

Re-thinking inflation: A regime-based framework for Australia

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Executive summary

Australian inflation is best understood as four regimes.

This paper develops a data-driven framework for understanding Australian inflation by identifying common inflation ‘regimes’ across the 87 consumer price index (CPI) expenditure sub-classes. Rather than starting with conventional classifications such as goods versus services or tradables versus non-tradables, the analysis groups CPI categories according to their inflation behaviour, including trend inflation, volatility, persistence, tail risk, seasonality, post-pandemic behaviour and relationships with headline and trimmed mean inflation. We dispense entirely with expenditure categories and are guided only by the data.

To do this we employ agglomerative hierarchical clustering, with the methodological innovation to extend this concept as we have used in prior asset-return work¹ from simple co-movement analysis to a richer inflation-process feature space, allowing CPI categories to be grouped by how they behave as inflation regimes rather than by where they sit in the expenditure basket.

The objective is to provide an alternative, and arguably richer, lens for interpreting inflation, monetary policy and portfolio implications. The four regimes represent different economic environments: volatile cost-push and administered-price shocks; broad based domestic pass-through associated with demand, capacity and labour-cost pressures; persistent services and administered inflation; and tradable goods disinflation associated with global competition, technology and supply conditions.

¹ See [Optimising private market asset allocations \(2025\)](#)

The central finding is that broad based domestic pass-through is the dominant inflation process. It accounts for the largest share of the CPI basket, is the most frequent driver of headline inflation and has the strongest relationship with trimmed mean inflation. The framework also provides a potential path to future analysis to assess how longer-run forces, including deglobalisation, the energy transition, demographic change and capacity constraints, could alter the balance between these regimes.

The analysis suggests that the inflation outlook should be assessed not only at the headline level but also by which regime is driving inflation. This has direct implications for the Reserve Bank of Australia's (RBA), policy rates and portfolio construction. It also extends the inflation factor insights in our paper Macro-factors revisited: an evolving approach to portfolio resilience (2025) by showing that inflation itself is not a single macro exposure but a set of distinct processes with different asset-class implications.

Key takeaways

- **Four distinct inflation regimes emerge from the data based on sub-index attributes.** These are: volatile shock & administered prices, broad based domestic pass-through, persistent administered & services inflation, and tradable goods disinflation.
- **broad based domestic pass-through is the central inflation engine.** It is the largest regime, the most frequent driver of headline inflation and the regime most closely linked to trimmed mean inflation.
- **Volatile shock inflation matters for headline CPI, but has much weaker underlying inflation content.** This supports the interpretation that fuel, electricity, travel and other shock-sensitive components can move headline CPI without necessarily changing the medium-term inflation process.
- **Tradable goods inflation has historically acted as a disinflationary offset, but remains important for inflation turning points.** This regime does not usually dominate headline CPI, but its relationship with trimmed mean inflation suggests it contains useful information about shifts in underlying inflation momentum.
- **Inflation breadth is critical for policy.** A narrow shock can often be looked through, but inflation becomes more policy-relevant when price pressures broaden into domestic pass-through and persistent administered or services inflation.
- **Policy implications:** Lower headline inflation is not sufficient to justify a durable easing cycle if broad based domestic pass-through and persistent services inflation remain elevated. The RBA is likely to need evidence that the regimes most closely linked to trimmed mean inflation are cooling before policy can move sustainably towards easing.
- **Portfolio construction implications:** The appropriate investment response depends on both the inflation regime and the investment horizon. Volatile shocks favour liquid tactical hedges such as commodities and energy; broad based domestic pass-through favours pricing power, resilient cash flows and balance-sheet strength; persistent services inflation increases the value of regulated or contractual indexation; and durable tradables disinflation supports duration and other rate-sensitive assets. Strategic resilience can be achieved by combining these macro-sensitive exposures with more macro-insulated assets such as unlisted infrastructure.

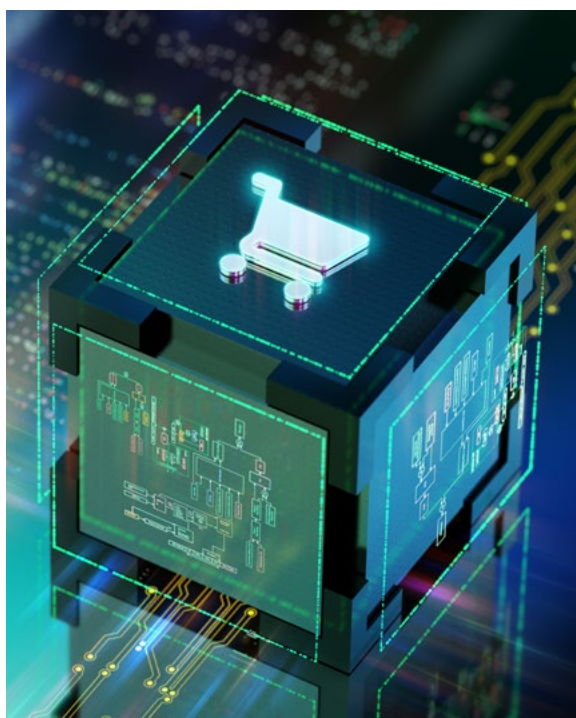
1. Motivation

Why look beyond goods, services, tradables and non-tradables?

Conventional inflation analysis usually starts with pre-defined categories. This is useful, but can obscure the way inflation processes cut across expenditure divisions. The regime approach taken here starts with the data and asks which CPI categories have similar inflation dynamics.

The framework is especially useful because it separates inflation drivers that potentially have different implications for policy, rates and asset pricing. We'd argue, for example, that a fuel shock, broad based domestic inflation pass-through and persistent administered prices do not require the same policy responses.

Identifying the underlying inflation environment may become increasingly important as structural forces reshape inflation dynamics. Deglobalisation and supply-chain duplication could weaken the traditional tradables disinflation offset. The energy transition may generate both short-term cost shocks and longer-term investment-related capacity pressures. Demographic change and labour scarcity could add persistence to domestically generated services inflation. A regime framework provides a way to distinguish these structural pressures from conventional cyclical demand-pull inflation and temporary supply shocks.



2. Method

Feature-space clustering

To identify the regimes this paper uses quarterly Australian CPI expenditure-class data that contains 87 seasonally adjusted sub-indexes.² We restrict the analysis to the period from 1998 onwards to focus on the inflation-targeting era and avoid allowing the high-inflation and disinflationary episodes of earlier decades to dominate the results. From the cleaned index data, we calculate both quarterly and year-ended inflation

The economic question is deliberately different from standard CPI decomposition. Rather than asking whether inflation is coming from goods, services, tradables or non-tradables, we ask which categories share similar inflation behaviours. This is important because two categories may sit in different Australian Bureau of Statistics (ABS) expenditure divisions but still respond to the same underlying inflation process.

This paper extends the clustering logic used in our earlier asset-class work. In that work, hierarchical clustering was applied to asset return correlation profiles, grouping assets according to their similarity in return co-movement with the broader investment universe. Here, the same broad clustering logic is applied to CPI inflation, the innovation being the input is a richer inflation-process feature space rather than a correlation matrix alone. Each CPI expenditure class is represented by an inflation 'fingerprint' covering average inflation, volatility, persistence, tail behaviour, seasonality, post-pandemic behaviour and relationships with headline, housing, services and supply-shock inflation proxies. The resulting dendrogram therefore identifies inflation regimes rather than simple co-movement groups.

The final step is to connect the regimes back to macroeconomic, policy and investment decision-making. To do this we examine how each regime contributes to headline inflation, how each relates to trimmed mean inflation, and what this implies for monetary policy and portfolio construction.

² We have made an adjustment to these data as June and September 2020 child care CPI observations were distorted by the temporary free child care policy. Those two observations are linearly interpolated between March and December 2020. The adjustment removes a known policy distortion without changing the underlying series outside those quarters.



EXPLAINER

Why cluster CPI categories?

Clustering analysis groups observations that behave similarly. In finance, it is often used to group assets by returns behaviour. Here, the same logic is applied to CPI inflation. Instead of asking which assets behave similarly, we ask which CPI categories behave similarly as inflation processes. This analysis moves beyond simple correlation and seeks to identify common behaviours and drivers.

“Feature space” refers to the statistical map used for the clustering. Each CPI category is located in this map according to its inflation characteristics, such as volatility, persistence and relationship with headline and trimmed mean inflation. Categories that are close together in this map are interpreted as having similar inflation processes.

A dendrogram is the visual output of hierarchical clustering. It shows how individual categories are gradually joined together into larger groups as the similarity threshold is relaxed. Categories that join early are more similar; categories that only join at higher levels are more different. This is useful because it allows us to see not only the final regimes, but also the hierarchy of relationships between CPI categories.

This matters because traditional CPI classifications, such as goods, services, tradables and non-tradables, are imposed before the data are analysed. Clustering allows inflation regimes to emerge from the data itself. The result is a taxonomy of inflation processes rather than expenditure categories, helping distinguish between shock inflation, broad based domestic pass-through, persistent services inflation and tradable goods disinflation.

3. The four regimes

A taxonomy that cuts across expenditure categories

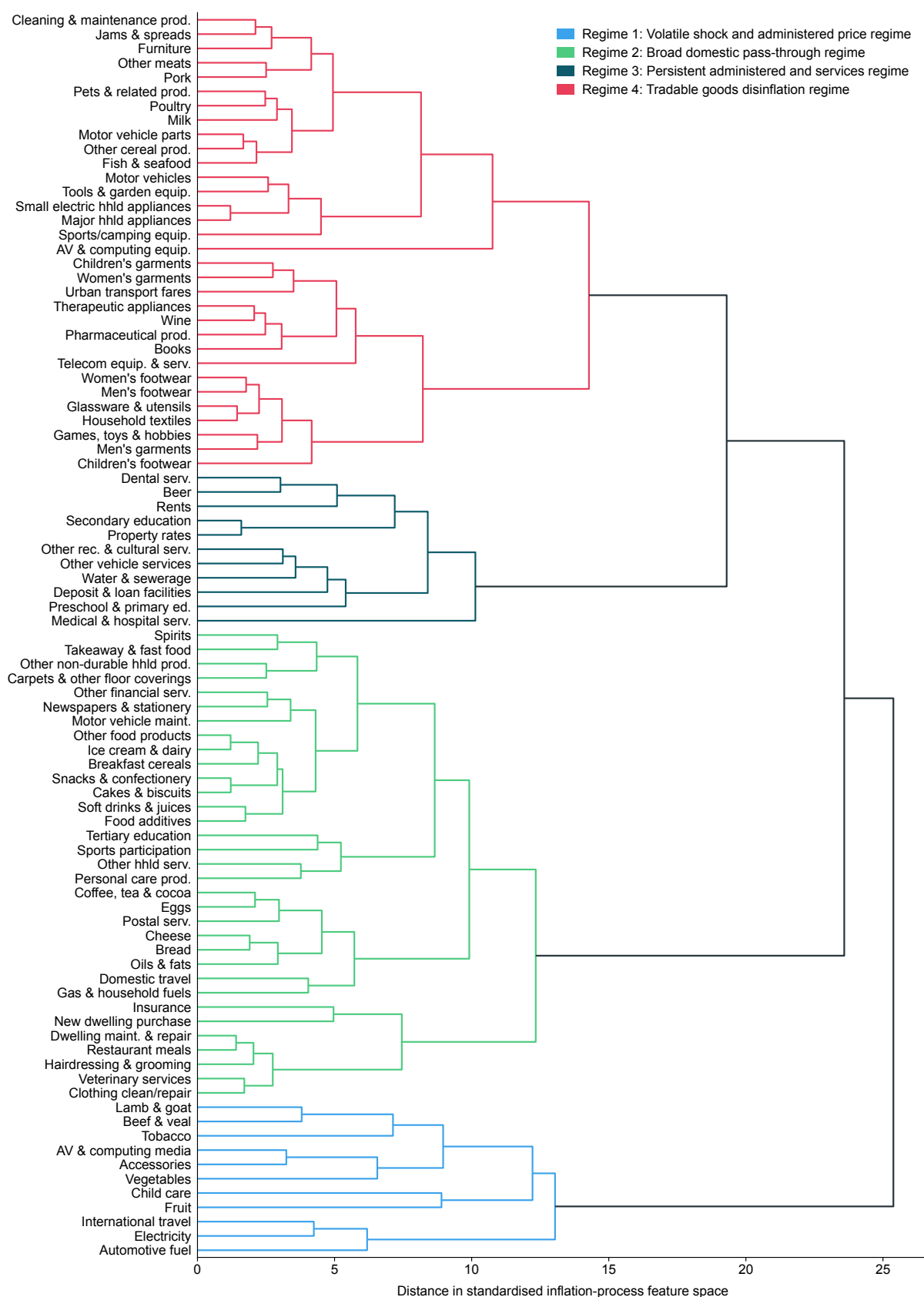
The first output of the clustering exercise is the dendrogram shown in Graph 01. It shows how individual CPI expenditure classes are progressively joined together based on similarity in their inflation-process characteristics. Categories that join together close to the left-hand side of the chart have more similar inflation dynamics, while categories that only merge further to the right are more different. This is why the chart is best read horizontally: movement from left to right represents increasing distance in the standardised inflation-process feature space.

In this exercise, each CPI category is represented by an inflation fingerprint covering features such as average inflation, volatility, persistence, tail behaviour, seasonality, headline inflation beta, post-pandemic behaviour and correlation with housing, services and supply-shock proxies. The dendrogram therefore does not group items simply because they sit in the same ABS expenditure division. Instead, it groups categories that behave similarly as inflation processes.

Graph 01 shows that the CPI basket naturally separates into four broad regimes. The coloured branches identify the preferred four-regime solution selected by the silhouette optimisation process (see Appendix B). The grey branches show where these distinct regimes eventually merge into a broader inflation hierarchy. This is useful because it reveals both the final regime classification and the nested structure within each regime. For example, food, household goods, administered prices, housing-related components, services and tradables do not fall neatly into traditional CPI categories. Instead, they cluster according to their inflation behaviour.

The key point is that the dendrogram is not just a statistical diagram. It is the visual foundation of the inflation taxonomy used in the rest of the paper. The regimes described below are therefore not imposed classifications such as goods, services, tradables or non-tradables. They are data-driven groupings that emerge from similarities in inflation dynamics. This is what allows the framework to distinguish between volatile shocks, broad based domestic pass-through, persistent services and administered inflation, and tradable goods disinflation.

GRAPH 01 FEATURE-SPACE DENDROGRAM OF AUSTRALIAN CPI INFLATION REGIMES



Source: IFM Investors

Note: Branches that merge further to the left are more similar; branches that merge further to the right are increasingly different in standardised inflation-process feature space.

Before turning to each regime in detail, it is useful to emphasise that the labels below are interpretive, not imposed. The clustering algorithm groups CPI expenditure classes according to their inflation-process characteristics, and the economic labels are then assigned after examining the membership and statistical profile of each group. The resulting regimes cut across standard expenditure categories. For example, food items, services, administered prices, tradables and housing-related components do not sit neatly in separate groups. Instead, categories are grouped according to how they behave through time: whether they are volatile, persistent, domestically driven, shock-sensitive or influenced by global goods disinflation. The four coloured branches represent the preferred regime structure, while the grey branches show how these regimes eventually merge into a broader inflation hierarchy. The descriptions below translate this statistical classification into an economic interpretation. Our four regimes are as follows:

- 1: Volatile shock & administered prices.** This regime includes automotive fuel, electricity, fruit, vegetables, international travel, tobacco and child care. It captures large episodic price changes associated with commodities, major policy, weather and administered price resets.
- 2: Broad based domestic pass-through.** This is the central inflation engine. It includes new dwelling purchase, restaurants, takeaway food, domestic travel, insurance, household services, hairdressing and selected food items. It has the largest weight and the strongest relationship with trimmed mean inflation.
- 3: Persistent administered & services.** This regime contains rents, medical services, education, property rates and water charges. It is the most persistent regime and matters because sticky prices can slow the return to target even after shocks fade.
- 4: Tradable goods disinflation regime.** This regime includes motor vehicles, telecommunications, furniture, apparel, footwear, electronics and appliances. It has been a long-run disinflationary force, but clearly also provides turning-point information for underlying inflation given its importance in bringing headline inflation lower.

Table 01 confirms that the four regimes are not simply descriptive labels, but distinct inflation processes with different economic roles. Table 01 summarises each regime by its CPI weight, persistence (measured as the one-quarter autocorrelation of year-ended regime inflation, where a higher value indicates that inflation in that regime tends to remain elevated from one quarter to the next) and relationship with trimmed mean inflation. This matters because persistent inflation is more relevant for monetary policy than a short-lived relative-price shock.

The table reinforces the economic interpretation of the four regimes. The volatile shock & administered price regime has the weakest relationship with trimmed mean inflation, consistent with its role as a source of headline volatility rather than sustained underlying pressure. The broad based domestic pass-through regime stands out as the central inflation engine: it has the largest CPI weight, high persistence and the strongest correlation with trimmed mean inflation. The persistent administered & services regime is the stickiest part of the taxonomy, suggesting it can slow the return of inflation to target even after shocks fade. The tradable goods disinflation regime has lower average inflation but a meaningful relationship with trimmed mean inflation, indicating its role as a turning-point signal.

Overall, Table 01 strengthens the main message of the framework: Australian inflation is best understood as a set of interacting regimes, not a single aggregate cycle or a simple goods-versus-services split. Broad based domestic pass-through is the main policy-relevant inflation engine, persistent administered & services prices are the sticky component, tradables provide disinflationary and turning-point information, and volatile shocks explain much of the headline noise.

TABLE 01: ECONOMIC INTERPRETATION OF REGIMES

Regime	Weight	Persistence	TM corr	Role
Broad based domestic pass-through regime	42.3%	0.83	0.78	Broad domestic inflation engine.
Persistent administered and services regime	22.2%	0.87	0.45	Persistent services and administered inflation.
Tradable goods disinflation regime	20.3%	0.73	0.64	Tradables and imported disinflation.
Volatile shock & administered price regime	15.2%	0.73	0.32	Volatile supply shocks and administered prices.

Source: IFM Investors

4. Evolution over time

The evolution of inflation regimes

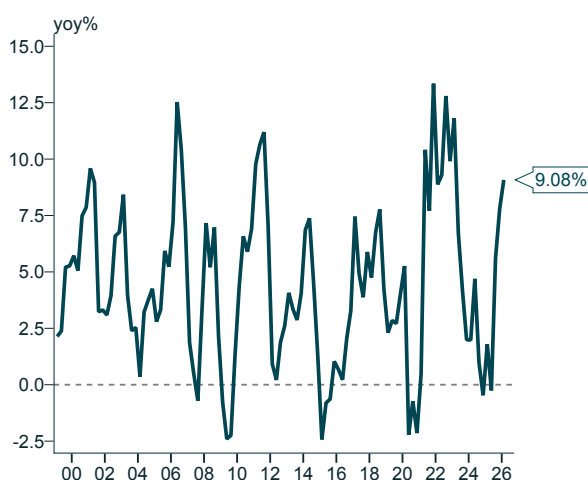
Graphs 02 to 05 shift the analysis from classification to history. Having identified four inflation regimes, the chart plots the CPI-weighted year-ended inflation rate for each regime through time. This allows us to see not only what the regimes are, but how each has behaved across different inflation episodes. These charts are useful because the four regimes display very different time-series characteristics: some are volatile and episodic, some are persistent and slow moving, and some act as long-run inflation offsets.

The key message is that Australian inflation is never generated by a single process. Different regimes dominate at different points in time, and the post-pandemic episode stands out because several regimes accelerated together.

Regime 1: Volatile shock & administered price regime

This regime is by far the most volatile, with repeated sharp spikes and reversals, especially in the mid-2000s, early 2010s and post-pandemic period. This regime emerged because these categories share a common inflation signature: large and infrequent price adjustments, high volatility, low predictability and a strong exposure to external shocks or policy decisions. Despite belonging to different parts of the CPI basket, automotive fuel, electricity, fruit, vegetables, international travel, tobacco and child care all exhibit sudden price movements associated with commodity markets, weather events, regulation or government policy interventions. As a result, the regime behaves as a source of headline inflation volatility rather than a persistent driver of underlying inflation.

GRAPH 02 VOLATILE SHOCK & ADMINISTERED PRICE REGIME

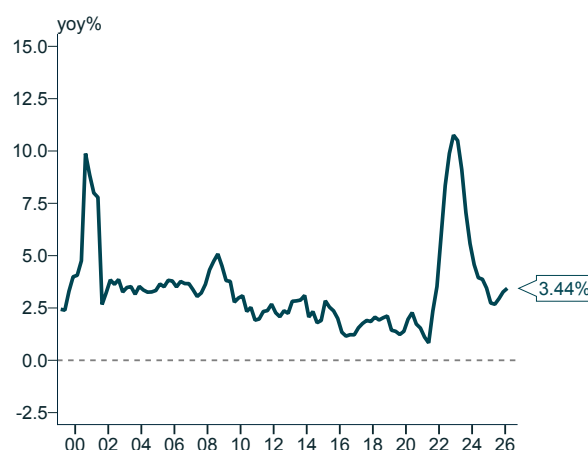


Source: IFM Investors

Regime 2: Broad based domestic pass-through regime

This regime is less volatile than Regime 1 but shows clear cyclical swings, including a pronounced post-pandemic rise. This is consistent with its role as the broad based domestic inflation engine. This regime emerged because these categories share strong exposure to domestic cost pressures and broad economic conditions. New dwelling purchase, restaurants, takeaway food, domestic travel, insurance, household services, hairdressing and selected food items tend to experience inflation when labour costs, housing costs, construction costs and broader demand conditions strengthen. Unlike the shock regime, price changes in this group are more persistent and more closely linked to the inflation pressures that matter for trimmed mean inflation and monetary policy. This explains why the regime appears as the dominant inflation engine in the Australian CPI.

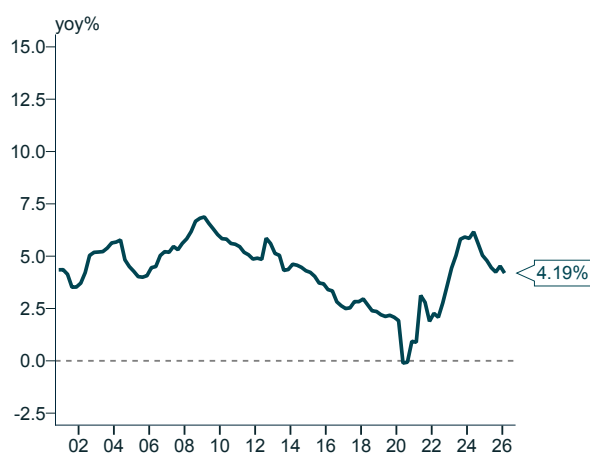
GRAPH 03 BROAD BASED DOMESTIC PASS-THROUGH REGIME



Source: IFM Investors

Regime 3: Persistent administered & services regime

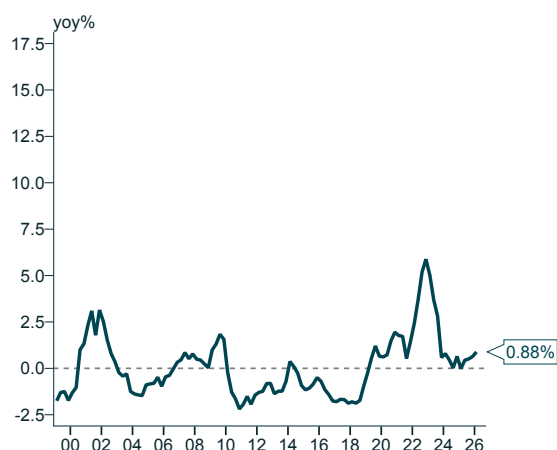
This regime is the 'smoothest' and most persistent series. This regime emerged because these categories share slow-moving and highly persistent pricing behaviour. Rents, medical services, education, property rates and water charges are often influenced by contracts, regulation, institutional pricing arrangements or gradual adjustment processes rather than frequent market repricing. This leads to inflation that is less volatile but more enduring, showing signs of inertia or inflation begetting inflation. The regime therefore acts as the "sticky" component of inflation, helping explain why inflation can remain above target even after broader shocks have faded.

GRAPH 04 PERSISTENT ADMINISTERED AND SERVICES REGIME


Source: IFM Investors

Regime 4: Tradable goods disinflation regime

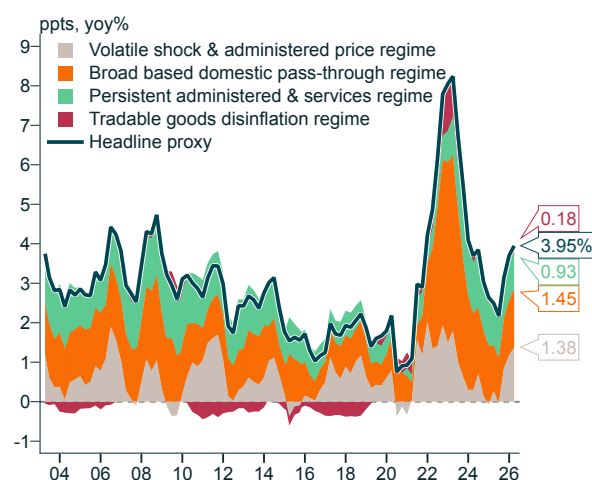
This regime is distinct because it spends much of the sample near or below zero. This regime emerged because these categories have historically been exposed to common disinflationary forces, including global competition, technological change, imported goods pricing and productivity improvements. Motor vehicles, telecommunications, furniture, apparel, footwear, electronics and appliances have tended to experience lower inflation than the rest of the CPI basket over much of the inflation-targeting era. The post-pandemic period is unusual because many of these categories temporarily shifted from acting as a disinflationary offset to making a positive contribution to inflation as global supply chains were disrupted and goods demand surged. The risk here being that this regime could be the most disrupted by deglobalisation.

GRAPH 05 TRADABLE GOODS DISINFLATION REGIME


Source: IFM Investors

Overall, Graphs 02 to 05 show why the regime framework is useful. It separates four very different inflation histories: a volatile shock process, a broad based domestic pass-through process, a persistent services and administered-price process, and a tradable goods disinflation process. The post-pandemic inflation surge is notable because Regime 1 rose sharply, Regime 2 accelerated materially, Regime 3 remained persistent and Regime 4 stopped acting as a disinflationary offset. This combination helps explain why the inflation episode became more difficult for policy: it was not just a headline shock, but a broadening of inflation pressure across several regimes.

We can also observe this in Graph 06 which translates the regime framework into a contribution analysis for headline CPI. Unlike the regime inflation charts, which show the inflation rate within each regime, this chart shows how much each regime contributes to aggregate year-ended inflation after applying CPI expenditure weights. It therefore provides a direct accounting view of what drove headline inflation through time.

GRAPH 06 REGIME CONTRIBUTIONS TO YEAR-ENDED HEADLINE CPI INFLATION


Source: IFM Investors

Note: Contributions are calculated using CPI expenditure weights. The black line is the headline proxy produced by summing regime contributions.

The chart reinforces the central finding of the paper: headline inflation is not usually driven by volatile shocks alone. The broad based domestic pass-through regime is the dominant contributor through much of the sample and was also the largest contributor during the post-pandemic inflation surge. Volatile shocks clearly mattered, particularly around energy, food and travel-related episodes, but the sustained inflation impulse came from the broad based domestic regime.

The chart also shows why the recent inflation episode became more difficult for policy. Inflation was not confined to the shock regime. Broad based domestic pass-through increased materially, persistent services and administered prices remained elevated, and tradables stopped acting as a meaningful disinflationary offset. This combination points to a broader inflation process than a narrow supply shock.

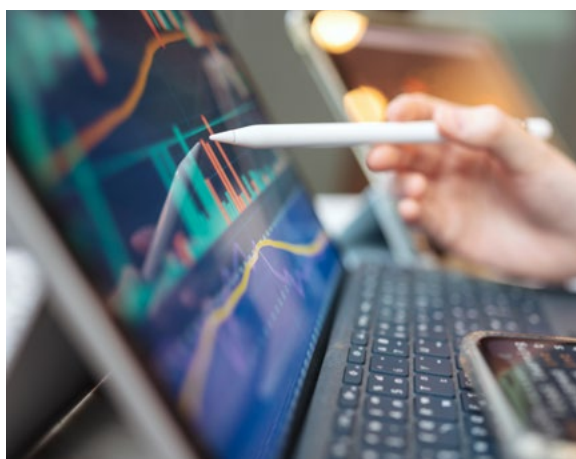
Table 02 provides a compact summary of the contribution story across key inflation episodes. The broad based domestic pass-through regime is the largest contributor in each period, including the GST era, the mining boom, the low-inflation period and the COVID inflation surge. This is important because it shows that Regime 2 is not only statistically central, but economically central. It is the regime that most consistently explains headline inflation outcomes.

TABLE 02: AVERAGE REGIME CONTRIBUTION TO HEADLINE INFLATION BY EPISODE

Episode	Regime 1	Regime 2	Regime 3	Regime 4	Headline proxy
GST era	0.91	2.00	0.86	0.26	4.31
Mining boom	0.69	1.33	1.22	-0.05	3.20
Low inflation	0.51	0.77	0.70	-0.17	1.80
COVID inflation surge	0.93	2.13	0.90	0.38	4.35

Source: IFM Investors

During the COVID inflation surge, the broad based domestic regime contributed 2.13 percentage points to average headline inflation, compared with 0.93 percentage points from volatile shocks and 0.90 percentage points from persistent administered & services inflation. That result supports one of the main arguments of the paper: the recent inflation episode was not simply a shock story. It became a broad based domestic pass-through episode.



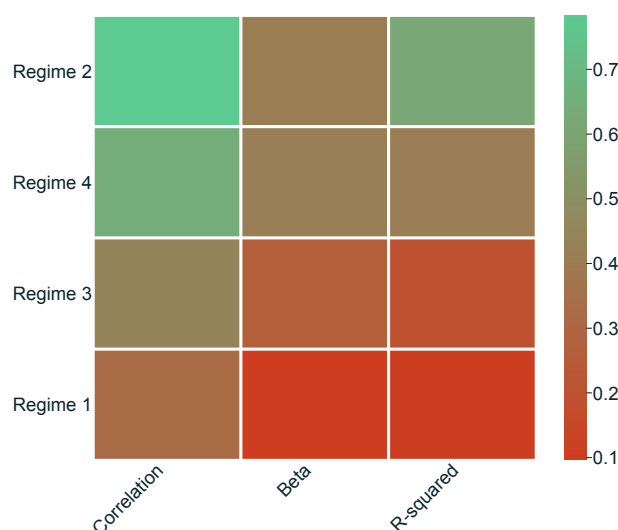
5. Drivers of underlying inflation

Trimmed mean is most closely linked to broad based domestic pass-through

We now shift focus from headline inflation to underlying inflation and the policy-relevant trimmed mean measure. The contribution chart has shown which regimes explain headline CPI, but monetary policy is ultimately more concerned with whether inflation pressure is persistent and broad enough to show up in underlying measures such as the trimmed mean. The RBA explicitly uses underlying inflation measures to help look through temporary volatility in headline CPI and assess whether inflation is returning sustainably to target. The ABS similarly describes the trimmed mean (and weighted median) measure(s) intended to capture the medium-term trajectory of inflation by reducing the influence of irregular or temporary price movements.

Graph 07 therefore asks a different question from the headline contribution chart. Instead of asking which regimes added most to headline CPI, it asks which regimes are most closely related to trimmed mean inflation. This is important because trimmed mean inflation is not additive in the same way as headline CPI. It cannot be decomposed mechanically into regime contributions. Instead, the chart uses three analytical angles to assess each regime's relevance for underlying inflation.

GRAPH 07 RELATIONSHIP BETWEEN REGIMES AND TRIMMED MEAN INFLATION



Source: IFM Investors

Note: The heatmap summarises simple correlations, betas and single-regime R-squared relationships.

Correlation with trimmed mean inflation: This shows how closely each regime moves with trimmed mean inflation through time. Regime 2 has the strongest correlation, indicating that broad based domestic pass-through is the regime most aligned with underlying inflation momentum. Regime 4 also has a meaningful correlation, suggesting tradables contain useful information about turning points. Regime 1 has the weakest relationship, consistent with its role as a source of headline volatility, where components are often 'trimmed out', rather than being a source of underlying pressure.

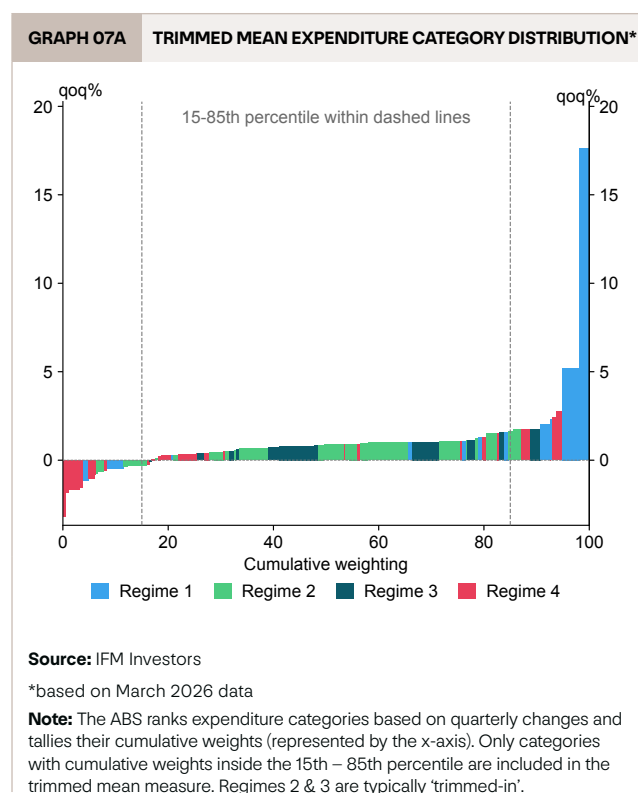
Beta to trimmed mean inflation: This measures the sensitivity of trimmed mean inflation to movements in each regime. A higher beta indicates that changes in the regime are associated with larger changes in trimmed mean inflation. Regime 2 has the strongest beta reading in the chart, reinforcing its importance as the central policy-relevant inflation process. Regime 1 and Regime 3 show weaker beta relationships, implying less direct explanatory power for movements in the trimmed mean.

R-squared with trimmed mean inflation: This shows how much of the variation in trimmed mean inflation can be explained by each regime in a simple one-regime relationship. Regime 2 again stands out, with the strongest explanatory relationship. Regime 4 is second, reinforcing the idea that tradable goods inflation is not usually the dominant headline driver but can still matter for underlying inflation turning points. Regime 3 has much less explanatory power with largely administered prices impacted by factors exogenous to inflation drivers, as well as being driven by lagged inflation inertia. Regime 1 has the lowest explanatory power, which is consistent with the interpretation that volatile shocks are often looked through by underlying inflation measures.

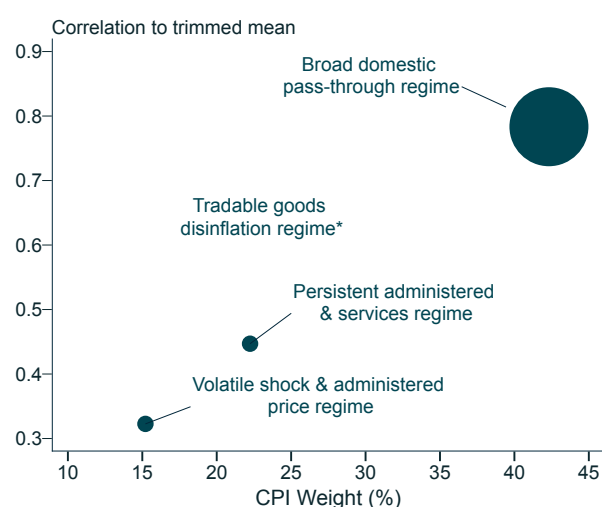
Read alongside Table 01, this points to a specific role for Regime 3 rather than a general one. High own-persistence without a correspondingly strong trimmed mean relationship suggests the regime is less useful as a real-time signal of underlying inflation pressure than Regime 2, but more useful as an explanation of why inflation can remain elevated for longer once broader pressures start to ease. In other words, Regime 3 is better understood as a drag on the speed of disinflation than as a driver of the trimmed mean itself.

The analysis in Graph 07 again confirms the central policy message of the paper. Broad based domestic pass-through inflation is the regime most relevant for trimmed mean inflation, while volatile shocks are less informative about persistent underlying pressure. The chart also adds nuance by showing that the tradable goods disinflation regime matters more for underlying inflation than its headline contribution would imply. This makes the regime framework useful for policy analysis: it helps distinguish inflation that can be looked through from inflation that is more likely to shape the RBA's assessment of whether inflation is returning sustainably to target.

Graph 07A provides a complementary perspective by showing where the regimes sit within the trimmed mean calculation itself. The ABS trimmed mean removes the most extreme quarterly price movements, 'trimming' 15% by expenditure weight from either end of the percentage change distribution. The chart shows that Regime 2 and Regime 3 components are typically concentrated within the part of the distribution retained in the trimmed mean, whereas Regime 1 components are more commonly trimmed out. This provides an intuitive explanation for why the broad based domestic pass-through and persistent administered and services regimes have the strongest relationship with underlying inflation.



Graph 08 brings together three dimensions of regime importance: CPI weight, relationship with trimmed mean inflation and frequency as the largest headline contributor. The x-axis shows each regime's CPI weight, the y-axis shows its correlation with trimmed mean inflation, and the bubble size shows how often the regime is the largest contributor to headline CPI. This makes the chart a compact way to assess which inflation regimes matter most for policy and portfolios.


GRAPH 08 INFLATION REGIME 'IMPORTANCE' MAP


Source: IFM Investors

Note: The x-axis shows CPI weight, the y-axis shows correlation with trimmed mean inflation. Bubble size reflects the frequency with which each regime is the largest contributor to headline inflation. Regimes that are rarely or never the largest contributor appear as small markers. *Nb tradable goods disinflation is not visible as it never acts as the largest contributor.

Broad based domestic pass-through regime (R2):

This regime sits in the upper-right of the chart and has the largest bubble. It is large in CPI weight, closely linked to trimmed mean inflation and frequently the largest headline contributor. This confirms its role as the central policy-relevant inflation engine.

Volatile shock & administered price regime (R1):

This regime can matter materially for headline CPI, but sits lower on the trimmed mean dimension. This reinforces its role as a source of headline volatility rather than sustained underlying inflation pressure.

Persistent administered & services regime (R3):

This regime is important because of its stickiness. Its relationship with trimmed mean inflation is not as strong as the broad based domestic regime, but it matters for the speed at which inflation returns to target.

Tradable goods disinflation regime (R4): This regime is not usually the largest headline contributor, but it has a meaningful relationship with trimmed mean inflation. This suggests tradables are useful as a turning-point signal, especially when global goods prices, import prices or exchange-rate-sensitive components shift direction.

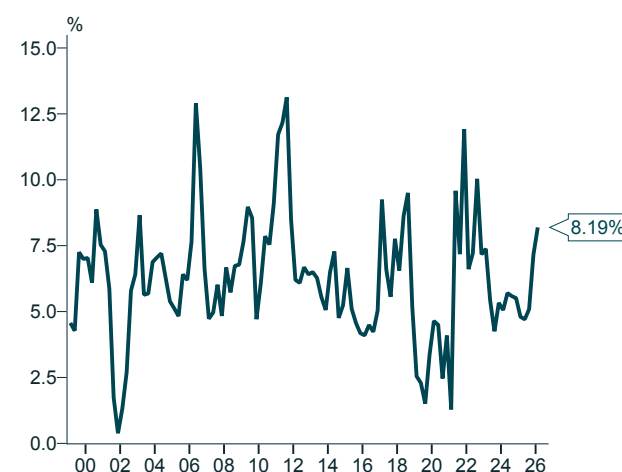
Overall, Graph 08 reinforces the central conclusion of the paper: inflation regimes differ in their macroeconomic importance. Broad based domestic pass-through is the dominant policy-relevant regime, volatile shocks explain much of the headline noise, persistent services and administered prices influence inflation stickiness, and tradables provide important turning-point information.

6. Inflation breadth

When inflation becomes broad, the policy problem changes

The preceding sections show that not all inflation regimes have the same policy relevance. Volatile shocks can lift headline CPI, while broad based domestic pass-through and persistent services inflation are more closely connected to underlying inflation. The next question is therefore whether inflation pressure is narrow or broad across regimes. This matters because central banks can often look through a temporary relative-price shock, but broad-based inflation is harder to dismiss. Once multiple regimes are rising together, the risk is that inflation becomes more persistent, more embedded in expectations and more difficult to return to target.

Graph 09 provides a simple measure of this breadth. It calculates the difference between the highest and lowest regime inflation rate in each quarter. A higher reading indicates greater dispersion across regimes, meaning some inflation processes are running much hotter than others. A lower reading suggests inflation is more synchronised across the CPI basket.

GRAPH 09 INFLATION BREADTH ACROSS CPI REGIMES*


Source: IFM Investors

*Breadth is measured as the difference between the highest and lowest regime inflation rate each quarter

The chart is useful because it distinguishes between two very different inflation environments. In the first, headline inflation may be high because one regime, often the volatile shock regime, has moved sharply. That type of inflation can be disruptive, but it is more likely to reverse. In the second, several regimes move higher together. That is more concerning for policy because it suggests inflation pressure is no longer isolated to a narrow set of relative prices.

In the recent cycle, the breadth measure rose materially as several forces interacted:

- Volatile shocks increased headline pressure, particularly through energy, food, travel and administered-price components.
- Broad based domestic pass-through accelerated, indicating that inflation was spreading into more domestically driven prices.
- Persistent administered & services inflation remained elevated, adding stickiness to the inflation process.
- Tradables stopped acting as a strong disinflationary offset, removing a force that had helped contain inflation in earlier periods.

This is the key policy insight from Graph 09. The post-pandemic inflation episode was not simply a narrow supply shock. It became more difficult because inflation pressure broadened across regimes. That broadening helps explain why the RBA could not rely only on headline disinflation from volatile components. A durable return to target requires not just lower shock inflation, but narrower inflation breadth and clearer evidence that broad based domestic pass-through and persistent services inflation are easing.

For investors, inflation breadth is also a useful risk indicator. Narrow inflation shocks may call for tactical hedges, such as commodities or energy exposure. Broad inflation requires a more strategic response because it affects policy rates, discount rates, margins, refinancing costs and cross-asset valuations. In that sense, Graph 09 bridges the policy and portfolio implications: when inflation becomes broad, both central banks and investors need to treat it as a more systemic risk.

7. Policy implications

What the regime framework implies for inflation and interest rates

The regime framework is another analytical tool that could guide policymakers in how they should respond to inflation developments. The key insight is that not all disinflation is equal. Declines in volatile prices can generate temporary relief in headline inflation, but sustainable progress towards the inflation target requires easing in the broad based domestic pass-through regime and the persistent services and administered-price regime. Notably, these sectors are overwhelmingly domestically generated inflation.

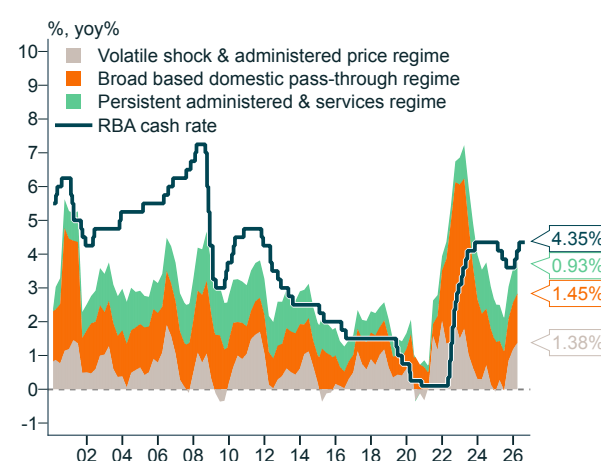
This distinction is increasingly important as inflation sits uncomfortably above the upper bound of the RBA's target range. Recent inflation outcomes have created an environment in which the RBA has had to increase policy restrictiveness. The RBA Board continues to be focused on whether inflation is returning sustainably to target.

We'd assert that domestic price pressures should remain a critical area of focus. In regime terms, the question is no longer just whether headline and trimmed mean inflation are returning to target, but whether Regime 2 (broad-based inflation) and Regime 3 (persistent) are normalising sufficiently to keep inflation near target once temporary influences fade. We'd argue they haven't decelerated enough to give the Bank any confidence inflation can stay sustainably at the target band.

Further the RBA should discount the disinflationary impact of Regime 1 (volatile) and Regime 4 (tradables) because they risk being transitory - as was the case in the disinflationary period of 2022 and 2023. We are also cautious of stagflationary dynamics adding to the inertia of inflation. That is to argue that supply shocks to prices may reverberate through the CPI over an extended period and not be limited to the quarters in which they occur. This is as cost push inflation proves difficult to pass on in times of economic weakness. So market participants are limited in their immediate response and wait for demand to improve before recouping margins. This is another argument that seeks to explain the re-acceleration that has occurred in the last 18 months in Australia added to the capacity constraints premise.

Graph 10 places the regime contribution framework alongside the RBA cash rate. The purpose is not to suggest a mechanical policy rule, but to show how episodes of broad based domestic pass-through and persistent services inflation have tended to coincide with periods in which policy needed to become, or remain, restrictive. The unfortunate conclusion we draw from this analysis is that in having to address the domestically generated inflation observed in regimes 2 & 3 the RBA is put in an even more uncomfortable position with respect to its dual mandate. The 'cost' of putting more pressure on domestic inflation is potentially the unemployment rate rising further than the Bank currently expects.

GRAPH 10 REGIMES CONTRIBUTIONS AND THE CASH RATE



Source: IFM Investors

Note: A resurgence in the Volatile & Administered regimes sits behind the recent reacceleration of inflation.



8. Investment implications

Allocating by inflation regime dynamics

The regime framework suggests that inflation should not be treated as a single macroeconomic risk. The source of inflation matters because demand-pull pressure, cost-push inflation, stagflationary shocks and global goods disinflation produce different effects on earnings, interest rates, margins and valuations.

Regime 1 is most consistent with episodic supply or policy shocks and may require a liquid tactical hedge. Regime 2 reflects broad based domestic pass-through arising from demand, capacity utilisation, labour costs and pricing power. Regime 3 captures persistent services and administered inflation, which may reflect institutional pricing, labour scarcity, demographics and regulated cost adjustment. Regime 4 represents global goods disinflation, although deglobalisation, trade fragmentation and supply-chain duplication may weaken that historical offset.

These distinctions also influence investment horizon. Public-market assets can express tactical views on shocks and disinflationary turning points. Private assets may provide more strategic resilience through regulated or contractual revenues, pricing power and structural return drivers, although refinancing and valuation sensitivity remain important.

Fixed income

For fixed income investors, the distinction between inflation regimes is particularly important because inflation ultimately influences interest rates through the central bank reaction function.

Regime 1 inflation is often associated with short-term supply shocks and can be volatile without necessarily changing the medium-term inflation outlook. Duration may therefore recover relatively quickly if policymakers judge that shocks are temporary. Yet will suffer should they prove more persistent.

Regime 2 is different. Broad based domestic pass-through inflation is more consistent with demand-pull inflation, labour market tightness and sustained pricing power. This is the regime most likely to keep policy restrictive and therefore has the largest implications for duration and real yields. In this space is where capacity utilisation concerns have driven inflation.

Regime 3 can be equally challenging because administered and services inflation tends to be persistent. Even if broader inflation slows, this regime can delay the return of inflation to target and push back expectations of policy easing. We'd argue that this has been a mainstay of Australian inflation for some time.

Regime 4 is generally the most supportive environment for core fixed income. Tradables disinflation may reflect global competition, technology, productivity gains and easing supply-chain pressures. If accompanied by resilient growth, it can reduce inflation expectations and support lower policy rates and bond yields. If it instead reflects weak global demand, the duration benefit may be accompanied by greater earnings and credit risk.

For duration, the key signal is therefore not lower headline inflation alone, but evidence that Regime 2 and Regime 3 are easing together.

Credit

The credit implications depend on whether inflation is accompanied by stronger nominal growth or by a more restrictive monetary policy environment.

Regime 2 can initially support credit performance because stronger nominal activity improves revenue growth and debt-servicing capacity. However, if broad based domestic inflation remains elevated for too long, higher policy rates eventually become a headwind through refinancing costs, tighter financial conditions and slower demand.

Regime 3 presents a similar challenge. Persistent services inflation can keep rates higher for longer even as growth slows, creating a more difficult environment for both public and private credit.

Private credit occupies a unique position because floating-rate income increases as policy rates rise. This can support returns during periods of persistent inflation. However, higher income for lenders must be weighed against weaker borrower affordability. The regime framework therefore reinforces the importance of underwriting discipline, covenant quality and borrower pricing power.

The most favourable credit environment remains one where inflation is moderating but nominal growth remains resilient.

Listed equities

For equities, the regime framework provides a useful way to distinguish between inflation that supports earnings and inflation that compresses valuations.

Regime 2 represents the classic demand-pull environment. Companies with pricing power are able to pass through higher costs and protect margins. Businesses with strong balance sheets and resilient demand tend to outperform.

Regime 3 is less favourable because persistent services inflation raises labour and operating costs without necessarily generating stronger revenue growth. Margin compression becomes a greater risk.

Regime 1 tends to create sector-specific opportunities and risks. Energy, resources and commodity-linked sectors are more likely to benefit, while sectors exposed to input-cost pressure can struggle.

The most challenging equity environment occurs when a Regime 1 cost shock passes into Regime 2 or Regime 3 while economic activity weakens. This is the more stagflationary configuration: input and labour costs rise, pricing power becomes uneven and discount rates remain elevated even as earnings growth slows.

Regime 4 is generally supportive for growth and duration-sensitive equities because lower inflation pressure often allows lower discount rates and a more accommodative monetary policy environment.

Unlisted infrastructure

For infrastructure, the regime framework highlights the difference between inflation protection and inflation exposure.

Infrastructure is most attractive when inflation reflects persistent domestic pass-through or administered-price dynamics because many assets have regulated, contracted or CPI-linked revenue streams. This characteristic aligns naturally with Regime 2 and Regime 3.

The framework also supports the conclusions of our macro-factor research. Infrastructure, and particularly IFM's Unlisted Infrastructure Proxy (UIP)³, which combines inflation-linked cash-flow characteristics with relatively low overall macro sensitivity, makes it one of the more effective long-term inflation-resilient allocations in the opportunity set.

Importantly, infrastructure benefits most when inflation is persistent enough to support revenues, but not so persistent that higher discount rates completely offset cash-flow growth.

Secular themes can reinforce this strategic role, but also introduce new risks. The energy transition creates substantial demand for infrastructure investment and may support long-duration contracted revenues, while also generating construction-cost and capacity pressures. Demographic growth can support utilisation of transport, utilities and social infrastructure. The investment outcome depends on whether these pressures are captured through revenue indexation or retained as unrecovered capital and operating costs.

³ In this article we define IFM's UIP to mean "Unlisted Infrastructure Proxy". Note that the limited benchmark universe within the unlisted infrastructure asset class can serve to 'penalise' performance compared with other asset classes that comprise more benchmarks where the optimisation algorithm is more 'forgiving' of underperformance. As a result, IFM created a proxy benchmark to demonstrate what it believes is representative of global unlisted infrastructure by combining the net local currency returns of two core infrastructure portfolios it manages.

Property

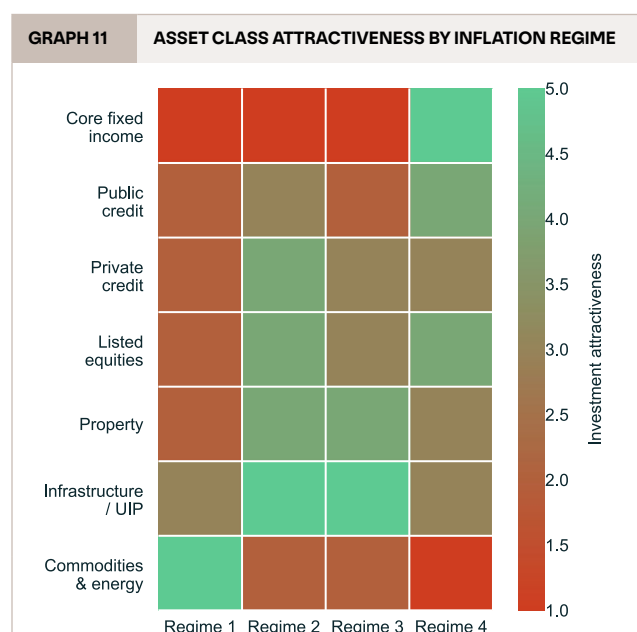
Property is best viewed as a conditional inflation hedge rather than a pure inflation hedge.

Regime 2 and Regime 3 can support rental growth through stronger nominal income and inflation-linked lease structures. However, higher inflation can also pressure valuations by raising real yields, debt costs and capitalisation rates.

The attractiveness of property therefore depends on the balance between income growth and discount-rate pressure. Industrial and logistics assets remain the most structurally supported where supply remains constrained. Residential assets benefit from demographic drivers and rental demand, although affordability constraints and policy intervention can limit pass-through.

Office and retail exposures remain more sensitive to cyclical demand and tenant affordability.

Graph 11 translates the inflation-regime framework into an investment context. The heat map summarises which asset classes are most likely to benefit when a particular CPI regime dominates. The assessments are informed by both the regime analysis and the inflation sensitivities identified in our earlier macro-factor work. Commodities and energy offer the strongest response to volatile inflation shocks, while infrastructure, UIP and selected property exposures provide greater resilience to persistent domestic inflation. By contrast, core fixed income and duration perform best when tradable goods disinflation becomes established and policy rates move lower. The chart highlights that inflation risk should not be managed through a single inflation hedge, but through exposures aligned with the dominant inflation regime.



Source: IFM Investors

Note: Commodities and energy are primarily tactical responses to Regime 1. Infrastructure, UIP and property are more strategic responses to Regimes 2 and 3. Duration is primarily a response to Regime 4.

Portfolio construction

The practical implication is to think about assets in terms of the inflation regime they protect against.

- **Regime 1, stagflationary or supply shock:** favour liquid tactical hedges such as commodities, energy and resource equities. These provide direct inflation sensitivity but remain volatile and exposed to the accompanying growth environment.
- **Regime 2, broad based domestic demand and pass-through:** favour pricing power, resilient earnings, shorter duration, strong capital structures and selective credit. Strategically, favour assets with reliable inflation-linked revenues and essential-service demand.
- **Regime 3, persistent services and administered inflation:** favour regulated or contractual indexation, refinancing resilience and macro-insulated real assets. This regime is particularly relevant to longer-horizon strategic allocation because it can keep rates elevated after cyclical inflation has eased.
- **Regime 4, tradables disinflation:** favour government bonds, high-quality fixed income and selected rate-sensitive assets when falling inflation reflects improving supply conditions. Retain more caution if disinflation instead signals deteriorating demand.

This is consistent with IFM's broader macro-factor conclusion that resilient portfolios should combine liquid, macro-sensitive assets capable of expressing tactical regime views with macro-insulated allocations that provide structural diversification and durable return drivers.

Bottom line

The investment lesson is that inflation risk should be managed by regime. Regime 1 generally calls for tactical protection against a shock. Regime 2 is the central risk to policy rates, discount rates and broad asset valuations. Regime 3 calls for strategic resilience against persistent inflation and delayed easing. Regime 4 can provide the turning-point signal for adding duration and rate-sensitive exposure.

For institutional investors, the critical distinction is whether inflation remains concentrated in an episodic shock, broadens through Regime 2 and Regime 3, or is being durably reduced by Regime 4. The first may require tactical hedging; the second favours pricing power, inflation-linked cash flows and balance-sheet resilience; the third creates an opportunity to add duration, provided disinflation is not simply the result of collapsing demand.

9. Conclusions

Inflation should be monitored as a regime system

The analysis identifies four inflation regimes in the Australian CPI and in this way moves beyond the traditional expenditure category and underlying measures analysis to a framework of categories that behave similarly. And in doing so the central finding is that the broad based domestic pass-through regime is the key inflation engine. It is the largest regime, the most frequent contributor to headline inflation, and the regime most closely linked to trimmed mean inflation. This is key particularly for policymakers.

The broader implication is that the inflation outlook should can be informed by the interaction between regimes and the economic forces generating them. Regime 1 captures shocks that may be temporary or stagflationary. Regime 2 reflects domestic demand, capacity and cost pass-through. Regime 3 captures persistence arising from services, institutional pricing and structural labour or demographic pressures. Regime 4 reflects global goods disinflation, but may become less reliable in an environment of deglobalisation, supply-chain duplication and geopolitical fragmentation. Sustained changes in Australia's inflation trajectory therefore require changes in the balance between these processes, particularly broad based domestic pass-through. Put simply, identifying regimes driving inflation may allow investors to respond more appropriately.

Main conclusions

For policymakers

- Inflation is best understood as a regime system, not a single aggregate process.
- Lower headline inflation is not enough if broad based domestic pass-through and persistent services inflation remain elevated.
- A durable easing cycle requires evidence that broad based domestic pass-through is cooling, persistent administered & services inflation is easing, inflation breadth is narrowing, and tradables are again acting as a disinflationary offset.
- The key policy risk is looking through headline inflation too quickly when underlying regime inflation remains sticky.

For investors

- Inflation risk should be managed by regime and by investment horizon.
- Volatile shocks favour liquid tactical hedges; broad based domestic pass-through favours pricing power and capital resilience.
- Persistent services inflation increases the value of contractual indexation and macro-insulated strategic assets.
- Tradables disinflation supports duration when it is durable and supply-led, but is less constructive when it reflects declining demand.
- Portfolio resilience requires combining assets that express tactical macro views with assets that provide structural, non-macro return drivers.

Appendix A

Data and caveats

Data

The empirical analysis uses Australian CPI expenditure-class index numbers from ABS Appendix 1a. The dataset covers 87 CPI expenditure classes and is restricted to the period from 1998 onwards to focus on the inflation-targeting era. Quarterly and year-ended inflation rates are calculated from the index levels.

The analysis uses 2025 CPI expenditure weights to construct regime-level inflation rates and contributions to headline CPI. The regime classification is based on inflation-process characteristics, including average inflation, volatility, persistence, tail behaviour, seasonality, common-factor exposure, post-pandemic behaviour and relationships with headline and trimmed mean inflation.

A narrow adjustment is made to the child care CPI series to account for the temporary free child care policy during the pandemic. June and September 2020 observations are linearly interpolated between March and December 2020. No other observations are altered.

Caveats

- The regimes are statistical clusters with economic interpretation. The labels should be reviewed as new data become available.
- The analysis is historical. Inflation relationships may change if pricing behaviour, regulation, global supply chains, household demand or monetary policy transmission changes.
- CPI weights are held fixed using 2025 weights. This helps interpret the regimes using the current CPI basket, but historical contribution estimates should be read with this assumption in mind.
- Trimmed mean inflation is not additive across CPI components. The regime analysis of trimmed mean inflation therefore uses correlations, betas and explanatory relationships rather than exact contribution accounting.
- The approach identifies inflation regimes, not causal mechanisms. Economic judgement is still required to interpret why each regime behaves as it does.
- Forward-looking policy and investment implications are conditional judgements, not forecasts or investment recommendations.

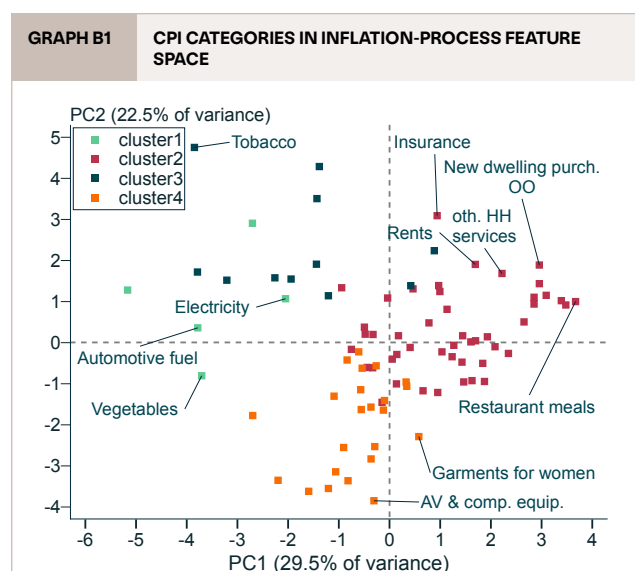


Appendix B

PCA validation of the inflation-regime classification

The main clustering analysis is conducted in a high-dimensional inflation-process feature space. Each CPI expenditure class is represented by an inflation fingerprint that captures trend inflation, volatility, persistence, tail behaviour, seasonality, inflation beta, post-pandemic behaviour and correlations with relevant inflation proxies.

Principal components analysis provides a reduced-dimensional view of this feature space. It is not used to determine the final clusters. Rather, it provides a visual validation tool by showing whether the regimes identified by the clustering algorithm occupy economically meaningful regions of the inflation-process space.



Source: IFM Investors

Note: PC1 explains 29.5% of feature-space variance and PC2 explains 22.5%. The chart shows that the four regimes occupy economically meaningful regions of the reduced feature space. And because the resulting regimes align closely with the headline and underlying inflation relationships documented in the main body of the paper.

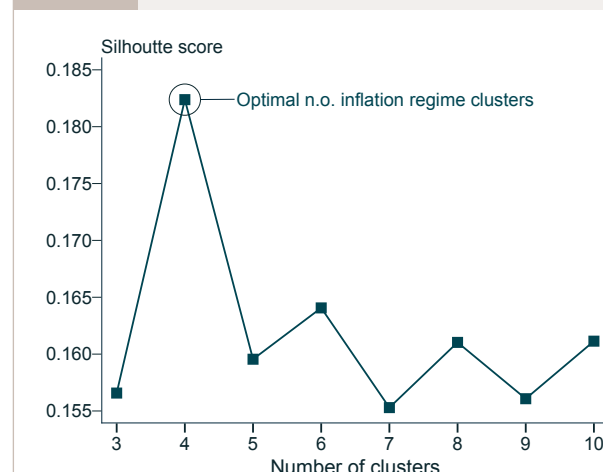
Graph B1 projects the CPI expenditure classes onto the first two principal components of the feature space. PC1 explains 29.5% of feature-space variation and PC2 explains 22.5%. Together, these two dimensions provide a useful visual summary of the inflation-process structure underlying the clustering.

PC1 broadly separates domestic and persistent inflation processes from more external, tradable or shock-driven inflation processes. PC2 helps distinguish administered and sticky inflation processes from more competitive tradable-goods inflation. The chart also highlights that several categories are outliers, including some policy-sensitive and administered-price components.

This reinforces the idea that the CPI basket contains several distinct inflation processes rather than one homogenous inflation cycle.

The most important feature of the chart is that the broad based domestic pass-through regime appears as a dense and economically coherent group of housing-related, services, insurance and domestic cost-sensitive inflation processes. This foreshadows the main empirical finding of the paper: this regime is the largest contributor to headline inflation and the regime most closely associated with trimmed mean inflation.

GRAPH B2 SILHOUETTE OPTIMISATION OF THE NUMBER OF REGIMES



Source: IFM Investors

Note: The preferred solution selects four inflation regimes, balancing parsimony and within-regime coherence.

Graph B2 summarises the silhouette-score optimisation used to select the preferred number of regimes. The silhouette score measures how well each CPI category fits within its assigned cluster relative to alternative clusters. Higher scores indicate that categories are more similar to members of their own cluster than to categories in other clusters.

The preferred solution identifies four inflation regimes. This balances interpretability and statistical coherence. Fewer regimes would collapse economically distinct inflation processes into overly broad groups. More regimes would add detail, but at the cost of interpretability and policy usefulness.

The four-regime solution is therefore used throughout the paper because it produces a taxonomy that is both statistically defensible and economically meaningful: volatile shocks, broad based domestic pass-through, persistent administered & services inflation, and tradable goods disinflation.

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