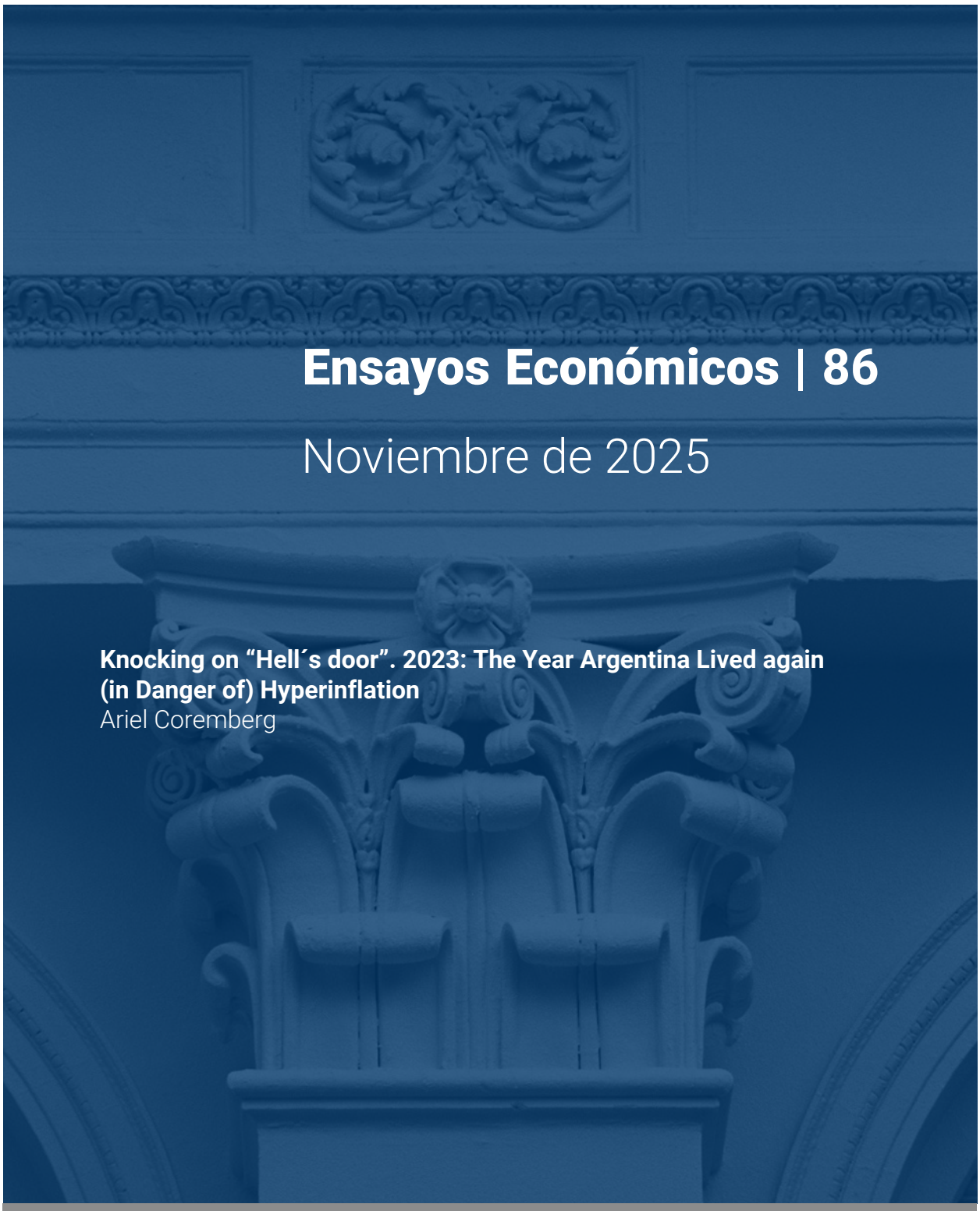

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**Knocking on "Hell´s door". 2023: The Year Argentina Lived again (in Danger of) Hyperinflation**

Ariel Coremberg

BANCO CENTRAL
DE LA REPÚBLICA ARGENTINA

# Knocking on “Hell´s door”. 2023: The Year Argentina Lived again (in Danger of) Hyperinflation

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## Abstract

This paper examines the hypothesis that Argentina was on the verge of hyperinflation in 2023. If inflation were to escalate to hyperinflation, society's urgent demands: Stabilize and Else! Moreover, a credible stabilization plan could yield rapid results after hyperinflation compared to a chronic high-inflation regime. Furthermore, if Argentina faces the risk of hyperinflation in 2023, like the 1989-1990 crisis, it would be a rare event in world history. This would be only the second case in world history, after Russia, in which a country has experienced repeated hyperinflations, highlighting Argentina's lack of institutional and generational memory of past crises. The paper reviews economic definitions of quantitative thresholds and mainly examines qualitative responses to hyperinflation versus those in a chronic high-inflation regime. The paper shows that Argentine society displayed several adaptive behaviors in 2023 as it did during earlier hyperinflations, and as the Germans did during their hyperinflation in 1923. Likewise, Argentina surpassed several quantitative thresholds for hyperinflation. At least during 2023, even amid financial repression, Argentina was knocking again on the hell's door of hyperinflation.

*JEL Classification*: E31, E52, E63, N16.

*Keywords*: Argentina, hyperinflation, inflation effects, macroeconomic crises, stabilization plans.

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# Golpeando a las “puertas del infierno”. 2023: el año en que Argentina vivió otra vez en (peligro de) hiperinflación

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## Resumen

Este trabajo examina la hipótesis de que Argentina estuvo al borde de una hiperinflación en 2023. Si la inflación escalara hacia una hiperinflación, las demandas urgentes de la sociedad serían claras: “¡Estabilizar o nada!”. Además, un plan de estabilización creíble podría generar resultados rápidos tras una hiperinflación, en comparación con un régimen de inflación crónicamente elevada. Asimismo, si Argentina enfrentó en 2023 el riesgo de una hiperinflación, similar a la crisis de 1989-1990, se trataría de un evento poco frecuente en la historia mundial. Sería apenas el segundo caso en el mundo, después de Rusia, en que un país experimenta hiperinflaciones repetidas, lo que pone de relieve la falta de memoria institucional y generacional de Argentina respecto de las crisis pasadas. El trabajo revisa las definiciones económicas de umbrales cuantitativos y analiza principalmente las respuestas cualitativas a la hiperinflación, en contraste con las observadas en un régimen de alta inflación crónica. El estudio muestra que la sociedad argentina exhibió en 2023 varios comportamientos adaptativos, similares a los de etapas previas de hiperinflación y a los observados en Alemania durante la hiperinflación de 1923. Del mismo modo, Argentina superó diversos umbrales cuantitativos asociados a la hiperinflación. Al menos durante 2023, aun bajo represión financiera, Argentina volvió a golpear las puertas del infierno de la hiperinflación.

*Clasificación JEL*: E31, E52, E63, N16.

*Palabras clave*: Argentina, crisis macroeconómicas, efectos de la inflación, hiperinflación, planes de estabilización.

*Presentado*: 29 de agosto de 2025 – *Aprobado*: 2 de diciembre de 2025.

*"In Argentina, experience does not turn into learning." — Santiago Kovadloff.*
*"We were going insane." — German Hyperinflation 1923 testimony -Adam Ferguson (1975)*

## 1. Introduction

The infamous President of the German Central Bank, Hjalmar Schacht, who managed to end the German hyperinflation of 1923 during the Weimar Republic, once stated: ***"The Central Bank sails the waters trying to avoid two monsters: the Scylla of inflation and the Charybdis of unemployment."***[1]

Like the Weimar Republic, Argentina's economy experiences extreme swings, shifting between frequent hyperinflationary crises and less common deflationary downturns marked by high unemployment.

A 55-year-old Argentine has experienced five major economic crises involving institutional upheaval—1975, 1982, 1989, 1990, and 2001—and four severe crises: 1995, 2009, 2018-2019, 2020, and 2022-2023. His father and grandfather remember other significant inflation crises, including 1949, 1951, 1959, and 1966. These events sharply contrast with the experience of a European of the same age, who likely faced only one major shock—the 2008 global financial crisis—besides the COVID-19 pandemic.

Public opinion keeps questioning why the country, like Groundhog Day, repeatedly faces the same crises and implements the same failed economic policies from the 1940s to today.

The Schacht lemma might apply to Argentina. As we will examine below, Argentina has faced persistent high inflation since the mid-1940s, coming close to hyperinflation several times, with two major hyperinflations occurring in 1989 and 1990. After multiple failed stabilization efforts, Argentina achieved a relatively low inflation rate only during the 1990s, thanks to adopting a currency board. However, this regime ended at the start of the 21st century and lasted only about a decade. The decision to leave the currency board, however, triggered a memorable bank run, seizure of bank deposits, and a crisis of hyper-unemployment and deflation.

The recovery effects of the major commodity price Supercycle from 2003 to 2011, since the prosperity of the 1880s era enabled a populist regime that lasted for two decades.

However, Argentina relapsed into high inflation, like the 1980s, at the end of the Supercycle in 2011. The flight from domestic currency led the populist government to enforce a foreign currency clampdown, including strict foreign exchange controls and import rationing, which lasted over a decade for households and continues to this day for businesses. Nonetheless, the currency clampdown could not prevent the route to the brink of hyperinflation in 2023. The song remains the same.

[1] Schacht (1927). Schacht, an opportunistic economist of undeniable Machiavellian intelligence, would later become Hitler's Minister of Economy and eventually an advisor to the Allies—allegedly to evade prosecution in Nuremberg.

Inflation often results from monetizing fiscal deficits, a process in which the central bank is involved, as Thomas Sargent (1984) notes. Hyperinflation indicates a budgetary collapse, as the government nearly loses all its tax-collection capacity and creditworthiness, as observed by Bresciani-Turroni (1931) for Germany in 1923. Financial repression (such as capital and foreign exchange controls) becomes less effective. It is no longer possible to "force" public debt into banks, as seen in the extreme case of Sargent and Wallace (1989). Importantly, hyperinflation is “easier” to halt than chronic inflation. According to Thomas Sargent (1984), a “Credible Announcement” of public finance could restore order and convince agents that money issuance will stop, and that stabilization can be sudden and effective.

Despite intense debate over the origins of inflation in Argentina, there is remarkably no consensus on whether the inflation in 2023 reached hyperinflation levels, which is the main focus of this paper.

However, identifying the 2023 episode as a near threshold of hyperinflation is crucial. Argentina would be the only country, apart from Russia, to have repeated hyperinflation.

Stabilization efforts must account for the levels of indexation and inflationary inertia in the economy to achieve rapid stabilization. After a recent successful disinflation program, Argentinians' forgetfulness is notable, considering their concerns about deflation, unemployment, and recession, just one year after the 2023 crisis.

Furthermore, recent hyperinflation occurred during a Peronist government that controlled the “streets”; there were no typical looting episodes as during the hyperinflation of 1989 and the hyper-unemployment deflation crisis of 2001-2002.

Setting aside the discussion of the quantitative hyperinflation threshold, the adaptive behavior during the transition from high inflation to hyperinflation is key to showing that 2023 was a year at risk of hyperinflation.

Argentinians live with inflation as hyperinflation, as several phenomena associated with other hyperinflations have occurred, such as shortening contract durations, weekly price changes, and dollarization of prices. These factors weaken domestic money as a medium of exchange and lead to episodes of “closed for lack of prices” with endogenous shortages of goods.

Besides, evidence of short-sighted monetary and fiscal policies, such as “the bracket creep” and tax indexation, attempts to address the effects but not the root fiscal causes of inflation.

The goal of this paper is to analyze and apply different definitions of hyperinflation to the 2023 Argentine inflation episode, emphasizing a qualitative rather than purely quantitative approach, and highlighting the behavioral responses of economic agents and policymakers to hyperinflation.

The paper is structured as follows: the second section details notable historical hyperinflations and categorizes the economic and political shocks that led to their emergence. The third section

reviews various definitions of hyperinflation in economic literature. The fourth section analyzes various behavioral responses to high inflation and hyperinflation. The fifth section presents stylized facts that apply analytical definitions, set up quantitative thresholds, and mainly illustrates Argentines' behavioral responses during the transition from chronic high inflation to hyperinflation in 2023. Finally, the last section provides the conclusions.

## 2. Historical hyperinflations

The historical hyperinflation episodes, shown in the following table, could be classified in seven groups at chronological order: liberal revolutions at the end of the XVIII century, post-WW1, post-WW2, Latin America Lost Decade of the 1980s, Israel at the Yom Kippur War, the Fall of Soviet Regime and three main contemporary hyperinflations: Venezuela, Zimbabwe and possible Argentina 2023 episode.

Generally, disruptions to institutions due to Revolutions, Civil Wars, Invasions, Classicide, Coups d'État, and transitions from dictatorship to democracy are behind all the episodes, except Argentina in 2023.

As we will prove by this research, Argentina experienced at least the hell's door of hyperinflation once again in 2023, making it the only country in modern economic history, besides Russia during the Bolshevik civil war (1921) and the collapse of the USSR in 1991, which repeat an hyperinflation but during a democratic regime without civil war, territorial secession, or foreign invasion on its mainland.

The primary characteristic of Venezuela is a populist political economy that emerged during the positive phase of commodity cycles, whose benefits ultimately ended with the collapse of commodity prices.

Soft fiscal budgets characterize populist economic policy, but not all have public finance out of control and fiscal endogenous monetary printing, as was the case in Venezuela (2017-2021) and Argentina until 2023. Bolivia has a relatively independent Central Bank. Ecuador has a dollarized economy, which has resisted the temptation to de-dollarize, despite having had populist governments in the past. Peru has had several populist governments over the last few decades, but since its hyperinflation in 1989, it has established a formal and de facto independent Central Bank.

Argentina has been under a populist trap since 1943, when a fascist coup d'état imposed a corporatist, anti-competitive Stolper-Samuelson coalition that is resilient today.[2] However, since the return to democracy, the anti-competitive coalition has blocked any change to the corporatist rule. The result is a weak state and institutional anomie, as it is analyzed in the following sections.

Moreover, the risk of hyperinflation in Argentina has recurred also since the return to democracy in 1983, without a military coup d'état, invasion, or civil war, not only due to the hyperinflation of 1989-

[2] See Coremberg and Ocampo (2025).

1990, but also when short, explosive episodes, such as those in 1975, 1982, 1985, 1991, and 2023 are considered together. It appears that Argentina has historically been prone to a persistent risk of hyperinflation.

The extent to which Argentina was close to hyperinflation in December 2023 is the key focus of this paper, which will analyze evidence of behavioral adaptations beyond mere quantitative thresholds.

**Table 1: Historical Hyperinflations**

| | Country | Date | Shock | |
|---|---|---|---|---|
| Liberal Revolutions | EE. UU. | 1776 | Independent War | |
| | Francia Assignats | 1789 | French Revolution | |
| Post-World War I | Germany | 1923 | World War I, several revolutions, coup d'état, political assassinations, the Ruhr occupation, and attempts at territorial segregation. | |
| | Fall of the Austro-Hungarian Empire | 1918-1921 | WWI Territorial Separation | |
| | Russia | 1919-1921 | Bolshevik Revolution, Civil War, Kulaks Classicide | |
| Post-World War II | Greece-Hungary-Yugoslavia-China-Taiwan | | Lessons Learned: European countries resolved the Monetary Overhang without hyperinflation. | |
| Latin America Lost Decade | Argentina | 1975-1989-1990 | Quasi Civil War, Military Coup d'état, Malvinas War, Stabilization Failures. Default, Deposit Confiscations | Democracy Transition and Transfer Issues |
| | Bolivia | 1985 | | |
| | Brazil | 1990 | | |
| | Perú | 1990 | | |
| Israel | Israel | 1985 | Yom Kippur War | |
| Soviet Regime Collapse | Ex URSS y Europa Oriental | 1989-1992 | Soviet Regime Collapse | |
| Contemporary | Venezuela | 2017-2021 | Bolivarian Revolution-Chavismo | |
| | Zimbabwe | 2008 | White Landlords Classicide | |
| | Argentina | 2023? | End of Commodities Supercycle 2011 and Fiscal Chaos | |

## 3. Definitions

This section reviews several definitions of hyperinflation from the economic literature.

Phillip Cagan (1956) provides the canonical quantitative definition of hyperinflation, drawing on the European experience following World War I. The hyperinflation threshold, as defined by Cagan (1956), begins when monthly price increases exceed 50% and ends when inflation stays below 50% for at least a year.

However, the quantitative threshold was estimated based on the post-World War I episode in European countries. Geography, geopolitics, social and historical contexts are quite different from other cases.

Heymann and Leijonhufvud (1995) also consider the conventional quantitative threshold of 50% per month for hyperinflation and 5% per month for high inflation, but their focus is on a qualitative approach.

Heymann and Leijonhufvud (1995) define hyperinflation not only by a specific quantitative threshold but primarily by the adaptive behavior of agents and policymakers in response to inflation. They represent three inflation regimes by the planning horizons: “moderate”, “high”, and “hyperinflation”. They consider inflation to be in the “moderate” range if people who experience it generally remain content, as shown by the annual inflation rate. In “high inflation”, people measure inflation in percentage terms per month; they consider annual figures meaningless, except for historical purposes. “Hyperinflation” occurs when the effective horizon for sound price forecasts is less than one month.

Those are adaptive behavioral definitions of agents as a sequence of adaptive behaviors from a chronic high-inflation regime to hyperinflation, characterized by shortening contracts and planning horizons, ultimately leading to the dollarization of prices. At the same time, domestic money loses its functions first as a store of value, then as a unit of account, and lastly reaches a minimum of demand as a medium of exchange for daily transactions.

Frenkel (1990) defines hyperinflation as the extreme limit of a high-inflation regime. In such a regime, agents adapt to elevated inflation by indexing contracts to past inflation, including wages, housing rents, financial positions, and public utility tariffs. However, when inflation reaches extremely high levels, traditional backward-looking indexation becomes ineffective. Rising inflation increases uncertainty about future price changes, particularly about repositioning costs. Consequently, agents increasingly form forward-looking expectations, considering high-frequency indicators, such as weekly price changes, and, in extreme cases, resort to price dollarization in response to daily foreign exchange fluctuations.

The following section focuses on several adaptive behaviors that characterize the transition from a high-inflation regime to Hyperinflation.[3]

## 4. Behavioral adaptations from high inflation to hyperinflation

The first outlook on the transition from a moderate inflation to a high inflation regime is the collapse of the nominal contracts in favor of indexation. Housing rents, wages, and financial instruments tend to adapt to inflation acceleration by indexation.

Exchange rate, terms of trade, and public tariff shocks thrust the chronic moderate inflation regime to a new high inflation level. The primary adaptation to a high inflation regime is the diffusion of indexation across the network of contracts. Then, the agents adapt to the shortening of indexation periods and the acceleration of contract renegotiation frequencies to avoid possible holding losses and real wage losses between indexation periods. The housing rental market tends to shorten the indexation period from annual to quarterly. Labor unions pressure firms to include cost-of-living adjustment (COLA) clauses in wage contracts. Banks offer shorter and indexed deposits and credits. Public finance began offering indexed public debt to institutional investors and savers, indexed to the CPI or dollar-linked, not only to finance the public deficit but also to avoid portfolio dollarization and stop the drain on central bank reserves.

However, high inflation is not a stable regime because it is highly unpredictable: the level of inflation rises with any shock (balance-of-payments, tariff changes, exchange rate changes, or fiscal shocks).

Every shock generates jumps in the inflation level, which in turn leads to high relative price variability, signaling high uncertainty. From the perspective of firms and shops, uncertainty about the reposition costs of merchandise increases loss aversion. To mitigate the risk of holding losses, firms and shops raise defensive markups to hedge against expectation errors, leading to another round of price increases (Frenkel, 1979).

A stylized fact of most inflationary episodes is that inflation's variability tends to increase with inflation. In other words, higher inflation is typically associated with increased uncertainty on both the future path of nominal variables and the structure of relative prices. However, as Calvo (2012) pointed out, the type of uncertainty we are referring to is Knight's uncertainty, derived from the volatility generated by a crisis that seriously undermines fiat money as a medium of exchange, rather than the normal price volatility that characterizes an efficient market economy, which could be forecast with a known distribution of probabilities.[4]

[3] The IMF, following IAS 29 (2025), defines hyperinflation when populations dollarize or shift to non-monetary assets, contracts, and prices are indexed, and cumulative inflation surpasses 100 percent over three years. Argentina—alongside countries such as Haiti, Venezuela, Suriname, Iran, Lebanon, Turkey, Yemen, Zimbabwe, Ethiopia, Ghana, Sierra Leone, and Sudan—has exceeded this threshold between 2014 and 2023. The IAS 29 criteria capture Argentina's high-inflation dynamics but do not necessarily imply hyperinflation or an imminent transition to it.
[4] Knight (1921).

A high level of inflation tends to increase inflation's variability. Inflation became unforeseen, generating high uncertainty about future relative prices. At the peak of hyperinflation, inflation variability, ergo, uncertainty, reaches its maximum. High variability of inflation gives rise to stagflation: "wait and see" behavior induces investment, labor demand, and output contraction, as Vining and Elwertowski (1976) point out, based on Lucas's (1973) hypothesis. This heightened uncertainty from inflation variability can impair the efficiency of the economic system, thereby lowering potential and effective output, investment, and employment, as pointed out by Blejer and Leiderman (1980), Palerm (1990), Dabus (1993), and Coremberg (1994, 1995 and 1999).

As inflation accelerates, Barro (1972) and Dornbusch, Sturzenegger, and Wolf (1990) address the speed and frequency of price increases, as well as labor unions' pressure and strikes to shorten the adjustment interval and speed up payroll payments.

However, shortening the indexation and payment periods, increasing the frequency of renegotiations, and incorporating trigger clauses may not be enough to offset the risk of real wage losses, even when the planning horizon is compressed to one month.

As noted by Frenkel (1990) and Heymann and Leijonhufvud (1995), the collapse of planning horizons to weekly inflation expectations is one of the main stylized facts showing that a high-inflation regime can evolve into hyperinflation.

Nevertheless, even weekly inflation indicators of future inflation expectations may not be sufficient to reduce uncertainty. However, the weekly indexation clauses and the weekly revision of markups are highly costly when inflation expectations are often shocked. When past inflation loses predictive power, the next step is the dollarization of prices and contracts, considering the daily spot foreign currency market (Frenkel, 1990). Under foreign exchange controls, the daily informal foreign exchange rate market serves as a leading indicator of expectations for future inflation, as inflation spikes on a daily and weekly basis. Weekly and daily price adjustments, as well as price dollarization, signal a risk of hyperinflation.

On the verge of hyperinflation, when the economy loses its anchors, supermarkets delay their payments to suppliers due to liquidity constraints. The next step is the collapse of trade credit. When uncertainty about holding losses for sale goods is high, episodes of "closed due to lack of price list" become frequent, as Heyman and Leijonhufvud (1995) point out. Stores quit trading because they have lost the anchors that could link the past to future prices. Shortages surged endogenously even in the absence of official price controls.

Specific shocks could trigger a sudden transition from stable high inflation to hyperinflation. In Germany, the assassination of Minister Walter Rathenau in mid-1922 and the foreign occupation of the Ruhr at the beginning of 1923 occurred.[5] In Zimbabwe, the "Fast-Track Land Reform", the war in the Democratic Republic of Congo, and the suspension of World Bank credit due to the huge war veterans' pension scheme led the country to rely on printing money to finance public

[5] See Fergusson (1975), Feldman (1997), and Ulrich (2022).

expenses.[6] In Venezuela, there were no established savings during the oil boom years (2004–2013), leaving the state vulnerable when oil prices fell, amid institutional disruption and a shift towards an autocratic regime in the constitution.[7]

In Argentina, the failure of the stabilization plan Primavera in 1988, followed by default and the official confirmation of the suspension of World Bank disbursements, set in motion the path to hyperinflation in 1989. The new government's confiscation of deposits as part of the Bonex Plan was another turning point that triggered the second hyperinflation at the beginning of 1990.

As we will analyze in Section 5.8, for the 2023 episode, we find four episodes that push the verge of hyperinflation, characterized by two-digit monthly inflation rates above 10%. From March 2022, rising rollover risk of indexed public debt and criticism of the political economy by the leader of the official party. The second shock was the resignation of the Minister of Economy on July 12, 2022. The third shock was the unexpected primary victory of the dollarization-oriented libertarian candidate on August 13, 2023, and the fourth was the populist candidate's first-round win on October 22, 2023, who minimized inflation risks and was also the incumbent economy minister. Those shocks increased uncertainty about the policy regime, triggering CPI to 25% monthly in December 2023 and WPI to 54% monthly, both above the Cagan threshold.

This type of shock erodes the effectiveness of indexation clauses, such as past inflation in wage arrangements, thereby undermining the ability of nominal anchors to form expectations.

The search for an anchor for pricing leads to widespread dollarization of goods and services. Dollarization is sequential, prompt, and asymmetrical. First, domestic prices of tradable goods are dollarized; then, intermediate inputs; and lastly, even the non-tradables sector. Labor and government remain nominal or adapt later. Formal labor adapts faster than informal labor. However, later, even the State tries to mitigate tax erosion due to inflation (Olivera-Tanzi effect) by indexation of tax bases or implementing the so-called “bracket creep”.[8]

Informal dollarization, as an adaptation to hyperinflation, is a sign of institutional anomie, as Ocampo and Cachanovsky (2022) point out. Institutional anomie is one of the characteristics of hyperinflations, mainly German hyperinflation of 2023, according to Waldmann (1988) (2003), and Nino (1992) for the Argentine case. It refers to a condition in which a state keeps formal legal structures but lacks an effective rule of law, as informal norms and arbitrary state actions override them, resulting in a dysfunctional, weak institutional order.

As noted before, agents often evade legislative taxes by shifting to the informal economy, using domestic cash to avoid declaring transactions, and later converting it to foreign currency to avoid

[6] See Haslam and Lamberti (2015), and Hanke and Krus (2012)
[7] See Hausmann and Rigobón (2011), Hanke and Krus (2012), and Cárdenas and Barrientos (2018).
[8] “As a result of inflation and devaluation, the taxes were steeply progressive, with an increase of the fiscal burden without a corresponding increase in the contributive capacity of the citizens”, Bresciani-Turroni (1931) on German Hyperinflation of 1923. “The collapse of the mark left many people with no other option than to 'flee into physical assets'” Ullrich (2022). The same effect occurred during the recent period of high inflation and the brink of hyperinflation in Argentina, as described below in this paper.

the inflation tax. At hyperinflation levels, anomy reaches its maximum, legal enforcement weakens, and financial repression lowers its enforceability. For example, informal housing rent contracts began to include quarterly CPI indexation to evade housing rent controls, despite it being forbidden by the law.

¿What about real money demand? The canonical literature assumed that the route from a high-inflation regime to hyperinflation involves the following sequence: money ceases to serve as a store of value first, then as a unit of account, and finally, in the extreme case of hyperinflation, as a medium of exchange.

Cagan (1956) was the first to model real money demand, which shows exponential decay with inflation. However, he found a minimum of real balance demand for routine transactions in post-World War I hyperinflations. He, as well as Schacht (1926), found an even lower limit for Germany's hyperinflation, during which illegal currencies were issued, accounting for an impressive two-thirds of the outstanding legal banknotes.

However, there is evidence of the "staying power of money" not only in moderate inflation but also in high-inflation regimes and even during hyperinflation. As pointed out by Calvo (2012), "there are several post-WWI dramatic hyperinflation episodes in which the value of fiat money was positive until monetary reform was implemented."

Money continues to function as a medium of exchange even when subject to extremely high taxation. Economic theory suggests that even high inflation rates must induce currency substitution until the domestic fiat currency is reduced to zero. Inflation variability can also reduce the use of domestic money as a medium of exchange. However, even when the economy approaches the hyperinflationary threshold, domestic money keeps its role, at least partially, for routine transactions, as the medium of exchange, reaching a lower bound.

Easterly and Schmidt-Hebbel (1991) and Ahumada (1991) found that traditional money demand overestimates the decline in real balances during periods of hyperinflation. Moreover, money retains its status as a medium of exchange even when taxed at an exorbitant rate.

Several reasons would be behind the "staying power of money" during hyperinflation.

Modern Monetary Theory holds that a money-sovereign state can finance its spending by creating money. They implicitly postulate that money stays a medium of exchange due to legal tender laws and social convention.[9]

Of course, the role of domestic money as a medium of exchange can also be bolstered by requiring taxes to be paid in fiat legal currency. However, precisely when a high-inflation regime dissolves into hyperinflation, anomie reaches its maximum, at which the State loses its sovereignty, and citizens flee domestic money to evade the inflation tax by increasing the velocity of money.

[9] See Kelton (2010).

Financial repression through foreign exchange and capital controls, aimed at reducing foreign currency demand and financing fiscal deficits, could explain the persistence of domestic money, particularly when legislative taxes are charged in domestic currency.

Furthermore, financial repression through foreign-exchange and capital controls enables the State to impose an additional inflation tax on savers. Under financial repression, governments use the banking system as a tool for indirect taxation. By restricting alternative savings options and enforcing regulatory requirements—such as reserve mandates and interest rate caps—they direct citizens' deposits into public debt at artificially low yields (negative real interest rates), extracting inflation tax revenue by monopolizing savings and payments. Therefore, financial repression is a hidden form of taxation that distorts financial intermediation, as Reinhardt and Rogoff (2011) note. However, enforcement of financial repression typically diminishes as hyperinflation approaches.

The other choice is that money illusion persists even in highly inflationary environments, as postulated by Shafir, Diamond, and Tversky (1997), and Schiller (1997).

Day-to-day transactions, such as the price of a coffee in a coffee shop or a snack dinner, were conducted in domestic currency, even during hyperinflations. Moreover, recurrent repricing at weekly or daily frequencies is not a common practice among neighborhood shops, which helps keep their clients.

The best-known hypothesis of menu costs concerns the costs incurred by firms when changing nominal prices, as noted in the new Keynesian literature, for example, Akerlof et al. (1995) and Mankiw (1985). Menu costs provide a micro foundation for price stickiness: firms may refrain from adjusting prices in response to shocks. Nonetheless, menu costs are particularly relevant only in environments with low inflation, where firms adjust prices infrequently. Under high inflation or hyperinflation, menu costs become negligible relative to the benefits of frequent price adjustments.

The staying power of money generates hysteresis of money demand, as rationalized by Uribe (1997) and Guillermo Calvo (2012). Uribe (1997) derives hysteresis in real money balances from network externalities through learning experiences associated with currency substitution, which is quite like the argument of Ostroy and Starr (1992) about the means of exchange as a matter of transaction coordination. Calvo (2012) shows that fiduciary money maintains a liquidity premium due to sticky pricing driven by simple heuristics.

The determination of the minimum demand for money in high inflation is not only important for analytical purposes but also has consequences for economic policy, since beyond this limit the State's capacity to collect an inflationary tax would be zero.[10]

For Heymann and Leijonhufvud (1995), high-inflation economies ultimately operate on a triple standard of deferred payments: very short-term contracts remain nominal; agreements of

[10] In all hyperinflations, events of using goods as a medium of exchange are recorded but only generalized barter trade was recorded in Zimbabwe and in countries with a centralized economy such as Cuba.

intermediate term, such as housing rentals and wage settlements, become indexed; and transactions in real estate and certain durable physical assets are denominated in a foreign currency. The store-of-value function is performed by foreign currency. Domestic money is preserved as a medium of exchange for routine transactions and taxes.

However, it is true that during the 1989 hyperinflation, Argentine provinces issued quasi-currencies to pay public salaries and provincial taxes, in a déjà vu reminiscent of German hyperinflation. They conserved their nominal value only for paying state taxes. However, retail stores accepted them at a significant discount. As a result, they led to very imperfect substitutes for the domestic currency as a medium of exchange, albeit at a considerable discount.

Financial innovations, such as new payment methods, like digital wallets and cryptocurrencies, have enabled daily transactions since the last pandemic, lowering the transaction costs of holding domestic money and pushing up the limit on the decay of real balances due to inflation.

The evidence suggests that the triple standard persists even during hyperinflation, as domestic money continues to serve as a medium of exchange, at least for daily transactions, and taxes are still levied in domestic money.

Summarizing, the route from high inflation to hyperinflation is marked by shortening contract durations, frequent repricing, and payments collapsing from a monthly basis to a weekly basis, decline of transactions, lack of prices with shortage due to uncertainty on reposition costs, informal dollarization, and a weak staying power of money as a medium of exchange.

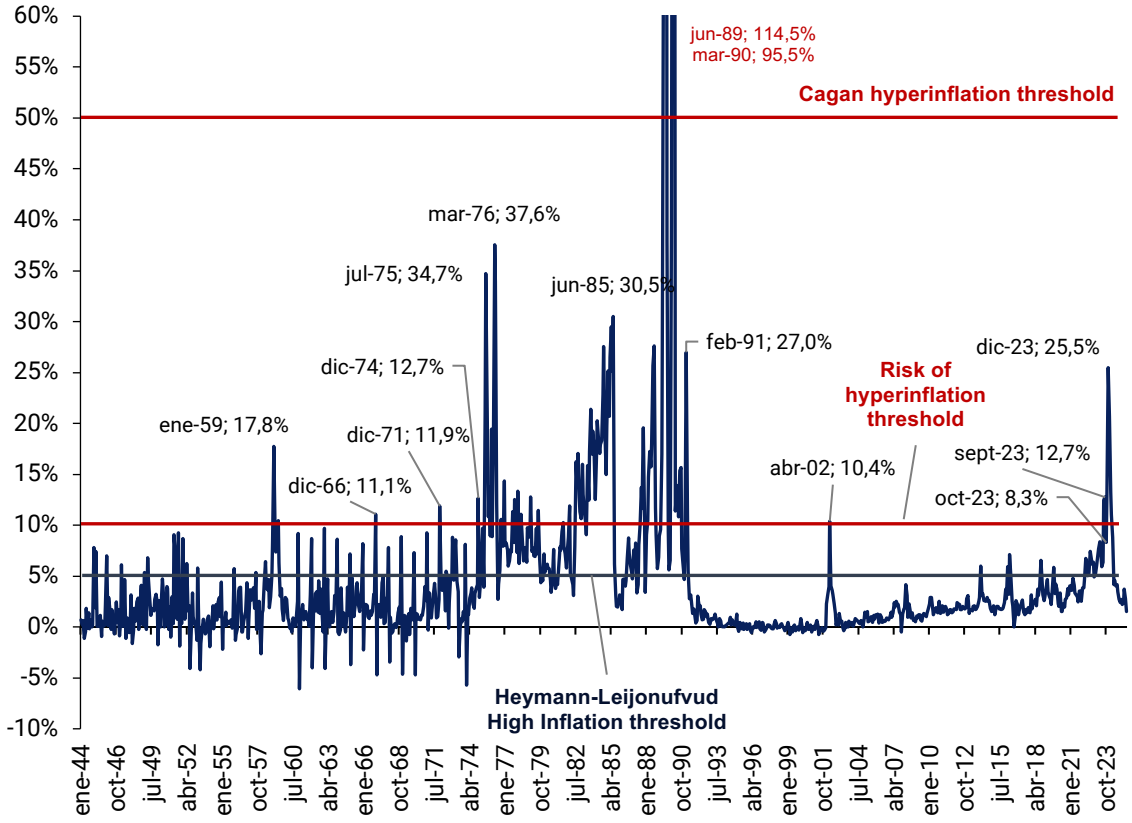
The following section presents quantitative and mostly qualitative stylized facts indicating that Argentina in 2023 was at least on the brink of hyperinflation, like the end of the 1980s Argentine experience and the well-documented German Hyperinflation of 1923.

## 5. Stylized facts

### 5.1. The brink to hyperinflation quantitative threshold

The following figure illustrates the monthly inflation from 1944 to 2023 measured by the CPI index.

**Figure 1: CPI monthly inflation 1944-2025**




Source: Official CPI index from INDEC (National Statistics Institute), except 2007.1-2015.12 from CPI Bevaqua.

Since 1944, there have been nine episodes of extreme inflation, in addition to the hyperinflations of June 1989 and March 1990. It is not a coincidence that almost all episodes, except April 2002, preceded stabilization plans: December 1958 (Alsogaray Plan), March 1967 (Krieger Vasena Plan), July 1975 (Rodrigo Shock), April 1976 (Martinez de Hoz, "Tablita" Plan), and June 1985 (Austral Plan) and 2023. The Convertibility Plan, the only durable stabilization plan since 1944, was implemented in April 1991, following the failure of earlier stabilization attempts by the same government, which had occurred after hyperinflations of June 1989 (114.5%) and March 1990 (95.5%).

All these episodes, except those in 1971 and 2002, were driven by a social demand for low inflation, which ultimately culminated in a stabilization plan once inflation had surpassed the 10 percent monthly threshold.

Based on these historical experiences, we set a quantitative threshold for the ex-post risk of relapsing into hyperinflation as monthly CPI inflation exceeding 10%, followed by stabilization, regardless of the inflation level reached.

This limit is not discretionary. It corresponds to the critical juncture when Argentines' demand for stabilization reached its peak, after which the economy either relapsed into hyperinflation or stabilized, at least temporarily, thereby delaying its onset. Notably, our threshold for the risk of relapses in hyperinflation is twice that of Heymann and Leijonhufvud (1995), the High Inflation Regime threshold (5%). Ocampo (2021) identifies four episodes of hyperinflations: 1975-76; 1984-85, 1989-1990-1991, which are among those identified here, based on quantitative thresholds of CPI, WPI, and FX rates as well as the level of public budget, but this excludes inflationary spikes of January 1959 and December 1966, which sparked ex-post stabilization plans.

A significant milestone in the onset of chronic inflation was INDEC's political intervention in January 2007, when the effective annual inflation rate surpassed 10%. The CPI was adjusted from January 2007 to November 2015 using a more credible alternative series from Graciela Bevaqua, the Former Price Director of INDEC (National Statistics Institute). The government factually intervened the INDEC during the cited period to hide inflation acceleration above a 10% annual rate and later manipulate the rest of the official series.

Zimbabwe officially acknowledged hyperinflation in its statistical reporting. Venezuela, by contrast, discontinued publishing official inflation figures. Argentina stood for a distinct case: it was the *only economy* on the verge of hyperinflation in which the statistical agency ceased producing reliable measures of inflation, as well as of GDP, unemployment, and poverty, until November 2015. Following the change in administration in December 2015, the statistical framework was restored, and credible data have been consistently published since then.

Nonetheless, given the Heymann and Leijonhufvud high-inflation threshold, Argentina has kept a relatively stable high-inflation regime since the devaluation in January 2014, when the CPI inflation rate first exceeded 5% per month.

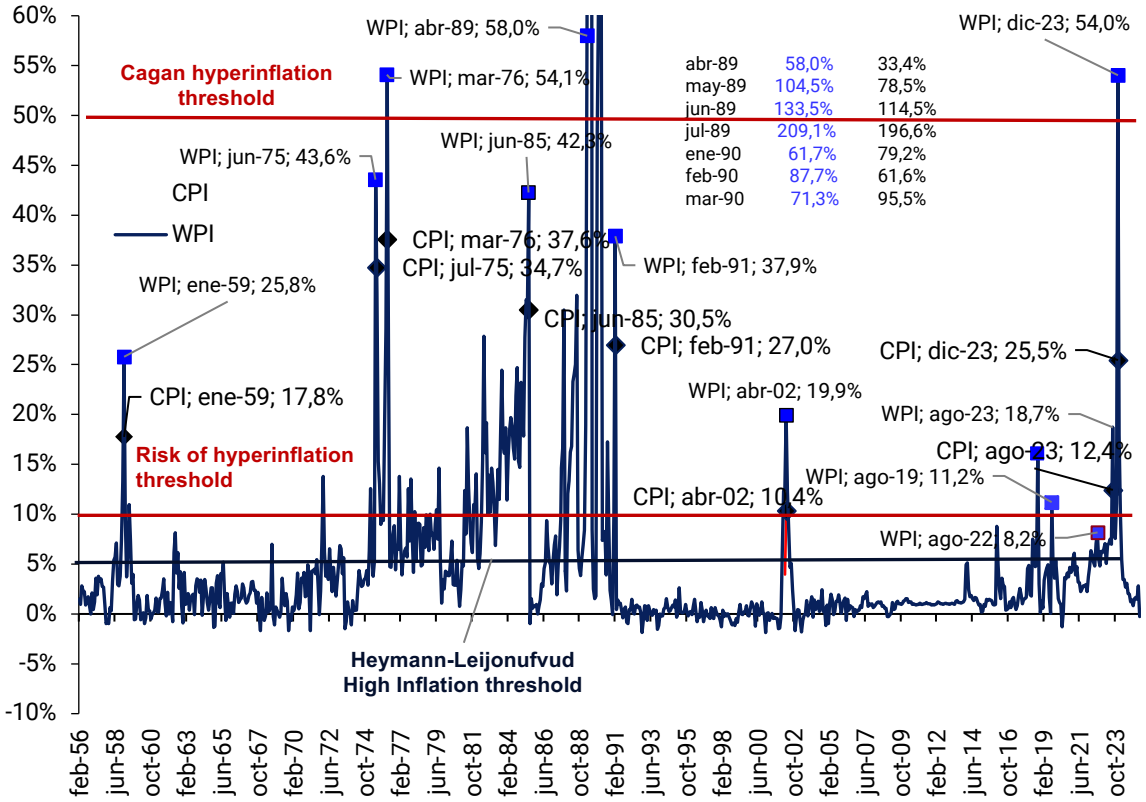
Nevertheless, the route to hyperinflation was marked by an acceleration of inflation since March 2022, when inflation jumped above the 5% threshold and continued to accelerate until August 2023, when the CPI reached a 12.4% monthly rate, signaling the risk of hyperinflation.

CPI Inflation reached a peak of 25.5% in December 2023, a level like earlier experiences of “knocking on the door” of hyperinflation, which preceded stabilization plans such as Austral and Convertibility.

One of the key characteristics of hyperinflation episodes is that the wholesale price index (WPI) tends to lead, or at least move contemporaneously with, the consumer price index (CPI). Moreover, the WPI has another advantage because it generally records higher inflation than the CPI, as the latter is affected by repressed inflation stemming from administered prices, particularly frozen public utility tariffs.

As shown in the following graph, from 1956 up to the present, the WPI, due to its direct link with the exchange rate, anticipates all the episodes of risk of hyperinflation based on the CPI, except December 1966 and December 1971, as the following figure shows:

**Figure 2: WPI monthly inflation**




Source: Official CPI from INDEC, except 2007.1-2015.12 from CPI Bevaqua: January 1944-March 2025. WPI: January 1956 -March 2025.

The figure also reports that the strict hyperinflations of 1989 and 1990, as defined by Cagan, show the same pattern as the verge episodes. For instance, WPI inflation in April 1989 reached 58%, above the Cagan limit, followed by CPI inflation of 78.5% in May, and so on. The peak of 1989 hyperinflation occurred in July, when the CPI reached a record 196.6%, after WPI inflation accelerated from 133.5% in June to 209.1% in July. The second episode of strict hyperinflation reached a peak of 95.5% in March 1990, after the WPI accelerated from 61.7% in January to 87.7% in February.

Moreover, in 2023, the WPI reached a strict hyperinflation level in December, with a 54% increase over Cagan's definition of hyperinflation. Setting aside the strict hyperinflations of 1989 and 1990, as well as March 1976, December 2023 was the only episode where wholesale inflation jumped above the Cagan threshold from 1956 to the present.

After the 1990s decade of lower inflation, Argentina returned to chronic inflation, at least since January 2014, when monthly inflation reached 5%. The transition to a high-inflation regime began in March 2022, when WPI monthly inflation jumped and remained above the 5% threshold defined by Heymann and Leijonhufvud (1995) until December 2023. Moreover, according to the earlier threshold definition of hyperinflation risk, December 2023 marked a strict Cagan hyperinflation episode for the WPI case.

The new government implemented a stabilization plan on December 12, 2023. This plan, featuring an exchange rate and a strong fiscal anchor, was a significant step towards curbing inflation. It also involved a hard adjustment of public tariffs after they had been frozen for almost 20 years. After realigning the relative prices of administered utility tariffs, the stabilization plan successfully reduced monthly CPI inflation from 25.5% in December 2023 to 1.5% in May 2025, and monthly WPI inflation from 54%, December 2023 to -0.3% in May 2025.

Notwithstanding the quantitative threshold outlined here, the focus lies in identifying adaptive behavior under hyperinflationary conditions, a pattern that re-emerged in 2023, as discussed in the following subsections.

The chronic, stable part of a high-inflation regime could not induce economic agents to demand stabilization. If agents live in an inflationary environment, as we define it by adaptive behavior in the following sections, the demand for stabilization is extreme, as “stabilization and else!”

### 5.2. Weekly inflation

A clear symptom of December 2023 as a strict hyperinflation episode was the collapse of planning horizons from monthly to weekly, as pointed out by Frenkel (1990) and Heymann and Leijonhufvud (1995). Economic agents and policymakers began to take alternative weekly CPI figures into account in their expectations.

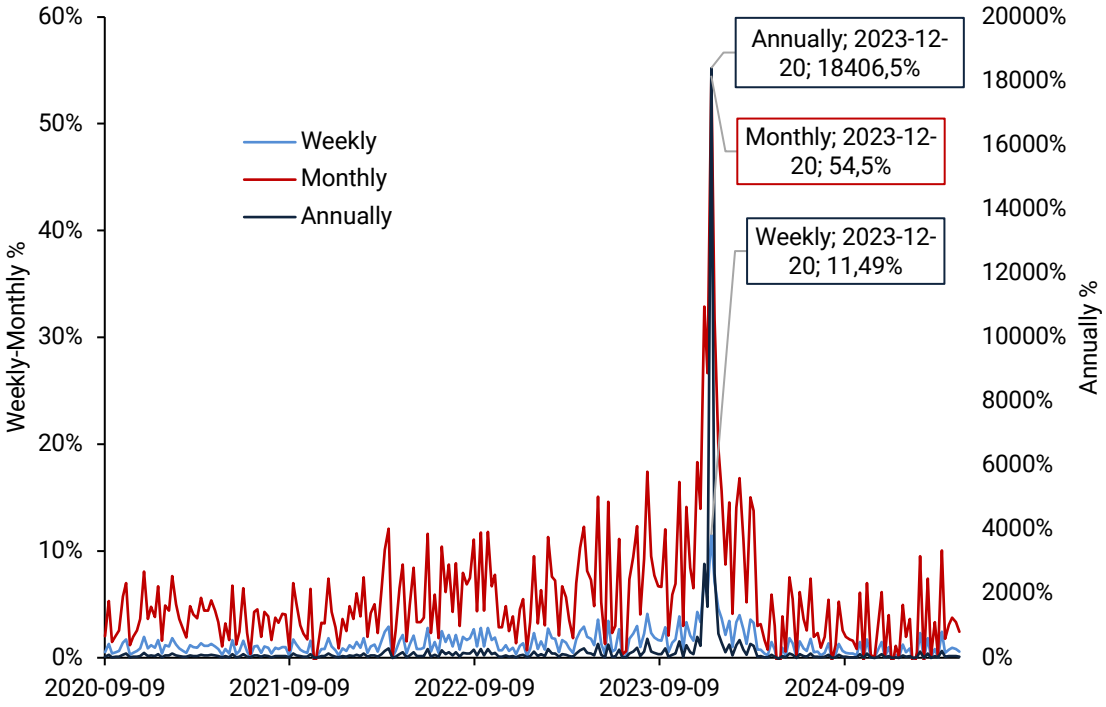
In 2023, weekly inflation indexes from several consulting firms proliferated. Furthermore, the Ministry of Economy issued an official weekly CPI from May 2022 to December 2023, allegedly to coordinate expectations. This policy is inconsistent, as inducing shortening expectations tends to accelerate inflation, according to the economic literature.

One of the most widely cited CPI weekly inflation rates comes from LCG consultants, which measures weekly food inflation. Despite this indicator excluding private and public services, it has the advantage of reflecting the immediate impact of inflation on households' beliefs, while also excluding the effect of repressed inflation stemming from the government's tariff freeze.

As shown by the following figure, weekly inflation reached a peak during the third week of December 2023, when the CPI reached a peak of 11.5% in a week, equivalent to a monthly rate of

54.5%, above the Cagan hyperinflation threshold, as well as the WPI an impressive annual rate of 18406.5%.[11]

**Figure 3: Weekly inflation**




Source: Ariel Coremberg based on LCG and INDEC.

### 5.3. Inflation variability and relative price variance

As shown in the following chart, the monthly equivalent inflation of the weekly indicator for Argentina shows a positive relationship between the inflation rate and its volatility for the period from 2020 to 2025, with December 2023 marking a peak in both inflation and variability. The relationship between inflation and its volatility becomes explosive in December 2023, when inflation exceeded Cagan's hyperinflationary threshold. At the end of December and the beginning of 2024, in line with the stabilization plan announced by the new government, the direction shifts towards areas of lower inflation and volatility, confirming the positive correlation.

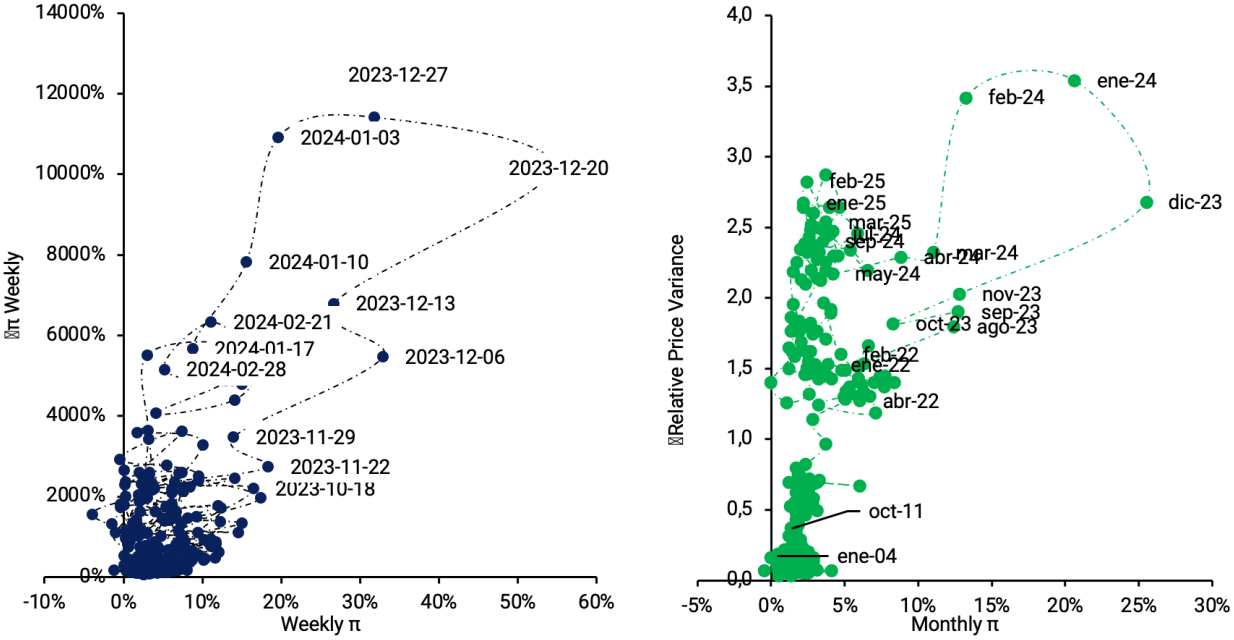
The path of the variance of relative prices resembles that of weekly inflation variability, as shown in the following figure. The recent high-inflation regime in Argentina confirms the stylized fact of a positive relationship between inflation and relative price variability, with inflation peaking in December 2023 and relative price variability in January 2024. The volatility of relative prices, as measured by the CPI groups, increases with inflation acceleration during the second half of 2023 until the implementation of the stabilization plan. Stabilization took effect immediately following a

[11] While it would not be proper to annualize the inflationary spike, given that ex post inflation later decelerated, nonetheless, economic agents contemporaneously perceived this rapid pace in both food prices and the Wholesale Price Index (WPI).

new shock to relative prices from the unfreezing of public tariffs. Not only has inflation dropped since February 2024, but uncertainty in relative prices has also decreased.

Volatility in both inflation and relative prices peaked at the end of 2023, confirming the loss of a nominal anchor—a key indicator of hyperinflation consistently highlighted in the economic literature.

**Figure 4: Inflation variability and relative price variance**




Source: Ariel Coremberg based on LCG and INDEC.

## 5.4. The exchange rate as a leading indicator of inflation[12]

The high volatility of inflation in the high-inflation regime makes it unpredictable. As we saw earlier, inflation's volatility makes it unpredictable, encouraging economic agents to forecast it using weekly inflation indicators and, when these are insufficient, the exchange rate.

However, when policymakers deny the fiscal and monetary origins of inflation, they often resort to repressed inflation by fixing the exchange rate (or imposing tariffs on public utilities), either nominally or by adjusting it below the expected inflation rate. Therefore, the black parallel exchange rate, rather than the repressed official rate, becomes a leading indicator of prices as the planning and pricing horizon shortens to a week or even a day.

[12] Speculation in currency was in no way the exclusive domain of the financially informed. "It was computed that well over a million Germans in early 1923 were engaged in exchange speculation. Their dealings took place mainly through the so-called Winkelbankiers, the back-street operations who had sprung up with inflation, made a living entirely through taking advantage of bid-ask price of foreign exchange." Ferguson (1975).

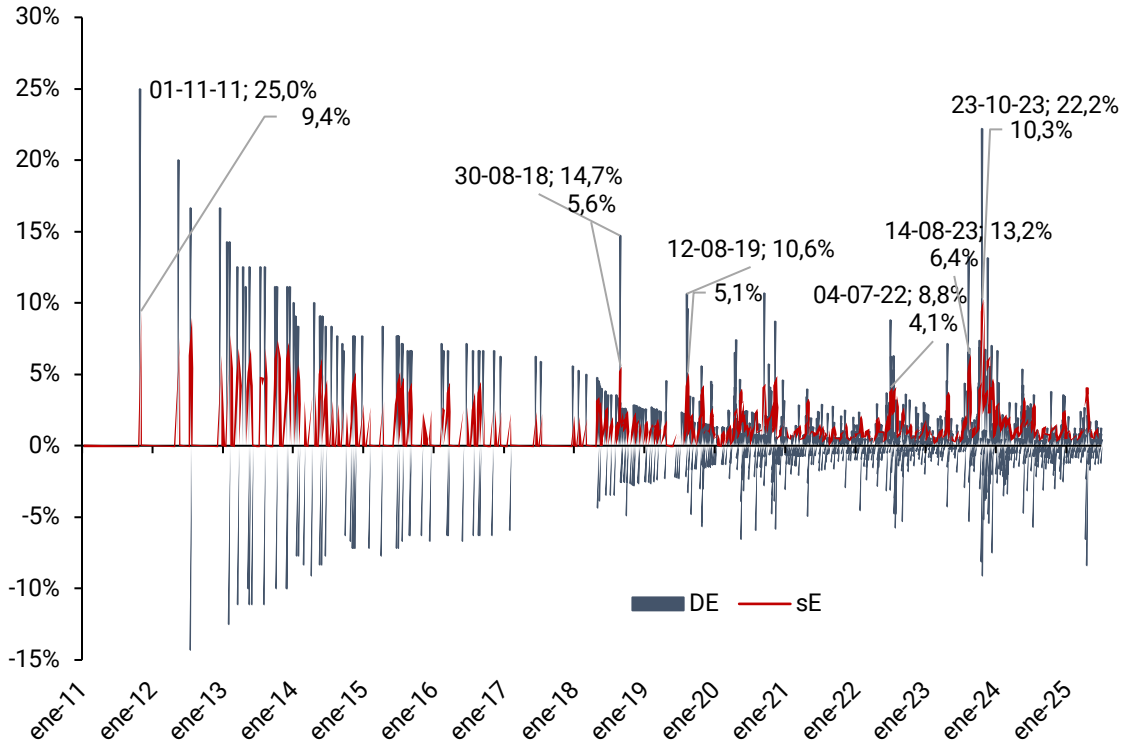
Figure 5 illustrates daily fluctuations and weekly volatility in the underground-economy rate of the parallel exchange rate of the dollar, denoted in blue, from the start of the currency clampdown in 2011 through March 2025. The series of parallel exchange rates, known as the dollar blue, as Argentines have named it, captures the several "tsunami" shockwaves associated with notable political and economic events.

On November 1, 2011, the day after the currency clampdown, which followed the attack on central bank reserves immediately after the elections, marks the first peak of the series. The parallel exchange rate increases by 25% in a single day with a weekly volatility of 9.4%.

Since August 2019, the date of primary presidential elections, which marked the return of populism to power till the end of currency clampdown for households in April 2025, the dollar blue changes have accelerated to a daily frequency, seemingly a seismograph of daily continuum earthquakes, analogous to the findings of Heyman and Leijonhufvud (1995) for the Argentinean hyperinflations of 1989 and 1990.

However, another peak was observed on October 23, 2023, the day after the first round of the presidential elections, when the daily change in the parallel dollar reached 22.2%. Weekly volatility rose further to 10.3%. A month and a half later, weekly inflation reached hyperinflationary levels.

**Figure 5: Exchange rate, parallel foreign exchange market, "dollar blue" - Level and standard deviation**




Source: Ariel Coremberg based on INDEC and Central Bank.

### 5.5. Staying power of money[13,14]

The Argentine economy responds to the stylized fact of demonetization and financial disintermediation, which is a characteristic of historical high inflation and hyperinflation. All monetary aggregates to GDP decreased, with a transitory reversion during the coronavirus pandemic. Currency cash measured by the ratio M0/GDP dropped from 7.9% to a minimum of 1.9% in 2024; the monetary base decreased from 10.2% to 3.1%, M1 from 12.3% to 4.8%, M2 from 16.2% to 5.2%, and M3 from 26.3% to 14.3%. Demonetization was more pronounced for M2 and M3 than for M1, reflecting financial disintermediation, as well as the staying power of money as a medium of exchange.

An indicator of the explosive size of monetary printing in Argentina is the sharp increase in banknote imports. In 2012, 1.5 tons of banknotes were imported, representing a 75% increase from the previous year.[15] By October 2023, on the brink of hyperinflation, 117 tons of banknotes were put out to tender.[16] Scenes of Argentines pushing cash-filled wheelbarrows, reminiscent of the hyperinflation in Germany in 1923, emerged in late 2023 and early 2024 as they paid for public services.[17]

Although the main aim of this paper is not to provide an econometric estimate of demand for money, it is helpful to analyze scatter plots to examine their behavior in the Argentine case.

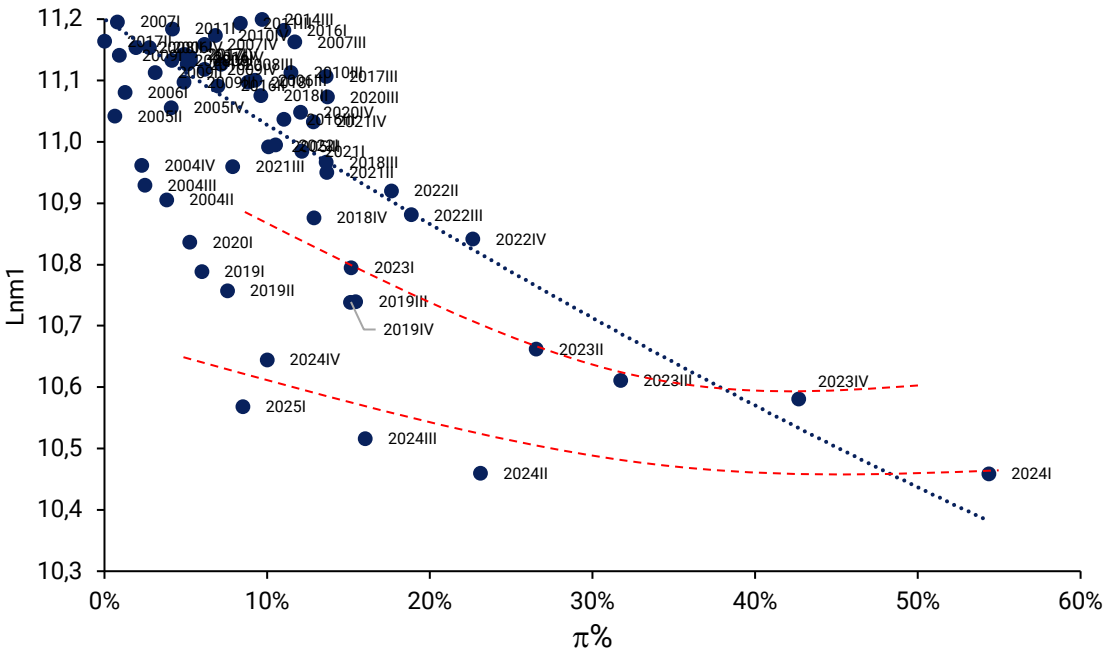
Real money balances show the typical negative exponential decay slope with inflation, as Cagan's model predicts, as shown in the following figures. The "flattening" of the money demand in 2023 would be consistent with a drop in the semi-elasticity of real balances to inflation.

However, real money demand would have reached a minimum but positive level during the peak of hyperinflation at the end of 2023, just before a reversion due to stabilization. This suggests the existence of a lower limit to the decline in real balances during hyperinflation. Routine daily transactions, wages, and taxes were conducted in domestic currency, a sign of the "staying power of money" phenomenon.

Likewise, the data for 2024 suggests a downward shift in demand for money, associated with irreversible effects stemming from individuals' extensive attempts to reduce their demand for real balances, given sunk costs and latent uncertainty about the possible reversal of stabilization efforts. The findings for 2023 are like those of Ahumada, Canavese, Sanguinetti, and Sosa Escudero (1993) for the hyperinflations in Argentina in 1989 and 1990.

[13] "The worst feature of all inflation is the mistakes of the economically weakest and the least informed", Schacht (1927).
[14] "Our estimations confirmed the often-stated view that the degree to which individuals can reduce their holdings of a depreciating currency has a limit", Cagan (1956).
[15] https://www.lanacion.com.ar/opinion/dinero-por-kilo-nid1620419/
[16] https://www.clarin.com/economia/alta-inflacion-gobierno-quiere-traer-90-millones-billetes-impresos-alemania_0_LfpKWltShB.html?utm_source=chatgpt.com
[17] https://www.instagram.com/reel/C4rEENCvwnl/?utm_source=ig_web_copy_link

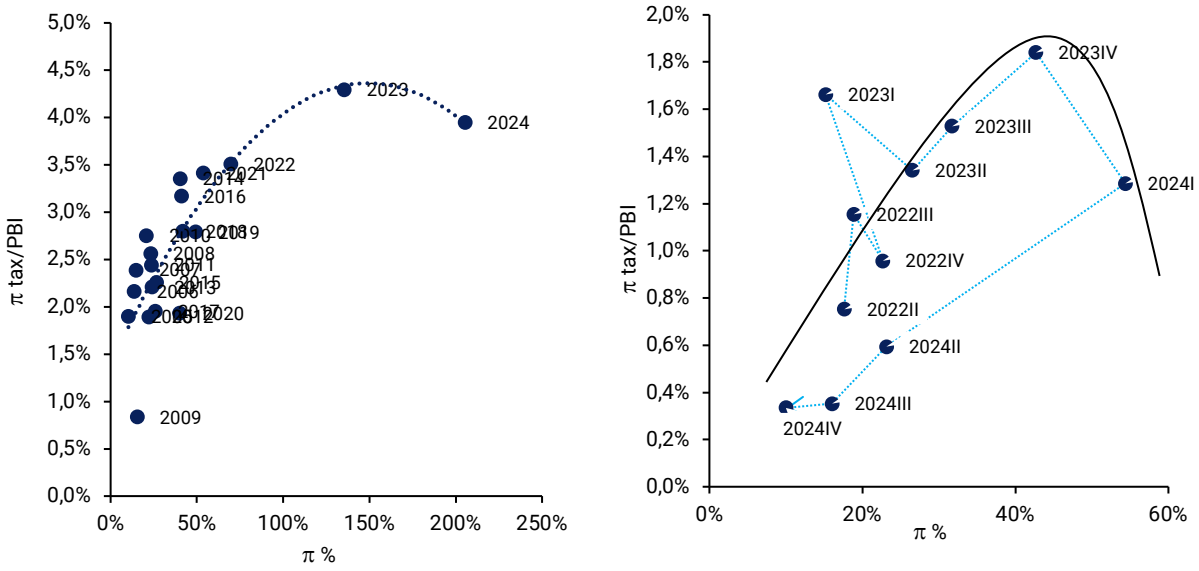
**Figure 6: Real money demand (money base)**




Source: Ariel Coremberg based on INDEC and Central Bank.

This finding on real money demand is key to understanding the performance of the inflation tax. The following figure shows that the relationship between the inflation tax and inflation at an annual frequency resembles the Laffer-Cagan curve, as shown by the standard trendline estimation. The inflation tax collection appears to reach a maximum in 2023, and 2024 seems to fall on the adverse side of the Cagan-Laffer curve.

**Figure 7: Cagan-Laffer curve**




Source: Ariel Coremberg based on INDEC and Central Bank.

However, annual figures could hide short-run dynamics. The quarterly frequency confirms that inflation tax revenue grew in tandem with the acceleration of inflation after the second quarter of 2022. At the peak of inflation in the 2023 fourth quarter, inflation tax collection was on the "good" side of the Laffer curve, nearly at its maximum. Beyond this peak, inflation tax revenue declines, even as inflation reached a maximum of 54% in the first quarter of 2024. At the beginning of stabilization, the Laffer-Cagan Curve appeared to shift downward, showing that the resort to inflation financing of the public budget had been exhausted.

The evidence suggests that the substitution of domestic currency for foreign currencies as a medium of exchange approached a positive lower bound in 2023, reminiscent of the Argentine hyperinflations of 1989-1990. The domestic currency retained its transactional function, albeit in a markedly attenuated form, as routine credit card payments required prior conversion of dollars in the underground economy.

The interplay of escalating economic informality, the still-limited scope of financial repression, the persistence of residual monetary illusion, survival menu costs, and the simple heuristics of prices in domestic money for routine daily transactions, such as "coffee" in a bar, imposed a de facto floor on the contraction of M1 demand.

The adoption of digital wallets in Argentina, accelerated by the pandemic, helped sustain M1 liquidity, supported transactional use of money during the verge of hyperinflation in 2023.[18]

This limit is above the experience of other historical hyperinflations, which lasted longer than the present Argentine 2023 episode, such as Germany (1923), Venezuela (2017), and Zimbabwe (2008), where the destruction of paper money as a medium of exchange was explosive, resulting in more frequent episodes of barter trade.[19]

### 5.6. Financial repression at the verge of hyperinflation[20]

Financial repression through foreign exchange and capital controls allows the State to obtain additional seigniorage from savers beyond cash. Under financial repression, governments use the banking system as an instrument of indirect taxation by limiting alternative savings vehicles and imposing regulatory requirements, such as reserve mandates and interest rate caps. They channel citizens' deposits into public debt at artificially low yields (a negative real interest rate), extracting inflation tax revenue by monopolizing savings and payments. Thus, financial repression is a concealed form of taxation through the distortion of financial intermediation, as Reinhardt and Rogoff (2011) point out.

[18] Current accounts held through digital wallets are included in the M1 aggregate. However, if money is invested in funds offered by digital wallets, these are backed by short-term deposits or bonds, which affects M2 and M3. However, if funds from investment funds' wallets are used for transactions, it represents a substitution of M2 or M3 for M1.
[19] Except the limit of their own hyperinflations of the end of the 1980s decade which was similar to 2023.
[20] "Private Banks by granting loans (to "crony-rent-seeking industries") in paper marks at a discount rate below inflation, did so at the expense of depositors or those of the Reichsbank", Schacht (1927). "The incentive to saving is gone just when saving is of vital necessity to the State". Testimony of Sir Basil Blackett, Director of the Bank of England, on a memorandum to the Foreign Office about German disorder of hyperinflation, 1923.

However, financial repression could also occur in both low- and high-inflation regimes. In 2011, Argentina adopted a strong exchange control named “currency clampdown” to prevent currency substitution, capital flight, and speculative attacks on Central Bank reserves. This measure was in effect until the middle of 2024, except for the period from 2016 to 2018.

The currency clampdown, implemented in 2011, not by chance, matched with the end of the commodity price Supercycle that had sustained external revenues since the early 2000s, where capital flight and currency substitution were acute. The policy served as a defensive response to tightening external constraints, effectively delaying the full manifestation of hyperinflation. Over time, however, increasing currency substitution through informal and offshore channels undermined its effectiveness by shrinking the domestic monetary base and eroding the government’s capacity to extract seigniorage, ultimately requiring higher inflation rates to generate equivalent fiscal resources.

It was a mechanism of forced savings in pesos (the domestic currency), serving as an extreme form of financial repression, to continue collecting inflationary taxes that would otherwise be evaded through currency substitution. The mechanism involved "forcing" the allocation of financial banking assets into public bonds in pesos at a negative real interest rate by prohibiting legal access to the dollar. As a result, the inflation tax also had a regressive impact, not only on wages but also on middle-class savings in the banking system and on the working capital of companies, especially small and medium-sized enterprises (SMEs).

In this way, it was even more difficult to flee the legislated tax zone into the unregistered economy, forcing them to pay inflationary taxes on their assets in banked pesos.

On the other hand, SMEs and savers who placed their pesos in banks financed the "promoted" loans directed by the State at negative real lending rates. The inflationary tax levied on savers implicitly subsidized debtors in the financial system, as remarked by Fanelli, Szapiro, and Damill (1989).

The magnitude of the tax borne by depositors in pesos arising from the negative return on their savings, as well as the corresponding subsidy to debtors of the financial system for credit granted at negative real interest rates, can be calculated following the methodology of Gaba (1977) as:

$$\tau^{\pi}.D = (r_P - r_{P*}).D$$

$$S^{\pi}.C^{priv} = (r_A - r_{A*}).C^{priv}$$

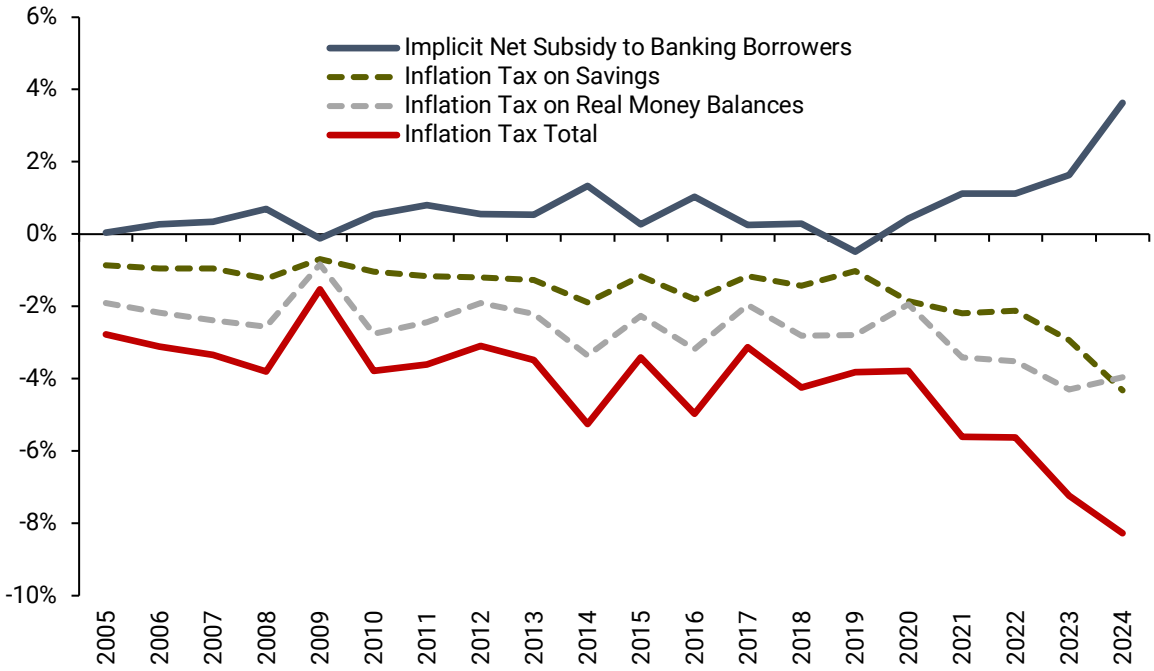
Where:

$\tau^{\pi}.D$: inflation tax on savers.

$S^{\pi}.C^{priv}$: subsidies to borrowers.

$r_i$: are the real interest rates; $r_P$: real passive interest rate; $r_A$: real active interest rate; $r_{i*}$: the equilibrium real rates; $D$: deposits in pesos; $C^{priv}$: credit in pesos to the private non-financial sector.[21]

**Figure 8: Inflation tax on savings and credit subsidies**




Source: Ariel Coremberg based on INDEC and Central Bank.

Inflation tax on cash balances reached a maximum of 4.3% of GDP in 2023. The inflation tax on savers reached a peak in 2024, at 4.3%, due to the partial erosion of the quasi-fiscal deficit by the downloaded nominal interest rate, which was below the initial devaluation at the beginning of stabilization. This allows the State to charge part of the inflation tax on deposits by issuing Central Bank debt instruments to banks at a negative real interest rate.[22] At the same time, this also implicitly subsidizes credit for banking borrowers by 1.6% in 2023 to 3.6% in 2024.

Focusing solely on the effect of inflation as a tax on cash balances may underestimate the income transfers from other assets that result from inflation, as noted by Fanelli and Szapiro (1990). In this way, holders of current accounts and deposits at a negative real interest rate pay an inflationary tax, which banks collect on behalf of peso holders. However, the quasi-fiscal deficit and tight reserve requirements allowed the Central Bank to appropriate a large part of this tax through liabilities instruments of the Central Bank (LELIQs, LEBACs, and others) on the bank's assets, but

[21] Here, the assumptions of Gaba (1977) are used, which are $r_{P*} = 2\%$ and $r_{A*} = 5\%$.
[22] Public debt securities at the nominal interest rate were another source of inflation tax. Another source would be public debt with indexation clauses at more extended periods than the frequency of inflation expectations. The Argentine State decided to selectively default on CPI-indexed bonds and GDP warrants by manipulating the CPI and GDP between January 2007 and December 10, 2015, thereby collecting another source of inflation tax.

shortening their maturity to a week and inclusive daily at the peak of brink of hyperinflation in December 2023, as it will analyze in next section.

The positive trend in total inflation tax revenue from financial assets, from a minimum of 2.8% in 2005 to 8.8% of GDP in 2024, suggests a relatively effective form of financial repression. However, there was a general belief that lifting the currency clampdown would lead to hyperinflation. Nevertheless, as we will analyze below, at the verge of hyperinflation, the enforcement of financial repression tends to weaken.

Summing up, inflation tax, which affects people experiencing poverty, workers, savers, and SMEs, paid a total of 7.2 % of GDP in 2023 and a peak of 8.8% of GDP in 2024 (4% of inflation tax on real cash balances), which subsidized banking debtors by 1.6% and 3.6% of GDP for the same period.

## 5.7. Shortening horizons and frequency of payments by market

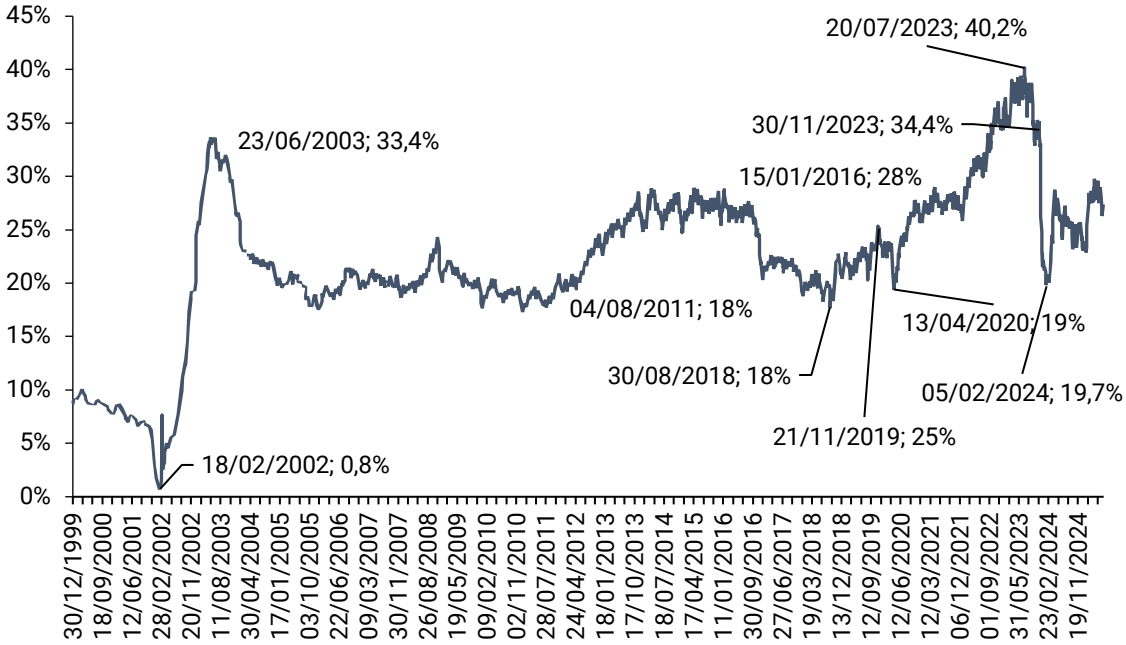
### 5.7.1. Financial market

The Argentine financial system showed a pronounced shortening of the maturity structure of bank deposits, a stylized response to inflationary acceleration. The erosion of the domestic currency's purchasing power, combined with heightened price volatility, led households and firms to favor short-term placements as a mechanism to hedge against devaluation risk and capitalize on prospective nominal interest rate adjustments.

During 2022 and 2023, a range of one-month time deposits emerged, along with the expansion of money market funds offering daily liquidity and inflation-indexed deposit instruments, all of which represent empirical regularities consistent with high-inflation episodes previously observed in Argentina in the 1980s. The demand for immediate liquidity eased rapid shifts out of the domestic currency and withdrawals from the financial system, undermining the banking sector's role as an intermediary.

The following figure illustrates the inverse relationship between inflation dynamics and deposit maturity.

**Figure 9: Private sector fixed-term deposits in pesos up to 59 days as % of total private sector deposits**




Source: Author, based on the Central Bank of Argentina.

Following the implementation of the foreign currency clampdown in 2011, the share of private-sector peso-denominated time deposits with maturities under 60 days increased steadily, rising from 18% to a peak of 40.2% by the third week of July 2023.[23]

Nevertheless, the financial disintermediation escalated further in the lead-up to the hyperinflationary episode of late 2023. Short-term deposits declined, from 40.2% in July to 34.4% by November. It declined by an additional 15 percentage points in the following two months, reaching 19.7% in early February 2024. The decline is not only due to withdrawals but also to the depreciation of the peso.

The 2023 presidential elections reproduced the precautionary saving effect observed in earlier electoral episodes, such as 2011, 2018, and 2019.

As shown in the following figure, during the high-inflation regime, savers substitute long-term domestic-currency deposits for short-term deposits, mainly dollar-denominated savings accounts. Deposits of more than 59 days in pesos and dollars showed a negative trend throughout the period.

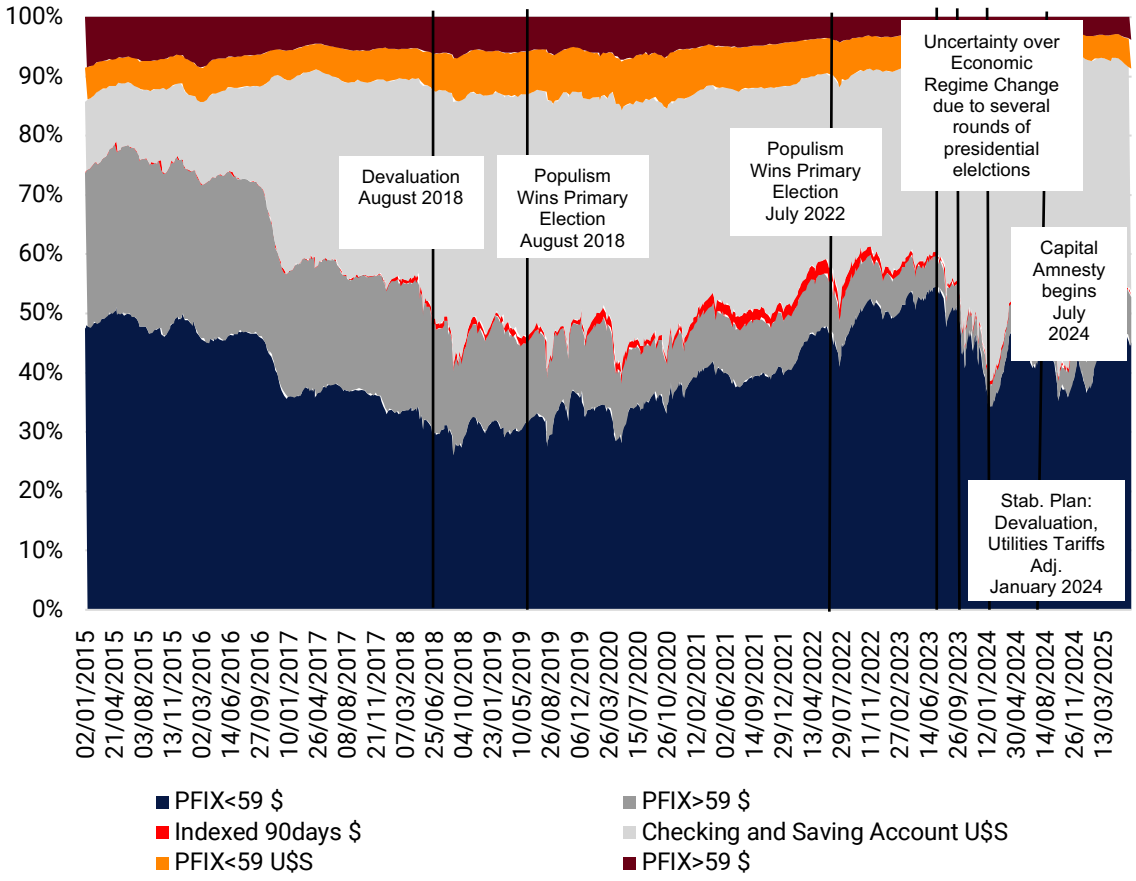
[23] A transitory reversal of this trend occurred with the temporary exit from the clamps from the beginning of 2016 until August 2018.

However, the central phenomenon is portfolio dollarization. Every shock to the foreign exchange rate triggered a run on peso deposits. In more acute episodes, such as during every intermediate and presidential election, a bank run ensued. Long-term deposits have almost disappeared.

CPI-indexed deposits proved ineffective as an inflation-hedging instrument, reflecting a pronounced maturity mismatch: while their indexation horizon was limited to 90-day maturities, inflation expectations had already shortened markedly—first to a monthly horizon, then to weekly, and subsequently to daily. As a result, these instruments did not provide a meaningful buffer against inflationary volatility. This was a sign of incomplete financial adaptation and financial repression at the verge of hyperinflation.

The indexed deposits are an endogenous financial innovation designed to preserve real balances in the face of accelerating inflation. If the stabilization of the new government had not been in place, there would have been a chance of more short-term indexed deposits to a weekly frequency, as seen during the 1989-1990 hyperinflation.

**Figure 10: Composition of private sector deposits by currency and maturity**




Source: Author, based on the Central Bank of Argentina.

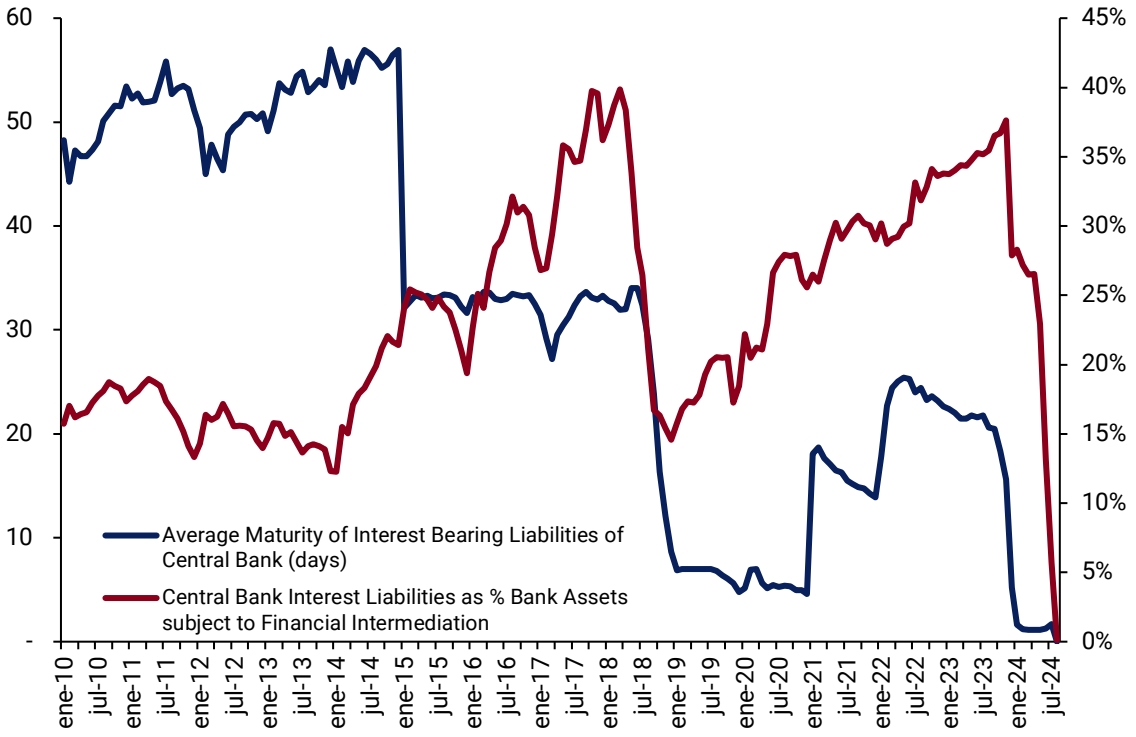
The banking system effectively transitioned to a transactional banking model, as maturity mismatches and the crowding out of private credit by the public sector virtually cut banks' capacity to extend credit to the private sector.

Indeed, a substantial share of banks' lending capacity was absorbed by short-term Central Bank financial instruments, thereby easing financial repression and, in effect, sharing the burden of the inflation tax.
The Central Bank's indebtedness to the banking system—denominated as the quasi-fiscal deficit—arose from sterilizing part of the monetary issuance to finance the fiscal deficit, creating a monetary overhang within the banks that enabled them to collect part of the inflation tax on bank savers.

At the beginning of 2023, the Central Bank's monetary liabilities, together with Treasury securities, accounted for more than 70% of banks' liquidity position and credit-exposable assets, as well as 10% of GDP, levels comparable to those seen during the hyperinflations of 1989 and 1990.

The quasi-mandatory placement of interest-bearing liabilities in their different denominations and instruments rose from 14.6% in December 2018 to 37.6% in November 2023, as shown in the following figure:

**Figure 11: Interest-bearing liabilities of the central bank**




Source: Author, based on the Central Bank of Argentina.

The inflationary burst triggered by the adjustment of repressed public utility tariffs at the onset of the stabilization program partially contributed to their dilution, their later replacement, and their conversion into Treasury debt with the prospect of lengthening maturities.

Nevertheless, the extreme fragility of the financial system becomes clearer in the sharp shortening of the Central Bank's interest-bearing liabilities' duration. In fact, their maturity was already limited at the beginning of 2011 currency clampdown, with an average term of 55 days. On the brink of hyperinflation in 2023, the average duration fell to less than 5 days, driven by the placement of overnight daily repos.

In the wake of deposit withdrawals in December 2023, the Central Bank resorted to placing put options with commercial banks, amounting to a third of the outstanding stock of interest-bearing liabilities. Moreover, BOPREAL bonds were issued to regularize the foreign-currency debt with importers, in an amount equivalent to another 60% of the stock of remunerated liabilities. These operations generated a sizable contingent liability, highlighting the risk of default on these instruments, which could lead to the financial system's bankruptcy.

The bank balance sheets mismatches at the verge of hyperinflation in 2023 were extreme, highlighting the high fragility of backing savers' deposits with public financial instruments at the brink of default.

### 5.7.2. Labor Market[24]

As noted by Trajtenberg and Schlesser (2024), in the context of Argentina’s chronic high-inflation regime over the past decade, the prevailing adaptive strategy in collective bargaining has been to shorten agreement durations and increase the frequency of wage adjustments.

More strikingly, wage contract durations approached levels consistent with a hyperinflationary environment, as shown by cases in which non-remunerative payments, wage revisions, and indexation mechanisms (such as trigger clauses) began operating at fortnightly or even weekly intervals. Wage contracts showed significant flexibility towards forward-looking bargaining by December 2023. The majority of the 27 agreements analyzed by the authors included wage negotiations in January 2024 that indexed salaries to the 25% inflation rate recorded in December 2023.

The duration of agreements, which had previously been semiannual or quarterly, was shortened to bimonthly in sectors such as food, mechanics, and sports organizations, and even to monthly in sectors like commerce (the central labor union), construction, bakery, and banking.

In response to heightened inflation volatility, labor unions successfully pushed not only for shorter agreements but also for real-time monitoring of inflation's effects on wages. This included the

[24] “In July 1923, an Agreement was thus struck between the Minister of Finance and labor union leaders to relate wages by indexation to the cost of living. Its principle was a weekly wage adjustment (as well as daily payments) to keep value”, Ferguson (1975).

widespread adoption of indexation mechanisms such as trigger clauses and, where these were absent, revision clauses.

The truck drivers' union, a wage-setting leader among Argentine trade unions at present, adjusted the duration of its collective agreements in line with the acceleration of inflation. Between 2015 and 2019, the union reduced the length of its contracts from annual terms to shorter periods, as average monthly inflation increased from 1.5% in 2015 to 3.9% in 2019. While keeping annual agreements during that period, the union incorporated semiannual review clauses in 2019 and adopted quarterly fixed-sum payments in 2020 and 2021 as inflation accelerated.

In 2022, when average monthly inflation reached 5.7%, the threshold for a high-inflation regime, the wage agreement transitioned to a quarterly structure with flexible review clauses and a longer duration than other unions, serving as an inflation anchor in exchange for tax-exempt status for trucker wages. Although the union conducted only one formal wage review in August 2023, which led to a 61% semiannual increase, the peak in monthly inflation (54%) by late 2023 prompted further adaptations from an anchor to a forward-looking agreement. In January 2024, with monthly inflation still high, the union agreed to bimonthly increases and, later, to monthly fixed-sum payments. This sequence of decisions reflects inflationary inertia in the periodicity of wage-setting agreements.[25]

This empirical pattern is consistent with stylized facts of economic literature. As formulated by Barro (1972), when inflation accelerates, the frequency of wage disbursements adjusts to the rising cost of holding money between pay periods, which may exceed the fixed costs of altering the payroll schedule. This behavioral adjustment contributes to the increase in the velocity of money, a classic feature of hyperinflationary episodes.

Another fundamental feature of the Argentine labor market, stemming from its corporatist structure since the 1940s, is the centralized nature of wage bargaining in Argentina. This centralization implies that labor conditions negotiated at the top level between union and employer federations are effectively imposed across firms, regardless of their size or productivity. As a result, the labor market experiences de facto flexibilization. Moreover, according to Novaro (2025), the centralization of collective bargaining in Argentina exhibits features that do not produce the stabilizing behaviors seen in other developed countries. This is due to a high concentration of union representation and a fragmented representation of employers, which eased adaptation to a high-inflation regime with greater wage and price variability.

Over the last two decades, a substantial part of the labor force has worked outside formal labor protections, yet at present. In the fourth quarter of 2023, only 39% of wage earners in the private sector were registered, while 30% were non-registered and 31% were self-employed workers engaged in disguised wage relationships, showing a high under-registration of wages among formal workers, a phenomenon prevalent today.

[25] A former leading union in Argentina's wage-setting process in the past, the Metallurgic Labor Union (UOM), signed an agreement that extended its term from three months (April 2023) to six months (July 2023), but included a trigger clause that allowed automatic wage adjustments to offset the inflation acceleration observed in December 2023 and January 2024.

This explains that there was a high minimum demand for cash derived from informal wage payments. Besides, the impact of inflation on wages by labor category during the wake of hyperinflation in 2023 was asymmetrical. Non-registered salaried workers and those earning the minimum wage experienced greater inflationary pressures than formally employed workers, who have greater bargaining power. The adjustment of wages to inflation and its variability was rapid for formal private workers, minimum-wage workers, and public employees, with informal employees being the most affected.

### 5.7.3. Housing Rents[26]

The housing rental market in Argentina was regulated during the recent period of high inflation. Rental Law 27.551, effective from June 2020 to October 2023, established a three-year minimum term, annual indexation based on an index (ICL), caps on deposits, among other provisions. The ICL (Index of Rent Contracts, for its Spanish acronym) published by the Central Bank is a blend of 50% of the official CPI index and the official formal wages index (RIPTE, Average Taxable Remuneration of Stable Workers, for its Spanish acronym).

From 2020 to 2023, Argentina reintroduced rent control, as in its earlier experiences in 1915, the emergency laws of the 1920s and 1930s, the decree laws during World War II, and the laws of the 1970s and 1980s. As expected, Argentina experienced the same consequences as in earlier instances: a reduction in supply and the spread of informal contracts with lower enforcement. This was another sign of institutional anomie.

However, in 2023, informal housing rental contracts accounted for a sizable share of the market. A significant share of informal contracts included quarterly indexation directly to the CPI, rather than the semi-annual frequency based on the official blend moderate index, ICL. Additionally, there was rent dollarization for premium apartments, retail stores, and daily temporary apartment rentals.

On the verge of hyperinflation in 2023, the rental market was in crisis, characterized by housing rent shortages and informal contracts with soaring prices. As another symptom of anomie, Congress amended the rental law on October 18, 2023, supporting a 3-year minimum, switching to semi-annual (every 6 months) updates, and requiring new contracts to be denominated in pesos.

After liberalization by decree from Dec 29, 2023, onward. New contracts can freely set terms, currency, and adjustment frequency/formula (legacy contracts keep their original regime until expiry). There was a sharp increase in listed supply in Buenos Aires after the repeal, accompanied by moderate rent prices.

The housing rental market also adjusted to the high-inflation environment despite the regulatory framework, by effectively shortening the duration of rent indexation clauses from annual to

[26] Mother sold her tenanted houses. Furniture she bought…had gone up five times in price…Inflation acceleration swallowed bit by bit the savings accounts of Mother and millions of others. Testimony of German Hyperinflation of 1923. Ferguson (1975).

semiannual and from semiannual to quarterly terms. On the verge of hyperinflation at the end of 2023, the market for temporary rentals, certain residential leases in high-income districts of Buenos Aires, and retail commercial rents became denominated in U.S. dollars—a pattern reminiscent of the dynamics seen during the 1989-1990 hyperinflation episode.

The shortening of contract duration and payment frequency in labor, rent, and housing markets, is robust evidence of a transition from a high inflation regime to hyperinflation in 2023.

### 5.8. Lack of price effect and shortage at the "sudden phase transition" to 2023 hyperinflation[27]

A well-established feature distinguishing hyperinflations from a chronic, stable high inflation regime is the "Closed for lack of prices" effect, characterized by a temporary sales shutdown, precautionary stockpiling, and endogenous shortages of goods, even in the absence of price controls.

Historical evidence from Argentina's hyperinflation crises illustrates the recurrence of this phenomenon. The 1975 "mega-inflation" episode and the hyperinflations of 1989-1990 featured repeated instances of retail market halts, including in supermarkets and department stores, as sellers suspended transactions because nominal prices were not updated.

The same patterns appeared from 2018 up to 2023. Four political shocks triggered a significant surge in the daily parallel exchange rate, with the third and fourth signaling "the sudden phase transition" towards hyperinflation levels.

The first two shocks were the devaluations of August 2018 and August 2019. The first signals macroeconomic inconsistencies in inflation targeting, twin deficits, and a foreign currency bottleneck stemming from lower exports due to a severe drought affecting crops. CPI monthly inflation increased from 3.9% in August to 6.5% in September 2018. WPI inflation jumped from 4.9% to 16.0% as shown in Figures 2 and 3. Spikes in inflation were consistent with a daily jump in the parallel ("blue") exchange rate: 14.7% on August 30, 2018, as shown in Figure 5.

The second shock signaled the return of populism to power after its triumph in primary elections in August 2019, marked by a daily spike in the parallel dollar of 10.6% on August 12. The monthly CPI rose from 4% in August to 5.9% in September. WPI jumped from 0.1% in July to 11.2% in August,

August 2019 marked the first episode of a "lack of price effects" in durable goods retail, including hardware, household appliances, and automobiles, which showed temporary sales stoppages. Agreed rental contracts were postponed, financing plans were withdrawn, car dealerships no longer had valid price lists, and even candy stands refrained from selling cigarettes. Bakeries received flour deliveries only under the condition of delayed payment at updated prices. These are just some

[27] "…Not only are prices of incoming commodities increasing daily, but the prices of old stocks are increasing within the twenty-four hours. Testimony of British Consul in Essen during the German Hyperinflation of 1923. It was quite impossible to quote prices in advance…" In any case, throughout the trade, it was found that the sums realized from sales would not replace stocks cited by Ferguson (1975).

examples of an economy that, in a single day, lost its reference prices.[28] Nevertheless, the inflation rate level averaged 3% without any acceleration till the beginning of 2022. The 2020 pandemic seemed to have temporarily halted inflation.

The third and fourth shocks from 2022 to 2023 marked the sudden phase transition to hyperinflation. Since March 2022, inflation and the parallel exchange rate have accelerated due to doubts among banks and investment funds, the main holders of indexed public debt, about the risk of rollover and reprofiling, as well as criticism of fiscal policy and the high level of internal indexed public debt from the leader of the incumbent party. The third shock was the untimely resignation of the Minister of Economy on July 12, 2022, followed by the leader of the government party issuing a public statement urging the President to implement a "cabinet reshuffle". The fourth shock involves rising political uncertainty over policy regime change in the primary and presidential election rounds, following the surprising victory of the liberal presidential candidate, who advocates the formal dollarization of the economy, in the primaries on August 13, 2023. Then, the triumph of the populist candidate in the first-round election on October 22, 2023—the former Minister of Economy, who did not acknowledge inflation problems—further deepened instability.

Doubts on rollover of domestic public debt shocks on an increase in the volatility of "blue" dollar and inflation acceleration. The firing of the Minister of Economy led to an 8.8% spike in the parallel exchange rate over the course of one day. Meanwhile, wholesale prices increased by 8.2% and retail prices by 7.0% in August 2022 and remained at those levels until July 2023.

Following the resignation of the Minister of Economy in July 2022, the lack of reliable price references has spread across multiple sectors, including automobiles, real estate, e-commerce, appliances, tools, electronics, and apparel, leading to a generalized suspension of sales, as reported by one of Argentina's leading newspapers.[29]

Under heightened nominal uncertainty, firms increasingly resort to precautionary price markups and postpone transactions. A behavior consistent with models of precautionary pricing under uncertainty and relative price variability. Uncertainty over replacement costs and the exchange rate at which firms can access foreign currency generates precautionary behavior, such as withholding supply, pausing e-commerce posts, or applying weekly and daily preventive markups.

Episodes of shortages and price indeterminacy in the automobile, spare parts, and consumer electronics markets led firms to suspend sales, citing the absence of updated nominal price schedules. Several car dealerships refrained from posting prices as a precautionary measure. Uncertainty surrounding the depreciation of the parallel exchange rate and the policy direction of the incoming economic authorities heightened doubts about the replacement cost of goods across

[28] https://www.infobae.com/economia/2019/08/13/la-suba-del-dolar-dejo-a-los-comercios-sin-precios-de-referencia-y-algunos-suspendieron-las-ventas/
[29] https://www.lanacion.com.ar/economia/dolar/falta-de-precios-y-actividad-paralizada-el-duro-impacto-de-la-disparada-del-dolar-nid24072022/

all sectors. For this reason, certain dealerships suspended sales, awaiting greater certainty before resuming transactions.[30]

The shortage of diesel fuel in the Argentine countryside made up one of the most severe supply disruptions of that year. The management of the state-owned company YPF, the country's leading fuel producer, was unable to prevent the diesel shortfall at the critical moment of the harvest season for Argentina's principal crops—cereals and oilseeds—during March and April, which subsequently extended throughout the rest of the year, also affecting regional crops such as yerba mate.

Cross-border purchases from neighboring countries increased, and underground diesel trade, known as "blue diesel," appeared at prices above the official level.[31] Transporters and contractors feared the shortage would persist despite mid-year policy measures to raise the pump price and increase the biodiesel blend. This situation, in fact, recurred in the following year.[32]

In such contexts, expectations of further price adjustments will amplify relative price variability, leading firms to delay transactions until updated price schedules are available.

The depreciation of the parallel exchange rate (dollar blue) also affected the non-durable goods sector. The absence of daily price updates, combined with exchange-rate uncertainty, led to shortages of food items on retail shelves, including cooking oil, pasta, coffee, sugar, and flour. Suppliers began rationing deliveries to supermarkets, while wholesale transactions were suspended altogether. As a manager of one of Argentina's largest supermarket chains stated: "In the past, we would receive three or four price lists with increases throughout the year, which later turned into a new list each month. Now we find ourselves in a situation where we have not even concluded negotiations on one increase before a new price list arrives".[33]

The expectations of a regime change "a la Sargent" were affected by the high political uncertainty during rounds of presidential polls between a candidate who supports the inflationary status quo and a liberal candidate who supports formal dollarization and peso repudiation. Nonetheless, this dynamic of opposition candidates fueling market exchange rate expectations during a presidential transition resembles that of the Alfonsin-to-Menem transition amid the 1989 hyperinflation. As with the hyperinflations of 1976 and 1989, the expectations surrounding the assumption of new presidential authority temporarily halted hyperinflation.

The win of the official populist presidential candidate in the first-round election of October 22, 2023, marked the main event of "sudden phase transition to hyperinflation".

[30] https://www.lanacion.com.ar/autos/que-esta-pasando-en-las-concesionarias-con-la-suba-del-dolar-blue-nid04072022/
[31] As the case of cross-border tire purchases. https://www.clarin.com/servicios/falta-neumaticos-legal-ir-cambiarlos-pais-vecino-_0_zNhixxtqam.html
[32] https://www.lanacion.com.ar/economia/campo/agricultura/gasoil-en-el-agro-advierten-que-podrian-seguir-los-sobreprecios-y-los-faltantes-pese-a-los-aumentos-nid17062022/
[33] see footnote 28.

This turning point triggered further parallel exchange rate jumps of 13.2% on August 14, 2023, and 22.2% on October 23, 2023 (with the highest historical daily volatility). Monthly CPI inflation accelerated from 12.4% (August 2023) to 25.5% (December 2023), while monthly WPI increased from 18.7% to 54.0% over the same interval, well above Cagan's hyperinflationary threshold.

Finally, the liberal candidate prevailed in the second-round runoff on November 19, 2023. The stabilization program involved a relative price adjustment normalization, aimed at correcting repressed inflation through a 120% devaluation of the official exchange rate, accompanied by successive increases in public utility tariffs, producing a new—but terminal—inflationary spike during the last weeks of December 2023. Nevertheless, fiscal and monetary anchors: tight monetary policy and fiscal surplus ensured a later decline in inflation.

In 2023, shortages, lack of prices, and precautionary markups became more acute and widespread across a broader range of products. Beginning in mid-year, sugar, cooking oil, yeast, milk, and wheat flour were often unavailable or subject to purchase rationing (e.g., two or three units per customer). The phenomenon extended beyond food to household cleaning products. Retailers reported that wholesale suppliers either refused to deliver at agreed prices or abruptly raised prices, prompting inventory hoarding along the supply chain.[34]

These findings support the hypothesis that, once expectations become unanchored on the brink of hyperinflation, the inflationary process may follow a nonlinear acceleration path, where complete exchange rate pass-through to prices amplifies nominal shocks, leading to episodes of lack of prices and temporary sales shutdowns typical of hyperinflations.

December 2023 was marked by the absence of price lists amid uncertainty about the incoming government's exchange rate policy, announced on 10th December.[35] The announcement of fiscal consolidation, along with a comprehensive adjustment of relative prices (unfreezing food prices and public utilities, and doubling the official exchange rate), clarified the economic horizon, albeit at the cost of a temporary jump in inflation. This effectively eliminated both shortages and the absence of reference prices. Today, CPI inflation is down to 1.5% monthly, while WPI shows signs of deflation.

It is noteworthy that one of the most significant fuel shortages in Argentina since 1975 occurred between October 27th and 30th, 2023. Since the leading fuel supplier, YPF, is a state-owned enterprise (SOE), this episode was one of the key events behind the liberal candidate's victory in the last round, as reported by the press.

Additionally, not only were private firms affected, but fundamental government services like public education and healthcare also faced serious challenges, such as numerous labor strikes and

[34] https://www.eldiarioar.com/politica/elecciones-2023/comercios-advierten-suba-precios-especulacion-falta-mercaderia-mayoristas_1_10709724.html?utm_source=chatgpt.com
[35] https://noticiasargentinas.com/economia/venta-de-autos-frenada--por-que-las-concesionarias-no-tienen-precios-y-las-terminales-no-producen_a65abdc42d6031f9dea227b2c

shortages of critical imported medical supplies, which were common during historical hyperinflations.

Therefore, the “Closed for lack of prices effect” during the rapid phase of 2023 hyperinflation became widespread not only in durable goods markets but also extended to the retail and wholesale trade of non-durables, indicating a halt in price formation and market transactions. In this setting, price dollarization increased, with the parallel exchange rate serving as the leading indicator of future price changes.

Therefore, the Argentine economy in 2022 and 2023 experienced several “closed due to lack of prices” episodes, without a closed sign posted on the storefront, a common feature of hyperinflation.

## 6. Conclusions

This research finds that in 2023 Argentina experienced a sudden shift toward the hyperinflation threshold, mirroring patterns observed earlier in Argentina, Germany, and contemporary hyperinflations in Venezuela and Zimbabwe.

Argentina did not save during the biggest commodity super-cycle since the late nineteenth century. The strict currency clampdown introduced in 2011 at the end of the super-cycle was a way to delay hyperinflationary pressures.

Quantitative indicators show that by the third week of December 2023, Argentina had surpassed Cagan’s hyperinflation thresholds for both the weekly food CPI and the monthly Wholesale Price Index, closely mirroring patterns seen in historical episodes.

The decision-making horizon shrank to a weekly scale, as demonstrated by the increasing importance of high-frequency alternative CPIs, the explosive behavior of inflation volatility, relative price dispersion, and the tsunami waves of the parallel (blue) dollar.

The functions of domestic money as a unit of account and a store of value have entirely vanished. However, domestic money still functioned as a medium of exchange for everyday small transactions, from a heuristic perspective, due to lingering monetary illusions and the extensive informal economy. Additionally, the demand for cash in domestic currency hit a record low, similar to the hyperinflations of 1989 and 1990.

The shortening of agents' commitment and contracts horizons is observable in financial, labor, and housing rental markets. The increased reliance on short-term, CPI-indexed deposits proved insufficient to stem the ongoing flight from domestic currency assets, leaving banks primarily engaged in transactional intermediation.

The enforcement of foreign exchange restrictions eased in late 2023, ahead of the presidential elections, as evidenced by increased pressure on the parallel ("blue dollar") exchange rate and the shift of central bank liabilities to daily maturities, raising the financial system's vulnerability to bank runs.

The labor market demonstrated strong adaptability, shifting expectations from past inflation to forward-looking in 2023, aimed at preserving real incomes. This was clear not only through trigger clauses in collective bargaining agreements but also through the shortening of wage payment intervals from quarterly to fortnightly and, in some cases, to weekly frequency.

Business and temporary rental contracts have become increasingly dollarized. The maturity and indexation of housing leases have been shortened to quarterly or even monthly periods, in direct contradiction to the rental law. This reflects yet another symptom of Argentina's institutional anomie.

Argentina's 2023 episode illustrates how the breakdown of nominal anchors, accompanied by exchange rate dislocations, undermined the economy's adaptive mechanisms under chronic high inflation, triggering a rapid shift into hyperinflationary dynamics.

The sudden transition towards the hyperinflation threshold was characterized by widespread failure of price signals and endogenous shortages. Pressures in parallel exchange markets during 2022-2023 spilled over not only to tradable goods but also to non-tradable goods. These dynamics caused food and fuel shortages, disruptions of retailers' payment systems, and a lack of prices in wholesale outlets and durable markets, all signaling the stylized facts of nearing the hyperinflation threshold.

While one may argue that Argentina did not reach a fully-fledged hyperinflationary regime, given that the Cagan-type monthly inflation thresholds were crossed only briefly, its macroeconomic configuration in 2023 placed the country knocking on the hell's door of hyperinflation, pushing the demand for "Stabilize or else".

Argentinians perceived 2023 as a novel episode of hyperinflation. First, the younger Argentine generation has no memory of the hyperinflation episodes from the late 1980s. "They had to learn." However, the memory of the "2001" crisis, which featured high unemployment and deflation in wages and prices, remained. At the same time, policymakers' inaction reflects a lack of institutional memory of the 1989-1990 hyperinflation. "They did not learn."

Second, in 2023, a strong social demand arose to "Stabilize or else," as shown by the decisive electoral win of the liberal candidate, whose platform focused on dollarization and a sharp contraction of inefficient public spending as strategies for macroeconomic stabilization.

Thus, Argentina is the only case in world history to have recently approached hyperinflation multiple times without war, revolution, territorial segregation, or institutional disruption.

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