Sumantra Chattopadhyay [redacted]

Prof. James Winder

Senior Honors Seminar in Finance

21 September 2021

Short Paper 1: What Time is it and How to Position Your Portfolio

The atmosphere generated by the hardship brought upon the world by COVID-19 from early 2020 through the present can be characterized by many adjectives—dismal, depressing, pessimistic. The state of U.S. public equity markets (which are regarded as proxies for or synonymous with the state of the overall U.S. economy at times) is reflected in the levels of the following indices: S&P 500 Index, Dow Jones Industrial Average, and the NASDAQ Composite. These indices all seemed to follow these negative adjectives during the early stages of the pandemic. From the S&P 500's record high of 3,386.15 on February 19, 2020, the index plunged 33.9% to its COVID-crisis low of 2,237.40 on March 23, 2020 ("S&P 500."). From the Dow Jones' record high of 29,551.42 on February 12, 2020, the index plunged 37.1% to its COVID-crisis low of 18,591.93 on March 23, 2020 ("Dow Jones Industrial Average."). From the NASDAQ's record high of 9,750.96 on February 20, 2020, the index plunged 24.8% to its COVID-crisis low of 7,334.78 on March 17, 2020 ("NASDAQ Composite Index."). Clearly, the markets were in a downward correction from their pre-pandemic peak to a new COVID-crisis low.

With this context, reflecting on the indices and state of U.S. markets today, the markets seem absurdly high, reversing all of the aforementioned negative adjectives about the state of the markets. From the pandemic lows to September 17, 2021, the S&P 500, Dow Jones, and the NASDAQ are up 98.1%, 86.0%, and 105.1%, respectively ("S&P 500."; "Dow Jones Industrial Average."; "NASDAQ Composite Index."). Even when comparing the index movements from

their pre-pandemic highs to September 17, 2021, the S&P 500, Dow Jones, and the NASDAQ are up 30.9%, 17.0%, and 54.3%, respectively, reflecting significant gains ("S&P 500."; "Dow Jones Industrial Average."; "NASDAQ Composite Index."). Gains such as these are highly sought after as investors hunt for yield in this low-interest-rate environment. However, "the S&P 500 already hitting 54 records this year through Thursday [September 11th]—the most during that period since 1995—" has "several analysts [from firms including Morgan Stanley, Citigroup Inc., Deutsche Bank AG and Bank of America Corp.]" worried about "a growing possibility of a pullback or, at the least, flatter returns" (McCabe). Characterized by absurdly high stock market index levels, uncertainty about the future of the pandemic and its new variants, as well as behavior in other markets, the U.S. market cycle is around the peak, signified by letter (c) in the following chart from the book, *Mastering the Market Cycle*, by American investor, co-founder of Oaktree Capital Management, Howard Marks.

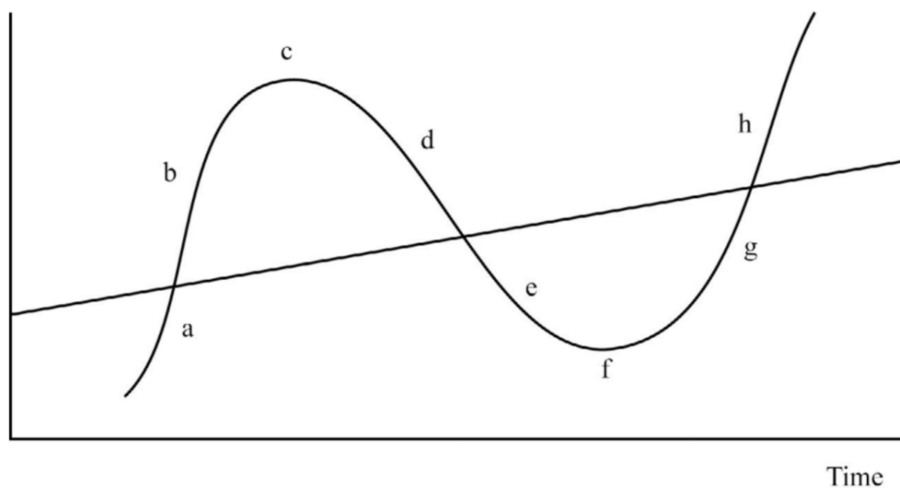

Figure 1: Stages of the market cycle according to Howard Marks

The current market being at (c) is supported by examining Marks' description of the earlier stages of the cycle and general characteristics of the cycle at (c). Marks describes stage (a) as

"recovery from an excessively depressed lower extreme or "low" toward the midpoint" (Marks 26). He describes stage (b) as "the continued swing past the midpoint toward an upper extreme or "high"" and stage (c) as "the attainment of a high" (Marks 26).

Undoubtedly, the aforementioned COVID-crisis low point in the stock market indices was the "excessively depressed lower extreme" that Marks mentions that precedes the stage (a) recovery towards the secular midpoint. Expanding the analysis beyond public equity markets, real GDP for the United States fell a staggering 9.4% in Q2 2020 from Q1 2020, and 37.4% in the same period using a continuously compounded annual rate of change ("Real Gross Domestic Product."). This collapse "wiped away nearly five years of growth", clearly meeting the definition of a low point (Casselman). Largely due to massive government stimulus, markets and the economy have recovered from this low point and have risen to record highs. As mentioned before, the public equity market indices have eclipsed their pre-pandemic highs by huge margins. Taking the pre-pandemic highs as a new midpoint in the market cycle, it is clear markets have been well into stage (b) that Marks describes.

However, the larger economy may be further from its peak and still in recovery. Real potential GDP—which estimates the economic output from high capital and labor resources usage—and actual real GDP are still apart. Even in Q2 2021, with equity markets closing at record highs regularly, real GDP of $19.4 trillion is about $300 billion less than real potential GDP of $19.7 trillion ("Real Potential Gross Domestic Product."; "Real Gross Domestic Product."). However, this negative output gap will continue to close as it has been since the initial COVID shock due to government stimulus and recovering economic activity. Similarly, though the most recent unemployment rate (August 2021) of 5.2% is higher than the pre-pandemic rate (February 2020) of 3.5%, it is much lower than a crisis-high of 14.8% in April 2020 and has been trending

downwards since then ("Unemployment Rate."). The real economy may have more recovery to do before it is near its peak of the market cycle. In contrast, the financial economy (largely characterized by public equity indices) is much closer to the peak of the market cycle.

Turning from this more quantitative analysis to Marks' more qualitative framework, the current state of all categories in his guide to market assessment indicates that the current market cycle is around a peak at stage (c). Marks' guide is shown in Figure 2 below.

Economy:	Vibrant	Sluggish
Outlook:	Positive	Negative
Lenders:	Eager	Reticent
Capital markets:	Loose	Tight
Capital:	Plentiful	Scarce
Terms:	Easy	Restrictive
Interest rates:	Low	High
Spreads:	Narrow	Wide
Investors:	Optimistic	Pessimistic
	Sanguine	Distressed
	Eager to buy	Uninterested in buying
Asset owners:	Happy to hold	Rushing for the exits
Sellers:	Few	Many
Markets:	Crowded	Starved for attention
Funds:	Hard to gain entry	Open to anyone
	New ones daily	Only the best can raise money
	General Partners hold all the cards	Limited Partners have bargaining power
Recent performance:	Strong	Weak
Asset prices:	High	Low
Prospective returns:	Low	High
Risk:	High	Low
Popular qualities:	Aggressiveness	Caution and discipline
	Broad reach	Selectivity

Figure 2: Howard Marks' Guide to Market Assessment

Though there is a negative output gap, as mentioned before, the economy is pretty vibrant. Headlines have generally been optimistic these days when it comes to the economy, pointing to strong consumer goods demand, increased travel, and lower unemployment, among other items. Related to this, the outlook has been largely positive, supported by government stimulus and enthusiasm for continued growth, with some downward pressure from COVID variant uncertainty

and some increasing cases as well as potential inflation fears. A few ways to quantify this observation is to analyze business and consumer confidence. According to the OECD's business confidence index (BCI), the United States registered at a 99.0 level pre-pandemic in February 2020, very slightly pessimistic. However, the August 2021 BCI is at 101.5, slightly optimistic. Though this number had been trending downwards from the peak of 102.1 in December 2020, the BCI still shows that the economy and outlook are positive ("Business Confidence Index."). The OECD's consumer confidence index (CCI) is more pessimistic than the BCI. Its August 2021 level of 98.1 is below the February 2020 pre-pandemic level of 102.1 ("Consumer Confidence Index."). However, the OECD's composite leading indicator (CLI), which provides qualitative information about short-term economic movements, has been trending upwards. Its August 2021 level of 100.6 is higher than the pre-pandemic February 2020 level of 98.7 ("Composite Leading Indicator."). Though there is slight weakness, the overall economy and outlook still seem vibrant and positive, supporting the position that that the market cycle is near its peak.

Marks' next set of categories regarding the cheap availability of plentiful capital on easy terms is certainly true now, given the low-interest-rate environment and voracious demand from borrowers (both individuals and large entities) supplied by investors deploying their dry powder. The current Fed funds rate range is 0-0.25%, effectively 0%. For individuals, 30-year fixed mortgage rates are at 2.88% as of September 9, 2021, 0.57 percentage points lower than the pre-pandemic rate of 3.45% ("30-Year Fixed Rate Mortgage Average in the United States."). For corporations, the average investment-grade BBB debt currently has an effective yield of 2.24% as of September 17, 2021, which is still lower than the pre-pandemic effective yield of 2.93% on February 3, 2020 ("ICE BofA BBB US Corporate Index Effective Yield."). Even for high-yield corporate debt, the effective yield of 3.96% as of September 17, 2021 is much lower than the pre-

pandemic effective yield of 5.38% as of February 3, 2020 ("ICE BofA US High Yield Index Effective Yield."). Overall, credit is fairly cheap and accessible across the economy for various types of individuals and entities.

Investors and asset owners are still enthusiastic about the market environment and their holdings. Total net assets in U.S. regulated open-end funds[1] reached $29.3 trillion at year-end 2020 from $25.7 trillion at year-end 2019, an increase of 14% (*2021 Investment Company Fact Book.* 21). Not only have inflows occurred during the last year, but U.S. households also hold more of their financial wealth in regulated funds (23%) than in bank deposits and currency (13%) (*2021 Investment Company Fact Book.* 35).

According to the framework, this increasing risk allocation, and fund inflows, along with prior characterizations of the market according to the framework, checks off conditions regarding the market being near the peak. Now that one knows what inning it is / what time it is in terms of the market cycle, it is important to know how to position one's portfolio for the coming declines.

Pursuing a defensive strategy while remaining a market participant will ensure that the portfolio receives solid returns while managing downside risk from the coming market correction. According to Marks, at or near the peak of a market cycle, the portfolio manager needs to be cautious and use discipline, being selective to not buy too much at high prices and not taking too much risk (Marks 166). The investment clock from Merrill Lynch, as discussed in class, offers some guidance as to which asset classes and sectors the portfolio manager should be involved in during different stages of the market cycle. According to this clock, given that the market is near stage (c), the portfolio manager should invest in TIPS (inflation-protected bonds) and large-cap

[1] Regulated open-end funds include mutual funds, exchange-traded funds (ETFs), and institutional funds.

stocks. This approach makes some sense, but it can be enhanced further to improve protection and better position the portfolio to handle the coming market decline.

Assuming that the portfolio is for a client who is focused on the long-term and can take a little bit of risk, perhaps like a life insurance company, the portfolio manager can add other protective features.

Arguably the simplest protective feature for an existing portfolio would be setting stop-losses for all publicly traded instruments. The precise level or percent of the stop-loss should be determined after analyzing initial trade prices, the amount of profit to save, tax implications, and how much pricing risk the client can tolerate. The expected duration of the correction should also be anticipated. For large amounts of shares, it may be impractical to exit them, receive cash, and then quickly redeploy that cash if the correction will be over quickly. However, if there is more time, the positions can be exited and new ones entered with relative speed.

Another protective feature is using options to hedge existing positions in public markets. For example, before the correction happens, the portfolio manager can buy put options on their positions. When the market corrects, they can sell their shares at a higher strike price than the market price. The use of these derivatives should be considered based on the client's risk tolerance and available cash in the portfolio to buy these options. Credit default swaps can protect bond positions in the portfolio in the event borrowers default. These instruments should be purchased before the correction starts so that a lower premium can be locked in for credit protection. There are many other possibilities for protecting an existing portfolio from a correction, but the aforementioned strategies would be a good start.

The next item to consider is redeploying cash as it becomes available from exiting / trimming positions and payoffs from options, credit default swaps, and other derivatives. Given

that the market cycle will be in a downwards phase, the key to evaluating when to enter new positions and where to create those new positions is the relative value of the investment under consideration compared to others and how the price of that investment compares to its intrinsic, fundamental value. This process requires diligent research into the investments considered by the portfolio manager. It will have to be done relatively quickly to open new positions at bargain levels when others are still fearful, rather than when prices are already starting to increase, and good bargains become harder to find. Marks states, "when others are terrified, we should turn aggressive" (Marks 165). Timing is important, and the portfolio manager should

In the last year and a half, the United States has been recovering from a global pandemic, has experienced the shortest recession ever, and has added trillions and trillions of dollars of government debt as it supported individuals and markets. During this same time, public equity markets are up absurdly high, posting significant returns. Euphoric tendencies from individuals and investors have taken hold of the financial economy while the real economy still recovers to its potential. The setting is ripe for a market cycle peak followed by a correction in the very near future. The portfolio managers of the world should position their portfolios accordingly.

Works Cited

2021 Investment Company Fact Book. Investment Company Institute, 2021.

“30-Year Fixed Rate Mortgage Average in the United States.”, September 9, 2021, https://fred.stlouisfed.org/series/MORTGAGE30US.

“Business Confidence Index.”, September, 2021, https://data.oecd.org/leadind/business-confidence-index-bci.htm.

Casselman, Ben. “A Collapse that Wiped Out 5 Years of Growth, with no Bounce in Sight.” *The New York Times*, Jul 30, 2020, https://www.nytimes.com/2020/07/30/business/economy/q2-gdp-coronavirus-economy.html.

“Composite Leading Indicator.”, September, 2021, https://data.oecd.org/leadind/composite-leading-indicator-cli.htm.

"Consumer Confidence Index.", September, 2021, https://data.oecd.org/leadind/consumer-confidence-index-cci.htm.

“Dow Jones Industrial Average.”, 2021, https://www.spglobal.com/spdji/en/indices/equity/dow-jones-industrial-average/#overview.

“ICE BofA BBB US Corporate Index Effective Yield.”, September 17, 2021, https://fred.stlouisfed.org/series/BAMLC0A4CBBBEY.

“ICE BofA US High Yield Index Effective Yield.”, September 17, 2021, https://fred.stlouisfed.org/series/BAMLH0A0HYM2EY.

Marks, Howard. *Mastering the Market Cycle.* Houghton Mifflin Harcourt Publishing Company, Boston, 2018, https://ebookcentral.proquest.com/lib/[SITE_ID]/detail.action?docID=5188367.

McCabe, Caitlin. "U.S. Stock Market Faces Risk of Bumpy Autumn, Wall Street Analysts Warn." *The Wall Street Journal*, September 12, 2021, https://www.wsj.com/articles/u-s-stock-market-faces-potentially-bumpy-autumn-wall-street-analysts-warn-11631439002.

"NASDAQ Composite Index.", 2021, https://www.nasdaq.com/market-activity/index/comp.

"Real Gross Domestic Product.", April 1, 2021, https://fred.stlouisfed.org/series/GDPC1.

"Real Potential Gross Domestic Product.", April 1, 2021, https://fred.stlouisfed.org/series/GDPPOT.

"S&P 500.", 2021, https://www.spglobal.com/spdji/en/indices/equity/sp-500/#overview.

"Unemployment Rate.", September, 2021, https://fred.stlouisfed.org/series/UNRATE.