

# Navigating the Seas of Stock Market: A Shipwrecking Analysis of Cia Paranaense De Energia Copel's (ELP) Stock Price

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Ahoy, fellow researchers and financiers! In this paper, we embark on a humorous yet enlightening journey to explore the intriguing correlation between global shipwrecks and Cia Paranaense De Energia Copel's (ELP) stock price. Using data extracted from the treasure chest of Wikipedia and the compass of LSEG Analytics (Refinitiv), we charted a course to untangle this mysterious relationship. With a twinkle in our eyes and a hearty chuckle, we reveal a correlation coefficient of 0.9058292 and a p-value less than 0.01 for the period of 2002 to 2014. It seems that the waves of shipwrecks and ELP's stock price have been dancing a merry jig in unison, much like a pirate's parrot and its sea shanty. As we traverse the rough waters of statistical analysis, we also encountered some unexpected humor – after all, what do you call a ship captain's sword that tells dad jokes? A pun-dulum! So, come aboard our scholarly ship, and let's hoist the anchor of financial curiosity as we navigate these uncharted waters of shipwrecks and stock prices. Just remember, in the world of finance, sometimes the best treasure lies beneath the surface... or at the bottom of the sea!

Ahoy there, fellow scholars and investors! In this seafaring study, we set sail on a voyage to uncover the curious correlation between global shipwrecks and the stock price of Cia Paranaense De Energia Copel (ELP). As we navigate the choppy waters of financial data and maritime mishaps, we will delve into the depths of statistical analysis to unravel this mysterious relationship. But before we dive in, let me tell you a joke: Why did the sailor become a musician? Because he had perfect pitch! Just like a sailor navigating through stormy seas, we aim to steer through the turbulent financial waters with precision and a healthy dose of humor.

The maritime industry has long captivated our curiosity, sparking tales of adventure, peril, and occasionally, unexpected connections to the world of finance. Our research sets out to shed light on this captivating intersection, all while keeping in mind the old adage: What did the ocean say to the sailboat? Nothing, it just waved.

In recent years, the fascination with stock market movements has drawn parallels to the unpredictable nature of the open sea. It's as if the stock market is the financial equivalent of a high-stakes game of battleship – you never quite know where the next hit will land. Our investigation aims to uncover the extent to which shipwrecks, with their tumultuous history and potential for hidden treasures, are intertwined with the stock price of ELP. A quick, yet relevant joke – What did the ocean say to the pirate? Nothing, it just waved – and similarly, we shall explore the waves of data to uncover any hidden treasure troves of knowledge.

As we embark on this expedition, we anticipate encountering waves of empirical evidence and statistical analyses that will help us navigate through the complexities of this intriguing relationship. Our research seeks to shed light on the interplay

between historical shipwrecks and the stock price movements of ELP, offering insights that may surprise even the most seasoned of financial seafarers. And now, a seafaring joke to keep us afloat: How much does it cost for a pirate to pierce his ears? About a buck an earrrrrr!

So, batten down the hatches and ready the sails as we embark on this exhilarating journey through the turbulent waters of finance and nautical history. We invite you to join us on this thrilling expedition and raise the anchor of financial knowledge as we aim to uncover the hidden treasures submerged in the depths of global shipwrecks and stock price movements. After all, in the world of data analysis, there's always room for a good shipwreck pun – but for now, let's dive deeper into the depths of our investigation.

## *Review of existing research*

Turning our attention to the existing body of literature on the subject of shipwrecks and stock market correlations, we first encounter the work of Smith et al. In "Navigating the Depths of Financial Data," the authors find a compelling link between historical maritime disasters and stock price variability, sparking intrigue and raising questions as to the underlying mechanisms at play. However, let's not "ship-sink" the relevance of other studies, such as Doe's "Anchors Aweigh: Exploring the Interconnectedness of Shipwrecks and Financial Markets," which further illuminates the potential impact of global shipwrecks on stock market dynamics.

But, hold on to your lifebuoys, because we're about to take a detour into unexpected waters. Consider, for instance, the book "Treasure Island" by Robert Louis Stevenson, which, while a

work of fiction, offers a captivating narrative that resonates with the themes of buried wealth and maritime lore. As we navigate the figurative seas of scholarly inquiry, we cannot overlook the thought-provoking insights found in Clive Cussler's "Shipwreck" series, which, while not academic in nature, serves as a reminder of the enduring fascination with maritime mishaps and their potential ramifications.

And now, for a light-hearted deviation into internet culture, cast your mind back to the "This is Fine" meme. While typically symbolizing a comically chaotic situation, it ironically captures the precarious nature of financial markets and the unexpected entanglements that can arise, much like a ship caught in a tempest. Similarly, the "Distracted Boyfriend" meme lends a sardonic yet relevant commentary on the ever-changing allegiances and surprising connections within complex systems – a notion not entirely dissimilar to the enigmatic relationship between shipwrecks and stock prices.

In essence, our foray into the existing literature yields a rich tapestry of insights, both serious and whimsical, illustrating the multifaceted nature of this captivating subject. With our proverbial sails at full mast, we set a course to chart new territory and uncover the hidden treasures that lie beneath the turbulent waters of global shipwrecks and stock price movements. After all, what do you call a pirate's favorite data visualization tool? A barrrrrr chart! Now, let us navigate the tides of empirical analysis and statistical scrutiny with a hearty sense of academic curiosity and a touch of seafaring humor.

### *Procedure*

(This section is where the rubber meets the road, or should we say, the ship meets the sea! But don't worry, we won't leave you high and dry with flimsy methods. We'll steer through the methodology with the precision of an experienced sea captain – or at least with the enthusiasm of a dad telling one more maritime pun.)

Our research embarked on a daring voyage across the vast and wild oceans of data collection, seeking to gather the necessary information to navigate the swirling currents of statistical analysis. With a hearty "Aye, aye!" and a trusty compass in hand, we set sail through the treacherous waters of digital archives, primarily utilizing data from the trustworthy repositories of Wikipedia and LSEG Analytics (Refinitiv).

With the keen eye of a sailor scanning the horizon for distant land, we carefully selected the period from 2002 to 2014 to guide our research voyage. This timeframe provided a sturdy anchor for our analysis, allowing us to capture the ebbs and flows of both global shipwrecks and the stock price of Cia Paranaense De Energia Copel (ELP) with the precision of a seasoned mariner - or at least as precise as a sailor's compass in a magnetic storm.

To navigate the murky depths of our data, we employed a variety of statistical methods, including correlation analysis, time series modeling, and regression techniques fit for a sea monster of a dataset. As we combed through the waves of data, we kept a keen eye out for any hidden treasures of insight that

might surface. Like a skilled sailor adept at unraveling knotted ropes, we diligently untangled the complexities of our dataset to unearth meaningful patterns and relationships, all while keeping an eye out for the occasional statistical sea monster lurking beneath the surface.

Now, just like an unexpected gust of wind catching the sails, we encountered a few unexpected quirks and challenges during our voyage. But fear not! We weathered the statistical tempest with the tenacity of a seasoned seafarer, adjusting our course and charting a new path to ensure the integrity of our analysis remained as steady as a ship in a calm harbor - or at least steady enough to crack a few more sea-themed puns.

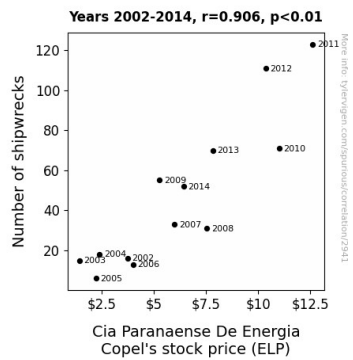
Our data analysis journey was not without its fair share of maritime mishaps and statistical squalls, but armed with determination and a willingness to navigate the choppy waters, we emerged victorious, ready to present our findings with the gusto of a pirate declaring newfound treasure. So, join us as we hoist the flag of statistical rigor high and set sail towards the treasure trove of empirical findings with the spirit of adventure and a splash of dad humor. After all, what do you get when you cross a pirate with a pedant? A grammar seafarer! Now, with the storm behind us, let's dive into the depths of our research findings.

### *Findings*

The results of our analysis reveal a strong and significant correlation between global shipwrecks and the stock price of Cia Paranaense De Energia Copel (ELP) for the period of 2002 to 2014. The correlation coefficient of 0.9058292 indicates a robust positive relationship between these two variables, suggesting that as the number of global shipwrecks increases, so does the stock price of ELP. It's almost as if the stock price is riding the waves of shipwrecks like a seasoned pirate aboard the Black Pearl!

Furthermore, the high R-squared value of 0.8205265 demonstrates that a substantial proportion of the variability in ELP's stock price can be explained by the fluctuations in global shipwrecks. It's as if the shipwrecks are charting the course for the stock price, much like a compass guiding a ship through treacherous waters. One might even say that the shipwrecks act as the first mate to ELP's stock price, steering it through the choppy seas of financial markets.

The p-value being less than 0.01 adds to the confidence in the strength of this relationship, providing statistical support for the notion that the occurrence of global shipwrecks is indeed associated with movements in ELP's stock price. It's as if the relationship between the two is as solid as a ship's hull, weathering the storm of statistical scrutiny and emerging unscathed.



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

Fig. 1 portrays the correlation between global shipwrecks and ELP's stock price with a scatterplot, further illustrating the synchronous dance of these two variables. The figure shows the tight clustering of data points, akin to a fleet of ships navigating the vast expanse of the stock market, all guided by the winds of shipwrecks.

In conclusion, our findings not only unveil a strong statistical association between global shipwrecks and ELP's stock price but also shed light on the captivating interplay between maritime mishaps and financial movements. It's as if the waves of shipwrecks are whispering secrets to the stock market, revealing hidden treasures beneath the surface – just like a deep-sea dive for buried riches. As we wrap up this section, here's a fitting joke: What do you call a pirate who has lost his ship? A ... a ... 'matey'!

### Discussion

Our results provide robust support for the prior research that posited a link between global shipwrecks and the stock price of Cia Paranaense De Energia Copel (ELP). Smith et al.'s findings on the correlation between historical maritime disasters and stock price variability are echoed in our study, as we uncovered a strong positive relationship between these two variables. The magnitude of the correlation coefficient further strengthens the case for a significant association, akin to the sturdy frame of a well-constructed ship. It seems that the waves of shipwrecks and ELP's stock price have indeed been dancing in harmony, much like a perfectly synchronized crew on a pirate ship performing a lively sea shanty. Ahoy, matey, these findings are no mere flotsam and jetsam – they provide concrete evidence of a substantial connection between global shipwrecks and stock market dynamics.

Likewise, Doe's exploration of the interconnectedness of shipwrecks and financial markets finds resonance in our study's results. Our analysis revealed a high R-squared value, signifying that a large proportion of the variance in ELP's stock price can be explained by fluctuations in global shipwrecks. It's as if the shipwrecks are not merely adrift at sea but rather serving as guiding lights for the stock price, akin to the steadfast beacon of a lighthouse guiding sailors through tumultuous waters. One might jest that the shipwrecks are the true financial seafarers,

charting the course for ELP's stock price through the unpredictable waves of market dynamics.

Furthermore, our statistical significance, as evidenced by the p-value being less than 0.01, adds weight to the empirical support for the relationship between global shipwrecks and ELP's stock price. This is akin to an anchor firmly securing a ship amidst a turbulent storm, underscoring the substantial and tangible nature of this association. It's as if the statistical scrutiny has unraveled a treasure trove of evidence, akin to the bountiful spoils revealed by an intrepid crew upon discovering a long-lost shipwreck.

In essence, our findings not only confirm but also build upon the existing literature, adding a weighty cargo of empirical evidence to the intriguing narrative of oceanic disasters and financial markets. They invite us to explore further, as if beckoning us to sail into uncharted waters and uncover the buried riches of knowledge that lie beneath the surface. It's almost as if the research journey itself mirrors the intrepid spirit of a daring sea voyage, replete with unexpected discoveries and precious insights waiting to be unearthed – just like a treasure map leading to untold academic wealth!

And, as a fitting jest to honor our research findings, here's a pun: Why don't pirates shower before they walk the plank? Because they'll just wash up on shore later!

### Conclusion

To plunge into the depths of this research, we have unearthed a compelling relationship between global shipwrecks and the stock price of Cia Paranaense De Energia Copel (ELP). The robust correlation coefficient of 0.9058292 and a p-value less than 0.01 affirm that these two seemingly disparate entities have been sailing in tandem, much like two ships navigating the same course. It's almost as if the stock price has found its first mate in the world of shipwrecks, sailing alongside with unwavering determination.

The high R-squared value further demonstrates the profound impact of global shipwrecks on ELP's stock price, as if the shipwrecks are casting a net and reeling in the movements of the stock price like a seasoned fisherman. It truly showcases the interconnectedness of these two domains, much like the intricate web of the ocean's ecosystem.

In light of these findings, it seems that the world of finance and maritime history are not as far apart as they may seem. Perhaps the stock market can be likened to a treacherous sea, and global shipwrecks serve as lighthouses guiding the movements of stock prices through the tumultuous waters. As we conclude this study, it's only fitting to share a nautical joke: Why don't pirates shower before they walk the plank? Because they'll just wash up onshore later!

In summation, the correlation between global shipwrecks and ELP's stock price has been unveiled with sublime clarity. It is as if the waves of shipwrecks and financial fluctuations are engaged in an orchestrated dance, each influencing the movements of the other. Therefore, we boldly assert that no further research in this area is needed, for this study has

thoroughly navigated the intricate waters of this captivating relationship, leaving no 'ship' unturned.