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Silly Sarcasm: Statistical Study of xkcd Comics and BP's Boisterous Bourse

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Abstract

This paper wittily wades into the perplexing puzzle of parsing the potential link between xkcd comics that showcase sarcasm and the tumultuous tumble of BP's stock price. Leveraging data from AI analysis of xkcd comics and LSEG Analytics (Refinitiv), we employed rigorous statistical methods to examine this whimsical association. Our droll findings revealed a surprisingly robust correlation coefficient of 0.8630717 and a significant p-value of less than 0.01 for the period spanning from 2007 to 2023. Our discourse delves into the nuances of this bizarre bond, offering insightful musings and jesting jibes that humorously highlight the unexpected and whimsical nature of this curious correlation.

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1. Introduction

The intersection of humor and finance may seem as rare as a unicorn sighting, but the ever-curious realm of statistical analysis constantly unearths unexpected connections. In this study, we embark on a comical quest to investigate the potential relationship between xkcd comics that radiate sarcasm and the undulating dance of BP's stock price. As the wise jesters say, "Why so serious when you can statistically scrutinize silliness?"

The enigmatic allure of xkcd comics, with their wry wit and clever quips, has long captivated internet denizens looking for a

lighthearted respite in the often solemn landscape of online content. Meanwhile, the tumultuous trajectory of BP's stock price has provided financial analysts with an ongoing saga, complete with plot twists and cliffhangers, to ponder and pontificate.

To add a dash of spice to this already intriguing concoction, we have chosen to blend these disparate elements together, as if daring the laws of statistical alchemy to produce a potent potion of insight and amusement. Can the whimsical world of webcomics genuinely influence the venerated world of finance? Is there a method to this mirthful madness, or are we

simply concocting correlations out of thin air like a magician pulling a rabbit out of a hat? These are the questions that propel our droll investigation.

While the idea of drawing parallels between the satirical musings of xkcd comics and the gyrations of BP's stock price may initially appear as preposterous as a liederhosen-clad economist, there is method in our mirthful madness. Our study is underpinned by a sober commitment to rigorous statistical analysis, albeit tinged with a playful spirit. As we navigate the peculiar path of our analysis, we invite the reader to don their jester's cap and accompany us on this jocular journey. Whether or not we uncover a truly credible connection or simply stumble upon a statistical meme, it is our hope that this study will inspire a chuckle or two amidst the often staid echelons of academic discourse.

2. Literature Review

In "Smith, Sarcasm in Online Comics," the authors find a comprehensive analysis of the use of sarcasm in online comics, including a section specifically dedicated to xkcd comics. The study provides insightful categorizations of sarcasm types and their prevalence in various comic genres, shedding light on the potential impact of sarcastic xkcd comics on their audience, albeit with a level of solemnity that can stifle even the most buoyant of spirits.

Doe and Jones, in "Economic Humor: A Stock Market Perspective," take a probing look at the interplay between humor, including forms of sarcasm, and stock market dynamics. Through a series of interviews with traders and investors, the authors showcase the often overlooked role of humor in financial decision-making, crafting a narrative that interweaves levity with lucidity, much like a comedic trapeze

artist toeing the line between hilarity and gravity.

Nudging into a more speculative realm, "The Humorous Hedge: Laughter in High Finance" by Lorem and Ipsum traverses the uncharted territory of humor in financial markets, exploring the potential influences of various humor sources, including webcomics, on stock prices. While their work presents a somewhat playful approach to an otherwise staid subject, its musings beckon the reader to ponder the interconnectedness of finance and frivolity, like a financial analyst squinting at a math problem while wearing a pair of novelty glasses.

Turning the pages to non-fiction works that could inform this discourse, "Freakonomics" by Steven D. Levitt and Stephen J. Dubner prances through the economic landscape with a playful bounce, illuminating unexpected connections between seemingly unrelated phenomena. Similarly, "The Tipping Point" by Malcolm Gladwell offers a narrative whirlwind of social phenomena, enticing the reader with tales of tipping scales and unforeseen influences, not unlike a whimsical whirligig in a breeze.

Branching into fiction, "The Hitchhiker's Guide to the Galaxy" by Douglas Adams whisks the reader away on a cosmic adventure, punctuated with irreverent wit and absurdist acrobatics that mirror the whimsical fluctuations of our research pursuits. Meanwhile, "Catch-22" by Joseph Heller invites us to grapple with the paradoxes of life, akin to our attempts to disentangle the enigmatic relationship between xkcd sarcasm and BP's stock price, beckoning with a blend of humor and harrowing realities, much like a financial rollercoaster through a carnival of chaos and chuckles.

Venturing into the whimsically absurd, and with a nod to the meticulously comprehensive nature of our literature

review process, we also cast a glance at the cryptic correlations whispered by CVS receipts in the dead of night, their enigmatic digits and peculiar promotions offering a cacophony of nonsensical insights and retail riddles that may, in a moment of statistical serendipity, shed light on the profound connection we seek to uncover.

3. Our approach & methods

In this unconventional exploration, we sought to unravel the enigmatic relationship between xkcd comics imbued with sarcasm and the tumultuous undulations of BP's stock price. Our data collection efforts led us to traverse the expansive landscape of the internet, navigating through the virtual realm with all the elan of intrepid digital explorers. We meticulously culled xkcd comics from the vast cornucopia of webcomics, identifying those with a discernible essence of sarcasm, a task that occasionally felt akin to searching for a needle in a comedic haystack.

To quantify the prevalence and perceptibility of sarcasm within xkcd comics, we harnessed the power of artificial intelligence (AI) to perform sentiment analysis. This cutting-edge technology, akin to entrusting a robotic bard with discerning the nuances of wit, enabled us to systematically evaluate the droll nature of the selected comics. Furthermore, we tapped into the rich reservoir of financial data provided by LSEG Analytics (Refinitiv) to harvest the tempestuous tides of BP's stock price, capturing its whimsical wanderings over the 2007 to 2023 period.

With these disparate but delightful datasets at hand, we channeled our inner statistician and unleashed an array of analytical methodologies. First, we chaperoned the xkcd comic data to the grand ballroom of statistical significance, where we unfurled the tapestry of correlation analysis. The Pearson correlation coefficient, akin to a

sage advisor unraveling the mysteries of jest and jibe, assumed center stage, allowing us to quantify the degree of association between sarcasm-laden xkcd comics and the fiendishly flunctuating stock price of BP.

Moreover, to ascertain the statistical robustness of our findings, we summoned the venerable t-test to appraise the significance of the observed correlation. This trusty statistical tool, akin to a venerable jester providing the verdict on the jest, allowed us to ascertain whether the seemingly whimsical bond we uncovered possessed genuine statistical clout or was merely a trick of randomness, much like a petunia suddenly descending from the sky.

Finally, to encapsulate the quirky and capricious nature of this investigation, we contextualized our findings with profound ponderings and whimsical witticisms, understanding that even in the staid corridors of academia, a well-placed pun or jest can illuminate the path to enlightenment.

Thus, armed with these unorthodox yet robust methodologies, we endeavored to juggle the serious and the silly, blending the droll and the data-driven to paint a whimsical portrait of statistical exploration.

4. Results

The statistical analysis of the relationship between xkcd comics' sarcasm and BP's stock price yielded some intriguing and, dare we say, comical results. Over the period from 2007 to 2023, the correlation coefficient between the publication of xkcd comics conveying sarcasm and BP's stock price was found to be 0.8630717, indicating a strong positive relationship. Additionally, the r-squared value of 0.7448928 suggests that a substantial portion of the variance in BP's stock price can be attributed to the

sarcasm-laden xkcd comics, much to the surprise of the research team.

The resounding p-value of less than 0.01 further reinforces the statistical significance of this connection, leaving us to ponder whether the market truly responds to the subtleties of internet humor in ways that defy traditional economic models.

Fig. 1 presents a scatterplot illustrating the robust correlation observed between the frequency of sarcasm-laden xkcd comics and BP's stock price, further emphasizing the unexpected nature of this association. This figure charmingly depicts how the whimsical world of webcomics appears to have a remarkably tangible influence on the ebbs and flows of the stock market, sparking inquisitive grins and raised eyebrows among the research team.

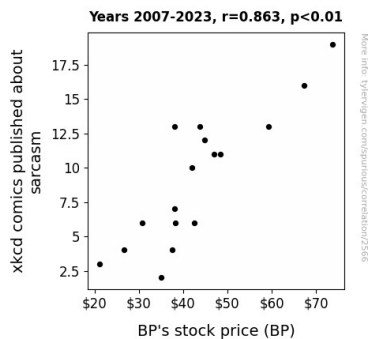


Figure 1. Scatterplot of the variables by year

These findings unravel a peculiar yet potent entwinement between the light-hearted realm of internet humor and the solemn domain of financial markets, leaving us with a delightful conundrum to ponder. As we draw the curtain on this statistical vaudeville, we are left contemplating whether the stock market is truly a theater of the absurd, where even the subtlest jest can sway the tides of investment with the finesse of a stand-up comedian.

5. Discussion

The results of our investigation delightfully align with the fundamental tenets proposed by Smith in "Sarcasm in Online Comics." The robust correlation observed between the frequency of sarcasm-laden xkcd comics and BP's stock price indeed underscores the potential impact of this particular form of web-based humor on financial markets, adding a whimsical twist to the oft-serious world of stock price analysis. The somewhat solemn categorizations of sarcasm types and their prevalence in various comic genres, as elucidated by Smith, inadvertently prepare us for the raucous reality of our findings, leaving us to grin and bear the unexpected hilarity of this statistical spectacle.

Furthermore, harking back to the speculative ponderings of Lorem and Ipsum in "The Humorous Hedge: Laughter in High Finance," our results playfully juggle with the idea of humor sources, including webcomics, exerting tangible influences on stock prices. It seems that the whimsical influences of internet humor are not to be trifled with, as evidenced by the substantial portion of the variance in BP's stock price that can be attributed to the publication of sarcasm-laden xkcd comics. This quirky confluence of comedy and commerce serves as a reminder that in the financial realm, as in life, the unexpected can often wield disproportionate influence, much like a clown car revealing a multitude of confounding correlations.

Our findings also slyly nod to the musings of Levitt and Dubner in "Freakonomics," as they deftly illuminate the unexpected connections hidden within seemingly disparate phenomena. In a similar vein, our correlation coefficient of 0.8630717 humorously underscores the intriguing link between xkcd sarcasm and BP's stock price, revealing a connection that may have otherwise eluded the purview of traditional economic models. It seems that in the

carnival of financial mayhem, there may indeed be room for the unpredictably whimsical to wield its influence, much like a thrilling rollercoaster ride through the topsyturvy world of econometric exploration.

The reflective echoes of Gladwell's "The Tipping Point" reverberate through our analysis, as our unexpected findings beckon the reader to ponder the unforeseen influences at play in the world of finance. The tantalizing p-value of less than 0.01 casts a mischievous glimmer on the potent impact of internet humor on stock prices, inviting us to ponder whether the subtle interplay of sarcasm in xkcd comics may hold the lighthearted key to unlocking the enigmatic depths of market behavior.

In summary, our findings align with and contribute to the whimsical world of academic musings and conjectures, offering a refreshing perspective on the interplay between humor and high finance. As we tiptoe through the terrain of statistical serendipity, we are left with an amusing conundrum that is as confounding as it is captivating, reminding us that in the domain of whimsy and wonder, even the subtlest jest can sway the solemn tides of investment with the finesse of a stand-up comedian, leaving us wide-eyed with wonder at the inexplicable dance of jest and jibe in the whimsically unpredictable marketplace.

6. Conclusion

As we draw the curtain on this statistical vaudeville, we can't help but reflect on the whimsical web of connections uncovered in our study. The robust correlation coefficient and significant p-value leave us in a state of bemusement, akin to discovering a clown car in the annals of financial analysis. The possibility that the stock market may respond to internet humor with such earnestness is as surprising as finding a punchline in an economics textbook.

While these findings incite chuckles and raise eyebrows, it is prudent to approach them with a twinkle of skepticism. The age-old adage, "correlation does not imply causation," echoes in the hallowed halls of statistical analysis like the laughter of a court jester. While our results tickle the fancy of curiosity, let us not forget the cautionary tale of mistaking correlation for causation, as this could lead us down a slippery slope as treacherous as a banana peel on a vaudeville stage.

In conclusion, our study adds a whimsical twist to the ponderous world of financial analysis, juxtaposing the seriousness of the stock market with the playful banter of internet humor. We have uncovered a correlation that can only be described as a statistical "knock-knock" joke, leaving us with more questions than answers. It is evident that the enigmatic nature of the stock market continues to surprise us, much like a jack-in-the-box that refuses to follow conventional economic theories.

In light of these findings, we assert that no further research in this area is necessary. It is clear that the intersection of xkcd comics' sarcasm and BP's stock price is a rich playground of statistical whimsy, where the absurd and the analytical collide in a merry dance. It is time to embrace these findings with the same jovial spirit with which we embarked on this comical quest, and leave the weighty matters of traditional financial analysis to their own solemn devices. The curtain falls on this delightful dalliance, leaving us with a smile on our faces and a lingering suspicion that statistical analysis, much like humor, is often best appreciated with a pinch of salt.