ECONOMIC OUTLOOK



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Falling Sales And Prices Not The Biggest Housing Market Story?

Whether, or to what extent, the FOMC's aggressive course of Fed funds rate hikes has had an impact on inflation is open to debate, but there is no denying that higher interest rates have, to borrow a phrase from Chair Powell, done a job on the housing market. As mortgage interest rates have pushed higher, even briefly rising above seven percent, new single family construction and sales of new and existing homes have fallen sharply, and house prices are declining in many markets across the U.S. That single family construction and sales have tumbled comes as no surprise given that the for-sale segment of the housing market is typically the first casualty in a rising rate cycle, and it is also no surprise that these declines have generated some attention-grabbing headlines that seem to get more dramatic with each new month's data. At the same time, however, what could possibly be an even bigger, and we mean that both figuratively and literally, housing market story continues to, well, build, with little or no attention paid to it.

As of October, the latest available data point, there were a total of 1.722 million housing units under construction, a new record high. Or perhaps we should say another new record high, as October was the third consecutive new record high for this metric and the fourth in the past five months. Of that total, 794,000 were single family units, which is down from a high of 828,000 in the spring, while 928,000 were multi-family units, the most multi-family units under construction in any month since December 1973. Though we discuss the under-construction pipeline each month in our analysis of the reports on residential construction, we see little mention of it in other forums, and to the extent the construction backlog is discussed, the tendency is to simply chalk it up to the usual suspects, i.e., the supply chain backlogs stemming from the pandemic and the policy response to it.

To be sure, there is some truth to that, particularly when it comes to the growing backlog of single family units under construction. That is, however, not the only factor in play here, particularly when it comes to the (still) growing backlog of multi-family units under construction. While it has certainly grown since the onset of the pandemic, the origins of the backlog of multi-family units under constriction go much further back. We began discussing this all the way back in 2015, though in all of this time we have yet to come up with a satisfactory explanation, so it's been more an expression of our unwavering confusion than an actual discussion. In any event, shortages of labor and materials have played a role in the more recent growth in the backlog of under construction housing units. Additionally, with the recent deterioration in both the for-rent and for-sale segments of the market, it could be that developers are moving even more slowly in hopes of waiting out what they believe is a temporary (what, you thought we were

going to say "transitory"?) period of sluggish demand that will ultimately give way to stronger market conditions as the economy rights itself and interest rates begin to fall. Even to the extent this is the case, the magnitude of the current construction backlog is still hard to fathom. And, even when it stops growing, this backlog will likely shrink only gradually, meaning that we'll be talking about it for some time to come regardless of how much, or how little, attention it gets elsewhere.



70 72 74 76 78 80 82 84 86 88 90 92 94 96 98 00 02 04 06 08 10 12 14 16 18 20 22 Source: U.S. Census Bureau; Regions Economics Division

The above chart shows the under construction backlog broken down by single family and multi-family units. In both segments, 2012 marked the beginning of the rebound from the deep and prolonged downturn associated with the 2007-09 recession. Note that in the first several years of this rebound, the rate of multifamily construction was much more rapid than the rate of single family construction. This was a reflection of several factors that weighed on the rate of single family construction, including fewer single family builders having survived the downturn, foreclosure inventories which did not normalize until 2016 and thus were a steady source of lower-priced single family homes competing with new construction, more stringent mortgage lending standards that thinned out the pool of prospective buyers, what in many markets were more cumbersome entitlement processes that have acted to limit quantities of single family units being built, and chronic labor shortages that weighed more heavily on single family construction as it is more labor intensive than multi-family construction.

Nonetheless, single family construction plodded along at a fairly steady rate while multi-family construction was racing ahead, and with completions of single family units intended for sale basically keeping pace with new home sales, inventories of single family units intended for sale remained lean. Note from the above chart, however, that the backlog of single family units under construction began to fall in mid-2018 while the muti-family backlog continued

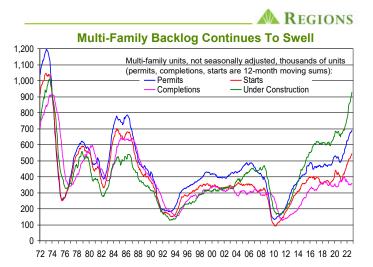
to build. Rather than reflecting a faster rate of completions, the decline in the single family backlog reflected a downturn in single family starts which at least in part was due to rising mortgage interest rates weighing on demand for home purchases – stop us if you've heard this one lately . . . Recall that in late-2014 mortgage interest rates fell below 4.0 percent, where they remained until early-2018, and when mortgage rates began rising, sales of both new and existing homes began to fall, as did single family housing starts. As such, the backlog of under-construction single family units declined steadily from mid-2018 through mid-2020, when the effects of the pandemic and the policy response to it contributed to a spike in demand for single family homes.

The story since then is all too familiar. With sub-3.0 percent mortgage rates, changing work arrangements, and changes in location preferences all contributing to robust growth in demand, supply chain and labor supply constraints were limiting the capacity of builders to deliver finished homes. As such, while single family starts and sales jumped, single family completions puttered along, contributing to the sharp increase in the number of single family units under construction. It helps to recall that new home sales can occur at any phase of construction – before it starts, while it is underway, or after it has been completed. It also helps to recall that in mid-2021, many builders changed tactics, intentionally limiting sales and holding off on releasing units for sale until construction was well underway, which enabled them to get a better window on delivery times while passing pricing risk (in the form of rapidly rising materials costs) along to buyers.

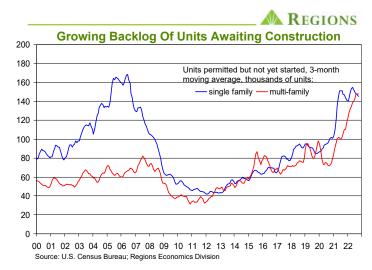


This fueled further growth in the backlog of single family units under construction yet posed little risk to builders, in terms of them risking unwanted inventory builds, as long as demand held up. So much for the best laid plans, although we're fairly sure Robert Burns wasn't referring to homebuilding. In any event, the above chart illustrates how this turned out for builders. What began as a "managed" decline in sales turned into an all-out rout when mortgage interest rates began rising earlier this year, leaving builders with rapidly growing inventories of unsold homes under construction. While the cumulative difference between the green and red lines can be thought of as an addition to the backlog of single family homes under construction, it doesn't capture all of the growth in that backlog. We show single family units intended

for sale in the above chart, but keep in mind that single family homes built for rent have accounted for a growing share of single family starts over the past several quarters. Completions of these units are subject to the same materials and labor constraints which are holding up completions of units intended for sale.



As for the multi-family segment, the above chart is no stranger to readers of our analysis of the residential construction data. Unlike the single family segment, higher interest rates haven't yet had an appreciable impact on multi-family starts, and with multi-family completions having fallen through 2021 and into 2022, the backlog of multi-family units under construction has continued to swell. One could argue that higher mortgage interest rates will funnel demand for housing into the rental market, and it is also the case that a sizable share of younger (18-to-34 years old) adults remain in their parents' homes. Even so, while we've never questioned the demand for multi-family rental units, we have questioned, and continue to question, whether that demand is sufficient to absorb the number of units already in the pipeline, let alone what remain sizable additions to the pipeline.



The record number of housing units under construction doesn't capture the full extent of the backlog of housing units. As the chart above shows, the number of units which have been permitted but

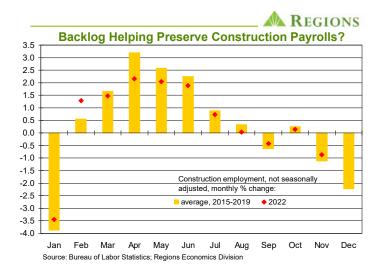
not yet started has grown considerably since the onset of the pandemic. The number of such multi-family units is, as of October, the highest in any month since March 1978, while the number of such single family units is at levels last seen prior to the housing market bust in 2006. To be sure, even in the most normal of times, to the extent there is such a thing anymore, not all units that have been permitted will be started, and for that matter, not all units that are started will be completed. It could be that a higher than normal share of housing units that have been permitted will not be started any time soon, if ever, but even allowing for this possibility, units already permitted figure to at some point add to the already sizable backlog of housing units awaiting completion.

The seemingly obvious question here is what the impact on house prices and market rents as completions will be ramp up, as they will even if when they will is not yet clear. Supply chain constraints are by no means fully resolved but are at least easing, so simply pointing to supply chain constraints to account for the slow pace of completions is becoming less and less plausible. Either way, builders have thus far not been overly aggressive in cutting prices in order to move inventories of unsold homes, having been more reliant on non-price concessions. While they do have some element of control over the pace of completions, and as such can try to wait out current market conditions, there is a cost to them of doing so.

We have argued that there is still a considerable degree of unsatisfied demand for home purchases, in large measure due to the extent to which the market has been undersupplied for the past decade-plus. We've also argued that any improvements in affordability, either via price reductions or declines in mortgage interest rates, would unlock at least some portion of this pent-up demand. To that point, the Mortgage Bankers Association's weekly surveys of applications for mortgage loans show that mortgage interest rates fell by sixty-five basis points over the three weeks ending with November 25, and applications for purchase mortgage loans increased by over eleven percent over that same span. To be sure, that still leaves them far below their year-ago levels, but to the extent that more recent declines in market interest rates carry through to mortgage interest rates, more buyers will emerge from the sidelines. While that won't necessarily do anything to speed up the pace of single family completions, it will at least shift more and more of these under construction units from "for sale" to "sold" and thus help alleviate downward pressure on new home prices. This isn't to say this will be the ultimate soft landing for homebuilders, as they will at some point likely have to make bigger concessions on pricing, but it does suggest that clearing these backlogs may not be as painful to builders as the magnitude of the backlogs may suggest.

It's harder to see a smooth path in the multi-family segment of the market. Indeed, market rents are already coming under pressure even absent a faster pace of completions coming on the market. To the extent labor market conditions deteriorate over coming months, that will further sap demand for multi-family rental units, in part because that will keep more younger adults at home with their parents for longer than would otherwise have been the case. At the same time, should affordability constraints ease and unlock additional demand for home purchases, that would suggest at least some diminishment in demand for rental units, whether single family or multi-family. And, speaking of single family rental

units, they now comprise a larger share of the rental housing stock than has historically been the case, and that share seems set to increase further, particularly with single family rental operators contracting directly with builders to construct new units. At least some of any subsequent increases in the stock of occupied single family rental units will come at the expense of multi-family rental units. Again, while we do not question the demand for multi-family rental units, we do question whether that demand will be sufficient to absorb what at some point will be a significant increase in the number of completed multi-family units. To the extent the answer to this question is no, there will be implications for market rents.



One final, if perhaps underappreciated, consequence of the sizable backlog of housing units under construction is that it is helping to preserve construction employment despite notably weaker market conditions over recent months. For instance, with the sharp decline in the volume of mortgage loan originations, there have been layoffs amongst providers of mortgage finance. Construction payrolls, in contrast, have continued to grow, which is the case whether one looks at total construction employment or specifically at residential construction employment. To illustrate that point, we use the above chart, which shows the average monthly change in construction payrolls over the five years prior to the onset of the pandemic (gold bars) and the corresponding monthly changes in 2022 (red diamonds). The chart is based on the not seasonally adjusted data, which is the proper basis on which to compare changes in the same months over time.

With the exception of February, the monthly changes in 2022 have been smaller than pre-pandemic averages, including September and November, when the seasonal declines in construction payrolls in 2022 have been smaller than normal for those months. It is worth noting that typical monthly employment patterns being out of alignment with pre-pandemic norms is not specific to the construction industry, nor is the misalignment in patterns of activity specific to the employment data, as this has been a general case since the onset of the pandemic. The point here, however, is that the speed and magnitude of the declines in new home sales and softening conditions in the rental market seen over recent months might lead one to think that builders would be shedding workers at a rapid pace, which is simply not the case. Instead,

unless they plan on simply abandoning large numbers of units already under construction, builders are not only keeping workers on their payrolls but are also keeping them busy as they work to complete these units. Moreover, the data on job openings suggest that not only are current workers being kept on their payrolls, but builders would have even more workers were they able to find them. Again, this is true across private sector industry groups, but even with the deterioration in market conditions seen over recent months the number of job openings in construction remains well above pre-pandemic norms. That is likely to remain the case for some time to come given the magnitude of the construction backlog. One concession to current market conditions is that average weekly hours worked in construction are down over recent months and are below pre-pandemic norms, which could be a sign that builders are not moving as quickly as they might be were market conditions stronger. Still, that is a lever that builders can continue to pull, and it seems unlikely they would let workers go in large numbers given how badly they have been plagued by labor supply constraints over the past several years. While that is by no means specific to the construction industry, it is perhaps felt more acutely here than in most other industry groups.

While it's always been easier to start construction on a new housing unit than to finish it, finishing housing units has been even harder, not to mention more costly, since the onset of the pandemic. Like many other areas of the U.S. economy, the pandemic did not create the supply/demand imbalance in the housing market but instead exacerbated it. While demand has clearly been knocked down a peg, or three, thanks to higher mortgage interest rates and a slowing economy, there is a pool of new supply more or less waiting in the wings, in the form of the sizable backlog of housing units under construction. We do think there is a floor under demand, and that in the case of the for-sale segment of the market, demand will be fairly quick to respond to improvements in buying conditions, as the recent period of falling mortgage interest rates has suggested. We think builders have at least some capacity to step up the pace at which they complete single family units, but at the same time think builders will have to be more accommodating on pricing to make a meaningful dent in inventories of spec homes for sale. While perhaps not exactly a smooth path forward, we think the for-sale segment of the market faces a less bumpy path than is the case in the rental segment of the market given that asking rents are already falling and the magnitude of new supply yet to be delivered to the market.

Labor Market: No Longer Boiling, But Still More Than A Simmer

As in the housing market, an existing imbalance between supply and demand in the labor market was greatly exacerbated by the pandemic and the policy response to it. And, just as the greater imbalance between supply and demand in the housing market led to a significantly faster pace of price appreciation, the greater imbalance between supply and demand in the labor market led to a sharp acceleration in the pace of wage growth. Unlike the housing market, however, there is not a significant pool of labor supply lurking in the wings that has the potential to significantly alleviate price (wage) pressures as it comes on the market. To be sure, there is potential for the labor force participation rate to rise

from where it presently is, but demographic trends that have been in place for many years all but ensured persistent downward pressure on the labor force participation over the longer-term, which something we were discussing years before the pandemic.

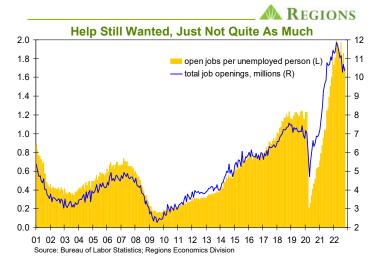
While faster wage growth was not the cause of the sharp acceleration in inflation that began in the spring of 2021, the labor market has nonetheless become the focal point in the FOMC's campaign to push inflation back down toward its 2.0 percent target rate. Despite decades of evidence to the contrary, the notion of a Phillips Curve relationship continues to dominate thinking around the link between the labor market and inflation, particularly amongst FOMC members. As such, many analysts seize on the average hourly earnings metric in each monthly employment report as holding the key to how high the FOMC will have to push the Fed funds rate in the current cycle. That was on clear display in the reaction of the financial markets to the November employment report, which showed average hourly earnings rising by six-tenths of a percent, double the expected gain. This pushed year-on-year growth in average hourly earnings up to 5.1 percent, topping the growth seen in the prior two months, leading many to, once again, change their calls on the path of the funds rate.

This is yet another illustration of the folly of reacting to headline numbers without bothering to look through the details of the data. Average hourly earnings in the transportation & warehousing industry group rose by 2.5 percent in November, easily the largest monthly increase on record, while rising by 0.9 percent in retail trade. These increases likely reflect nothing more than firms in these industry groups making a push to add seasonal workers. At the same time, average hourly earnings in information services, a broad industry group which encompasses much of the technology sector, rose by 1.6 percent in November. This could, at least in part, reflect severance payments associated with recent layoffs amongst several tech companies. It helps to recall that the BLS does not ask firms to report average hourly earnings, instead, firms are asked to report total wage payments and the number of hours worked, from which BLS backs out an estimate of average hourly earnings. Outside of these industry groups, there is simply no evidence of a reacceleration in wage growth that would be a concern to the FOMC or any other Phillips Curve devotees.

Be that as it may, it is worth discussing whether, or to what, extent the labor market has begun to cool, not for what that might tell us about the path of inflation but instead for what it might tell us about the path of the broader economy. First and foremost, the pace of job growth has clearly decelerated over the past several months, which is neither surprising nor concerning as the frenzied pace of hiring that prevailed as firms scrambled to fill the gaps left by the pandemic and the policy response to it was not a pace that was going to be sustained. That said, there is evidence that firms would be taking on more workers were they able to do so.

There were, as of October, 10.334 million open jobs across the U.S. economy. Though down from the peak of 11.855 million reached in March, this is still roughly forty-eight percent higher than the number of open jobs prior to the onset of the pandemic. When scaled to the number of unemployed workers, this translates into 1.7 open jobs for each unemployed person which, while down from a peak of 2.0 in March, is still far above the ratio that prevailed prior to the pandemic. Even if we expand the pool of

potential workers to include those not currently in the labor force who nonetheless state that they want a job, this translates into 0.9 open jobs for each potential worker, once again well above the ratio that prevailed prior to the pandemic.



The chart above illustrates the disparity between the number of open jobs and the number of unemployed persons, and also illustrates our earlier point that there was a growing mismatch between labor demand and labor supply well before the onset of the pandemic. Even if we broaden the pool of potential workers to include those who want a job but are not at present in the labor force, the point remains the same, i.e., the extent to which labor demand remains far above labor supply is contributing to upward pressure on wages. This goes to a point we and many others, including Fed Chair Powell have been making, which is that even as the economy slows under the weight of elevated inflation and higher interest rates, we are less likely to see widespread layoffs than would have been the case in past cycles. That there have been several high-profile announcements of job cuts of late does not disprove our assertion, as those have mainly come in areas, such as retail trade and technology, in which past hiring was simply too closely aligned with pandemic-related patterns of activity and not closely enough aligned with longer-term demand profiles.

To the extent our view is correct, further declines in job openings will be a sign of further cooling in the demand for labor. We've also argued that the next step firms would take to alter total labor input in the face of slowing demand would be reductions in hours worked. Indeed, there are signs of that happening, with average weekly hours worked having declined in most of the broad industry groups over the past few months. This includes construction and manufacturing, two sectors of the economy in which activity has been most impacted by higher interest rates. Overall average weekly hours declined by one-tenth of an hour in November, and while that may seem a trivial change, it is nonetheless equivalent to over 300,000 jobs in terms of the change in the economy's productive capacity. Our view is that firms still have considerable latitude in managing hours worked should demand continue to slow before they reach the point where significant layoffs become the more feasible alternative.

While the demand for labor has begun to cool, labor supply has fallen in recent months, even using the broader measure which includes those both those in the labor force and those not in the labor force but who want a job. At least if one believes the labor force data contained in the monthly employment reports, which show the labor force participation rate declining in each of the past three months. Why we have some reservations about this is that the reported decline in the labor force is more than accounted for by declining participation amongst females in each of the broad age cohorts for which data are reported, more than offsetting rising male participation. We cannot come up with a plausible explanation for why this would be the case.

While not a direct measure of labor supply, we do think it worth noting that the rate at which workers are voluntarily quitting jobs has fallen over the past several months. While still above prepandemic norms, the quits rate is much closer to that marker than is the job openings rate, as we show in the chart below. One reason this is a useful indicator is that a falling quits rate indicates workers are feeling less confident in their ability to land a new job and, as such, is consistent with the premise of a cooling labor market. It is also significant in that job changers are shown to secure bigger increases in salary than those who stay in place, meaning that a falling quits rate should translate into a slowing pace of wage growth.



Even with the demand for labor having cooled some over recent months, the labor market remains tight as labor supply, even more broadly defined to include those not in the labor force but who want a job, is still no match for labor demand. It is likely that job vacancies will continue to decline in the months ahead, and we continue to think that firms will use hours worked as a lever with which to manage total labor input through what we think will be several quarters of weak demand. Absent a reversal of the recent declines in labor force participation, however, the extent to which that will take some of the edge off of wage growth is unclear.

We expect labor market conditions to loosen further in the months ahead. That will, however, likely look different than has been the case in past cycles, in which layoffs would have been a more prominent component than we expect to be the case in this cycle. Even so, slower job growth, slower wage growth, and further cuts in hours worked will combine to take a toll on growth in personal income and, in turn, on consumer spending. This is one reason we expect only weak growth in private domestic demand in 2023.

ECONOMIC OUTLOOK A REGIONS December 2022



Q2 '22 (a)	Q3 '22 (p)	Q4 '22 (f)	Q1 '23 (f)	Q2 '23 (f)	Q3 '23 (f)	Q4 '23 (f)	Q1 '24 (f)		2020 (a)	2021 (a)	2022 (f)	2023 (f)	2024 (f)
-0.6	2.9	1.1	0.3	0.6	0.9	1.3	1.6	Real GDP ¹	-2.8	5.9	1.9	0.9	1.6
2.0	1.7	2.6	0.5	1.3	1.4	1.4	1.9	Real Personal Consumption ¹	-3.0	8.3	2.8	1.4	1.8
0.1	5.1	5.4	3.4	1.3	1.2	1.4	2.3	Real Business Fixed Investment ¹	-4.9	6.4	3.8	3.0	2.3
-2.0	10.7	4.0	0.9	-2.7	-2.4	-1.3	0.5	Equipment ¹	-10.5	10.3	4.8	1.2	0.4
8.9	5.8	6.3	4.9	4.0	3.9	3.8	4.0	Intellectual Property and Software ¹	4.8	9.7	8.7	5.1	4.1
-12.7	-6.9	6.9	6.1	5.1	3.7	2.2	2.4	Structures ¹	-10.1	-6.4	-7.4	2.5	2.4
-17.8	-26.8	-22.2	-5.8	5.4	5.4	6.3	5.2	Real Residential Fixed Investment ¹	7.2	10.7	-10.4	-9.1	5.3
-1.6	3.0	0.6	0.7	1.1	1.1	1.1	1.1	Real Government Expenditures ¹	2.6	0.6	-0.9	1.0	1.1
-1,430.5	-1,264.7	-1,358.9	-1,377.5	-1,383.5	-1,400.0	-1,419.8	-1,434.7	Real Net Exports ²	-922.6	-1,233.4	-1,385.7	-1,395.2	-1,454.7
1,086	911	857	852	856	863	883	905	Single Family Housing Starts, ths. of units ³	1,002	1,131	1,010	863	934
561	546	557	534	516	491	480	473	Multi-Family Housing Starts, ths. of units ³	393	474	549	505	467
17.3	11.5	6.1	-0.2	-3.8	-3.7	-2.7	-0.5	CoreLogic House Price Index⁵	6.7	15.7	13.4	-2.6	1.8
13.3	13.4	14.3	15.0	15.0	15.3	15.4	15.6	Vehicle Sales, millions of units ³	14.5	14.9	13.8	15.2	15.9
3.6	3.6	3.7	3.8	4.0	4.2	4.3	4.4	Unemployment Rate, % ⁴	8.1	5.4	3.7	4.1	4.4
4.4	4.0	3.3	2.4	1.7	1.0	0.5	0.3	Non-Farm Employment ⁵	-5.8	2.8	4.1	1.4	0.4
-2.3	0.9	1.6	4.5	1.9	4.0	4.4	5.8	Real Disposable Personal Income ¹	6.2	1.9	-6.5	2.5	4.5
7.6	7.1	6.4	5.3	3.9	3.5	3.1	2.6	GDP Price Deflator⁵	1.3	4.5	7.0	3.9	2.3
6.6	6.3	5.7	4.9	3.8	3.4	3.1	2.5	PCE Deflator⁵	1.1	4.0	6.3	3.8	2.2
8.6	8.3	7.3	6.0	4.4	3.7	3.3	2.8	Consumer Price Index⁵	1.2	4.7	8.0	4.3	2.4
5.0	4.9	4.8	4.4	3.9	3.5	3.0	2.5	Core PCE Deflator⁵	1.3	3.5	5.0	3.7	2.3
6.0	6.3	6.1	5.5	4.6	3.7	3.2	2.8	Core Consumer Price Index⁵	1.7	3.6	6.2	4.2	2.5
0.81	2.24	3.71	4.54	4.63	4.63	4.63	4.42	Fed Funds Target Rate Range Mid-Point, %4	0.42	0.13	1.73	4.60	3.40
2.93	3.11	3.83	3.70	3.63	3.56	3.44	3.36	10-Year Treasury Note Yield, %4	0.89	1.44	2.95	3.58	3.36
5.27	5.62	6.69	6.41	6.24	6.07	5.84	5.65	30-Year Fixed Mortgage, % ⁴	3.12	2.96	5.35	6.14	5.51
-4.0	-3.3	-3.5	-3.7	-3.6	-3.6	-3.5	-3.4	Current Account, % of GDP	-2.9	-3.6	-3.7	-3.6	-3.4

a = actual; f = forecast; p = preliminary

Notes: 1 - annualized percentage change 2 - chained 2012 \$ billions 3 - annualized rate 4 - quarterly average 5 - year-over-year percentage change