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A New Estimate of Inflation for Ultra-High-Net-Worth Brazilians

In October 2017, we published our 28th letter, examining inflation from two perspectives: one focused on the economic stabilization plans implemented in Brazil and the other on an exercise to construct an inflation index for Brazilian ultra-high-net-worth individuals (UHNWIs). In this edition, we revisit and reformulate that index considering what we have learned over nearly a decade, now with an additional objective: to develop an indicator that can be updated periodically.

The motivation behind this exercise remains unchanged. Brazil's Broad National Consumer Price Index (IPCA), the country's main measure of inflation, tracks the cost of living of urban households earning between 1 and 40 minimum wages, leaving very wealthy households outside its scope. As the consumption baskets of these two groups tend to differ substantially, official inflation statistics may not accurately reflect the price changes experienced by these families.

This letter begins by explaining some important concepts for understanding inflation and how price indices are calculated. It then introduces a new methodology for measuring inflation among Brazilian households with substantial wealth and, finally, examines the characteristics of this indicator and assesses the implications of our findings for investment decisions and financial planning.

What Does an Inflation Index Actually Measure?

Inflation is defined in the dictionary as a "generalized and sustained increase in the prices of goods and services that reduces the purchasing power of money." This is a useful definition, although it conceals technical details that often go unnoticed by the public.

Not all indices measure the same thing. Broadly speaking, they can be divided into two categories. The first tracks changes in the nominal cost of a fixed basket of goods and services **(Cost of Goods Index, or COGI).** The second seeks to estimate the cost of living **(Cost of Living Index, or COLI),** meaning how much a household would need to spend to maintain the same standard of living, accounting for the possibility of substituting products in response to changes in relative prices and for changes in product quality over time. The latter is considered the more appropriate conceptual benchmark for inflation indices, as it incorporates changes in consumption patterns.

In this sense, constructing an index comparable to traditional measures requires more than simply calculating changes in the nominal prices of individual items. It involves a series of statistical adjustments. One important example is quality adjustment, which seeks to distinguish the portion of a price change attributable to pure inflation from the portion resulting from changes in a product's characteristics. Think about the last time you replaced your mobile phone: the new model probably cost more than the previous one, but its features were also likely to have improved, with more memory, greater processing power, and a better camera. How much of that price difference reflects "inflation," and how much reflects "product improvement"? This is precisely the question that quality adjustment seeks to answer, and there is more than one way to approach it.[1].

In any case, estimating this type of adjustment involves several technical challenges and methodological choices that are subject to measurement errors. One way to benefit from established statistical procedures is to favor items already included in official price indices, produced by institutions such as the Brazilian Institute of Geography and Statistics (IBGE), responsible for the IPCA, and the Bureau of Labor Statistics (BLS), which publishes the US Consumer Price Index (CPI).

Another challenge lies in determining the appropriate weights for each component of the index. Technically, the most accurate approach would be to first identify what was consumed during the period and only then assess the price changes affecting each item, as is done with GDP deflators. The problem is that collecting consumption data takes time and is subject to significant measurement errors, often requiring subsequent revisions. For this reason, the most widely established inflation indices tend to rely on household budget surveys. This allows results to be published more promptly and generally eliminates the need for subsequent revisions. The choice of methodology therefore depends on the index's intended purpose: for greater accuracy, retrospectively calculated indices may be more appropriate, while for contractual indexation (rents, wages, or debt), the latter approach tends to be preferable.

Choices and Limitations of the Study

Our objective is to present an alternative index based on publicly available data. The strategy adopted is to combine a restructured version of the IPCA, adjusting its weights to prioritize items that form part of our target audience's consumption basket, with a selection of categories from the US CPI, converted into Brazilian reais using exchange rate movements.

Compared with Letter 28, the approach has changed in three main respects. In the previous version, IPCA weights were adjusted based on the structure of the US CPI to approximate the consumption patterns of a higher-income population, and only two components were replaced with series more closely aligned with the target audience: rents, using the FipeZap index for properties with four or more rooms, and vehicles, using an average of imported luxury car models. This reweighted index accounted for 75% of the total and was combined with the Cost of Living Extremely Well Index (CLEWI), a basket of high-end luxury goods and services calculated annually by Forbes and converted into Brazilian reais, with a weight of 25%. In the new version, weights were calibrated directly for the target audience at a more granular level, as discussed below, while the CLEWI was replaced by selected components of the US CPI, which continue to account for 25% of the index.

The strategy is pragmatic, but clearly not perfect. The first limitation is that, although we can prioritize certain types of items over others (increasing the weight of "new cars" and excluding "used cars," for example), we cannot isolate only the high-end segments within a given category (retaining only "luxury cars" while excluding "economy cars"). When an item's weight is limited, its individual impact on the overall index is also smaller. Measurement errors in opposite directions may partially offset one another, but such offsetting is not guaranteed,

1 The main quality-adjustment techniques are hedonic adjustment, cost-based adjustment, and direct comparison with linking. The CPI combines all three techniques across different items, while the IPCA, according to IBGE's methodological documentation, uses only the third.

particularly if prices in high-end segments exhibit persistent differences relative to the series drawn from official statistics.

The greatest risk lies in items with disproportionately large weights, where deviations can have a more significant impact on the overall index. Differences between general price movements and those observed in high-end segments may become particularly relevant depending on the size of the market. In broader markets, where the premium embedded in a product's price relative to similar items depends solely on its quality (such as different brands of groceries), price dynamics tend to be disciplined by competition and innovation, and inflation differentials across segments tend to be moderate. Jaravel (2019) shows that, in US retail, products consumed by higher-income households experienced lower inflation due to the greater introduction of new products in these segments[2]. In such cases, prices of higher-quality goods still tend to remain highly correlated with the broader market, even though the "quality premium" may vary over time.

On the other hand, when prices are driven by supply scarcity (or exclusivity), the dynamics can be quite different. This is because the magnitude of price adjustments in response to an increase in demand depends on how easily supply can adjust. If production can expand without difficulty, most of the adjustment occurs through quantities sold. However, when supply is constrained, the adjustment falls more heavily on prices. Many luxury goods have **structurally inelastic** supply, whether because it is impossible to create more land in a city's most desirable location or additional units of a unique work of art, or because a particular school or club deliberately restricts its membership. This dynamic is well documented in the literature, including the work of Gyourko, Mayer, and Sinai (2013)[3], on the US real estate market and Goetzmann, Renneboog, and Spaenjers (2011)[4], on the art market. **Both studies indicate that price movements in these markets are driven by the wealth of buyers competing for these goods, rather than by production costs or general inflation.**

In other words, the risk is that using the hotel accommodation index measured by the US CPI, for example, may not adequately reflect price dynamics in the country's luxury hotel segment. Our strategy should therefore work better in capturing inflation in goods and services whose prices vary according to their characteristics and quality than in goods whose value depends primarily on exclusivity or location, known as "positional goods."

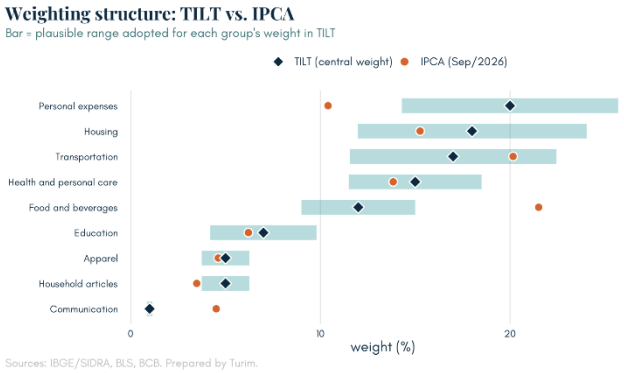
Introducing TILT: An Inflation Index for the Top 0.1%

As there is no household budget survey covering individuals with wealth of this magnitude, any estimate of the weights assigned to the index becomes sensitive to the judgment of those constructing it. To reduce the degree of arbitrariness in these choices, we informally consulted a group of families served by Turim about the composition of their expenditures. The survey does not claim statistical representativeness, as the sample is small, nonrandom, and does not allow for population-level inference, but it nevertheless provides useful insights.

Overall, we observed a significant share of spending on travel and leisure, as well as recurring expenses related to household staff. At the same time, substantial differences across the consumption profiles surveyed were evident: the weight of education varies depending on whether a family has school-age children, housing expenses depend on whether the family owns property abroad, and transportation costs vary according to the use of private aviation. The considerable divergence in responses highlights the challenge of designing a single representative index for this group and makes clear that the available sample does not allow us to estimate its consumption patterns with confidence.

The solution adopted to address both measurement challenges and the heterogeneous nature of the group was to establish **a central estimate surrounded by a "plausibility range."** This consists of a range of weights calibrated heuristically based on the responses obtained, rather than a conventional statistical measure[5]. This approach allows us to assess how results change under different plausible expenditure compositions, although the resulting range does not represent a statistical confidence interval or capture all sources of uncertainty in the exercise.

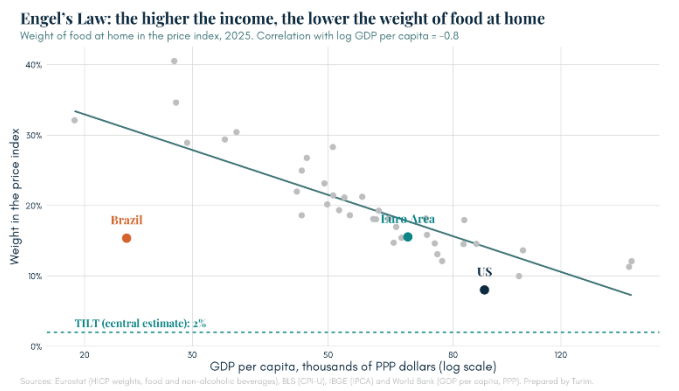
One of the largest differences between TILT (Turim Index for Living Top-tier) and the IPCA lies in the food category, whose weight declines from approximately 21% to 12% in TILT's central estimate, reflecting the smaller share of food consumed at home (just 2%) in the budgets of wealthy households. Conversely, the weight of personal expenses doubles, driven by spending on domestic staff, leisure, and travel. These revisions extend to the most detailed levels of the index's structure. The accommodation subitem, for example, which falls under personal expenses in the IPCA, was assigned a higher weight and moved to the housing category, following the treatment adopted in the US CPI. In public transportation, we retained only domestic and international airfares, excluding all other subitems.



Overall, these adjustments increase the relevance of categories associated with the consumption patterns of this audience, such as domestic staff, travel, dining out, and the purchase and maintenance of durable goods, while reducing the weight of items such as food consumed at home, fuel, and telecommunications and streaming services. These results are also consistent with well-documented evidence, such as Engel's Law, which states that as household income rises, the proportion of income spent on food declines. This phenomenon is evident both when comparing households across

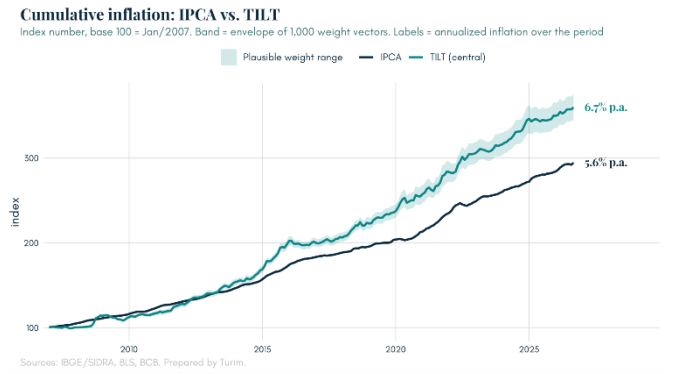
2 *"The Unequal Gains from Product Innovations: Evidence from the U.S. Retail Sector" examines how product innovation affected inflation across different income groups in US retail between 2004 and 2015.*
3 "Superstar Cities" investigates why property prices and average incomes rise much faster in certain metropolitan areas than in the rest of the country.
4 *"Art and Money" examines how equity markets and income concentration affect art market prices over the centuries.*
5 To estimate the range of outcomes, 1,000 combinations of weights are randomly drawn, with each weight selected within its plausible range and the full set rescaled to sum to 100%. Each combination is held constant throughout the entire period, generating a complete trajectory for the index.

income levels and when comparing countries with different levels of GDP per capita, as illustrated in the chart below.

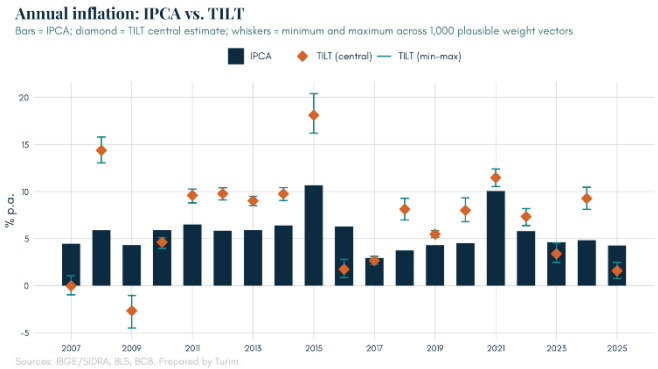


TILT's Performance Over the Past Two Decades

Between January 2007 and September 2026, TILT increased at an annualized rate of 6.7% in the central estimate, compared with 5.6% for the IPCA, a difference of 1.1 percentage points per year. This result holds across the simulated weight combinations: considering the minimum and maximum estimates obtained from these simulations, the difference relative to the IPCA ranges from 0.8 to 1.3 percentage points per year. Over the period common to Letter 28 (2010 to 2016), TILT rose by 8.8% per year, slightly above the original index's 8.4%, corresponding to a difference of 2.1 percentage points per year relative to the IPCA, compared with 1.7 percentage points in the 2017 version. **Thus, despite methodological differences, both versions reach similar conclusions.**

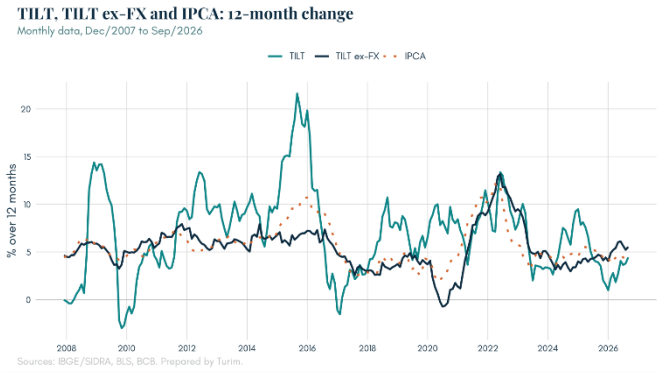


TILT's dynamics also differ substantially from those of the IPCA: the correlation between the two series is only 0.14 for monthly changes and 0.67 for annual changes, relatively low levels considering that 75% of TILT is based on IPCA series. Over shorter periods, the main factor behind this difference is the exchange rate: in every year in which the Brazilian real depreciated, TILT exceeded the IPCA, while in almost every year of appreciation, it remained below it.



Over the full period, however, the external component has a smaller impact than short-term dynamics might suggest. This is because the exchange rate fluctuates considerably in both directions, and much of the accumulated depreciation of the real was offset by lower inflation in the United States. According to our estimates, exchange rate movements added approximately 1.4 percentage points per year to the index, while lower inflation in US categories relative to their Brazilian counterparts reduced this differential by around 0.8 percentage points. As a result, the net effect of the external component was approximately 0.7 percentage points, only slightly above the contribution of the domestic component, at around 0.5 percentage points over the period.

By isolating the index from the highly volatile effects of exchange rate movements, we can estimate a type of core inflation measure that exhibits considerably less erratic behavior. By assuming a constant nominal exchange rate, "TILT ex-FX" tends to underestimate actual price increases, but it is a useful tool for assessing underlying inflation dynamics. Based on the accumulated change over 12 months, this measure has remained below 5% since January 2024 and ended 2025 at 4.4%, below its historical average of 5.4%, pointing to a more benign inflation environment even when the effects of the real's recent appreciation are excluded. Nevertheless, this level remains above what would be consistent with current inflation targets in Brazil and the United States.



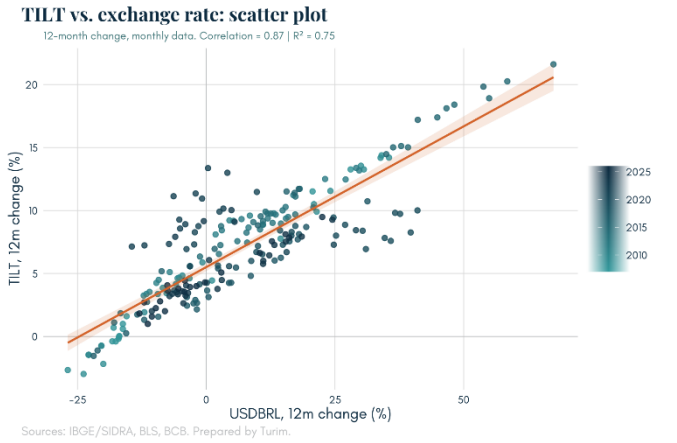
This more benign environment reflects the global disinflation process observed in recent years, amid monetary tightening by central banks. However, it is noteworthy that, since the recent peak in mid-2022, more than half of the deceleration in "TILT ex-FX" can be attributed to travel-related items, such as airfares and accommodation prices, both in Brazil and abroad. These segments reached their inflation peaks during the reopening of the global economy following the pandemic.

Implications of the Results and Final Considerations

Although inflation captured by TILT has exceeded the IPCA by more than 1 percentage point per year over the past two decades, this differential should not be extrapolated at the same magnitude into the coming decades, as a significant portion of it reflects the real depreciation of the exchange rate. In equilibrium, according to **Purchasing Power Parity (PPP) theory,** the expected long-term depreciation of a currency should correspond to the inflation differential between countries.

In this case, the effect of exchange rate depreciation would be offset by lower inflation in foreign prices. Nevertheless, it is worth noting that, in practice, exchange rates rarely behave as predicted by PPP, as illustrated by the substantial depreciation of the Brazilian real over recent decades[6]. On the other hand, even when considering only the domestic component, TILT inflation has exceeded the IPCA by approximately 0.6 percentage points per year since 2007, with an annualized increase of 6.2% over the period[7]. It therefore seems reasonable for any actuarial return target for this audience to incorporate an expected inflation rate above the IPCA.

The cumulative result matters, but understanding the drivers of inflation is what truly sheds light on its dynamics. If, as discussed, a significant portion of inflation experienced by wealthy households depends on exchange rate movements, which are highly volatile and uncertain, this only reinforces the importance of maintaining exposure to global assets in investment portfolios, as they provide a natural hedge for wealth (and, consequently, income) against exchange rate fluctuations.



In summary, inflation relevant to very wealthy households tend to be higher and considerably more volatile than that measured by the IPCA. The structural difference stems from a consumption basket with greater weights assigned to services, travel, and durable goods, and lower weights assigned to food and administered prices. The higher volatility, in turn, is primarily driven by the portion of household expenditures denominated in hard currencies. For wealth planning purposes, this suggests two practical conclusions: adopting an inflation benchmark above the IPCA when setting long-term return targets and maintaining a significant share of wealth invested in global assets, which provide exposure aligned with the US dollar-denominated portion of the cost of living. **Starting with this edition, TILT will be updated and shared monthly by Turim with its clients.**

Referências

GOETZMANN, William N.; RENNEBOOG, Luc; SPAENJERS, Christophe. Art and Money. *American Economic Review*, vol. 101, no. 3, pp. 222–226, May 2011.

GYOURKO, Joseph; MAYER, Christopher; SINAI, Todd. Superstar Cities. *American Economic Journal: Economic Policy*, vol. 5, no. 4, pp. 167–199, November 2013.

JARAVEL, Xavier. The Unequal Gains from Product Innovations: Evidence from the U.S. Retail Sector. *The Quarterly Journal of Economics*, vol. 134, no. 2, pp. 715–783, May 2019.

TURIM. *Turim Letter No. 28: Economic Stabilization Plans and Inflation: Lessons from the Past / An Alternative Inflation Index*. October 2017.

6 Between 2007 and 2025, the Brazilian real depreciated by approximately 1.9% per year beyond the inflation differential, and this real depreciation explains the positive net effect of the external component.

7 A significant portion of the difference is explained by airfares, which carry a substantially higher weight in TILT than in the IPCA and have recorded cumulative price increases of approximately 9% per year over the period.