

# What Do Firms Tell Us About the Inflation Outlook?

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## Abstract

The Reserve Bank's liaison program collects information from firms in Australia about current economic conditions and their expectations for future conditions, including their own prices. Firms' observations provide a timely read on inflation. Over the past six months, firms have generally expected their prices growth to continue to moderate, but on average to remain above the Bank's inflation target range of 2–3 per cent. Firms have reported that large cost increases over recent years are still flowing through to some parts of the supply chain and have indicated that this is the primary driver of their decisions to increase prices at a faster-than-normal rate. Slower growth in demand and increased competition are expected to result in a further slowing in growth of firms' prices over coming quarters.

## Introduction

The Reserve Bank's liaison program is an important input into the Bank's understanding of economic conditions, including inflation. The liaison program gathers economic intelligence through interviews with firms conducted continuously throughout the year on a wide range of topics.<sup>[1]</sup> Around 700 meetings with firms are held annually. The information collected offers a live – albeit partial – read on what is happening in the economy and

why. It also gives the Bank insight into firms' expectations for the future.

## Nature of the inflation information collected

In terms of inflation-related information, over the past two decades firms in the liaison program have been consistently asked two core questions about prices, as well as other questions about wages and costs. Specifically, firms have been asked how much their prices have changed on average over the

12 months preceding each interview (their ‘year-ended price growth outcome’) and their expectations for average price changes over the 12 months following the interview (their ‘year-ended price growth expectation’). These questions have been asked alongside other questions on the drivers of their price changes and related topical questions that vary over time.

The Bank organises information on prices collected from liaison interviews into four broad categories:

- **numerical** year-ended average price growth outcomes and expectations from firms
- qualitative information on the drivers of pricing decisions that are recorded as **text**
- quantitative **staff scores** on an ordinal scale from –5 to +5, adjusted for what is ‘normal’ or ‘average’ for each firm<sup>[2]</sup>
- supplementary information collected episodically by interview, recorded as **survey data**.

This article shares recent insights from the Bank’s liaison on prices, including a supplementary pricing survey of firms conducted by the Bank in 2023. The article also discusses deeper topic-specific analysis of the dataset of information collected over the life of the program that has been made possible by investment in upgrading and expanding data analytics capability, including through use of artificial intelligence.<sup>[3]</sup> The entire liaison dataset analysed includes around 20 million words on economic conditions collected from firms and around 150,000 staff scores for key economic variables assigned based on the conditions reported by firms.

### Results of pricing survey

A targeted group of 80 firms participated in supplementary survey interviews over August and September 2023.<sup>[4]</sup> The objective of the survey was to increase the Bank’s understanding of the factors firms were considering in making pricing decisions and as such to support the Bank’s analysis of inflation. Firms were interviewed in detail on their pricing decisions to complement information from other liaison meetings, data and business surveys. For the survey, firms were selected on the basis of

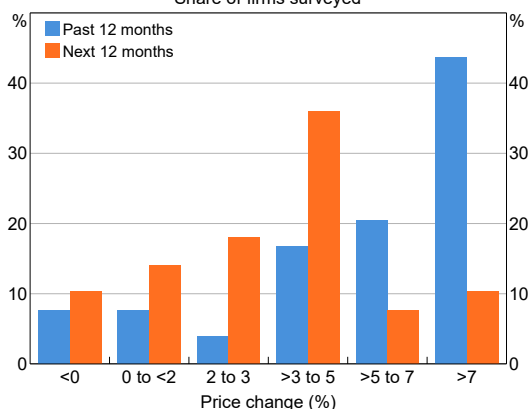
ensuring a broadly representative sample of the products and services included in Australia’s Consumer Price Index (CPI).

Answers to the survey at the time indicated that the growth in firms’ prices had slowed considerably but would remain above the inflation target range over the year ahead. The median year-ended price growth outcome of firms in the 2023 survey was around 7 per cent (Graph 1).<sup>[5]</sup> Sixty-nine of the 80 firms surveyed had increased their prices in the 12 months before the survey, an unusually high share in the history of the liaison program, reflecting the breadth of inflationary pressures in the economy. The median reported year-ended price growth expectation for the 12 months ahead was 4 per cent. The expected moderation in price growth was broadly based among firms across different industries, though there was some variation within industries. Services firms expected their price growth to come down more slowly, on average, than goods firms (Graph 2).

While firms’ pricing intentions were consistent with an easing in the pace of inflation, it was notable that their average expected price growth would remain above the Bank’s inflation target range of 2–3 per cent over the year ahead. Only a few firms surveyed expected to reduce prices on average across their product range over the 12 months following the survey.

**Graph 1**

**Size of Price Changes**  
Share of firms surveyed



Source: RBA.

### Drivers of prices growth

Firms were asked about the role of their non-labour costs, labour costs, demand, their competitors' behaviours and the exchange rate in driving their year-ended price growth outcome over the previous 12 months. For each of these factors, firms rated the significance of each factor on a four-point scale – from 'unimportant' to 'very important'. The cost factors were cited as the most important drivers of pricing decisions over the prior year (Graph 3). Firms said that over recent months slowing demand conditions and competitors' behaviours had become more important considerations and were expected to remain important over the period ahead.

### Costs and profit margin considerations

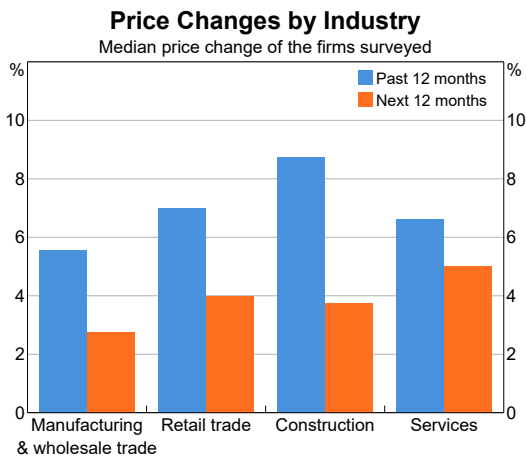
Firms generally highlighted the importance of costs in determining their prices over the previous 12 months, but they placed different weights on labour and non-labour costs. These weights broadly accorded with their composition in each firm's total costs. For example, labour tended to be a larger share of costs at services firms, and these firms were more likely to cite labour costs as a 'very important' factor in their price setting than goods firms. Goods firms instead typically cited non-labour costs as 'very important'. This split is useful in explaining the outlook for firms' prices with the lift in wages growth over the past year underpinning the strength in price increases by services firms, and the

easing in imported goods costs flowing through to goods firms' prices.

Firms said a desire to rebuild or maintain their net profit margins (a firm's revenue less costs) in the high inflation environment was affecting the outlook for prices. Some firms reported that they had maintained stable margins over the prior 12 months by increasing their prices. Firms in the survey sample that were able to maintain stable margins had increased their prices on average by more than other firms. The median price increase for firms with stable margins was around 10 per cent, compared with around 6 per cent for other firms (Graph 4). Firms surveyed that expanded their margins over the prior year had not generally increased their prices more strongly than other firms.

Some firms reported that they were unable to pass through the full increase in their costs because of growing competition in their market or because they were concerned about demand. Average margins declined over the prior 12 months for these firms. A majority of those reporting a decline in their margins also reported having a share of their market below 20 per cent.

**Graph 2**

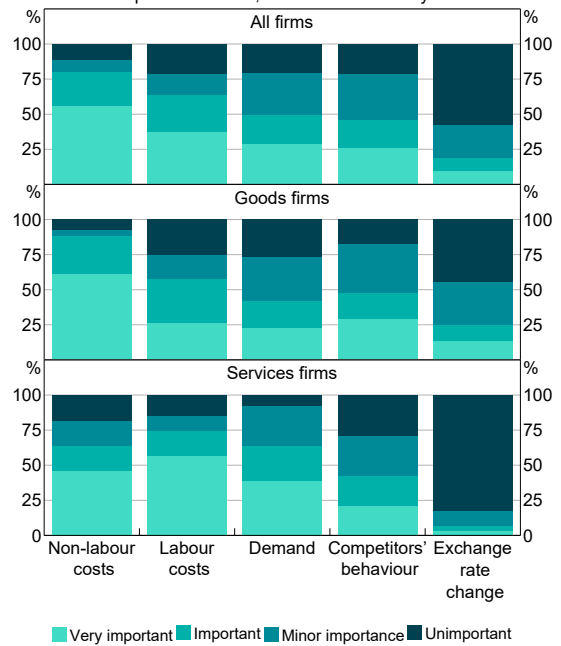


Source: RBA.

**Graph 3**

### Drivers of Price Changes

In past 12 months, share of firms surveyed



Source: RBA.

Looking ahead, firms in the survey that expected their margins to narrow over the 12 months to August 2024 intended to increase their prices modestly over that period, on average by 1 per cent. By contrast, firms that expected to expand or maintain margin over that period expected to increase their prices on average by around 4 per cent.

### Effect of demand on inflationary pressures

Several firms indicated that demand had been so strong over recent years that many customers had been willing to pay more to secure goods and services and that customers were relatively accepting of price increases, compared to some previous periods. As such, many firms surveyed cited demand as an important factor in their pricing decisions, but the share that did so was lower than for costs. This finding is consistent with a survey of firms in the Bank’s liaison program in 2008, a previous period of high inflation, when costs were reported as a more important driver of prices than demand (Park, Rayner and D’Arcy 2010). Recent Bank analysis of the text of earnings calls conducted by listed Australian companies from 2007–2023 also found that sentiment about final prices had a significantly stronger association with sentiment about input costs than it did with sentiment about demand in that period (Windsor and Zang 2023).<sup>[6]</sup>

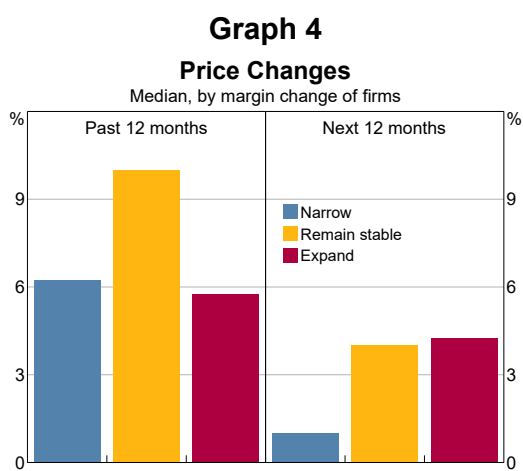
Firms expected the role of demand in their pricing decisions to increase in the 12 months following the survey as both costs and demand growth were expected to moderate. Some firms highlighted that

discounting activity increased in early 2023 as consumer demand slowed. This was most apparent among consumer-facing firms such as retailers. Reports in liaison of some discounting among residential construction-related firms had also begun to be more prevalent in early 2023, and in the survey some firms noted that discounting had become ‘aggressive’ in this industry and that this could lead to further stress and insolvencies in the industry.

### Competitive pricing

In general, firms’ responses to the survey indicated that the level of competition in their market was not a primary driver of price outcomes over the preceding 12 months. There was little difference between the median reported price outcomes of firms that rated the level of competition in their market as significant and those that did not. However, a small number of firms that rated competition as low made notably larger price increases than the median increase. Similarly, some firms that saw themselves as price leaders in their market increased their prices by notably more than the median price outcome over the 12 months preceding the survey.

However, a noticeable theme from the 2023 survey, which also became more prominent in messages from the broader liaison program as the year evolved, was that in forward-looking pricing decisions price competition was intensifying and was likely to put downward pressure on prices in the 12 months following. This compares to the preceding years when strong demand, together with the sharp rise in costs, resulted in greater acceptance of price increases both along the supply chain and by consumers. Looking forward, firms in the survey that rated their industry as having a relatively high level of competition on average expected somewhat lower price growth over the 12 months to August 2024 than those that said competition was relatively low in their industry.



Source: RBA.

### Effect of exchange rate on prices

At the time of the survey, only a small number of firms identified changes in the exchange rate as an important driver of their pricing decisions over the previous 12 months. This was consistent with a

broadly stable exchange rate in the 12 months before the survey. Firms where the primary business activity involves purchasing goods were asked whether they mainly import these goods directly or buy from domestic wholesalers. As would be expected, those firms that directly import most of their goods were more likely to identify exchange rates as important in their general pricing decisions than other firms; in many cases, importing firms employ hedging strategies to manage the effects of exchange rate moves.

### Insights from liaison about inflation in recent months

Over the latter part of 2023, firms continued to report through the broader ongoing liaison program that substantial upwards pressure on their prices persisted.

Slightly more than three-quarters of firms in the liaison program are still increasing their prices. Reports from firms on their expected price increases suggest this share will remain relatively steady over the coming 12 months, well above the historical average share. The share of firms expecting to increase their prices at a pace that they characterise as above average also remains elevated, although it has declined in recent quarters (Graph 5).

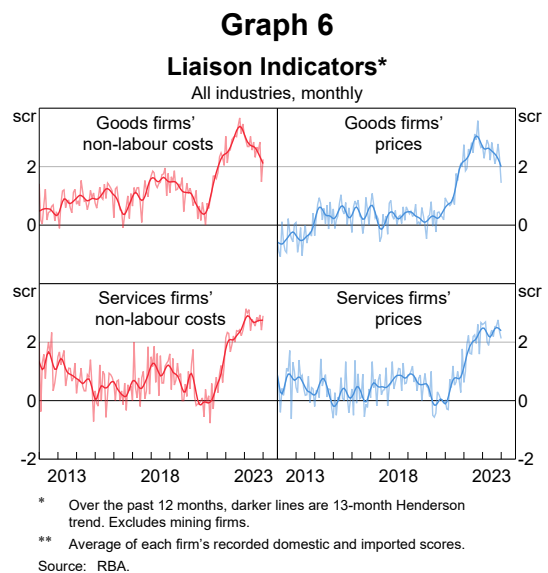
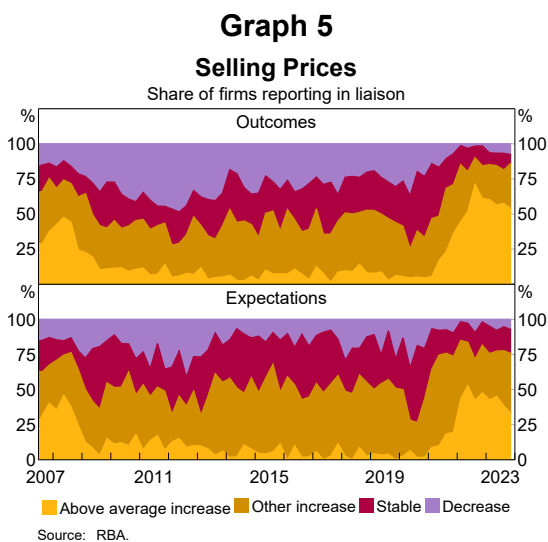
Elevated non-labour cost and price pressures remain broadly based (Graph 6). The qualitative messages firms provide in interviews have also offered valuable explanations of why prices are changing (or not), which have helped the Bank to

understand pricing conditions for different industries and inflation risks. Some key drivers of persistent upward pressures on domestic costs over the past year have been energy, logistics (including fuel) and insurance. These cost increases are in addition to substantial increases in unit labour costs over recent years, which are impacting services firms more than goods firms because of labour's larger share of their costs.

The weight of recent evidence from firms, alongside other data and survey information, has suggested that prices growth may moderate more slowly than previously anticipated. This is despite firms in some goods-related industries saying they are 'reaching the limit' of price increases that they can put through given softer demand conditions. Records of discussions with firms in liaison, and the artificial intelligence summary indicators of topic frequency and sentiment scores derived from these text records, similarly illustrates a slowing in the moderation of cost and price inflation over late 2023, alongside inflation indicators from other sources (Graph 7).<sup>[7]</sup>

### Firms' views provide a reasonable read on official data

The numerical estimates of the price growth firms report they have implemented over the previous 12 months and of the price growth they intend to implement over the coming 12 months have historically had a reasonable correlation with year-



ended official measures of inflation (Graph 8).<sup>[8]</sup> Periods where a large share of firms in the program have been reporting price increases greater than 3 per cent have also broadly coincided with periods when large shares of the components of Australia’s CPI basket are growing above the target range (Graph 9).

Data analytics have also allowed the Bank to examine more holistically the information firms report and how it changes over time, including the distribution of firms’ outcomes, to inform the Bank’s assessments of inflation. Over time, the range of price outcomes reported across firms has stayed fairly stable. But since the start of 2021, three changes in firms’ pricing can be observed

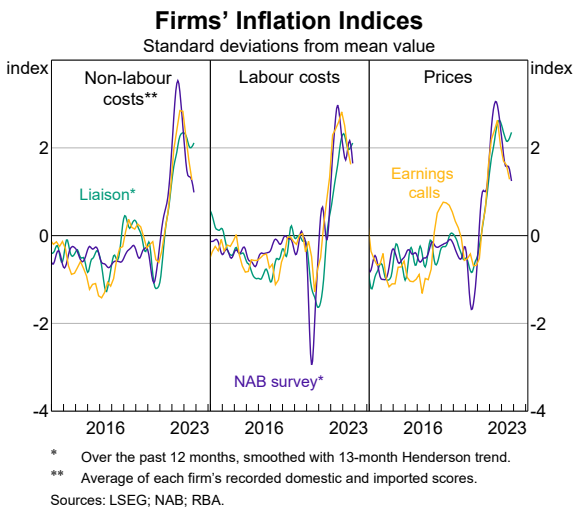
(Graph 10). First, fewer firms have reported price decreases. Second, more firms than usual have reported very large price increases. Third, a larger share of firms has reported small positive increases.

### Conclusion

Liaison information suggests a continued moderation in prices growth over the coming year. The pace of that slowing is uncertain and the share of firms expecting above-average increases is still much higher than prior to the pandemic. Inflationary pressures remain generally broadly based across firms and industries, reflecting some domestic costs continuing to grow strongly.

Liaison provides some evidence that slower demand growth is playing a role in firms’ pricing decisions, helping to achieve a better balance

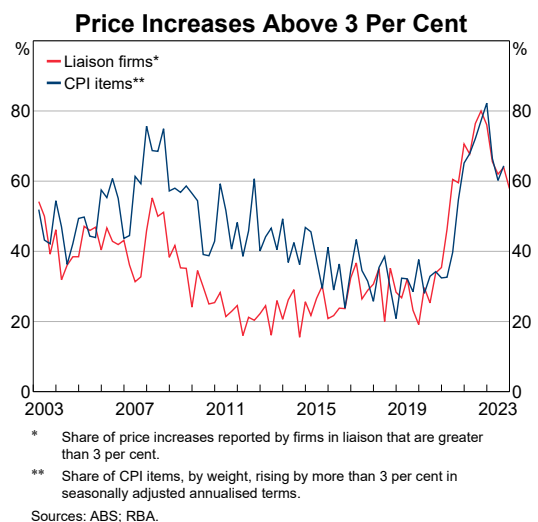
**Graph 7**



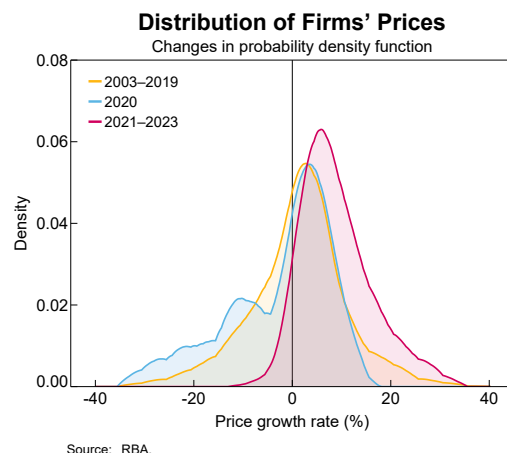
**Graph 8**



**Graph 9**



**Graph 10**





between the level of demand and supply, which is needed to return inflation back towards the target range. If demand weakens quickly, the pace of moderation in prices growth could accelerate. In the 2023 pricing survey, firms suggested that while costs were the most important drivers of their price increases, a softening in demand was likely to be a more important factor in driving a slowing in prices

growth in the following 12 months. Pricing surveys conducted by the liaison program between 2004 and 2010 found that firms typically increase prices in response to a rise in costs but decrease prices in response to a competitor's price cut or a fall in demand (Park, Rayner and D'Arcy 2010). ❖

## Endnotes

- [\*] The authors are from Economic Analysis and Economic Research departments. The authors wish to thank Anne Kroehn and Andrea Hetherington for running the pricing survey, and Patrick Chan, Lorenzo Casaol and Callan Windsor for their analytical inputs. We would also like to thank the firms that continue to support the program through their participation.
- [1] All references in this article to 'firms' are to firms in the liaison program, not all firms in the Australian economy.
- [2] Further information on the Bank's liaison program, including detailed information on how information is collected and how staff scores are assigned, is provided in Dwyer, McLoughlin and Walker (2022).
- [3] The Reserve Bank's data science team has built an information retrieval tool using natural language processing techniques – a field that uses computers to process and analyse large amounts of text – to store the textual content of liaison notes, linked to metadata, staff scores and other quantitative information firms have provided over time. In the database, each paragraph of text is enriched with machine learning generated tags, which provide information on the topic and sentiment of the text.
- [4] Around 200 firms were invited to participate.
- [5] This was somewhat higher than the 5.4 per cent increase in the CPI in the year to the September 2023 quarter. As noted elsewhere in this article, the numerical percentage estimates of year-ended average price growth from liaison have a reasonable correlation with official measures such as CPI. Firms report the most recent data available to them at the time of each meeting, though the outcomes they report may relate to a period some time prior to the meeting and the sample of firms varies through the quarter. As such, caution is applied in interpreting point estimates.
- [6] A survey of firms in the United Kingdom during the pandemic also found that supply-side pressures (energy prices and shortages of labour and materials) accounted for most of the inflation there, rather than demand, as the demand shock of the pandemic still persisted for many firms (Bunn *et al* 2022). Demand was cited by respondents to a Federal Reserve survey of US firms as the most important factor influencing price setting during late 2022 and early 2023, above costs; interviews alongside the survey suggest that for these firms the potential demand response to a proposed price change is assessed before cost increases are passed through (Dogra *et al* 2023).
- [7] See Windsor and Zang (2023) for background on the construction of the earnings calls measure.
- [8] Granger causality tests for predictive or contemporaneous relationships show that information in both the numerical percentage estimates of the price growth firms provide and staff scores of the broader set of information firms provide can help to predict CPI and Producer Price Index (PPI) inflation in the reference quarter, after considering the past values of both variables, and vice versa.

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