

Economic Forecast

How we got here and where we're going!

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What We Are Going to Cover

Where we've been / How we got here

Where we are going

Where We Have Been

Average Home Prices Exploded in 2021

Year	Collin County
2020	\$402,263 +6.42%
2021	\$494,459 +22.92%
2022	\$588,866 +21.12%

Source: Texas A&M Real Estate Center

Where We Have Been

Average Home Prices Exploded in 2021

Year	Collin County	DFW
2020	\$402,263 +6.42%	\$353,838 +7.20%
2021	\$494,459 +22.92%	\$423,367 +19.65%
2022	\$588,866 +21.12%	\$487,135 +15.06%

Source: Texas A&M Real Estate Center

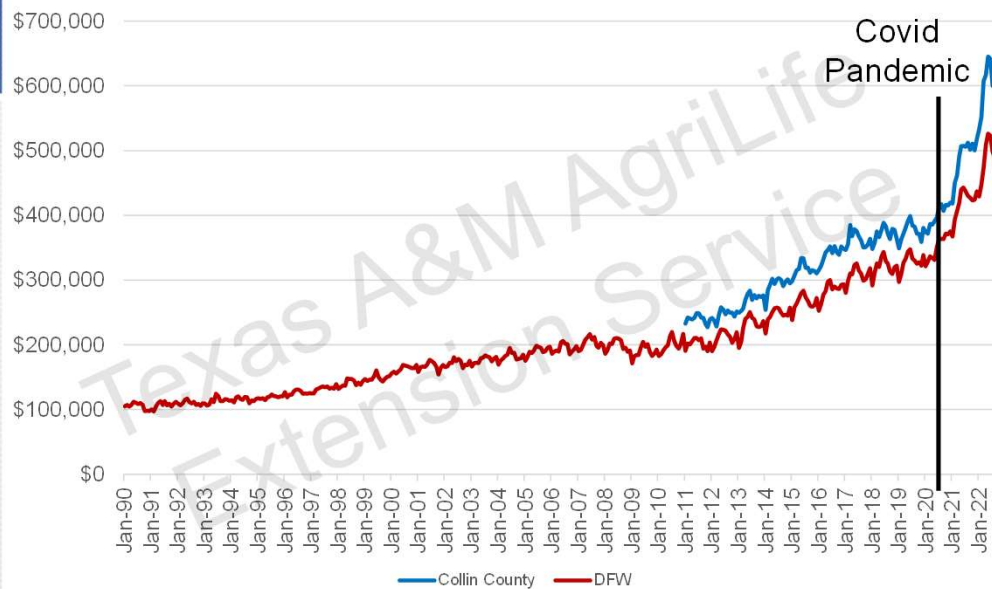
Where We Have Been

Average Home Prices Exploded in 2021

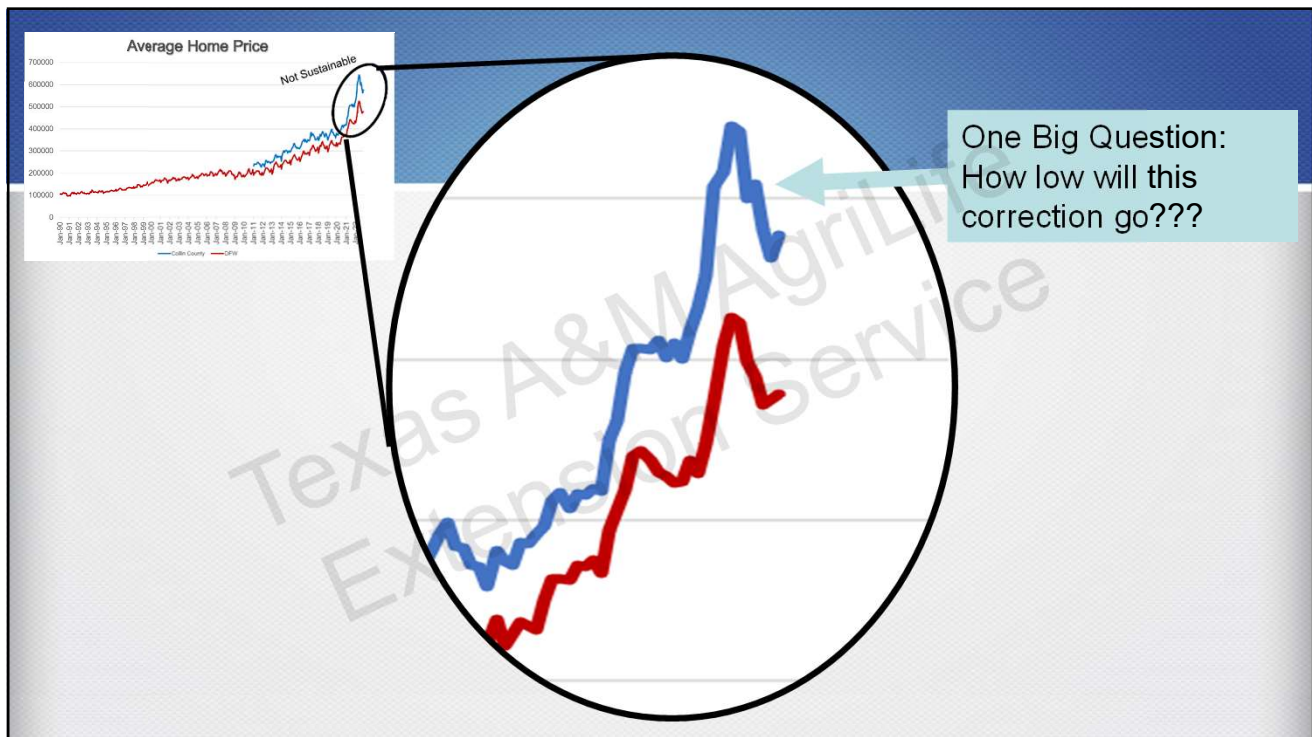
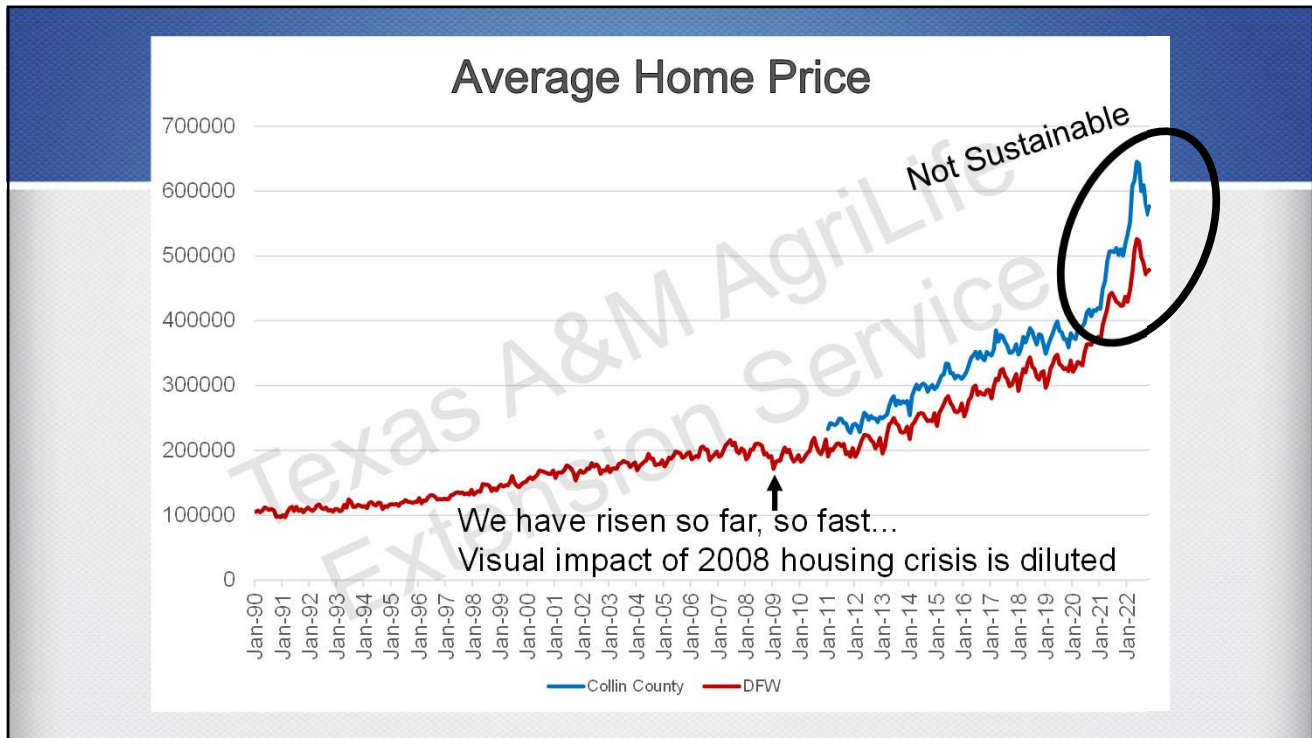
Year	Collin County	DFW	Texas
2020	\$402,263 +6.42%	\$353,838 +7.20%	\$316,296 +8.16%
2021	\$494,459 +22.92%	\$423,367 +19.65%	\$373,579 +18.11%
2022	\$588,866 +21.12%	\$487,135 +15.06%	\$414,854 +11.05%

Source: Texas A&M Real Estate Center

Average Home Price



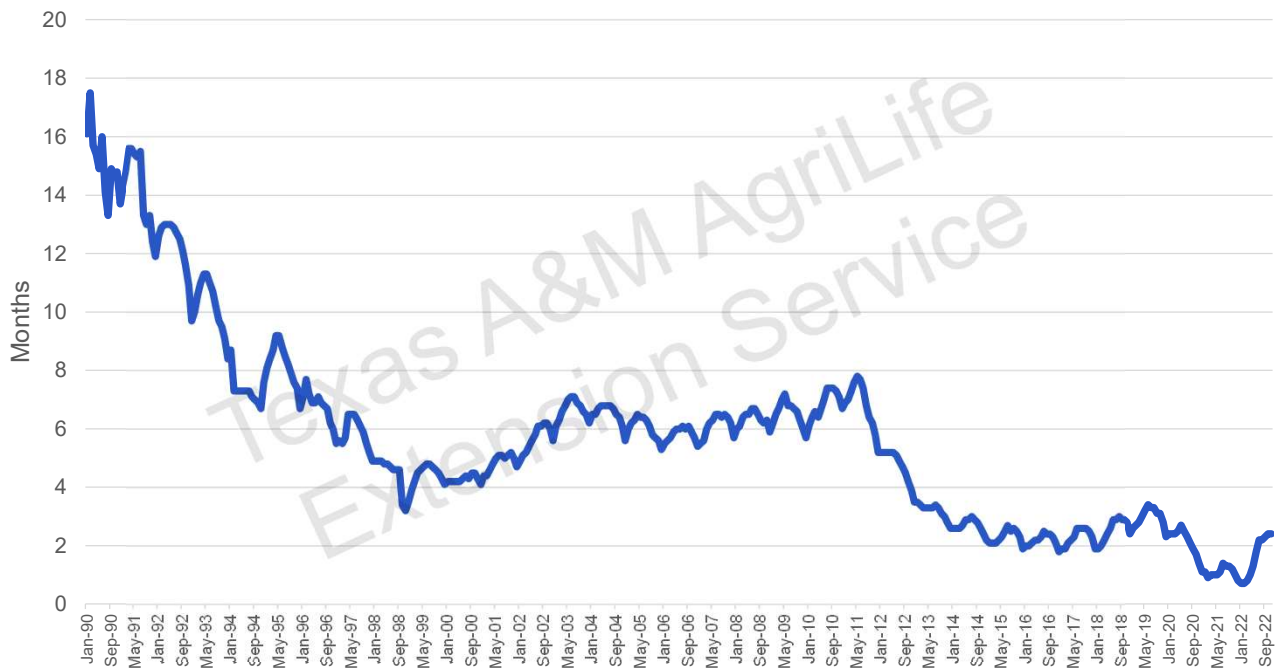
Source: Texas A&M Real Estate Center

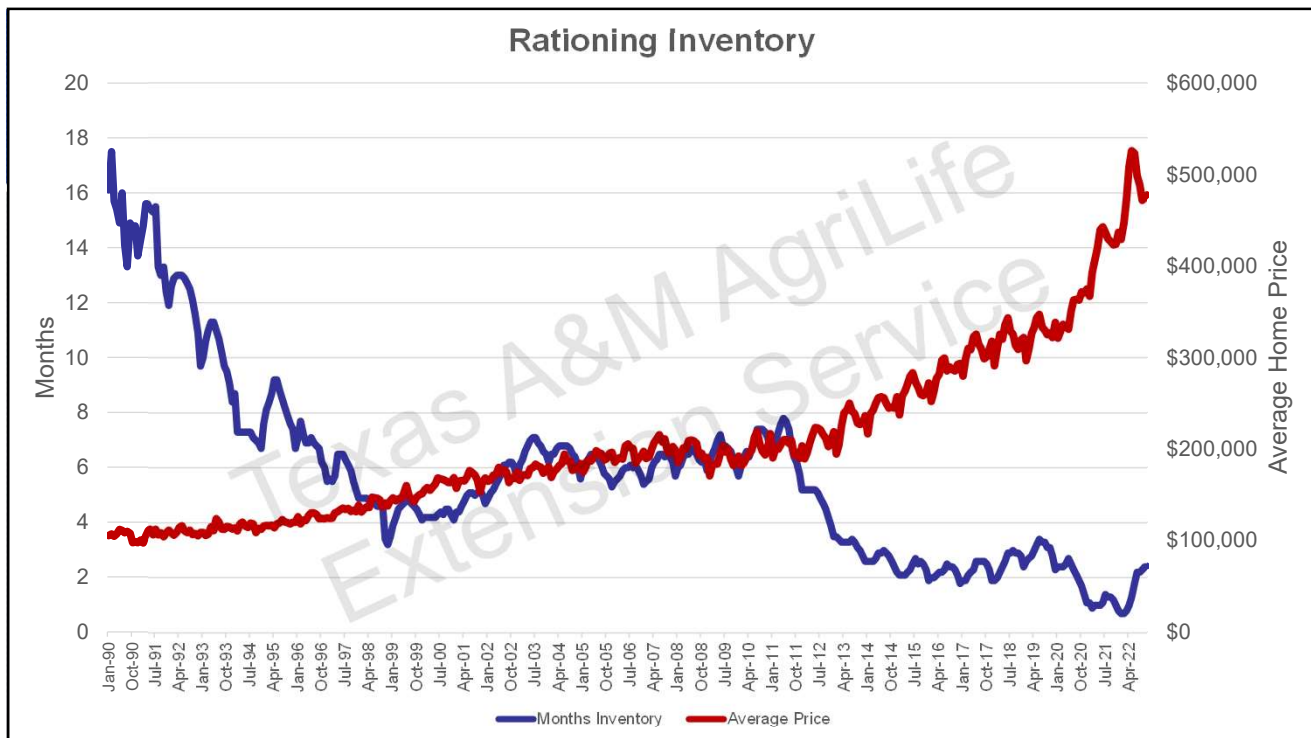


How We Got Here



Months of Inventory - DFW





DFW Population Growth

DFW (Collin, Dallas, Denton, & Tarrant Counties)

Pop 4/1/20 6,695,066

Pop 7/1/21 6,763,636

Growth/Day 150.37

Source: US Census Bureau

DFW Population Growth

	DFW (Collin, Dallas, Denton, & Tarrant Counties)	Denton
Pop 4/1/20	6,695,066	906,422
Pop 7/1/21	6,763,636	941,647
Growth/Day	150.37	77.25

Source: US Census Bureau

DFW Population Growth

	DFW (Collin, Dallas, Denton, & Tarrant Counties)	Denton	Collin
Pop 4/1/20	6,695,066	906,422	1,064,465
Pop 7/1/21	6,763,636	941,647	1,109,462
Growth/Day	150.37	77.25	98.67

Source: US Census Bureau

DFW Population Growth

	DFW (Collin, Dallas, Denton, & Tarrant Counties)	Denton	Collin
Annual Pop. Increase	55,885	28,196	36,015
Assume 4 / Household			
New Dwellings Required / Yr	13,721	7,049	9,004
% of All 2021 Sales	12.24%	26.74%	50.00%

What's Ahead...Economic Uncertainty



What's Ahead...Economic Uncertainty



THE WALL STREET JOURNAL
ECONOMY: THE OUTLOOK
Higher Inflation Is Here to Stay for Years, Economists Forecast
Strong economic rebound and lingering pandemic disruptions fuel inflation forecasts above 2% through 2023, survey finds

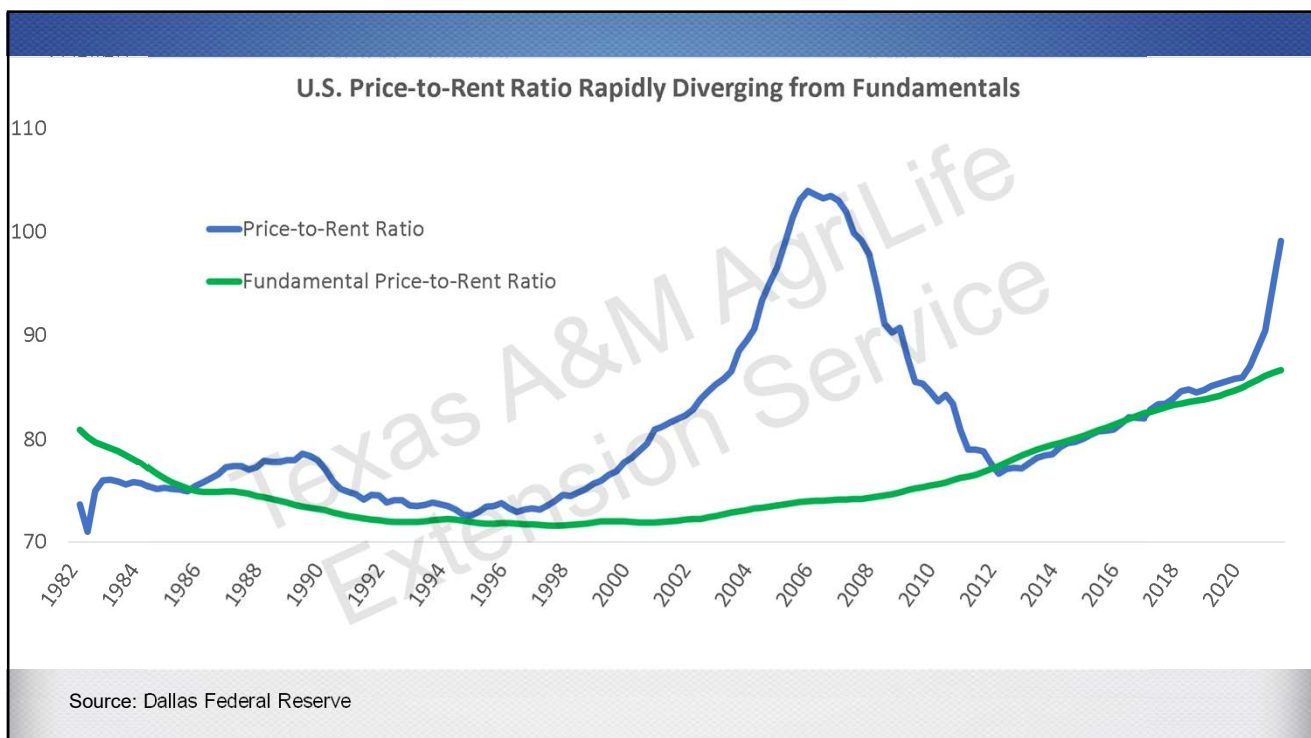
Cost of living under strain from inflation
Consumer group warns of crisis

Inflation rate dips in US but remains close to 40-year high

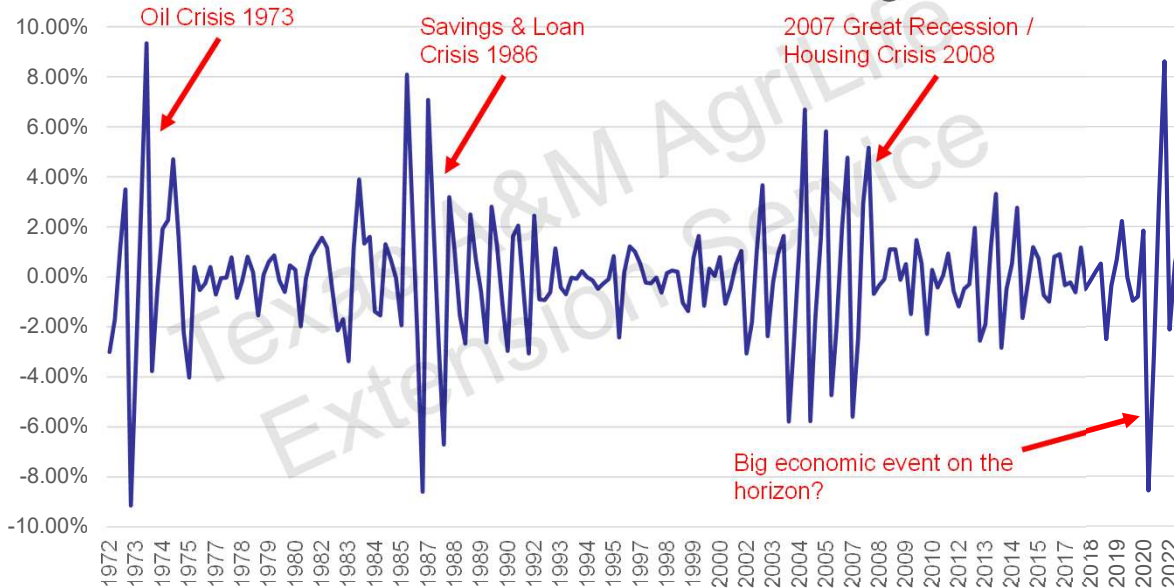
Cramer On The Impact Of Inflation
MAD MONEY

Google's Most Searched Definitions for 2022

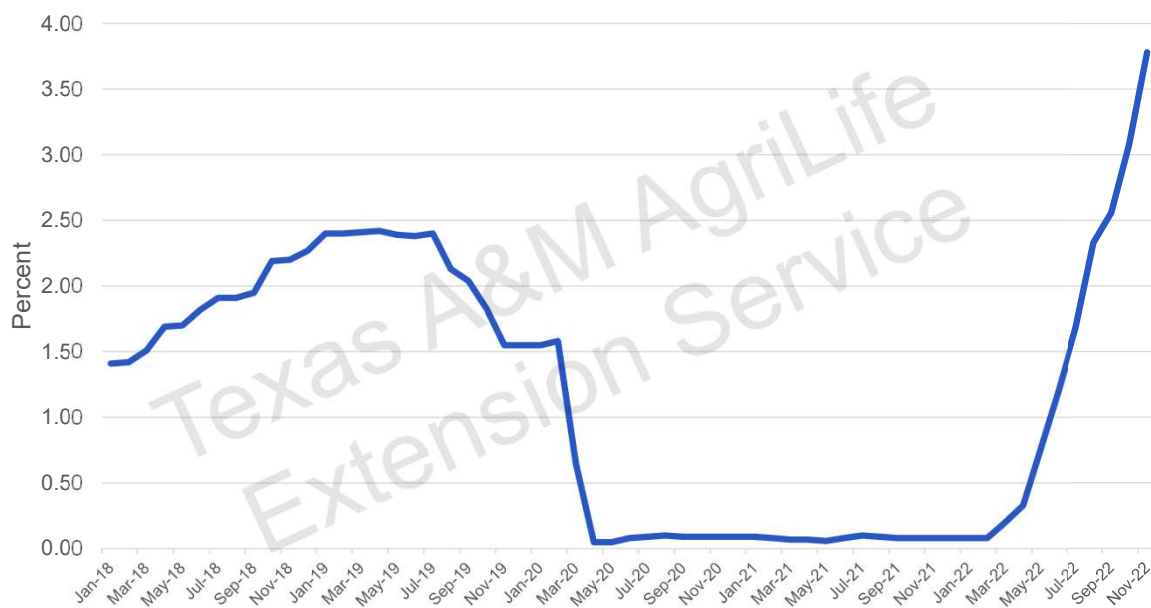
1. Rupee – Wordle answer
2. Oligarch – Russian Businessmen
3. Cacao – Wordle answer
4. Homer – Wordle answer
5. Recession
6. Canny – Wordle answer
7. Foray – Wordle answer
8. Trove – Wordle answer
9. Saute – Wordle answer
10. Tacit – Wordle answer



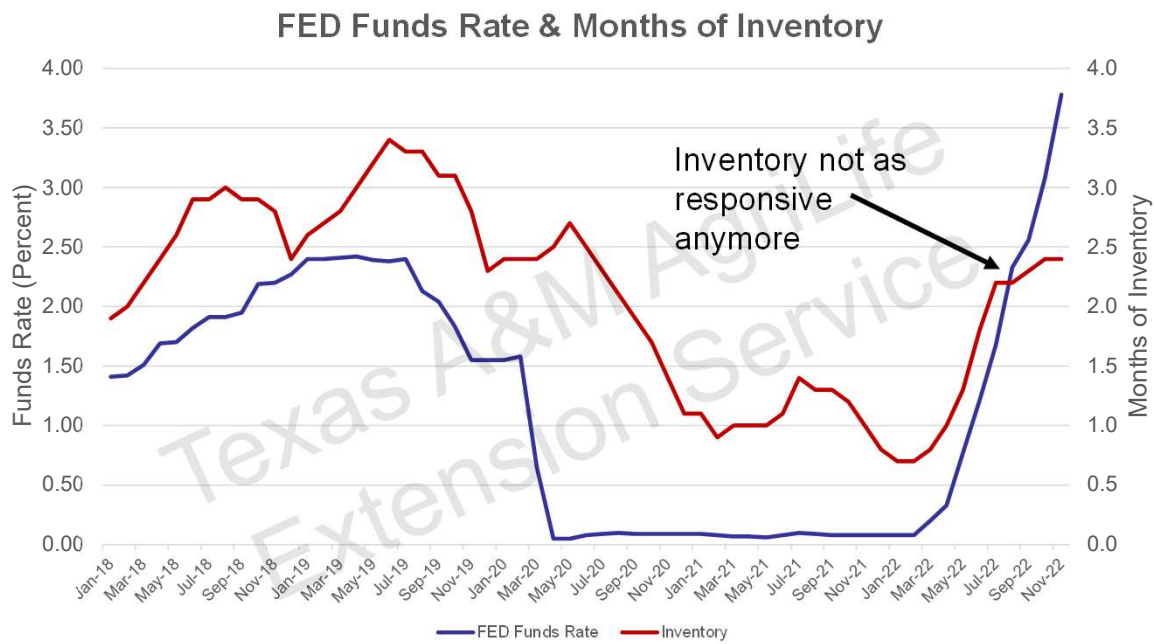
Percent Difference in Real Rural Land Prices from Annual Average



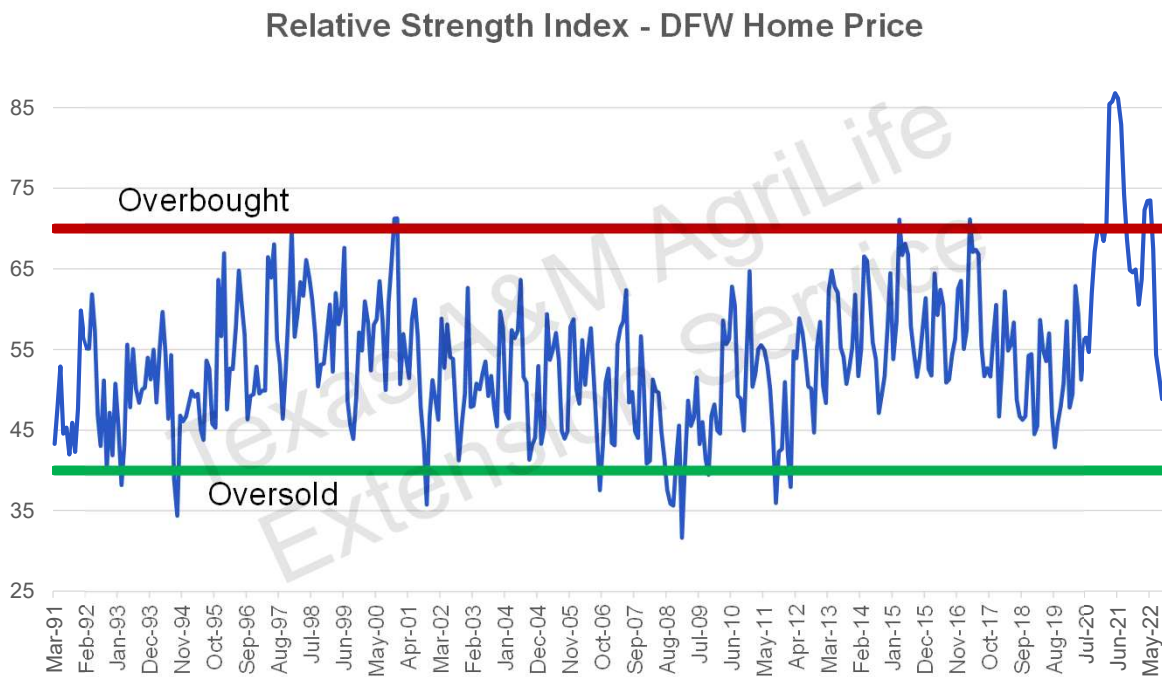
FED Funds Rate



Source: St. Louis Federal Reserve



Source: St. Louis Federal Reserve



Forecasts for 2023

- Sales and price data from Texas A&M Real Estate Center
 - Remove inflation by converting to 2022 dollars (real dollars)
- Seasonal Index
- Actual forecast

Why Remove Inflation?

- Inflation is the rise in prices over time

Nominal Price	
Year	Price
1977	\$2.23
2022	\$9.17



Real Price (2022 Dollars)	
Year	Price
1977	\$9.97
2022	\$9.17

What it looks like in housing

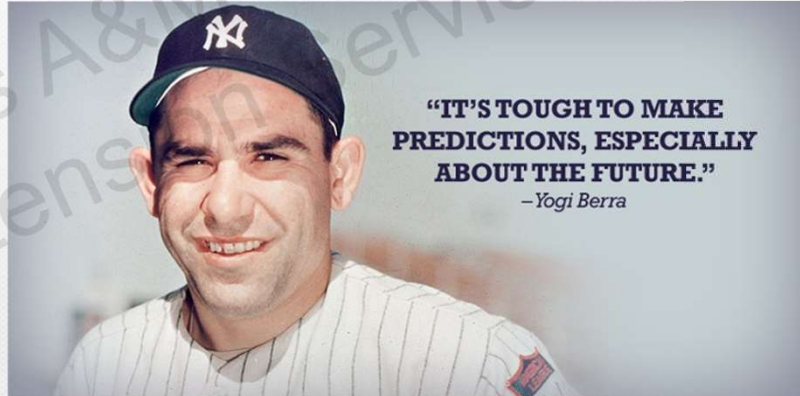
Date	Nominal Price of Average DFW Home
Jan 1990	\$105,280
Nov 2022	\$477,900

What it looks like in housing

Date	Nominal Price of Average DFW Home	Real Price of Average DFW Home (Nov 2022 Dollars)
Jan 1990	\$105,280	\$246,354
Nov 2022	\$477,900	\$477,900

Now We Ammunition for Forecasting

- Forecast collaboration with Dr. Mark Welch
 - Texas A&M University



Step 1: Seasonal Price Index

seasonality [see-zuh-nal-i-tee]

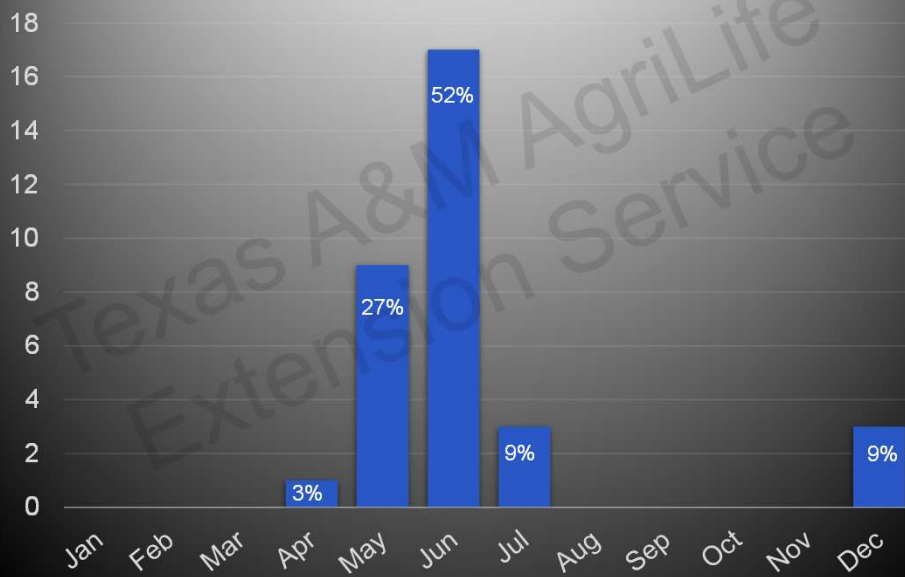
regular and predictable changes that recur every calendar year in a business or economy based on the seasons

Investopedia

Seasonality Quiz 1

- Between January 1990 and December 2022 can you guess the month when...
 - The highest average annual price of homes in DFW typically occurs?
 - **June**

Months Where the Highest Average
Real Price of the Year Occurred
(DFW: 1990 – 2022)



Months Where the Highest Average Real Price of the Year Occurred (DFW: 1990 – 2022)

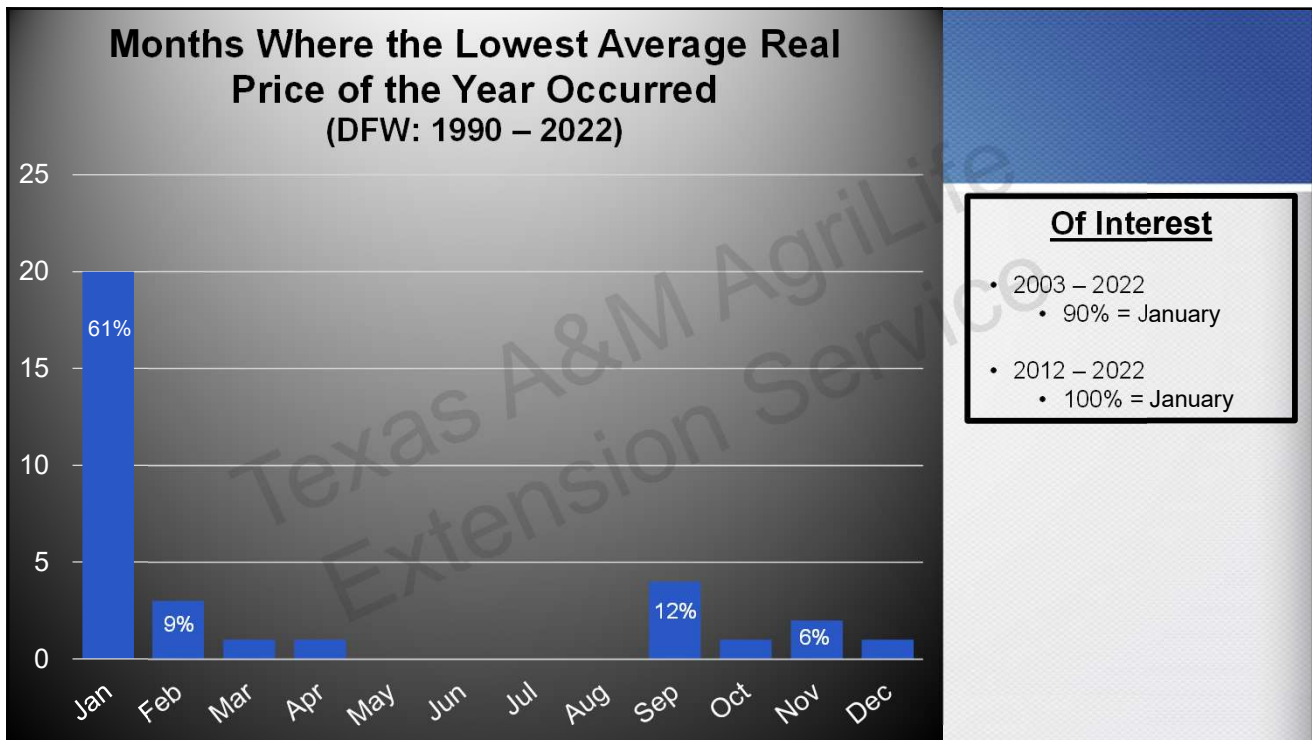
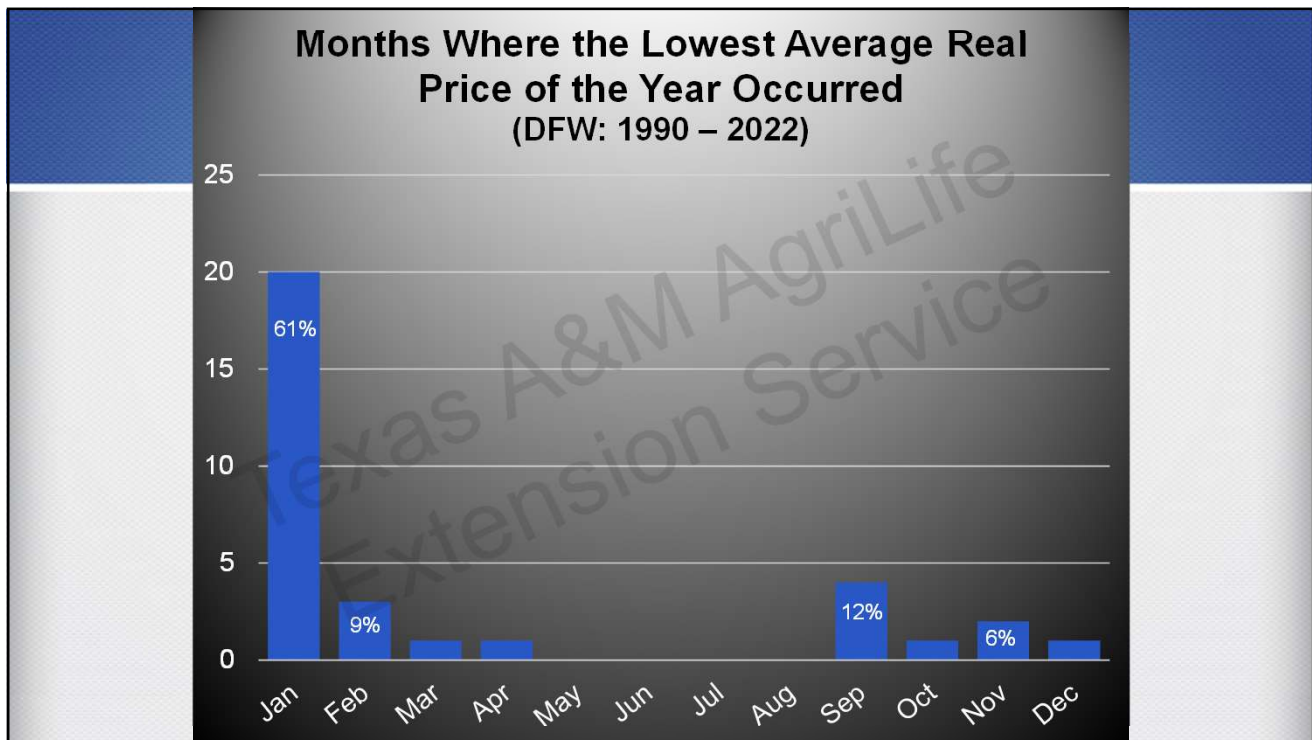


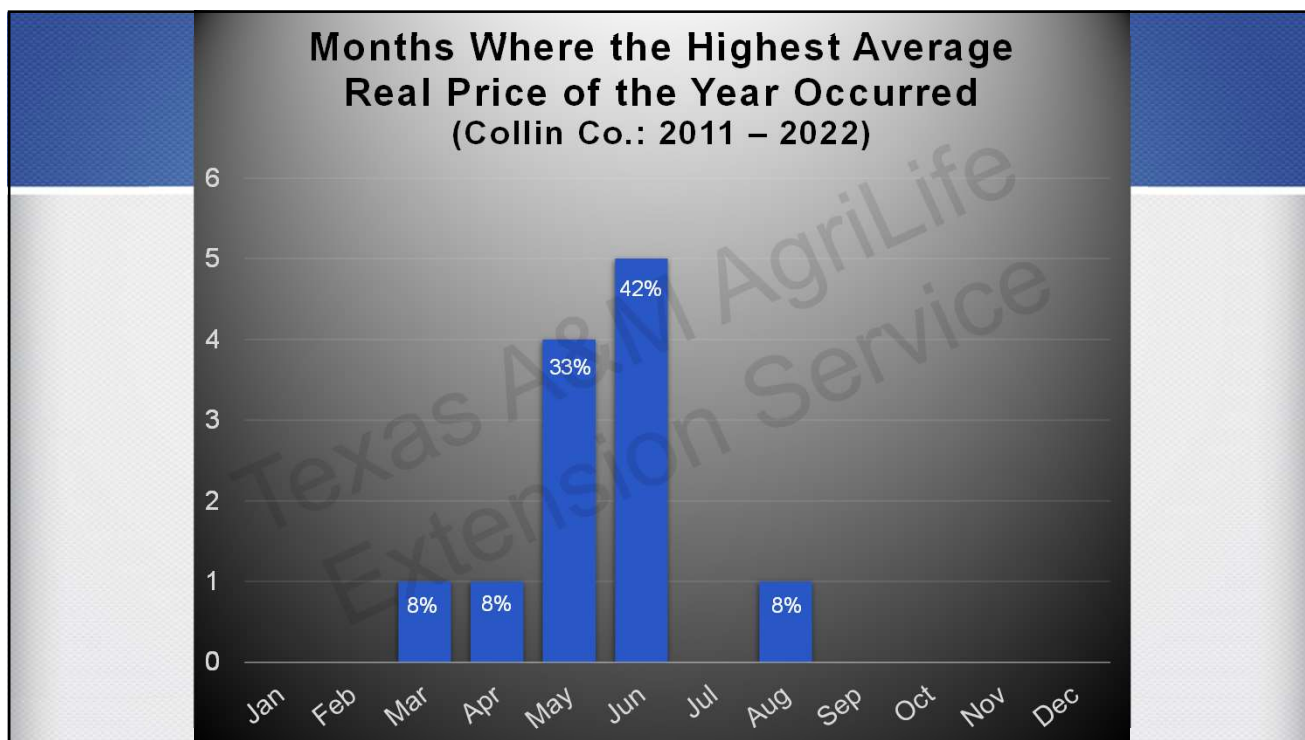
Of Interest

- Dec – 1997, 2014, 2020
- Apr – 1994
- 2015 – 2022
 - May (2)
 - Jun (5)
 - Dec (1) (2020)

Seasonality Quiz 2

- Between January 1990 and December 2022 can you guess the month when...
 - The lowest average annual price of homes in DFW typically occurs?
 - **January**





Months Where the Lowest Average Real Price of the Year Occurred (Collin Co.: 2011 – 2022)



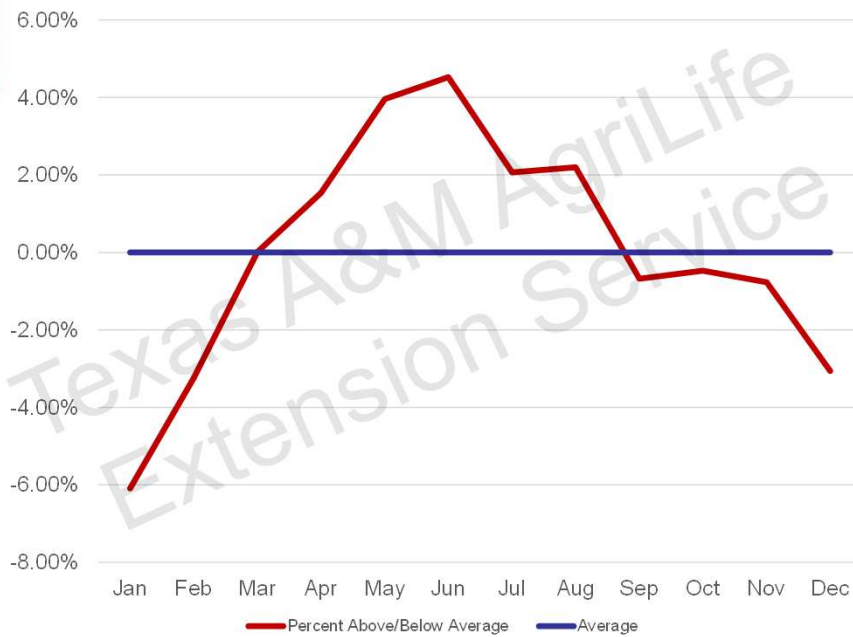
Seasonal Price Index Collin County 2011 – 2022

Buyer's Market

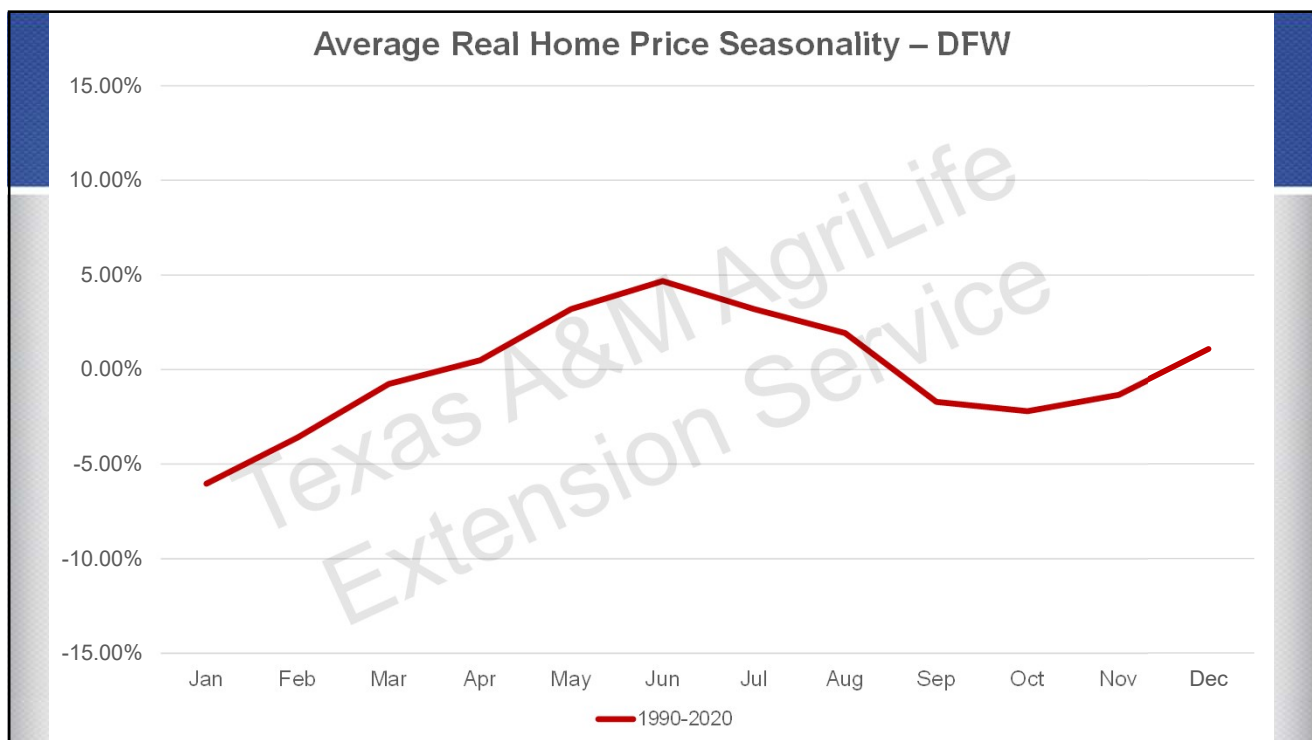
Jan
Feb
Sep
Oct
Nov
Dec

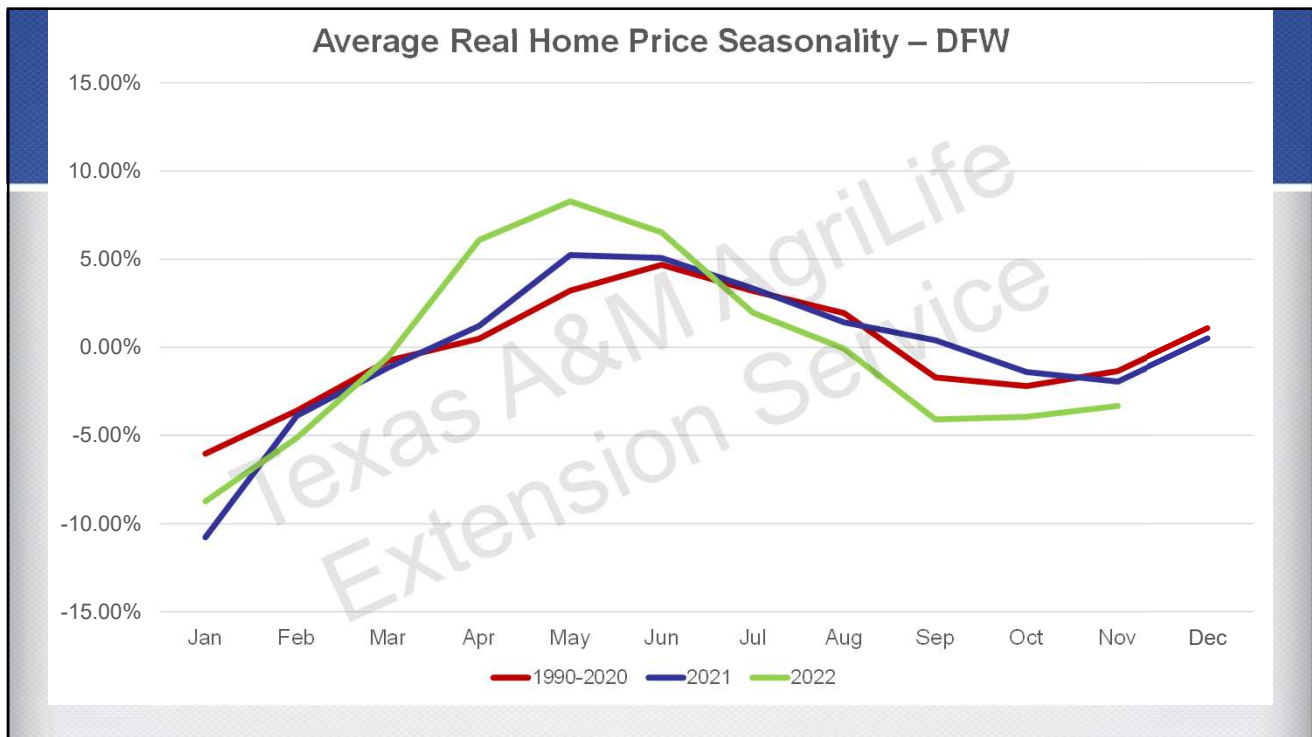
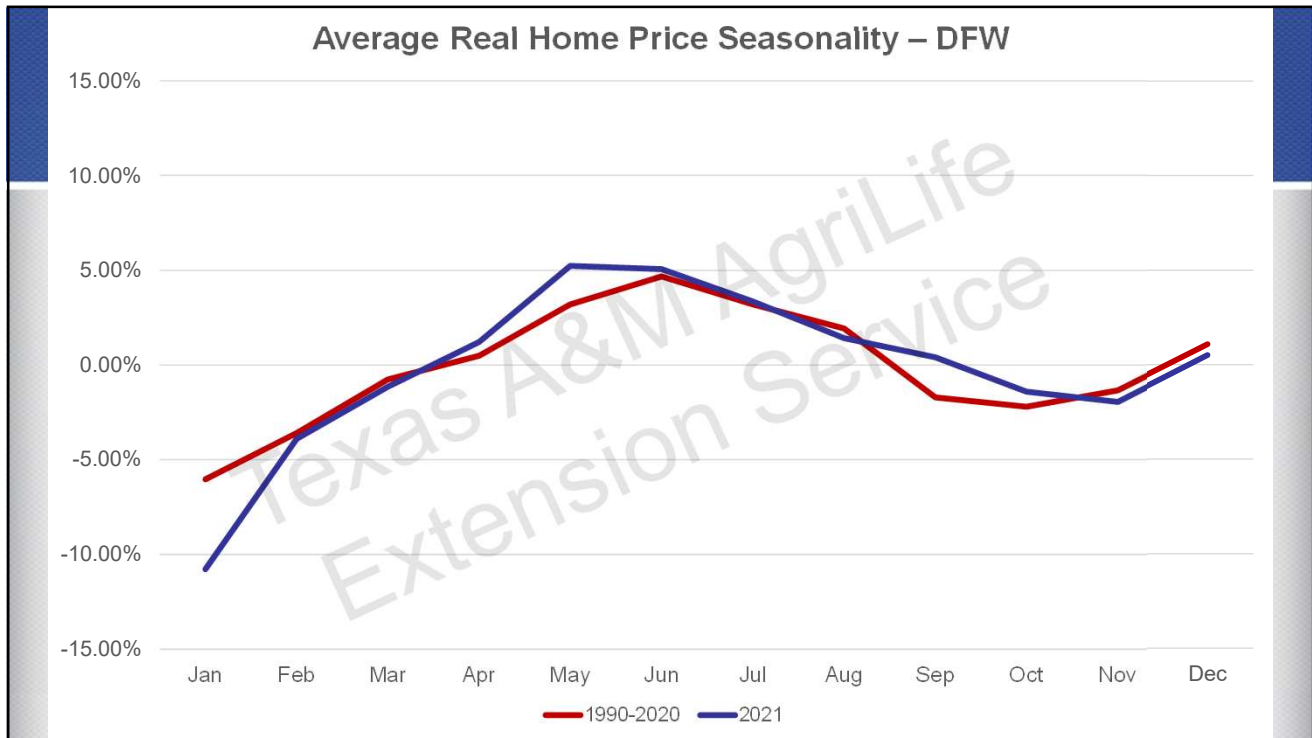
Seller's Market

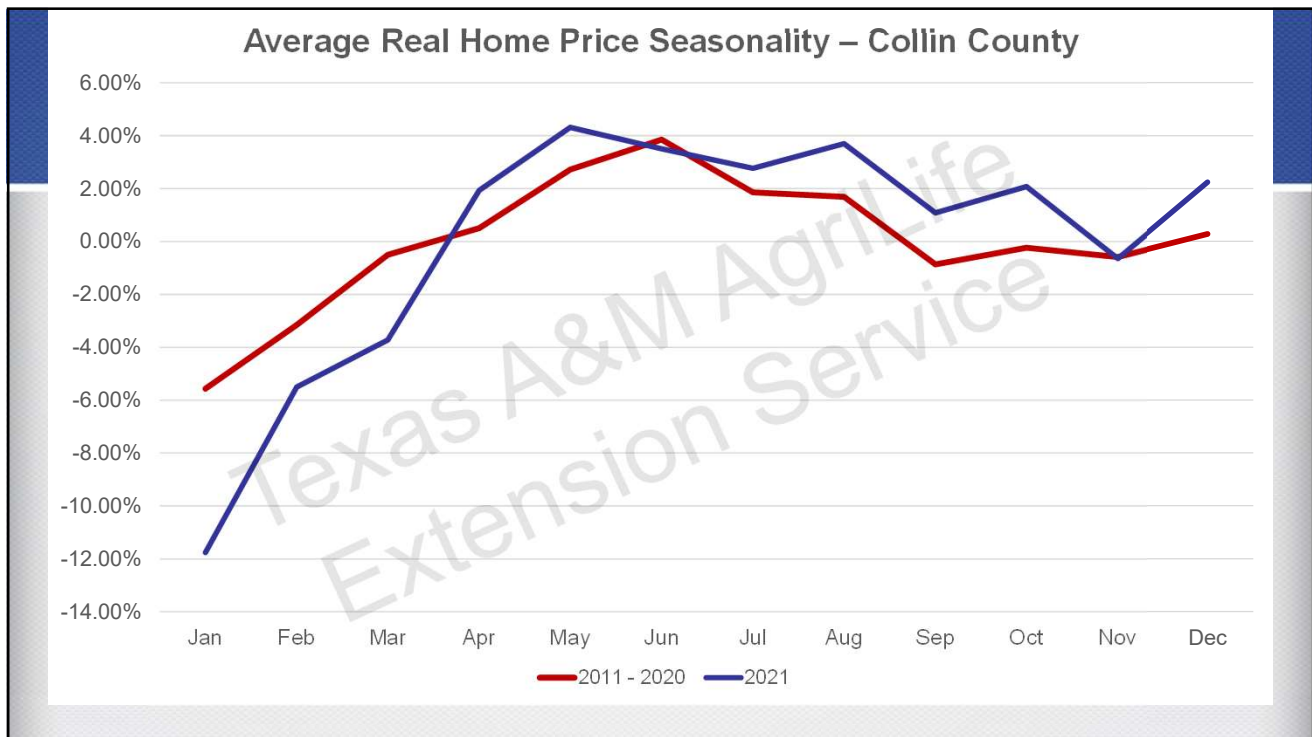
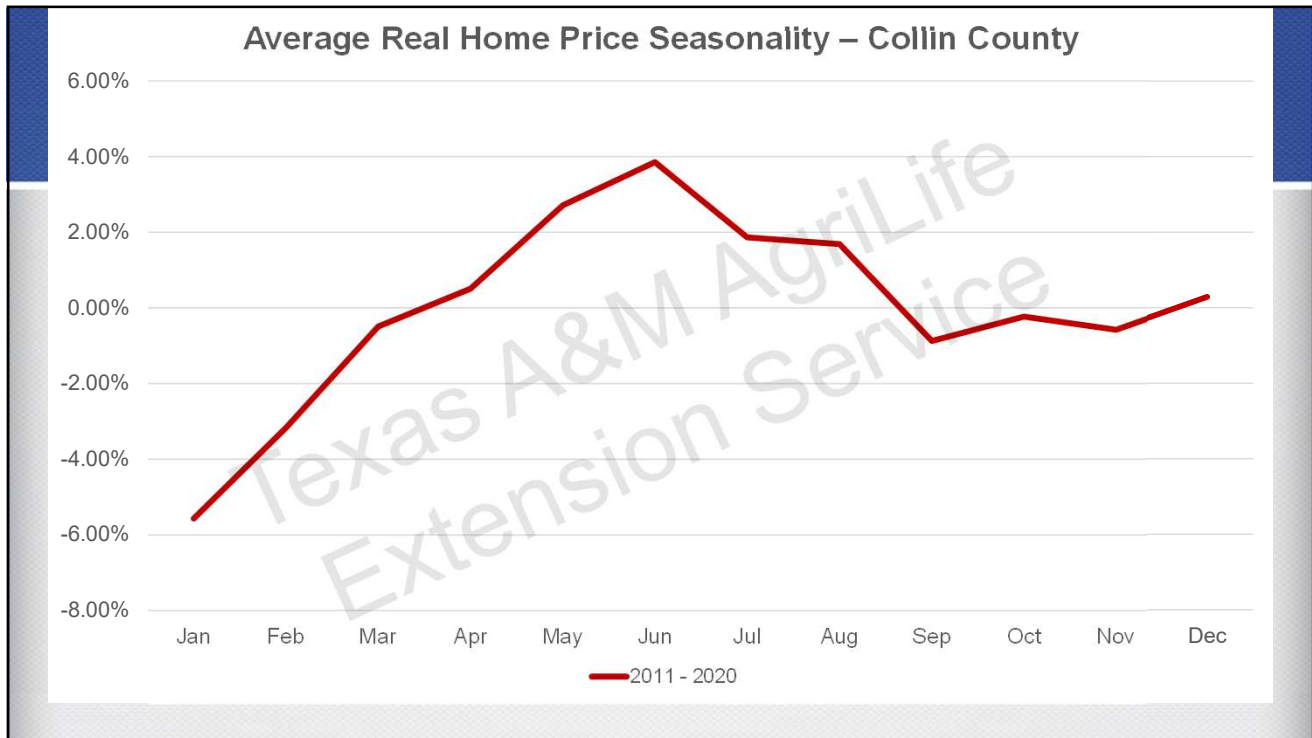
Mar
Apr
May
Jun
Jul
Aug

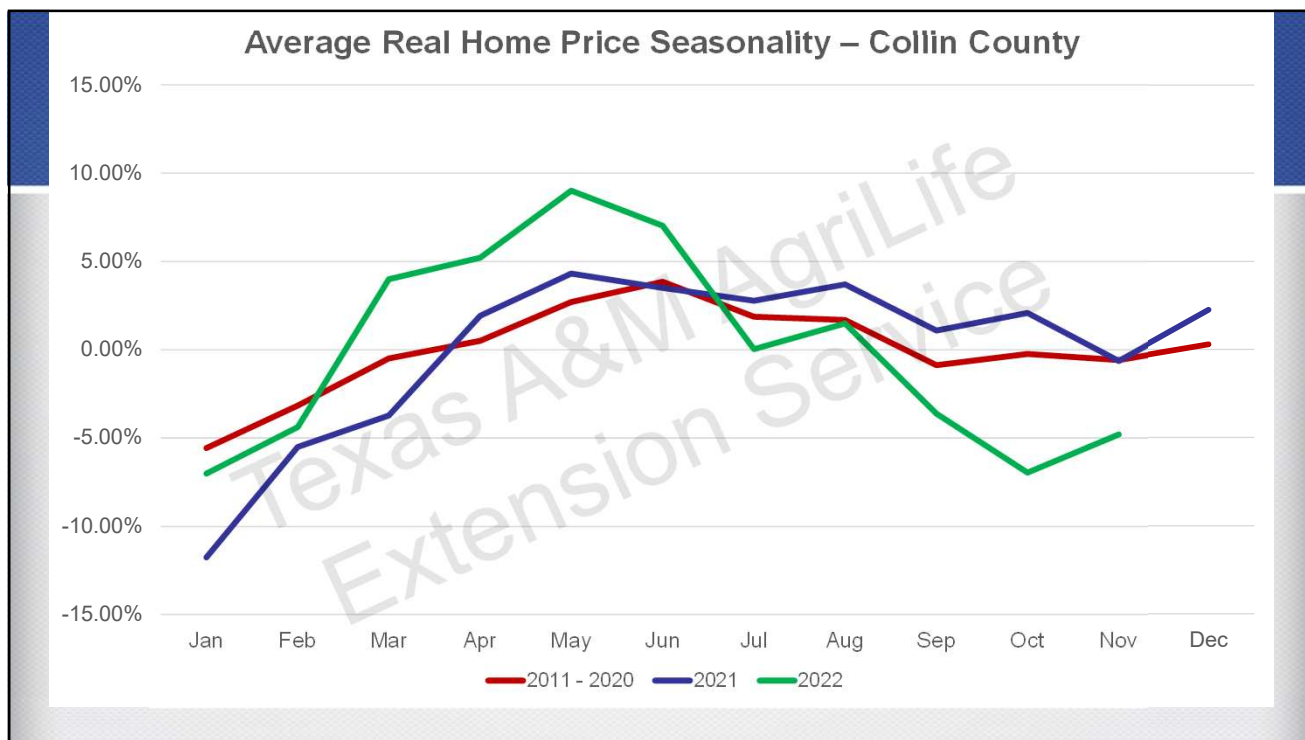


Surely this pattern has been different over the past two years...









This Suggests...

- Yes, real values increased significantly in 2021 and 2022
- Seasonality Patter
 - DFW – Not a big difference
 - Collin County
 - 2021 – Not much a variation from history
 - 2022 – Larger variation
- Traditional seasonal pattern held

Other Interesting Facts

Average Percentage Price Increase Jan – Jun

Collin County (2011 – 2022)

11.31%

DFW (2011 – 2022)

16.26%

Texas A&M AgriLife
Extension Service

Other Interesting Facts

Average Percentage Price Increase Jan – Jun

Collin County (2011 – 2022)

11.31%

DFW (2011 – 2022)

16.26%

DFW (1990 – 2022)

11.73%

Texas A&M AgriLife
Extension Service

Other Interesting Facts

Average Percentage Price Increase Jan – Jun

Collin County (2011 – 2022)	11.31%
DFW (2011 – 2022)	16.26%
DFW (1990 – 2022)	11.73%

Current Year's High = Higher Than Last Year's High

Collin County (2011 – 2022)	90.91%
DFW (2011 – 2022)	83.33%

Other Interesting Facts

Average Percentage Price Increase Jan – Jun

Collin County (2011 – 2022)	11.31%
DFW (2011 – 2022)	16.26%
DFW (1990 – 2022)	11.73%

Current Year's High = Higher Than Last Year's High

Collin County (2011 – 2022)	90.91%
DFW (2011 – 2022)	83.33%
DFW (1990 – 2022)	68.75%

If we assume traditional seasonal patterns
hold for 2023...

All that is left is forecast the 2023 average
price

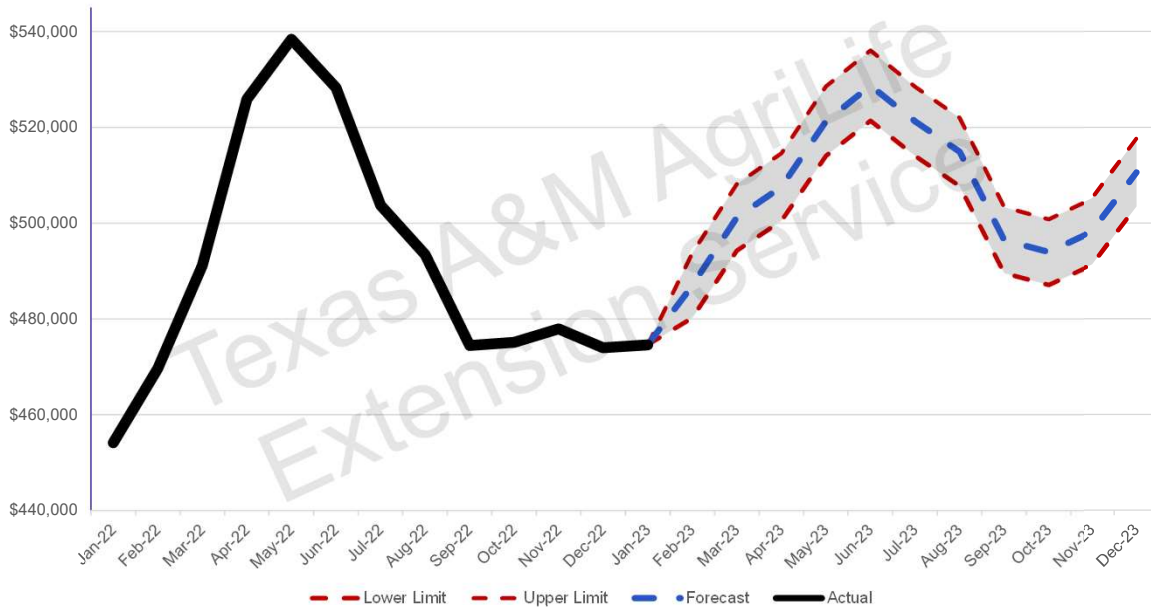
Forecast of 2023 Average DFW Home Price

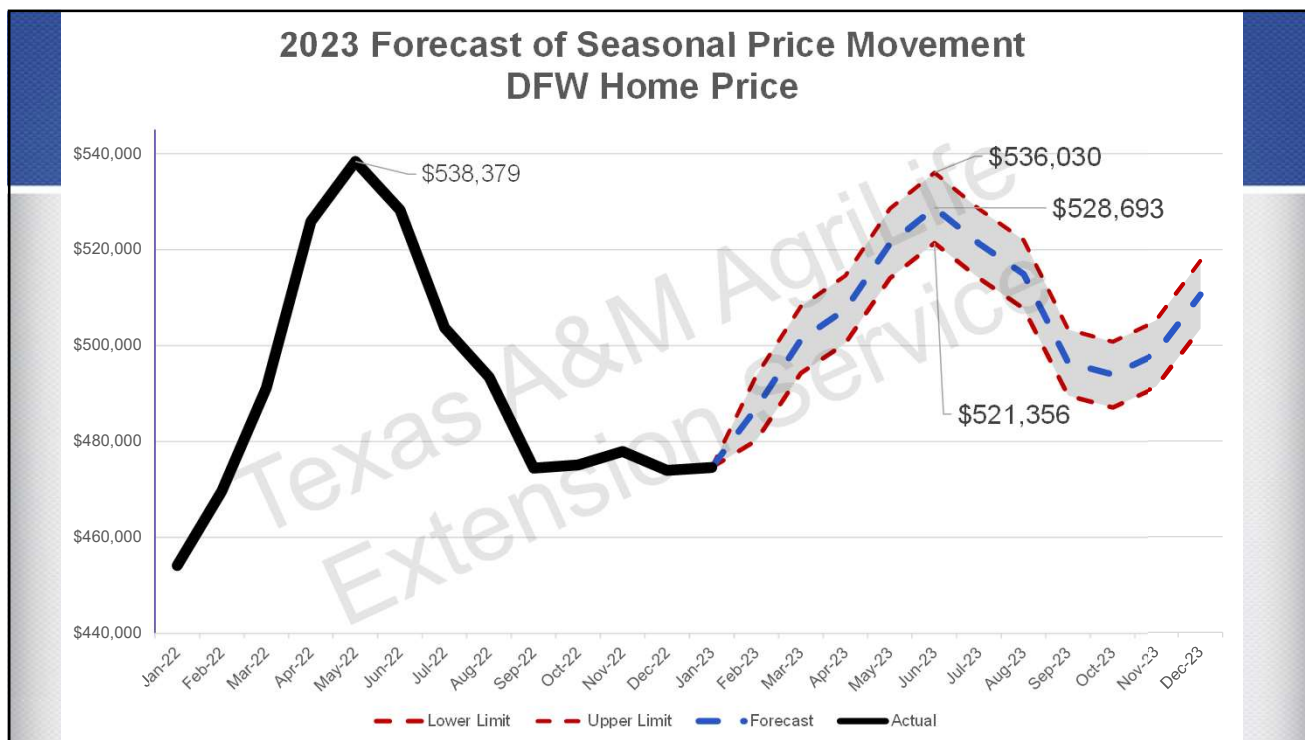
- Runaway market to the upside is likely over
 - FED got market's attention
 - Population worried about economy
- Not going to fall out of bed
 - Population growth continues
 - Inventory still extremely low
 - New home permits still strong in 2022 (even with drop in Q4)
 - Return to “normal” seasonalities

Forecast of 2023 Average DFW Home Price

	Recession		Continued Economic Growth	
	Hard Landing	Soft Landing		
Change DFW GDP	-3%	-1%	2.5%	5%
Forecasted DFW Price	\$490,062	\$498,066	\$512,084	\$522,126
% Change from 2022	-1.42%	+0.19%	+3.01%	+5.03%

2023 Forecast of Seasonal Price Movement
DFW Home Price





Only Half Done

- Many forecasts of price are available
 - Easier to do
 - What we most often think about
- But...
 - Average price could equal \$500,000 with 100,000 sales
 - Average price could equal \$500,000 with 75,000 sales

Forecast of Sales

- Why it isn't done much
 - **A LOT** more difficult
 - Not as sexy as forecasts of price
 - Doesn't matter to many outside real estate industry
- For this group
 - Just as important as forecast of price

Forecast of Total Home Sales in DFW

- Concern Over FED's Actions
 - Some holding out waiting for a drop in rates
 - FED survey members
 - Survey of FED members suggest increase to 5.25% to 5.5% in 2023
 - Two members suggested 5.5% to 5.75%
- Not going to collapse
 - Again, population growth continues
 - Inventory still extremely low
 - Disposable personal income still rising
 - New home permits still strong in 2022 (even with drop in Q4)

Forecast of Total Home Sales in DFW

	Best Case	Most Likely	Worst Case
FED Funds Rate	5.25%	5.38%	5.75%
Forecasted DFW Sales	98,168	98,010	97,536
% Change from 2022	-0.57%	-0.73%	-1.21%

Even With All This...

- Everyone Still Worried we have “2008 2.0”
 - “The Big Short” (2015)
 - 13,689,072 people have watched the trailer since April
 - “Margin Call” (2011)
 - Google search up 130% in 2022
 - “Too Big To Fail” (2011)
 - Interest on Google peaked in January 2021



Today is Different from 2008

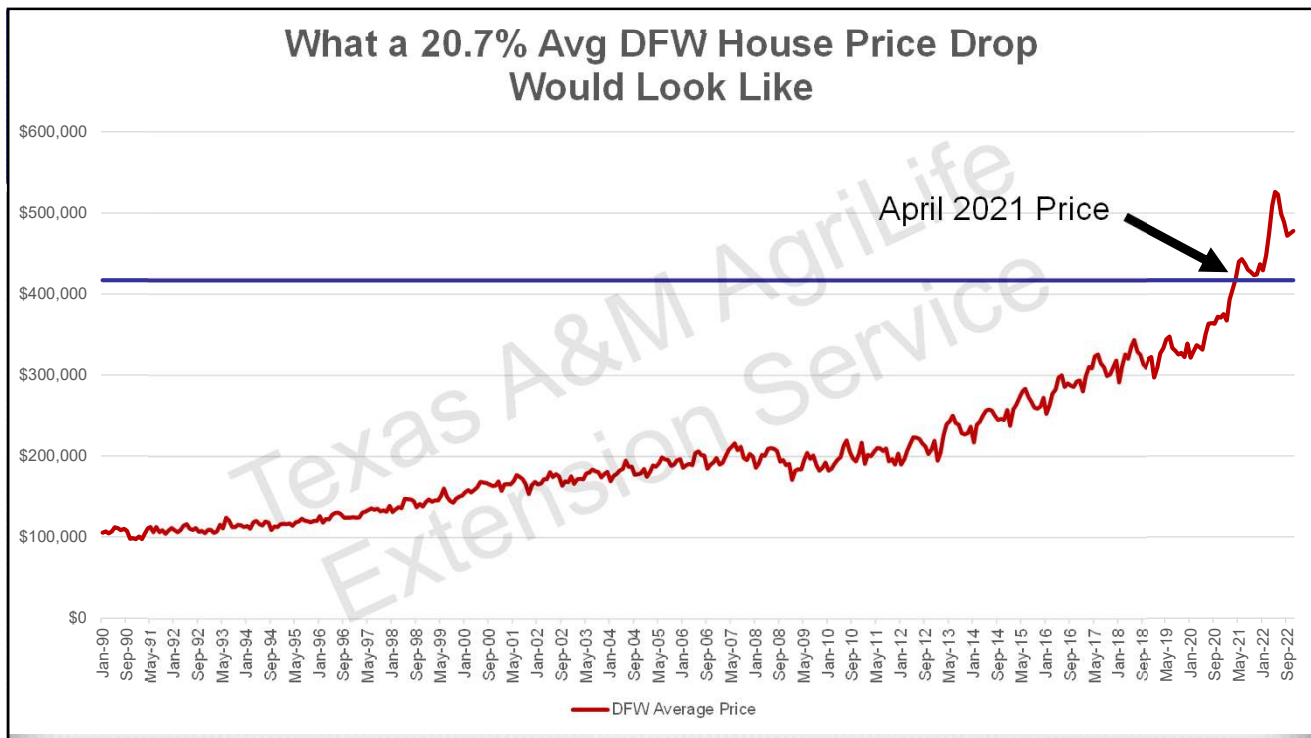
	2008	Today
Lending	Subprime lending (Oprah like)	Strict regulations; Banks well capitalized
ARMs facing rate resets	Over 13 million	1.4 million
HELOC Balance	\$705 billion	\$322 billion
Foreclosures	1,755,860	87,860
Bankruptcies	1,548,160	285,180
Months Inventory (DFW)	5.9 months	2.4 months (0.8 in Jan'22)

But, What If???

- We Get a Repeat of 2008?
 - DFW
 - Average home prices peaked in June 2007 at \$216,212
 - Bottomed out in January 2009 at \$173,379

That's a 20.7% Drop!!!

Wonder how much was due to seasonalities (January low; June high)???



Things to Watch

- Market correction continues down if
 - Continued uncertainty
 - Public not certain if lower rates are on horizon (hold off now)
 - Unemployment
 - Massive layoffs will result in softer market
 - Economy
 - Hard landing = pull back

Things to Watch

- Market prices start increasing
 - Get the soft landing
 - Economy shows signs of improving
 - Dodge recession bullet

Regardless of the Macroeconomic Situation

- 2023 Looks relatively safe
 - Still have supply/demand imbalance
 - Population increasing
 - DFW/Texas different from US economy
 - Seasonal patterns have proven to be extremely resilient

2024 Is on the Watchlist

- Inflation
 - Not as large in 2023, but prices likely not decreasing
 - Supply/Chain issues???
 - War in Ukraine – Fuel prices
 - FED still chasing demand when supply may be biggest problem
- New home permits
 - Dip in Q4 of 2022...will it continue???
- Recession???
- Consumer disposable income takes a hit
- But, will be an election year

Thank You

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