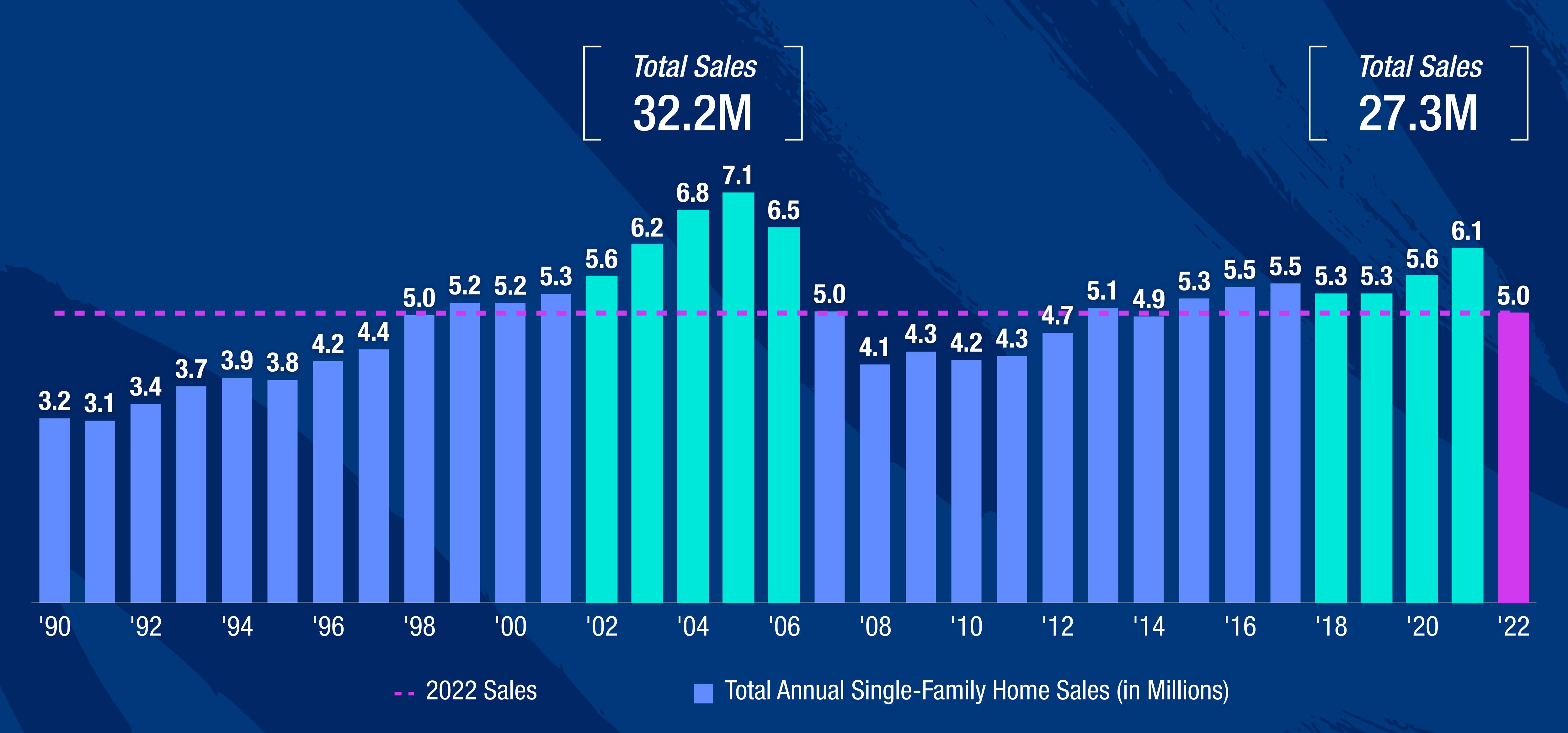
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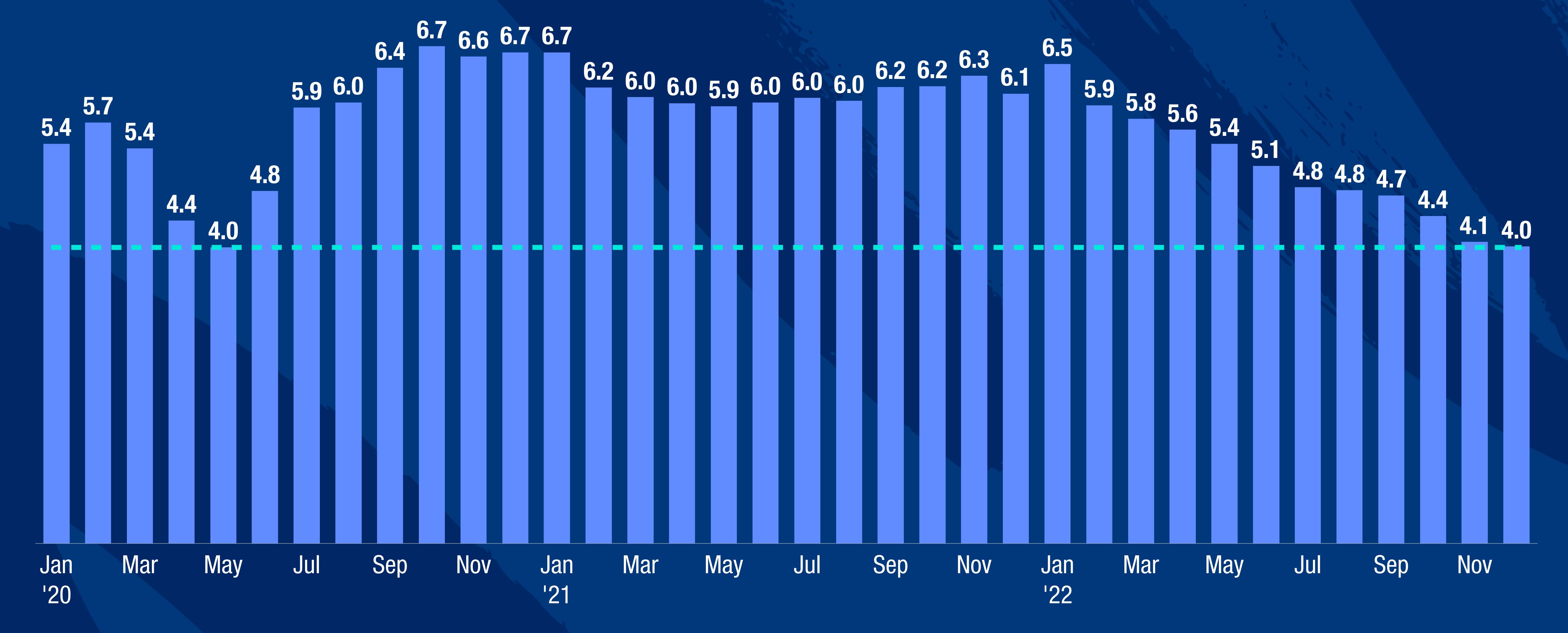
The Numbers That Drive U.S. Real Estate

- 1. Home Sales
- 2. Home Prices
- 3. Total Market Volume
- 4. Inventory
- 5. Mortgage Rates
- 6. Treasury Spread
- 7. Affordability

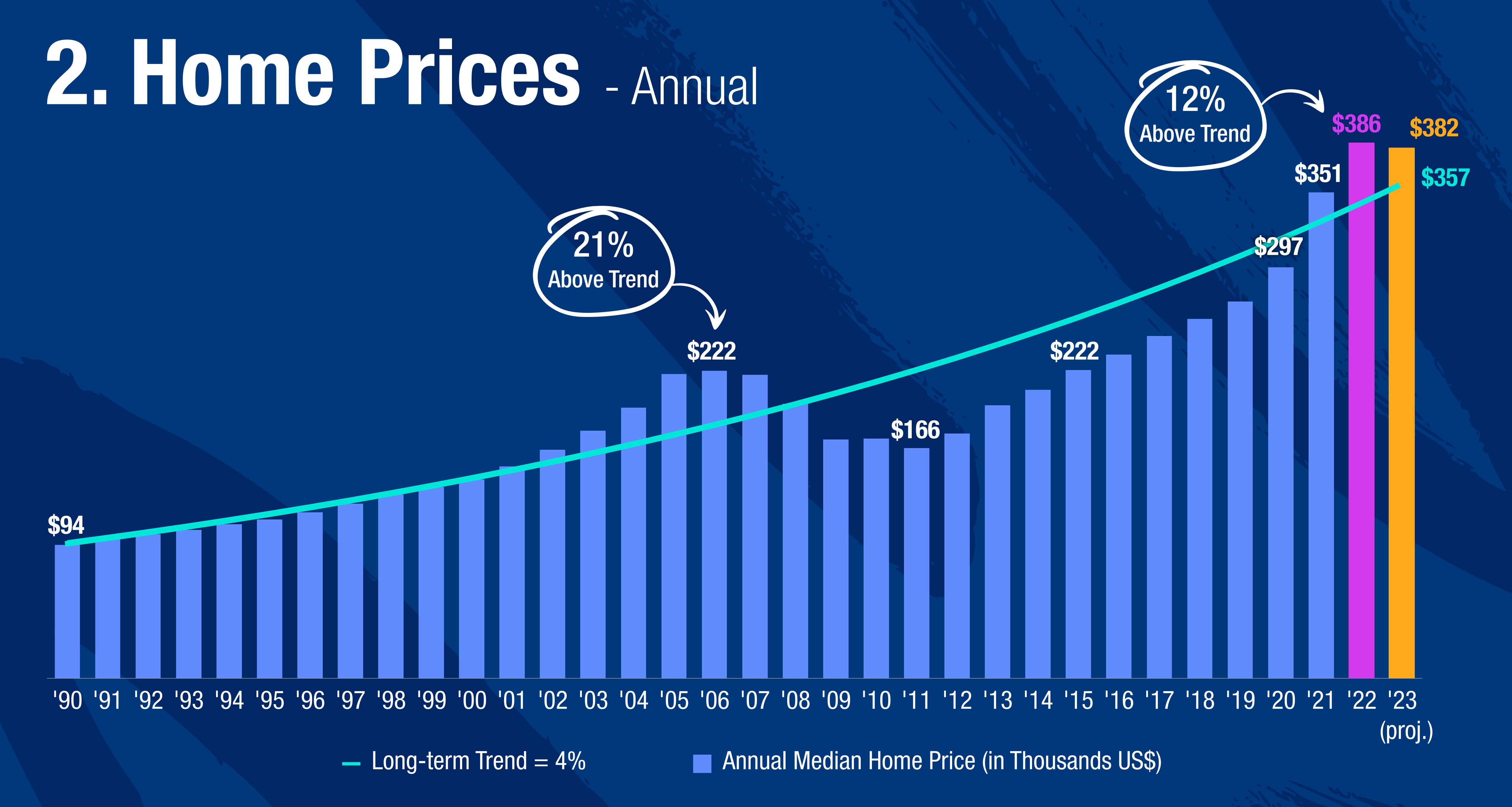
1. Home Sales - Annual



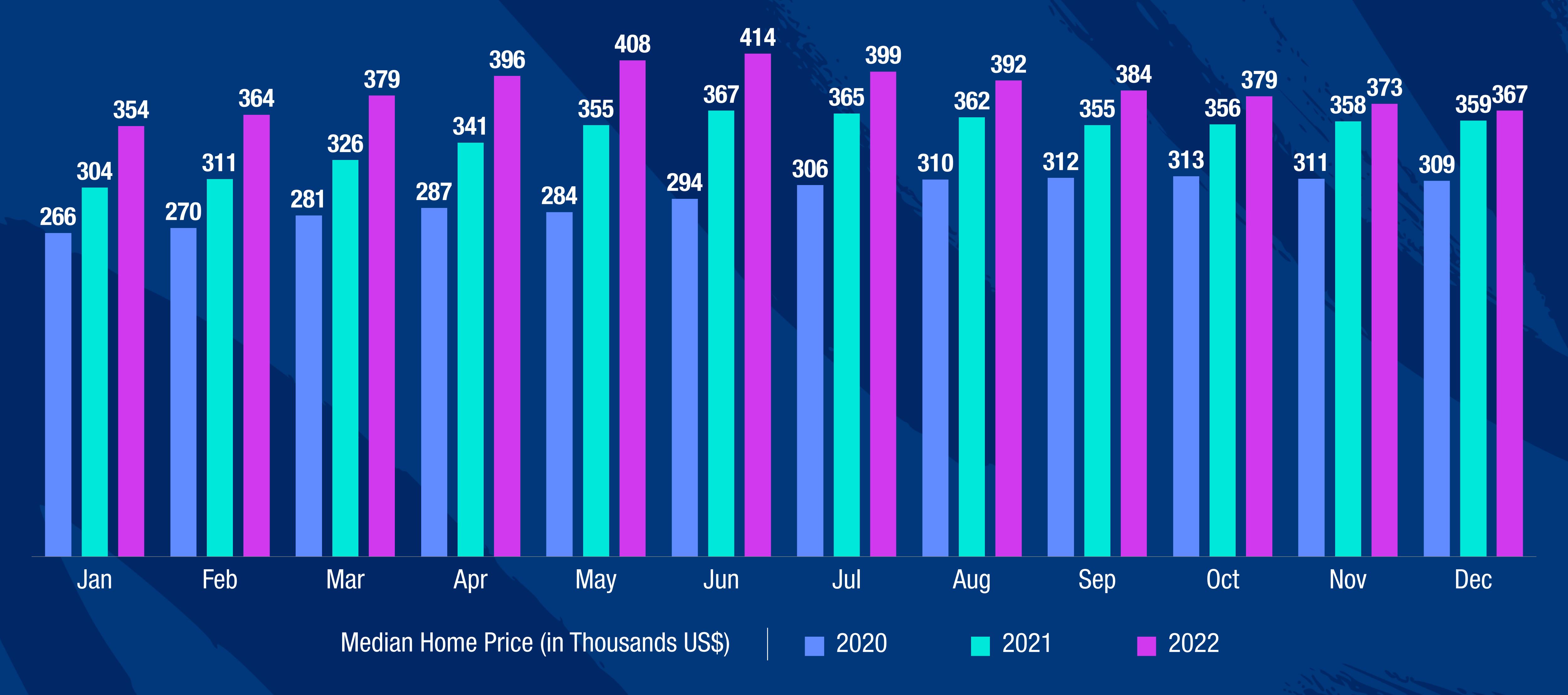
1. Home Sales - Monthly (Seasonally Adjusted)



Seasonally Adjusted Annualized Sales Rate (in Millions)



2. Home Prices - Monthly



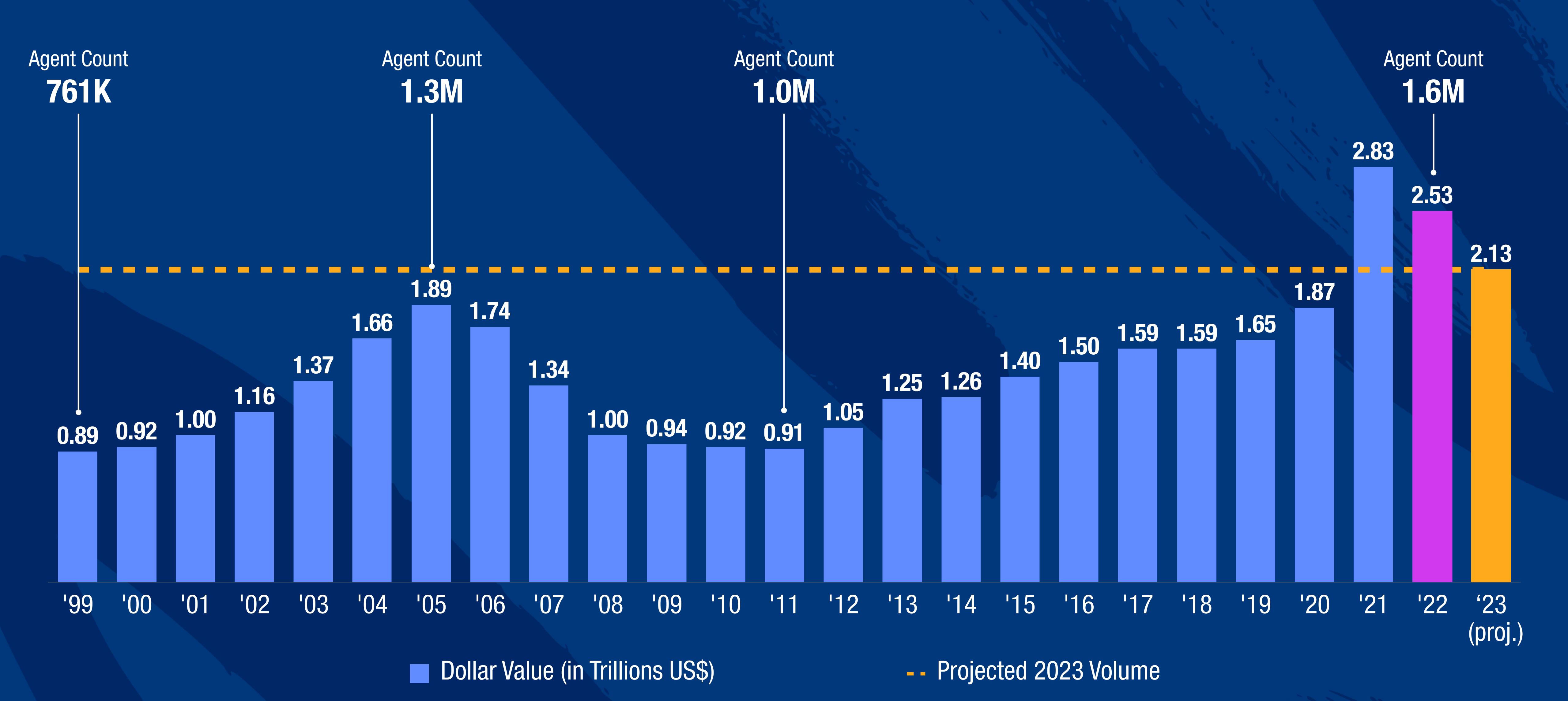
2. Home Prices - Annual Appreciation



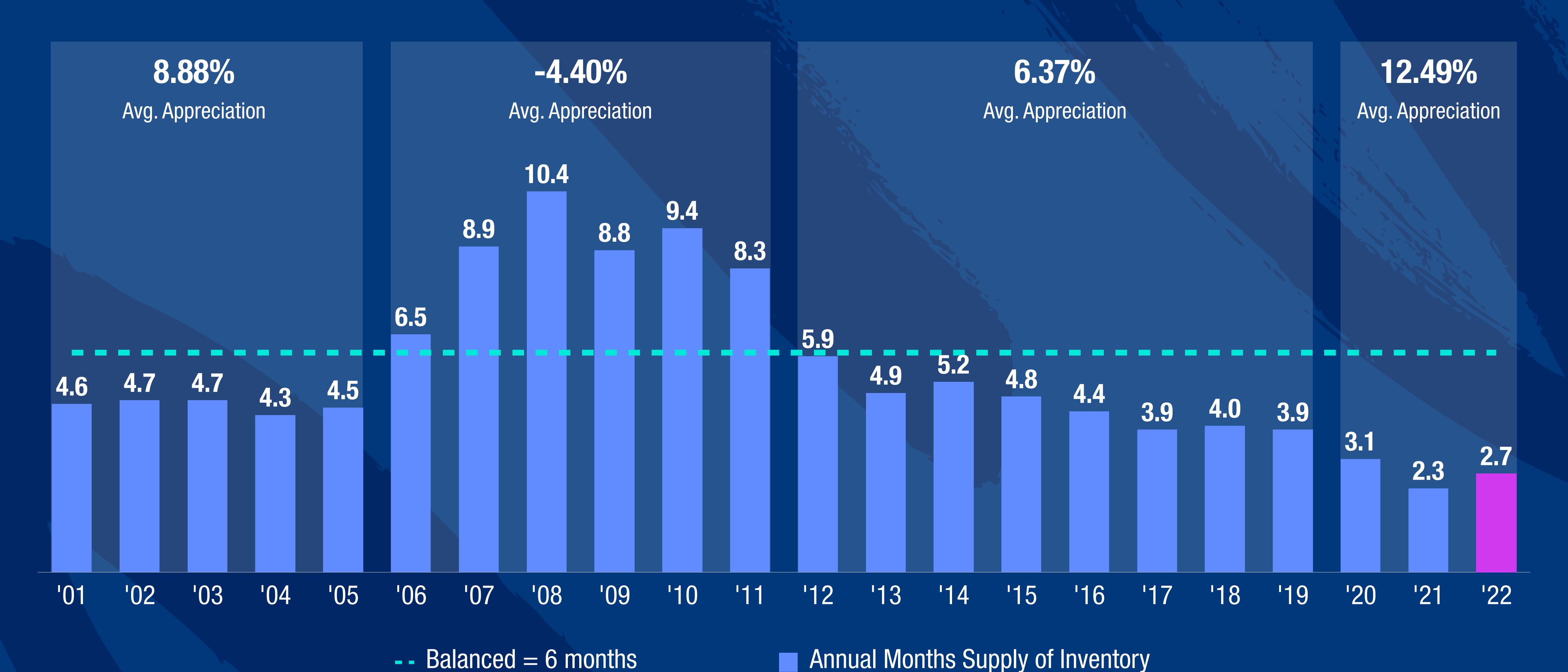
'90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22 '23 (proj.)

Annual Median Home Price Appreciation (%)

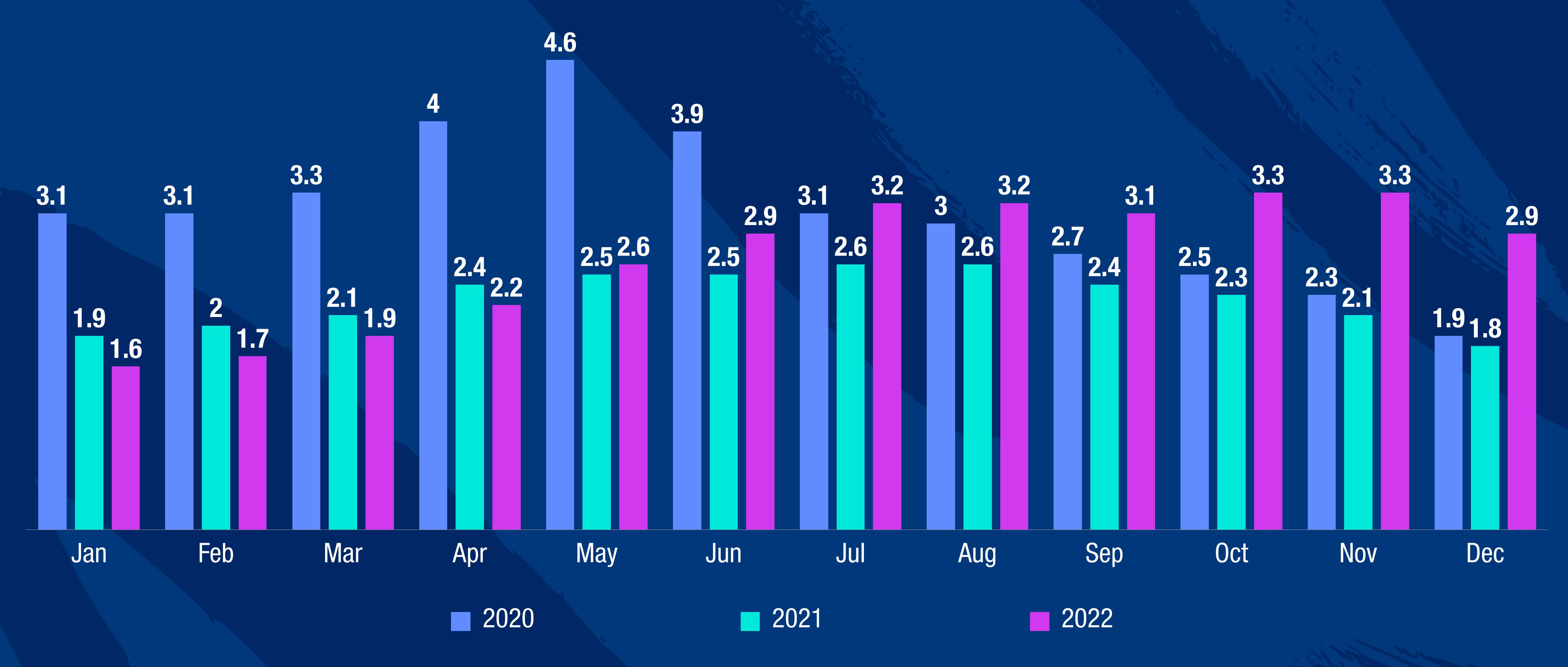
3. Total Market Volume



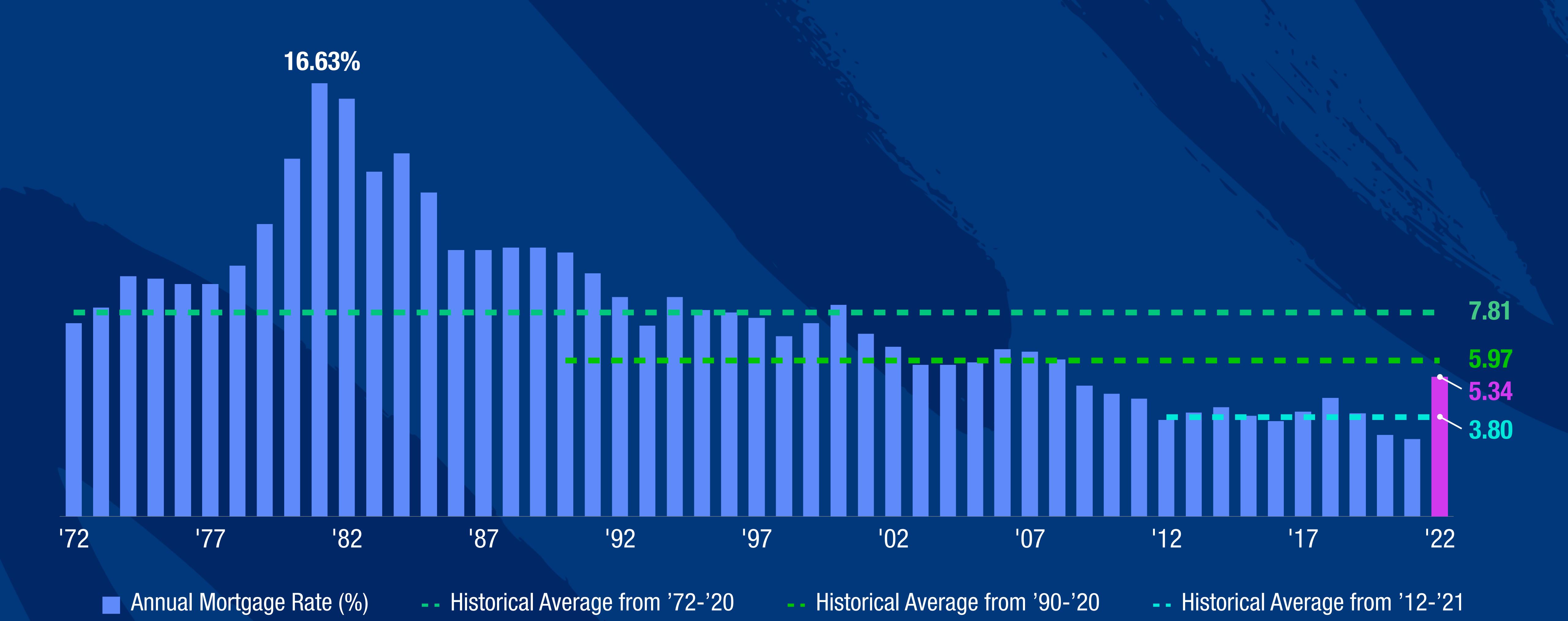
4. Inventory - Annual



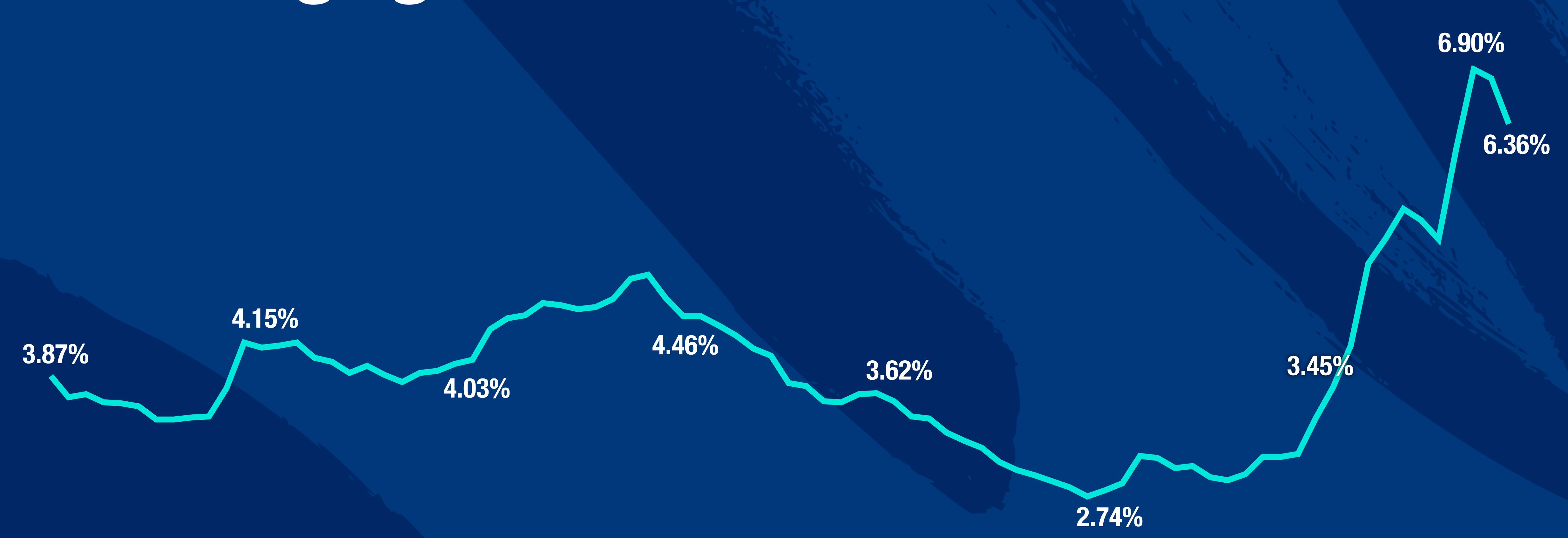
4. Inventory - Monthly



5. Mortgage Rates - Annual

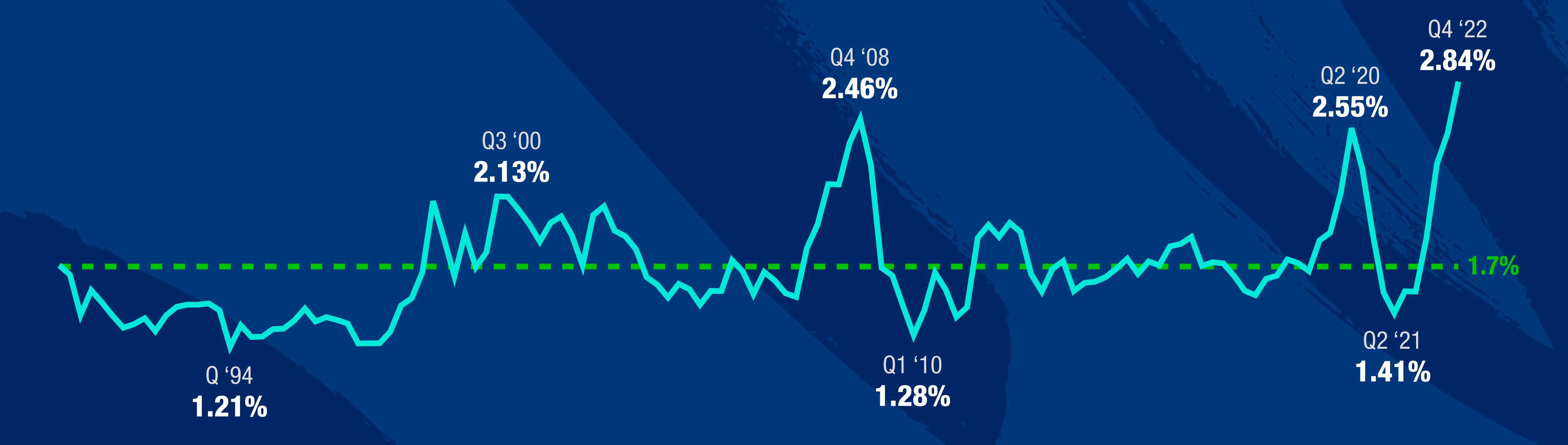


5. Mortgage Rates - Monthly



— Monthly Mortgage Rate

6. Treasury Spread

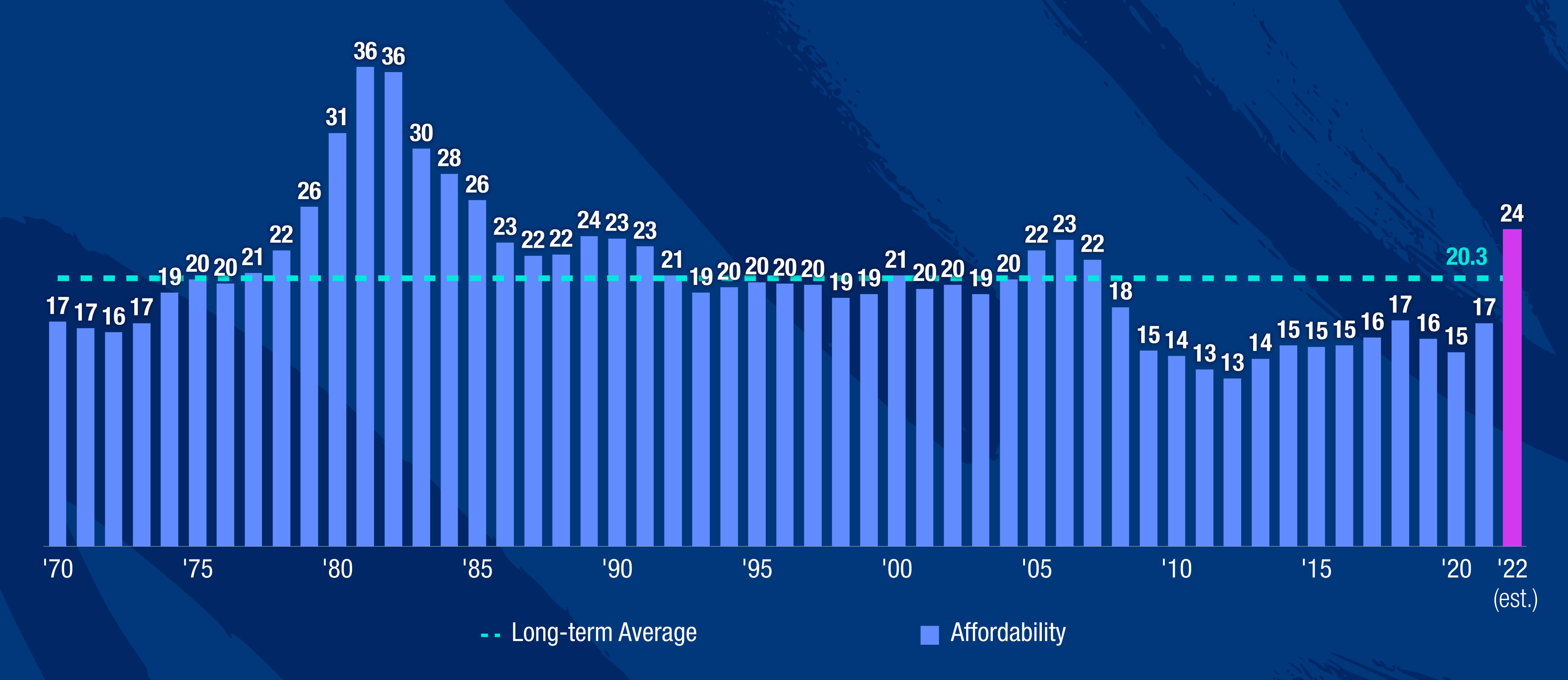


'90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22

Spread Between 30-year Fixed Rate Mortgage and 10-year Treasury

- Historical Average

7. Affordability



The U.S. Economy

- 1. Gross Domestic Product
- 2. Unemployment
- 3. Personal Savings Rate
- 4. Inflation

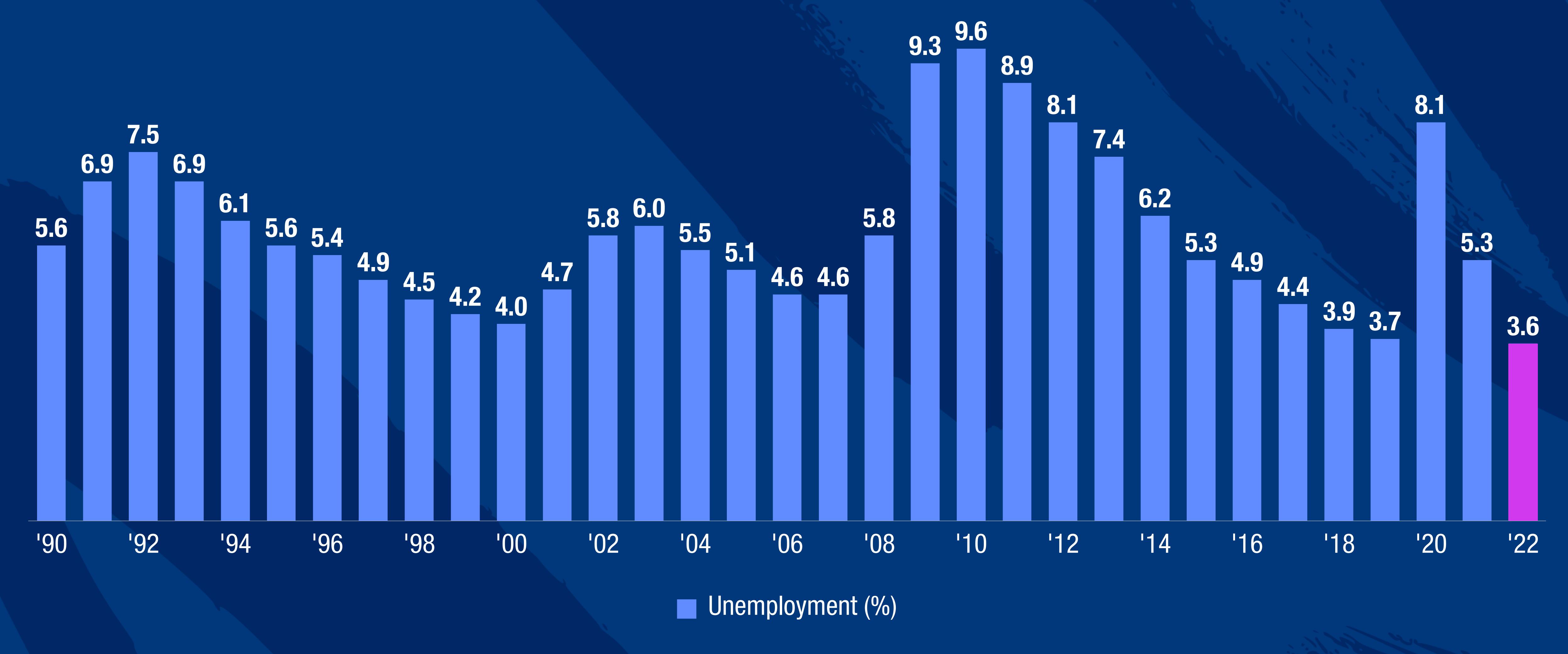
1. Gross Domestic Product - Annual



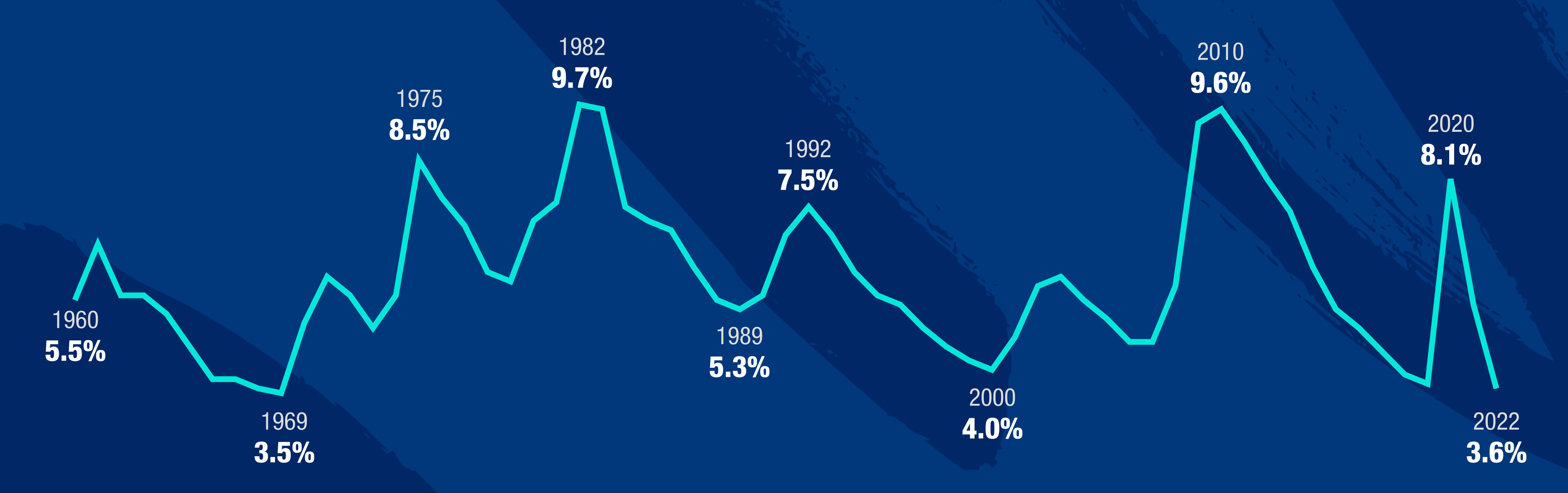
'90 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13 '14 '15 '16 '17 '18 '19 '20 '21 '22

Real GDP Year-over-Year Change (Percentage)

2. Unemployment - Annual



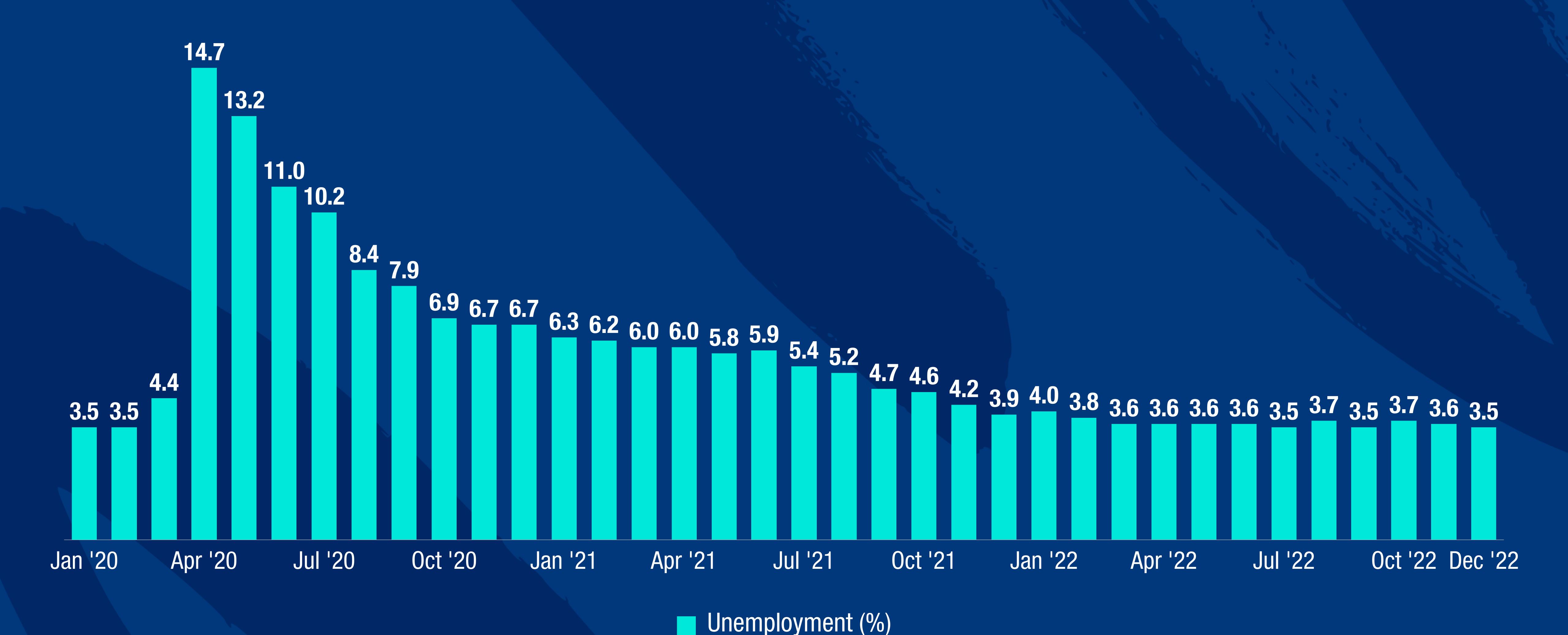
2. Unemployment - Annual



'60 '62 '64 '66 '68 '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

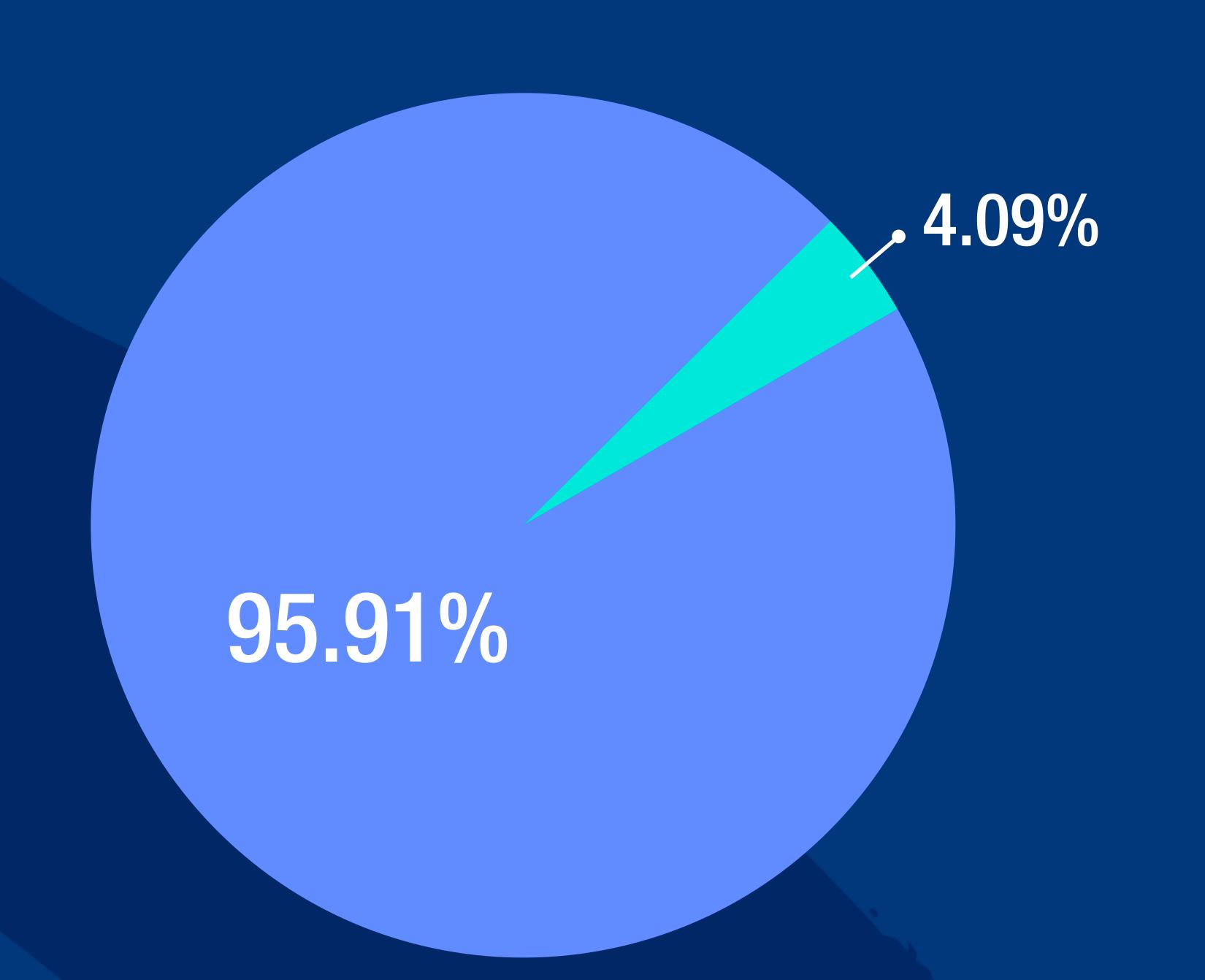
- Unemployment (%)

2. Unemployment - Monthly

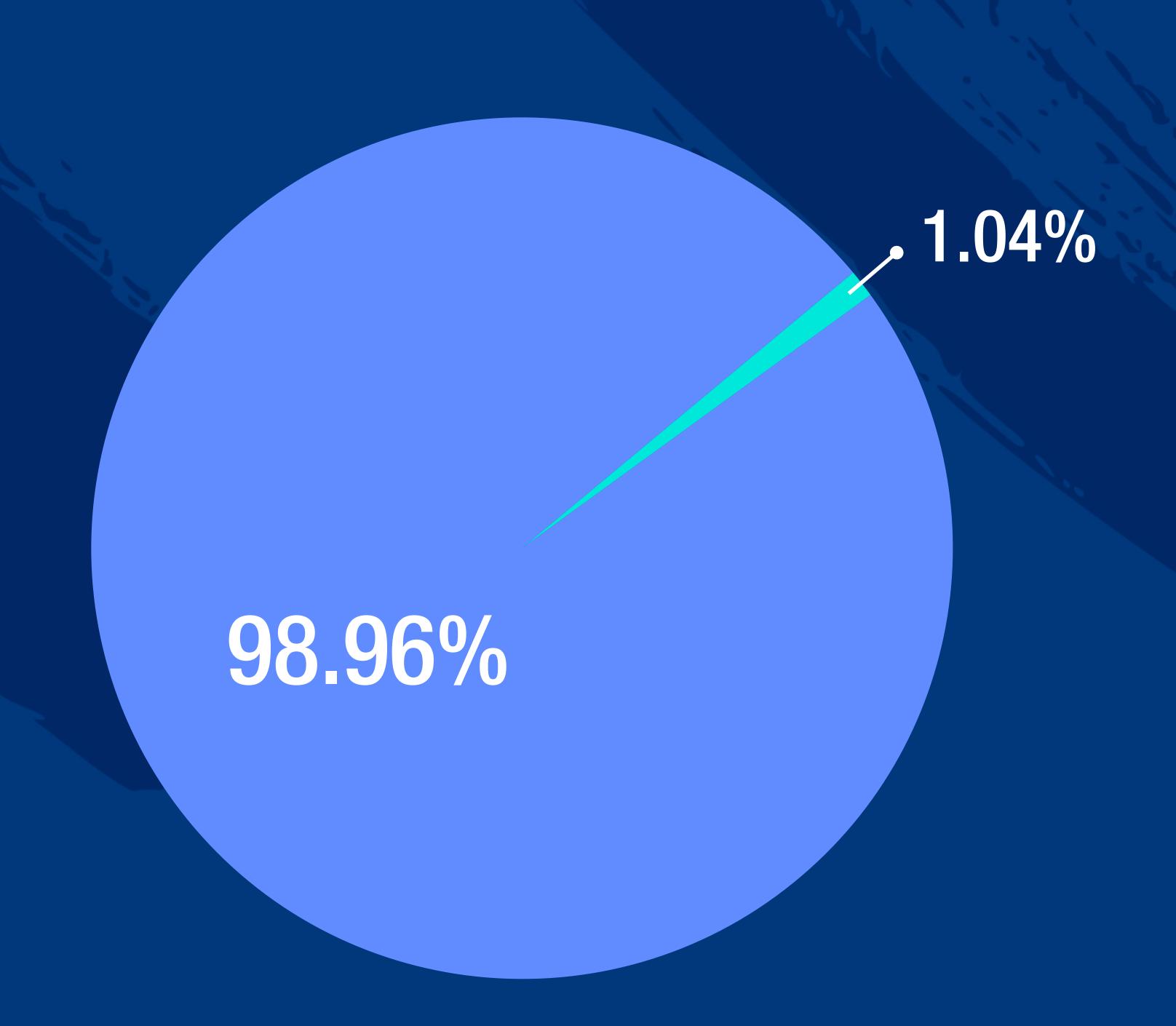


2. Unemployment - Layoffs

Nasdaq as a percentage of total employment



Layoffs as a percentage of Nasdaq

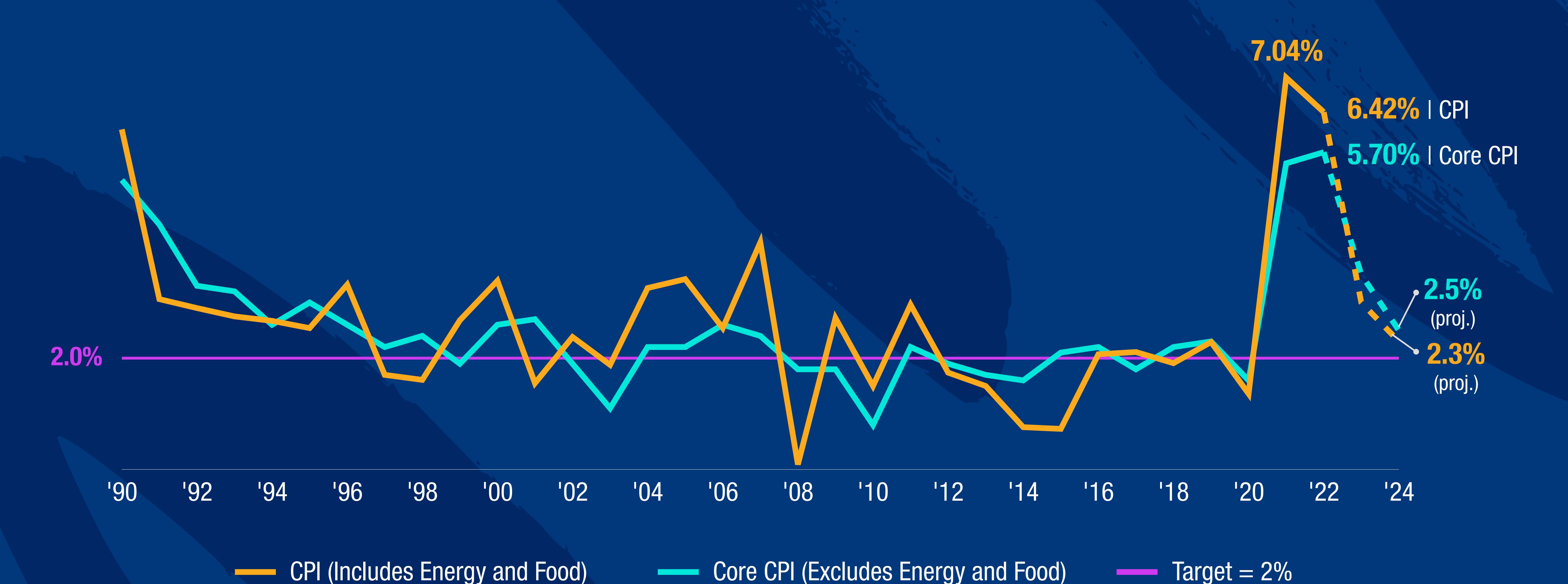


Layoffs as a percentage of total employment: 0.04%

3. Personal Savings Rate

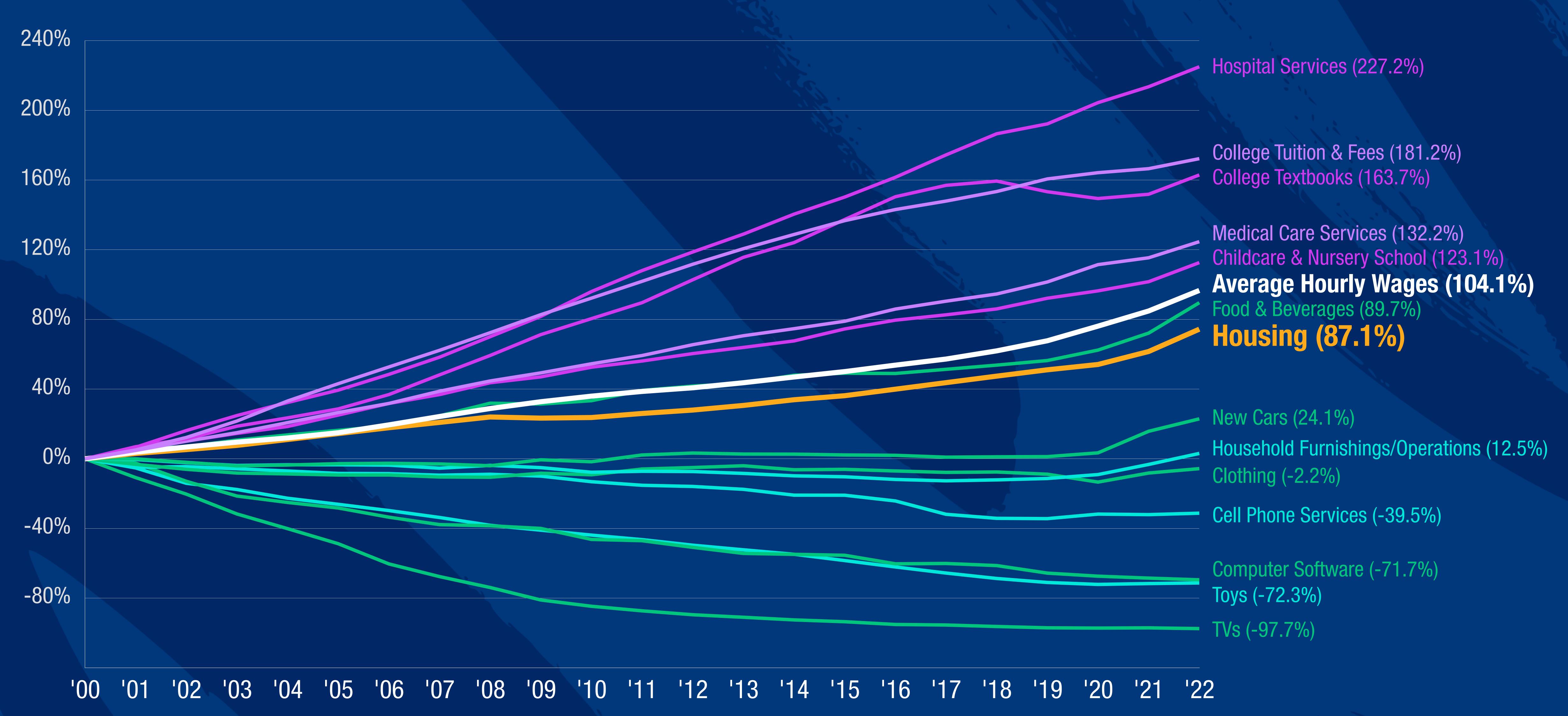


4. Inflation - Annual



The U.S. Economy | Vision 2023

4. Inflation - Affordability in Perspective



4. Inflation - Affordability in Perspective

	CAR	GAS	HOUSE		HOURLY WAGES
			Price	Mortgage	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
1989	\$15,350	\$0.97	\$94,000	\$678	\$9.80
1989 Adjusted for Inflation	\$37,620	\$2.38	\$230,379	\$1,675	\$24.02
2022	\$49,507	\$3.95	\$386,900	\$1,722	\$27.55
Real Change from 1989	31.60%	65.97%	67.94%	2.81%	14.70%

4. Inflation - Affordability in Perspective

	CAR	GAS	HOUSE AT		HOURLY WAGES
			Price	Mortgage	\$
2000	\$26,850	\$1.48	\$143,600	\$843	\$14.00
2000 Adjusted for Inflation	\$47,587	\$2.62	\$254,507	\$1,494	\$24.81
2022	\$49,507	\$3.95	\$386,900	\$1,722	\$27.55
Real Change from 2000	4.03%	50.76%	52.02%	15.26%	11.04%

U.S. Events

- 1. Sides Per Agent
- 2. Volume Per Agent
- 3. Listings with Price Drops
- 4. New Listings
- 5. Distressed Sales
- 6. Credit Conditions
- 7. New Homes
- 8. Student Loan Debt
- 9. Economic Risks in 2023
- 10. Rent vs. Own

1. Sides Per Agent

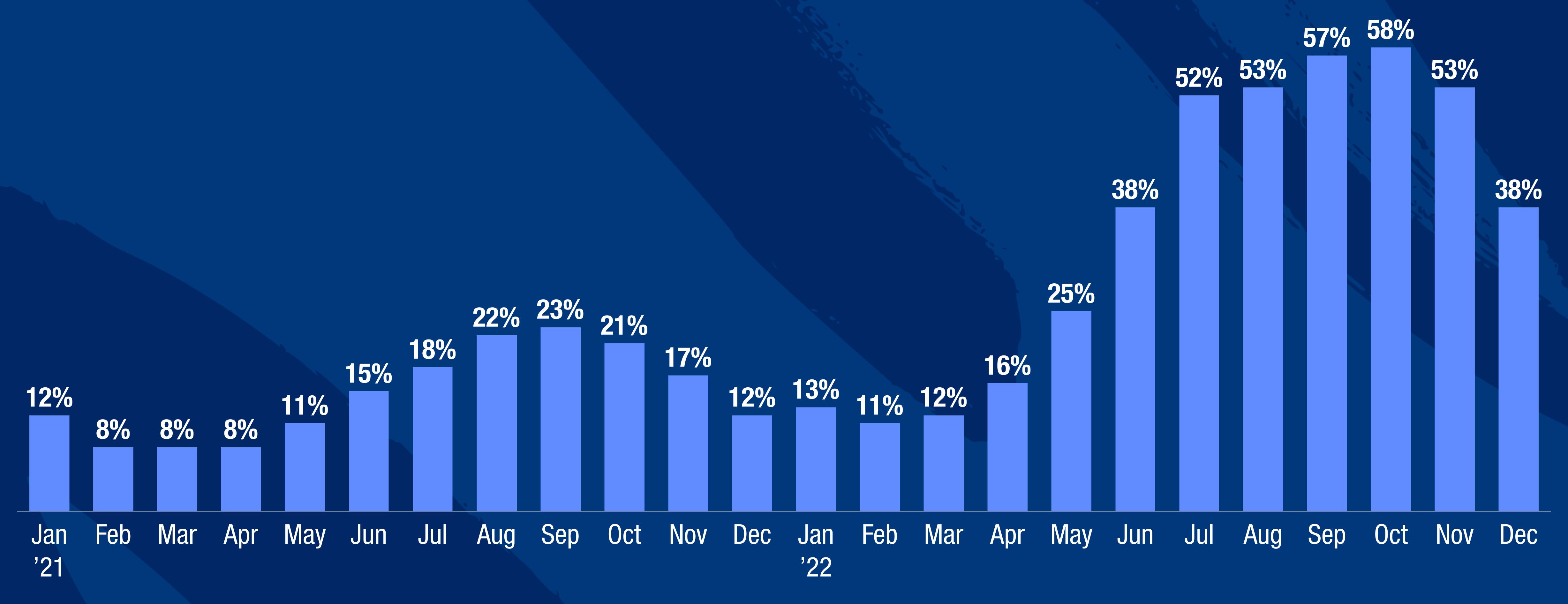


2. Volume Per Agent



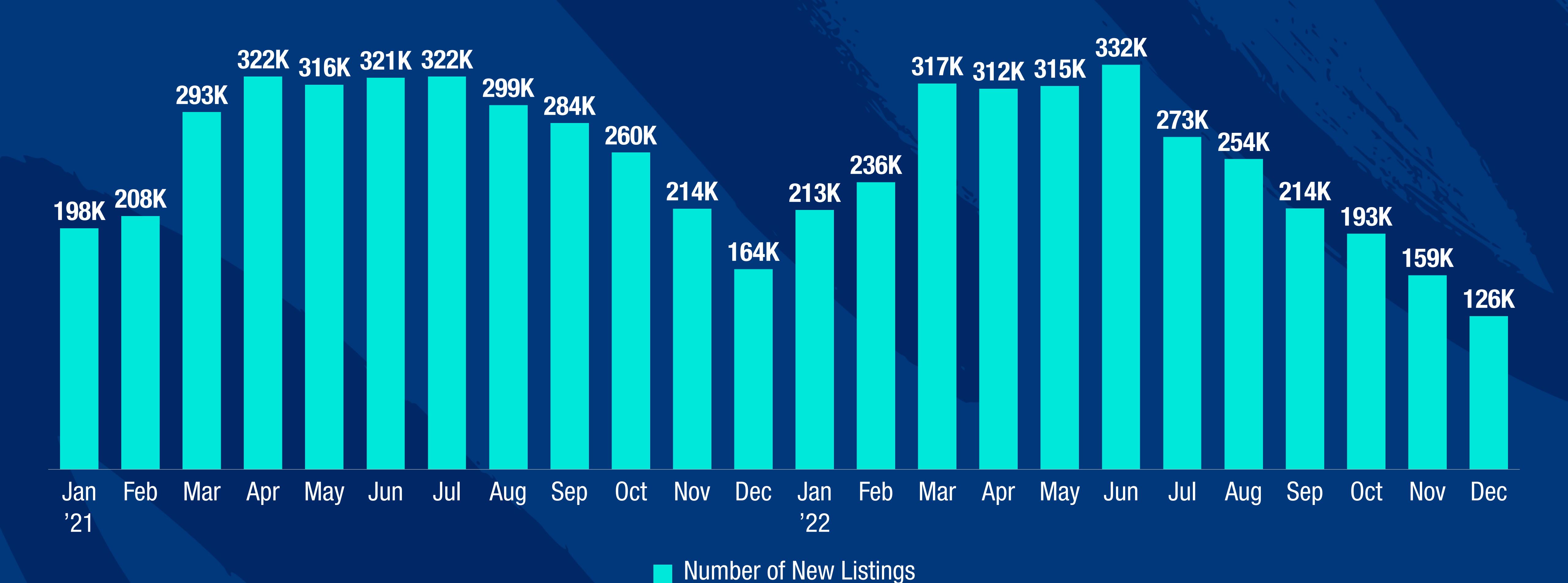
Volume Per Agent (in Millions US\$)

3. Listings with Price Drops - Percentage

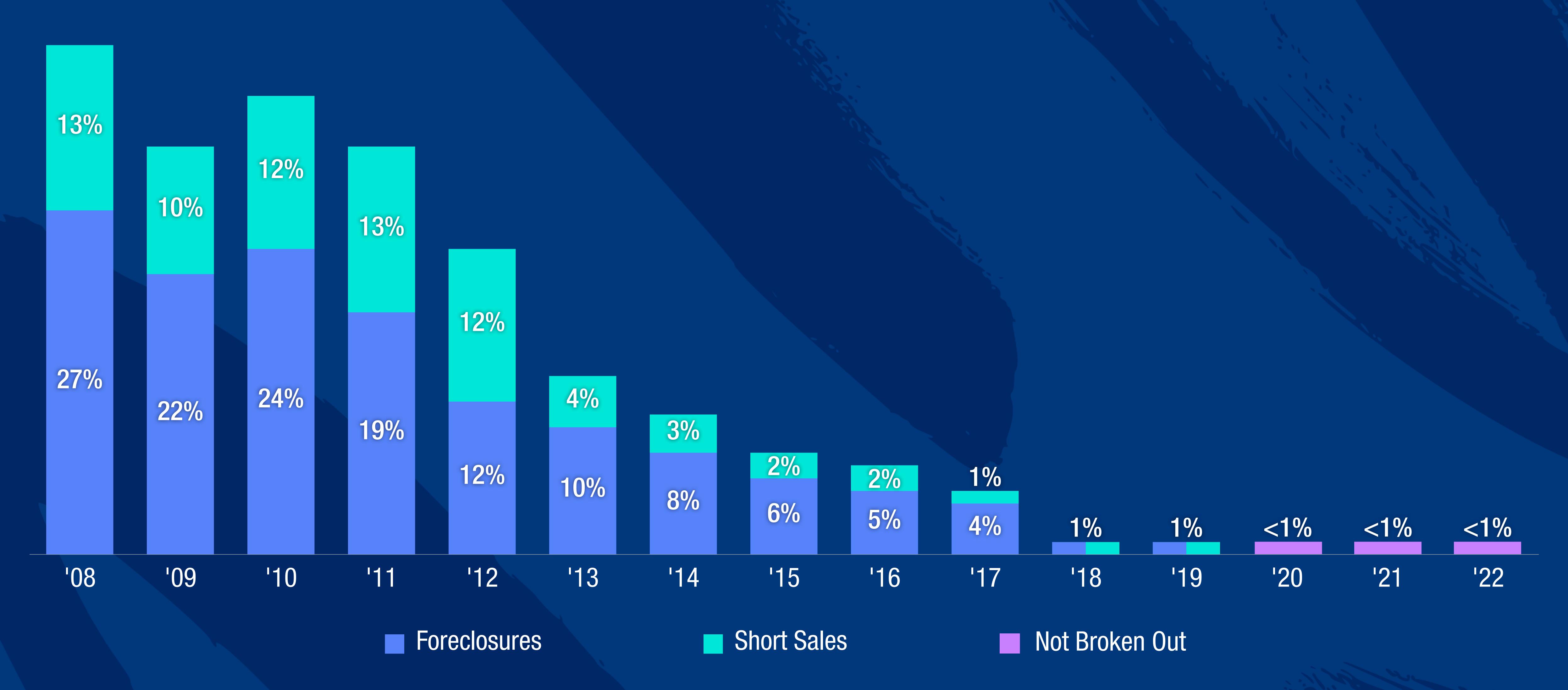


Percentage of Listings with at Least One Price Drop

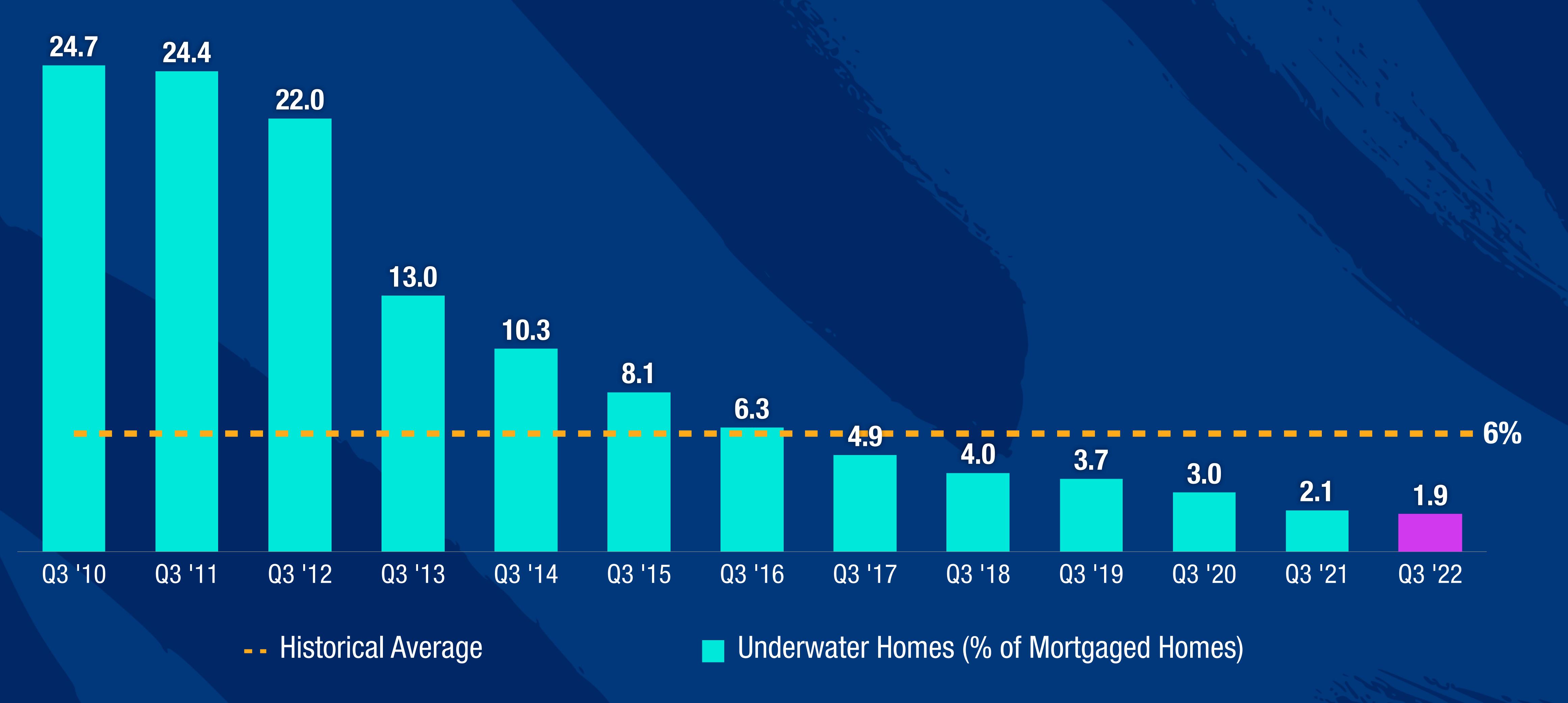
4. New Listings



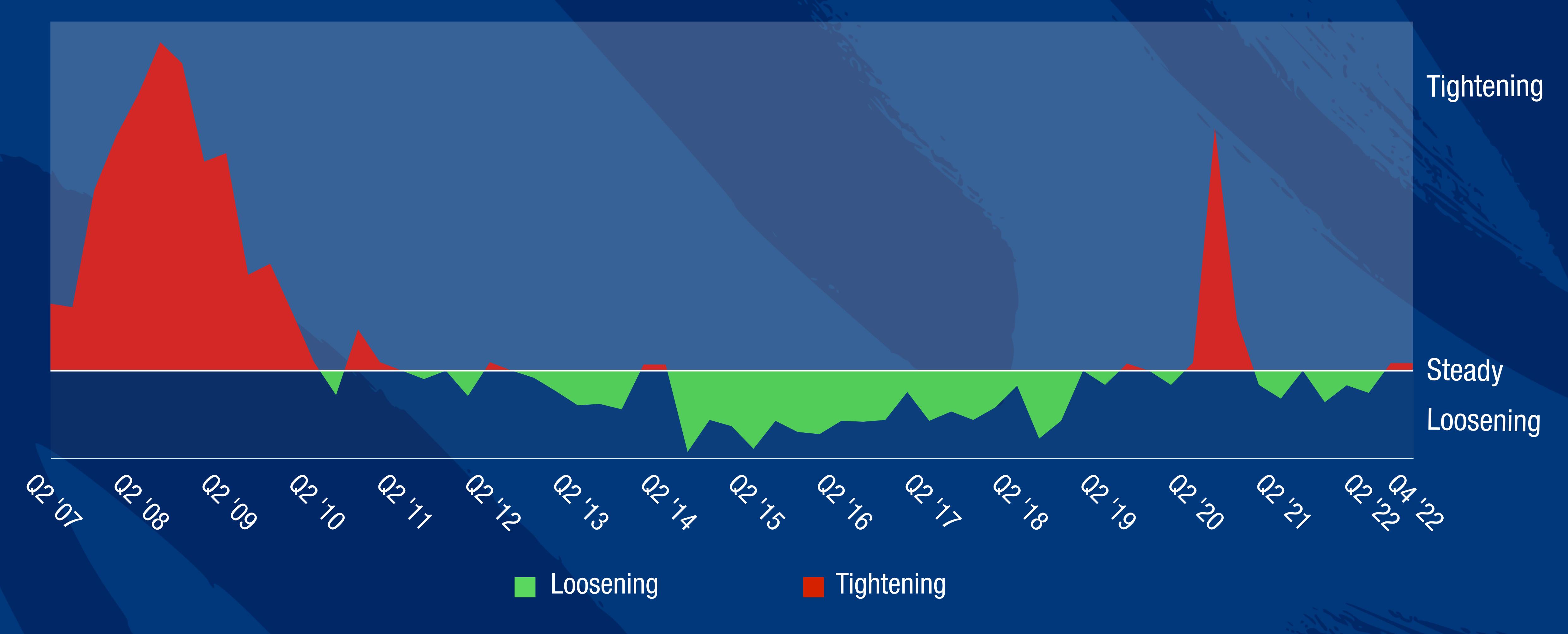
5.1. Distressed Sales



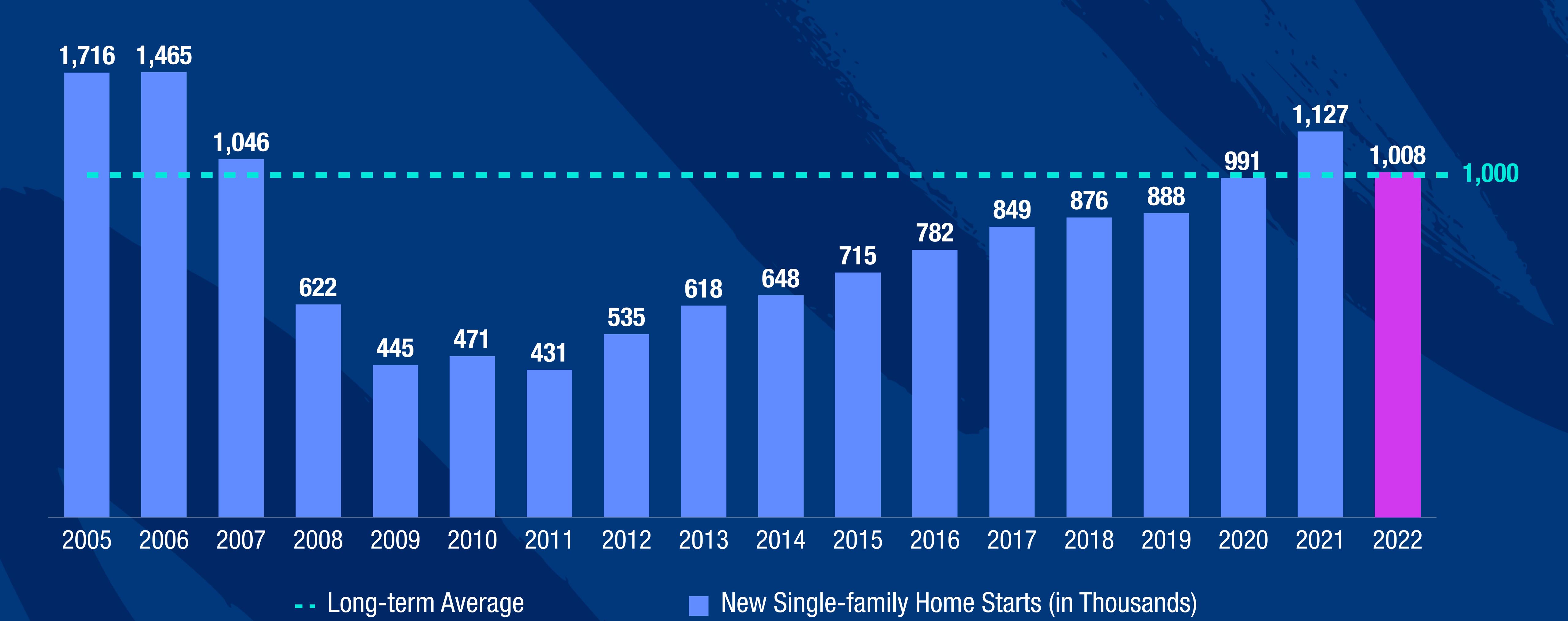
5.2. Underwater Homes



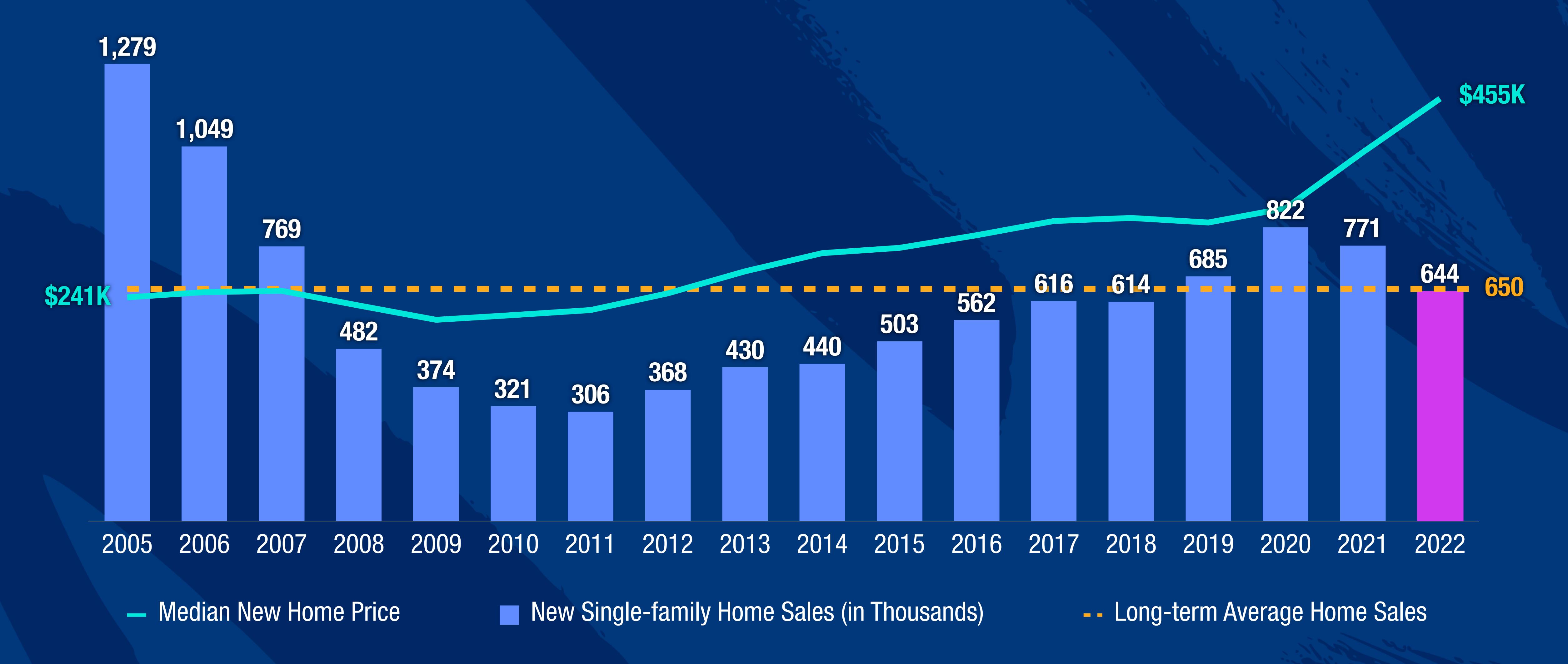
6. Credit Conditions



7.1. New Home Starts

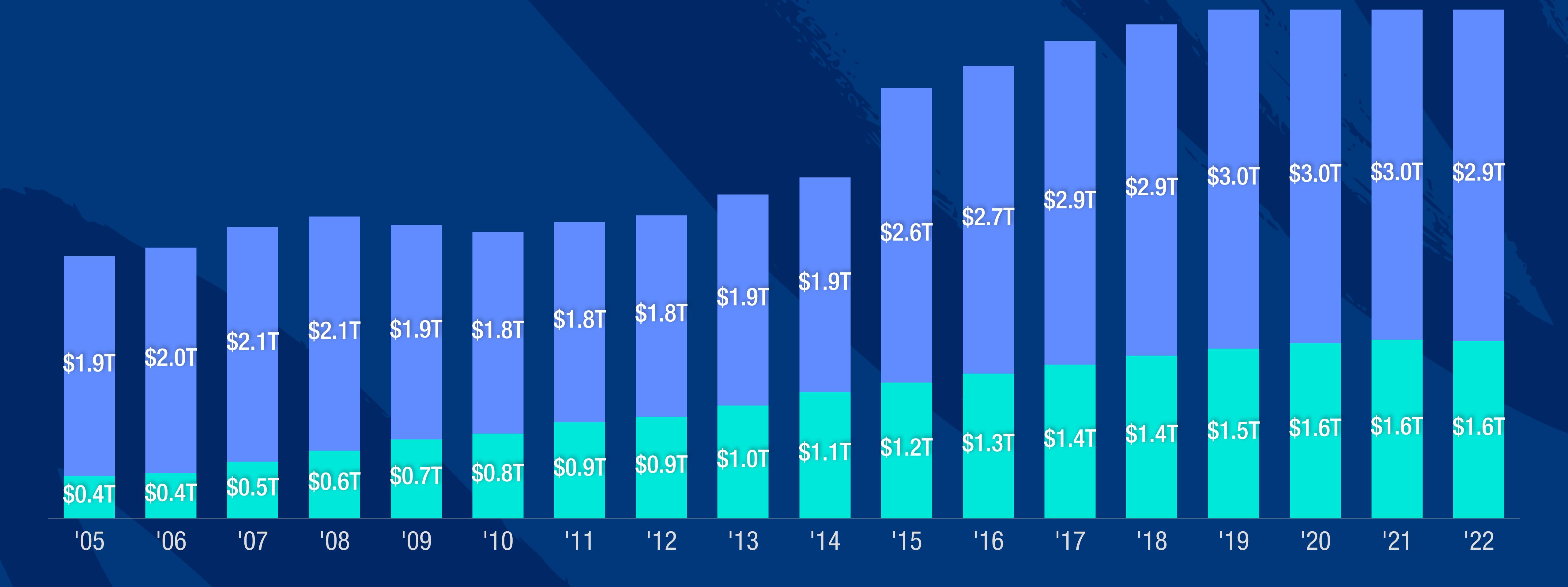


7.2. New Home Sales



8. Student Loan Debt

Student Loans (in Trillions)



All Other Consumer Debt (in Trillions; Excludes Mortgage)

9. Economic Risks in 2023

- 1. Further Escalation in Ukraine
- 2. A Resurgence in Inflation
- 3. Debt Ceiling Brinkmanship
- 4. Political Tensions with China
- 5. Continuing Environmental Concerns

10. Rent vs. Own

	Year	Owning	Renting and Investing	Renting and 10% Investing
	2012	\$9,980	\$26,472	\$22,700
2	2013	\$28,969	\$36,631	\$29,652
3	2014	\$42,784	\$42,787	\$33,228
4	2015	\$60,006	\$44,137	\$33,151
5	2016	\$74,154	\$50,186	\$36,498
6	2017	\$90,027	\$61,998	\$43,792
7	2018	\$105,560	\$59,737	\$41,221
8	2019	\$121,419	\$79,268	\$53,353
9	2020	\$149,263	\$95,113	\$62,324
10	2021	\$206,676	\$124,000	\$79,414
11	2022	\$234,124.00	\$106,229	\$66,418

- 1. The World's Wealthy
- 2. Allocation of Financial Investments
- 3. Days on Market

1. The World's Wealthy

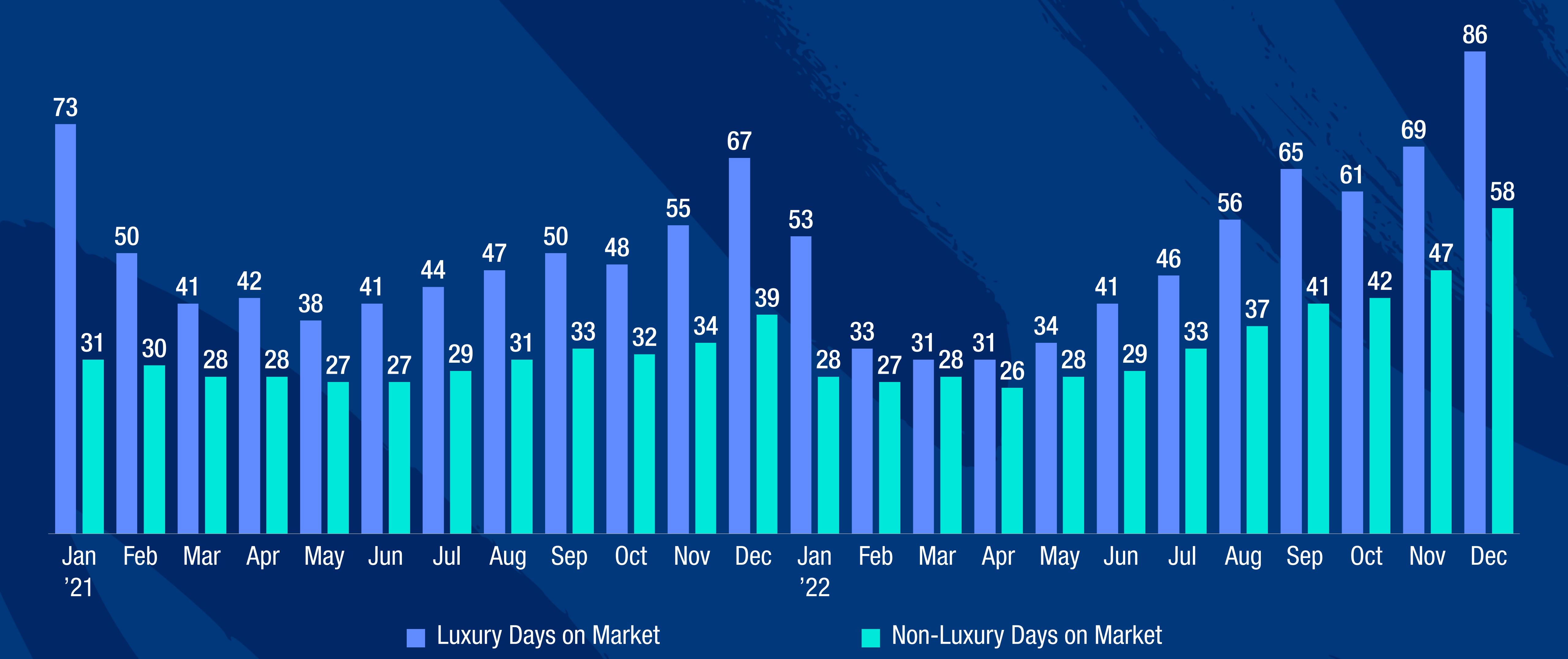
Year	HNWI* in US	HNWI in Canada	Global HNWI	Wealth of Global HNWIs
2008	2.5M	231K	8.6M	\$32.8T
2009	2.9M	251K	10.0M	\$39.0T
2010	3.1M	282K	10.9M	\$42.7T
2011	3.1M	280K	11.0M	\$42.0T
2012	3.4M	298K	12.0M	\$46.2T
2013	4.0M	320K	13.7M	\$52.6T
2014	4.4M	331K	14.6M	\$56.4T
2015	4.5M	321K	15.4M	\$58.7T
2016	4.8M	357K	16.6M	\$63.5T
2017	5.3M	377K	18.1M	\$70.2T
2018	5.3M	362K	18.0M	\$68.1T
2019	5.9M	392K	19.6M	\$74.0T
2020	6.6M	403K	20.8M	\$79.6T
2021	7.5M	439K	22.5M	\$86.0T

^{*}HNWI = High Net Worth Individuals

2. Allocation of Financial Investments

Year	Real Estate	Cash/Deposits	Fixed Income	Stock Market	Alt. Investments
2008	18%	21%	29%	25%	7%
2009	18%	17%	31%	29%	6%
2010	19%	14%	29%	33%	5%
2012	20%	28%	16%	26%	10%
2013	19%	27%	16%	25%	14%
2014	18%	26%	17%	27%	13%
2015	18%	24%	18%	25%	16%
2016	18%	24%	18%	25%	16%
2017	14%	27%	18%	31%	10%
2018	17%	27%	16%	31%	9%
2019	16%	28%	18%	26%	13%
2020	15%	25%	17%	30%	13%
2021	15%	24%	18%	30%	14%
2022	15%	24%	18%	29%	14%

3. Days on Market



Commercial

- 1. Commercial Trends
- 2. Multifamily Units Started
- 3. Loan Delinquency Rates

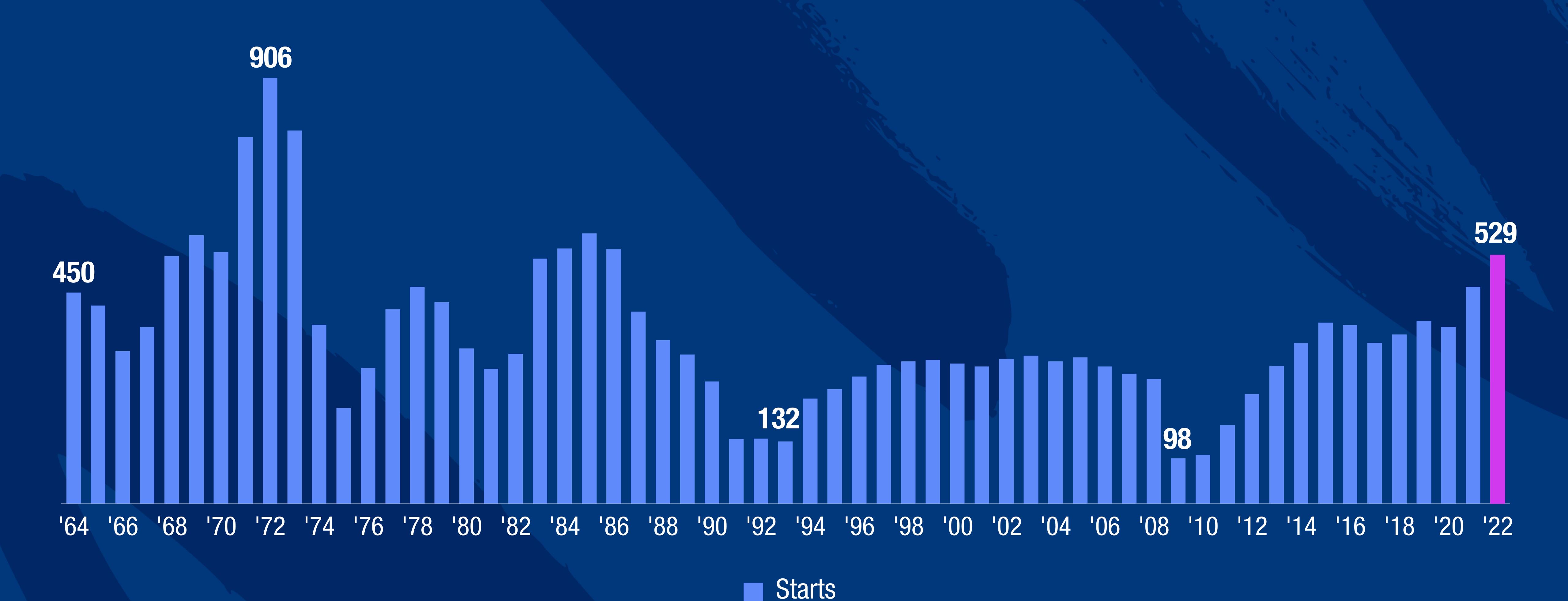
1. Commercial Trends

- 1. Office remains in limbo as companies try and figure out what the new normal is for remote, hybrid, and in-office work.
 - a. Ultimately it will reduce sq. ft. per worker.
- 2. Industrial continues to be driven by the growth of ecommerce.
 - a. Supply-chain reinforcement will also drive new project demand.
- 3. Retail will remain stable as a result of slow construction over the last decade.
 - a. Stores will look to enhance experiences with tech to draw more customers back to stores and to address labor shortages.

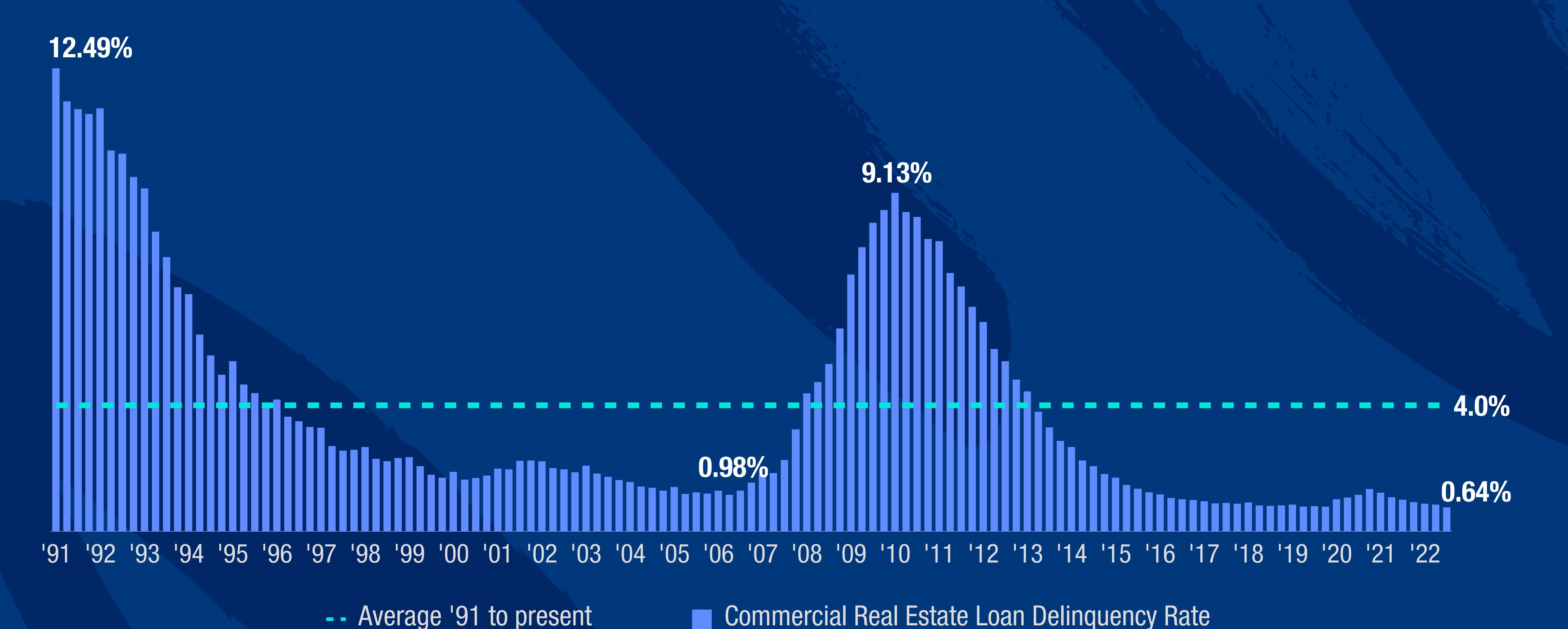
4. Multifamily

- a. A large number of new units is coming onto the market in 2023. 529,000 units started in 2022.
- b. New projects are slowing due to high interest rates
- c. Demand for apartment rentals will continue to be boosted by affordability challenges.

2. Multifamily Units Started



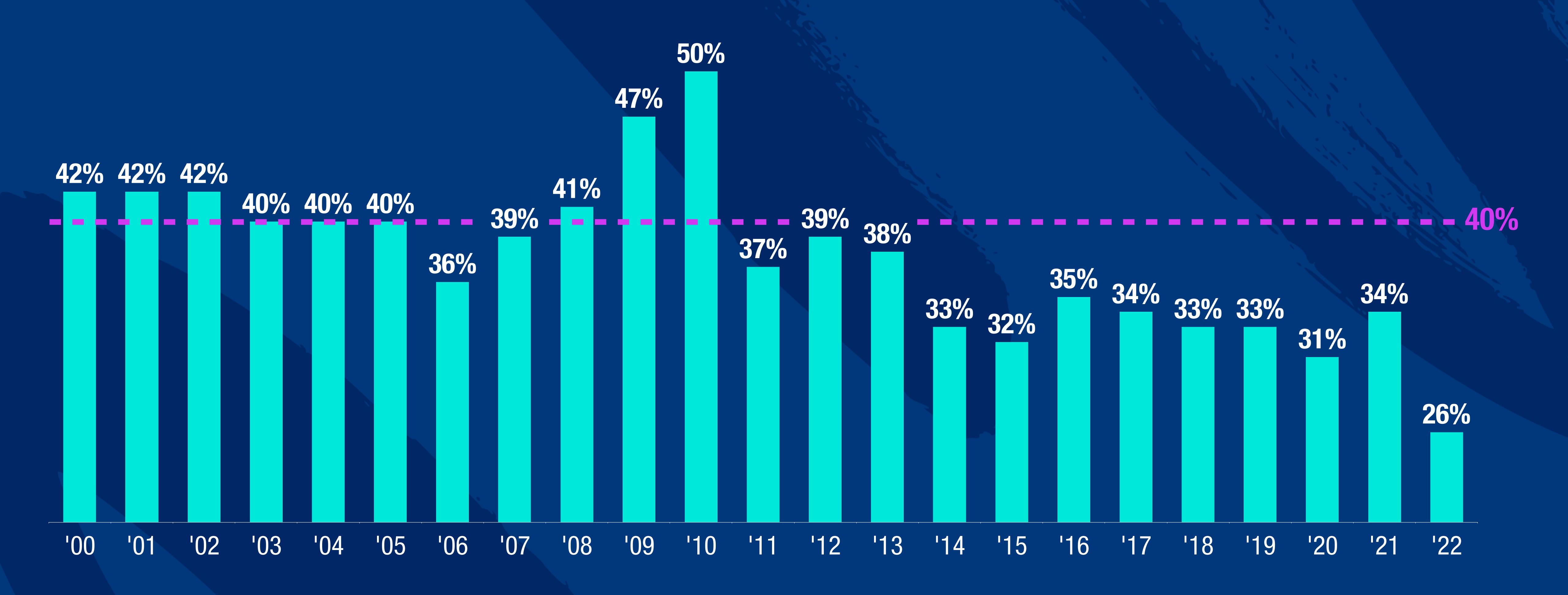
3. Loan Delinquency Rates



National Association of REALTORS®

2022 Profile of Home Buyers and Sellers

First-Time Home Buyers



First-time Home Buyers

Primary Reason for Purchasing a Home

	2006	2010	2016	2017	2018	2019	2020	2021	2022
Desire to own a home	32%	31%	31%	30%	29%	29%	27%	28%	22%
Desire to be closer to family/friends	*	5	7	8	8	9	9	10	16
Desire for a home in a better area	8	5	6	7	7	7	6	7	8
Desire for a smaller home	5	3	6	5	5	6	6	5	8
Retirement	4	3	5	5	5	5	5	5	8
Desire for a larger home	14	9	10	10	9	9	10	11	7
Change in family situation	9	8	8	8	7	8	8	7	6
Job-related relocation or move	12	7	8	8	8	7	6	5	6
Establish a household	*	2	3	2	2	3	2	3	2
Affordability	*	6	3	3	2	2	3	2	2
Financial Security	*		2	2	2	2	2	2	2
Desire to be closer to job/school/transit	7	3	3	4	3	3	3	2	
Desire for a newly built or custom-built home	N/A	N/A	2	2	2	2	2	2	

^{*} Less than 1%

Tenure in Previous Home

	2007	2010	2016	2017	2018	2019	2020	2021	2022
1 year or less	6%	3%	3%	4%	9%	4%	4%	8%	4%
2 to 3 years	23	8	10	10	15	13	11	16	10
4 to 5 years	17	16	11	12	12	14	14	14	13
6 to 7 years	13	18	12	10	8	11	12	10	12
8 to 10 years	13	17	15	14	12	10	11	9	12
11 to 15 years	12	17	21	21	17	16	16	15	13
16 to 20 years	7	8	11	11	11	12	13	11	10
21 years or more	10	13	16	17	16	19	20	18	25
Median	6	8	10	10	9	10	10	8	10

Buyer's Expected Tenure

	2006	2010	2016	2017	2018	2019	2020	2021	2022
1 year or less	1%	1%	1%	1%	1%	1%	1%	2%	3%
2 to 3 years	11	3	3	3	5	5	5	5	5
4 to 5 years	18	12	9	9	14	14	14	16	15
6 to 7 years	7	3	3	3	4	4	4	4	2
8 to 10 years	12	13	15	14	22	20	23	23	17
11 to 15 years	6	5	6	6	10	10	9	9	8
16 to 20 years	20	22	26	27	43	45	44	41	50
Don't Know	24	42	38	36				1	
Median	8	10	12	15	15	15	15	12	15

Weeks in Home Search



First Step in Buying Process

	2007	2010	2016	2017	2018	2019	2020	2021	2022
Looked online for properties for sale	32%	36%	44%	42%	44%	44%	43%	41%	52%
Contacted a real estate agent	20	19	17	17	17	16	18	19	19
Contacted a bank or mortgage lender	7	8	7	8	7	7	7	9	7
Looked online for information about the buying process	12	11	13	12	11	12	9	10	6
Drove by homes/neighborhoods		7	6	6	6	5	6	5	5
Talked with a friend or relative about buying process	9	7	6	6	6	6	7	7	4
Contacted a home seller directly	2						2		2
Looked up neighborhood information	*	*							2
Visited open houses	7	4	3	3	4	4	4	2	
Contacted builder/visited builder models							2	2	
Attended a home buying seminar	1	2	1	1			1		*
Looked in newspapers, magazines, or home buying guides	5	2						*	*

^{*} Less than 1%

Information Sources Buyers Use

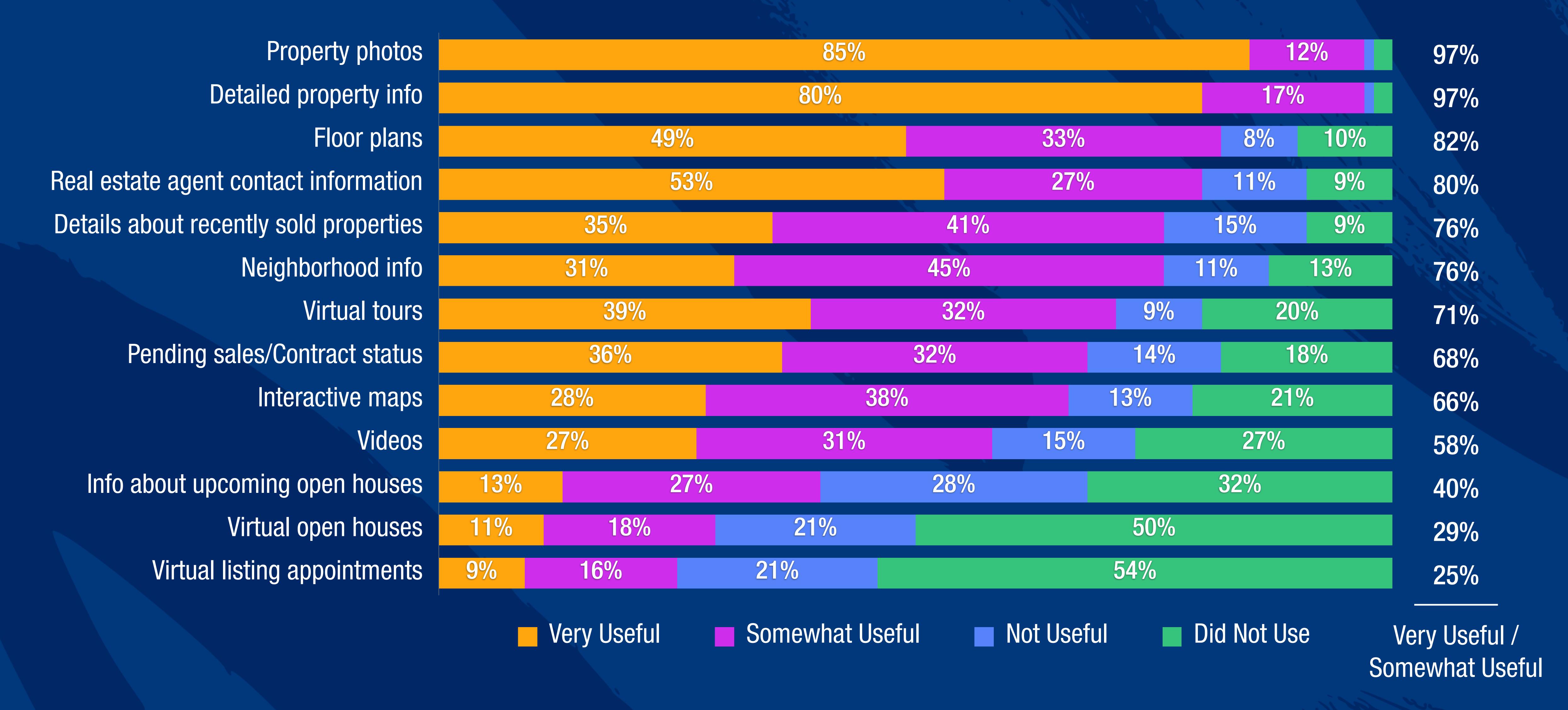
			77776						
	2006	2010	2016	2017	2018	2019	2020	2021	2022
Real estate agent	85%	88%	92%	89%	86%	87%	87%	87%	86%
Mobile or tablet search device	N/A	N/A	72	74	73	73	76	74	73
Online video site	N/A	N/A	36	39	37	35	41	40	40
Yard sign	63	57	49	48	46	39	41	35	39
Open house	47	45	50	52	53	51	53	41	28
Print newspaper advertisement	55	36	16	15	13	11	10	7	12
Home builder	26	16	14	19	18	15	18	19	9
Home book or magazine	34	23	12	12	10	7	8	6	7
Billboard	9	5	4	5	5	4	4	4	2
Television		7	3	2	3	3	3	2	2
Relocation company	5	3	3	3	3	3	3	2	2

Where Buyers Found the Home They Purchased

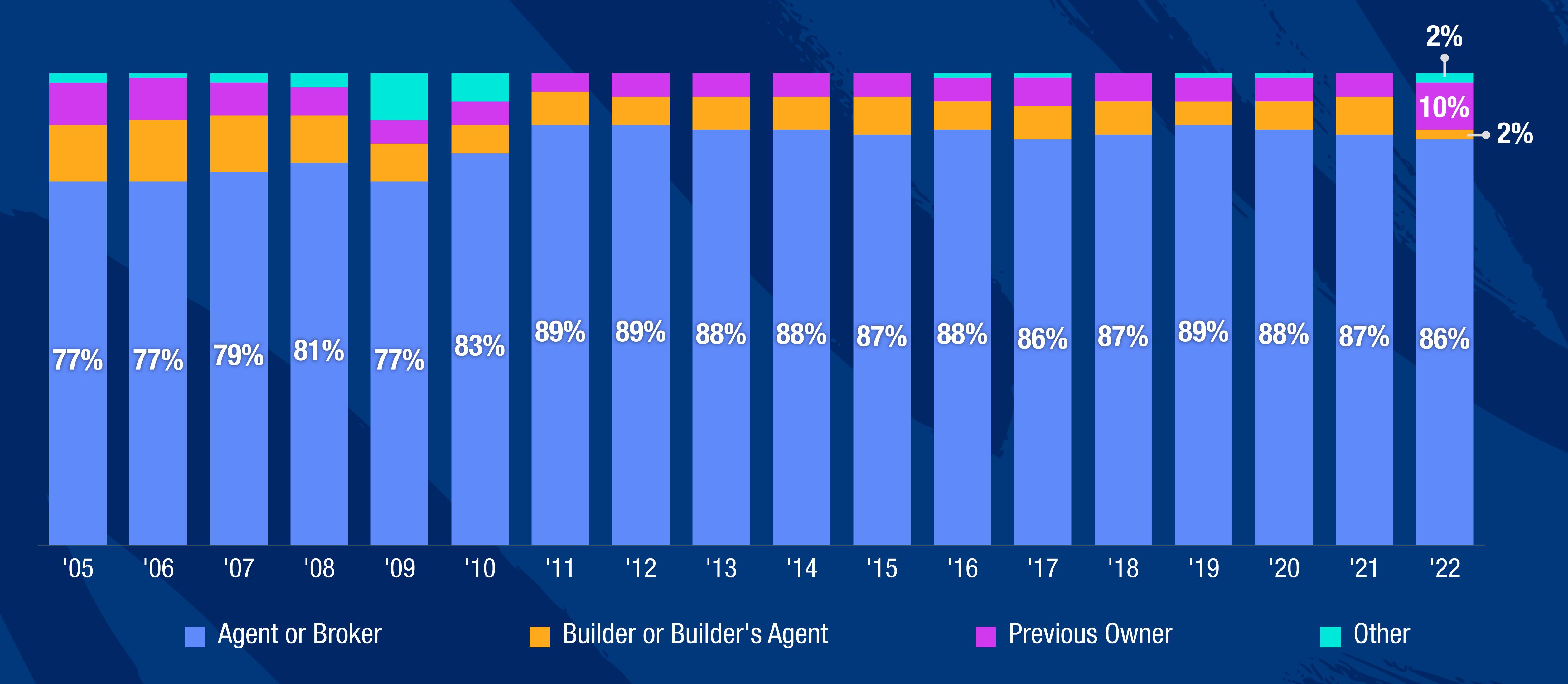
	2006	2010	2016	2017	2018	2019	2020	2021	2022
Internet	24%	37%	44%	51%	49%	50%	52%	51%	51%
Real estate agent	36	38	33	34	31	28	29	28	29
Friend, relative or neighbor	8	6	6	4	6	7	6	6	10
Directly from sellers/Knew the sellers	8	4	6	2	6	5	4	5	5
Yard sign/Open house sign	15	11	9	8	7	7	6	7	4
Home builder or their agent	3	2	2		2	3	3	3	
Print newspaper advertisement	5	2	1				*	*	*
Home book or magazine		*	*	*	*	*	*	*	*
Other	*	*	*	*	*	*	*	*	*

^{*} Less than 1%

Value of Website Features



Method of Home Purchase

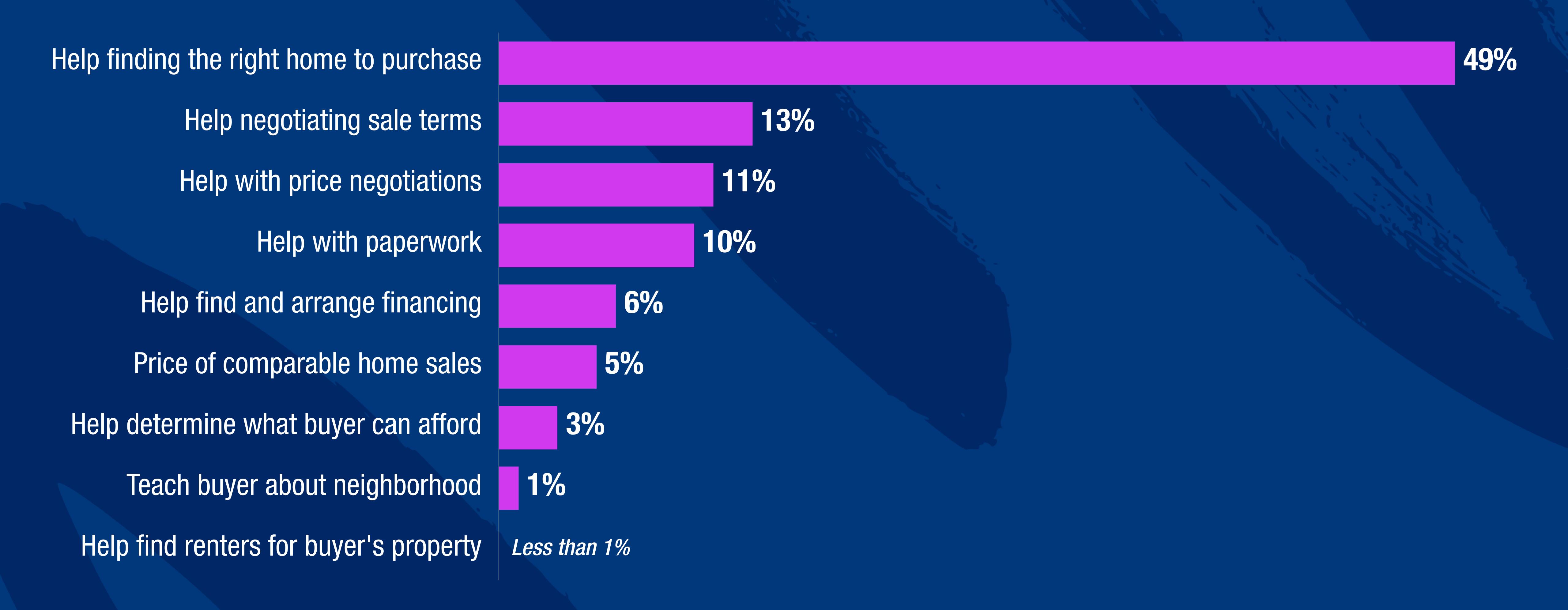


Buyer Representation Agreement

Buyer representation agreement is a crucial protocol to maintain transparency and to align expectations between buyers and agents.

	2006	2010	2016	2017	2018	2019	2020	2021	2022
Yes, a written arrangement	44%	40%	42%	40%	40%	39%	40%	40%	35%
Yes, an oral arrangement	20	17	16	17	16	19	17	17	18
No	26	29	29	28	31	28	28	27	34
Don't know	11	13	14	15	14	14	15	16	14

What Buyers Want from Their Agent



How Buyers Found Their Agent

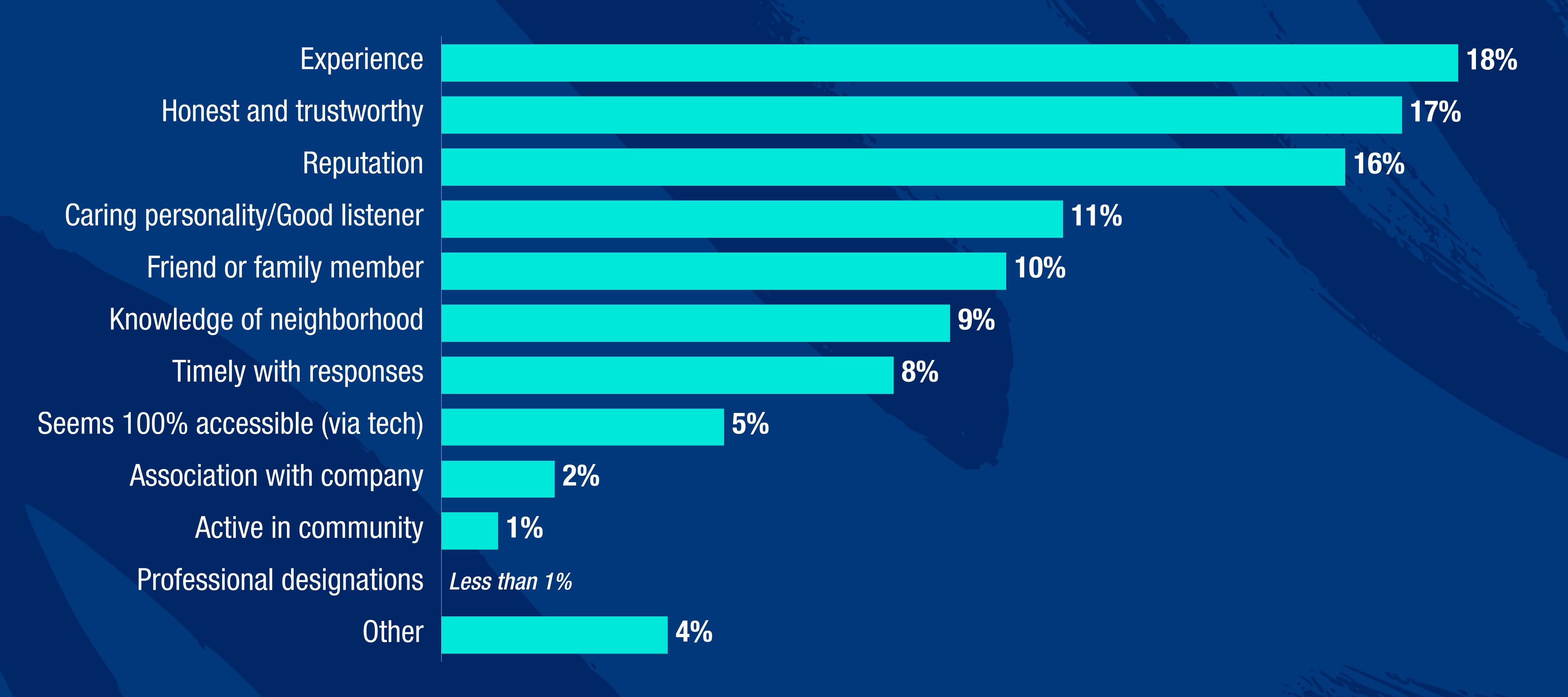
	2006	2010	2016	2017	2018	2019	2020	2021	2022
Referred by (or is) a friend, neighbor, or relative	40%	48%	42%	42%	41%	41%	40%	47%	38%
Used agent previously to buy or sell a home	13	9		12	12	12	13	13	12
Inquired about specific property viewed online	N/A	N/A	N/A	N/A	7	7	7	7	10
Website	7	10	9	9	6	5	6	7	9
Saw contact information on for sale/open house sign	7	6	4	4	4	3	3	5	9
Referred by another real estate agent or broker	5	3	5	5	5	6	5	5	6
Personal contact by agent (telephone, email, etc.)	3	3	3	4	3	4	4	3	5
Visited an open house and met agent	7	7	6	6	5	5	6	4	3
Walked into or called office and agent was on duty	4	5	2	2	1	1	1	1	2
Referred through employer or relocation company	4	3	3	2	2	2	2	2	1
Mobile or tablet application	N/A	N/A	1						
Other	7	7	11	11	11	11	10	6	2

Buyer Interviews

Buyers overwhelmingly went with the first or second agent they met – you need to get there first!

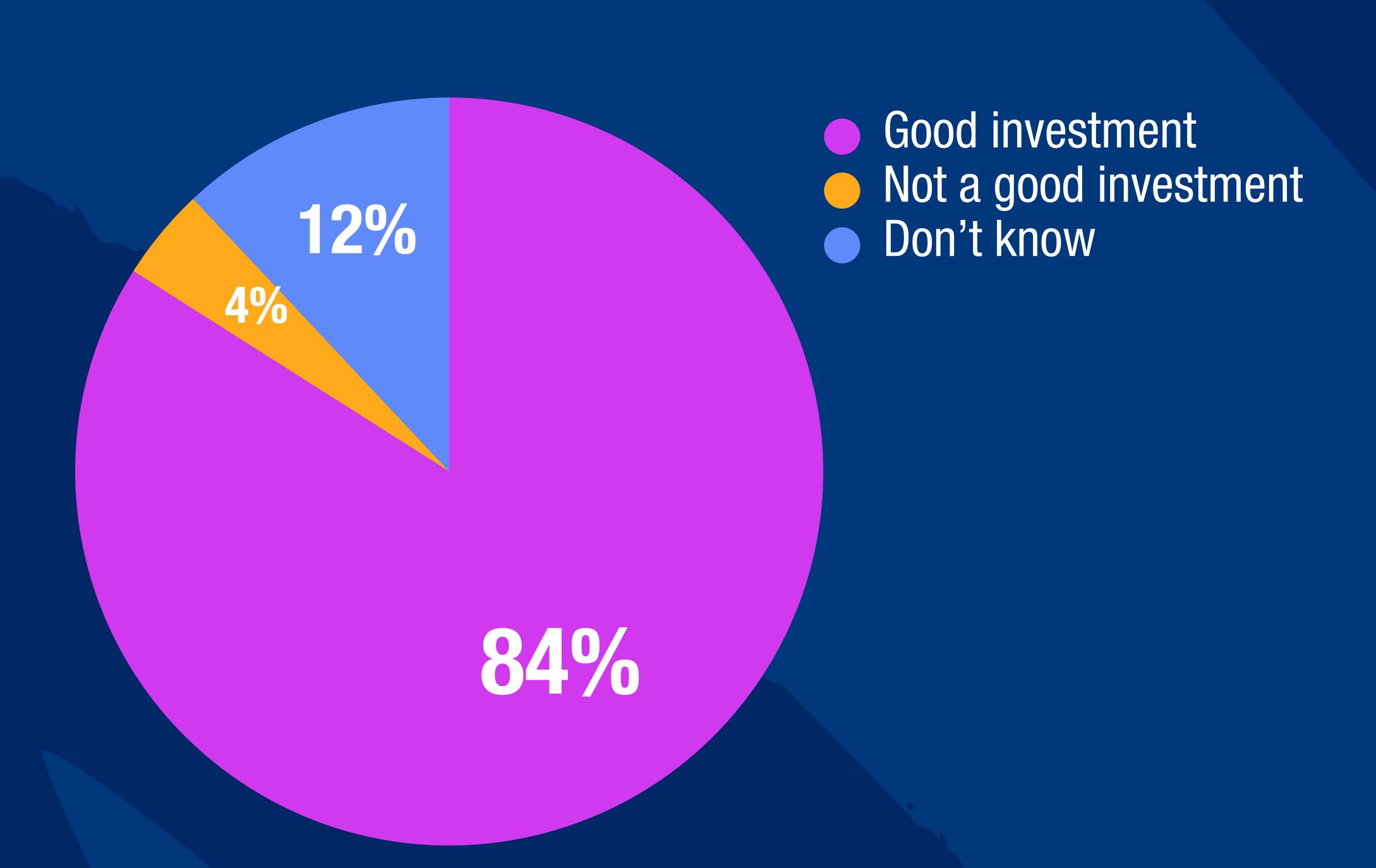
	2006	2010	2016	2017	2018	2019	2020	2021	2022
One	65%	64%	69%	70%	68%	75%	73%	73%	67%
Two	20	21	19	17	20	15	16	16	17
Three	10	10	8	8	8	7	7	7	9
Four or more	5	6		6	5	3	4	4	7

Most Important Factors for Buyers

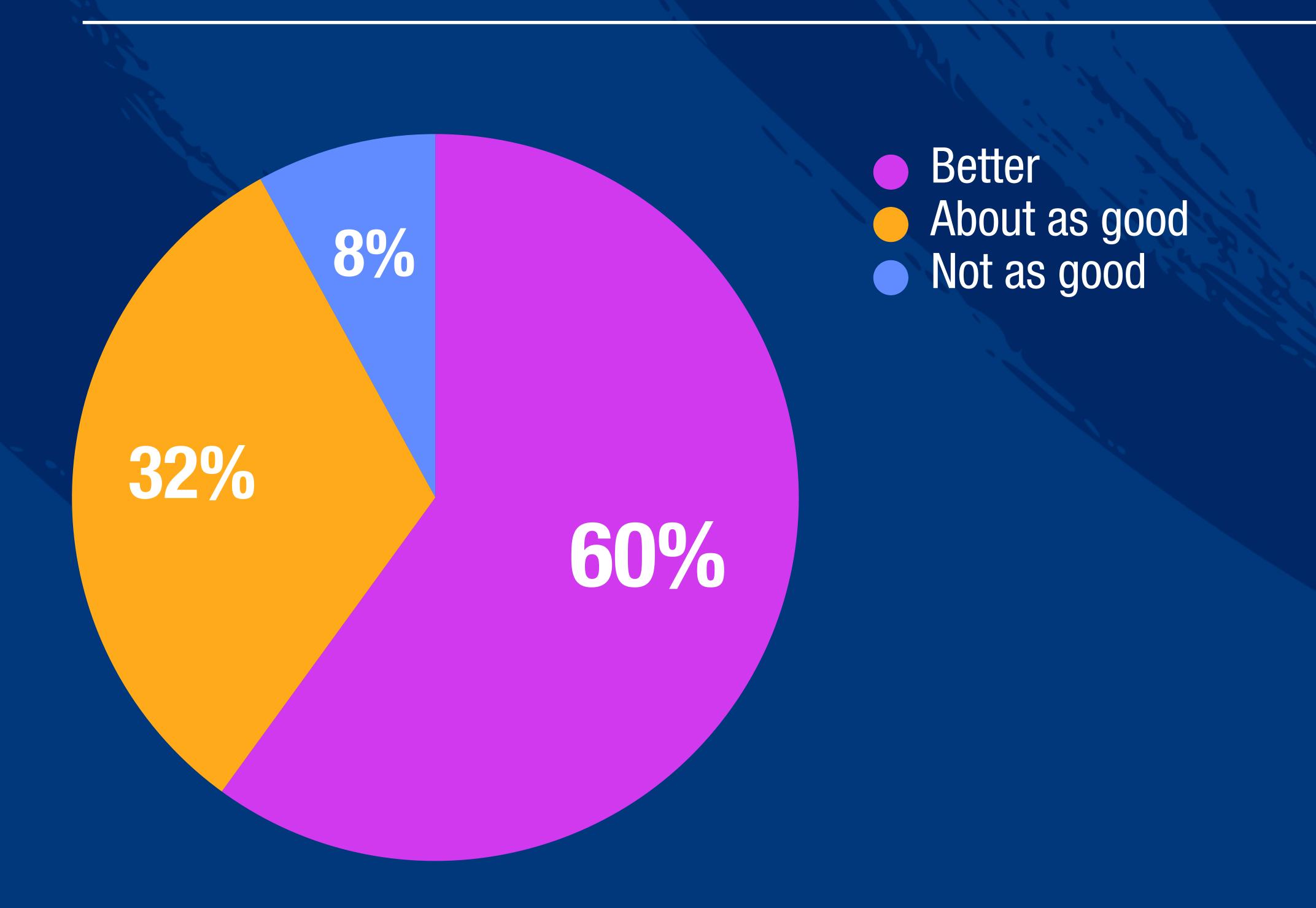


Home as a Financial Investment

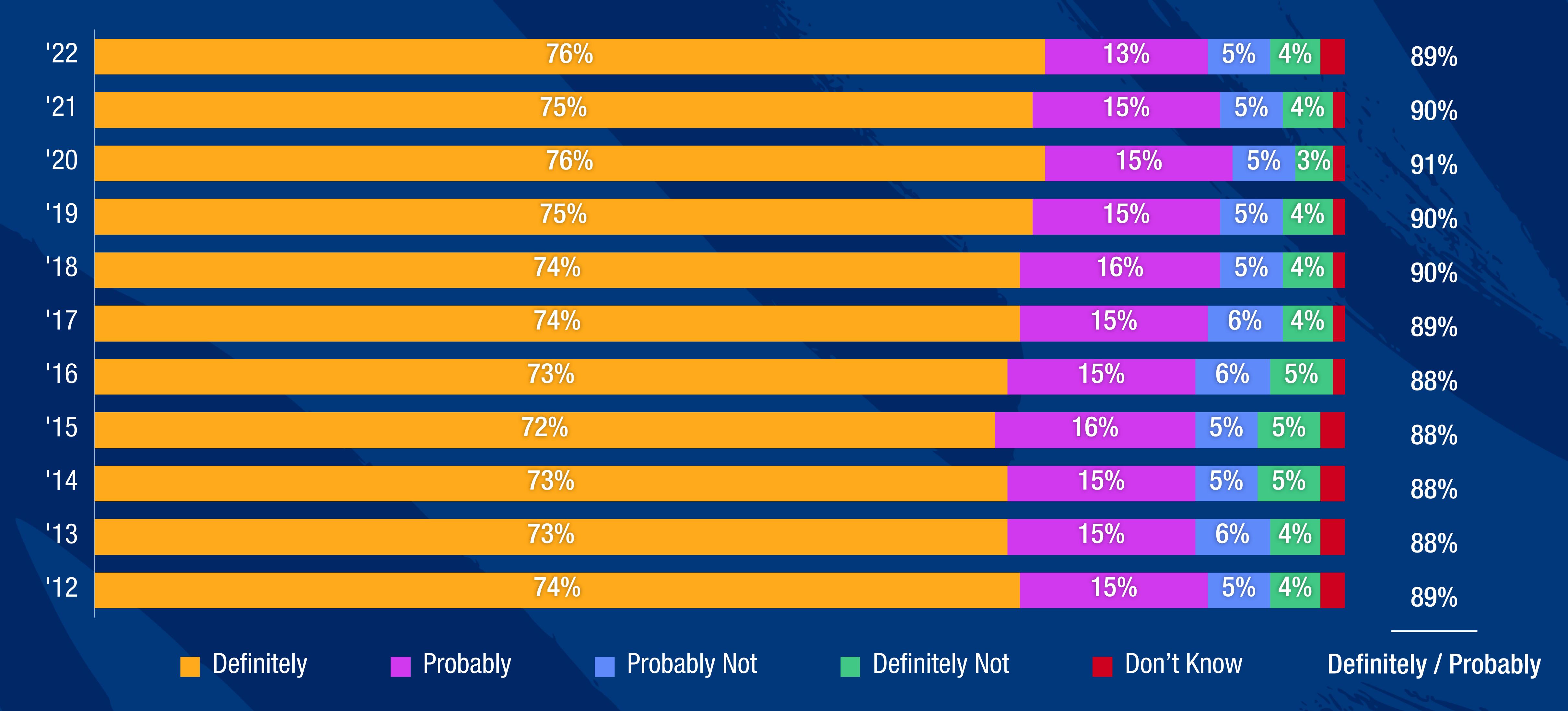
Is real estate a good financial investment?



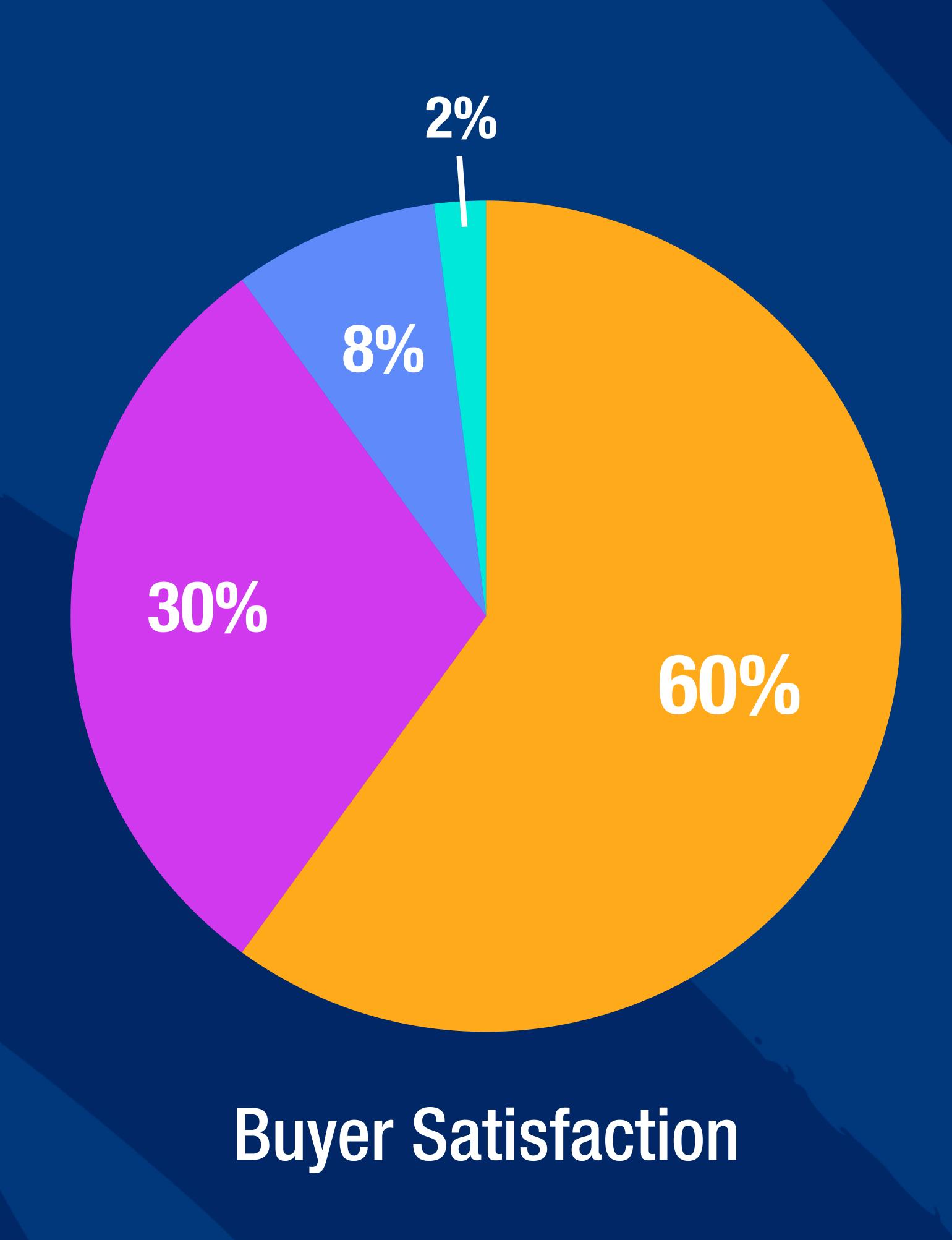
Is real estate a better investment than stocks?

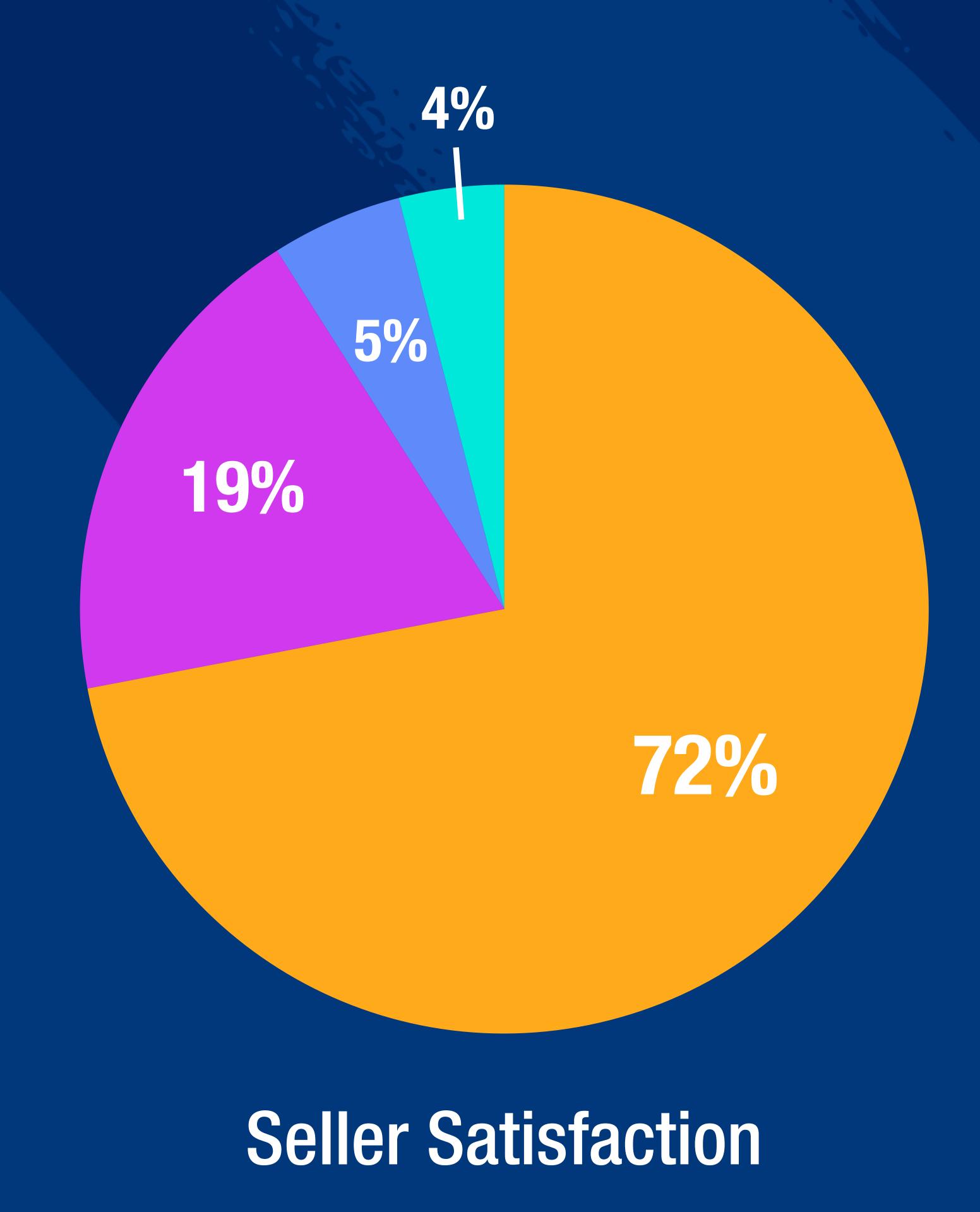


Buyer: Repeats and Referrals



Buyer and Seller Satisfaction





- Very satisfied
- Somewhat satisfied
- Somewhat dissatisfied
- Very dissatisfied

How Sellers Found Their Agent

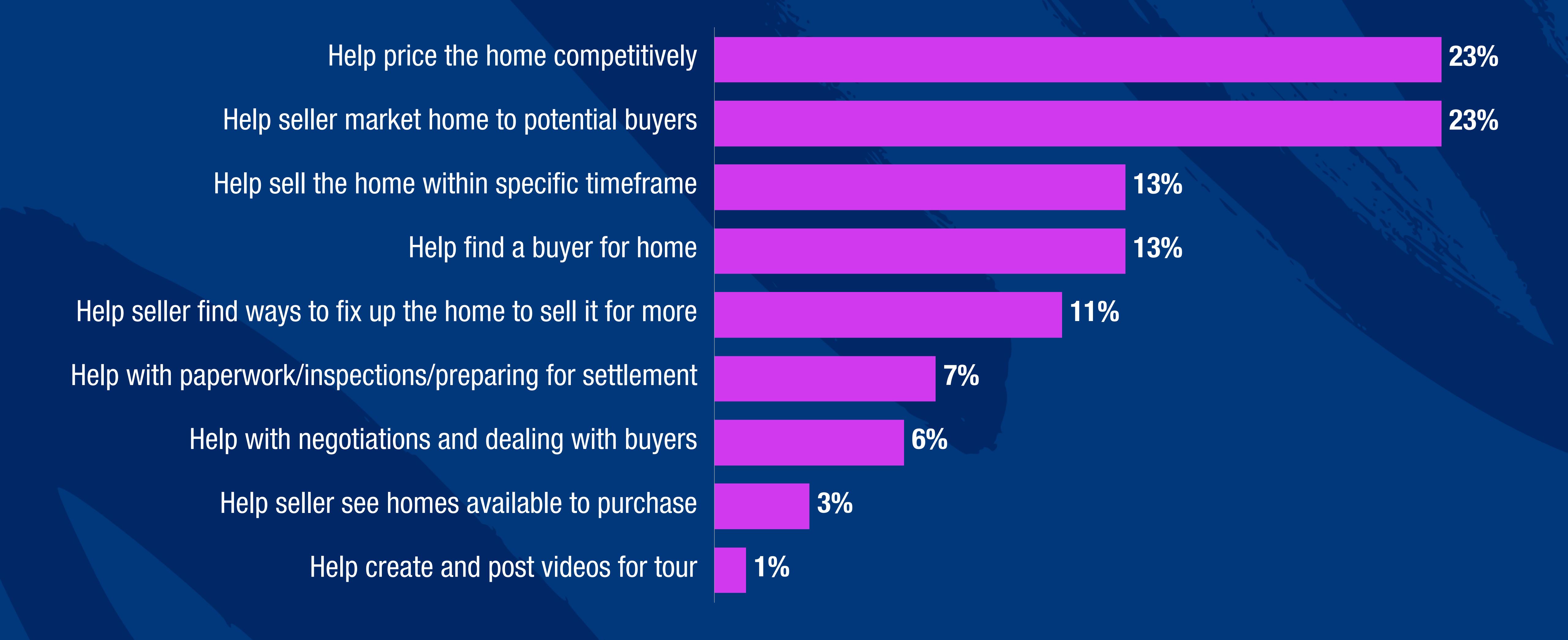
	2006	2010	2016	2017	2018	2019	2020	2021	2022
Referred by (or is) a friend, neighbor, or relative	44%	41%	39%	41%	39%	39%	41%	39%	36%
Used agent previously to buy or sell a home	30	23	25	23	24	27	26	29	27
Personal contact by agent (telephone, email, etc.)	5	4	4	5	5	5	4	4	5
Referred by another real estate agent or broker	4	4	4	3	3	3	4	4	5
Website	2	4	4	5	4	4	5	3	5
Direct mail (newsletter, flier, postcard, etc.)	3	2	2	2	2				3
Saw contact information on for sale/open house sign	*	3	2	2	2	2		2	2
Walked into or called office and agent was on duty	*	*			2				2
Visited an open house and met agent	5	4	4	4	4	3	3	2	
Referred through employer or relocation company	3	3	2	2	2	2			
Other	2	6	10	10	12	10	11	15	12

* Less than 1%

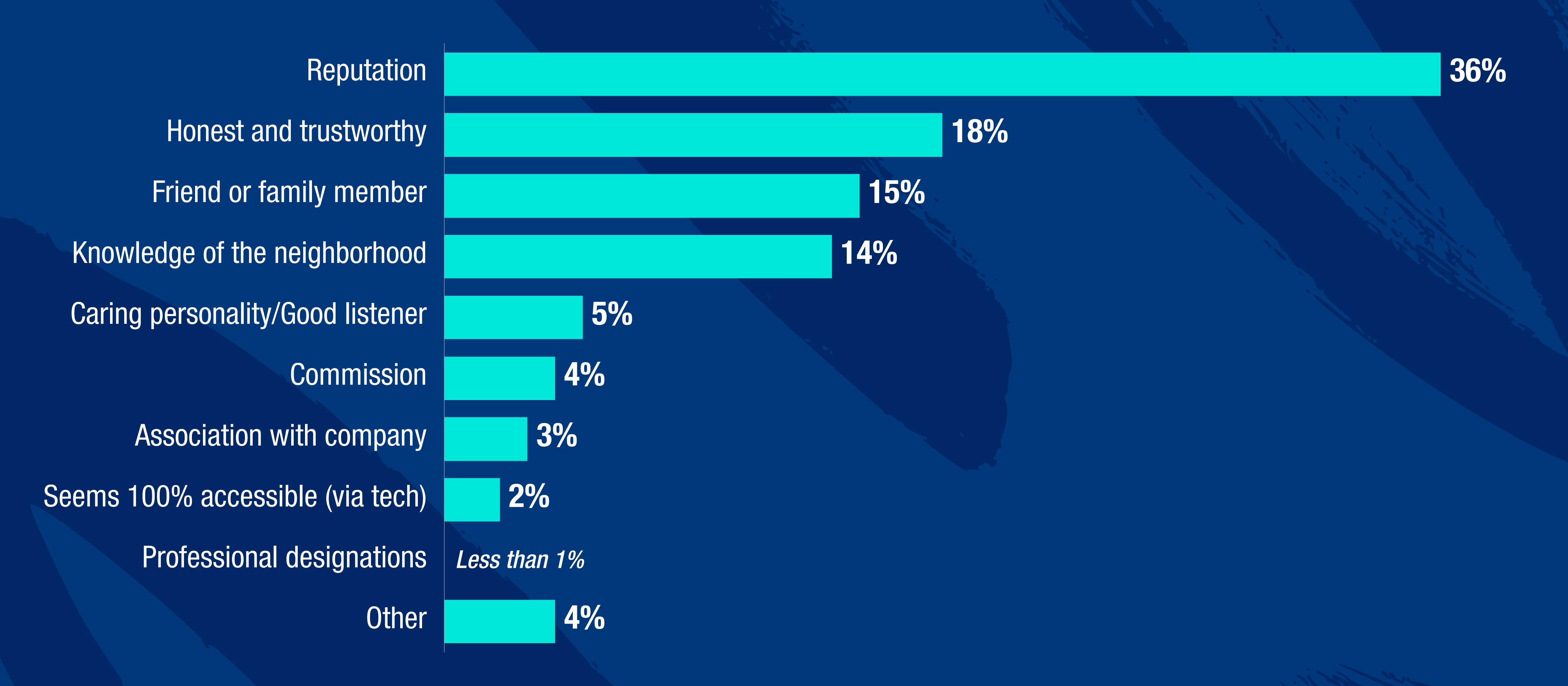
Seller Interviews

	2006	2010	2016	2017	2018	2019	2020	2021	2022
One	69%	66%	72%	74%	75%	75%	77%	82%	80%
Two	18	19	16	15	13	15	13	10	11
Three	9	10	8	7	8	8	7	5	7
Four or more	4	6	4	3	3	3	4	3	

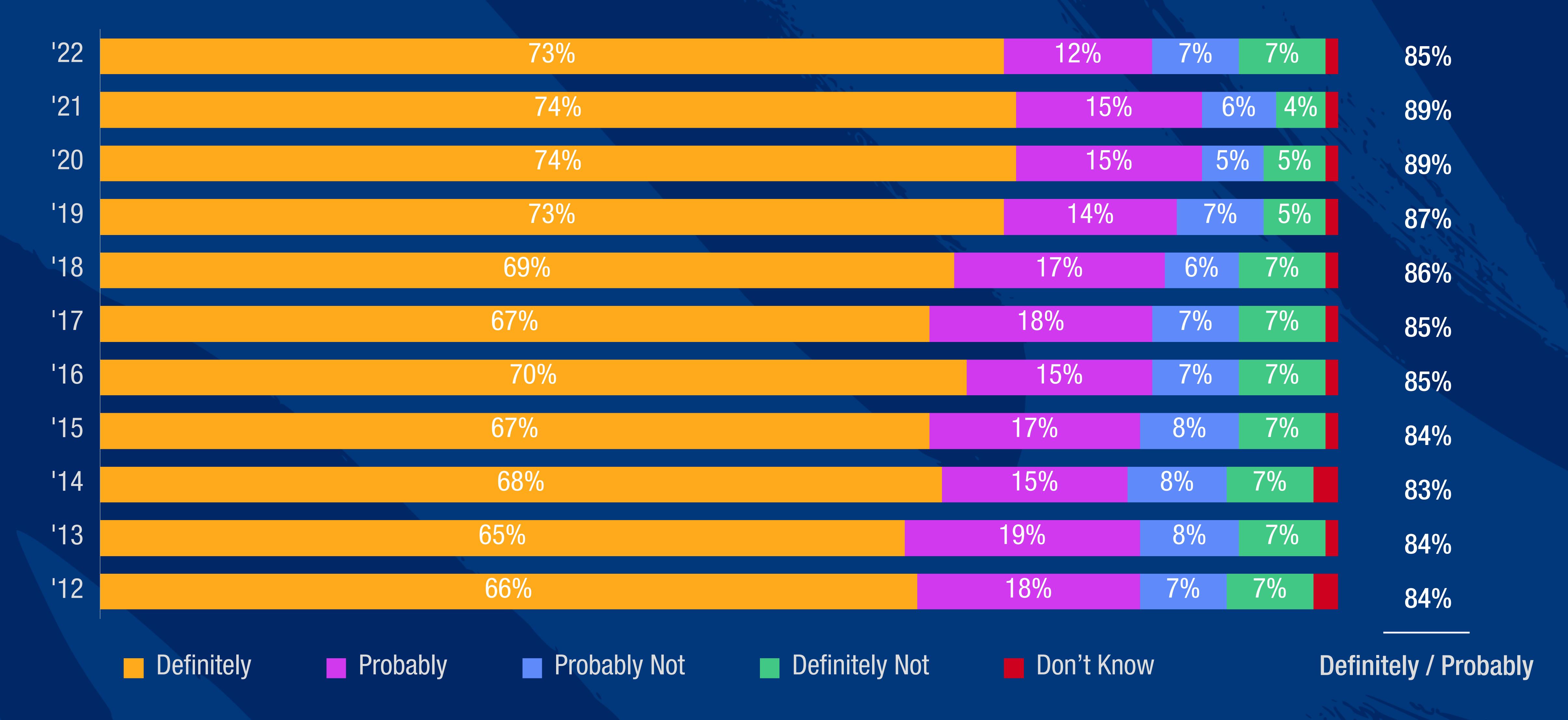
What Sellers Want from Their Agent



Most Important Factors for Sellers



Seller: Repeats and Referrals



Method Used to Sell Home

	2006	2010	2016	2017	2018	2019	2020	2021	2022
Sold home using an agent or broker	84%	88%	89%	89%	91%	89%	89%	90%	86%
For sale by owner (FSB0)	12	9	8	8	7	8	8	7	
Sold home to a home-buying company		1		*		1			1
Sold through an iBuyer program	N/A	N/A	N/A	N/A	N/A	N/A	*	*	
Other	3	3	2	2		2	2	2	2

^{*} Less than 1%

Incentives Offered to Attract Buyers

	2010	2016	2017	2018	2019	2020	2021	2022
None	56%	64%	63%	66%	66%	67%	74%	80%
Home warranty policies	25	21	21	18	17	17	13	8
Credit toward remodeling or repairs	5	6	8	7	8	8	7	8
Assistance with closing costs	20	16	16	13	14	14	9	7
Other incentives (car, TV, etc.)	4	5	4	4	3	3	2	2
Other	5	3	4	4	4	4	3	3