

## What is Correlation?

**H**ere at Allodium, we try to keep the financial jargon to a minimum. But even where we may succeed, you're likely to encounter references elsewhere that can turn valuable information into mumbo-jumbo yet to be translated.

### Correlation, Defined

Correlation is more than just a quality; it's also a quantity — a measurement — offering two important insights along a spectrum of possibilities between  $-1.0$  and  $+1.0$ :

**Correlation can be positive or negative**, which tells us whether two correlated subjects are behaving similar to or opposite of one another.

**Correlation can be strong or weak (or high/low)**, which tells us how powerful the similar or opposite behavior has been.

### Correlation, Applied

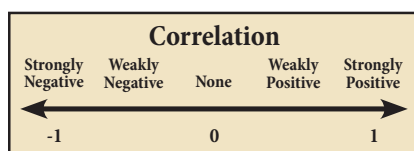
If you've been around the investment block, you've probably heard about the benefits of diversification, or owning many, as well as many different *kinds* of holdings. A well-diversified portfolio helps you invest more efficiently and effectively over time. Diversification also offers a smoother ride, which helps you better stay on course toward your personal financial goals.

**Compare existing funds** – If one fund is expected to perform a certain way according to its averages, and another fund is supposed to perform differently according to its own averages, how do you know if they're really performing differently as expected?

**Compare new factors** – What about when a researcher claims they've found a new factor, or source of expected returns? As this University of Chicago paper explains, "factors are being discovered almost as quickly as they can be packaged and sold to the waiting public." How do we determine which are actually worth considering out of the hundreds proposed?

**Compare one portfolio to another** – Even perfectly good factors don't always fit well together. You want

factors that are not only strong on their own, but that are expected to create the strongest possible total portfolio once they're combined.



Correlation is the answer to these and other portfolio analysis challenges. By quantifying and comparing the behaviors and relationships found among various funds, factors and portfolios, we can better determine which combinations are expected to produce optimal outcomes over time.

### Correlation, Calculated

Fortunately, as an investor, you don't necessarily need to know how to precisely calculate correlations. But it's useful to know what correlation measurements mean when you see them.

**Strong (high), positive correlation** tells us that two investments seem to be playing a highly similar role; when that's the case, you may not need to hold both of them.

**Strong (high), negative correlation** offers the most diversification, but it's hard to find. Prone as they are to herd mentality, most holdings follow general trends at least a little.

**Weak (low) or no (zero) correlation** is thus the preferred relationship we typically seek between and among the funds we use to build a diversified portfolio.

**Comparing Investments** – First, the correlation between two holdings is not calculated by directly comparing the returns of each holding. Instead, we compare how each holding's returns move up and down relative to its own average returns. In "Reducing the Risk of Black Swans," co-authors Larry Swedroe and Kevin Grogan illustrate how this works: "A positive correlation exists between two assets

when one asset produces above-average returns (relative to its average) and the other asset tends to also produce above-average returns (relative to its average). The stronger the tendency, the closer the correlation will be to  $+1$ ."

In other words, two investments may seem quite different at a glance. But if you compare them to their own usual performance, and they both tend to sink or soar in reaction to the same market conditions, they are unlikely to offer strong diversification benefits if you pair them together.

**Going the Distance** – Also, correlation is not a "set it and forget it" number. For example, two funds may usually exhibit weak correlation, but this can shift if a bear or bull market roars in and wreaks havoc on business as usual. In short, solid analysis calls for studying correlation data across multiple markets and over time, to better understand what to expect during various market conditions. This is another reason to take care when adding new factors to your portfolio. Even if a new opportunity seems promising, you may want to wait and see how it performs over time and around the globe before you buy into the latest popular find.

### Correlation, Concluded

Heeding correlation data is a lot like having a full line-up on your favorite sports team. If each player on the roster adds a distinct, useful and well-played talent to the mix, odds are, your team will go far. Similarly, your investment portfolio is best built from a global "team" of distinct factors, or sources of returns. A winning approach combines quality components that exhibit weak or no correlation among or between them across varied, long-term market conditions.

Until next time, no regrets!

*David Bromelkamp*  
President and CEO

## Recent and Upcoming Events

### September 9, 2020

Join us for a Zoom Webinar on September 9 as we welcome guest speaker and renowned author, Donald Trone, CEO of 3ethos.

### October 14, 2020

We are pleased to welcome guest speaker, Weston Wellington, a vice president with Dimensional Fund Advisors. Join us for this virtual fall event. Details coming soon.

For more information about these events, please contact Ilona Avraamides at (612) 230-3711 or [iavraamides@allodium.com](mailto:iavraamides@allodium.com).

### NEW EMPLOYEE SPOTLIGHT:

## Suzanne Tudor

Allodium is happy to welcome our newest employee, Suzanne Tudor.

**Role at Allodium:** Senior Investment Consultant

**Joined firm on:** July 7, 2020

**Hometown:** Glencoe, MN

**Favorite movie:** *12 Angry Men*, *The Big Lebowski*

**Favorite book:** *In the Garden of Beasts* by Erik Larson

**Favorite TV show:** *Game of Thrones*, *Silicon Valley*

**Favorite food(s):** Thai curry, salmon, seafood

**Favorite news source:** CNN

**Favorite place in Twin Cities:** University of Minnesota

**Favorite gadget/technology:** iPad and Roomba

**Favorite activity:** Watching the stock market go up, of course!

**Favorite music:** Alternative adult contemporary

**Person I admire most:** Mary Barra, CEO of GM

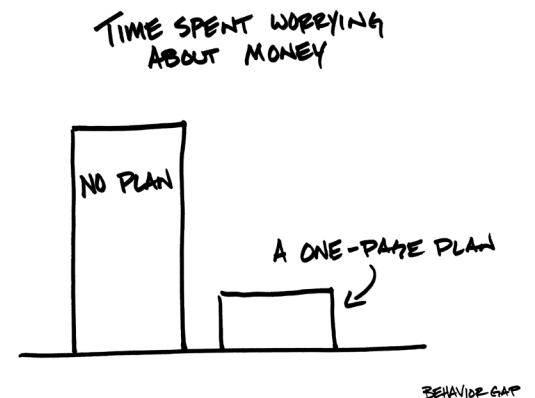
**What I'm most thankful for:** Having been born in the U.S. in the 20th century



## Headlines

- Allodium turned 15 years old on August 12! To help us celebrate, we launched our new website. Check it out at [www.allodium.com](http://www.allodium.com).
- The Centre for Fiduciary Excellence (CEFEX) recertified Allodium in August 2020. The annual CEFEX assessment process independently verifies our firm's adherence to fiduciary standards.
- Allodium was listed as one of the Minnesota Registered Investment Advisory (RIA) firms in the RIA Survey and Ranking 2020, as published by Financial Advisor Magazine in the August 2020 issue.
- We successfully held our first virtual event called *Navigating Turbulent Financial Markets* on July 14. Apollo Lupescu of Dimensional Fund Advisors was the guest speaker.
- Our office will be closed September 7, November 26 and November 27 for company holidays.

**Note:** To find out more about Allodium's breaking news, please visit our website: [www.allodium.com](http://www.allodium.com).



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