

**TURNING
POINT**
ANALYTICS



Turning Point Analytics utilizes a time-tested, real-world strategy that optimizes the client's entry and exit points and adds alpha. TPA defines each stock as Trend or Range to identify actionable inflection points.

"In the short run, the market is a voting machine, but in the long run, it is a weighing machine." - Benjamin Graham

WORLD SNAPSHOT – COMMENTS & CHARTS

Friday, August 11, 2023

General comments first and macro tables at the bottom. [Links for Explanations of Technical terms at the bottom of the report.](#)

This is the least likely time to worry about home prices in the past 50 years.

Too many individuals let the constant everyday news noise, normally driven by headlines without historical context, affect their beliefs and actions. In this report, we will strive to provide historical context. We have been are still sanguine on the U.S. housing market in general and Massachusetts in particular.

As we talk about the economy and housing, keep in mind what we have tried to drill home for readers for the past 4 years – ***there is a historic housing shortage that will take not years, but decades to rectify.*** The table below shows that even if Housing Starts annually somehow managed to stay at its highest level ever recorded (2.3 million homes in 1972), it would still take until 2032 to reduce the deficit created from 2007 to 2019. (Of course, that does not take into account that the U.S. population has grown by over 34 million since 2007.)

Table below...

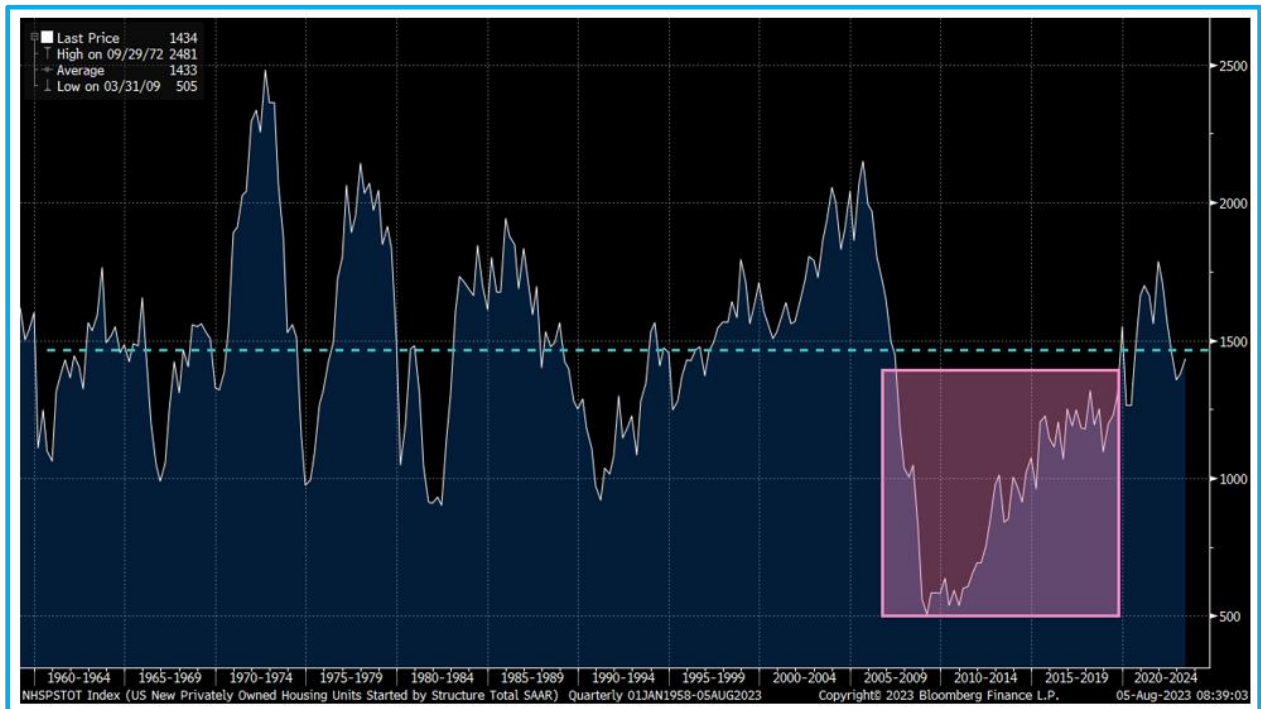
Average housing starts for 35 years was 1,590,832 (1970-2006)
Maximum housing starts was in 1972; 2,366,000 homes
Hypothetical shortage each year using annual housings starts of 2,366,000

YEAR	HOUSING STARTS	1,590,832		POPULATION	POPULATION	
		ANNUAL HOUSING SHORTAGE	CUMULATIVE DEFICIT		CHANGE PER YEAR	CUM POP CHANGE
2007	1,355,000	-235,832	-235,832	301,231,207	2,000,000	2,000,000
2008	905,500	-685,332	-921,165	304,093,966	2,862,759	4,862,759
2009	554,000	-1,036,832	-1,957,997	306,771,529	2,677,563	7,540,322
2010	586,900	-1,003,932	-2,961,930	309,327,143	2,555,614	10,095,936
2011	608,800	-982,032	-3,943,962	311,583,481	2,256,338	12,352,274
2012	780,600	-810,232	-4,754,195	313,877,662	2,294,181	14,646,455
2013	924,900	-665,932	-5,420,127	316,059,947	2,182,285	16,828,740
2014	1,003,300	-587,532	-6,007,659	318,386,329	2,326,382	19,155,122
2015	1,111,800	-479,032	-6,486,692	320,738,994	2,352,665	21,507,787
2016	1,173,800	-417,032	-6,903,724	323,071,755	2,332,761	23,840,548
2017	1,203,000	-387,832	-7,291,557	325,122,128	2,050,373	25,890,921
2018	1,249,900	-340,932	-7,632,489	326,838,199	1,716,071	27,606,992
2019	1,587,000	-3,832	-7,636,322	328,329,953	1,491,754	29,098,746
2020	1,661,000	70,168	-7,566,154	331,511,512	3,181,559	32,280,305
2021	1,702,000	111,168	-7,454,986	332,031,554	520,042	32,800,347
2022	1,550,000	-40,832	-7,495,819	333,289,857	1,258,303	34,058,650
2023	2,366,000	775,168	-6,720,651			
2024	2,366,000	775,168	-5,945,484			
2025	2,366,000	775,168	-5,170,316			
2026	2,366,000	775,168	-4,395,149			
2027	2,366,000	775,168	-3,619,981			
2028	2,366,000	775,168	-2,844,814			
2029	2,366,000	775,168	-2,069,646			
2030	2,366,000	775,168	-1,294,478			
2031	2,366,000	775,168	-519,311			
2032	2,366,000	775,168	255,857			

Source: U.S. Census Bureau

The charts below show the Housing Start deficit in sharp relief.

U.S. HOUSING STARTS ANNUALLY 1960-2023



U.S. HOUSING STARTS ANNUALLY 1999-2023



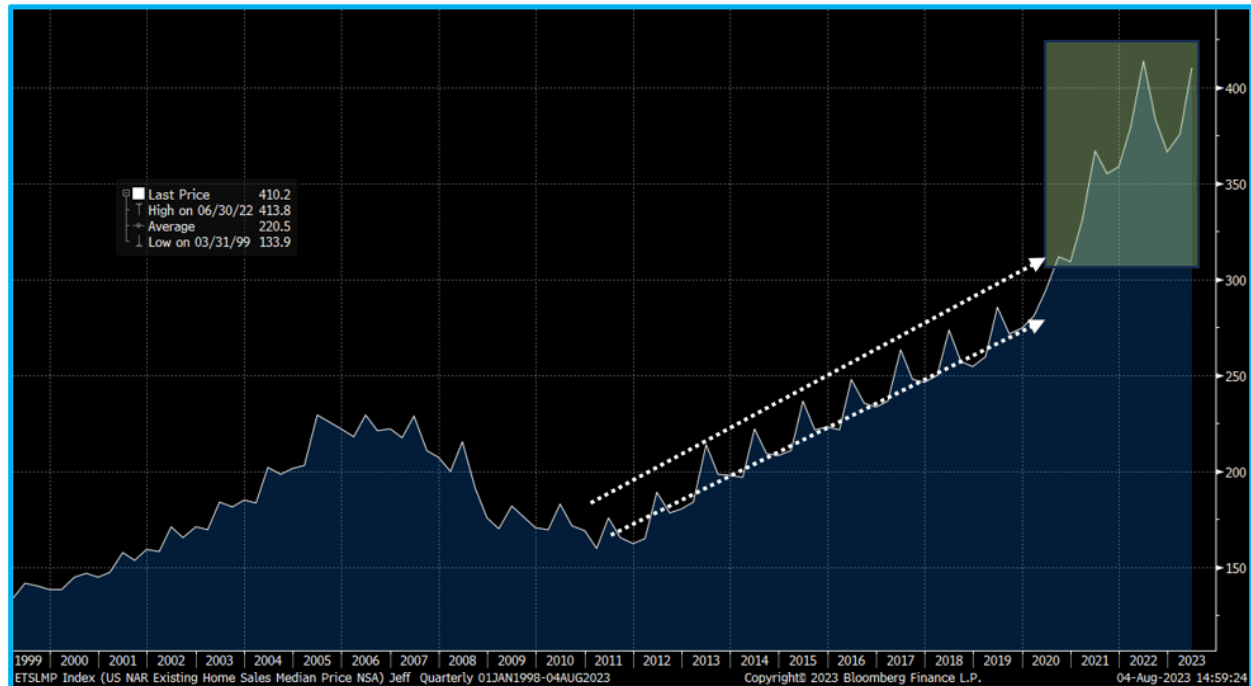
This deficit of Housing Starts led directly to a 10-year under-average housing inventory. See the chart below.

U.S. HOME SALES INVENTORY 1999-2023



Combine the housing supply deficit with the effects of Covid – remote work and government cash – and you get the bump we saw from 2020 to the present (chart below).

U.S. MEDIAN HOME PRICES 1999-2023



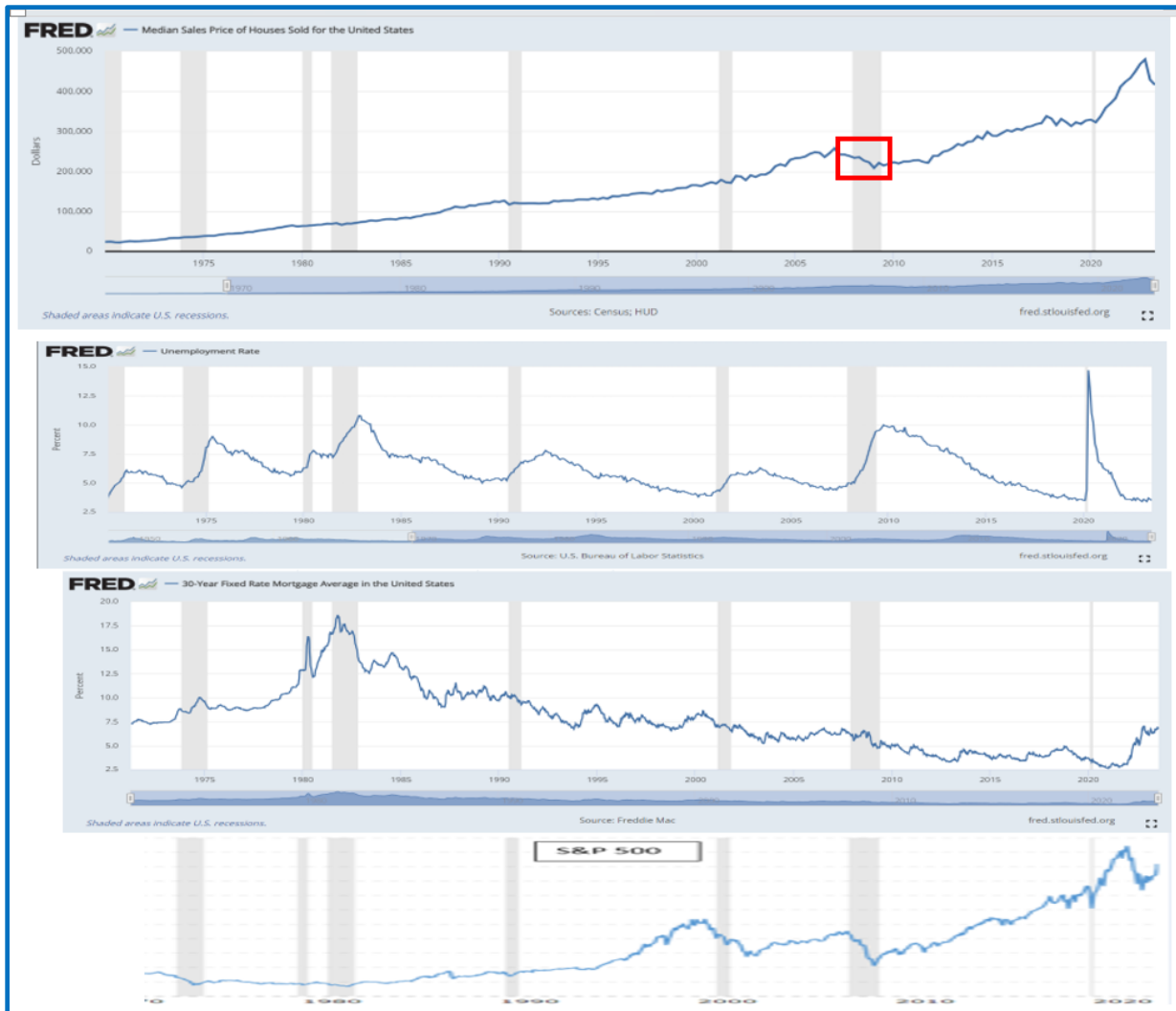
Even without the shortage of homes starts, however, the lessons of history are clear - housing prices continue to rise throughout good and bad times.

The charts below line up the Median U.S. Home Price from 1970 to present day with the major factors that should effect prices:

1. Unemployment – a good barometer for the economy
2. Average 30-Year Mortgage Rate – the price of borrowing for a home
3. Stock prices – a good measure of economic strength and wealth creation.

Each chart also shows U.S. recessions by the shaded areas. Why are we showing you all these charts? **Because one thing is clear over the past 60+ years. Through all the recessions, rising and falling employment, massive changes in mortgage rates, and huge stock market moves, the only time Home Prices declined for a sustained period of time was the Housing Bust.** That decline in prices was caused not by high home prices, weak employment, or high rates. That decline was caused by the housing market itself - overleveraged homeowners and banks, lax lending requirements, and a mortgage-back security market that resembled a Ponzi scheme. None of those conditions exists today.

1970-2023 Charts: Median Home Prices, Unemployment Rate, Average 30-Year Mortgage, the S&P500.



People may be concerned about the almost constant parade of bad news. They may worry about a political system in crisis, global warming or the war in Ukraine. The truth is that there have always been exogenous events occurring coincident with the consistent march of higher home prices. The charts above include wars in Vietnam, Iraq, and Afghanistan. The time period covers the resignation of one president and the impeachment of 2 others. The charts above also include the oil embargo and resulting gas shortage, the savings and loan crisis, the Tech bubble bursting, 9/11, and Brexit. These exogenous events still did not cause a large or sustained housing decline.

The conclusion seems obvious. Home prices climb consistently. This seems like the least likely time to worry about home prices, since we are now experiencing the worst deficit in housing supply in the past 50 years.

CLICK ON LINKS BELOW FOR TECHNICAL INDICATOR EXPLANATIONS:

[ASCENDING - DESCENDING TRIANGLE](#)

[BASING-TOPPING-CONSOLIDATION](#)

[BREAKOUT \(Breakdown\)](#)

[CHANNEL & RANGE](#)

[DIRECTIONAL MOVEMENT INDEX \(DMI\)](#)

[DOUBLE BOTTOM or DOUBLE TOP](#)

[MACD-MOVING AVERAGE CONVERGENCE-DIVERGENCE](#)

[MOVING AVERAGES](#)

[RELATIVE STRENGTH & PEER STOCK PERFORMANCE](#)

[REPEATING PATTERNS](#)

[RSI-RELATIVE STRENGTH](#)

[SUPPORT, RESISTANCE, BREAKOUT, BREAKDOWN](#)

[TREND](#)

ALWAYS REMEMBER: No strategy exists in a vacuum – always evaluate the relevant sector & market.
Over 80% of portfolio performance is determined by sector and market forces (Ibbotson & Kaplan study – January/February 2000)

Turning Point Analytics Disclaimer

Turning Point Analytics (TPA) is only one of many tools that an investor should use to make a final investment decision. TPA is an overlay on top of a client's good fundamental or macro analysis. TPA does not create or provide fundamental analysis. The information in this communication may include technical analysis. Technical analysis is a discipline that studies the past trading history of a security while trying to forecast future price action. Technical analysis does not consider the underlying fundamentals of the security in question and it does not provide information reasonably sufficient upon which to base an investment decision. Investors should not rely on technical analysis alone while making an investment decision. Before making an investment decision, investors should consider reviewing all publicly available information regarding the security in question, including, but not limited to, the underlying fundamentals of the security and other information which is available in filings with the Securities and Exchange Commission. The information and analysis contained in reports provided by TPA are copyrighted and may not be duplicated or redistributed for any reason without the express written consent of TPA. The information in this communication is for institutional or sophisticated investors only. By accepting this communication, the recipient agrees not to forward, and/or copy the information to any other person, except as permitted, or required by law. TPA does not guarantee accuracy or completeness. TPA is a publisher of technical research and has no

investment banking or advisory relationship with any company mentioned in any report. Reports are neither a solicitation to buy nor an offer to sell securities. Past performance is in no way indicative of future results. Opinions expressed are subject to change without notice. TPA will provide, upon request, the details of any past recommendations. TPA's analysis and recommendations should not be used as the sole reason to buy or sell any security. TPA may compensate brokers and intermediaries for sales and marketing services. You understand and acknowledge that there is a very high degree of risk involved in trading securities and/or currencies. The Company, the authors, the publisher, and all affiliates of Company assume no responsibility or liability for your trading and investment results. It should not be assumed that the methods, techniques, or indicators presented will be profitable or that they will not result in losses. Statements, data, and analysis made by TPA or in its publications, are made as of the date stated and are subject to change without notice. TPA and/or its officers and employees may, from time to time acquire, hold, or sell a position in the securities mentioned herein. Upon request, TPA will furnish specific information in this regard. TPA will not be held liable for losses caused by conditions and/or events that are beyond TPA's control, including, but not limited to, war, strikes, natural disasters, new government restrictions, market fluctuations, and communications disruptions.