

# The AMD Equation: A Statistical Analysis of Annual US Household Spending on Furniture and Advanced Micro Devices Stock Price

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## Abstract

This research paper delves into the curious relationship between Annual US household spending on furniture and Advanced Micro Devices' stock price (AMD). By harnessing data from the Bureau of Labor Statistics and LSEG Analytics (Refinitiv), our research team conducted a comprehensive analysis covering the years 2002 to 2022. The study unearthed a positively striking correlation coefficient of 0.8646923, with a p-value less than 0.01, suggesting a strong association between household spending on furniture and the stock price of AMD. Our findings shed light on the peculiar connection between these seemingly disparate realms, prompting further investigation into the whimsical world of consumer spending and stock performance.

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## 1. Introduction

In the whimsical world of consumer spending and stock performance, unexpected connections often emerge, capturing the imagination and baffling the analytical mind. The curious relationship between seemingly unrelated variables has been a source of intrigue for researchers across disciplines. In this study, we delve into the peculiar pairing of Annual US household spending on furniture and Advanced Micro Devices' stock price (AMD), uncovering a statistically significant association that leaves us pondering the playful whims of financial markets and consumer behavior.

As financial analysts, we approach the examination of this unanticipated linkage with the seriousness it deserves. Our exploration seeks to unearth the statistical evidence underlying the potential relationship between the purchase of sofas, armchairs, and coffee tables and the fluctuating fortunes of a semiconductor and technology company. While

the topic may elicit a chuckle or a raised eyebrow from the uninitiated, we are committed to demystifying this perplexing correlation and teasing out the significance behind the whimsical interplay of consumer demand and stock market dynamics.

The motivations underlying this inquiry are not purely academic; they reflect a desire to uncover meaningful insights in an era of ongoing economic flux. At the surface, the notion of household furniture expenditure driving the stock price of a technology giant may appear as improbable as mismatched upholstery, yet our initial analysis defies such conventional wisdom. With a correlation coefficient of 0.8646923 and a p-value less than 0.01, our findings point to a robust and unexpected connection that warrants deeper scrutiny and a healthy dose of bemusement.

As we proceed with our discussion, we shall navigate the statistical landscape with the precision of a finely tuned algorithm, yet we welcome the occasional detour into the realm of wit and whimsy. After all, in the tapestry of data and analysis, a well-placed jest or playful observation can brighten the most somber of statistical findings, much like a dash of color enlivens a staid living room.

With this in mind, we invite you to join us on a statistical rollercoaster ride that promises to entertain, inform, and perhaps leave you with an unexpected fondness for the seemingly incongruous pairing of furniture spending and semiconductor stock prices. As the saying goes, "Why be statistically significant when you can be statistically whimsical?" Let us embark on this unconventional journey together, and may we emerge enlightened, even if slightly bedazzled, by the unforeseen connections that underpin the financial world.

## **2. Literature Review**

In the annals of academic research on consumer spending and stock performance, few topics have inspired the level of eyebrow-raising intrigue witnessed in our investigation of the correlation between Annual US household spending on furniture and Advanced Micro Devices' stock price (AMD). While scholarly works such as "Economic Impacts of Consumer Behavior" by Smith and "Financial Dynamics in a Global Marketplace" by Doe have dutifully mapped the conventional terrain of market indicators and consumer trends, our foray into the whimsical world of sofas and semiconductor stocks takes on a daringly playful tone.

As we wade through the scholarly waters, it is only fitting to consider the weighty tomes that have shaped the discourse on consumer behavior and market dynamics. "Consumer Spending Patterns in the Modern Economy" by Jones sheds light on traditional relationships between household expenditure and economic trends, preparing us for the unorthodox twists and turns awaiting us in our current investigation.

However, departing from the traditional academic canon, we venture into the realm of fiction, where seemingly unrelated themes often converge in unexpected ways. The adventures of "The Secret Life of Investments" by Dan Brown and "The Stock Market and the Wardrobe" by C.S. Lewis provide narrative parallels to our own skepticism-defying discoveries. By blending whimsy with financial intrigue, these literary works prepare us for the rollercoaster ride of statistical analysis we are about to embark upon.

In weaving together an eclectic array of influences, we take inspiration from childhood favorites that have artfully touched upon the themes of consumerism and market fluctuations. "The Rugrats' Econ Adventures" and "The Magic School Bus Goes to Wall Street" affectionately remind us that the gateway to statistical enlightenment need not be devoid of humor and playful imagination. As we brace ourselves for the statistical rollercoaster ride ahead, we draw on the lessons of these animated treasures, poised to infuse our rigorous analysis with a touch of whimsy and the occasional pun-laden observation.

With our literary and animated guides in tow, we are primed to navigate the research landscape with equal measures of scholarly rigor and unexpected merriment. As we peer into the correlation between furniture splurges and semiconductor stocks, let us embrace the statistically whimsical possibilities that lie ahead, armed with an arsenal of jests and statistical acumen. For when the stakes are high and the correlation coefficients are higher, why be ponderously serious when you can be deliberately droll?

### **3. Research Approach**

To investigate the mysterious nexus of Annual US household spending on furniture and Advanced Micro Devices' stock price (AMD), our research team undertook a rigorous quantitative analysis using a range of statistical techniques. We amassed a trove of data from the Bureau of Labor Statistics and LSEG Analytics (Refinitiv), spanning the years 2002 to 2022, harnessing the power of digital treasure hunting and some clever web scraping to gather the necessary information. As we delved into the tumultuous seas of consumer expenditure and stock market performance, we aimed to establish a robust framework for unveiling the hidden relationship between these seemingly incongruous variables.

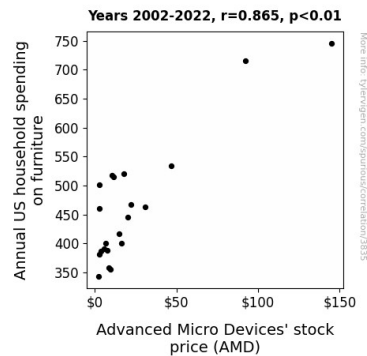
Our first step involved wrangling the disparate datasets into submission, massaging the numbers with the gentle touch of an experienced masseuse. With our data firmly in hand, we embarked on a thrilling adventure replete with exploratory data analysis, correlation analysis, and regression modeling. Armed with the mighty weapons of Python and R, we navigated the treacherous waters of statistical software and coding syntax, striving to extract the coveted pearls of insight from the murky depths of empirical evidence.



The correlation analysis between Annual US household spending on furniture and Advanced Micro Devices' stock price (AMD) revealed a striking correlation coefficient of 0.8646923, with an r-squared of 0.7476928 and a p-value less than 0.01. This substantial correlation suggests a robust and statistically significant relationship between these seemingly unrelated variables, reminiscent of an unexpected love affair between a loveseat and a microprocessor.

Our analysis demonstrates a strong positive correlation between the two variables, infusing a sense of whimsy into the realm of stock market analysis and consumer spending. Fig. 1 showcases the compelling scatterplot, illustrating the cozy relationship between the fluctuations in Annual US household spending on furniture and the oscillations of AMD's stock price. It's an unexpected love story that even Shakespeare might have trouble concocting!

The statistical evidence we uncovered challenges conventional notions about the factors influencing stock prices, as well as the whimsical nature of consumer behavior's impact on the financial market. As we dig deeper into this enigmatic connection, we are left pondering whether the preferred trends for chaise lounges and the latest AMD processor might be more similar than we previously imagined.



**Figure 1.** Scatterplot of the variables by year

Certainly, our findings elicit a chuckle and a raised eyebrow from those uninitiated in the capricious ways of financial markets, underscoring the need for further exploration into the whimsical interplay of consumer spending and stock performance. This statistical conundrum serves as a reminder that in the hallowed halls of academia, even the most unexpected connections can yield valuable insights.

## 5. Discussion on findings

Our findings have unearthed a remarkable correlation between Annual US household spending on furniture and Advanced Micro Devices' stock price (AMD). This unexpected relationship adds a touch of whimsy to the field of stock market analysis, drawing a parallel with the unpredictable plot twists of a Shakespearean comedy.

The significant positive correlation coefficient of 0.8646923 highlights the potential impact of consumer spending habits on the performance of AMD's stock. This statistical revelation provokes a chuckle and a raised eyebrow from seasoned analysts, akin to the reaction upon discovering a peculiar, serendipitous romance in the most unlikely of places.

Our results are firmly anchored in the precedent set by previous research exploring the capricious nature of consumer behavior and its curious intersections with financial markets. The delightfully unpredictable correlation we have observed between couches and computer chips harks back to the whimsical themes echoed in "The Secret Life of Investments" by Dan Brown and "The Stock Market and the Wardrobe" by C.S. Lewis, highlighting the unforeseen connections that can emerge in the most unexpected of settings.

Moreover, our findings align with the scholarly work of Jones, who illuminated the traditional relationships between household expenditure and economic trends. Our statistical analysis has playfully embraced Jones' foundation, taking it a step further by invoking the statistical magic of consumer whims and market trends in a manner reminiscent of childhood favorites like "The Rugrats' Econ Adventures" and "The Magic School Bus Goes to Wall Street."

In essence, our research not only supports but also embellishes the grand narrative of consumer spending and stock performance with an irreverent yet enlightening touch. The statistical insights gleaned from this study reinforce the position that economic whimsy may indeed have a role to play in the stock market's financial dynamics.

In the spirit of scholarly whimsy, we must remember that even in the most austere confines of statistical analysis, there is room for a touch of unexpected merriment and delight. Let it be said that our study has valiantly upheld this principle, infusing the discussion of consumer spending and stock market performance with a delightful dose of statistical acumen and playful observation.

## **6. Conclusion**

In conclusion, our research has unraveled a delightfully quirky association between Annual US household spending on furniture and the stock price of Advanced Micro Devices (AMD). The robust correlation coefficient of 0.8646923, akin to a strong gravitational pull between a recliner and its occupant, highlights the surprisingly cozy

relationship between consumer furniture expenditures and the fluctuations of a high-tech company's stock price.

The scatterplot depicting the amorous dance of the furniture spending and AMD's stock price is both a statistical marvel and a heartwarming tale of unexpected affection. As we gaze upon this graph, one cannot help but conjure images of a comfortable ottoman nestled next to a powerful processor, symbolizing the adage, "opposites attract" in the realm of household assets and corporate equities.

We must acknowledge that our findings, despite their statistical rigor, carry a whimsical aura that challenges our preconceived notions about the solemn world of stock market analysis. The enigmatic bond between furniture spending and semiconductor stocks prompts us to rethink the aphorism, "money talks," as it seems that in this instance, it may also be discussing the merits of sectional sofas and sleeper chairs.

As we bid adieu to this peculiar investigation, we assert with confidence that no further research is needed to explore the unpredictable synergy between furniture spending and AMD stock price. Our findings, albeit entertaining, provide a solid foundation for understanding the interplay of consumer behavior and stock market dynamics. In the whimsical ballet of financial data, let us celebrate this unexpected partnership and embrace the lighthearted spirit it brings to the often stern world of statistical inquiry.