SPECIAL FOCUS 2

Low for How Much Longer?
Inflation in Low-Income Countries

Inflation in low-income countries (LICs) has declined sharply to a median of 3 percent in mid-2019 from a peak of 25 percent in 1994. The drop has been supported by the move to more flexible exchange rate regimes, greater central bank independence, and a generally more benign external environment since the 1990s. However, low LIC inflation cannot be taken for granted amid mounting fiscal pressures and the risk of exchange rate shocks. To maintain low and stable inflation, monetary and fiscal policy frameworks need to be strengthened and supported by efforts to replace price controls with more efficient policies.

Introduction

The number of low-income countries (LICs) has more than halved since 2001. As of 2019, 31 countries are classified as "low income" according to the World Bank definition, down from 64 in 2001, following the graduation of 35 mostly metals-exporting and transition economies to middle-income status.[1] Today, LICs are predominantly agriculture-based, small, and fragile, and they tend to have weak institutions (World Bank 2015). All but six are in Sub-Saharan Africa.

LICs have made large strides in price stabilization over the past five decades, with sharp declines in inflation levels and volatility (Figure SF2.1). That said, the level and volatility of inflation in LICs has remained higher than in advanced economies and other emerging market and developing economies (EMDEs) over the past two decades (Ha, Ivanova et al. 2019a). Reasons include monetary policy challenges that arise in LICs due to their volatile economies, pervasive use of administered pricing, conflicts among central bank policy objectives, weaknesses in monetary policy transmission, and limited analytical capacity at central banks. The disinflation in today's LICs was also considerably less pronounced than in the (larger number of) EMDEs that were classified as LICs in 2000 but have since achieved middle-income status.

Low inflation has typically been associated with more stable output and employment, higher output growth and investment, and falling poverty rates. Low and stable inflation makes relative price

changes more apparent, provides confidence for long-term savers and investors, protects the purchasing power of household income and wealth, and enhances financial stability (Easterly 2019; Ha, Kose, and Ohnsorge 2019a).[2] By contrast, economies that have experienced high inflation have suffered significantly lower economic growth (Kremer, Bick, and Nautz 2013).

Low and stable inflation is especially important for LICs, where a large number of the world's poor reside. Those most at risk are the "near poor"—those living on incomes just above $1.90 per day, the World Bank's threshold for extreme poverty. (The very poorest households hold few nominal assets or incomes that would be affected by inflation.) Poorer households—which are more prevalent in LICs than in the EMDEs—may suffer greater welfare losses from inflation than wealthier households because they are less able to protect the real value of their income and assets from the impact of inflation (Ha, Ivanova et al. 2019b). An erosion of their real incomes and assets through inflation could tip these households into extreme poverty.[3] In addition, by stabilizing output fluctuations that disproportionally hurt the poor, the adoption of a credible monetary policy regime that maintains low and stable inflation may help reduce poverty and inequality (Romer and Romer 1999).

Note: This Special Focus was prepared by Jongrim Ha and Franziska Ohnsorge.

[1] In addition, there are two countries (South Sudan and Syrian Arab Republic) that are newly grouped as LICs in 2019.

[2] Several policy outcomes have improved considerably since the 1990s, including lower inflation, smaller black market premiums, and lesser currency overvaluation (Easterly 2019).

[3] Although the evidence of a positive correlation between inflation and inequality or poverty is mixed at the aggregate level, the links are better established at the household level (Ha, Ivanova et al. 2019b). For example, single-country studies on EMDEs, such as India (Datt and Ravallion 1998), the Philippines (Blejer and Guerrero 1990), and Brazil (Ferreira and Litchfield 2001), find that higher inflation is associated with a lower share of income held by the poor or higher inequality. Using panel data of 24 developed and 66 developing countries over 1990–2014, Siami-Namini and Hudson (2019) similarly find bi-directional Granger causality between inflation and income inequality in both groups.

FIGURE SF2.1 Inflation in low-income countries and poverty

Inflation and inflation volatility in LICs have declined since 1970, broadly in line with other EMDEs. The decline has been broad-based across countries, as well as across components of inflation. Those that have grown to middle-income status have had faster declines in inflation. The remaining LICs feature higher poverty than EMDEs. Those just above the extreme poor level are at risk of being tipped back into poverty when inflation erodes the real value of their assets and incomes.

A. Inflation
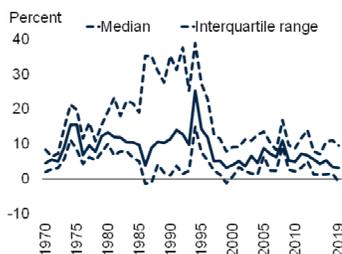
B. Number of LICs by inflation bracket
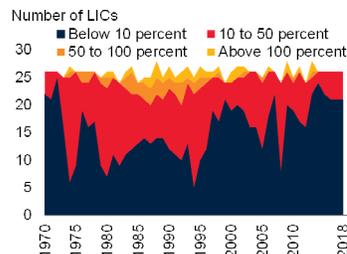
C. Inflation
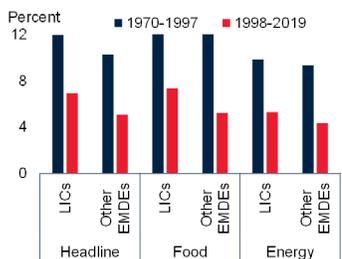
D. Inflation volatility
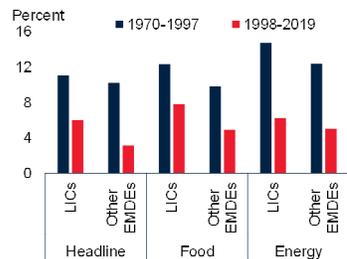
E. Inflation in former and current LICs
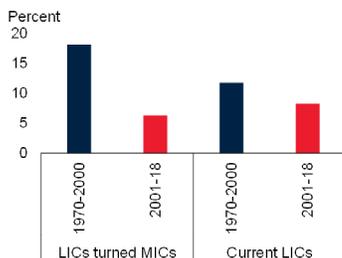
F. Poverty
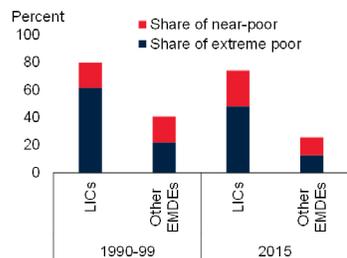
Source: Haver Analytics; International Monetary Fund; World Bank.
Note: Data for 26 low-income countries and 99 other EMDEs. Inflation refers to year-on-year inflation. EMDEs = emerging market and developing economies; LICs = low-income countries.
A. Blue lines are cross-country medians of inflation; dashed lines indicate the interquartile range across 26 LICs. 2019 inflation rates are based on year-on-year inflation during the first half of 2019 in 19 LICs.
B. Number of LICs in which inflation was in the bracket indicated. Data for 2019 are not yet available for some LICs and was not included.
C.D. Cross-country medians of inflation (C) or standard deviations of inflation (D). The differences across sample periods are all statistically significant.
E. Median inflation across countries. "LICs turned MICs" indicates 33 countries classified as low-income countries in 2000 but classified as middle-income countries as of 2019. "Current LICs" indicates 29 low-income countries as of 2019.
F. Median share of population in extreme poverty (living on less than $1.90 per day) and near-poverty (living on $1.90-$3.20 per day) in 27 LICs and 109 other EMDEs.

Against this backdrop, this Special Focus delves into the characteristics of LIC inflation, quantifies its drivers, and examines related monetary policy challenges. Specifically, it discusses the following questions:

- How has inflation evolved in LICs?

- What factors have supported inflation developments in LICs?

- What policy challenges do LIC central banks face in managing inflation?

Evolution of inflation

Among LICs, median inflation has fallen by two-thirds since 1970, to 3.2 percent in mid-2019—broadly in line with inflation developments in other EMDEs). The inflation decline has been broad-based across countries as well as inflation components (e.g., food, energy). As a result, the wide heterogeneity of inflation among LICs in the 1990s has narrowed sharply.

1970s to 1990s. Median inflation among LICs was 9-10 percent over this period. Although broadly in line with inflation in other EMDEs, LIC inflation underwent several spikes (up to 25 percent), especially in the early 1990s, amid currency crises. In half the years between 1970 and 2000, the majority of LICs had double-digit inflation.

Post-2000. Median inflation in LICs has fallen rapidly—to 3.2 percent in mid-2019 from a peak of 25.2 percent in 1994 (Figure SF2.1.A). This decline was broad-based and narrowed some of the wide heterogeneity in inflation among LICs. In one-third of LICs, inflation in mid-2019 was less than one-third of its level in 1970. In an even larger number (63 percent) of LICs, inflation in mid-2019 was less than one-third of its 1994 level. By 2008, hyperinflation episodes in LICs (inflation in excess of 1,000 percent) had also subsided.[4] In mid-2019, inflation was in the single

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[4] In the 1990s Democratic Republic of Congo and Tajikistan experienced inflation over 1,000 percent.

digits in more than three-quarters of LICs, compared with less than one-fifth in 1994 (Figure SF2.1.B).

Since 1970, core, food price, and energy price inflation have also declined, as has inflation volatility (Figures SF2.1.C and SF2.1.D).

Inflation in non-LIC EMDEs. Although the inflation decline in LICs has been broadly in line with developments in other EMDEs, its level remains well above its counterparts.[5] Disinflation in today's LICs has also fallen short of that among (the larger number of) EMDEs that used to be LICs in 2000 but that have since achieved middle-income status, even though these countries started with lower levels of inflation (Figure SF2.1.E).

Factors supporting inflation developments

Since 2000, improvements in LIC policies and a benign global macroeconomic environment have supported the decline in LIC inflation. That said, policy frameworks in the median LIC remain generally weaker than those in other EMDEs.

Improved policies. The adoption of more resilient monetary, exchange rate, and fiscal policy frameworks has facilitated more effective control of inflation (Hammond, Kanbur, and Prasad 2009; Taylor 2014). Inflation has tended to be lower in LICs with higher degrees of central bank independence and transparency, lower central bank head turnover, and lower public debt ratios (Easterly 2019; Ha, Kose, and Ohnsorge 2019a). Since 1970, monetary policy frameworks have strengthened in LICs. For example, the index of central bank transparency by Dincer, Eichengreen, and Geraats (2019) (available for 9 LICs) doubled between 1998, when the series starts, and 2015, when the series ends (Figure SF2.2.A). In 1970, all but three LICs had pegged exchange rates whereas, in 2019, less than half (14 of 29 LICs with

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[5] For instance, inflation remains in double-digits in Ethiopia, mainly due to recent currency depreciation and surging food prices after road disruptions and a drought.

FIGURE SF2.2 Factors supporting falling inflation in LICs

The decline in LIC inflation has been supported by the move to more flexible exchange rate regimes, greater central bank independence, lower government debt, and a more benign external environment.

A. Central bank transparency index

B. Number of LICs, by exchange rate regime

C. Government debt

D. Financial and trade openness

E. Inflation, by country characteristics

F. Exchange rate volatility
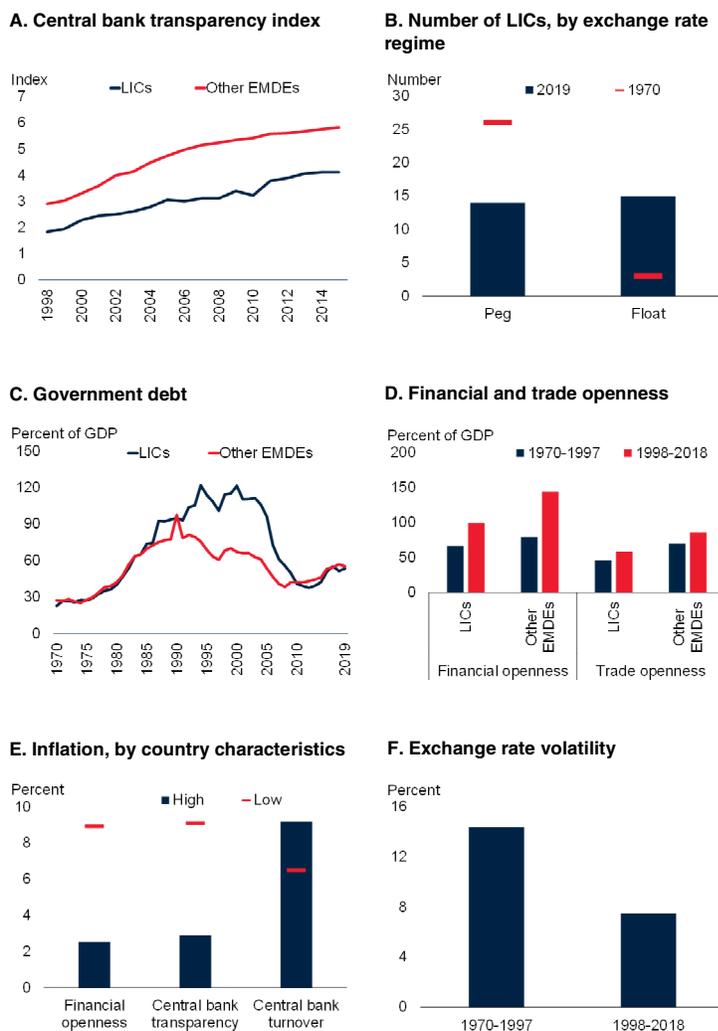
Source: Dincer, Eichengreen, and Geraats (2019); Dreher, Stum, and De Haan (2010); Haver Analytics; International Monetary Fund (IMF); Shambaugh (2004); World Bank.
Note: Data for 28 low-income countries and 96 other EMDEs. EMDEs = emerging markets and developing economies; GDP = gross domestic product; LICs = low-income countries.
A.C. Unweighted averages.
A. Central bank transparency index as defined in Dincer, Eichengreen, and Geraats (2019). Data for 9 LICs and 83 other EMDEs.
B. Exchange rate regime as defined in Shambaugh (2004).
C. Data for 2019 are based on IMF (2019).
D. Median trade openness (measured by trade-to-GDP ratio) and financial openness (international asset and liabilities to GDP) across countries.
E. Median year-on-year inflation in LICs during 1998-2018, by country characteristics. "High" indicates above-median financial openness, central bank transparency, and turn-over rate of central bank governors. "Low" indicates below-median financial openness, central bank transparency, and turn-over rate.
F. Exchange rate volatility is the cross-country average of the standard deviation of nominal effective appreciation in 28 low-income countries during each time period.
Click here to download data and charts.

available data) did (Figure SF2.2.B).[6] In addition, fiscal pressures on monetary policy also appear to have eased. In part as a result of debt relief initiatives, government debt has declined from a peak of 121 percent of GDP in 2000, on average, to 53 percent of GDP in 2019— broadly in line with the average non-LIC EMDE (Figure SF2.2.C).[7]

More benign external environment. LIC economies, on average, have become more open to trade and finance since the 1970s, although they remain less open than other EMDEs (Figure SF2.2.D; IMF 2011a). Higher capital account openness, in particular, has been associated with lower inflation, whereas there appears to be little difference between LICs that have been highly open to trade and those that have not (Figure SF2.2.E). Despite a growing number of LICs switching to floating exchange rate regimes, exchange rates have been considerably more stable since 1998 than in the preceding two decades (Figure SF2.2.F). This has helped lower LIC inflation volatility and inflation.

Global inflation cycle. LICs are now more integrated into the global economy. As a result, LIC inflation has become increasingly synchronized with the global inflation cycle. What was once a negligible contribution to LIC inflation, global inflation's impact on domestic inflation has become sizeable, especially since 2000 (Ha, Kose, and Ohnsorge 2019b; Parker 2018).[8] Over the past decade, the global

disinflation around the global financial crisis and oil price plunges in 2014-16 may have added downward pressure to inflation in LICs.

Monetary policy challenges

The level and volatility of inflation in LICs have remained higher than in advanced economies and other EMDEs over the past two decades. This difference may reflect monetary policy challenges particular to LICs arising from higher economic volatility and pervasive use of administered pricing, conflicts among central bank policy objectives, weaknesses in monetary policy transmission, and limited analytical capacity at central banks (Ha, Ivanova, et al. 2019a).

Volatile economies. Policymakers in LICs must contend with greater economic volatility than their counterparts in other countries. This in part reflects the greater frequency of supply shocks and the poorer anchoring of inflation expectations that allow exchange rate fluctuations to spill over into inflation.

- *Supply shocks.* LIC economies are particularly vulnerable to supply shocks, especially weather-related ones. Agriculture sectors tend to be large, poor transport links prevent risk sharing, and food comprises a large share of household consumption (Bleaney and Francisco 2018; Cachia 2014). As a result, rainfall appears to have the most pronounced effect on economic growth in EMDEs in Sub-Saharan Africa (Barrios, Bertinelli, and Strobl 2010).

- *Exchange rate volatility.* Exchange rates in LICs tend to be more volatile than those in other EMDEs, in part reflecting their greater frequency of supply shocks. With inflation expectations poorly anchored, exchange rate pass-through also tends to be higher in LICs than in other EMDEs (Ha, Ivanova et al. 2019a).

Conflicts among policy objectives. LICs frequently have multiple monetary policy objectives, with inflation being only one among several. This in part reflects challenges in

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[6] Several Sub-Saharan African LICs (as well as some recent low- and middle-income countries) belong to monetary unions (e.g., the West African Economic and Monetary Union, and the Central African Economic and Monetary Community). Many of these LICs have also experienced low levels of inflation over the recent decades (Ha, Kose and Ohnsorge 2019a).

[7] In addition, the relationship between fiscal position and inflation appears to be non-linear: in a low-inflation environment, fiscal deficits tend to be less inflationary (Catão and Terrones 2005; Lin and Chu 2013). As a result, the current low-inflation environment may help further mute the pressures from fiscal dominance on inflation in LICs.

[8] Using a dynamic factor model for 99 countries (including 16 LICs), Ha, Kose, and Ohnsorge (2019b) find that the contribution of global inflation factor to domestic inflation variation increased to 17 percent in 2001-17 from a 3-4 percent in 1970s to 1990s. Parker (2018) similarly finds that global inflation accounted for around a quarter of inflation variation in LICs over 2001-2012, compared to its contribution (10-20 percent) in the earlier periods.

formulating an appropriate numerical inflation target for LICs. The threshold at which inflation has clear negative effects on output is significantly higher for EMDEs than for advanced economies and varies widely depending on country characteristics (Khan and Senhadji 2001). A survey of low- and lower-middle-income countries that listed price stability as a central bank objective, found that most countries did not have a numerical inflation target, and those that had such a target simply tended to align it with the bank's inflation forecast (IMF 2015). LICs central banks are thus likely to have a broader set of objectives; the exchange rate is more likely to be a separate and important policy objective (Berg and Miao 2010; Rodrik 2018).[9] Other objectives may include supporting activity or fiscal sustainability.

- *Conflicts between inflation and output objectives.* To lower inflation after a history of high inflation, the central bank must be willing to tolerate weak activity perhaps for an extended period. A commitment to lowering inflation from a history of high inflation will require the central bank to be willing to tolerate weak activity perhaps for an extended period (Kasa 2001; Gemayel, Jahan, and Peter 2011). However, frequent supply shocks in LIC, for example from the effects of weather events on agricultural production, may raise inflation while depressing output (Frankel 2011).[10] Stabilizing inflation in response to such supply shocks may thus require failing to maintain output (Adam 2011; Bashar 2011; Nguyen et al. 2017).

- *Conflicts between inflation and exchange rate objectives.* In LICs (as in some other EMDEs)

the exchange rate may be an important policy objective (Buffie et al. 2004; IMF 2015; Mishkin and Savastano 2001; Taylor 2001). A declared strategy of stabilizing the exchange rate against currencies of trading partners with a track record of low and stable inflation may well be compatible with achieving domestic price stability and the limited international financial integration of many LICs may still afford some room for active monetary policy (Ostry, Ghosh, and Chamon 2012). However, when currency exposures are high, exchange rate pressures may prevent central banks from acting to preserve low and stable inflation.

- *Conflicts between inflation and fiscal objectives.* For LIC governments with weak revenue-raising capabilities and an absence of well-functioning capital markets, inflation may become an important source of financing fiscal deficits (Baldacci, Hillman, and Kojo 2004). The presence of large fiscal deficits or high government debt in LICs can cause fiscal policy to rely on accommodative monetary policy to ensure fiscal sustainability (Baldini and Poplawski-Ribeiro 2011; Weidmann 2013). In almost every year between 1992 and 2002, two-thirds of LICs had higher debt-to-GDP ratios than the one-third of non-LIC EMDEs with the highest debt levels. In half the years between 1995 and 2017, the median fiscal deficit in LICs was above that in non-LIC EMDEs. Weak institutions (Bleaney, Morozumi, and Mumuni 2016) and political instability (Aisen and Veiga 2006) may reinforce the negative association between budget deficits and price stability. Central banks in LICs are therefore more likely to face conflicts between price stability and pressures to maintain low interest rates or provide outright fiscal financing (Mas 1995; Prasad 2010).

Widespread price controls. Price controls—typically imposed to protect vulnerable groups—are more common in LICs than in other EMDEs (Special Focus 1). The most frequently used price controls in LICs are on basic food stuffs and petroleum. Since food expenditures represent

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[9] Using a heterogeneous structural vector autoregressive model for 105 countries, Ha, Ivanova et al. (2019a) find that core inflation in LICs with a floating exchange rate regime is less robust in the face of external shocks than in countries that fixed exchange rates. In advanced economies and other EMDEs, shocks to global core inflation account for a much larger fraction of the variance of domestic core inflation in fixed regimes than in floating regimes.

[10] For instance, a poor harvest will tend to increase inflation in the short term while depressing economic activity. Supply shocks thus push inflation and output growth in opposite directions, giving rise to a conflict between monetary policy's primary objective of stabilizing prices and its secondary objectives of supporting growth and maintaining a narrow output gap.

nearly 60 percent of the consumption basket in LICs, compared with 42 percent in other EMDEs, a significant portion of the basket is therefore subject to administered pricing (Laborde, Lakatos and Martin 2019).[11] Price controls can temporarily contribute to price stabilization in LICs, especially for key commodities subject to perceived excessive volatility in international markets.[12] However, this poses monetary policy challenges, as well as fiscal and growth challenges that can heighten conflicts between monetary policy objectives.

Weaknesses in the instruments and transmission mechanism of monetary policy. In advanced economies and many EMDEs, the key monetary policy instrument is a short-term interest rate, most often an interbank rate. An advanced-economy central bank can guide the interbank rate through bank reserves and standing facilities. In LICs, however, interbank markets are typically absent, as are liquid secondary markets in government securities, which the central bank could seek to influence through open-market operations (Mishra, Montiel, and Spilimbergo 2012). The government securities market in LICs tends to be a primary market in which counterparties are commercial banks that buy and hold government securities. Thus, the central bank often conducts monetary policy by directly lending to and borrowing from the commercial banking system. However, even the bank lending channel can be impaired in LICs.

- *Limited financial inclusion.* LICs tend to have large informal sectors but small formal financial sectors (World Bank 2019). Broad money and domestic credit by financial sector

in LICs are half the share of GDP of other EMDEs (Figure SF2.3.A). Only one-third of adults have a bank account in LICs, compared with 57 percent in other EMDEs (Figure SF2.3.B). As a result, the financial system has only weak links to overall economic activity. Around 80 percent of investment in LICs is financed internally and three-quarters of firms do not tap banks to finance investment (Figures SF2.3.C and SF2.3.D).

- *Weak institutions.* The institutional and legal environment in LICs—including property rights, accounting and disclosure standards, and contract enforcement—tends to be weak (Beck, Demirgüç-Kunt, and Levine 2004). This makes financial intermediation from private savers to private borrowers costly and risky, inducing banks to limit this activity and to hold safer government securities.

- *Preponderance of large firms.* Productive activity in LICs is often characterized by a few large, well-established firms and many very small, opaque, and often unstable ones. The marginal cost of bank lending to large firms tends to be lower than that of extending credit to small firms. As a result, the volume of lending to large firms may be very insensitive to fluctuations in bank funding costs induced by monetary policy (Mishra and Montiel 2013; Mishra et al. 2014).

- *Widespread informality.* The informal sector accounts for about almost two-fifths of GDP and 90 percent of employment in the average LIC, in part reflecting large agricultural sectors and a high share of unskilled workers (World Bank 2019). Firms in the informal sector have limited access to credit from the banking sector and capital markets, and thus have limited interactions with the formal financial sector. This dampens monetary policy transmission through the formal financial system.

- *Other factors.* In addition, the strength of monetary transmission in LICs has proven difficult to estimate because of data limitations (Li et al. 2016). What empirical evidence has been estimated suggests that the

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[11] In addition, LICs suffer collateral damage from other countries' administered prices on food and energy because of the high share of food and energy in LIC consumption baskets and trade. Volatility in global food and energy commodity prices is amplified when other countries respond to rising global commodity prices by imposing price and other controls to suppress prices in local markets (Laborde, Lakatos, and Martin 2019). The resulting higher volatility of import prices in LICs complicates central banks' efforts to maintain low and stable inflation.

[12] Median food and headline inflation were lower in the 52 EMDEs with food price controls than in the 23 EMDEs without such controls. However, the relative price distortions introduced by highly restricted food price controls have been associated with high inflation in LICs (Special Focus 1).

transmission is weak for several reasons: credit and other financial markets tend to be shallow; contract enforceability is limited; information asymmetries are pervasive; and many LICs retain elements of financial repression in the form of interest rate controls.[13] For example, while changes in policy rates tended to be transmitted almost one-for-one into retail bank lending rates in advanced economies, pass-through in EMDEs was only in the range of 30-45 percent (Abuka et al. 2015; Saborowski and Weber 2013).

Shortcomings in the analytical capacity of central banks. Because monetary policy affects the economy with lags, an important component of any monetary policy regime is the ability of the central bank to accurately forecast its target variables on the assumption of unchanged policies as well as to assess the effects of policy changes on those variables. Few LIC central banks have the structural models with proven track records required for such forecasts (IMF 2015). This reflects in part lack of relevant historical data, insufficient knowledge about the macroeconomic structure of the economies concerned, rapid structural change in the economy, and shortages of research expertise (Gemayel, Jahan, and Peter 2011; IMF 2015).

Complications introduced by globalization. Globalization is likely to alter the monetary transmission mechanism in complicated ways (Abuka et. al. 2015; Montiel and Pedroni 2018). It increases the economy's exposure to external shocks, in the form of exogenous changes in the foreign-currency prices of traded goods, remittance flows, and capital flows. It may also alter the trade-offs between different central bank objectives.

Policy options going forward

Going forward, the achievements of low and stable inflation in many LICs cannot be taken for granted. If the external environment turns less

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[13] For details, see Mishra, Montiel, and Spilimbergo (2012); IMF (2015); and Mishra and Montiel (2013).

FIGURE SF2.3 Monetary policy challenges in LICs

Financial systems are small and have narrow reach in LICs, and this limits monetary policy transmission through the financial sector. Broad money and domestic credit by the financial sector in LICs are half the share of GDP than in other EMDEs. Only a third of adults have bank accounts in LICs, compared with 60 percent in other EMDEs. Around 80 percent of investment in LICs is financed internally, while less than 20 percent is financed by the banking sector.

A. Broad money and domestic credit

B. Fraction of adults with bank accounts

C. Share of investment that is internally financed

D. Share of firms that approach banks to finance investment
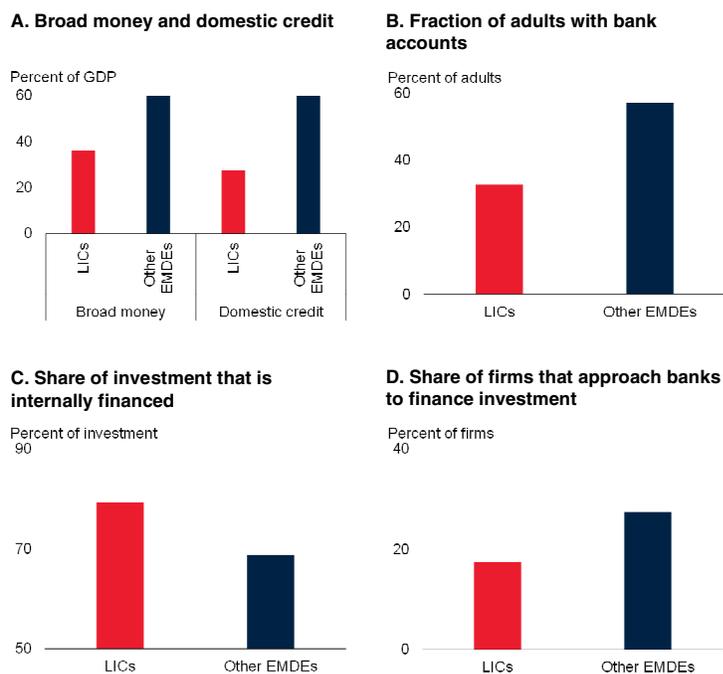
Source: Enterprise Survey; Global Findex Database; World Development Indicators.
Note: EMDEs = emerging markets and developing economies; LICs = low-income countries. Unweighted averages across countries.
A. Broad monetary and domestic credit provided by financial sector (both percent of GDP) in 2017, based on 20 LICs and 110 other EMDEs.
B. Proportion of adults (age over 15) holding a bank account in 2017. Survey based on 23 LICs and 86 other EMDEs.
C. Proportion of investment financed internally. Enterprise survey based on 15 LICs and 47 other EMDEs.
D. Proportion of firms using banks to finance investments. Enterprise survey based on 15 LICs and 47 other EMDEs.
Click here to download data and charts.

benign or fiscal pressures mount, the ability of central banks in LICs to maintain low inflation may be tested. Since 2013, government debt has risen rapidly, by almost 15 percentage points of GDP in the median LIC; about half of LIC debt is external and, hence, predominantly foreign-currency-denominated (World Bank 2019). This increases LIC governments' vulnerability to financial market disruptions that raise borrowing costs. Mounting fiscal pressures could heighten tensions between the multiple objectives of LIC central banks. Separately, because of poorly anchored inflation expectations, exchange rate

depreciations following financial market stress could raise LIC inflation. Broader policy efforts aimed at strengthening fiscal and monetary policy frameworks, and improving debt management, are therefore required in LICs to safeguard low and stable inflation.

Many of the monetary policy challenges facing LICs are related to their level of economic and financial development. Addressing these challenges requires a broader development process and includes: the development of financial markets to provide the central bank with more effective policy instruments; the improvement of systems compiling economic statistics; and capacity development in central banks and economic ministries, including strengthening economic expertise.

- *Strengthening central bank independence.* Central bank independence has increased among LICs since the early 1990s, partly as a means to allow central banks to give primacy to price stability over other objectives and enhance their credibility (Dincer and Eichengreen 2014; Garriga 2016). However, central bank independence of lower- and middle-income countries remains less than in other EMDEs and advanced economies, and de jure independence does not necessarily translate into de facto independence (IMF 2019).

- *Clarifying priorities in central banks' objectives.* A transparent prioritization of central bank objectives in the event of conflicts between different objectives could help central banks achieve their primary targets. Other policy options could be developed to help achieving central banks' secondary objectives— including for output or financial stability—of monetary policy. Such policies could include the judicious use of budgetary policy when there is fiscal space, and structural reforms

that reduce the economy's vulnerability to shocks, strengthen automatic fiscal stabilizers, increase the flexibility and effectiveness of discretionary fiscal policy, and increase the flexibility of labor markets. Institutional changes could include entrusting responsibility for financial stability to a separate supervisory and regulatory authority, associated with a well-capitalized deposit insurance agency.

- *Expanding central bank tools.* The central bank could develop or strengthen instruments separate from monetary policy to address its objective of financial stability, including capital flow management measures and macroprudential policies.

- *Considering best suitable nominal anchors for monetary policy.* Although inflation targeting, with its usual focus on the CPI, has been the most popular among advanced economies and larger EMDEs, other EMDEs and LICs could consider alternative nominal anchors for monetary policy that best suit their economic structures. For example, countries that produce commodities that are subject to volatile global commodity prices, and have procyclical access to global capital markets, could target export prices or producer prices. These targets may stabilize output better than CPI targeting in the presence of frequent terms of trade or financial shocks (Frankel 2011).

- *Building and maintaining central bank credibility.* The central bank could strengthen its efforts to convince the public of the primacy it gives to the low-inflation objective (Mishkin 1997). Declaration of a specific inflation target could serve this purpose, but this strategy may not yet suit LICs with weak and uncertain monetary transmission, data deficiencies, and limited analytical capacity.

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