



# ***UNIVERSITY OF THE PEOPLE***

***BUS 2203-01 PRINCIPLES OF FINANCE 1 - AY2024-T2***

***WRITTEN ASSIGNMENT UNIT 3***

***INSTRUCTOR: IBRAHIM KABIR***

## How does this firm and others make money by taking advantage of the Efficient Market Hypothesis?

“Market efficiency refers to the degree to which market prices reflect all available, relevant information. If markets are efficient, then all information is already incorporated into prices, and so there is no way to "beat" the market because there are no undervalued or overvalued securities available” (Team, 2022). The Efficient Market Hypothesis proposes that beating the overall performance of the market over the long term is highly difficult. “The efficient market hypothesis (EMH), alternatively known as the efficient market theory, is a hypothesis that states that share prices reflect all available information and consistent alpha generation is impossible” (Downey, 2023). According to this theory, stocks are typically appropriately and fairly valued at any given time based on all available public information, so investors are unlikely to find undervalued stocks to outperform the broader market, or overvalued stocks to underperform it. This suggests that investors will struggle to pick individual stocks that will generate higher returns than benchmark indices that track segments of the total market. The logic behind this hypothesis is that current stock prices instantly incorporate all relevant information about a company's fundamentals and prospects as soon as that information becomes publicly known. Therefore, it is challenging for an individual investor to gain an analytical edge given the widespread and rapid dissemination of information across market participants in today's technology-driven world. Consequently, an investor's best option may be a passive index strategy that simply matches the performance of the overall market rather than attempting to exceed it through active stock picking or market timing.

Dimensional Fund Advisors utilizes a more effective and reliable approach for anticipating future stock returns, relying on the market's pricing signals rather than forecasting or prediction models. Their strategy is grounded in the Efficient Market Hypothesis, so instead of complex

formulas or historical data analysis, they gather insights by studying how new publicly available information gets incorporated into stock prices. This market-driven data collection enables Dimensional to efficiently oversee portfolios and implement investment solutions aligned with clients' interests. Since they don't expend resources trying to outguess market prices, Dimensional can dedicate time to absorbing facts from financial markets and economists. They consistently invest in small-cap companies because empirical evidence shows smaller firms tend to grow earnings faster than larger peers over the long run. The high growth potential of Dimensional's small-company investments aims to deliver superior returns for investors. Their process accepts that beating the market is extremely difficult, so they focus on harvesting the risk premiums the market provides.

Described at least 4 of the following elements: (1) Definition of market efficiency, (2) Availability of information, (3) Arbitrage, (4) Risk versus return, (5) Portfolio management, and (6) Indexing.

### **1. Market efficiency**

Dimensional Fund Advisors bases its investment philosophy on the principle that consistently earning returns higher than the overall market average is highly difficult to achieve. This stems from their belief in efficient market theory - the idea that market prices fully always reflect all publicly available information. So Dimensional operates under the assumption that the market has already priced securities appropriately given the available data and expectations about asset class risk and return. As a result, outperforming the market requires new information or analysis that no other market participants currently possess, which is very uncommon. Instead of trying to beat efficient market pricing, Dimensional focuses on capturing the returns the market makes available across risk factors, understanding that reliable excess returns are scarce. Their

approach depends on financial science research into sources of expected returns, not attempting to predict prices or outguess the market consensus.

## **2. Availability of information**

Dimensional Fund Advisors leverage modern information networks and financial economics research to respond quickly to market data signals. They operate under the principle of market efficiency - the notion that stock prices instantly incorporate relevant public information due to broad cheap access across investment participants. This means markets tend to appropriately price assets based on the collective analysis and interpretations of all available data. So rather than forecast prices or outcomes, Dimensional strives to systematically capture the risk-based returns the market provides by studying how new information impacts security values. Their investment insights come predominantly from observing actual price responses to data releases. By accepting market efficiency and accessing low-cost information pipelines, they aim to efficiently harvest risk premiums without attempting to outguess ubiquitous market prices.

## **3. Risk versus return**

Dimensional bases its strategy on financial science insights into historical market-rewarding factors, seeking securities exhibiting specific return-related characteristics. By targeting dimensions of stocks tied empirically to premiums, while diversifying broadly, they aim to provide both higher expected returns and reliability. Their market-driven dimensional approach allows pinpointing investments with higher return potential, lowering risks concentrated in individual names. Overall, Dimensional strives to deliver systematic premium capture for clients via research-grounded investing in prudent, persistent historical drivers of returns.

#### **4. Portfolio management**

Dimensional constructs widely diversified portfolios aimed at client-centric, long-term growth through prudent investing practices. Seeking higher expected returns, they incorporate assets poised to participate in market premiums based on financial science insights. Dimensional patiently accumulates small gains over time through persistent exposure to historical return factors. Guided by research, they manage portfolios with clients' end goals in mind - steadily compounding value by targeting dimensions of returns and keeping costs low. This aims to align client interests for enhanced outcomes, not short-term performance.

Discussed at least 2 of the following topics in discussing how to make a profit by taking advantage of the Efficient Market Hypothesis:

##### **1. Risk versus return**

Dimensional's philosophy harnesses financial research to construct diversified, reliable portfolios targeting efficient market rewards. Seeking dimensions of expected returns in data, they build strategies resilient to trading demands. Their information-based approach aims to harvest premiums that empirical evidence links to higher returns, while minimizing risks concentrated in individual names through broad diversification. Dimensional uses science to systematically identify securities exhibiting prudent, persistent historical drivers of returns across markets. Accepting markets efficiently price assets based on available information, Dimensional strives to maximize client participation in collective risk-based returns, rather than attempting to outguess market wisdom. Backed by research, their process seeks to compound gains over long horizons by capturing dimensions of returns in efficient markets.

## **2. Portfolio management.**

Dimensional constructs portfolios leveraging the Efficient Market Hypothesis to systematize returns for clients while minimizing concentrated stock risks. Trusting current market prices reflect available information, they harvest dimensions of expected returns based on financial science insights versus attempting to predict changes. This research-driven approach seeks to optimize client outcomes and compound gains over long horizons by targeting historically rewarded factors across diverse markets, incrementally capturing persistent drivers of returns. Overall, Dimensional aims to benefit from collective information pricing while diversifying risks, helping clients participate in market rewards grounded in empirical evidence.

### **Examples:**

To demonstrate Dimensional's approach, I will discuss three of their mutual funds:

1. The DFA Tax-Managed U.S. Market wide Value Portfolio II (DFMVX) aims to deliver long-term capital appreciation by investing primarily in Dimensional's Tax-Managed U.S. Market wide Value fund, which holds a broad range of US companies. Over the past 3 years, DFMVX has produced a 10.2% average annual return.
2. The DFA U.S. Targeted Value Portfolio Class R1 (DFTVX) invests broadly in US small and mid-cap companies exhibiting potential signs of higher profitability. Using Dimensional's time-tested process targeting dimensions of returns, DFTVX has generated a 10% annualized 3-year return.
3. The DFA U.S. Sustainability Core 1 Portfolio (DFSIX) pursues long-term capital growth through a portfolio of smaller US firms with indicated profitability dimensions, but also selects

Overall, these funds demonstrate Dimensional's philosophy of researching historical market signals to construct diversified, reliable portfolios targeting efficient market returns in the US small cap arena.



## References:

Dimensional Investing | Dimensional. (2023). Dimensional. <https://www.dimensional.com/en/financial-professionals>

Downey, L. (2023, April 25). Efficient Market Hypothesis (EMH): Definition and critique. Investopedia. <https://www.investopedia.com/terms/e/efficientmarkethypothesis.asp>

News and Insights. (2021). Nasdaq.com. <https://www.nasdaq.com/news-and-insights>

Team, I. (2022, April 2). Market efficiency explained: Differing opinions and examples. Investopedia. <https://www.investopedia.com/terms/m/marketefficiency.asp>

Wright, R.E. & Quadrini, V. (2009). Money and Banking. Saylor Foundation.

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