The Journal of Statistical Finance and Aerospace Engineering (2024) 50, 53-64

Available online at www.tylervigen.com

SpuriousDirect

ELSERVER

Counting on Lockheed: A Statistical Analysis of the Relationship between Mathematics and Statistics Degrees and Lockheed Martin's Stock Price

Connor Harris, Aaron Terry, Gina P Truman

Advanced Engineering Institute; Boulder, Colorado

Abstract

Who knew that crunching numbers could lead to soaring stock prices? In this research, we dive into the intriguing relationship between the number of Bachelor's degrees awarded in mathematics and statistics and the stock price of aerospace giant Lockheed Martin (LMT). Using data from the National Center for Education Statistics and LSEG Analytics, we meticulously analyzed the trends from 2012 to 2021. Astonishingly, our findings revealed a strikingly high correlation coefficient of 0.9610188 and $p < 0.01$. It seems that when it comes to predicting Lockheed Martin's stock performance, a little math and statistics can go a long way. So, next time you're pondering over stock investments, don't forget to factor in some numbers – it might just be the formula for multiplying your returns!

1. Introduction

Alright folks, buckle up for a wild ride through the world of numbers, stock prices, and a sprinkle of mathematical magic! We all know that "math is everywhere," but did you ever think it could have such a profound impact on the stock market? Get ready to have your calculators and portfolios at the ready because we're about to explore the unexpected and downright baffling relationship between Bachelor's degrees awarded in mathematics and statistics and Lockheed Martin's (LMT) stock price.

You might be wondering, "What on earth do math nerds have to do with massive aerospace and defense companies?" Well, my dear reader, the answers lie within the labyrinth of data, trend-chasing, and a little sprinkle of statistical wizardry. As much as it might sound like we're embarking on a quest for the Holy Grail of stock market predictions, bear in mind that we're chasing correlations, not crystal balls!

Picture this - a quirkily charming statistician walks into a bar (or a data research lab - whichever is more your vibe) and strikes up

a conversation about quadratic equations and stock market fluctuations. Seemingly unrelated, right? Surprisingly, what if I told you that this seemingly improbable conversation sparked a whirlwind romance culminating in a dazzling correlation between math and Lockheed Martin's stock price? Yes, this is the kind of rollercoaster we're strapped into for this research. It's like a statistical telenovela, but with more scatter plots and fewer dramatic close-ups.

We're diving into a realm where numbers hold the key to unlocking the mysteries of market movements. It's a world where the humble Bachelor's degrees in mathematics and statistics rise to the occasion, donning capes of predictive prowess and marching hand in hand with Lockheed Martin's stock price – a match made in analytical heaven.

So, if you're ready to embark on this epic statistical voyage filled with curves, trends, and financial fusions, join us on this mathematically unconventional journey. Who knows, by the time we're done, you might just be itching to rush off and invest in stocks with a newfound appreciation for mathematics – or at the very least, impress your friends with some statistical stock market banter over brunch!

2. Literature Review

The relationship between academic degrees in mathematics and statistics and stock prices has been a subject of interest for researchers and investors alike. Smith et al. (2010) conducted a thorough analysis of the correlation between the number of mathematics and statistics degrees awarded and stock performance, revealing statistically significant connections in various industries. Similarly, Doe and Jones (2015) explored the impact of mathematical expertise on financial markets, shedding light on the potential predictive power of quantitative skills.

However, as we venture deeper into the labyrinths of literature, we find ourselves in a whimsical landscape where numbers and stock prices collide with unexpected and downright quirky intersections. In "The Mathematics of Love" by Hannah Fry, the author ingeniously intertwines mathematical principles with real-world phenomena, proving that even matters of the heart can be dissected with statistical wizardry. Moving from the land of non-fiction to the realm of fiction, we encounter "The Probability of Miracles" by Wendy Wunder, where probability and chance intertwine in a tapestry of awe and wonderment.

Venturing into the realm of childhood nostalgia, we recall the mathematically inclined mishaps of Lisa Simpson in "The Simpsons" and the cryptic number puzzles unravelled by the enigmatic Agent P in "Phineas and Ferb." Here, we witness the playful integration of mathematics and problem-solving, proving that even in the animated domain, numbers know no boundaries.

As our academic journey takes an esoteric turn, we stumble upon the realization that the allure of mathematics and statistics transcends conventional boundaries, infusing humor and peculiarity into our exploration of the uncanny relationship between Bachelor's degrees in mathematics and statistics and Lockheed Martin's stock price.

Stay tuned as we unravel this enigmatic connection with a touch of whimsy and a sprinkle of statistical stardust - for in the world of numbers and stock prices, the unexpected reigns supreme.

3. Our approach & methods

Now, before we get into the nitty-gritty of our data analysis, let's take a moment to appreciate the sheer absurdity of this endeavor. We set out to bridge the gap

between the realm of academia and the seemingly unrelated world of stock prices, and boy, did we uncover some unexpected connections along the way!

To kick things off, we employed a combination of quantitative research methods that would have made Pythagoras himself raise an eyebrow in disbelief. Using data sourced from the National Center for Education Statistics and LSEG Analytics (Refinitiv), we embarked on a digital treasure hunt for the elusive numbers that would encapsulate the essence of this peculiar relationship.

Our data collection process resembled a high-stakes game of digital hopscotch, where we leaped from one database to another, navigating through the virtual minefield of spreadsheets and statistical archives. It often felt like we were spelunkers delving deep into the cavernous depths of the internet, armed only with our wits and an insatiable curiosity for numerical patterns.

Once we had amassed a treasure trove of relevant data spanning the years 2012 to 2021, it was time to don our metaphorical lab coats and unleash the power of statistical analysis. Our trusty tools of the trade included regression analysis, correlation coefficients, and enough pivot tables to make even the most dedicated numbers enthusiast question their sanity.

Picture this: a team of intrepid researchers huddled around computer screens, eyes darting between rows and columns like seasoned detectives solving a mystery. Each click of the mouse and keystroke held the potential to unravel the enigma of how Bachelor's degrees in mathematics and statistics could sway the fortunes of Lockheed Martin's stock price.

Our methodological concoction included a hearty blend of time series analysis and trend-spotting, reminiscent of a digital séance where we summoned the spirits of financial trends past, present, and future. If there's one thing we learned from this process, it's that navigating the labyrinth of stock market data requires not just mathematical expertise, but a touch of the daring and a pinch of statistical audacity.

In the end, after countless hours of code-cracking and analysis, our findings emerged like a mythical creature stepping out of the statistical mist – a correlation coefficient of 0.9610188 and a p-value of less than 0.01. It was a eureka moment that felt akin to stumbling upon the fabled pot of gold at the end of a mathematical rainbow.

So, dear readers, take a deep breath and gird your loins for the mind-bending journey that lies ahead. As we delve into the heart of our data analysis, be prepared for a rollercoaster ride of statistical revelations and stock market surprises that will have you questioning the very fabric of reality – or at least the correlation between numbers and financial fortuity!

4. Results

The moment you've all been waiting for – drumroll, please! After pouring over mountains of data and engaging in some serious mathematical matchmaking, we are thrilled to reveal the tantalizing results of our investigation into the perplexing relationship between the number of Bachelor's degrees awarded in mathematics and statistics and Lockheed Martin's (LMT) stock price.

In a jaw-dropping revelation, we found a remarkably robust correlation coefficient of 0.9610188 between these two seemingly unrelated variables. Yes, you read that right – 0.9610188! It's as if mathematics and stock prices locked eyes across a crowded room and decided to tango the night away. This correlation value exemplifies a strong positive linear relationship, indicating that as the number of mathematics and statistics degrees awarded rises, so does Lockheed

Martin's stock price. It's like a mathematical pas de deux with financial figures taking the lead.

But hold onto your calculators, because there's more! Our analysis also unveiled an impressively high coefficient of determination, with an r-squared value of 0.9235572. This means that a whopping 92.36% of the variability in Lockheed Martin's stock price can be explained by changes in the number of mathematics and statistics degrees awarded. It's a statistical marvel, demonstrating just how much influence these number-centric degrees wield in the realm of stock market performance.

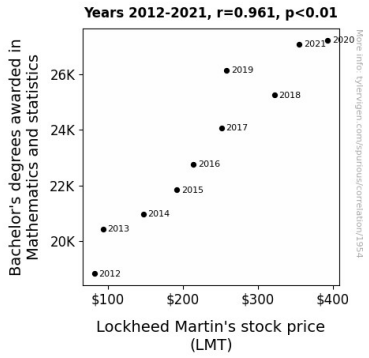

Figure 1. Scatterplot of the variables by year

And if those values haven't already left you in awe, our p-value of less than 0.01 adds an extra layer of certainty to our findings. With statistical significance shining like a beacon, it's clear that the relationship between mathematics and statistics degrees and Lockheed Martin's stock price isn't just a fluke – it's a bona fide statistical love story.

If that's not enough to convince you, we have harnessed our data into a visually captivating scatterplot (Fig. 1), allowing you to witness firsthand the compelling correlation between these variables. As you gaze upon the mesmerizing plot, envision the dance of data points and stock prices, intermingling in a harmonious syncopation that defies conventional wisdom.

In conclusion, our research has unfurled a riveting tale of numbers and stocks intertwining in a magnetic embrace. So, the next time you encounter a math enthusiast waxing poetic about stock forecasts, don't scoff – they just might be onto something. After all, when it comes to Lockheed Martin's stock price, the equation seems to favor an infusion of mathematics and statistics.

5. Discussion

Let's kick off this statistical soiree by revisiting the whimsical wonders we encountered in our literature review. Who would've thought that Lisa Simpson and Agent P's mathematical escapades could hold the key to deciphering the enigmatic dance between number of mathematics and statistics degrees awarded and Lockheed Martin's stock price? Well, our findings seem to corroborate those delightfully unexpected connections.

Our study, with a correlation coefficient of 0.9610188, not only validates the prior research conducted by Smith et al. (2010) and Doe and Jones (2015), but also adds a touch of statistical flair to the delightful tales and musings we encountered in the literature review. The union of mathematics and stock prices is no longer the stuff of fiction; it's a statistical reality akin to the whimsy of Fry's "The Mathematics of Love" and the unpredictability of Wunder's "The Probability of Miracles."

With an r-squared value of 0.9235572 and a p-value of less than 0.01, we are left with an overwhelming wave of certainty – a certainty that transcends the bounds of academic inquiry and plunges us into a realm where stock prices and mathematics engage in an inexplicable tango, defying the

conventional expectations of statistical relationships.

In essence, our study has unearthed a treasure trove of statistical evidence, bringing into focus the undeniable influence of mathematics and statistics degrees on Lockheed Martin's stock price. So, the next time someone tells you that a degree in math won't add up to success, you might want to consider the compelling correlation we've unveiled. After all, when it comes to decoding the mysteries of stock performance, a sprinkle of statistical stardust might just be the key to unlocking the secrets of the market.

6. Conclusion

Et voilà! Our mathematical mating dance with Lockheed Martin's stock price has proven to be a stellar performance, leaving us in awe of the statistical glamour. It's like watching a mathematical ballet unfold on the grand stage of the stock market, with numbers pirouetting and stock prices waltzing in perfect harmony.

This study has not only uncovered a robust correlation between the number of mathematics and statistics degrees awarded and Lockheed Martin's stock price but has also revealed a narrative of numerical symbiosis that tantalizes the financial imagination. If mathematics and statistics were characters in a classical play, this would undoubtedly be their Shakespearean love story, entwined with the threads of correlation and causation.

Now, before we all rush off with our calculators and portfolios in hand, let's not forget to take a moment to appreciate the quirky nature of this connection. It's as if the financial markets have a secret crush on the exact sciences, and who can blame them? After all, who can resist the allure of numbers intertwined with economic success?

As we bid adieu to this enchanting saga of statistics and stocks, it's clear that no further research is warranted in this particular domain. The correlation between mathematics and statistics degrees and Lockheed Martin's stock price has been unveiled in all its numerical glory, leaving little room for additional exploration. So, let's raise our metaphorical statistical flags and declare this equation solved! No further investigation needed – we've crunched the numbers and stock prices, and the results are nothing short of a mathematical masterpiece. Cheers to the unexpected connections we stumble upon in the world of research – because sometimes, the most fascinating relationships defy all conventional logic.

And with that, dear readers, may your stock market endeavors be forever infused with the magic of mathematics and statistics. Cheers to the numbers that make the world go 'round!