MORTGAGE MONITOR

BLACK KNIGHT®

FEBRUARY 2023 REPORT

MORTGAGE MONITOR

CONTENTS

FEBRUARY 2023 OVERVIEW

Each month, the Black Knight Mortgage Monitor looks at a variety of issues related to the mortgage finance and housing industries.

We begin with a review of some of the high-level mortgage performance statistics reported in our most recent First Look report. From there, we dive deeper into key February mortgage performance metrics to get a clearer sense of the current delinquency landscape, including roll and cure rates, and take a closer look at specific investors and products.

This month, we explore recent changes in home prices, affordability and inventory levels across the country. We look at which markets have seen the strongest reaction to the rising interest rate environment. Finally, we consider recent developments in home equity, including which borrowers are withdrawing equity and in what form, as well as how interest rate shifts are driving changes in equity lending.

In producing the Mortgage Monitor, the Black Knight Data & Analytics division aggregates, analyzes and reports on the most recently available data from the company's vast mortgage and housing related data assets. Information is gathered from the McDash and McDash Flash loan-level mortgage performance data sets; Collateral Analytics home price and sales trends data; origination and secondary market metrics from the Optimal Blue division; eMBS agency securities data; and the company's robust public records database covering 99.99% of the U.S. population. For more information on gaining access to Black Knight's data assets, please call 844-474-2537 or email mortgage.monitor@bkfs.com.

FEBRUARY 2023 FIRST LOOK

Black Knight's First Look at February mortgage performance provides a high-level overview compiled the Black Knight McDash loan-level database. Click on the chart to view in high resolution.

FEBRUARY OVERVIEW STATS

7 BPS

DELINQUENCY RATE

February's 2% rise was due to an uptick in early stage delinquencies

Serious delinquencies, those 90 or more days past due, continued to decline

9.4%

FORECLOSURE STARTS

February starts dropped to 29K, breaking a four-month streak of increases

Foreclosure actions began on 5.1% of serious delinquencies in February

6.2%

PREPAYMENT ACTIVITY

Prepayment activity inched up on the month's slight increase in purchases

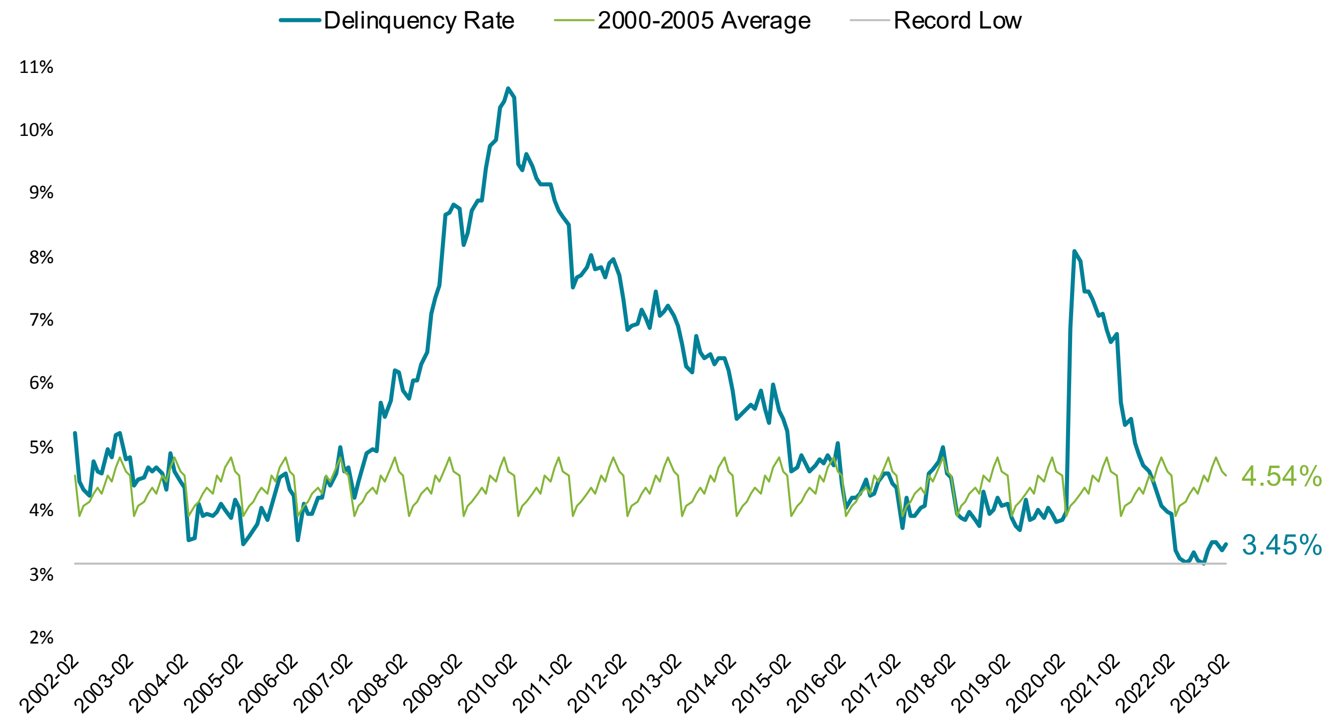
At 0.35%, the current single-month mortality rate remains near record lows

Serious delinquencies continued to improve nationally, falling by 17K, with 45 states seeing volumes shrink in February

FEBRUARY 2023 MORTGAGE PERFORMANCE HIGHLIGHTS

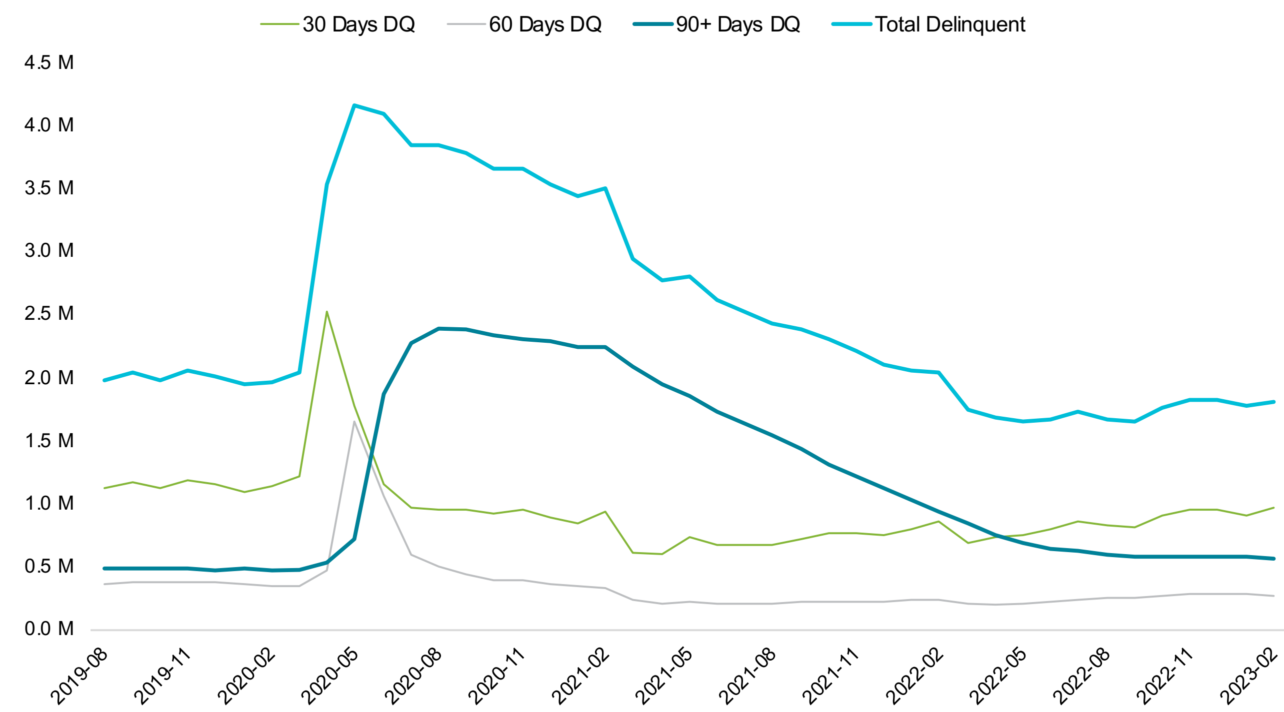
The Black Knight McDash loan-level mortgage performance database provides key performance metrics for a clearer picture of the delinquency landscape, including new inflow and roll rates. Click on each chart to view its contents in high resolution.

NATIONAL DELINQUENCY RATE – FIRST LIEN MORTGAGES



Source: Black Knight, McDash

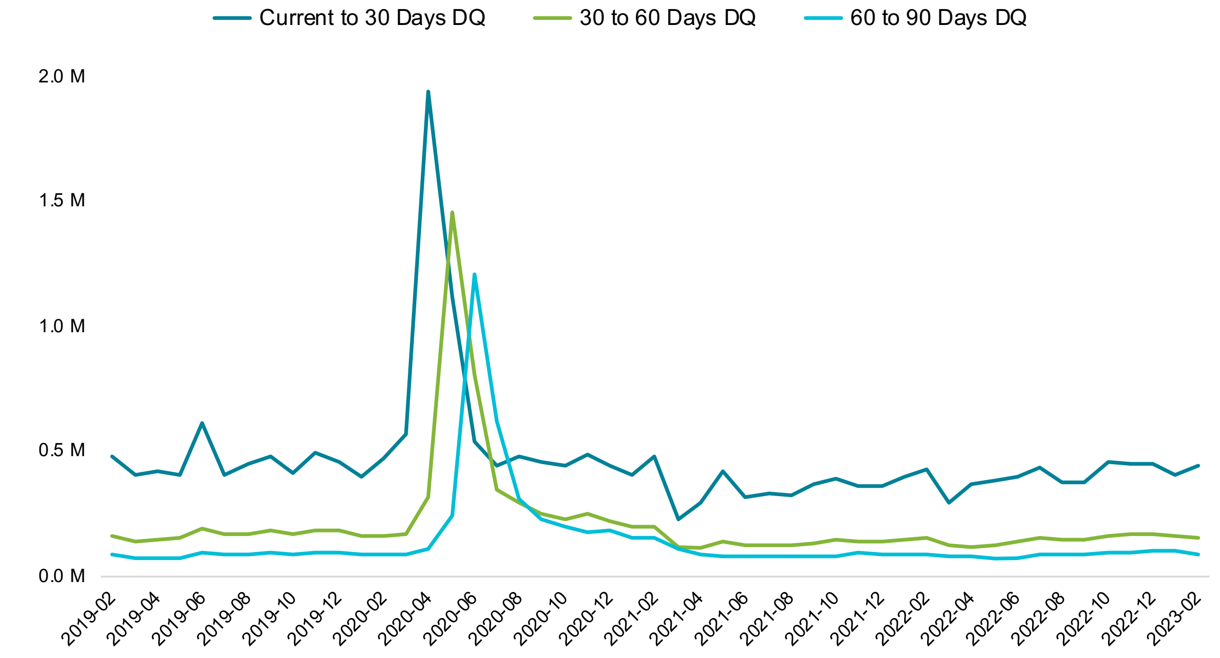
MORTGAGE DELINQUENCIES BY SEVERITY



Source: Black Knight, McDash

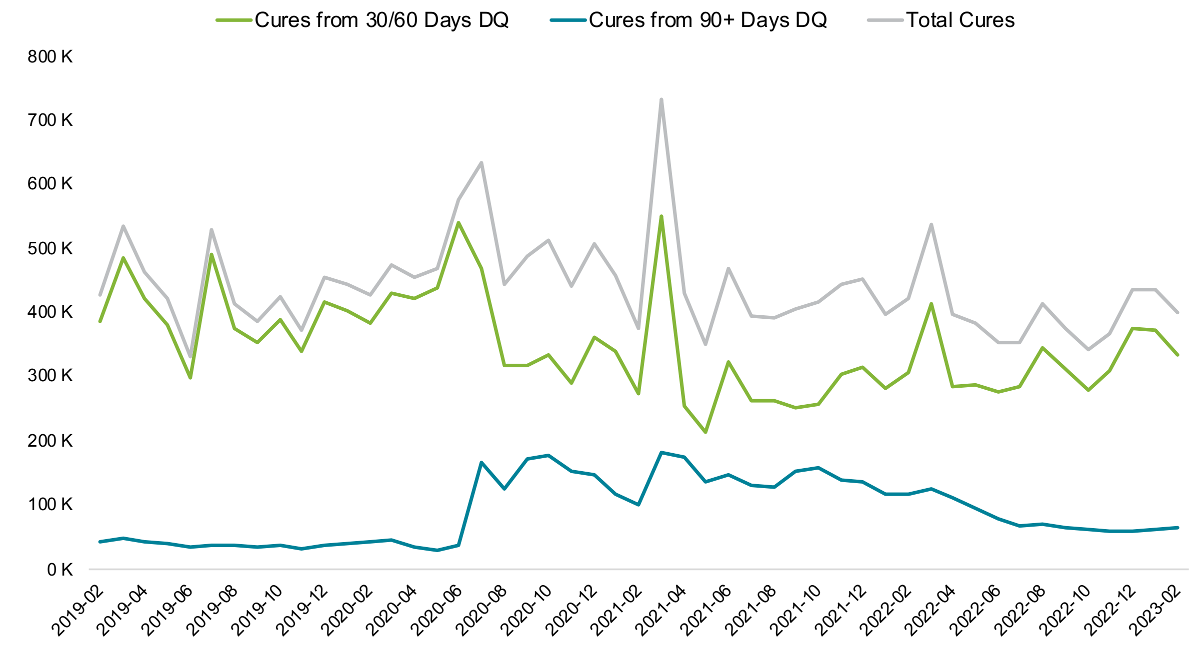
- At 3.45%, the national delinquency rate increased 7 bps in February, but is down 13% year over year
- February's 2% increase in delinquencies was driven by a 7.1% rise in borrowers 30-days past due
- The 65K rise in the number of borrowers who became 30-days past due was partly offset by January's 46K decline, leaving a net increase of 19K over two months
- In contrast, 60-day and 90-day delinquencies both declined (4% and 3%, respectively)
- Despite the improvement in late-stage performance, overall delinquencies worsened in 36 states and the District of Columbia
- Looking ahead, March typically sees the strongest monthly improvement in mortgage delinquency rates, which fall by approximately 10% in the average year
- While borrowers have been known to use tax refunds to catch up on delinquent payments, potentially smaller refunds, as well as new economic pressures, may lessen positive impacts this year

LOANS ROLLING TO A MORE DELINQUENT STATUS



Source: Black Knight, McDash

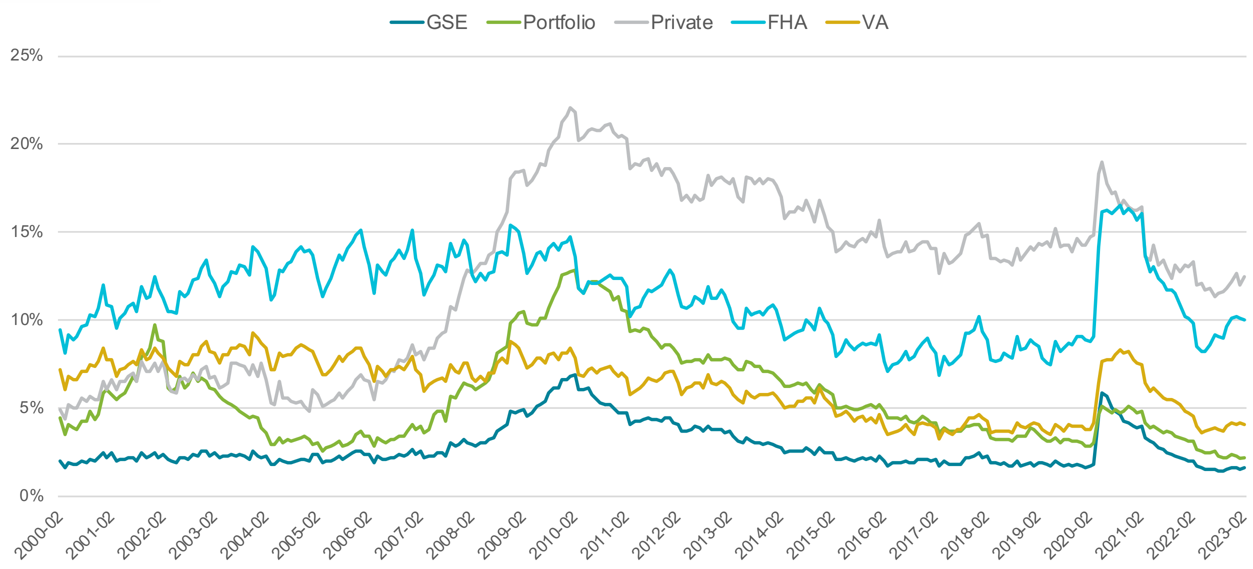
CURES TO CURRENT BY PREVIOUS DQ BUCKET



Source: Black Knight, McDash

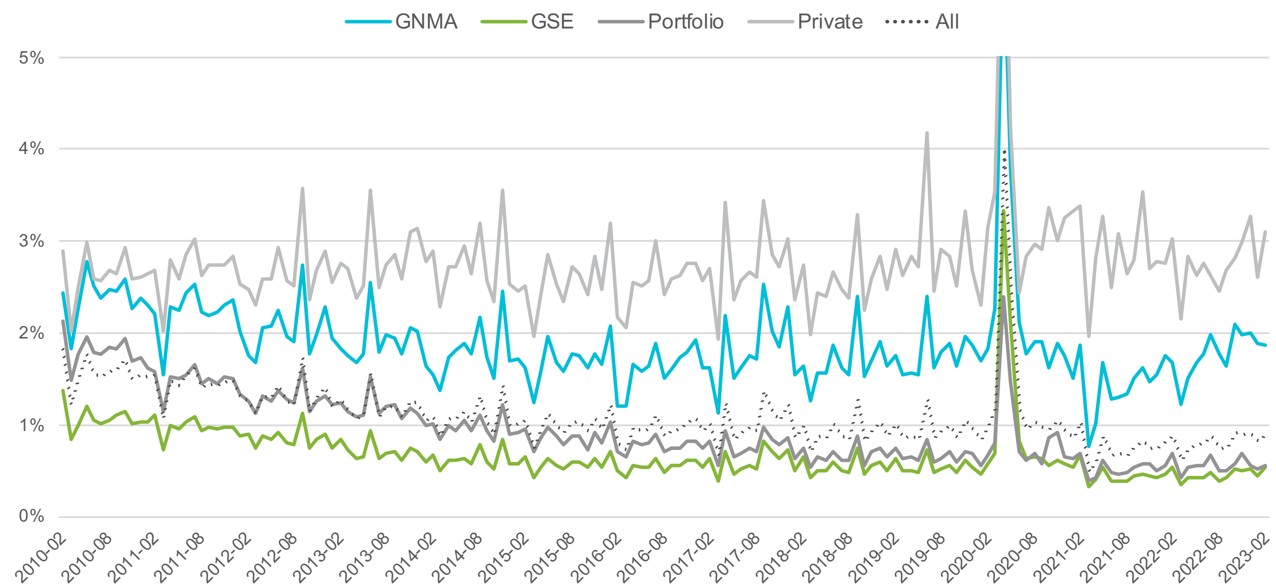
- February new delinquency inflows – those rolling from current to 30-days delinquent – rose 35K from January, but were 31K lower than their 2020 pre-pandemic level
- New 60- and 90-day delinquency inflows both fell, with 30-to-60-day rolls down 14K month to month (down 12K relative to pre-pandemic), and 60-to-90-day rolls down 9K for the month, but still marginally above pre-pandemic levels
- While higher current-to-30-days delinquent inflows were seen, the 35K increase did not fully offset the prior month's nearly 40K decrease, leaving new inflows near the average level for the past five months
- Cures from 90 days late have been stable lately, improving marginally in February, but are down 44% year over year
- Early-stage cures (from 30- and 60-days late to current) fell by 40K (11%) from January but are up 28K (9.3%) year over year, leaving total cures down 8.5% for the month and 5.3% from a year ago
- New delinquency and serious delinquency inflow will be worth watching in coming months given Fed tightening efforts to slow the labor market
- February's 66K cures from serious delinquencies (11.3%) continued to show signs of leveling

DELINQUENCY RATE BY INVESTOR/PRODUCT



Source: Black Knight, McDash

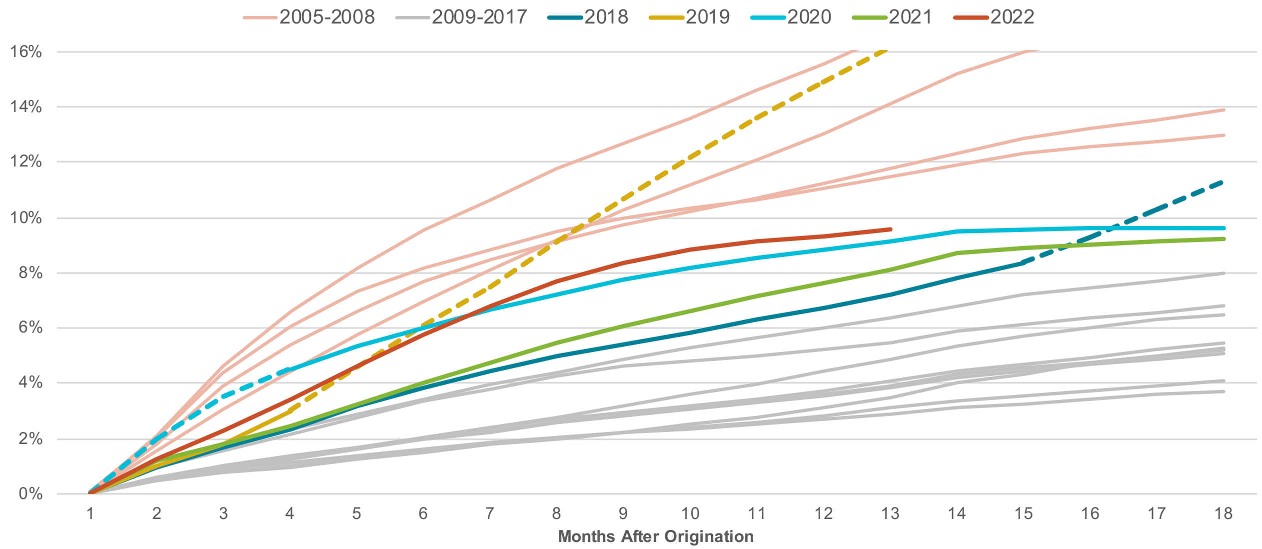
ROLLS TO 30-DAYS LATE BY INVESTOR



Source: Black Knight, McDasH

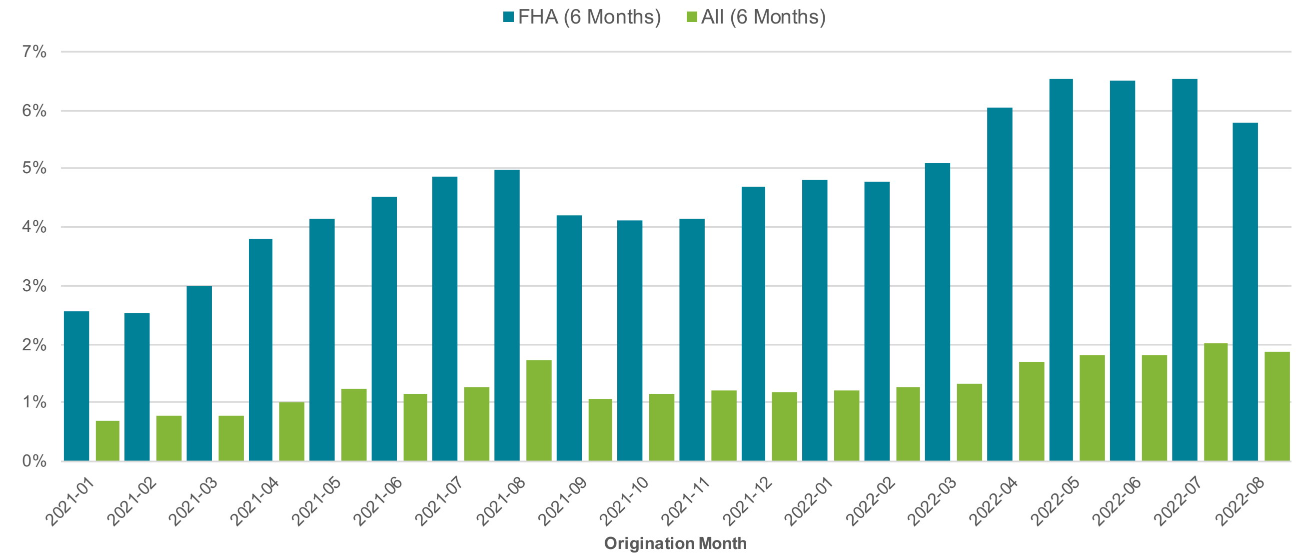
- While portfolio-held and GSE mortgage delinquency rates remain near record lows, FHA and VA loans, along with private labeled securities, have seen delinquency rates rise in recent quarters
- FHA delinquency rates (10.1% for February) have held above 10% for the last four months, marking their first such four month stretch above 10% since 2013
- In contrast, GSE delinquency rates stand at 1.6% – the same level as April 2022 and below the 1.8% rate in February 2020
- Portfolio delinquency rates have improved steadily over the last two years, and private label rates, while high, are lower than pre-pandemic levels
- New delinquency inflows for GSE and portfolio loans remain marginally below pre-pandemic levels, and while private label roll rates are high, they are in line with pre-pandemic levels
- Early-stage delinquency rolls for GNMA loans are up slightly relative to pre-pandemic levels, and while they are down over recent months, the rate is up 11.6% year over year and has been trending up over the last two years

EPD DATE FOR FHA MORTGAGES BY VINTAGE



Source: Black Knight, McDash
Stippled line indicates pandemic impact

SIX-MONTH EPD RATE BY ORIGINATION MONTH



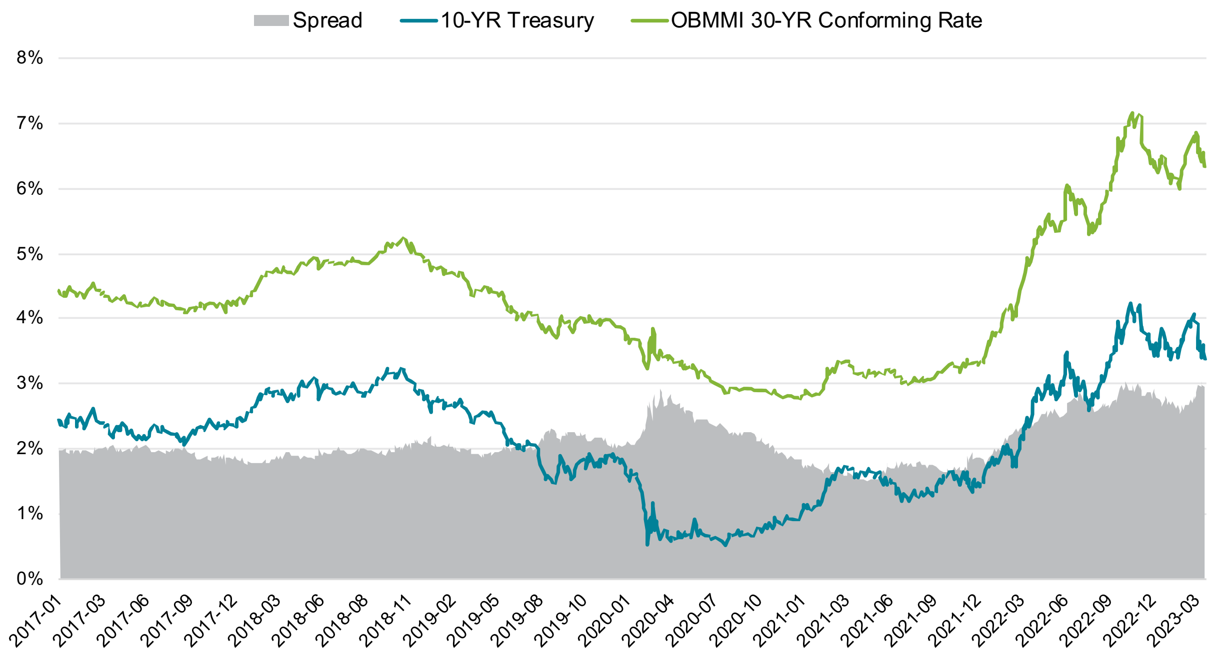
Source: Black Knight, McDasH

- 2022 vintage FHA loans have shown significantly higher early payment default (EPD) rates than 2009 through 2019 vintages, with 2.3% falling delinquent within three months and 9.3% within a year
- While the 2019 vintage showed higher 12-month delinquencies and 2020 showed higher three-month delinquencies, these were directly related to the pandemic, and outside the pandemic impact they exhibited flatter trajectories
- 2021 and 2022 vintage EPD rates remain well below those of 2005-2008 vintages, where delinquencies six months after origination ranged from 7% to 11%
- A deeper look at recent originations shows stress concentrated in loans originated during peak summer buying season of 2022, with a similar but smaller peak for FHA loans the summer of 2021
- This is attributed, at least in part, to those homes being purchased at or near the peak in prices
- Loans overall show a similar – but much less pronounced – pattern, as low inventories, high rates and peak prices caused home buyers to dig deeper financially

FEBRUARY 2023 HOUSING MARKET METRICS

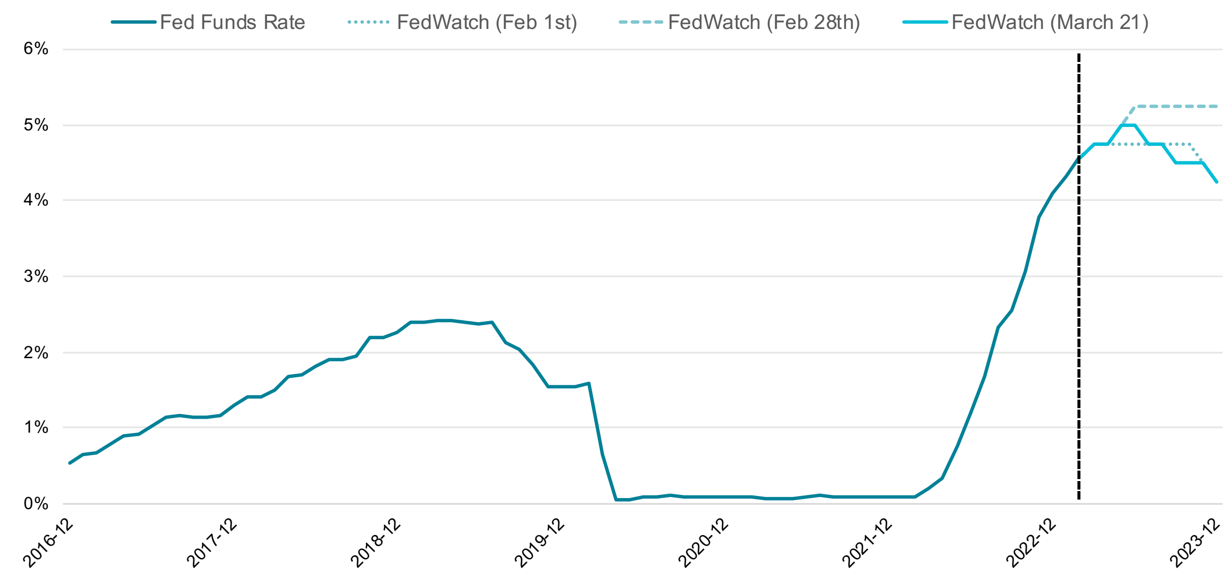
Here we examine recent changes in home prices, affordability and inventory levels across the country, with a closer look at which markets have seen the strongest reaction to the rising rate environment. This information has been compiled from the Black Knight Home Price Index, Collateral Analytics data, the McDash loan-level mortgage performance database and other public and proprietary data sets. Click on each chart to view its contents in high resolution.

30-YEAR MORTGAGE TO 10-YEAR TREASURY SPREAD



Source: Black Knight, Optimal Blue Mortgage Market Index (OBMMI), Federal Reserve Bank of St. Louis (FRED)

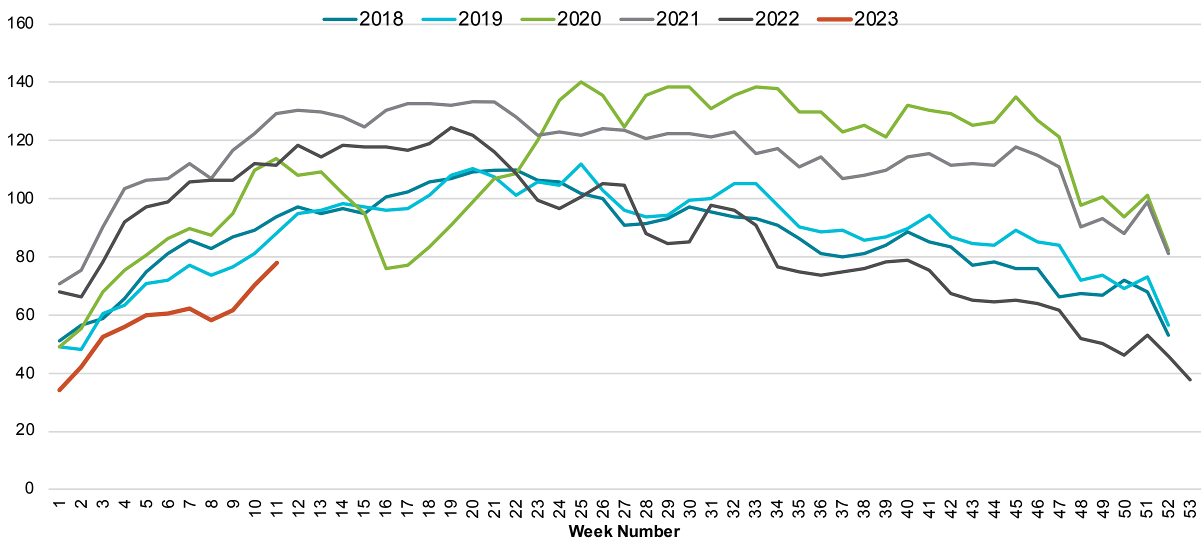
FEDERAL FUNDS RATE OUTLOOK



Source: Black Knight, Federal Reserve Bank of St. Louis (FRED), CME Group FedWatch

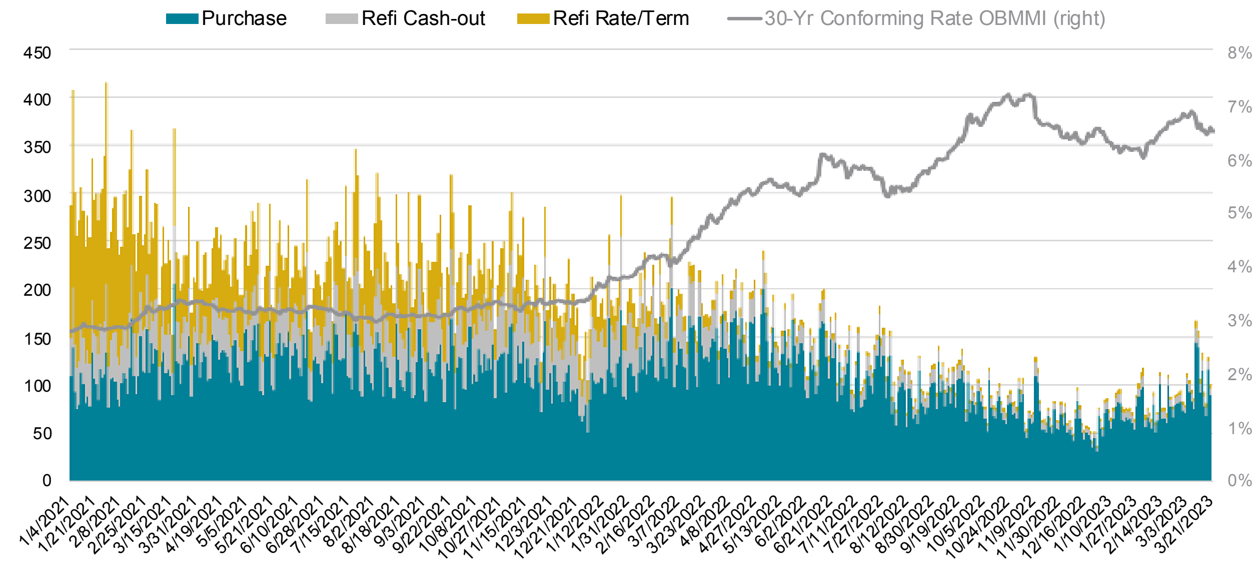
- The 10-year Treasury rate on March 24 fell to one basis point (bps) below the Feb. 1 low, and while the 30-year mortgage rate has slipped lower, the spread widened to 300 bps on March 22
- Since briefly hitting 300 bps in early November, the spread narrowed to as low as 254 bps in early February before widening in March
- The Optimal Blue OBMMI 30-year conforming rate was 6.38% as of March 23, 78 bps down from its Oct. 24 high (7.16%), but remains nearly two percentage points higher than a year ago
- The outlook for the Fed Funds rate changed several times throughout February, starting out low, but shifting upward on strong economic news later in the month
- The banking crisis increased uncertainty around whether, and how much further, the Federal Open Market Committee (FOMC) would raise rates, affecting both the Treasury rate and the spread
- With the Signature Bank and Silicon Valley Bank collapses, the 25 bps Fed Funds increase on March 22, and shifting FOMC forward guidance, market expectations have shifted toward possible rate cuts later this year

PURCHASE RATE LOCK COUNTS BY YEAR AND WEEK



Source: Black Knight, Optimal Blue
Data through week ending 3/18/2023
Total lock count indexed to 100 in week ending 1/13/2018

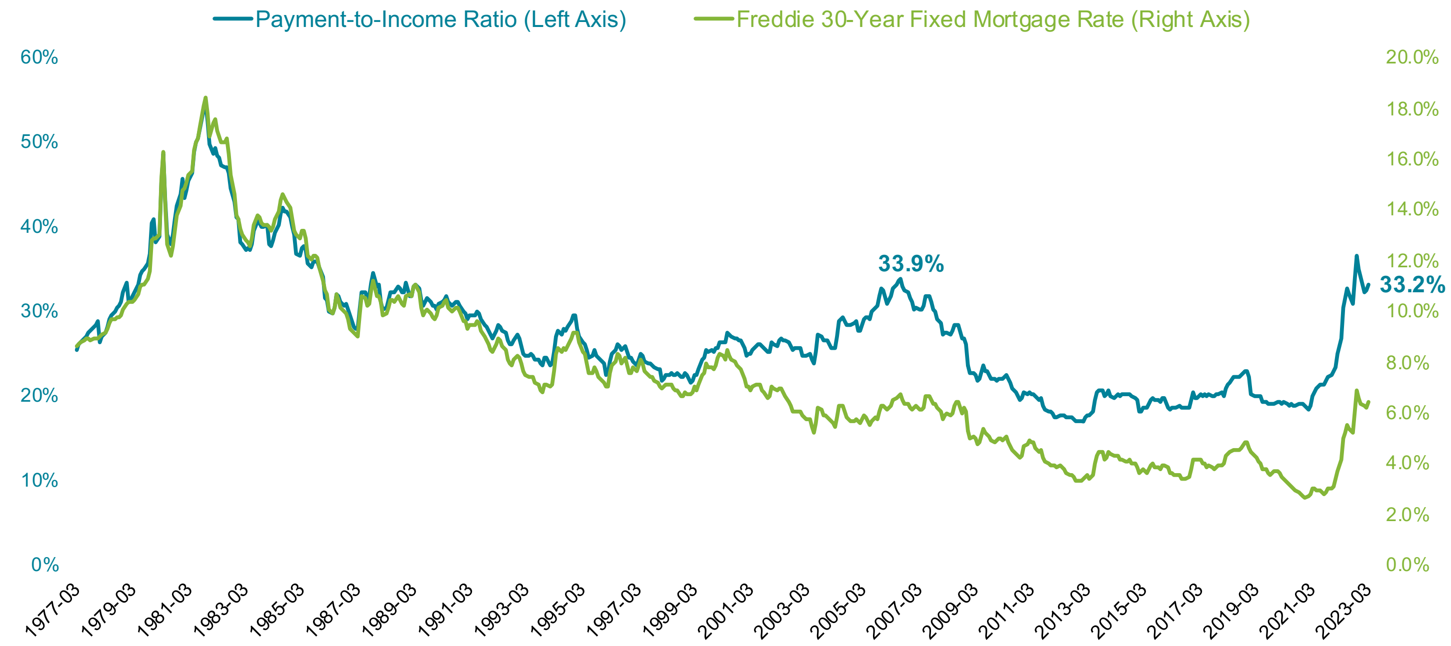
RATE LOCK VOLUME BY PURPOSE



Source: Black Knight, Optimal Blue
Data through 3/21/2023
Total lock volume indexed to 100 on 1/2/2020

- Purchase rate locks rebounded the week ending March 18 as interest rates declined due to banking sector woes
- Purchase lock counts were only 11% below 2019 and 17% below 2018 same-week levels in the week ending March 18
- As Optimal Blue 30-year conforming rates fell to 6.69% on Friday, March 10, and further to 6.54% on Monday, March 13, purchase mortgage rate lock volumes spiked to levels not seen since July 2022
- Refinance volumes remain very low, representing only 12.5% of rate locks with cash-outs making up 7.1% and rate/term refis accounting for 5.4%
- While most rate locks result in closed loans, pull-through rates vary, and a portion of the recent spikes is likely due to borrowers taking advantage of an opportunity to re-lock at lower rates as rates fell

PAYMENT-TO-INCOME RATIO VS. 30-YEAR RATES



Source: Black Knight Home Price Index, FHLMC PMMS, Census Bureau, Moody's Analytics
*The National Payment to Income Ratio is the share of median income needed to make the monthly principal and interest payment on the purchase of the average-priced home using a 20% down 30-year fixed rate mortgage at the prevailing interest rate

Home affordability continues to be a significant challenge despite interest rates edging lower in late March on banking sector concerns

- While Freddie Mac's 30-year PMMS rate of 6.42% is down from 6.73% earlier in the month and may be poised to trend lower in coming weeks, it's still higher than the 6.26% average from February
- That along with a modest rise in home prices has led to slightly worse affordability levels than we were seeing earlier this year
- It currently requires 33.2% of the national median household income to afford the median-priced home, roughly equivalent to the peak of the market in 2006, and well above the long run average of ~25%
- That puts home prices ~25% above what underlying incomes would typically support at today's interest rates
- For example, it would take a 10% drop in prices, a return to 5.25% interest rates on a 30-year mortgage, a 5% income growth for affordability to return to long-run averages

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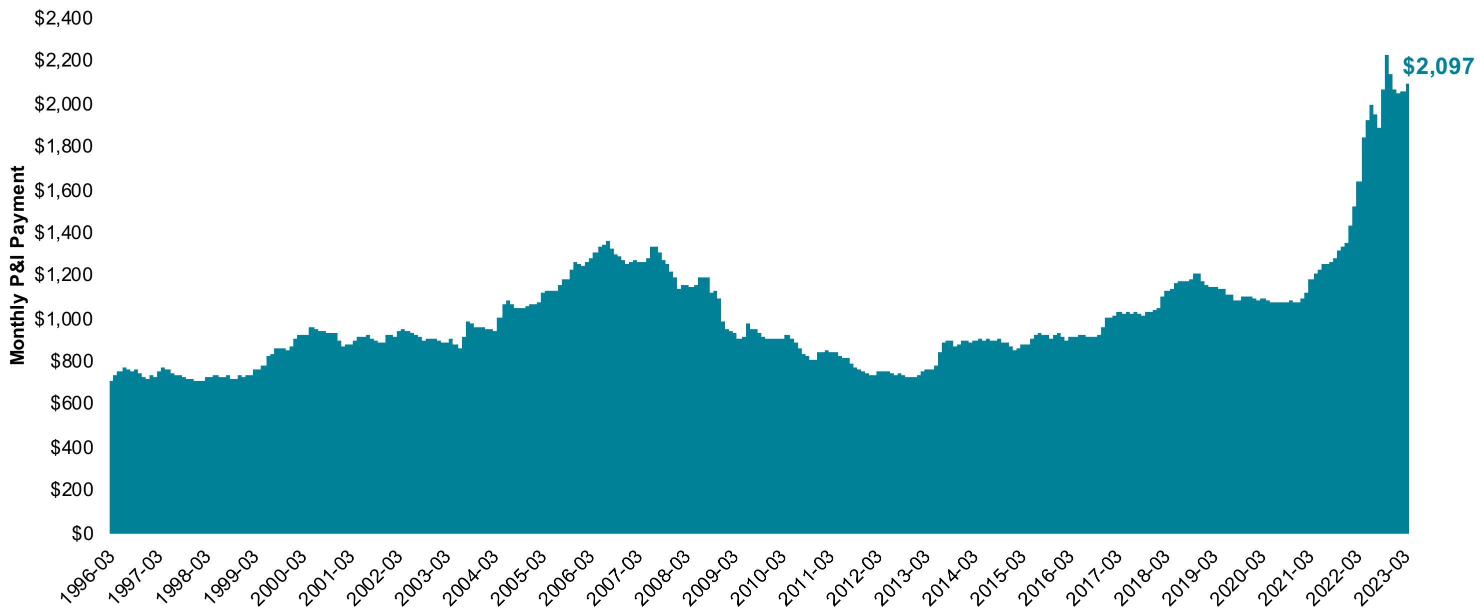
MONTHLY P&I PAYMENT TO PURCHASE AVERAGE PRICED HOME

(WITH 20% DOWNPAYMENT AT PREVAILING 30-YEAR INTEREST RATE)



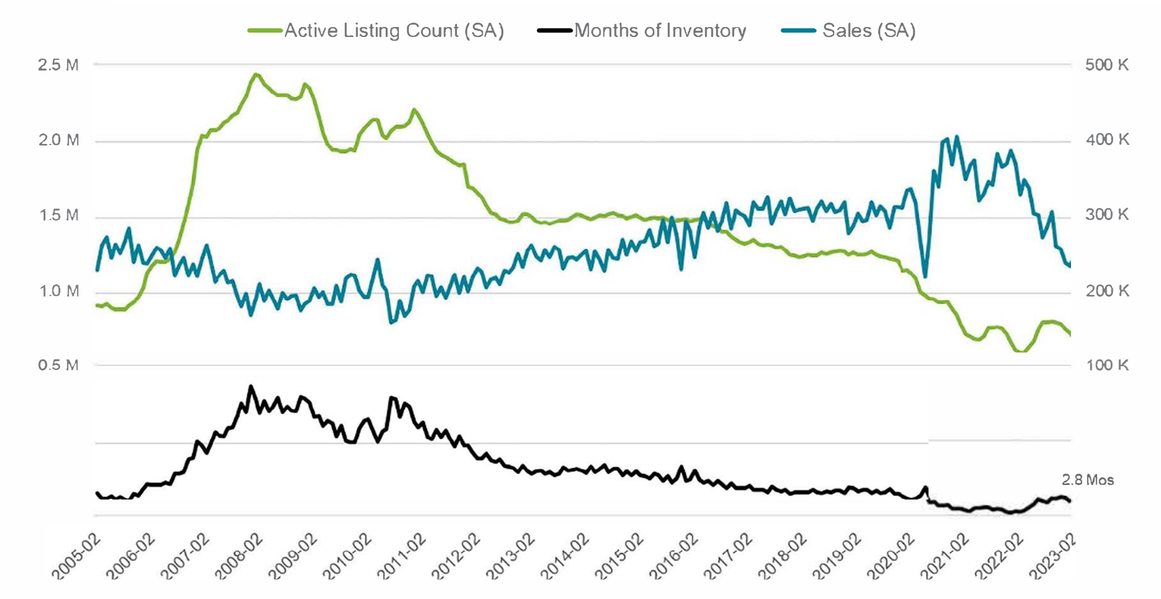
Source: Black Knight Home Price Index, FHLMC PMMS

The monthly P&I payment on the median home purchase has improved in recent months, but is still up $813 over the past year and a half

- The monthly mortgage payment required to purchase a median-priced home, assuming a 20% down 30-year mortgage, currently stands at $2,097, only $137 below the all-time high in October 2022
- What's more, October's peak was a bit of an outlier, with the current monthly payment only $41 lower than November, and higher than every other month historically
- Home affordability remains below long-run averages in 49 of the 50 largest markets (Cleveland, Ohio, being the exception), with 35% of markets requiring 10 percentage points more than normal of the median local market income to afford the median home
- Los Angeles (+28pp), San Diego (+21pp), Miami (+21pp), San Jose (+19pp) and San Francisco (+17pp) are the least affordable markets, and (with the exception of Miami) have experienced some of the sharpest price drops as interest rates have climbed

SALES, ACTIVE LISTINGS AND MONTHS OF INVENTORY

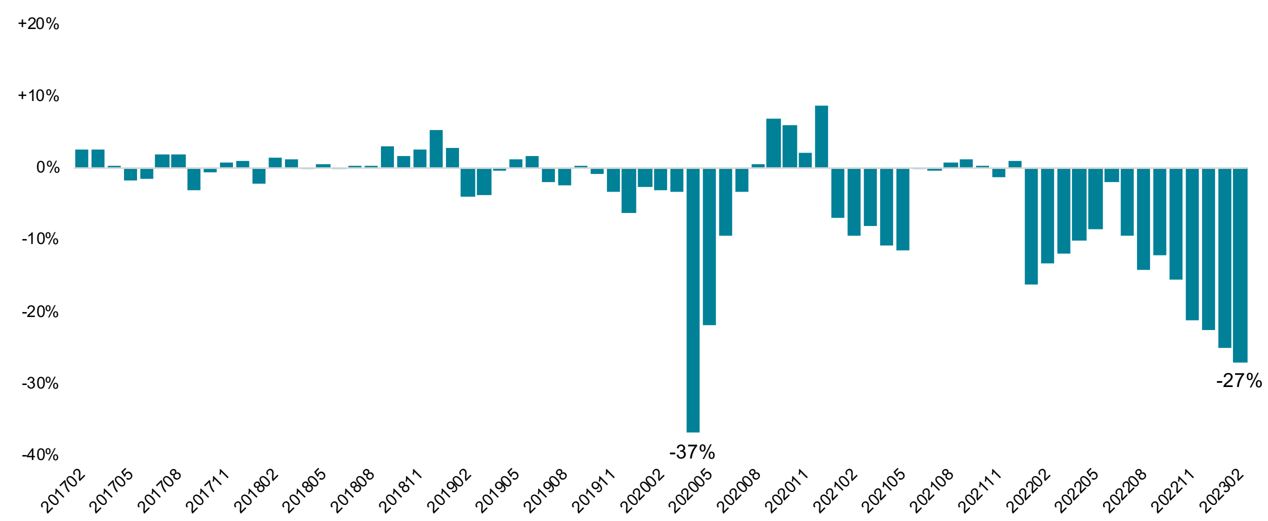
(SEASONALLY ADJUSTED - SINGLE FAMILY RESIDENCES AND CONDOS)



Source: Black Knight, Collateral Analytics

NEW REAL ESTATE LISTINGS

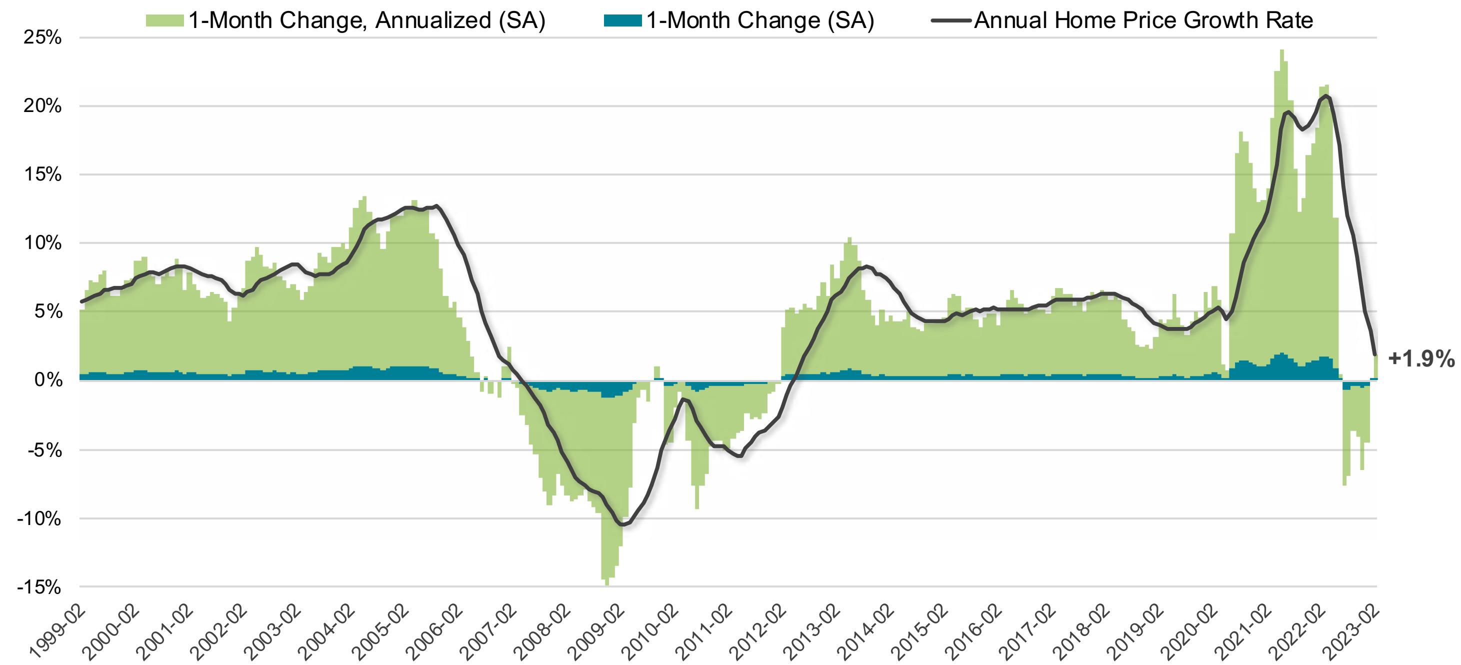
(% DIFFERENCE FROM 2017-2019 SAME MONTH AVERAGE)



Source: Black Knight, Realtor.com

- Home sales activity ticked up in February on a seasonally adjusted basis, according to the Black Knight Collateral Analytics data set, suggesting transaction volumes may have reached a floor
- Despite the improvement, sales remained 18% below their 2019 pre-pandemic average, as affordability pressures continue to weigh on demand
- What's more, the number of homes available for sale fell for the fifth consecutive month on a seasonally adjusted basis, hitting the lowest level since May of last year
- New listings ran 27% below pre-pandemic levels — slightly worse than the 25% deficit in January — as existing home sellers continue to shy away from the market
- Active for-sale inventory levels are now back to 47% below pre-pandemic levels, after recovering to within 38% of normal levels late last year
- 91 of the top 100, or 47 of the top 50, saw their inventory (active listing count) decline in February

BLACK KNIGHT HOME PRICE INDEX



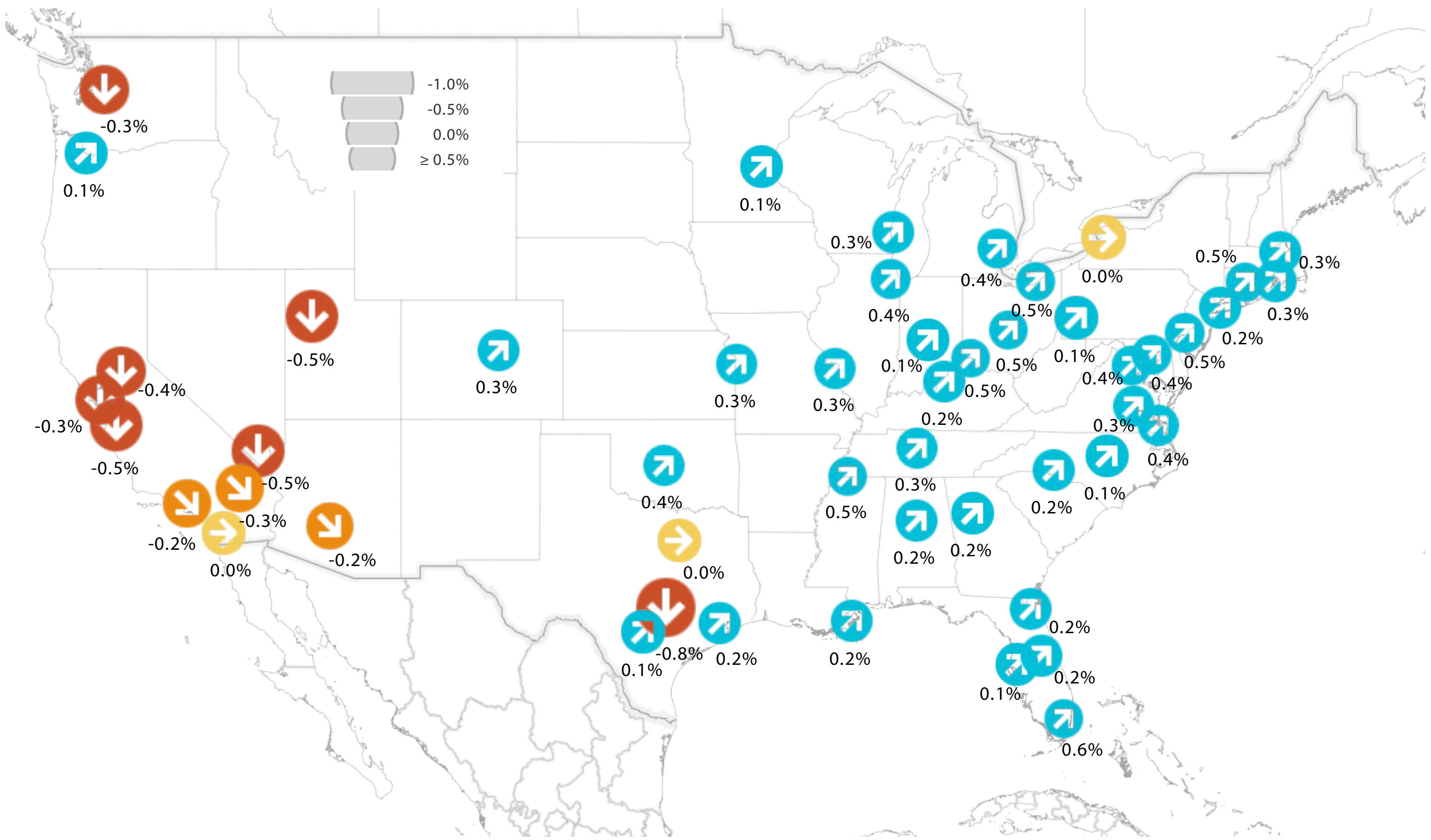
Source: Black Knight Home Price Index (HPI)

Home prices rose in February on both a non-adjusted and seasonally adjusted basis, breaking a streak of seven monthly declines

- A modest easing of affordability in January and early February along with tightening inventory levels drove home prices slightly higher
- On an adjusted basis, prices were up 0.16% for the month, the strongest single month gain since May of last year, while non-adjusted they were up 0.68%
- The headline annual home price growth rate fell by 164 bps in the month to 1.94%, the first time we've seen annual home price growth below 2% since early 2012
- Price growth is expected to cross over into negative territory by April but may return above 0% before the end of the year if inventory challenges persist and interest rates ease
- All in, home prices nationally are now down 2.6% from their 2022 peak, marginally improved from 2.7% in January

MONTH-OVER-MONTH CHANGE IN HPI

(SEASONALLY ADJUSTED)



Source: Black Knight Home Price Index (HPI)
February 2023

In perhaps the most noteworthy February trend, home prices rose in 78% of the nation's top markets, a significant change from only 4% of markets in November

- 39 of the 50 largest markets saw home prices rise on a seasonally adjusted basis in February
- That's a sharp contrast from three months prior, when prices fell in 48 of 50 markets
- The largest price increases occurred in Miami (+.63%), along with Cincinnati (+.55), Columbus (+.53%), Hartford (+.52%), Memphis (+.51%) and Cleveland (+.50%)
- While some price increases – most notably in Miami, which had the largest of the month – can be chalked up to migratory inflows, stronger price gains are being seen more generally in those areas with better affordability and larger inventory deficits
- Month-over-month gains in these areas are equivalent to 6.1%-7.6% annualized home price growth rates
- On the other end of the spectrum, Austin (-.82%), Las Vegas (-.53%), San Jose (-.52%), Salt Lake City (-.5%), Sacramento (-.37%), Seattle (-.34%), San Francisco (-.32%), Riverside (-.27%), Los Angeles (-.23%) and Phoenix (-.22%) saw the largest price declines
- Florida markets, which had been seeing prices pull back in recent months, were among those that shifted gears and trended higher

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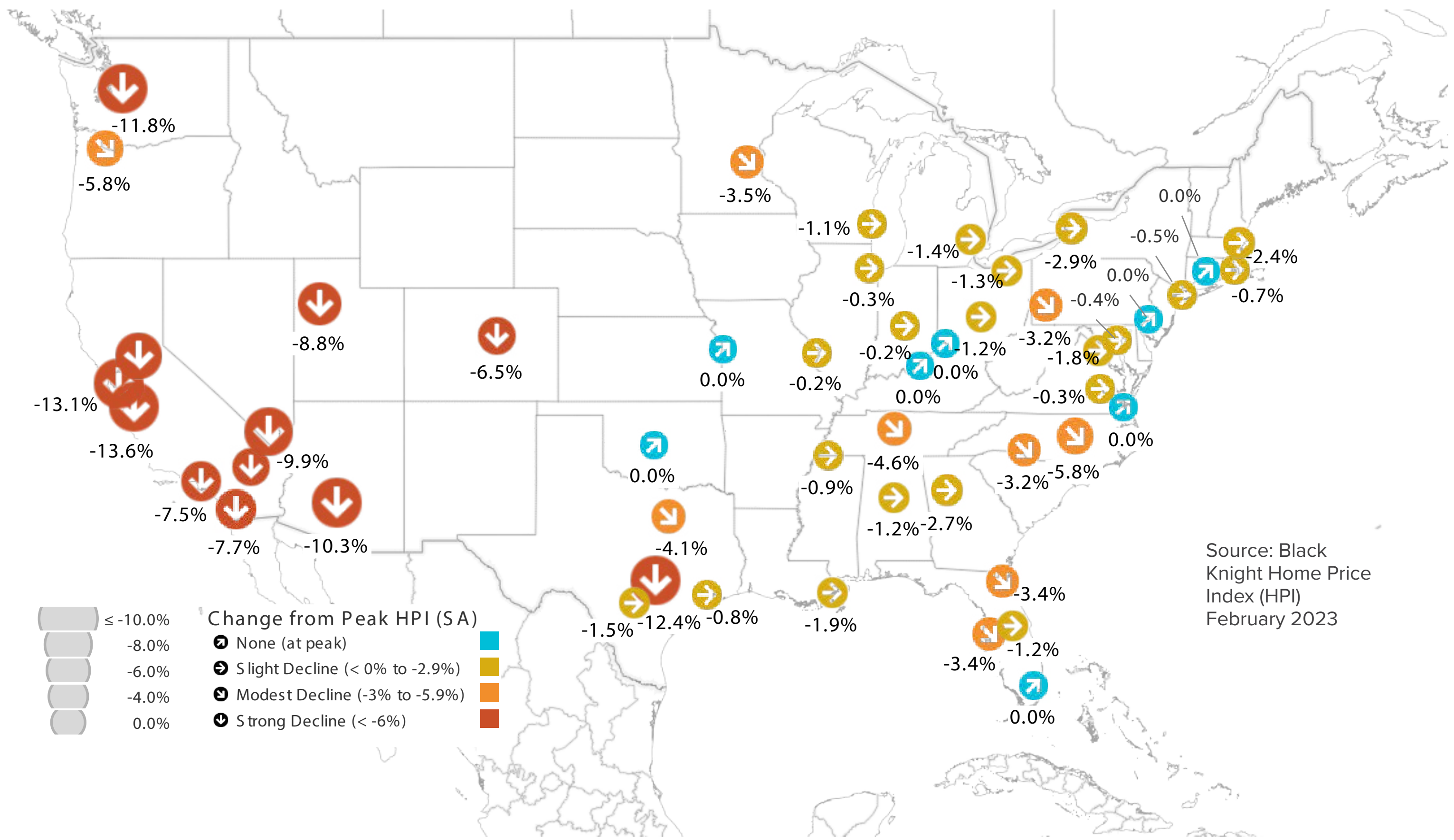
CHANGE IN HOME PRICE INDEX FROM 2022 PEAK

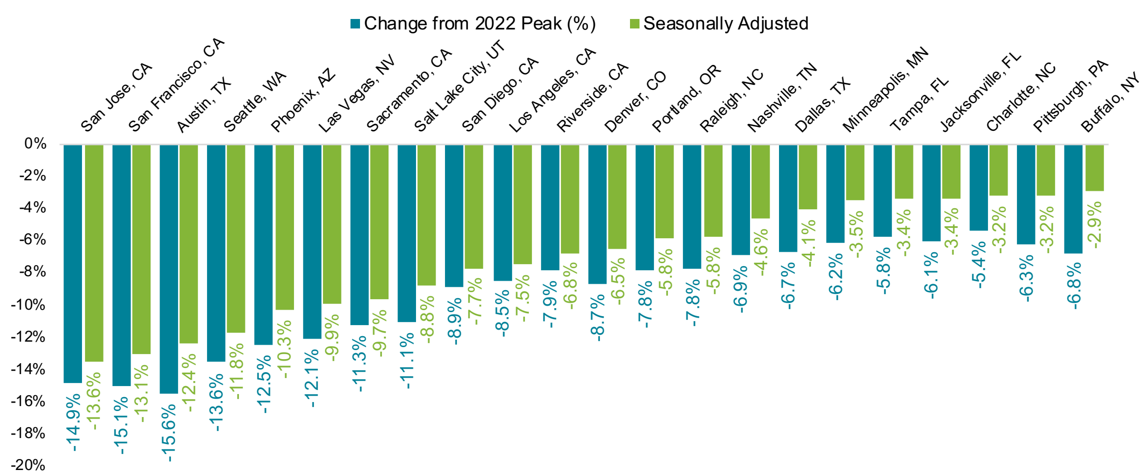
(SEASONALLY ADJUSTED)



- Despite the shift in February, prices by and large remain below their 2022 peaks on an adjusted basis, although those gaps narrowed in most of the country
- However, in areas seeing the steepest pullbacks, those declines worsened, with prices in San Jose, San Francisco, Austin, Seattle and Phoenix down more than 10%, and Las Vegas, Sacramento, Salt Lake City, San Diego and Los Angeles all between 7.5% and 10% off last year's peaks
- Eight markets – including Louisville, Kansas City, Virginia Beach, Oklahoma City, Philadelphia, Hartford, Cincinnati and Miami – are back to peak levels

CHANGE IN MEDIAN HOME PRICE

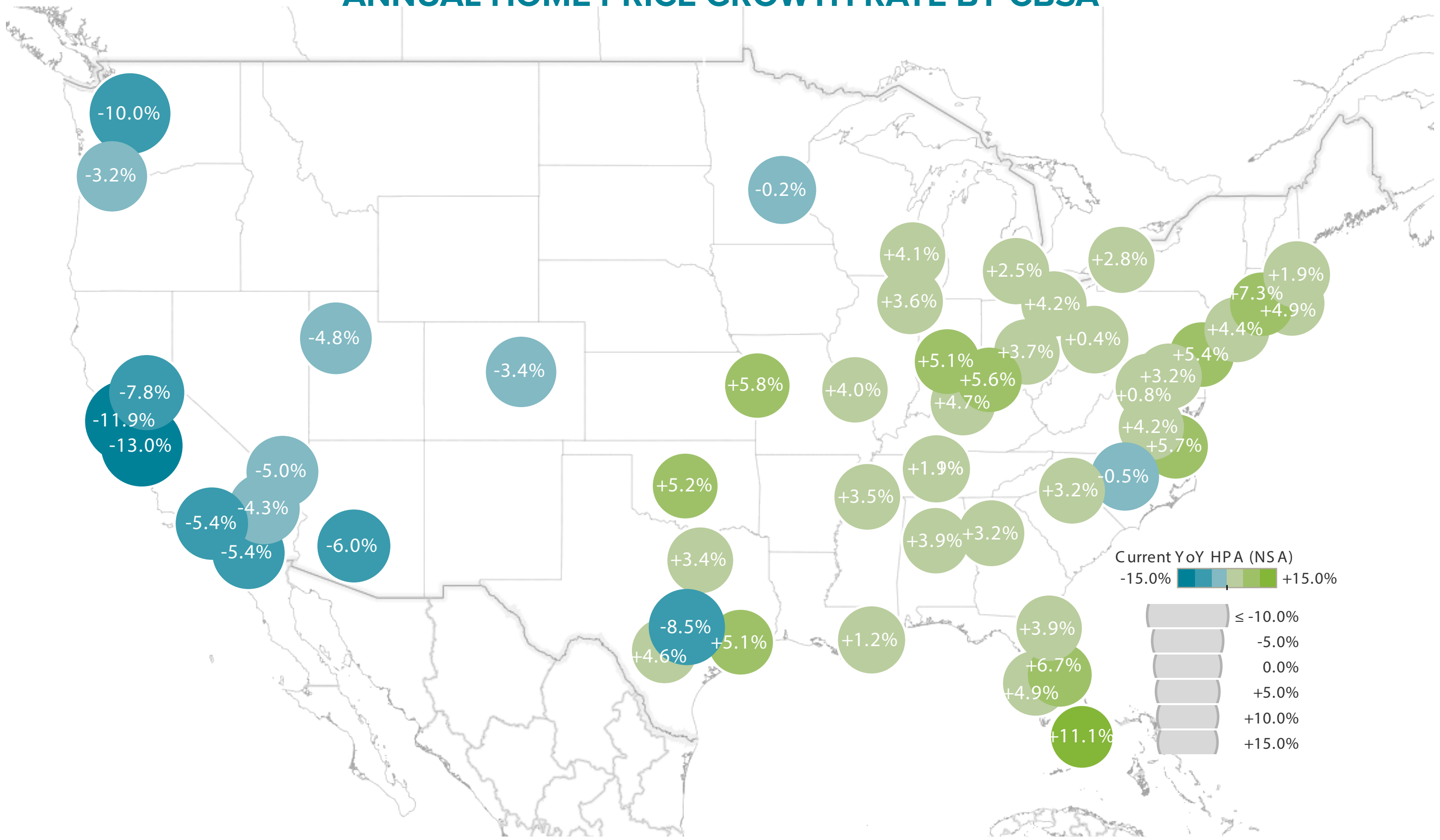
(BLACK KNIGHT HOME PRICE INDEX - MARKETS W/ LARGEST DECLINES)



Source: Black Knight Home Price Index (HPI)
February 2023

FEBRUARY 2023 HOUSING MARKET METRICS

ANNUAL HOME PRICE GROWTH RATE BY CBSA



MARKETS WITH HIGHEST HOME PRICE GROWTH RATES		
Rank	**Geography (CBSA)**	**Annual Home Price Growth Rate**
1	Miami, FL	+11.1%
2	Hartford, CT	+7.3%
3	Orlando, FL	+6.7%
4	Kansas City, MO	+5.8%
5	Virginia Beach, VA	+5.7%
6	Cincinnati, OH	+5.6%
7	Philadelphia, PA	+5.4%
8	Oklahoma City, OK	+5.2%
9	Houston, TX	+5.1%
10	Indianapolis, IN	+5.1%

MARKETS WITH LOWEST HOME PRICE GROWTH RATES		
Rank	**Geography (CBSA)**	**Annual Home Price Growth Rate**
41	Salt Lake City, UT	-4.8%
42	Las Vegas, NV	-5.0%
43	San Diego, CA	-5.4%
44	Los Angeles, CA	-5.4%
45	Phoenix, AZ	-6.0%
46	Sacramento, CA	-7.8%
47	Austin, TX	-8.5%
48	Seattle, WA	-10.0%
49	San Francisco, CA	-11.9%
50	San Jose, CA	-13.0%

Annual home price growth rates continue to cool across the country while Midwest/East Coast markets are holding stronger

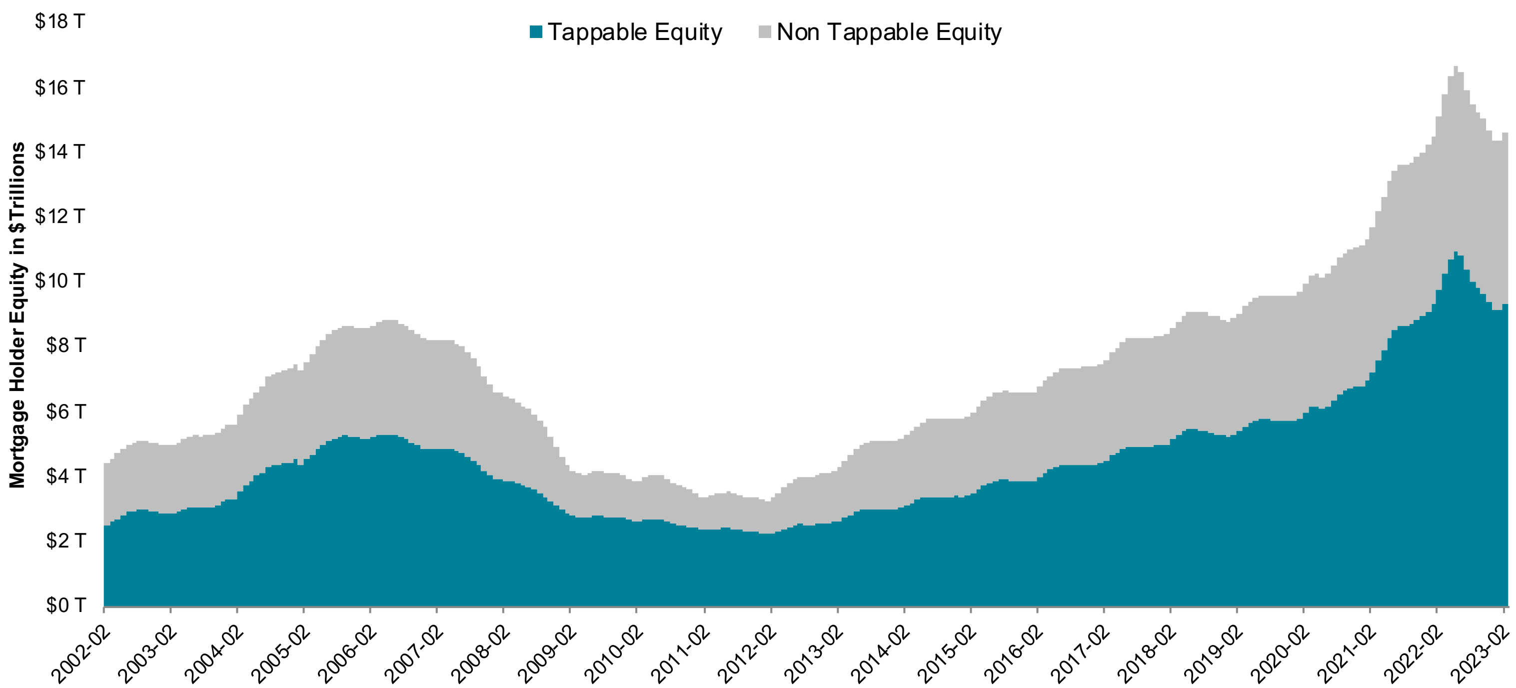
- Despite stronger home prices in February, home price growth rates cooled in every major U.S. market, as strong early 2022 home price trends continue to roll out of the 12-month backward-looking window
- Less than a year ago, all 50 major markets had double-digit annual home price growth rates, while as of February, only Miami can still make that claim
- There are now 15 markets (up from 13 in January) where prices are down year over year, with Raleigh (-0.6%) and Minneapolis (-0.3%) now marginally below last year's levels
- The largest year-over-year declines occurred in San Jose (-13%), San Francisco (-11.9%) and Seattle (-10%) where prices are down approximately 10% or more from the same time last year
- Midwest and East Coast markets like Hartford, Kansas City, Virginia Beach, Cincinnati and Philadelphia with relatively strong affordability and low inventory levels are rising up the ranks, while western markets, pandemic boom towns, and some Florida markets are seeing more cooling

Source: Black Knight Home Price Index (HPI)
February 2023

FEBRUARY 2023 HOME EQUITY TRENDS

Finally, we consider recent developments for home equity. We look closer at which borrowers are withdrawing equity and through what loan products, as well as how interest rate shifts are driving changes in equity lending. This information has been compiled from the Black Knight Home Price Index, Collateral Analytics data, the McDash loan-level mortgage performance database and other public and proprietary data sets. Click on each chart to view its contents in high resolution.

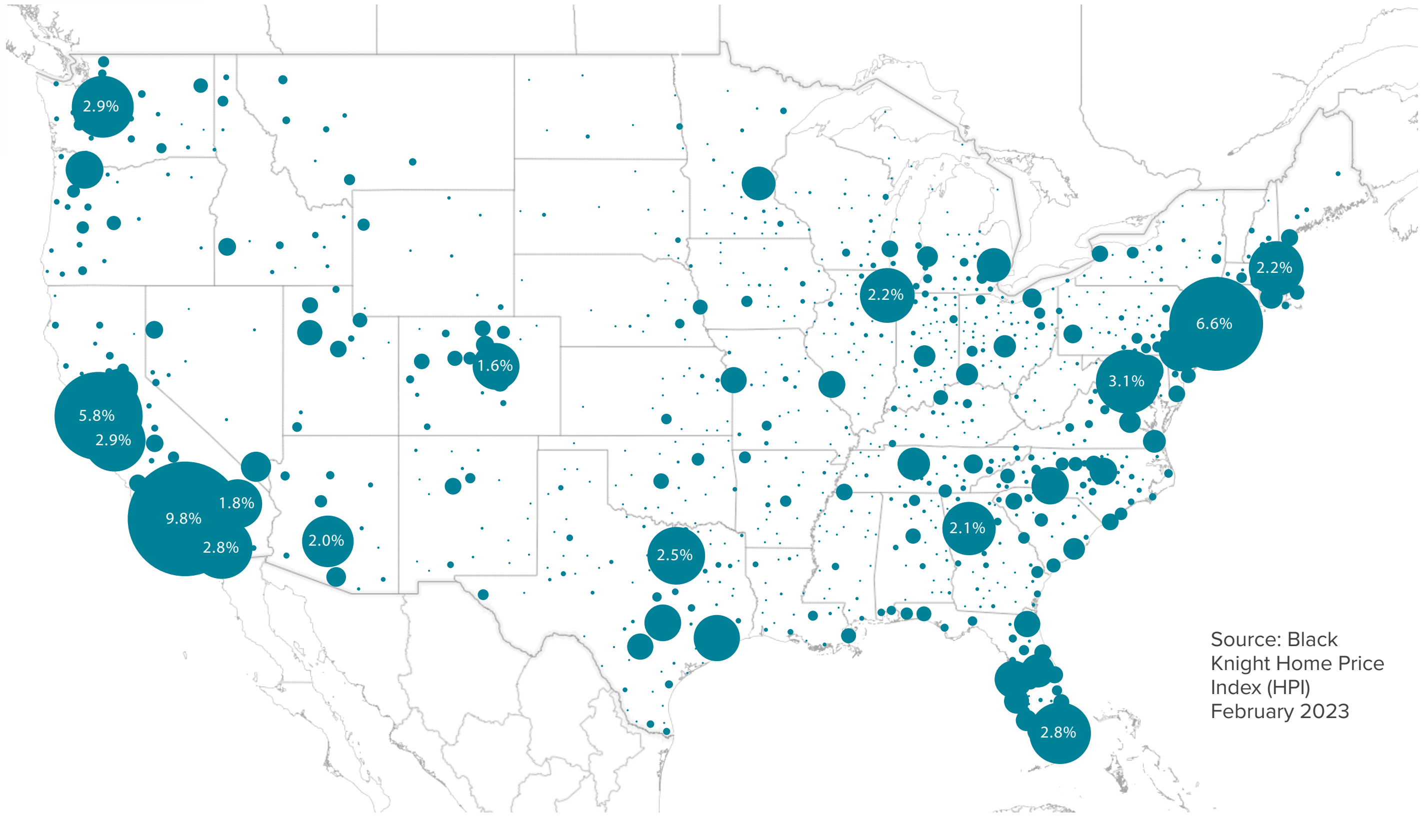
HOMEOWNER EQUITY ON MORTGAGED PROPERTIES



Source: Black Knight McDash Property Module, February 2023
Tappable equity is the share of equity that could be withdrawn while still maintaining an 80% or lower loan-to-value ratio

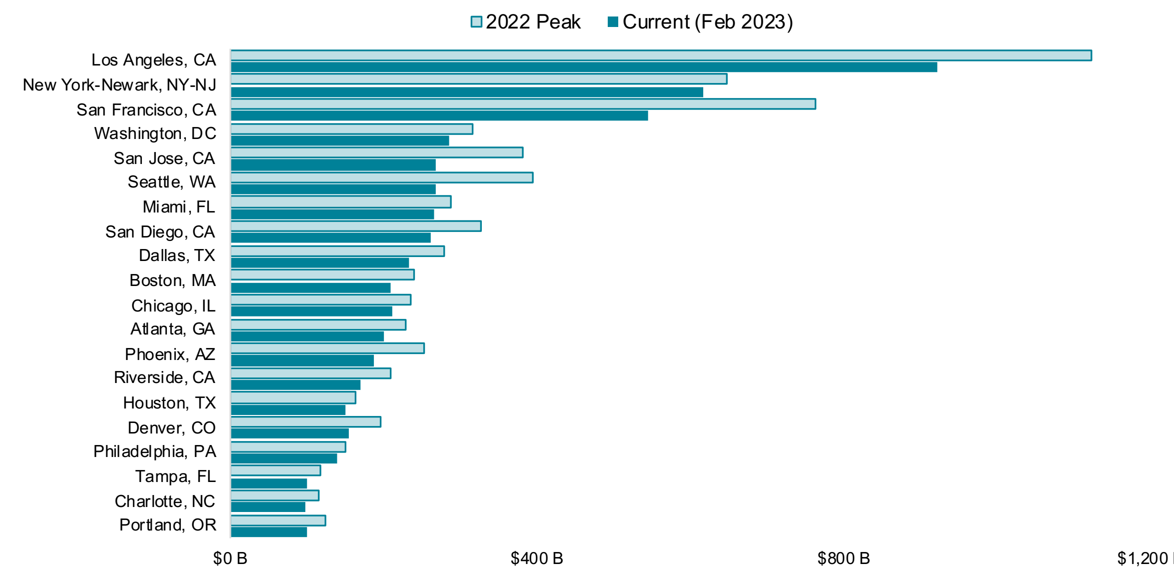
- Softening home prices have led to a contraction in mortgage holder equity, though it rebounded somewhat in February
- Overall, total mortgage holder equity is now down $2T (12%) from its 2022 peak, with the amount of tappable equity – the share available to lend/borrow against while still maintaining a 20% equity cushion – has dipped by $1.6T (15%)
- That said, $9.3T in equity remained available to tap as of the end of February, which is still up 56% ($3.4T) over the past three years
- The average mortgage holder has $178K in tappable equity, down from more than $210K early last year, but still $61K (54%) above the market average three years ago
- In short, despite recent declines, homeowners are still sitting on strong equity cushions

DISTRIBUTION OF TAPPABLE / LENDABLE EQUITY



Source: Black Knight Home Price Index (HPI) February 2023

TAPPABLE EQUITY ON MORTGAGED PROPERTIES BY CBSA

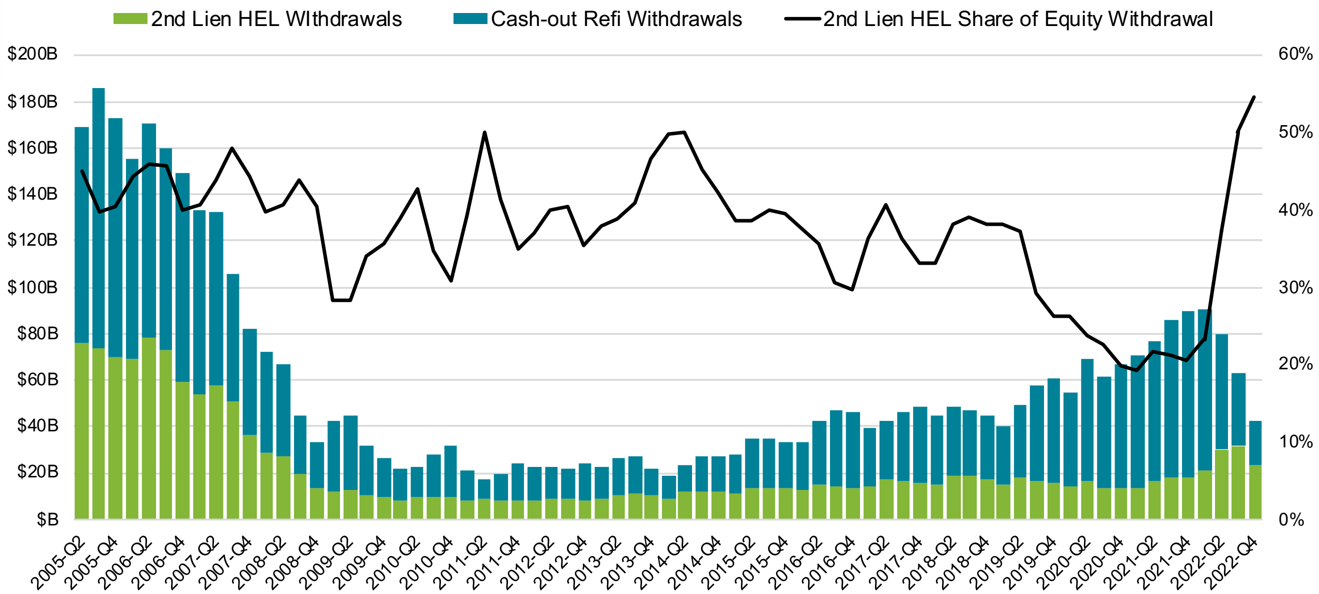


Source: Black Knight McDash Property Module, February 2023
Tappable equity is the share of equity that could be withdrawn while still maintaining an 80% or lower loan-to-value ratio

- West Coast markets where home prices have been hit hardest by rising interest rates have correspondingly seen the largest declines in mortgage holder equity
- On a percentage basis, Seattle (-32%), San Jose (-30%), San Francisco (-29%) and Austin (-31%) have all seen tappable equity fall more than 30% in recent months
- By dollar amount, San Francisco (-$220B), Los Angeles (-$202B), Seattle (-$126B), San Jose (-$114B), Phoenix (-$67B) and San Diego (-$65B) had the largest declines, with those five markets accounting for 50% of the drop nationwide

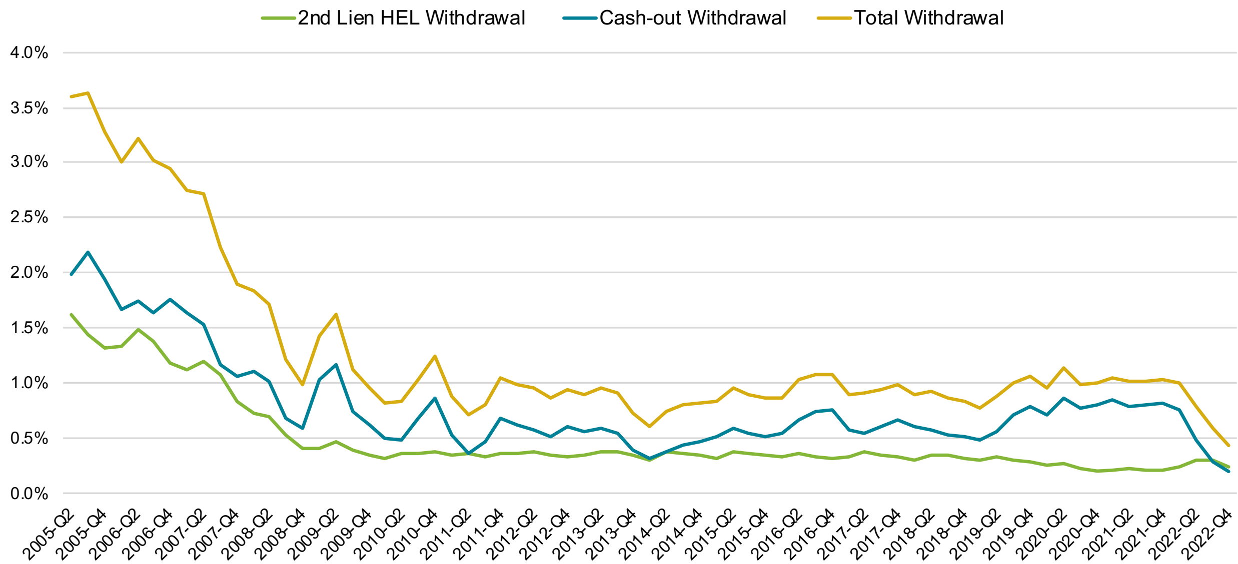
- Despite recent declines, the West Coast remains a focal point for home equity lending
- Five of the top ten market concentrations of tappable equity – San Jose ($654K), San Francisco ($523K), Los Angeles ($507K), San Diego ($430K) and Seattle ($289K) – representing a combined 25% of the national total, are on the West Coast
- California holds the largest share, at nearly $2.5T, 28% of the national total
- Those lending in these markets will be challenged to navigate the potential risk of additional equity erosion while still capitalizing on lending opportunities

EQUITY WITHDRAWALS BY TRANSACTION TYPE



Source: Black Knight McDash Property Module

EQUITY WITHDRAWN AS % OF TAPPABLE EQUITY AVAILABLE



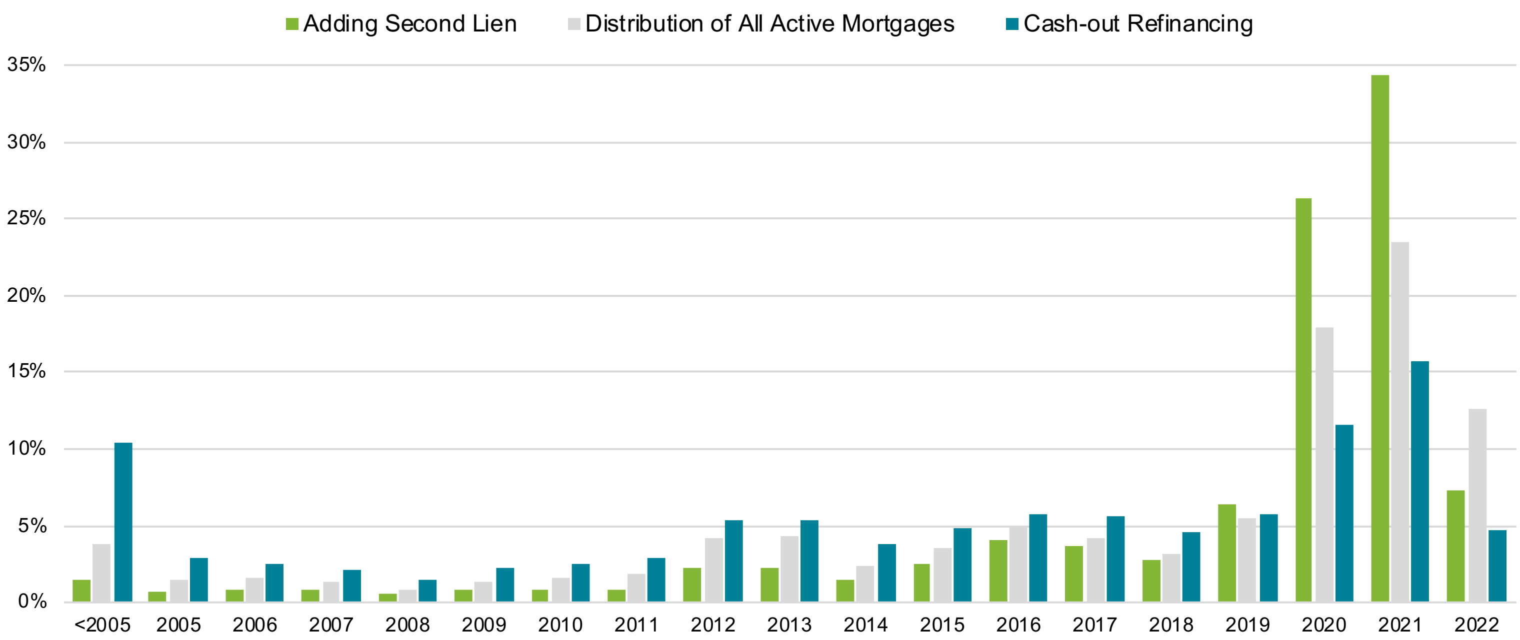
Source: Black Knight McDash Property Module

- Rising interest rates and declining home values have resulted in the amount of equity withdrawn via Q4 2022 cash-out refinances and subordinate-lien home equity products falling more than 50% from the highs of early 2021
- This decline could impact the broader economy with as much as $50B less in equity extraction flowing back into consumer spending
- Cash-out refinances were hit hardest, falling nearly 75% year over year
- Withdrawals via subordinate-lien home equity products fell by 27% over the quarter, but were still up 26% from Q4 2021, as homeowners with record-low interest rates favor second-lien products over refinancing

- Just 0.43% of available tappable equity on residential properties with a mortgage was withdrawn in Q4, less than half the rate of Q1, due in part to rising interest rates
- The withdrawal rate via cash-out refinances was only 0.2%, down 76% year over year, while the withdrawal rate among second-lien home equity products was estimated at 0.23%, down for the quarter but up marginally year over year
- Falling equity and rising short term rates are expected to create headwinds for second-lien lending, but volumes are likely to hold stronger as lenders look to replace dwindling first-lien volumes and borrowers seek to retain record-low mortgage rates

DISTRIBUTION OF Q4 2022 EQUITY WITHDRAWALS

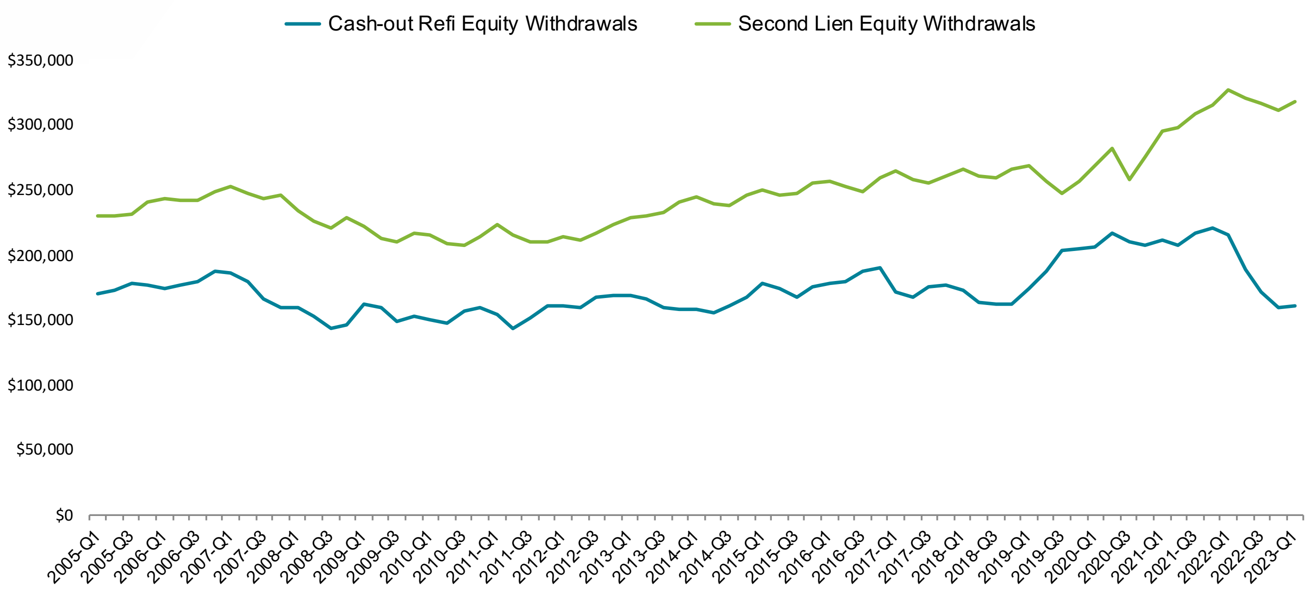
(BY PRIOR FIRST LIEN VINTAGE)



Source: Black Knight McDash Property Module

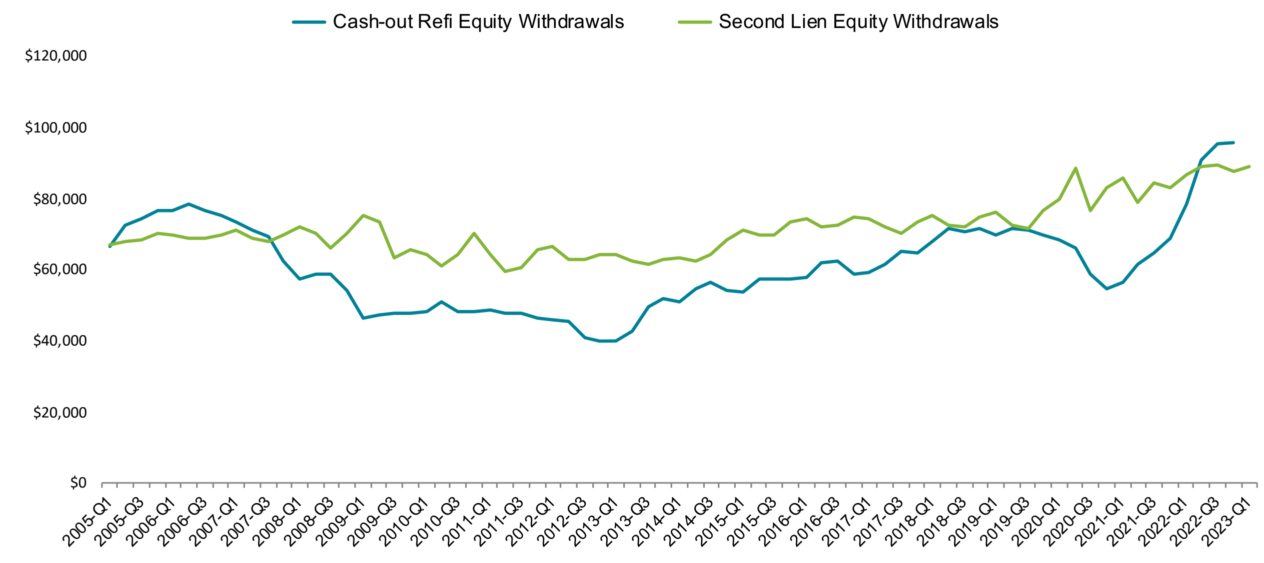
- More than 60% of borrowers who added a second lien to withdraw equity in Q4 took out their first lien in 2020 or 2021
- This makes intuitive sense; these borrowers locked in near-record-low first lien rates and have seen considerable home price gains since taking out their mortgages
- Lenders/servicers with first-lien portfolios may have recent relationships with borrowers, which can help feed their home equity origination channels
- Retention numbers show first-lien lenders who have worked with a borrower in the previous three years have a significantly higher likelihood of retaining their business during subsequent transactions
- Counter to the home equity trend, just over a quarter of borrowers completing cash-out refis took out their prior mortgages in 2020/2021 and nearly 60% more than five years ago
- Lenders hoping to retain borrowers with first-lien mortgages of older vintages might benefit from automated tools such as Black Knight's Servicing Digital platform, where borrowers can access personalized equity detail and explore second-lien options through servicer lending channels

AVERAGE $UPB PRIOR TO EQUITY WITHDRAWAL



Source: Black Knight, Collateral Analytics

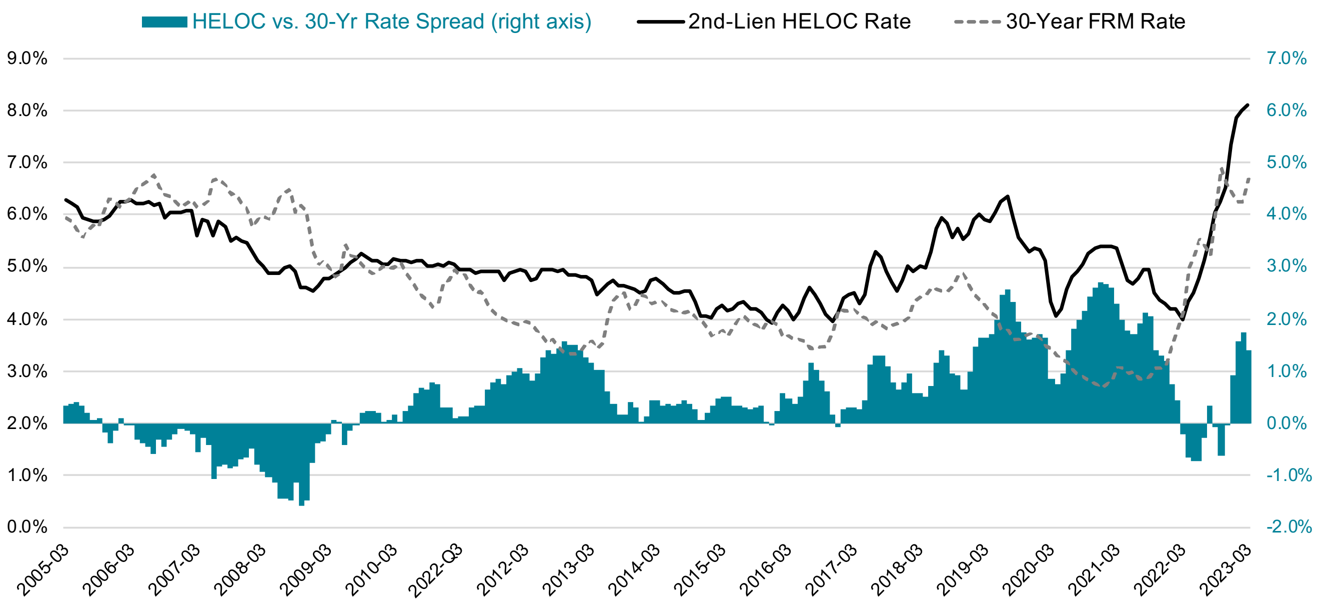
AVERAGE EQUITY WITHDRAWAL



Source: Black Knight, Realtor.com

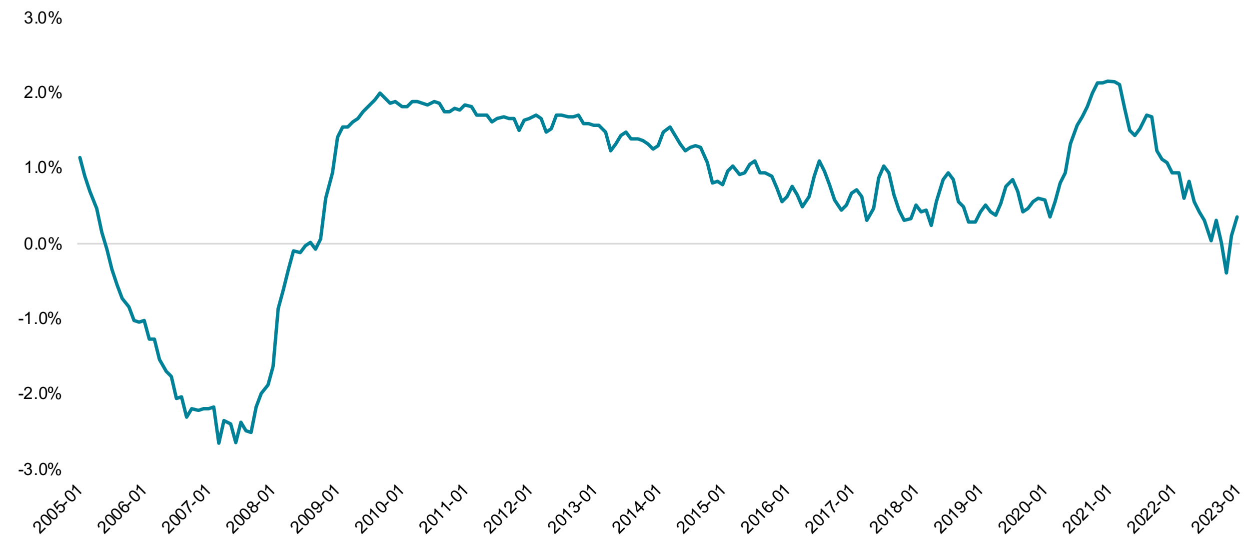
- Q1 market conditions have created the largest differential we've ever seen between the unpaid balance of borrowers with second-lien loans ($318K) and those using cash-out refis ($161K)
- Part of this has to do with math, part with credit quality
- FHA/VA loans, which account for ~1/3 of all cash-out activity, tend to have both lower balances and appeal to borrowers with lower credit scores, who might not qualify for a second-lien HELOC
- Average credit scores for second-lien withdrawals in early Q1 are 743, as compared with 719 for cash-out refis
- This gap could become more pronounced amid growing concerns about bank health and the likelihood of more restrictive credit requirements
- A trend has also developed of borrowers willing to take on the nearly 2.5% higher rate required for cash-out refis in Q4 taking out larger chunks of equity ($95K versus $54K in late 2020)

HELOC VS. 30-YEAR FIXED MORTGAGE INTEREST RATES



Source: Black Knight, McDash Home Equity Database, FHLMC PMMS; Federal Reserve Bank of St. Louis (FRED)

RATE SPREAD BETWEEN PRIME RATE AND AVERAGE INITIAL HELOC RATE



Source: Black Knight, McDash Home Equity Database, Federal Reserve Bank of St. Louis (FRED)

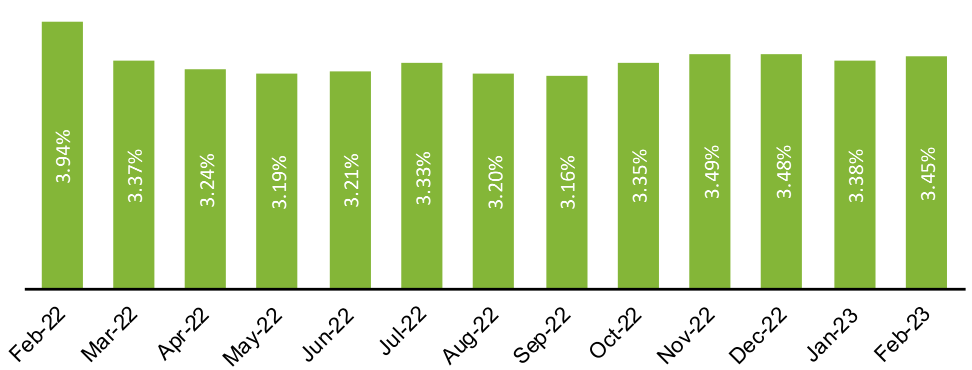
- The introductory rate on home equity lines of credit – per Black Knight's McDash Home Equity database – has reached its highest level in more than 20 years
- Continued upward pressure on short-term rates has increased the cost of equity utilization, which could further constrain withdrawal rates
- After interest rates on HELOC offerings fell below 30-year mortgage rates in mid-2022 – further incentivizing HELOC utilization over cash-out refinancing – that spread is now closer to normal
- While the Fed has signaled high rates throughout 2023, the implied rate path of the bond market suggests short-term rates may ease later this year, which could reverse this effect
- 10-year Treasury yields and downstream 30-year rates tend to move in anticipation of the Fed and may fall more quickly than HELOC rates
- The spread between HELOC introductory rate offerings and the prime rate has recently been the tightest in 15 years, suggesting lenders are aggressively marketing second-lien offerings
- If banking sector woes continue to induce uncertainty and credit tightens as expected, that spread could widen (as it did in both 2008 and 2020), which could negatively impact HELOC rate offerings
- Consumer debt on credit cards – which recently hit a record high – and other revolving debt are also impacted by rising short-term rates and could increase the need for debt consolidation

FEBRUARY 2023 DATA SUMMARY

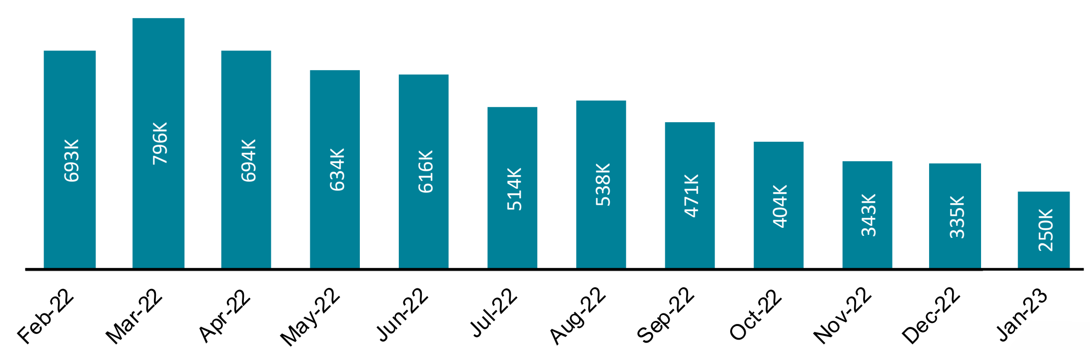
	Feb-23	Monthly Change	YTD Change	Yearly Change
Delinquencies	3.45%	1.96%	1.96%	-12.56%
Foreclosure	0.46%	0.81%	0.81%	15.18%
Foreclosure Starts	29,500	-9.23%	-9.23%	-4.22%
Seriously Delinquent (90+) or in Foreclosure	1.53%	-1.91%	-1.91%	-31.18%
New Originations (data as of Jan-23)	250K	-25.5%	-25.5%	-66.2%

	Feb-23	Jan-23	Dec-22	Nov-22	Oct-22	Sep-22	Aug-22	Jul-22	Jun-22	May-22	Apr-22	Mar-22	Feb-22
Delinquencies	3.45%	3.38%	3.48%	3.49%	3.35%	3.16%	3.20%	3.33%	3.21%	3.19%	3.24%	3.37%	3.94%
Foreclosure	0.46%	0.45%	0.44%	0.44%	0.43%	0.43%	0.44%	0.43%	0.44%	0.43%	0.42%	0.40%	0.40%
Foreclosure Starts	29,500	32,500	28,200	27,300	24,900	24,200	28,800	22,900	31,500	26,500	36,600	34,100	30,800
Seriously Delinquent (90+) or in Foreclosure	1.53%	1.56%	1.55%	1.55%	1.55%	1.56%	1.58%	1.63%	1.68%	1.74%	1.87%	2.02%	2.22%
New Originations		250K	335K	343K	404K	471K	538K	514K	616K	634K	694K	796K	693K

TOTAL DELINQUENCIES



NEW ORIGINATIONS



LOAN COUNTS AND AVERAGE DAYS DELINQUENT

Month	Total Active Count	30 Days	60 Days	90+ Days	FC	Total Non-Current	FC Starts	FC Sales (Completions)	Average Days Delinquent for 90+	Average Days Delinquent for FC	DQ%	Monthly Change	Yearly Change	FC%	Monthly Change	Yearly Change
12/31/00	41,340,000	1,403,000	332,000	378,000	190,000	2,302,000	32,800	16,200	210	305	5.1%	15.6%		0.5%	-2.7%	
12/31/01	42,676,000	1,471,000	373,000	548,000	309,000	2,701,000	76,100	21,400	211	282	5.6%	10.3%	9.7%	0.7%	3.7%	58.1%
12/31/02	43,421,000	1,425,000	364,000	483,000	317,000	2,587,000	76,400	23,200	237	298	5.2%	0.8%	-6.7%	0.7%	0.1%	0.5%
12/31/03	43,833,000	1,204,000	336,000	474,000	321,000	2,335,000	83,100	24,300	275	345	4.6%	-6.0%	-12.1%	0.7%	6.7%	0.4%
12/31/04	46,586,000	1,077,000	300,000	424,000	268,000	2,070,000	70,000	23,200	248	340	3.9%	-3.4%	-15.8%	0.6%	0.0%	-21.3%
12/31/05	49,764,000	1,332,000	412,000	538,000	247,000	2,528,000	74,700	21,600	202	306	4.6%	1.7%	18.5%	0.5%	6.1%	-13.7%
12/31/06	52,667,000	1,602,000	483,000	538,000	383,000	3,006,000	106,800	32,300	203	272	5.0%	9.1%	8.6%	0.7%	6.4%	46.3%
12/31/07	54,156,000	1,792,000	663,000	904,000	729,000	4,088,000	168,800	51,500	188	258	6.2%	8.3%	24.6%	1.3%	10.8%	85.3%
12/31/08	54,448,000	2,032,000	953,000	1,755,000	1,242,000	5,982,000	229,800	59,600	192	318	8.7%	0.6%	40.3%	2.3%	5.9%	69.5%
12/31/09	54,131,000	1,840,000	896,000	2,909,000	2,043,000	7,689,000	230,000	99,400	247	415	10.4%	0.7%	19.8%	3.8%	0.0%	65.4%
12/31/10	53,070,000	1,739,000	753,000	2,136,000	2,314,000	6,943,000	285,400	79,600	331	520	8.7%	-1.7%	-16.4%	4.4%	3.2%	15.5%
12/31/11	51,973,000	1,639,000	660,000	1,834,000	2,204,000	6,337,000	185,100	76,200	394	667	8.0%	0.8%	-8.8%	4.2%	-0.1%	-2.7%
12/31/12	50,867,000	1,500,000	594,000	1,587,000	1,751,000	5,433,000	144,300	58,700	463	802	7.2%	1.3%	-9.0%	3.4%	-1.5%	-18.8%
12/31/13	49,779,000	1,393,000	534,000	1,260,000	1,246,000	4,433,000	110,000	43,600	498	908	6.4%	-0.1%	-11.5%	2.5%	-0.7%	-27.3%
12/31/14	49,618,000	1,235,000	466,000	1,066,000	863,000	3,631,000	88,500	28,700	507	1,026	5.6%	-6.7%	-12.9%	1.7%	-0.5%	-30.6%
12/31/15	49,662,000	1,138,000	412,000	793,000	676,000	3,019,000	76,800	27,600	493	1,055	4.7%	-3.2%	-15.4%	1.4%	-1.1%	-21.7%
12/31/16	49,796,000	1,186,000	403,000	689,000	497,000	2,774,000	59,400	20,700	449	1,024	4.6%	-0.1%	-3.1%	1.0%	-2.5%	-26.7%
12/31/17	50,091,000	1,297,000	451,000	750,000	354,000	2,853,000	44,500	13,000	351	923	5.0%	4.8%	9.1%	0.7%	-0.1%	-29.1%
12/31/18	50,458,000	1,202,000	384,000	536,000	308,000	2,430,000	48,300	12,200	398	829	4.2%	5.2%	-15.7%	0.6%	1.4%	-13.6%
12/31/19	51,144,000	1,158,000	378,000	480,000	288,000	2,304,000	51,800	11,400	348	764	3.9%	-2.1%	-6.2%	0.6%	-0.3%	-7.9%
12/31/20	51,663,000	888,000	366,000	2,283,000	214,000	3,751,000	8,200	2,900	260	1,169	6.8%	-3.4%	73.6%	0.4%	0.2%	-26.4%
12/31/21	51,822,000	745,000	225,000	1,132,000	167,000	2,270,000	9,000	4,800	414	1,560	4.1%	-4.9%	-40.7%	0.3%	-1.7%	-22.1%
12/31/22	52,450,000	954,000	290,000	583,000	232,000	2,058,000	28,200	6,100	353	1,112	3.5%	-0.1%	-14.2%	0.4%	-0.2%	36.9%
1/31/23	52,492,000	908,000	288,000	579,000	238,000	2,012,000	32,500	7,000	348	1,075	3.4%	-2.9%	-15.1%	0.5%	2.4%	23.3%
2/28/23	52,522,000	973,000	276,000	562,000	240,000	2,050,000	29,500	7,100	345	1,057	3.4%	2.0%	-12.6%	0.5%	0.8%	15.2%

DELINQUENCY AND FORECLOSURE FIGURES BY STATE

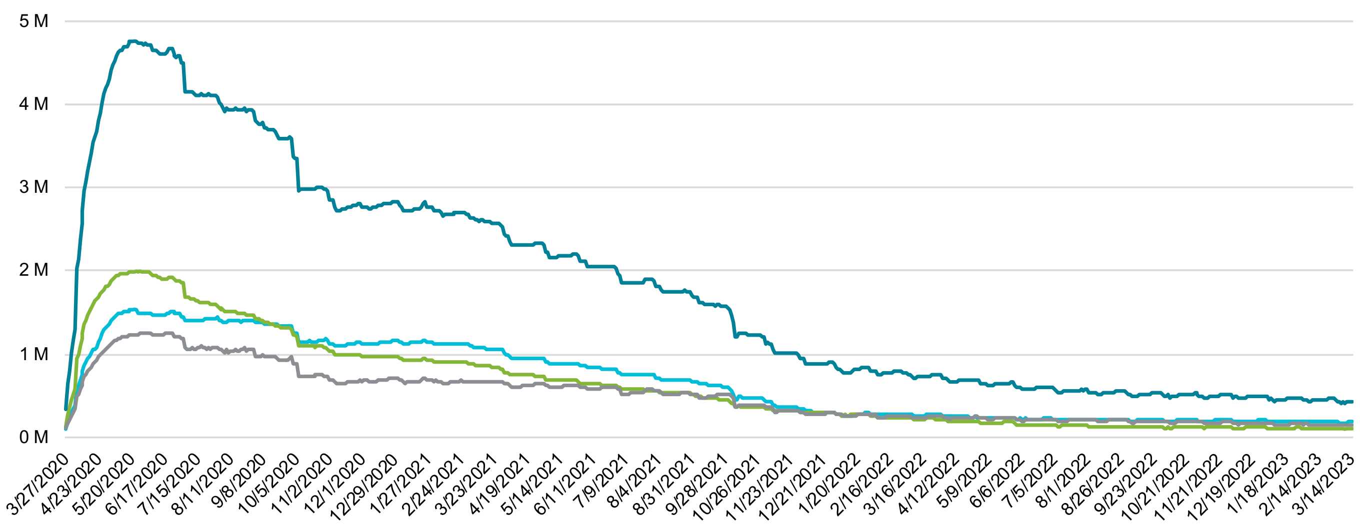
State		Del %	FC %	NC %	Yr/Yr Change in NC%
National		3.4%	0.5%	3.9%	-10.0%
MS		7.3%	0.6%	7.9%	-5.6%
LA	*	6.7%	0.9%	7.6%	-9.1%
AL		5.4%	0.4%	5.8%	-9.2%
AR		4.8%	0.4%	5.2%	-10.1%
WV		4.7%	0.5%	5.2%	-15.9%
IN	*	4.5%	0.7%	5.2%	-7.3%
PA	*	4.4%	0.7%	5.1%	-5.9%
OK	*	4.3%	0.8%	5.1%	-10.9%
OH	*	4.1%	0.7%	4.9%	-6.5%
IL	*	4.0%	0.8%	4.8%	-6.7%
GA		4.4%	0.3%	4.8%	-10.4%
TX		4.3%	0.4%	4.7%	-7.9%
MD	*	4.1%	0.6%	4.7%	-9.0%
DE	*	4.1%	0.6%	4.6%	-5.1%
KY	*	3.9%	0.7%	4.6%	-10.1%
NY	*	3.2%	1.3%	4.6%	-19.1%
FL	*	4.0%	0.5%	4.5%	-2.1%

State		Del %	FC %	NC %	Yr/Yr Change in NC%
National		3.4%	0.5%	3.9%	-10.0%
SC	*	3.9%	0.5%	4.4%	-12.1%
IA	*	3.5%	0.6%	4.2%	-3.8%
MO		3.8%	0.3%	4.1%	-6.4%
CT	*	3.5%	0.7%	4.1%	-19.9%
RI		3.6%	0.5%	4.1%	-8.5%
NJ	*	3.4%	0.6%	4.0%	-16.0%
MI		3.7%	0.3%	4.0%	-3.6%
WI	*	3.3%	0.5%	3.8%	-9.2%
NM	*	3.1%	0.6%	3.8%	-12.8%
ME	*	2.9%	0.8%	3.7%	-10.9%
KS	*	3.4%	0.4%	3.7%	-10.3%
TN		3.4%	0.2%	3.7%	-15.9%
NE	*	3.3%	0.3%	3.6%	-8.3%
VT	*	2.9%	0.6%	3.5%	-22.3%
NC		3.2%	0.3%	3.5%	-15.2%
VA		3.2%	0.3%	3.5%	-13.7%
AK		2.9%	0.4%	3.3%	-24.0%

State		Del %	FC %	NC %	Yr/Yr Change in NC%
National		3.4%	0.5%	3.9%	-10.0%
MN		3.0%	0.3%	3.3%	-7.1%
ND	*	2.6%	0.7%	3.2%	-11.3%
WY		2.9%	0.3%	3.2%	-10.9%
NV		2.8%	0.4%	3.2%	-9.8%
MA		2.8%	0.4%	3.2%	-12.9%
UT		2.9%	0.2%	3.1%	-3.7%
DC		2.4%	0.7%	3.1%	-17.3%
NH		2.7%	0.3%	3.0%	-12.3%
SD	*	2.5%	0.4%	2.9%	-1.2%
AZ		2.7%	0.2%	2.8%	-4.9%
HI	*	1.9%	0.9%	2.8%	-16.1%
OR		2.2%	0.3%	2.4%	-13.7%
CA		2.2%	0.2%	2.3%	-15.4%
MT		2.0%	0.2%	2.3%	-14.6%
ID		2.0%	0.2%	2.2%	-2.6%
CO		1.9%	0.2%	2.1%	-10.9%
WA		1.8%	0.2%	2.1%	-16.5%

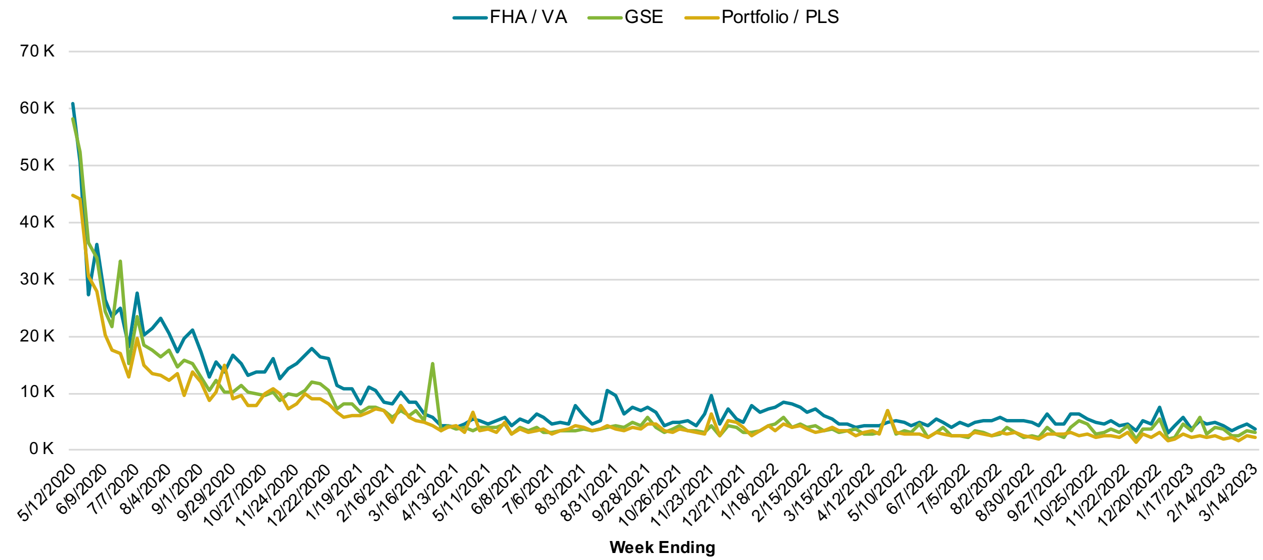
* Indicates Judicial State

ACTIVE FORBEARANCE PLANS



Source: McDash Flash
Data as of Feb. 14, 2023

NEW FORBEARANCE PLAN STARTS BY INVESTOR

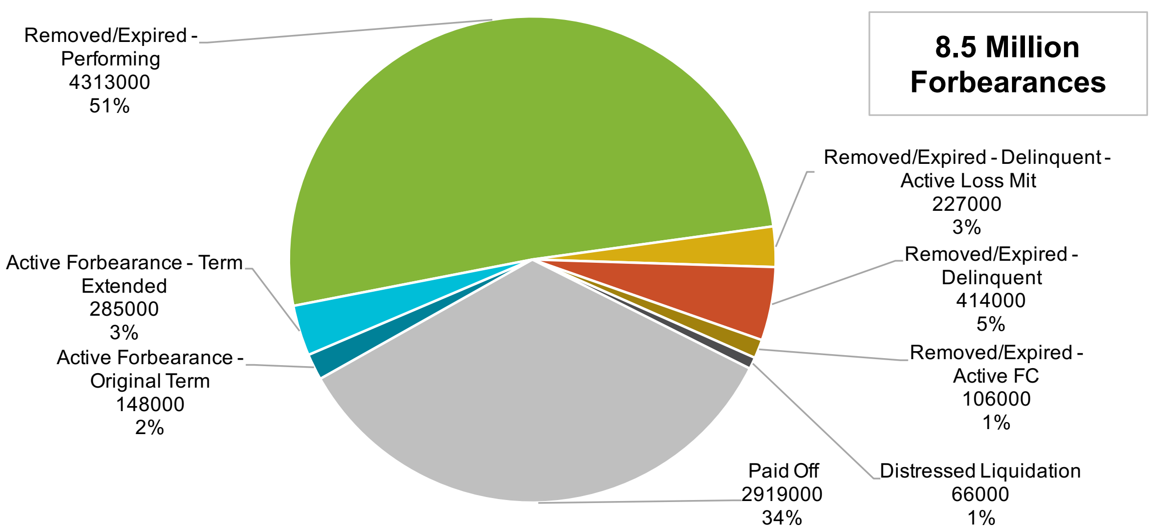


Source: McDash Flash

	Fannie & Freddie	FHA & VA	Other**	Total
Loans in Forbearance*	102,000	184,000	147,000	433,000
UPB of Loans in Forbearance ($Bil)*	$21	$35	$24	$81
Share of Loans in Forbearance*	0.4%	1.5%	1.1%	0.8%

Source: McDash Flash
Data as of March 14, 2023

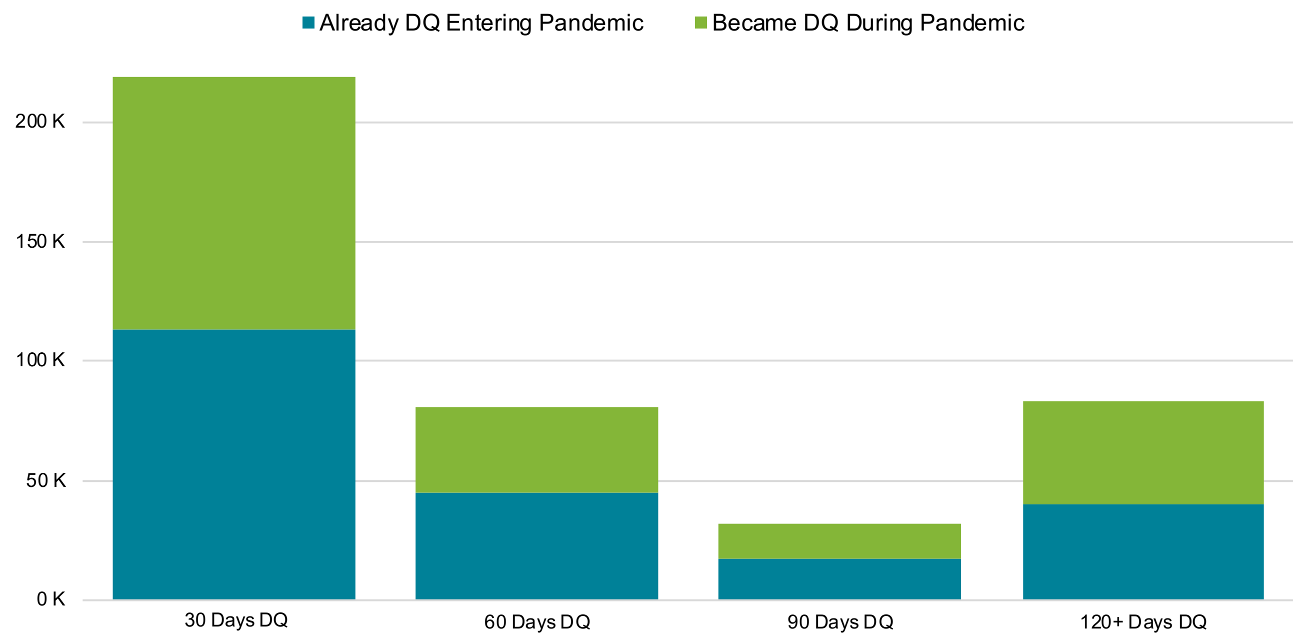
CURRENT STATUS OF COVID-19 RELATED FORBEARANCES



Source: McDash Flash
As March 14, 2023

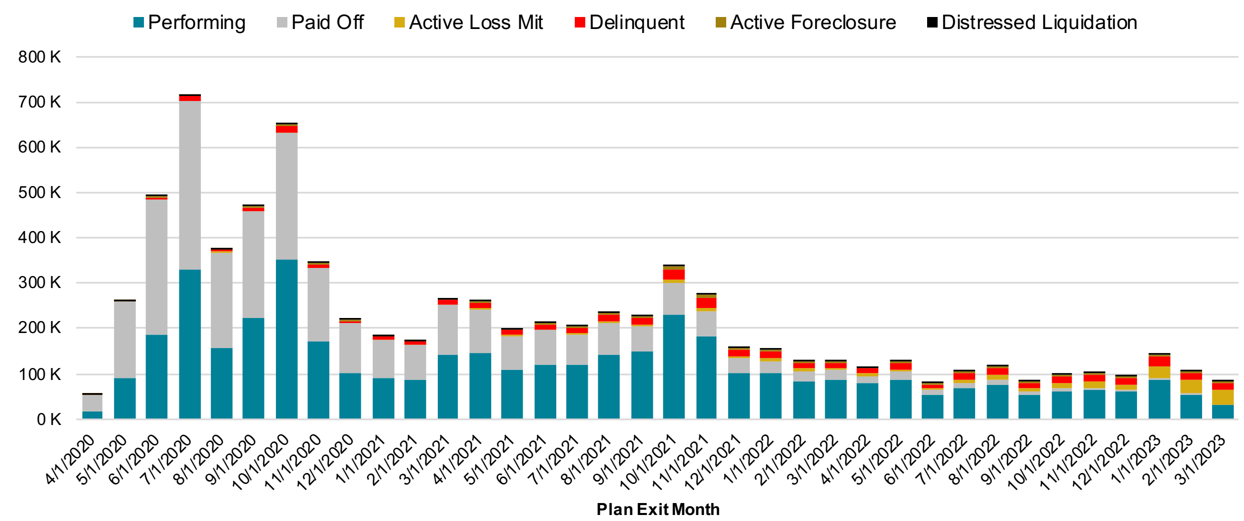
BREAKDOWN OF LOANS THAT REMAIN DELINQUENT FOLLOWING FORBEARANCE PLAN EXIT

(EXCLUDING LOANS IN ACTIVE LOSS MITIGATION OR FORECLOSURE)



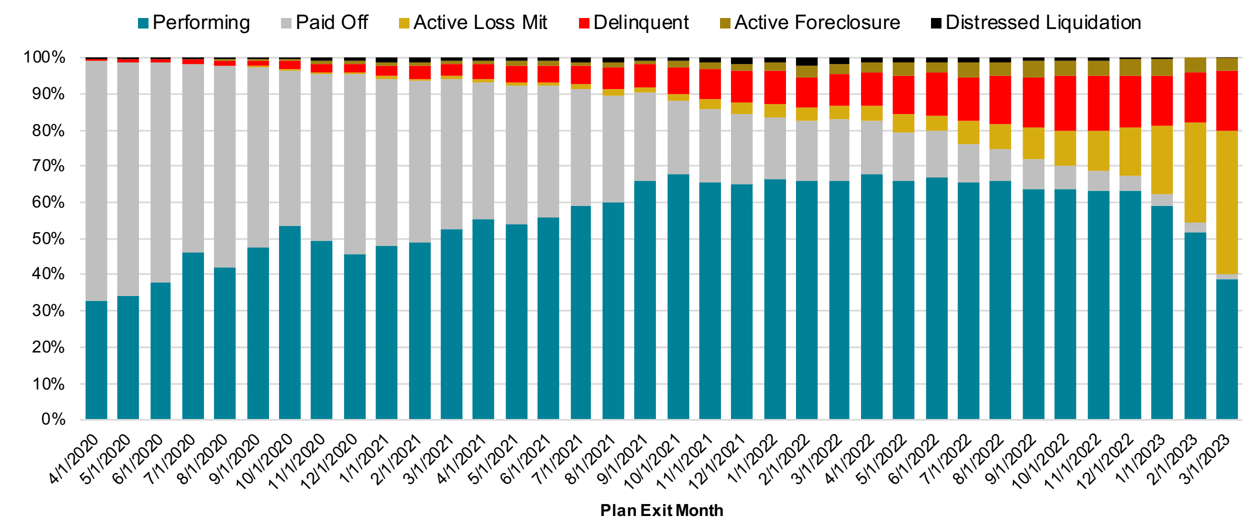
Source: McDash Flash

CURRENT STATUS OF LOANS THAT HAVE LEFT COVID-19 FORBEARANCE PLANS



Source: McDash Flash
March 2023 represents partial data through the 14th of the month

CURRENT STATUS OF LOANS THAT HAVE LEFT COVID-19 FORBEARANCE PLANS



Source: McDash Flash

Mortgage Monitor Disclosures

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FEBRUARY 2023 DEFINITIONS

TOTAL ACTIVE COUNT:	All active loans as of month-end, including loans in any state of delinquency or foreclosure. Post-sale loans and loans in REO are excluded from the total active count.
DELINQUENCY STATUSES (30, 60, 90+, ETC.):	All delinquency statuses are calculated using the MBA methodology based on the payment due date provided by the servicer. Loans in foreclosure are reported separately and are not included in the MBA days delinquent.
90-DAY DEFAULTS:	Loans that were less than 90-days delinquent in the prior month and were 90-days delinquent, but not in foreclosure, in the current month.
FORECLOSURE INVENTORY:	The servicer has referred the loan to an attorney for foreclosure. Loans remain in foreclosure inventory from referral to sale.
FORECLOSURE STARTS:	Any active loan that was not in foreclosure in the prior month that moves into foreclosure inventory in the current month.
NON-CURRENT:	Loans in any stage of delinquency or foreclosure.
FORECLOSURE SALE / NEW REO:	Any loan that was in foreclosure in the prior month that moves into post-sale status or is flagged as a foreclosure liquidation.
REO:	The loan is in post-sale foreclosure status. Listing status is not a consideration; this includes all properties on and off the market.
DETERIORATION RATIO:	The ratio of the percentage of loans deteriorating in delinquency status vs. those improving.