Cycles Within the US Stock and Real Estate Markets ASSET MANAGEMENT

October 2020

The US stock and real estate markets are governed by very distinct cyclical patterns. These patterns have been traced throughout history going back to the inception of public land sales to private citizens starting in 1800. While there are many cycles we could explore, some of the most important are the 80-year Generational Turning Cycle, the Secular Bull/Bear Stock Cycle, the 18.6-Year Cycle and the 11-Year Cycle. We will explore the latter 3 cycles in earnest in this paper in order to hopefully provide the reader with a clear picture as to how these cycles combine to move the US economy, stock market and real estate market forward through time and cause massive price oscillations along the way.

Why Study Cycles?

Cycles rule our universe. They are all around us. They are so prevalent that we often do not even notice them. The moon cycles every month from full to new and back again. The seasons cycle as the earth moves closer to and further away from the sun. Life cycles progress as we are born, grow up, raise our own children, teach them the lessons we have learned and then we pass away. There are countless other cycles that we either don't notice or just dismiss in our everyday lives.

The most interesting cycles are the ones that make up time. For some reason, we in the Western world tend to think of time as a linear progression moving forward without ever looking back. This is curious because all our time is based on circular movements of the planets...specifically the earth rotating as it moves in an oblong circular pattern around the sun marking out days and years. The very nature and structure of time is based on circular patterns, yet we think of it in a linear pattern. Yet these are the cycles that can teach us the most about how our universe works. This includes economies and markets.

Maybe the reason that cycles befuddle us so much is that we expect there to be clean easy answers to everything in life, and cycles provide approximations and pieces of the puzzle. For instance, there is not one clear cycle that determines every movement in markets, but a series of cycles that govern the major moves in markets. This series of cycles rises from smallest to largest or vice versa providing a structure through which to see the major movements of economies and markets. Think of the gears of a clock starting with the smallest that determines the seconds, then the minute gear, then the hourly gear, then the daily gear and so on up through time. You can move from smallest to largest and back down through the gears as they all work together to make the clock work as it should.

There are several books that have been instrumental in my understanding of cycles and my ability to piece them together to create the structure that I believe I have found. Each of these books have focused on a specific time length cycle and it's affects on the world. It is only when you put them together that you can gain a clear picture of how the machine works. Two of the most transformative books I have read on the subject of cycles are The Fourth Turning by Strauss and Howe and The Secret Life of Real Estate and Banking by Phillip J Anderson – which has had by far the most influence on the way I see economic and market cycles. The latter book is so important in my view that I read it every single year as a refresher. A third which has also contributed to my understanding of cycles is Zero Hour by Harry Dent and Andrew Pancholi.

Differing Cycle Lengths

Viewing these cycles in order from largest to smallest and adding the pieces of the total cycle picture that each author has focused on is a little like looking at an old lithograph with multiple layers that can be added or removed in order to provide a complete or incomplete picture. If you are looking at just one layer, you won't be able to see the full picture or how the different layers interact with one another. The cycles that are stacked

in this structure from largest to smallest are the Generational Turning Cycle > Secular Bull/Bear Market Cycle > 18.6 Year Real Estate/Gann Cycle > 11 Year Panic Cycle > 3 Year Stock/Economy Cycle (161 Weeks) > 18 Month Stock Cycle > 9 Month Stock Cycle. There are other smaller cycles that work within this structure such as the 20 week intermediate cycle and the 10 week daily cycle, but these cycles are small enough that they are largely inconsequential to the overall structure.

By stacking these cycles on top of each other, you will be able to see how each one interacts with the next. For instance, the 18.6 year real estate/Gann cycle acts differently in both severity and length of movements when placed inside of a secular bull market vs. a secular bear market. Also, generational fourth turnings tend to start with a financial crisis which coincides with a secular bear market. This massive crisis sets the tone for sociological and economic moods that come later. As the fourth turning progresses, market participants continue to look over their shoulders for another such crisis for decades to come, causing most of them to miss a large portion of the secular bull market that started when the financial crisis subsided. First and third turnings tend to be eras of economic prosperity that last for a couple of decades and lead into the next secular bear market which kicks off the second and fourth turnings respectively.

Secular Bull/Bear Cycles

Each cycle is like a key that must be turned in order to determine how the next smaller cycle will act. After turning the first key – which is the generational turning cycle – the next one to look at is the secular bull/bear market cycle. Going back to the beginning of the data I have access to in 1920, secular bull markets tend to last 25-26 years and secular bear markets tend to last 6-10 years. The secular bull and bear markets since 1929 look like this:

- Secular bear 1929-1942 ~ 13 years
- Secular bull 1942-1966 ~ 24 years
- Secular bear 1966-1974 ~ 8 years
- Secular bull 1974-2000 ~ 26 years
- Secular bear 2000-2009 ~ 9 years
- Secular bull 2009-ongoing; expected to end between 2034-2037

Source: Sourced Data from StockCharts.com; W.D. Gann Cycle Table

Figure 1 shows the long-term chart of the S&P 500. Secular bear markets are shown in the red boxes, and secular bull markets are shown by the green trend lines.

An interesting thing to note about secular bull/bear markets is that declines in secular bear markets can be 50% or greater, whereas declines in secular bull markets are usually less than 20%. Declines in secular bull markets are typically contained by the upward sloping 200 week moving average when looking at the S&P 500 and the upward sloping 150 week moving average when looking at the NASDAQ.

Source: Chart Courtesy of Stockcharts.com Figure 1:



CYCLES WITHIN THE US STOCK AND REAL ESTATE MARKETS

Secular bull and bear markets are driven largely by demographic factors as large generations are born, grow up and enter the work force. As they reach their peak spending years, they spend money on goods and services which drives economic growth and profitability of the companies traded on the exchanges. They also begin saving for retirement and use their peak income years to buy stocks which also drives stock prices higher.

After the large generation drives earnings and economic growth to their excesses – usually around the time the generation hits the demographic peak spending age – then a secular bear market begins. The secular bear market has two purposes: 1) allow the excesses built up in the prior secular bull to be worked off and 2) allow the smaller generation to pass through their peak spending years as the economy makes way for the next large generation. This oscillation between larger and smaller generations is captured quite well by the Middle-Young Ratio which was created by the Brookings Institute.

18.6 Year Real Estate/Gann Cycle

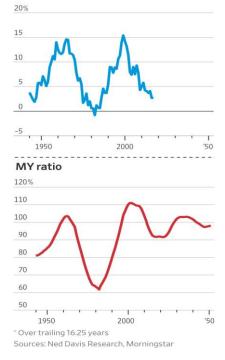
The next cycle to look at once you determine whether you are in a secular bull or bear is the 18.6 year Real Estate/Gann cycle. This is a very interesting and accurate cycle based on the work of two men. The first man to discover it and put it down on paper was an analyst and trader in the early 1900's named W.D. Gann. He reportedly discovered the cycle in 1910 and projected it forward through time. It has been uncanny in the dates that it has predicted as turning dates from up to down cycles. It predicted the March 2000 market top, the 2003 bottom, the 2007 top and the March 2009 bottom. It also warned of the panic in late 2015/ early 2016, as well as the panic sell off which began in October 2018. The original chart was based on columns of 19 years which had to be

Figure 2:

Remarkable Long-Term Model

The S&P 500's inflation-adjusted, dividendadjusted annualized return over trailing 16.25 years, versus ratio of middle-aged population to the young (the MY ratio))

Annualized Return*



adjusted after so many columns to account for the difference between a full 19 years and the 18.6 year cycle. I took the liberty of adjusting the chart starting in the year 1990 to show the chart on an actual 18.6 year cycle. It is shown in figure 3 below.

	1990.65	2009.25	2027.85	Extreme low stock prices, beginning of new 18.6 year cycle		
1973	1991	2010	2028			
1974	1992	2011	2029			
1975	1993	2012	2030			
1976	1994	2013	2031	Stock prices breakout to large upside move		
1977	1995	2014	2032			
1978	1996	2015	2033	Minor Panic		
1979	1997	2016	2034	Minor Panic Bottom, stock price low		
1980	1998	2017	2035			
1981.65	1999	2018.85	2036	High stock prices, mid-cycle market top		
1982	2000.25	2019	2037.45			
1983	2001	2020	2038	Panic		
1984.65	2002	2021.85	2039	Bottom of bear market, stock price low		
1985	2003.25	2022	2040.45			
1986	2004	2023	2041			
1987	2005	2024	2042	Real Estate cycle top, beginning of 4 year downturn		
1988	2006.6	2025.2	2043.8	Stock Market cycle top, extreme bear market		
1989.25	2007.85	2026.45	2044			
1990	2008		2045.05			

Figure 3:

It was a mystery to all who came across this cycle as to why it worked until the second man completed his work on the cycle and applied it to real estate and the overall economy. His name is Phillip J Anderson of Australia. In 2012, he wrote a book about his findings entitled The Secret Life of Real Estate and Banking. Based on my study

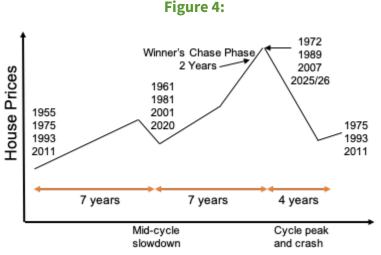
Source: W.D. Gann

CYCLES WITHIN THE US STOCK AND REAL ESTATE MARKETS

of market and economic history, Mr. Anderson's work provides the absolute best structure for determining economic and stock market moves. Mr. Anderson studied real estate cycles going back to the 1600's in England up through the Great Financial Crisis of 2008. He found that the economy, which is driven by this 18.6-year

real estate cycle, moves in very predictable ways throughout the cycle and events can be determined well ahead of time. In fact, a man named Fred Harrison predicted the 2008 real estate financial crisis using this cycle as far back as the 1990's.

The structure consists of a 7-year recovery from the previous real estate decline, followed by a 1-2 year mid-cycle slow down. This midcycle slowdown leads to the bull phase of the real estate cycle of approximately 5 years. This 5 year bull phase is followed by a 2 year bubble phase which ultimately leads to the 4 year real estate decline. I have recreated the structure of the real estate cycle as Mr. Anderson has described it as shown in figure 4.



Source: The Secret Life of Real Estate and Banking Phillip J. Anderson; Akhil Patel

Mr. Anderson also constructed a 24-hour economic clock which lays out every step that the economy takes through the cycle. Steps 1-24 are shown below.

The 24 steps are as follows:

Steps 1-4: first phase of real estate activity

- 1. Ready for next boom
- 2. Gross rents improve
- 3. Net rents improve

Steps 3-6: decline in vacancy rates

- 4. Higher net rents equals higher prices for established buildings
- 5. More profitable to build
- 6. Rapid expansion in new construction

Steps 7-9: construction takes off

- 7. Continued expansion of new construction
- 8. Expansion of banks
- 9. Easy credit

Steps 10-12: credit growth

- 10. Increased building activity absorbs vacant land
- 11. Mid-cycle slowdown
- 12. Mid-cycle slowdown begins to turn

Steps 13-18: real estate cycle in full swing

- 13. The land boom (world's tallest buildings; complaints about property taxes)
- 14. Lavish government spending for public works
- 15. Real estate activity frenetic (the peak)
- 16. Activity slackens (but confidence remains high)
- 17. Foreclosures and bankruptcies increase
- 18. Stocks enter bear market from past all-time high

Steps 19-21: vacancies increase

- 19. Credit creation institutions reverse policies
- 20. Economic activity stalls

21. Wipe out of debts/stagnation

Steps 22-24: land price induced recession

22. Wreckage is cleared away

- 23. Stocks start climbing
- 24. New cycle begins

There are also longer cycles that are just multiples of the 18-year cycle. For some unknown reason, when the cycles stretch out to multiples of the 18.6-year cycle, the multiples are of 18 years, not 18.6 years. Examples of these cycles that Andrew Pancholi wrote about in his book Zero Hour are the 45-year, 54-year, 72-year and 90-year cycles. He also wrote about 50 and 100-year cycles, but I don't find them as useful as the 18-year based cycles.

The next cycle is the 11-year cycle. This cycle is nearly as important as the 18.6-year cycle for determining turn dates for the stock market. There have been some amazing turns called out by this cycle. In the table in figure 5, I have gathered some of the more remarkable cycle turns over the last 35 years.

Year	Event	Market Decline	Previous Event Date
1987	Stock Market Crash	36%	
1998	Long Term Capital Management Crisis	28%	1987 Crash
2000	S&P 500 Market Top	50%	1989 Savings and Loan Market Top
2001	September 11 Crash Lows	29%	1990 Savings and Loan Market Bottom
2009	Financial Crisis Market Low	58%	1998 Asian Currency Crisis Bottom
2011	European Debt Crisis	22%	2000 Tech Bubble Top
2015/2016	Chinese Market Crash Issues	21%	2014/2005 Twin Declines
2018	Taper Tantrum	20%	2007 Market Top
2020	Coronavirus Crash	35%	2009 Financial Crisis Market Bottom

Figure 5:

Source: Sourced Data from Stockcharts.com

Some of the worst short-term panics we have seen since 1987 have come on this 11-year cycle, they are: the 1987 crash, the 1998 Long Term Capital Management sell off, the 2009 Great Financial Crisis bottom and the 2020 Coronavirus crash. There is no event shown before the 1987 crash because the previous event was the 1974 bear market low during the Arabian Oil Crisis. In this particular case the 45-year cycle overrode the 11-year cycle and we had a crash low in 1974 instead of the expected 1976.

The strongest market events come when multiple cycles line up together. This happened in 2020 when the 11year, 18.6-year and 45-year cycles all lined up together. The 18.6-year cycle was from the 9/11 crash low, the 11-year cycle was from the 2009 Financial Crisis market low and the 45-year cycle was from the 1974 crash low. Figure 6 is a chart of the Nasdaq going back to 1987. The bold red and green vertical lines are the 18.6-year cycle top and bottom turning points, while the dotted green and red vertical lines are the 11-year cycle top and bottom turning points. There is speculation of a possible cycle turn for the market around April 2021 if one is studying (following) both the 11-year cycle and the 18.6-year cycle. April 2021 is 11 years from the 2010 flash crash and 18.6 years from the 2002 Tech Bubble absolute price low. The end of this 3-year period of turmoil in which the S&P 500 has fallen by over 20% multiple times and GDP contracted by over 30% in the second quarter of 2020, is called out in the 18.6-year cycle tables above, may end in October 2021.

By understanding the different cycles and how they interact with each, investors are much more likely to understand what the economy should do next and where declines will most likely happen in the timeline of the stock market. When taking the interaction between secular cycles, 18.6-year cycles, 11-year cycles and 18-year multiple cycles investors can not only determine the most likely times that declines will happen but also the relative severity of declines. This information is helpful in providing investors a better understanding of the market and how cyclical in nature it is, which can help them to make more informed decisions for investments now and in the future.

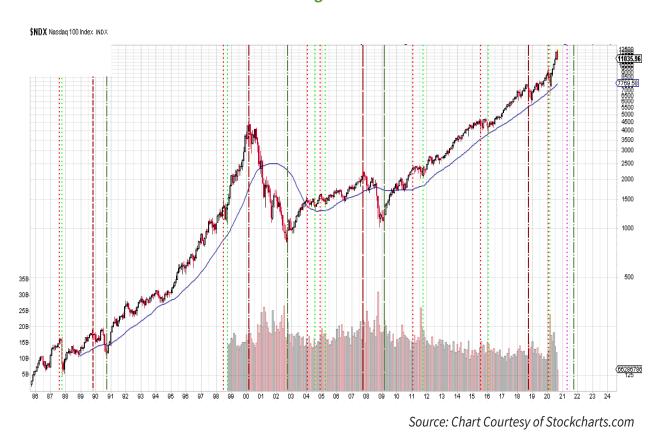


Figure 6:

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