. For Zimbabwe, we identify five interrelated elements that would be necessary in an initial stabilization package:

1. **Transparent transfer of quasi-fiscal activities to the government budget**, as announced by the 2007 budget.[15] No entity outside the budget should undertake any activity of a fiscal nature (including interest payments, subsidized credits etc.) without offsetting transfers transparently provided for in the budget. For instance, any QFAs carried out through the RBZ, FISCORP, the Industrial Development Bank of Zimbabwe or any other public entity should be covered via budgetary transfers. The purpose of this step, which by itself would not reduce inflation, is to increase transparency and accountability and strengthen fiscal governance by having actions of a fiscal nature subjected to normal budgetary scrutiny and procedures.

2. **Substantial fiscal tightening, including the newly-absorbed QFAs of the RBZ or any other public entity.** For instance, estimates based on preliminary data for 2006 suggest that a reduction of at least 10 percentage points of GDP in the adjusted primary balance (including the newly-absorbed QFAs) relative to the outcome in 2006 would be needed to lower inflation by about 800 percentage points. A tightening of this order of magnitude or more would be in line with large fiscal adjustments made by other countries, as discussed above. This tightening could be achieved by reduction in the government wage bill—which is large by regional standards—and capital expenditure—which more than doubled in real terms in 2006—as well as from cuts in (former) QFAs, particularly subsidies to public enterprises.[16] Complementary measures, such as price and exchange rate liberalization (see below), would be needed to ensure that QFAs are durably reduced. In addition, fiscal expenditure would need to be prioritized (within a tighter envelope) to ensure food security, rehabilitate the collapsing health infrastructure, and provide a targeted social safety net to

[15] It is the *new flows* of activity previously done by the RBZ (or any other such entity) that need to be transferred, not the stock of losses from past QFAs. Unrealized exchange losses can remain in the RBZ's balance sheet until recapitalization following stabilization.

[16] Government revenue ratios have been relatively high in Zimbabwe (around 30-52 percent in 2004-06). Hence the tightening needs to come mainly from reductions in expenditure which are very large in relation to GDP. Adjusted primary expenditure is estimated to have amounted to some 75 percent of GDP in 2006, of which non-interest QFAs of the RBZ amounted to some 27 percent of GDP. Zimbabwe's high government wage bill may reflect excessively large numbers of workers rather than an excessively high level of real wages.

protect vulnerable groups, including those affected by HIV/AIDS and "Operation Murambatsvina".[17]

3. **Liberalizing the exchange regime by unifying the exchange rate and removing restrictions on current international payments and transfers.** The interbank exchange rate would need to be substantially devalued promptly and all multiple exchange rates eliminated. The interbank rate should then be depreciated steadily toward the parallel market rate (which would appreciate as fiscal and monetary policies are tightened), and the unified exchange rate subsequently floated.

4. **Deregulating prices and imposing a hard budget constraint on public enterprises.** Enterprises need a hard budget constraint that requires them to cut costs and operate at preset levels of budget subsidies and agreed pricing formulas. Deregulating prices and allowing public enterprises to introduce cost-recovery pricing would be an essential element of a plan to move the operation of these enterprises to a commercial footing. Price deregulation would likely lead to a one-off spike in prices, but strong fiscal adjustment would ultimately reduce inflation pressures.

5. **Establishing a strong money anchor to reduce inflation and inflation expectations.** Once exchange rates are unified and the RBZ disengages from QFAs, a broad money anchor and a flexible exchange regime could be established, with reserve money as the operational target. (An exchange rate anchor would be difficult to implement because international reserves are low). To ensure that monetary policy is effective and reduce liquidity risks in the banking system, interest rates would need to be gradually moved to market determined levels.

Achieving sustained growth in Zimbabwe will require—in addition to stabilization—comprehensive structural reform and better governance over the medium term. The ongoing output collapse in the country is consistent with the stylized facts from cross-country experience, which shows that very high inflation is usually accompanied by a sharp output contraction. The cross-country evidence also shows that in a successful stabilization, output recovers quite quickly—usually within the first year or two of stabilization. In the case of Zimbabwe, we may surmise that there can be an initial positive output response if inflation is brought down rapidly and prices are liberalized because the damaging effects of uncertainty and price distortions would be greatly reduced. However, sustained output growth after stabilization will depend on addressing fundamental structural problems. Public enterprise and civil service reform, central bank reform, as well as public expenditure and tax reform will be important to sustain the fiscal adjustment and stimulate output growth. Improving governance, including by protecting private property rights and increasing policy predictability, will be essential for reinvigorating investor confidence. Zimbabwe's situation with respect to agriculture—a key sector of the economy—may be unique in that property rights issues relating to security of land tenure remain unresolved and may not be easy to

[17] "Operation Murambatsvina" is the government campaign that demolished unauthorized dwellings and structures across the country in 2005. The U.N. estimates that some 700,000 people lost their home or source of livelihood, or both, and that a further 2.4 million people were indirectly affected in varying degrees.

resolve even if consensus can be reached on stabilization and other structural reform policies. At present, commercial bank lending to the sector remains limited in part because existing arrangements, including the recently-introduced 99-year leases, do not provide adequate security of land tenure. A broad-based agreement among stakeholders on land tenure may be needed to achieve sustained growth in agriculture and in the economy more generally.

V. The Role of External Support

The lack of external financing is an issue for Zimbabwe, but cross-country evidence does not indicate this is a reason by itself to delay the implementation of a stabilization program. Even with limited external support, decisive policy action led to positive stabilization gains in several cases. In all 30 of the stabilization cases between 1980 and 2005, inflation had fallen by more than 600 percentage points 12 months after the peak of inflation. Of these, more than a third (12 cases) had official external financing[18] at levels comparable to that of Zimbabwe (less than 4 percent of GDP) and had no Fund arrangement in the main year of disinflation[19] (see Appendix Table 1). However, in almost all these cases there was external support in the form of close policy advice and technical assistance. The experience thus suggests that while several countries began significant stabilization even without large amounts of external financing, they benefited during this period from nonfinancial forms of external support. Within the subgroup that had limited external financing in the first year of stabilization, 9 cases subsequently had either a Fund arrangement or some other form of close engagement with the Fund, such as a staff-monitored program (SMP) or a rights accumulation program (RAP). The remaining three cases were exceptional: Brazil (two episodes covering May 1990-April 1991 and July 1994-June 1995) and Turkmenistan, which received technical assistance from the Fund. Overall, the evidence thus indicates that successful stabilization was followed by external financial and technical support, if not in the first year of stabilization, then in subsequent years.

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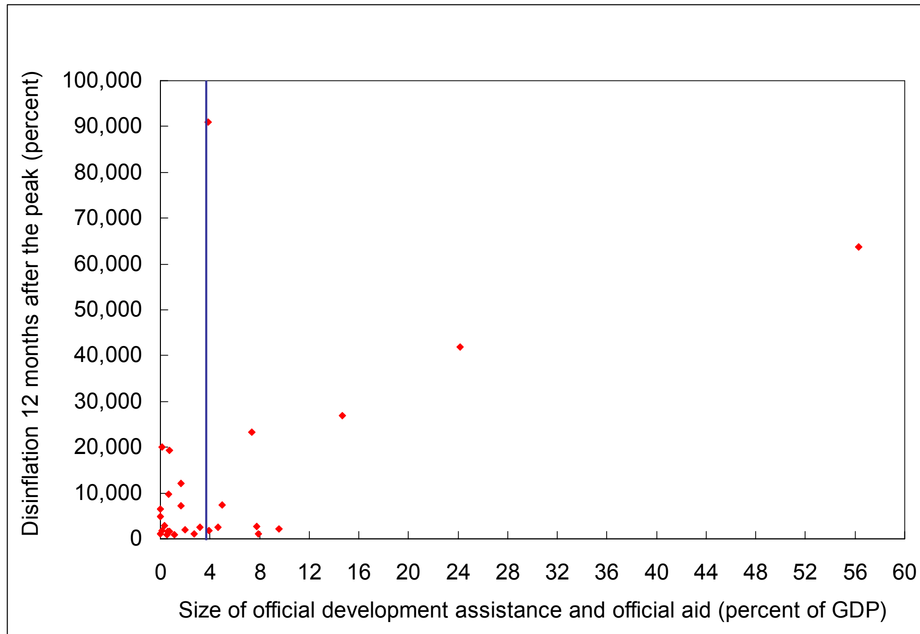
[18] Defined as "Official development assistance and official aid" in the World Development Indicators (World Bank).

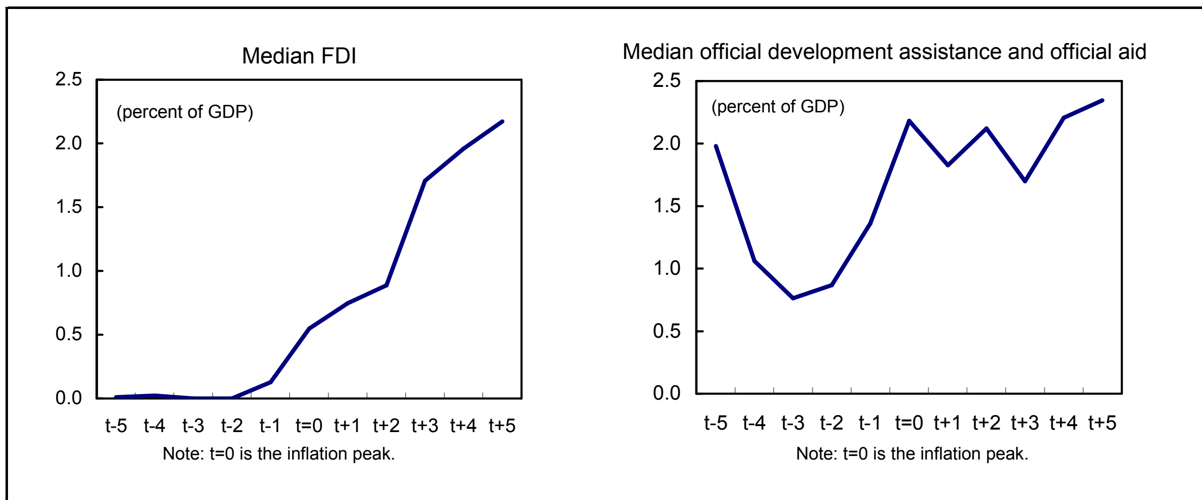
[19] Some transition economies drew small amounts under the Systemic Transformation Facility (STF), which was not formally a Fund arrangement.

Figure 3. Disinflation and External Financing



The international experience also suggests that private capital flows tend to follow successful stabilization. Thus, better policies and stronger governance, over time, attract private capital. As reforms progressed, foreign direct investment (FDI) tended to increase gradually from negligible levels. Some countries, including those with significant natural resources (e.g., Kazakhstan, Angola), were particularly successful in quickly attracting FDI.

Figure 4. External Inflows



For Zimbabwe, strengthening relations with donors and mobilizing external financing would ease the burden of the initial adjustment needed for a strong, upfront reduction in inflation. The more financing that is available, the less drastic the initial fiscal adjustment needed to

obtain a given reduction in inflation and the greater the room to address the possible social dislocation from the reduction in the size of the public sector (including public enterprises). External policy advice and technical support would also be essential to implement a broad-based stabilization package. Longer term financing would also be needed to support a medium term structural reform program to address the extensive distortions and ensure that the stabilization is sustained. At the same time, if a credible stabilization package is implemented upfront and followed by reforms to restore investor confidence, Zimbabwe's economy is sufficiently diversified and its long-term potential strong enough to be able, most likely, to attract significant private capital inflows over the medium term.

VI. Conclusions

The international experience suggests that periods of high inflation can last for a considerable time and there is little to prevent inflation from spiraling higher and higher if no reforms are undertaken. Periods of very high inflation have typically been characterized by widespread economic distortions, including very loose fiscal and quasi-fiscal policies, relative price distortions, segmented foreign exchange markets, declining domestic financial intermediation, and poor governance. They have also been associated with a sharp and sustained decline in economic activity.

Gains from stabilization—in the form of a rapid decline in inflation and recovery of output—can be achieved relatively quickly once a broad-based package of policies is implemented. An appropriate stabilization program needs to tackle the underlying causes of high inflation. A large fiscal adjustment upfront that especially reduces quasi-fiscal activities—if they exist—is at the core of such a package. Although international support helps to ease the adjustment burden, several countries have achieved initial stabilization without an upfront increase in official external financing. Structural reforms over the medium term are necessary to sustain stabilization and achieve growth.

In the case of Zimbabwe a comprehensive and credible policy package to stabilize the economy is needed without delay. Such a package should include several mutually-reinforcing actions centered on fiscal tightening, and price and exchange regime liberalization. The main elements would be: (i) a transfer of all quasi-fiscal activities to the government budget; (ii) strong fiscal adjustment, including newly-absorbed QFAs; (iii) exchange rate unification and full liberalization of the exchange regime for current international payments and transfers; (iv) liberalization of price controls and imposition of hard budget constraints on public enterprises; and (v) a strong monetary anchor.

Achieving sustained growth in Zimbabwe will require—in addition to stabilization—better governance and comprehensive structural reform over the medium term. Improvements in governance, including a more predictable policy environment and a strengthening of property rights, will be essential to restore investor confidence. Structural priorities include public enterprise reform; civil service reform to sustain a real reduction in the government wage bill; expenditure management and tax reform; central bank reform and recapitalization; and land and agriculture reform. Strengthening relations with creditors and donors would help mobilize external financial and technical support for the domestic reform efforts needed for Zimbabwe to achieve stabilization, sustained growth, and poverty reduction.

Appendix Table 1. Disinflation and External Financial Constraints

Country	Disinflation Period	Main Disinflation Years	Inflation Rate		Official Development Assistance and Aid (Percent of GDP)[2]	Fund Arrangement in the 12 Months After the Peak?
			Peak	12 Months After Peak		
Angola	December 1996–January 1998	1997	2,660.8	131.5	4.6	No
Argentina	July 1985–June 1986	1985–1986	1,128.9	50.1	0.0/0.08	Yes
Argentina	April 1990–June 1994	1990–1991	20,266.0	287.3	0.1/0.1	Yes
Armenia	June 1994–February 1997	1994–1995	27,019.7	196.7	14.5/14.8	No[3]
Azerbaijan, Rep. of	December 1994–February 1997	1995	1,898.4	173.6	3.9	No[3]
Bolivia	October 1985–September 1987	1985–1986	23,447.0	94.1	6.3/8.4	Yes
Brazil	May 1990–July 1991	1990–1991	6,821.3	375.2	0.0/0.0	No
Brazil	July 1994–February 1997	1994–1995	4,922.6	33.0	0.0/0.0	No
Bulgaria	April 1997–November 1998	1997–1998	2,019.5	22.1	2.1/1.9	Yes
Congo, Dem. Rep. of	October 1992–October 1993	1992–1993	7,689.2	486.2	1.7	No
Congo, Dem. Rep. of	October 1994–September 1995	1994–1995	91,253.1	330.2	4.2/3.5	No[4]
Croatia	July 1993–November 1994	1993–1994	19,449.5	209.7	0.8	No[3]
Estonia	1993	1993	1,069.0	89.0	1.1	Yes[3]
Georgia	February 1995–September 1995	1995	2,667.8	42.9	7.8	Yes[3]
Kazakhstan	August 1994–March 1999	1994–1995	3,121.4	156.1	0.3/0.3	Yes
Kyrgyz Republic	September 1993–February 1996	1993–1994	1,311.8	169.6	5.5/10.3	Yes[3]
Macedonia, FYR/SFRY[1]	1990	1990	1,239.9	608.4	n.a.	Yes
Macedonia, FYR	November 1992–December 1996	1993	2,100.5	241.7	0.1	No
Moldova	1994	1994	2,705.7	104.6	3.2	Yes[3]
Nicaragua	February 1989–March 1990	1989	43,033.7	1,074.4	24.1	No
Nicaragua	April 1991–April 1992	1991	63,775.7	24.2	56.3	Yes
Peru	September 1990–September 1995	1990–1991	12,377.8	230.4	1.5/1.8	No
Poland	March 1990–March 1992	1990–1991	1,173.3	90.9	2.2/3.3	Yes
Russia	October 1993–November 1994	1993–1994	1,066.7	221.1	0.6/0.5	No[3]
Slovenia/SFRY[1]	February 1990–March 1991	1990	3,450.0	51.2	n.a.	Yes
Tajikistan	January 1994–December 1994	1994	7,344.0	1.1	5.0	No
Tajikistan	March 1996–March 1997	1996–1997	2,266.8	13.4	9.8/9.3	Yes
Turkmenistan	July 1996–February 1998	1996–1997	1,633.6	98.4	1.0/0.5	No
Ukraine	January 1994–November 1997	1994–1995	10,155.0	401.1	0.6/0.7	No[3]
Uzbekistan	November 1994–October 1996	1995	1,844.2	189.4	0.6	No[3]

Sources: IMF database and World Bank, World Development Indicators.

[1] Slovenia, before June 1991, and Macedonia, before September 1991, were part of the Socialist Federal Republic of Yugoslavia (SFRY).

[2] The official development assistance and official aid data refers to the main disinflation years.

[3] These countries made drawings under the Systemic Transformation Facility (STF).

[4] Democratic Republic of Congo had a staff-monitored program (SMP) from January 1994 to December 1996 that did not involve financing.

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