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- Laibson, David. 2012. Comment on "What Have They Been Thinking? Homebuyer Behavior in Hot and Cold Markets," by Karl E. Case, Robert J. Shiller, and Anne K. Thompson. *Brookings Papers on Economic Activity*, Fall, 299–301.
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**COMMENT BY**

**JOSEPH GYOURKO** It is a pleasure and honor to comment on this paper. Not only is it of broad interest to professional economists, but it can profitably be read by policymakers and practitioners in housing markets. The ongoing data collection effort that underpins the paper was visionary when begun in 1988 and now constitutes a valuable public good for the economics profession. The repeated cross sections date back far enough in time to cover more than a full housing cycle—spanning the long boom leading up to the global financial crisis, the subsequent great decline, the long recovery, and now the sharp upsurge in prices during the COVID-19 crisis. The length of that time span makes it unique compared to newer surveys of price expectations. I only wish that Chip Case, an original collaborator on this research program, was here to help present this second ten-year review of results for Brookings. He is much missed, especially by those of us who study housing markets.

The paper is well written and provides detailed descriptions of many of its key results. I see no reason to summarize or critique much of that material, although I do provide specific commentary in select instances. Hence, most of my comments are wide-ranging in nature. They include a suggestion to link this paper's survey and results to other research that was initiated more recently and often inspired by the Case, Shiller, and Thompson series. Doing so would help the economics profession see what it can learn from better integrating this effort with that of others. Hopefully, the result will be greater than the simple sum of the individual parts (i.e., of the different surveys of expectations). I also include a detailed discussion of the COVID-19 period. The authors provide substantial detail on this period, too, as it has been a remarkable time for housing markets. I do not think there is much to improve upon in terms of their discussion of the 2020 and

2021 survey results, but I do hope to influence questions they ask in next year's survey. One of the great strengths of this survey is that respondents are not only asked what they think will happen to house prices in the short and long terms. Supplementary questions provide the opportunity to dig deeper into the reasons people provide to justify their price expectations. They hold the potential for us to better understand the working of housing markets beyond what expectations themselves provide.

**LINKING TO OTHER SURVEYS AND RESEARCH** My first suggestion is more for the broader economics profession than it is for the authors of the paper, that is, to begin linking the results presented and discussed in the paper to other, newer surveys on price expectations. For example, the housing module of the Federal Reserve Bank of New York's Survey of Consumer Expectations was initiated in 2014, so its time series is not nearly as long as that discussed in this paper.<sup>1</sup> However, that survey explicitly tries to achieve a nationally representative sample that includes those who did not purchase a home, so there are advantages to its approach. Comparing and contrasting the two sets of findings and methodologies would be a useful first step. Ultimately, it may prove possible to integrate the data, by which I mean using the common 2014–2021 period across these two surveys to adjust the series reported in Shiller and Thompson backward in time. That is a potentially complex undertaking which is not appropriate for this paper, but I encourage the authors to begin working with the people conducting other surveys to see what we might be able to learn from closer coordination going forward.

A related comment on linking to more recent work that the research program underlying this paper has inspired over time pertains to more recent developments in the analysis and estimation of whether expectations are rational. Table 5 in the paper reports results for short-run expectations. I am not an expert in this specific area, but there are newer methodologies described in Kuchler, Piazzesi and Stroebel (2022), for example. I do not believe that the results reported here will change materially after employing a different specification or econometric technique, but I suspect that the more we can link surveys and analytical approaches, the better.

**SHORT-RUN AND LONG-RUN EXPECTATIONS** Short-run (one year) and long-run (ten year) house price growth expectations typically are the paper's headline results. I will not reiterate the authors' discussion of them in the paper, but I do think it noteworthy that the nature of their conclusions about

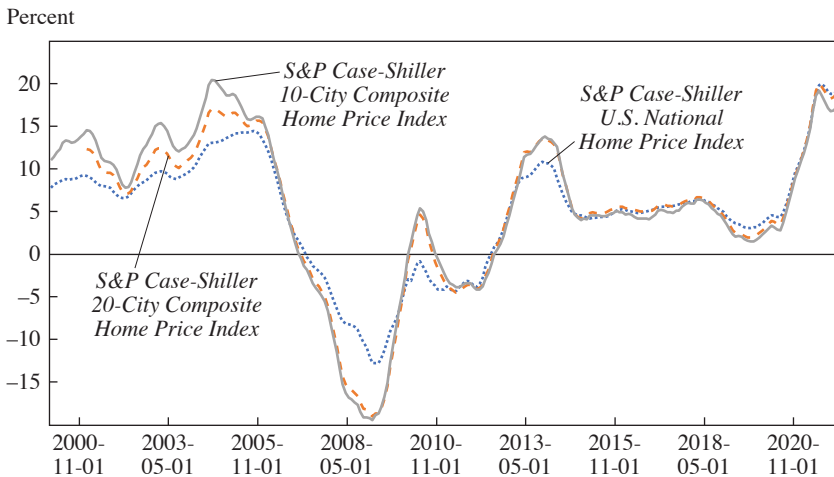
1. Federal Reserve Bank of New York, Center for Microeconomic Data, <https://www.newyorkfed.org/microeconomics/sce/housing#/>

short-term expectations in particular has not changed with the passage of time. This is not to say the level of the expectations themselves has been constant. Quite the contrary, in fact. Rather, it is meant to imply that the characteristics displayed by one-year-ahead expectations have not materially changed since the last report of these data to Brookings in 2012 (Case, Shiller, and Thompson 2012). This means they remain more volatile in nature, have some backward-looking element to them, but clearly contain information about the future above and beyond what is reflected in other regression controls such as lagged price growth. More simply put, short-term expectations look to be rationally founded, and the long recovery after the global financial crisis and the COVID-19 pandemic have not changed that perspective.

The 2012 paper did not conclude the same about ten-year expectations. Specifically, the authors note that long-term expectations appear too optimistic in the 2003–2006 period, with a large 200–500 basis point gap between those expectations and the thirty-year mortgage rate existing during that period (see figure 5 in the paper for the plot of these two series). That gap was emphasized as the basis for expecting high financial returns to homeownership and thus was a potential explanation for any price bubble around that time. A much more modest gap opened up in 2021, but currently forecasted Federal Reserve interest rate rises seem likely to ensure it will not widen in 2022. Hence, longer-term expectations now look less bubbly to the authors for this reason and because they have not been trending up over recent years. The slow, longer-run movement in long-term expectations is similar across the two halves of the time series. What is striking now is that long-term price growth expectations are markedly below short-term expectations in the most recent survey for 2021.

LEARNING MORE ABOUT HOUSING MARKETS DURING THE COVID-19 CRISIS I appreciate that the section on the COVID-19 era has been expanded in this final version. It is well worth the added detail. One reason is that price appreciation has been stunning, as indicated by my plot of the Case-Shiller (nominal) repeat sales series (figure 1). Price appreciation very quickly reached growth rates not seen since 2004–2005. Moreover, it is more widespread, as indicated by the near overlap of the national, 10-City Composite and 20-City Composite series since COVID-19 hit the United States. There was much more heterogeneity across markets in the run-up to the global financial crisis.

The data on expectations here are interesting as usual. The results for 2020, which reflect answers from buyers who knew that COVID-19 existed but bought before the virus really hit America, show short-run expectations

**Figure 1.** Case-Shiller Repeat Sales Index

Source: FRED, retrieved from <https://fred.stlouisfed.org/series/>. Reproduced with permission from S&P Dow Jones Indices LLC, S&P/Case-Shiller U.S. National Home Price Index [CSUSHPINS]; S&P/Case-Shiller 20-City Composite Home Price Index [SPCS20RSA]; S&P/Case-Shiller 10-City Composite Home Price Index [SPCS10RSA].

Note: Percent change from a year ago, monthly, not seasonally adjusted.

not much above 3 percent.<sup>2</sup> As Shiller and Thompson note, that was a big miss given what we now know happened to prices. However, new buyers revised their expectations up sharply in 2021, nearly doubling across the four markets covered in the paper. That was still a big miss compared to realized price appreciation, but the relatively high volatility of one-year-ahead expectations is clearly evident. Long-run expectations responded more sluggishly, which is not surprising given the uncertainty around what the pandemic might have meant for housing markets. The paper's extensive discussion of written answers providing the context for reported expectations shows that about one-third of respondents in 2020 mentioned COVID-19 as a factor, but there was not a consensus on what it meant for house prices. By the time of the 2021 survey, there was widespread agreement that prices were rising in each of the four markets. As in previous cycles, survey respondents are well-informed about recent price movements

2. The 2020 survey was sent out in July of that year to buyers who closed on their homes in the first quarter of the year. Hence, they could have been searching and settled on the home in the latter part of 2019. This timing scenario also applies to the 2021 survey results discussed just below.

in their housing markets. The discussion of key events that buyers thought moved prices is illuminating, too—the combination of “low rates,” “shortage of supply,” and “high demand” suggests a supply-demand imbalance—at least in the short run.

Here, I think it would be useful for students of housing markets to try to bring in other data—on the supply side in particular. Hopefully, this could be done in next year’s survey by adding supplementary questions. Supply was affected in two obvious ways. One was supply chain snafus which delayed builders from completing units and bringing them to the market. Government data indicate a meaningful increase in the number of months it took to complete a house once started. For example, 14 percent of all single-family units were completed within three months in 2019, versus only 9 percent in 2021. In general, it took longer to deliver a home to market in 2020 and 2021.<sup>3</sup> The other, and I think less well understood, supply side change involves the sharp drop in listings by existing owners. This latter phenomenon is important because buyers can purchase a new home or one from the existing stock. If nobody lists their home because, say, they were deterred by the need for social distancing or reluctant to relocate in uncertain times, then purchasers have to buy a new home. Whatever the causes, there were sharp declines in listings. One example comes from the Phoenix area. Data from an Arizona listings service indicate that the number of active listings fell from just over 18,000 in the first quarter of 2019 to just over 14,000 in the first quarter of 2020. And it got worse from there, as the analogous figure for the first quarter of 2021 was about 4,400.<sup>4</sup> Multiple listing services from different markets would have to be accessed to provide a clear national picture, but there seems little reason to believe that behavior in Phoenix was substantially more conservative than other metropolitan areas.

These negative shocks to the supply side of housing markets occurred simultaneously with an increase in the demand to be an owner versus a renter. US Census Bureau data show that the propensity to own jumped by 1.1 percentage points from the first quarter of 2019 to the same quarter in 2020 (from 64.2 percent to 65.3 percent) and then rose a bit further to 65.6 percent in 2021. There were nearly 130 million total households in the United States in 2020, so even a small percentage change implies a large

3. See US Census Bureau, “New Residential Construction,” <https://census.gov/construction/nrc/index.html>, for more detail.

4. These figures come from the Arizona Regional Multiple Listing Service. They are aggregated from monthly data available at ARMLS, “Statistics,” <https://armls.com/statistics>, and are for the Phoenix area, Maricopa County specifically.

absolute jump in purchasers.<sup>5</sup> Purchases of new home sales jumped sharply during the pandemic. The US Census Bureau reports that about 822,000 new homes were bought in the first year, 2020, versus only 683,000 in 2019, for an increase of 20 percent.<sup>6</sup> Existing home sales increased by a much smaller 6.3 percent between 2019 and 2020, from about 4.765 million units to 5.066 million units.<sup>7</sup> The sharp decline in listings noted above could have contributed to the relatively smaller increase in purchases out of the existing stock.

There seems much to learn from trying to put the expectations data in context, specifically with respect to perceived or actual changes in supply and demand. I agree with the statement in the text that COVID-19 heightened emotions and helped drive some people to find the “perfect house with space for meaningful new and different activities.” The demand side matters for sure, and there is much interesting discussion in the paper about how this might relate to reported expectations. However, I encourage more exploration of the opportunity that the pandemic presents to study how the supply side may be affecting how people perceive housing markets. I suggest doing this through the survey’s supplementary questions in 2022 and subsequent years. Perhaps the most obvious starting point would be to ask whether the respondents bought a new or existing home. I would also continue the question asked in the most recent survey about within-metropolitan area location of the home they purchased (i.e., central city versus suburb as in questions 33 and 34), as well as how much living area they desired (question 36). Finally, note that this is not an either-or issue, but one of “and,” as in demand and supply.<sup>8</sup>

5. The homeownership rate data are taken from the *Quarterly Residential Vacancies and Homeownership* report (table 4), which updates quarterly; the report can be downloaded from the US Census Bureau, <https://www.census.gov/housing/hvs/files/currenthvspress.pdf>. The household data are from the Federal Reserve Bank of St. Louis FRED Economic Data, “Total Households,” <https://fred.stlouisfed.org/series/TTLHH>.

6. The historical data can be downloaded from US Census Bureau, “New Residential Sales,” [https://www.census.gov/construction/nrs/historical\\_data/index.html](https://www.census.gov/construction/nrs/historical_data/index.html). Purchases of newly constructed homes remained elevated in 2021 at 771,000 versus only 617,000 in calendar year 2018.

7. These data may be downloaded at National Association of Realtors, “Housing Statistics,” <https://cdn.nar.realtor/research-and-statistics/housing-statistics>. The next year, 2021, saw a jump to 5.413 million purchases out of the existing stock, but that still is only a 7 percent increase over 2020.

8. In a related vein, I would even add supply side fundamentals to the demand side factors mentioned in question 17.2. That question asks whether the respondent believes more that psychological forces versus market fundamentals have had a stronger influence on recent house price trends. The market fundamentals—population growth, interest rates, and employment growth—all shift the demand schedule.

Another striking feature about this more recent era from figure 1 is how truly national the impact on prices has been. In the boom leading up to the global financial crisis, there was much more heterogeneity across markets. We all know about the so-called sand state market bubbles (Las Vegas, Phoenix, and Miami), but the Case-Shiller price series from other Sunbelt markets in North Carolina (Charlotte), Georgia (Atlanta), and Texas (Dallas) show no such boom during the run-up to the global financial crisis. It strikes me as worth considering why we do not see as much cross-market variation now. Changes in short- and long-term expectations already are compared and contrasted across four markets, and that obviously can be done in next year's survey, too. However, I would be interested in seeing a breakdown of written responses by market to learn whether different points were raised or whether buyers in, say, Milwaukee and San Francisco tended to reference similar or different factors. Finally, this is another area where coordination with other surveys could be valuable for our understanding of housing markets. There is much useful variation across the four markets surveyed here, but there is even greater variety across the country. Differences across markets, especially over time, provide a potentially useful context in which to study housing market behavior.

**CONCLUSIONS** This paper represents the continuation of a remarkably innovative research program into housing market expectations. The research it has spawned is now legion in scope and influence. Going forward, I hope we learn more about housing markets by exploiting the data in the written answers to supplementary questions that delve into issues beyond the survey respondents' specific views on future price appreciation. It would be useful to start publishing the underlying micro data on these answers, with an appropriate lag. Who knows what insights new textual analysis programs might provide? I also encourage more questions pertaining to the supply side of housing markets, particularly during and after the COVID-19 crisis.

#### REFERENCES FOR THE GYOURKO COMMENT

- Case, Karl E., Robert J. Shiller, and Anne K. Thompson. 2012. "What Have They Been Thinking? Homebuyer Behavior in Hot and Cold Markets." *Brookings Papers on Economic Activity*, Fall, 265–98.
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**GENERAL DISCUSSION** Frederic Mishkin related his first question to a point made by Joseph Gyourko about Robert Shiller's "great disappointment"