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US Economics Analyst

The Housing Shortage: Prices, Rents, and Deregulation (Walker)

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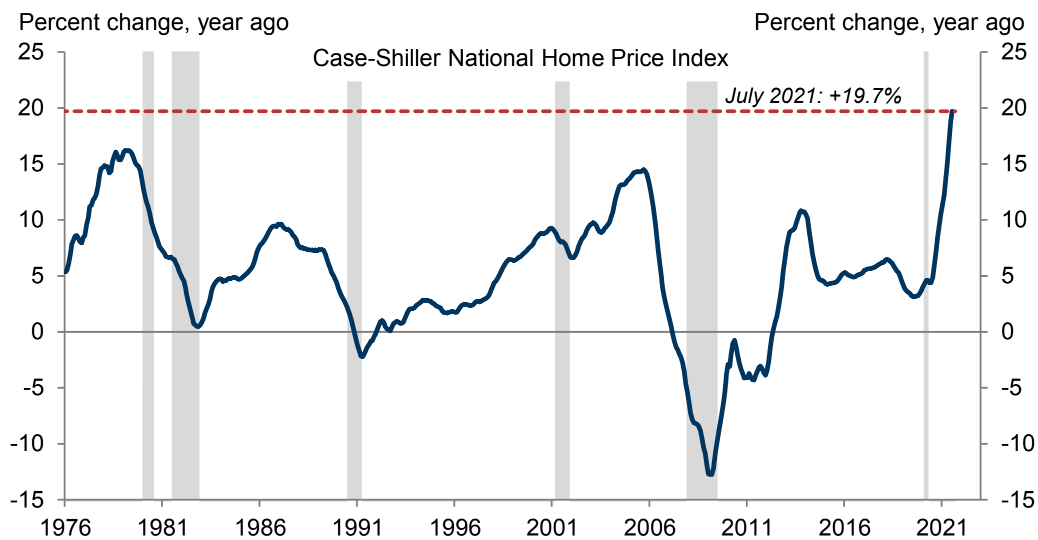
- Of all the shortages afflicting the US economy, the housing shortage might last the longest. Earlier this year, we argued that constrained supply and sustainably robust demand would keep the US housing market very tight, pushing up home prices and rents sharply. The boom since then has surpassed even our lofty expectations, with home prices now up 20% over the last year. This week, we take stock of where home prices will go from here, how high rent inflation will rise, and whether new deregulatory efforts can alleviate the housing shortage.
- The supply-demand picture that has been the basis for our call for a multi-year boom in home prices remains intact. Housing inventories remain historically tight, while homes remain relatively affordable despite the recent price increases, and surveys of home buying intentions remain at healthy levels. Our model now projects that home prices will grow a further 16% by the end of 2022.
- Does the sharp rise in home prices suggest an even faster acceleration in shelter inflation than our aggressive standing forecast of 4.5% at end-2022? The risks do now look more two-sided, especially with our shelter inflation tracker—a leading indicator based on several alternative rent measures—having jumped from 2.1% to 4.6% in just 6 months. But we caution that the most extreme increases reported in some alternative rent measures provide a misleading signal about the official data because they focus on units that turn over, where base effects from depressed rents in 2020 are stronger and government rent restrictions are weaker.
- Is there a solution to the national housing shortage? Economic research shows that relaxing the zoning rules and other regulatory constraints that have impeded homebuilding for decades would boost supply and lower prices and rents. But in practice, this has been difficult politically.
- Some state and local governments are pushing to substantially reduce regulatory constraints. Most notably, California recently abolished single-family zoning statewide. The White House hopes to use housing funding to incentivize others to follow suit, but much of the proposed $400bn in housing-related grants and tax subsidies is likely to be cut from the reconciliation bill. As a result, nationwide changes seem unlikely for now, and limited state and local changes are only a partial step toward relieving the housing shortage.

The Housing Shortage: Prices, Rents, and Deregulation

Of all the shortages afflicting the US economy, the housing shortage might last the longest. Earlier this year, we argued that constrained supply and sustainably robust demand would keep the US housing market very tight, pushing up home prices and rents sharply. The boom since then has surpassed even our lofty expectations, with home prices now up 20% over the last year (Exhibit 1). This week, we take stock of where home prices will go from here, how high rent inflation will rise, and whether new deregulatory efforts can alleviate the housing shortage.

Exhibit 1: Home Prices Have Jumped 20% Over the Last Year



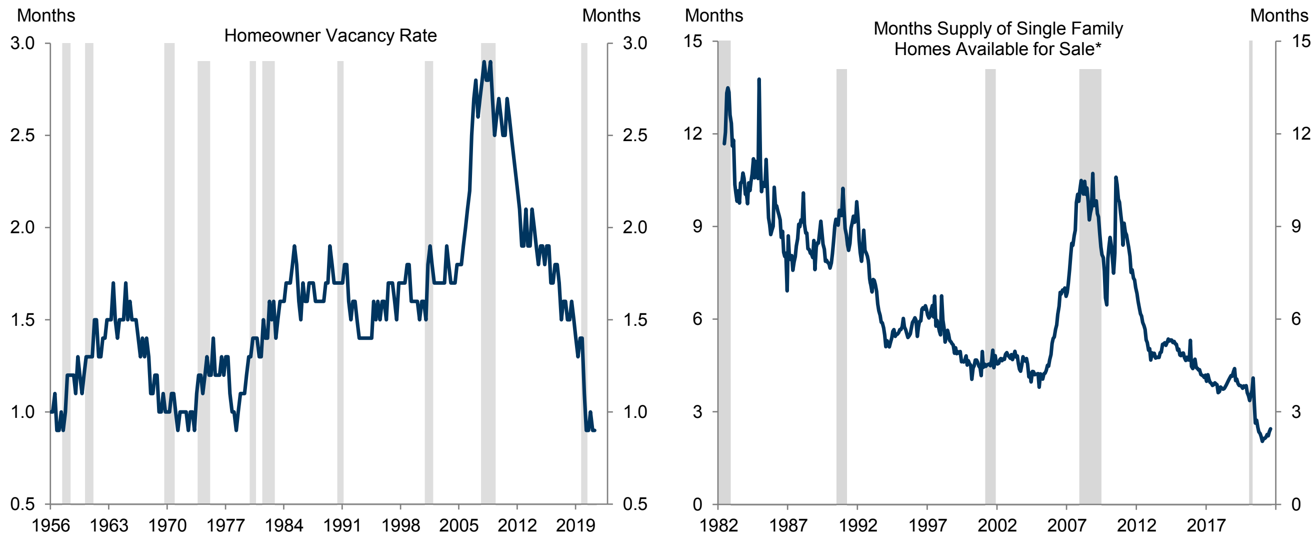
Source: Standard and Poor's, Goldman Sachs Global Investment Research

Home Prices: A Higher Peak, But a Shorter Boom

The supply-demand imbalance that has been the basis for our call for a multi-year boom in home prices remains intact.

While the supply of homes for sale has increased modestly since the spring, it remains well below pre-pandemic levels (Exhibit 2) and the outlook offers no quick fixes for the shortage. Homebuilders continue to face headwinds that were present before the pandemic — especially a lack of construction workers and a lack of available plots to build on — and the pandemic has exacerbated those problems with further delays from supply chain disruptions, lumber shortages, and now economy-wide labor shortages. These headwinds are likely to limit the pace of annual homebuilding to around 1.65mn in coming years. Subtracting roughly 250k demolitions per year implies a trend net increase in supply of 1.4mn housing units per year.

Exhibit 2: Booming Demand Has Reduced the Supply of Homes to the Lowest Level Since the 1970s



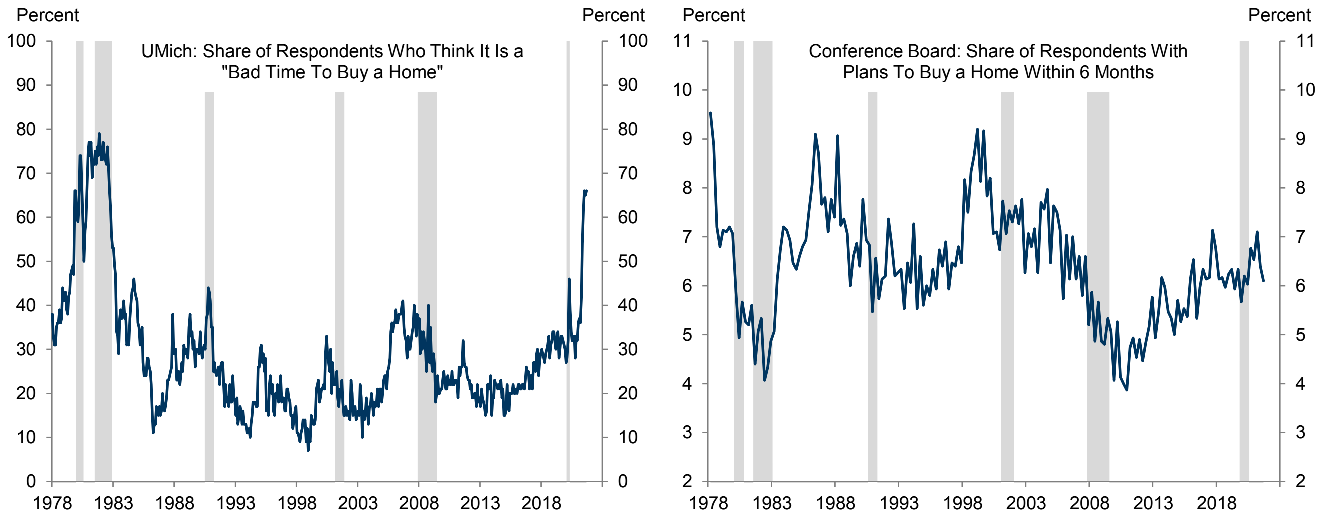
* Includes both new and existing homes. Series seasonally adjusted by GS.
Note: Shading indicates NBER defined recession shading.

Source: Department of Commerce, National Association of Realtors (NAR), Goldman Sachs Global Investment Research

How does that compare to demand? Demographic tailwinds are likely enough to prevent the supply of homes from normalizing quickly in the near-term. We estimate that demographic changes –most importantly, millennials moving into the age range where household formation and home buying tend to peak – have boosted the trend rate of household formation to roughly 1.3mn per year.

There has been some concern around the sustainability of homebuyer demand, as potential homebuyers seem to have taken note of the sharp rise in home prices: 66% of respondents to the University of Michigan consumer survey now think today is a bad time to buy a home, the highest share in nearly four decades (Exhibit 3, left). However, we are not that concerned about weakening sentiment because homebuyers remain, as our credit strategists noted, "reluctant bulls" who still intend to buy despite thinking it's a bad time (Exhibit 3, right). Additionally, while the huge increase in home prices over the last year has reduced housing affordability, housing in the US remains affordable relative to historical standards because rates are still low and household incomes have remained largely intact.

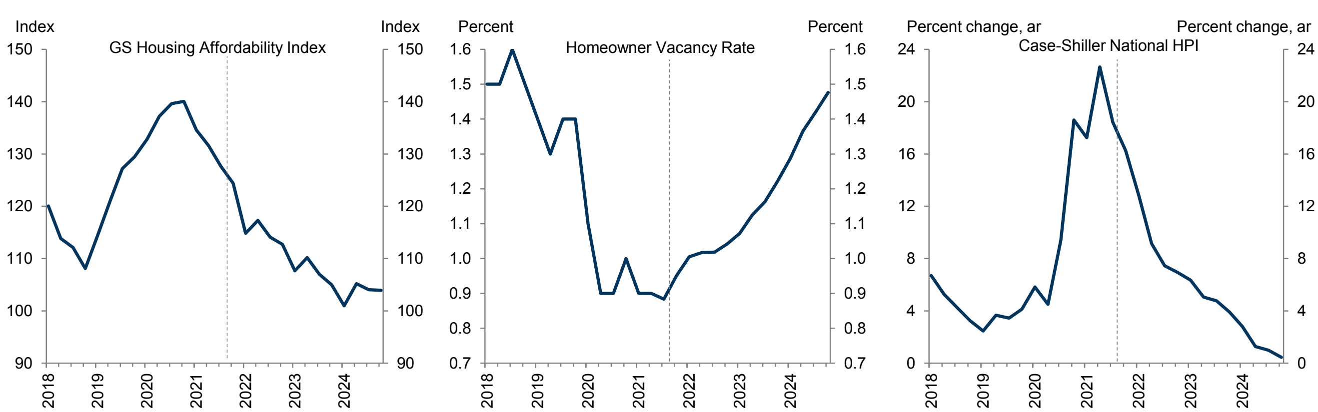
Exhibit 3: Consumers Say It's a Bad Time to Buy a Home, But This Has Had Only a Modest Impact on Intentions to Buy



Source: University of Michigan, The Conference Board, Goldman Sachs Global Investment Research

To see what this means for home prices, we update our housing model that jointly considers supply, demand, affordability, and home prices. In the model, we assume that mortgage rates, income, and homebuilding evolve in line with our baseline economic forecast, and allow home prices and demand to evolve simultaneously. The exercise suggests that today's robust demand for a limited supply of homes will only gradually reduce affordability (Exhibit 4, left). That in turn reduces demand, which slowly boosts the supply of available housing as the rate of housing completions remains steady and new listings of existing homes recover to the pre-pandemic trend (Exhibit 4, middle). That dynamic eventually mitigates the supply-demand imbalance and reduces price pressures, but not before—the model projects—home prices grow a further 16% by the end of 2022 (Exhibit 4, right).

Exhibit 4: Higher Prices Will Only Gradually Reduce Affordability Enough to Dampen Demand and Reduce the Supply-Demand Imbalance in the Housing Market



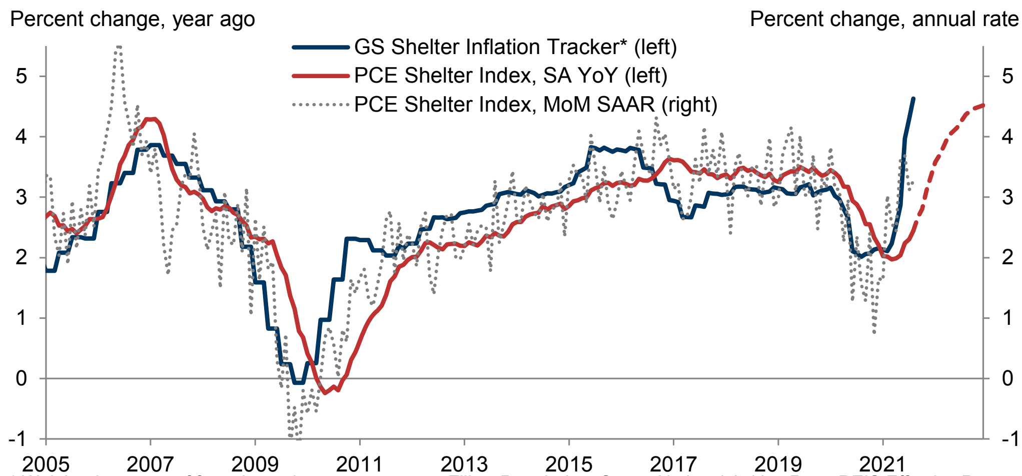
Source: Goldman Sachs Global Investment Research

How High Will Rent Inflation Rise?

Does the sharp rise in home prices suggest an even faster acceleration in shelter inflation than our aggressive standing forecast for PCE shelter inflation to rise from

2.4% year-over-year today to a 20-year high of 4.5% by the end of next year? The risks do now look more two-sided, especially with our shelter inflation tracker—a leading indicator based on several alternative rent measures—having jumped from 2.1% to 4.6% in just 6 months (Exhibit 5).

Exhibit 5: Rapid Home Price Appreciation Will Support Strong Shelter Inflation



* Weighted average of four alternative rent measures: Zillow Rent Index; Costar National Asking Rent; REIS Effective Rent per Apartment; Census Vacant Multifamily Median Rent.
Note: Dashed lines denote GS forecast.

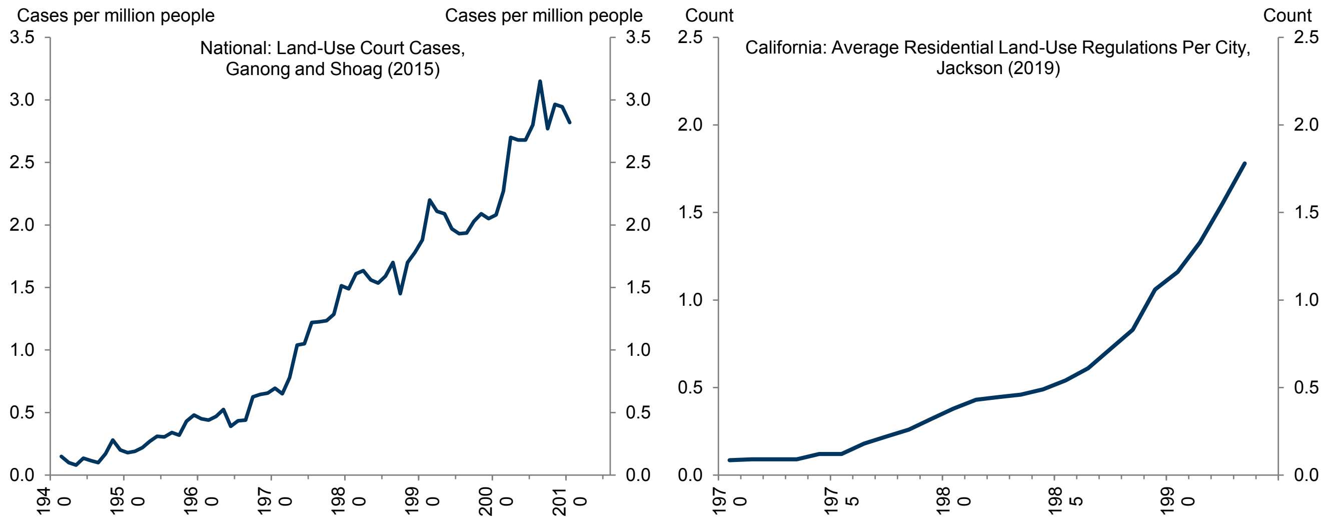
Source: Department of Commerce, Goldman Sachs Global Investment Research

Some investors expect a much faster pace of acceleration, pointing to double-digit increases in some alternative rent measures over the last year. However, we caution that some of these measures, such as Zillow's observed rent index, could provide a misleading signal about the official rent and owners' equivalent rent data because they are less smoothed and focus on units on the market that are turning over, whereas the official measure includes continuing leases. With less than 5% of rentals typically turning over in a given month, even sharp changes in asking rents only fractionally show up in the official measure. Measures based on asking rents weakened substantially during the start of the pandemic, especially in large cities, and now those measures are being compared to the depressed rents of 2020, resulting in an extreme base effect that overstates the sequential pace of rent increases. Additionally, several states and cities enacted rent freezes during the pandemic, and many areas regulate the rate of annual rent increase of at least some units. Those restrictions typically apply to only renewals, which are included in the official measure but not in measures of asking rents.

Is There a Solution to the National Housing Shortage?

A large body of economic research shows that one way to boost housing supply is to reduce the regulatory burden on homebuilders. In particular, academic studies show that the rise in land-use restrictions over the last 60 years (Exhibit 6) has constrained the supply of housing and increased both home prices and rents.

Exhibit 6: Land-Use Restrictions Have Increased Substantially Over Time



Source: Ganong and Shoag (2015), Jackson (2019)

While researchers measure the restrictiveness and impact of land-use regulations in many different ways due to the lack of a comprehensive nationwide database of regulations, even the lower end of the range of estimates implies that rolling back regulations like minimum lot sizes and building height limits can substantially increase the supply of housing (Exhibit 7).

Exhibit 7: Land-Use Restrictions Weigh on Housing Development and Increase the Cost of Housing

Effect of Land-Use Restrictions on Housing Market			
Study	**Regulatory Metric**	**Impact on Supply**	**Impact on Prices**
Jackson (2019)	One additional regulation…	reduces residential permits by 4%	-
Quigley and Raphael (2005)	One additional regulation…	-	increases home prices by 4.5% and rental prices by 2.3%.
Mayer and Somerville (2000)	Cities with high regulation vs. those with low regulation…	reduce housing starts by 45%	-
Schuetz (2009)	A 1% decline in multifamily zoned lots…	reduces multifamily permits by 0.5-0.7%	-
Ganong and Shoag (2015)	High-regulation regimes vs. low-regulation regimes…	weigh on permitting rates by 0.5%	double home price growth
Katz and Rosen (1987)	Cities with housing growth management programs vs. those without…	-	increase prices by 17-38%
Freemark (2019)	Neighborhoods that did not see deregulation vs. those that did had…	no detectable difference in supply	relatively lower prices
Glaeser and Ward (2009)	A one acre increase in minimum lot size…	reduces new permits by 40%.	-
Malpezzi (1996)	A change from a lightly regulated environment to a heavily regulated one…	decreases new permits by 42%	increases home values by 51% and rents by 17%
Glaeser, Gyourko, and Saks (2005)	A high-regulatory environment vs. a counterfactual with no regulations…	-	doubles the price of apartments

Source: Goldman Sachs Global Investment Research

Outside of the housing market, several studies show that land-use restrictions impact broader economic outcomes too. Ganong and Shoag (2015) show that high home prices — including those that are the result of land-use regulations — act as a barrier to labor market entry for lower-paid workers who would otherwise migrate to high-income places. That drag on labor mobility reduces productivity growth because it restrains the supply of workers for high-productivity cities. Hsieh and Moretti (2019) show that the accumulation of those productivity losses have substantially weighed on output, estimating that if land-use restrictions in New York, San Jose, and San Francisco had remained at the level of the median US city, national GDP would have been almost 4%

higher in 2009.

While economic research shows clear benefits from reducing the most restrictive land-use regulations, reducing them has been politically difficult in practice. But recently, some state and local governments have pushed to substantially reduce regulatory constraints (Exhibit 8). Most notably, California passed legislation last month that will effectively eliminate single-family zoning for most of the state, becoming only the second state to do so after Oregon. In addition to allowing some lots that were previously only zoned for a single-family home to split into two, the new legislation allows duplexes to be built on most single-family parcels. While take-up of the new policy is uncertain, it has the potential to grow the roughly 60 thousand new single-family homes that are permitted each year into thousands of additional units. And even if a small fraction of California's existing 7½ million single family homes were to make use of the policy — for 5.4% of which the Terner Center for Housing Innovation at UC Berkeley estimates it makes financial sense — the boost to housing supply could be substantial over the medium-term.[1]

Exhibit 8: Some State and Local Governments Have Recently Made Major Efforts to Reduce Land-Use Regulation and Increase Housing Supply

Recent Land Use Deregulation	
Locale	**Details**
California	Will allow most single-family parcels to split their lots in two and build duplexes on each lot, effectively allowing up to 4 units to be built on existing single-family parcels. Will allow cities to bypass the typical state-level environmental review process before upzoning areas for up to 10 units.
Oregon	Now allows duplexes to be built on most parcels that were previously reserved for single-family homes. Will allow 2-4 family unit homes to be built on single-family parcels in cities with populations over 25k in 2022.
Berkeley, CA	Will allow 2-4 family unit homes to be built on single-family parcels.
Cambridge, MA	Allows affordable housing developments to be built with greater height and density than standing regulations allow.
Minneapolis, MN	Allows 2-3 family unit homes to be built on previously single-family parcels.
Sacramento, CA	Will allow 2-4 family unit homes to be built on single-family parcels.

Source: Goldman Sachs Global Investment Research

As part of a broader effort to increase the supply and affordability of housing, the White House hopes to use funding for local governments to incentivize others to follow suit (Exhibit 9). The latest proposal would create an incentive program that awards flexible funding to local governments that take steps to reduce barriers to affordable housing production, such as by removing exclusionary zoning laws like minimum lot size requirements or restrictions on multi-family homes. However, much of the latest proposal's $400bn in housing-related grants and tax subsidies — which also include the expansion of the Low Income Housing Tax Credit and the creation of a new tax credit for homebuilders that develop and renovate 1-4 unit housing — appear likely to be dropped from the reconciliation bill as Democratic leaders try to scale back the overall size of the bill. As a result, nationwide changes seem unlikely for now, and limited state and local changes are only a partial step toward relieving the housing shortage.

1 Ben Metcalf, David Garcia, Ian Carlton, and Kate Macfarlane, "Will Allowing Duplexes and Lot Splits on Parcels Zoned for Single-Family Create New Homes?" 2021.

Exhibit 9: The White House Has Already Taken Some Steps to Boost Housing Supply, But More Expansive Legislation Appears Unlikely to Survive the Reconciliation Process

White House Housing Initiatives
Enacted
Expanded financing of manufactured and split-family homes for families through Fannie Mae and Freddie Mac.
Increased Fannie Mae and Freddie Mac's equity caps for the Low Income Housing Tax Credit by $700mn.
Increased funding for Community Development Finance Institutions and housing non-profits by making $383 million in the Capital Magnet Fund available.
Extended the period that offers for homes on GSE balance sheets are limited to owner-occupants and non-profits.
Volunteered to help local governments deregulate ***with no*** financial incentive.
Proposed Legislation
Expand the Low Income Housing Tax Credit and target some portion of additional allocations to areas that are particularly supply constrained.
Use federal subsidies to support the financing, building, and maintenance of affordable rentals via the HOME Investment Partnership program, Housing Trust Fund, and Capital Magnet Fund.
Create a new tax credit that targets the development and renovation of 1-4 family housing for low- and middle-income families.
Volunteer to help cities deregulate ***with*** financial incentives.

Source: Goldman Sachs Global Investment Research

Ronnie Walker

The US Economic and Financial Outlook

THE US ECONOMIC AND FINANCIAL OUTLOOK
(% change on previous period, annualized, except where noted)

	2019	2020	2021 (f)	2022 (f)	2023 (f)	2024 (f)	2021 Q1	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3	2022 Q4
OUTPUT AND SPENDING														
Real GDP	2.3	-3.4	5.6	4.0	2.1	2.2	6.3	6.7	3.3	4.5	4.5	4.0	3.0	1.8
Real GDP (annual=Q4/Q4, quarterly=yoy)	2.6	-2.3	5.2	3.3	1.9	2.2	0.5	12.2	5.2	5.2	4.7	4.1	4.0	3.3
Consumer Expenditures	2.2	-3.8	7.7	3.2	2.1	2.2	11.4	12.0	0.1	3.5	3.5	3.0	2.0	2.0
Residential Fixed Investment	-0.9	6.8	10.7	2.7	2.6	2.0	13.3	-11.7	0.9	6.0	4.0	4.0	3.0	3.0
Business Fixed Investment	4.3	-5.3	8.1	5.5	3.6	3.8	12.9	9.2	5.6	6.4	6.1	4.4	4.0	3.4
Structures	2.1	-12.5	-6.5	1.9	2.0	2.6	5.4	-3.0	4.0	2.0	2.0	2.0	2.0	2.0
Equipment	3.3	-8.3	14.0	5.9	2.8	2.8	14.1	12.2	2.2	7.0	8.0	5.0	4.0	2.5
Intellectual Property Products	7.2	2.8	10.1	6.9	5.0	5.2	15.6	12.5	10.0	8.0	6.0	5.0	5.0	5.0
Federal Government	3.8	5.0	1.4	-1.3	-0.8	-0.1	11.3	-5.3	-1.0	-1.0	-1.0	-1.0	-1.0	-1.0
State & Local Government	1.3	0.9	0.7	2.7	1.6	1.0	-0.1	0.2	5.4	2.5	2.5	2.5	2.5	2.5
Net Exports ($bn, '12)	-905	-943	-1,260	-1,344	-1,314	-1,281	-1226	-1245	-1274	-1298	-1317	-1345	-1355	-1360
Inventory Investment ($bn, '12)	75	-42	-68	150	105	60	-88	-169	-39	25	80	150	190	180
Industrial Production, Mfg.	-2.0	-6.6	6.1	4.4	2.2	1.8	2.8	4.5	3.9	4.4	5.2	5.0	3.7	2.4
HOUSING MARKET														
Housing Starts (units, thous)	1,292	1,397	1,624	1,676	--	--	1,599	1,588	1,662	1,645	1,653	1,682	1,686	1,685
New Home Sales (units, thous)	683	828	860	918	977	978	896	738	876	928	913	901	908	951
Existing Home Sales (units, thous)	5,327	5,658	5,972	5,964	6,086	6,210	6,303	5,833	5,862	5,891	5,920	5,949	5,979	6,009
Case-Shiller Home Prices (%yoy)*	3.4	9.9	9.4	7.6	6.2	--	11.7	15.2	11.7	9.4	8.1	6.1	7.8	7.6
INFLATION (% ch, yr/yr)														
Consumer Price Index (CPI)**	2.3	1.3	5.4	2.3	2.4	2.4	1.9	4.8	5.3	5.4	5.0	3.6	2.5	2.3
Core CPI **	2.2	1.6	4.7	2.5	2.5	2.5	1.4	3.7	4.1	4.5	4.8	3.4	2.7	2.5
Core PCE** †	1.6	1.5	4.25	2.00	2.15	2.20	1.7	3.4	3.7	4.2	4.1	3.0	2.4	2.1
LABOR MARKET														
Unemployment Rate (%)^	3.6	6.7	4.2	3.5	3.3	3.2	6.0	5.9	4.8	4.2	3.8	3.7	3.6	3.5
U6 Underemployment Rate (%)^	6.8	11.7	7.6	6.8	6.4	6.2	10.7	9.7	8.5	7.6	7.2	6.9	6.8	6.8
Payrolls (thous, monthly rate)	168	-785	588	219	123	100	518	615	550	667	317	223	173	162
Employment-Population Ratio (%)^	61.0	57.4	59.4	60.1	60.1	60.1	57.8	58.1	58.9	59.7	59.7	59.9	60.0	60.1
Labor Force Participation Rate (%)^	63.3	61.5	62.0	62.3	62.2	62.1	61.5	61.6	61.6	62.0	62.1	62.2	62.2	62.3
GOVERNMENT FINANCE														
Federal Budget (FY, $bn)	-984	-3,132	-3,000	-1,300	-1,100	-1,200	--	--	--	--	--	--	--	--
FINANCIAL INDICATORS														
FF Target Range (Bottom-Top, %)^	1.5-1.75	0-0.25	0-0.25	0-0.25	0.25-0.5	0.75-1	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25	0-0.25
10-Year Treasury Note^	1.92	0.93	1.60	1.80	2.30	2.45	1.74	1.45	1.52	1.60	1.60	1.60	1.60	1.80
Euro (€/$)^	1.12	1.22	1.20	1.25	1.30	1.30	1.17	1.18	1.16	1.20	1.23	1.24	1.25	1.25
Yen ($/¥)^	109	103	110	105	102	100	111	111	112	110	108	107	106	105

* Weighted average of metro-level HPIs for 381 metro cities where the weights are dollar values of housing stock reported in the American Community Survey. Annual numbers are Q4/Q4.
** Annual inflation numbers are December year-on-year values. Quarterly values are Q4/Q4.
† PCE = Personal consumption expenditures. ^ Denotes end of period.
Note: Published figures in bold.

Source: Goldman Sachs Global Investment Research

Economic Releases

Date		Time (ET)	Indicator	Estimate GS	Estimate Consensus	Last Report
Tue	**Oct 12**	6:00	NFIB Small Business Optimism (September)	n.a.	99.5	100.1
		10:00	JOLTS Job Openings (August)	n.a.	10,938k	10,934k
Wed	**Oct 13**	**8:30**	**CPI (September)**	**+0.43%**	**+0.3%**	**+0.3%**
			Core CPI (September)	**+0.32%**	**+0.2%**	**+0.1%**
Thu	**Oct 14**	**8:30**	**Initial Jobless Claims**	**315k**	**320k**	**326k**
			Continuing Claims	n.a.	2,686k	2,714k
		8:30	**PPI**	**+0.6%**	**+0.6%**	**+0.7%**
			PPI Ex-Food and Energy (September)	**+0.5%**	**+0.5%**	**+0.6%**
			PPI Ex-Food, Energy, and Trade (September)	**+0.4%**	**+0.4%**	**+0.3%**
Fri	**Oct 15**	**8:30**	**Retail Sales (September)**	**-0.8%**	**-0.2%**	**+0.7%**
			Retail Sales Ex-Auto (September)	**-0.3%**	**+0.5%**	**+1.8%**
			Retail Sales Ex-Auto & Gas (September)	**-0.5%**	**+0.3%**	**+2.0%**
			Retail Sales Control Group (September)	**-0.3%**	**+0.4%**	**+2.5%**
		8:30	Import Price Index (September)	n.a.	+0.5%	-0.3%
		10:00	**UMich Consumer Sentiment (October Preliminary)**	**74.0**	**73.5**	**72.8**

Source: Goldman Sachs Global Investment Research

Disclosure Appendix

Reg AC

We, Jan Hatzius, Alec Phillips, David Mericle, Spencer Hill, CFA, Joseph Briggs and Ronnie Walker, hereby certify that all of the views expressed in this report accurately reflect our personal views, which have not been influenced by considerations of the firm's business or client relationships.

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