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Book Presentation: "Inflation in Emerging and Developing Economies: Evolution, Drivers and Policies," Jongrim Ha, Ayhan Kose, and Franziska Ohnsorge, Editors

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Discussion Remarks[1]

I would like to thank Ayhan for providing us with such an eloquent, clear, and comprehensive presentation. As we have seen, the topics covered in the book, "**Inflation in Emerging and Developing Economies, Evolution, Drivers and Policies,"** are not only timely, but also quite interesting and relevant. I would also like to thank Daniel Chiquiar very much for his insightful comments on the referred book.

In my remarks today, I will try to do mainly two things. First, in some cases, I will try to put some more context to a number of the results presented by Ayhan and, second, in other cases, try to lend a little more economic content to them.

The work just presented is very relevant, for instance, consider: i) the extent to which inflation is nowadays synchronized; and, ii) the importance of understanding the global and domestic factors determining it.

Let me then go directly to a couple of results. First, global inflation has shown a downward trend in the last four to five decades. Several factors have contributed to this phenomenon. Allow me to underscore the following four: **i) trade openness**, which has led to the integration of productive chains. This has meant not only trade in goods, but also trade in tasks (a.k.a., offshoring) (Grossman and Rossi-Hansberg, 2006); **ii) technological progress** (while relevant, Gordon (2012) has argued that technological growth returning to its historic norm will reduce the U.S. per capita average growth rate of 2.0% from 1891 to 2007, to 0.8%); **iii) productivity growth** (again, Gordon (2012) subtracts an extra 0.6% from the growth of 0.8% due to a fall in productivity); and, **iv) financial openness**, among others. <u>In effect, these factors have strengthened the validity of the law of one price</u>.[2]

Second, we have that there is also a greater inflation synchronization at a global level. As explained in the book: "… *A critical feature of the international inflation experience of the*

[1] As prepared for delivery.
[2] See Auer, Borio, and Filardo (2017) for a study on the relationship of global value chains and global inflation.

past fifty years has been the rising importance of a "global inflation cycle" in explaining inflation at the country level (Carney, 2015)." (page i.7). Indeed, there is increased synchronization both at low and high frequencies.

I would like to underscore two points here: i) one could argue that causality goes from Advanced Economies´ (AEs) inflation to that of Emerging Market and Developing Economies´ (EMDEs). Thus, there has been, so to speak, a windfall for EMDEs´ in that several factors in AEs´ have led not only to lower inflation in AEs themselves, but also have translated into lower levels of inflation in EMEs. ii) There is an important distinction to be made among AEs. There are those AEs that are price setters, and there are those that are small open economies (SOEs), Australia and New Zealand being cases in point.

The AEs that are truly relevant in the determination of the global inflation component are the AEs that are price setters. Evidently, the most relevant price setter is the U.S. On the other hand, there is also one important EMEs price setter, which is China, although for entirely different reasons. This is almost 'by construction.'

Their roles as price setters, however, are due to somewhat different reasons.[3] The U.S. has benefitted from high productivity, technological advancement, and automatization. Of course, the relevance of these factors has changed through time. For instance, automatization probably has had a more important role in recent years. However, they have all contributed towards having lower inflation. For its part, China´s reasons are the sheer size of its economy and the level of competition it generates. On the other hand, the rise of China has had, at times, an important impact on commodity price inflation in the last two decades.[4]

Allow me next to reflect upon two historical episodes on inflation. In the context of a downward trend in global inflation, from my point of view, two episodes stand out where inflation deviated significantly from its trend.

First, concerning the AEs, we have that in the late 1970s, there were significant oil price shocks (in particular, in 1979).[5] This certainly led to higher inflation and lower economic growth in many economies, particularly so in the U.S. Indeed, the 1970s brought stagflation about to the U.S. economy, that is, output stagnation and inflation. We have that the U.S.

[3] Feyzioğlu and Willard (2006) document that inflation in the U.S. affects inflation in China.

[4] Francis (2007) argues that, given China´s size and the rapid acceleration in its trade following accession to the WTO, it plays a significant role in the inflationary process. The effect of China on prices mainly comes from: the contribution of an increase in China´s share of total exports and the indirect impact of increased competition from China on other exporters and domestic producers.

[5] Hamilton (1983, 1996) studies the oil price-macroeconomy relationship.

monetary response to the oil price shocks was to accommodate them, with the aim of stimulating economic growth.[6] In hindsight, this was a policy mistake.[7]

As you might recall, at the time Jimmy Carter was the U.S. president (term: 1977-1981). President Carter summoned Paul Volcker (term: 1979-1987). To tame inflation, short-term interest rates were increased above 15%. A harsh adjustment period ensued. This type of events motivated papers such as that of Barro and Gordon (1983).[8] On a related matter, in his recently published memoirs, Volcker (2018) describes that when he met with Carter for the first time, he told him the importance of the independence of the monetary authority. Since then, the Federal Reserve has gained institutional strength and independence, along with other central banks, two beneficial and necessary features for central banks to be successful in combating inflation, precisely as underscored in Ayhan´s book.[9] All in all, I would agree that AEs started in the 1980s a process of strengthening their institutions and enhancing macroeconomic management so as to combat inflation seriously and successfully.[10,11]

Second, we have EMEs, in particular, those in Latin America. For several reasons (among which one could underscore the oil price shocks), since the mid-1970s, they faced weak economic growth. Economic policy was geared towards trying to stimulate economic growth through higher public expenditures; in short, through fiscal expansions. The way it was done constituted a policy mistake, eventually leading to an external debt overhang problem.[12]

Let me next further concentrate on Latin American countries, although what follows is also relevant for many other countries. The 1980s was a decade of high and persistent inflation, mainly derived from seigniorage financing of the fiscal accounts.[13] I remember the precise term used: **high chronic inflation**. In its origin, this was a fiscal problem, which led to

[6] Bernanke et al. (1997) analyze the relationship between monetary policy and oil price shocks.
[7] This is line with the ECB (2010), which argues that the inflationary upsurge of the 1970s in the U.S. was mainly a result of monetary policy mistakes.
[8] In their model there is inflation bias as authorities persistently seek economic growth above its potential rate.
[9] More specifically, "[t]he book offers a range of analytical findings and policy messages. A recurring theme are the benefits of stability-oriented and resilient monetary policy frameworks, including central bank transparency and independence. Such policy frameworks need to be complemented by strong macroeconomic and institutional arrangements." (page i.5)
[10] See Stock and Watson (2003).
[11] On central banks in the late 1980s in AEs and EMEs, Arnone et al. (2009) provides general low level of autonomy. AEs exhibited the highest scores.
[12] In the 1970s, many Latin American countries borrowed massive amounts of resources from international creditors in an attempt to boost economic growth. The increasing interest rates in the U.S. and Europe in the late 1970s, the deterioration of domestic currencies, and the contraction of global trade in 1981, were key factors in Latin American crises. To overcome this problem, debts had to be restructured, with conditions and the intervention of the IMF (Ocampo, 2014).
[13] Fischer et al. (2002) explore modern hyper- and high inflations episodes.

external debt overhang, as mentioned, and to formal and informal price and wage indexation mechanisms.[14]

Next, consider another possible policy mistake. These were programs known by the name of **exchange-rate-based stabilization (ERBS)** programs.[15] In essence, the exchange rate was used as the nominal anchor.[16] This was done, in an attempt, to 'import' solid AEs institutions, where lower inflation was already taking root. An exception to this were some Asian economies in which, given their high propensity to save, such a mechanism proved feasible.

After most of these ERBS programs failed, various necessary adjustments took place, among which we prominently have external debt renegotiations and vast fiscal retrenchments. From these episodes arose what can be seen as a social consensus. This, in many cases, led to the improvement of macroeconomic management, notably, central bank independence and fiscal discipline.[17]

As of 2000-2001, most economies started to have inflationary processes with low and stable levels (i.e., stationary processes). In this context, I would like to comment on a paper by Noriega, Capistrán, and myself (2013), in which we study inflation dynamics in 45 countries for the 1960–2008 period. As one of our main findings, we have that in the last 50 years there have been mainly two episodes where long bursts of nonstationary inflation processes took place concurrently among groups of countries. In general, an episode occurred during the 1970s and 1980s in AEs, whereas the other one happened during the 1980s and 1990s

[14] Bernanke (2005) argues that in order to boost economic growth, Latin American governments introduced aggressive spending programs that could not be financed through taxes or borrowing. Instead, they were financed through seigniorage. These expansionary fiscal and monetary policies were generally followed by price controls and subsidies as the economies experienced an accelerated increase in inflation and inflation expectations.

[15] ERBS programs were implemented in some Latin American countries to cope with high and chronic inflation. One appeal of these programs was that they generated an initial boom in economic activity, a real exchange rate appreciation, and a rise in the real wage rate. However, they also came with the deterioration of the external accounts, eventually, leading to a sharp contraction and real exchange rate depreciation (Aisen, 2004).

[16] Calvo and Végh (1999) review and evaluate the literature related to inflation stabilization policies in developing countries.

[17] To cope with Latin America´s debt issues, amortization of the debt was fully rescheduled and new loans were collectively granted, encouraged by the IMF. It served as link between banks and debtors (Devlin and Ffrench-Davis, 1994). To access these facilities, debtor countries implemented adjustment programs. They generally entailed a reduction on the balance of payments deficits, a reduction on the budget deficit, liberalization of markets to guarantee a price mechanism, privatization of state-owned enterprises, strengthening of financial institutions, improved governance, and enhancement of foreign investors rights (Pastor, 1989; Agarwal and Sengupta, 1999).

in EMEs, particularly so in Latin America. This result is broadly consistent with those presented in Ayhan´s book.[18]

In the past two decades, four issues have been particularly relevant in bringing down inflation globally:

i) The AEs´ economic growth dependence on oil has been greatly reduced. Indeed, in the first decade of the 2000s, there was a significant increase in the level and volatility of commodity prices (i.e., the so-called commodities´ super cycle). Overall, there were negligible effects in terms of inflation and economic growth.[19]

ii) We have seen an improvement in macroeconomic management in many EMDEs. There has been no fiscal dominance for the most part, albeit in many cases a fiscal revenue windfall from high commodity prices helped significantly.[20]

iii) In AEs, we could be facing a secular stagnation. In this context, there is some disagreement about the factors leading to this. Some argue that it is explained by a fall in the economy´s long-run potential growth rate (e.g., Gordon, 2012). A second plausible explanation is that AEs are going through a persistent deviation from their actual potential growth (Summers, 2014). Yet, another possible explanation is that sharp one-off drops in the level of output are persistent, as there are no compensatory shifts in the potential growth rate.[21]

iv) There has been a quite strong contribution towards the appreciation of the exchange rate due to Quantitative Easing (QEs) and, as a result, capital inflows to EMEs. Normalization of monetary policy in AEs, in particular that of the U.S., has been much less intense than initially expected, and low interest rates in AEs have endured and, thus, have contributed to a very active search for yield process.

Overall, these factors continue to point to sustained low subdued inflation in AEs.

However, going forward, we could have the following risks for the global inflation outlook: 1) **Subdued growth** and **unequal income** and **wealth distribution** have led to **trade protectionism** and, in many cases, both in AEs and in EMEs, to **populism**.[22] In turn, populism can lead to **less trade** and to **fiscal relaxation**. These can certainly become significant risks for inflation in EMEs; and, 2) **Technological progress** could be initially

[18] From the econometric point of view, having inflation following a stationary process is in general a required condition to estimate several models. From the policy point of view, when having a non-stationary inflation process, some results in the literature might be not applicable.
[19] Blanchard and Galí (2007) explore the difference between oil shocks in the 2000s vis-à-vis the 1970s.
[20] Takáts (2012) presents evidence that EMEs were able to conduct countercyclical monetary and fiscal policies over the previous decade. As part of this, they had to improve their macroeconomic management.
[21] There are important specifics to these explanations. See Teuling and Baldwin, 2014, and Eichengreen, 2015).
[22] Blanchard and Willmann (2018) propose a model in which economic adjustment is slower than political change. In it, changes in global markets can increase political polarization, leading to a rise in popular support for distortionary economic policies. See also Pastor and Veronesi (2019).

favorable, but can eventually lead to trouble. [23, 24] In short, among others, there might be predatory pricing at later stages (See, for example, Khan (2017)).

All in all, EMEs could be facing quite a challenging set of circumstances. Being more specific, one could argue that several of the external factors that seem to have helped EMEs recently are currently losing relevance. Let me, on the other hand, list some domestic factors that appear to be gaining traction in some EMEs concerning their inflation outlook:

- **Institutional weakness;** in particular; 1) risk of weakening **central bank independence**; and, 2) weakening fiscal stances.
- **Continued low competition** could lead to a persistent high **inflation inertia**.[25]
- **Low TFP productivity**, in effect, countries with low **Total Factor Productivity** (TFP) can barely sustain low inflation.
- We also have formal and informal **indexing mechanisms**. These have led to the indexing some prices in such EMEs. As I previously mentioned, these played an important role in putting pressure in inflation during the 1980s in some EMEs.[26]

More generally, we have the following **general outlook**. For **AEs**, we have a low level of inflation, plausible due to a secular stagnation situation. There are several structural reasons for this; for instance, demography, education, inequality, and high levels of public debt. **For EMEs**, the global factors that have contributed towards lower inflation are increasingly becoming less relevant in many cases. Moreover, domestic factors are gaining importanc,e and they are not pointing toward a promising direction. Once more, this is consistent with an explanation given in Ayhan's book: …*there are reasons to worry that factors that have held inflation at bay over the past decades may lose momentum or be rolled back*." (p. i.6.)

I am going to stop here. Thank you very much for your attention.

[23] Domaç and Yücel (2005) provide some empirical evidence that suggests that in EMEs a more democratic regime reduces the probability of a high level of inflation starts.
[24] If further inflation pressure materializes, it could lead to a deterioration of wealth distribution, potentially leading to a catch-22 situation.
[25] Calvo (2000).
[26] Edwards and Lefort (1998).

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