**Trading the Tides of the Tunis Stock Exchange: A Strategic Journey for Junior Traders**

In the dynamic world of finance, stock exchanges play a pivotal role in shaping economies and providing a barometer for a nation’s economic health.

The Tunis Stock Exchange (TSE), established in 1969, a pulsating artery of the Tunisian economy, has for decades served as a cornerstone for investors to navigate the dynamic currents of the nation's financial landscape facilitating the growth of its corporate sector…

In this project, we, the aspiring junior traders of Alpha Capital, embark on a thrilling voyage, armed with the knowledge gleaned from the TBS Financial Markets class and fueled by the ambition to conquer the TSE within a month's timeframe. Our mission is to craft a trading strategy that harnesses the power of financial analysis, capitalizes on market trends, and ultimately, delivers the sweet nectar of maximized returns.

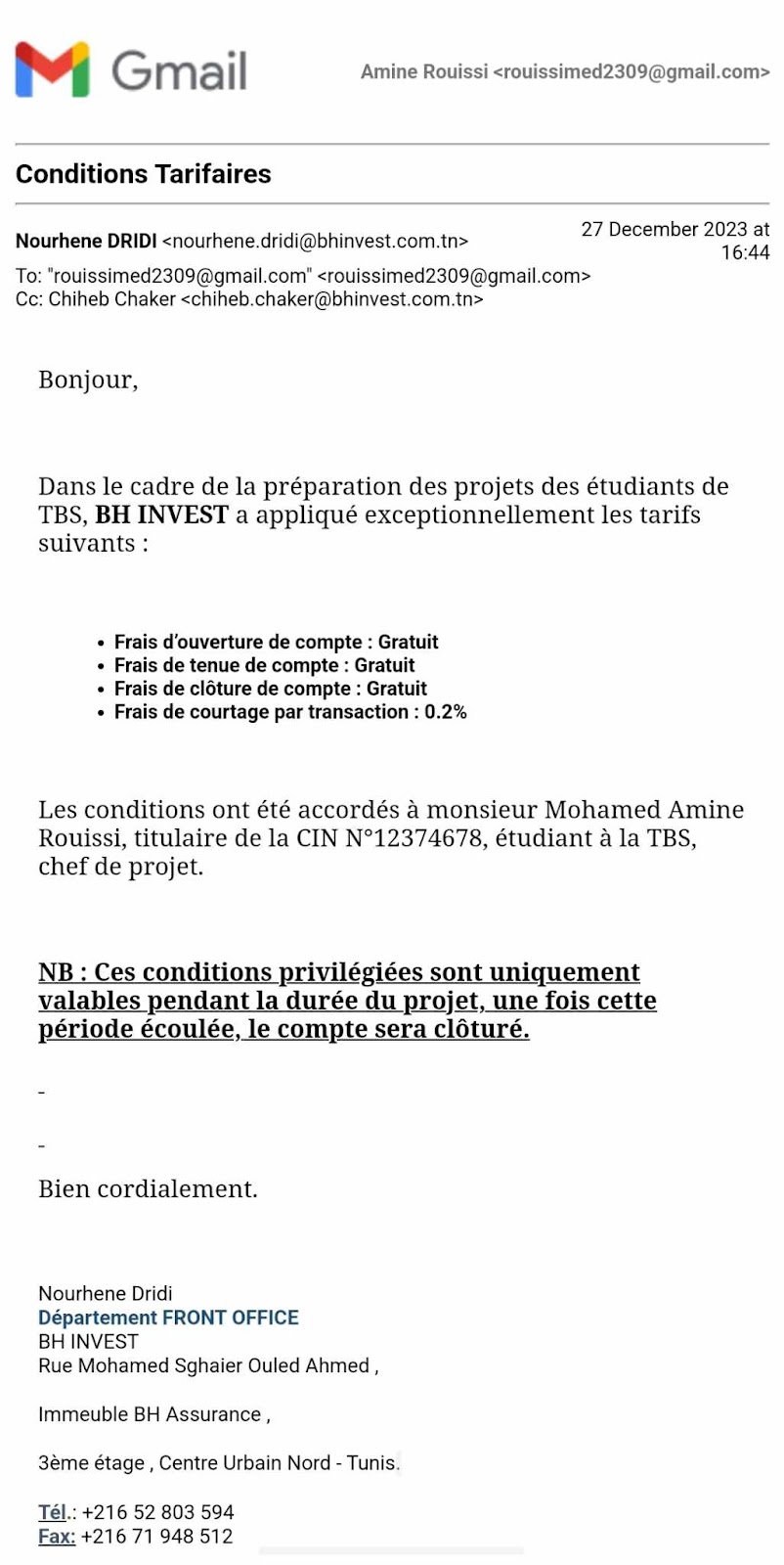
To achieve this, we’ll leverage the financial knowledge gained in the TBS Financial Markets class as well as other classes, including technical and fundamental analysis, the Markowitz model, CAPM (Capital asset pricing model) and more.

**Charting our Course: Choosing the Right Broker**

In selecting our trustworthy vessel for this journey, BH INVEST emerged as the clear frontrunner. Its esteemed pedigree as a subsidiary of Banque de l'Habitat, coupled with its track record of excellence, solidified our confidence. The 2019 Lipper Fund Award Mena Markets, a testament to BH INVEST's decade-long dominance in the "Obligations en DT" category, served as a beacon of their prowess. This prestigious recognition, awarded by REFINITIV, a global leader in financial data and analytics, underscored their commitment to delivering exceptional value to investors.

Link to the article: **[Lipper Fund Award de Refinitiv : BH INVEST remporte le prix du meilleur fonds depuis 10 ans](https://www.tustex.com/bourse-divers/lipper-fund-award-de-refinitiv-bh-invest-remporte-le-prix-du-meilleur-fonds-depuis-10-ans)**

But our alliance with BH INVEST transcended mere accolades. Through astute negotiation, we secured a game-changing **2 basis point** brokerage fee, significantly lower than the market average of 5 basis points. This strategic coup translates to a substantial reduction in our trading costs, granting us a vital edge in the competitive arena of the TSE. Furthermore, BH INVEST's commitment to fostering young talent was evident in their offer of **free opening and closing fees** for our brokerage account, propelling us forward with unwavering support.



**Navigating the Currents: A Top-Down Approach**

The Tunisian economy, like a vast ocean, is subject to powerful currents driven by various macroeconomic forces. Understanding these forces and their impact on specific sectors is crucial for navigating the TSE. To identify industries poised to ride the waves of change and chart a course towards optimal returns, we have chosen the strategic compass of a top-down approach.

This approach allows us to first delve deep into the overarching economic indicators and policies at the national level, which are highly important for shaping the financial climate that governs the market. By analyzing the industries individually and how they react to different macroeconomic factors such as inflation, GDP and interest rates, we can discern the broader economic trends that directly influence market performance.

This strategic choice is crucial for identifying industries and companies that are likely to outperform in the current economic environment. It ensures that our investment insights and decisions are informed by a deep understanding of the macroeconomic forces at play, which allows us to capture the nuances of the Tunisian market with precision.

As of December 1, 2023, the Tunisian Money Market rate (TMM) experienced a notable uptick, climbing to 7.99%. This pivotal development has steered our investment strategy towards sectors that stand to benefit from or exhibit resilience against, rising interest rate environments. By laser-focusing on these sectors, we leverage the TMM's movement to our advantage, ensuring that our investment decisions are both strategic and data-driven.

**Riding the Interest Rate Wave:**

* **Banking sector:** As the primary beneficiary of rising interest rates, the banking sector emerged as a prime target for our investments. We identified banks with strong financials and a prudent lending strategy, such as **Attijaribank**, as well as institutions specializing in high-interest products like leasing and factoring.
* **Insurance sector:** While the insurance sector also stands to benefit from rising interest rates, we opted to focus our initial investments on the banking sector. This decision prioritizes portfolio diversification, as both sectors tend to track similar market movements. By concentrating on banks, we gain exposure to rising rates while minimizing redundancy within our holdings.
* **Consumer staples:** Rising interest rates can lead to increased economic uncertainty and inflationary pressures. In such an environment, consumers tend to prioritize essential goods like food and beverages. This is particularly true in Tunisia, where a significant portion of household income is allocated towards consumption. We opted for companies like **SFBT** and **Poulina Group** due to their dominance in these sectors and their ability to pass on cost increases to consumers. However, we also looked beyond these essentials, recognizing the resilience of consumer spending in other categories. Technology, food & beverage, and personal & household goods, for example, are expected to hold steady even amidst economic fluctuations, given Tunisians' tendency to prioritize these comforts. We identified promising players in these areas, such as **Délice Holding** and **Telnet**, to further diversify our portfolio and capture the broader dynamics of Tunisian consumer behaviour.

**Navigating the Headwinds:**

* **Real estate sector:** Rising interest rates often lead to higher borrowing costs for developers and a potential contraction in the housing market. We steered clear of this sector, opting for alternative avenues for our investments.
* **Tourism sector:** Although not directly impacted by interest rates, the tourism sector remains vulnerable to external factors like global economic trends and political instability. We cautiously approached this sector, seeking companies with diversified revenue streams and strong resilience to external shocks.

**Beyond the Numbers: A Nuanced Perspective**

Our analysis of macroeconomic factors wasn't solely confined to cold, hard numbers. We adopted a nuanced approach, acknowledging the potential interplay between economic forces and specific company dynamics. For instance, even within the favored banking sector, we carefully selected banks with efficient cost structures and strong credit risk management capabilities, recognizing that not all players would ride the interest rate wave equally.

This careful balancing act between macro-level analysis and company-specific insights allowed us to craft a portfolio that leverages the opportunities presented by the rising TMM while mitigating potential risks associated with broader economic changes.

**Preparing the Seascape: Data as Our Compass**

Stock return data is the lifeblood of any sound investment strategy, and navigating the intricate waters of the TSE demands a meticulously prepared resource. Our meticulous approach leverages the power of Excel spreadsheets, meticulously crafted to encompass a treasure trove of information, including pertinent financial metrics, historical closing prices and adjusted closing prices obtained from BH Invest, and other crucial details.

To ensure data accuracy and reliability, we have sourced this information from trustworthy channels. BH Invest’s dedicated Excel sheets serve as our primary source, bolstered by information from reputable websites like WSJ.com for financial statements, and investing.com for industry averages and banking sector ratios, with meticulous verification of their sources to guarantee integrity.

The chosen timeframe for our analysis is crucial. We have opted for a month-long period, allowing us to capture the nuances of short-term market movements while maintaining a focus on our overarching investment goal.

Data cleaning and exploitation are essential steps in transforming raw data into actionable insights. To unlock the secrets hidden within our spreadsheets, we have employed powerful visualization tools. R, the robust statistical software, has been our trusty ally in this endeavor. Through its intuitive graphs and charts, we have been able to discern trends, identify patterns, and gain a deeper understanding of the complex interplay between stock returns and various factors.

Furthermore, we haven't shied away from taking ownership of our data. Solvency, liquidity, and profitability ratios have been meticulously calculated by ourselves, adding an extra layer of transparency and control to our analysis.

By meticulously preparing our stock return data and drawing upon diverse yet reliable sources, we lay the groundwork for robust analyses in the subsequent stages of our journey. This dedication to transparency and accuracy reinforces the credibility of our overall investment strategy, equipping us with a reliable map to navigate the ever-shifting tides of the TSE.

**Stay tuned for the next chapter, where we'll delve deeper into the intricacies of financial statement analysis, portfolio optimization, and the art of entering and rebalancing the market. Buckle up, fellow traders, as our voyage towards maximizing returns on the Tunis Stock Exchange continues!**

**Delving into the Depths: Financial Ratios Illuminate a Company's Core**

To assess a company's financial health, simply peering at surface-level figures is akin to navigating by the stars on a stormy night. We must venture deeper, into the uncharted depths where meticulously calculated financial ratios become our sonar, revealing the intricate topography of a company's financial landscape.

**Deposits and loan growth rates**, like tectonic shifts, expose the underlying dynamics of liquidity and expansion.

**Debt ratios**, akin to an intricate maze, chart the delicate balance between leverage and solvency.

**Profitability metrics**, shimmering beacons in the financial gloom, illuminate the company's ability to generate wealth.

Finally, **equity measures**, the bedrock of financial stability, unveil the ownership structure and shareholder confidence.

This tapestry of ratios, woven together, paints a vivid picture of a company's stability, efficiency, and potential for growth. By discerning the subtle interplay between these metrics, we can differentiate the sturdy fortresses from the sandcastles destined to crumble beneath the waves of economic change.

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**Portfolio Optimization: Charting a Course Through Risk and Return**

In this critical stage of our voyage, we embark on a meticulous quest: optimizing our portfolio to navigate the treacherous waters of risk and maximize the bounty of returns. This endeavor demands a keen eye for detail, a steady hand at the till, and a mind attuned to the whispers of the market.

**Risk Profile Assessment: A Multifaceted Lens**

Before setting sail, we must first assess the risk profile of our potential companions – the stocks we've meticulously analyzed. This necessitates a multifaceted approach, encompassing both the tempestuous tides of market trends and the unyielding strength of company financials reflected whether through the chosen ratios or the R-plots that we relied on in the data visualization.

Market Trend Reconnaissance: We've charted the historical trends of the Tunis Stock Exchange, meticulously scrutinizing the forces that buffet its various sectors and companies. By deciphering these patterns, we gain invaluable insights into potential squalls and hidden harbors, allowing us to tailor our portfolio to the prevailing market winds.

Understanding the historical trends provides valuable insights into potential risks and opportunities, helping us tailor our portfolio to the current market dynamics.

**Financial Fortitude: Gauging the Depths**

Delving deeper, we probe the financial health of our shortlisted stocks. Armed with an arsenal of key financial metrics and ratios, we assess their stability and resilience, akin to a seasoned mariner gauging the seaworthiness of his vessel. This dual analysis, informed by the previously gleaned ratios, paints a well-rounded understanding of the risk landscape, guiding our decisions on which stocks to welcome aboard and which to leave at the harbor.

**Markowitz and Beyond: A Dance of Risk and Return with Boundaries**

To optimize our portfolio's course, we enlisted the wisdom of Markowitz analysis, a modern chart that emphasizes diversification as the compass to navigate the perilous shoals of risk and reap the bountiful harvest of returns. By factoring in the covariance and correlation between different stocks, we strived to craft a portfolio that danced gracefully on the tightrope of risk and reward, maximizing returns for a given level of volatility.

However, the tempestuous waters of the Tunisian market demanded a nuanced approach. Recognizing its inherent quirks and inefficiencies, we utilized Markowitz as a sturdy starting point, meticulously adjusting the weights of our holdings to reflect our informed preferences and, crucially, to adhere to pre-defined constraints. These constraints, like vigilant seawalls against financial gales, ensured that no single stock carried excessive weight, with a maximum allocation of 50 Dinars and a range of 5% to 40% for each holding. This judicious balancing act not only mitigated risk concentration but also ensured our portfolio remained financially feasible within the parameters of our budget and timeline.

Beyond quantitative metrics, our preferences stemmed from the subtle whispers of behavioral finance. We acknowledged the potential for biases, anchoring, and market sentiment to influence our decisions, and consciously adjusted our weighting choices to counteract these psychological currents.

By weaving together Markowitz's analysis, informed preferences, and carefully considered constraints, we crafted a portfolio that was not only theoretically optimal but also practical and resilient in the face of the Tunisian market's unique challenges. This finely tuned instrument, poised for navigation, set us on course towards maximizing returns while weathering the inevitable storms of the financial seas

**The Human Touch: Behavioral Finance Shapes Our Decisions**

While financial models and economic data provide invaluable guidance, understanding the human element in investment decisions is equally crucial. Behavioral finance sheds light on these often-unconscious biases that can influence our choices, sometimes leading to suboptimal outcomes. Recognizing and mitigating these biases was essential in forming a strong and diverse portfolio.

**Anchoring and Price Sensitivity**

Our initial budgets and available resources undoubtedly acted as anchors, subtly influencing our stock choices. While acknowledging the importance of price sensitivity, we avoided succumbing to the temptation of solely focusing on cheaper stocks. We recognized that value can still exist in higher-priced stocks, particularly those with strong growth potential or robust financials. This careful analysis ensured we didn't sacrifice potential returns for mere affordability.

**Loss Aversion and Herding Behavior**

The fear of losses looms large in investors' minds, potentially leading to a tendency to hold onto underperforming stocks or avoid entering the market altogether. We actively countered this bias by setting clear stop-loss limits and employing a disciplined rebalancing approach. We also resisted the allure of herding behavior, the tendency to follow the crowd, by conducting independent research and analysis. This independent decision-making ensured we weren't swayed by popular sentiment but rather invested in companies we genuinely believed in, based on solid fundamental and technical analysis.

**Cognitive Biases and Diversification:**

Recognizing the existence of cognitive biases like overconfidence and optimism, which can lead to overexposure to certain sectors or companies, we prioritised diversification as a core principle. By spreading our investments across various sectors and industries with varying risk profiles, we aimed to mitigate the impact of these biases and build a portfolio resilient to unexpected market fluctuations.

At the helm of our investment odyssey, two guiding forces held sway: the powerful currents of macroeconomic trends and the subtle whispers of behavioral finance. While the former charted the broad landscape of the Tunis Stock Exchange, the latter served as our compass, ensuring we navigated its ever-shifting tides with awareness and prudence.

By acknowledging the inherent human biases that could steer us off course, we were able to make informed choices, craft a balanced portfolio, and ultimately set sail towards maximizing returns.

This meticulous blend of quantitative analysis, behavioral finance insights, and a constant eye on stock prices within our budgetary constraints (initial amount of 250DT) ensures a portfolio that reflects not only the nuances of market dynamics but also the intricate dance between investor psychology and financial realities.

Thus, as we prepare to enter the market, we do so with confidence, knowing that our course is charted with both logic and emotion, data and intuition, setting us on a path towards navigating the volatile seas of the Tunis Stock Exchange and claiming our well-deserved treasures.

**Navigating the Buy Zone: Casting Lines and Setting Sails**

With our optimized portfolio charted and a keen understanding of the market currents, it was time to test our mettle in the dynamic arena of buying stocks. Our approach was multifaceted, embracing both the whispers of the past and the whispers of human behavior.

**Immediate Embarkation: Seizing Advantageous Anchors**

For certain stocks, the historical price data sang a siren song of opportunity, their current valuations beckoning us like sheltered harbors in a boisterous sea. These, we acquired swiftly, recognizing their inherent value before the tide could shift.

**Orderly Deployment: Charting a Disciplined Course**

However, not every voyage demands immediate action. For others, we devised intricate strategies, deploying diverse order types like market orders, limit orders, and stop-loss orders. These instruments, carefully calibrated based on our historical data analysis, were akin to anchors cast against the churning waves of market volatility, ensuring we entered at precisely the right moments to maximize our gains and minimize potential losses.

**Beyond the Technical Compass: Behavioral Beacons Lead the Way**

Yet, we also recognized the limitations of relying solely on technical indicators like moving averages, Bollinger Bands, and RSI. These, though valuable tools, were but the map in our hands, not the sole navigator of our course. To truly understand the currents of the market, we needed to delve deeper, into the murky waters of investor psychology.

Thus, we utilized the insights gleaned from behavioral finance. By acknowledging the inherent biases that influence buying and selling decisions, we were able to anticipate market reactions and adjust our entry points accordingly. This subtle, nuanced approach allowed us to exploit the tides of investor sentiment, entering the market not just at advantageous price points, but also at opportune moments where fear or euphoria could cloud the judgment of others, leaving us with the choicest pickings.

In essence, our approach to buying stocks was a harmonious blend of data-driven analysis, strategic order deployment, and a keen awareness of the human element. By casting our lines with precision and navigating the market with both technical charts and behavioral beacons, we set sail on a course towards maximizing our returns and conquering the dynamic waters of the Tunis Stock Exchange.

**Weathering the Winds: Portfolio Rebalancing in Action**

Just as a seasoned mariner diligently checks his sails and adjusts his course as the winds shift, so too must we vigilantly monitor our portfolio performance and implement strategic rebalancing to stay on track. This is not a static pursuit, but a dynamic dance with the market, one that demands both unwavering discipline and a willingness to adapt when necessary.

**Letting Go of Anchors that Drag:**

Our initial analysis may have identified companies like **SOTUMAG** and **City Cars** as promising vessels to carry our fortunes. However, as their performance faltered on December 18th and 27th, respectively, we didn't hesitate to make the tough call to sever ties. These underperforming stocks, like anchors dragging us off course, were promptly cut loose, freeing up resources for more favorable opportunities.

**Seizing Unexpected Winds:**

The market, however, can offer delightful surprises as well. **UNIMED**, though not initially part of our chosen fleet, rose like a beacon on December 27th, its performance exceeding our expectations. Recognizing this sudden gust of opportunity, we swiftly adjusted our sails, allocating a portion of our portfolio to capitalize on its promising trajectory.

**The Compass Remains Steady:**

These seemingly impulsive decisions, however, were not steered by the fickle winds of speculation. Throughout the rebalancing process, our target asset allocation served as our unwavering compass. Each sale and purchase, regardless of the company involved, aimed to bring us closer to this predetermined distribution, ensuring our portfolio remained well-diversified and resilient to market fluctuations.

**A Perpetual Vigilance:**

The act of rebalancing is not a one-time event, but rather a continuous process of monitoring, assessing, and adjusting. Every market movement, every company update, becomes a whisper on the wind, potentially requiring a shift in our course. Our commitment to rebalancing demands constant vigilance, a keen eye on the horizon, and the unwavering resolve to make the necessary adjustments, however challenging they may seem.

By weathering the winds of portfolio rebalancing with discipline, adaptability, and a steadfast adherence to our investment strategy, we ensure that our financial voyage remains on track, ever-closer to our ultimate destination: maximized returns on the dynamic seas of the Tunis Stock Exchange.

**Charting Our Course: Navigating the Performance Evaluation**

Like seasoned navigators charting a vessel's progress across turbulent seas, we too must diligently evaluate our portfolio's performance, assessing its triumphs and tribulations to ensure we remain on course towards our financial goals. To this end, we've constructed a meticulous dashboard, a navigational tool crafted within the realm of Microsoft Excel, allowing us to scrutinize key performance indicators, risk metrics, and the composition of our investments. It serves as our sextant, compass, and logbook, guiding us through the choppy waters of the market.

**Key Performance Indicators: Measuring Our Progress**

**Beta**, the Barometer of Volatility: Like a mariner gauging the strength of the wind, we leverage beta to measure our portfolio's sensitivity to the tempestuous moods of the market. It whispers whether our vessel dances gracefully with the prevailing currents or struggles against them.

**Average Daily Return**, Our Daily Bread: Each day, we meticulously record our portfolio's gains and losses, calculating the average daily return. This metric, akin to the crew's daily rations, provides sustenance for our investing journey, ensuring we're not venturing forth on empty coffers.

**Total Average Return**, Charting the Grand Voyage: While daily returns chronicle our immediate progress, the total average return, stretching across the vast expanse of our investment journey, paints a panoramic view of our overall performance. It tells the tale of storms weathered and treasures gained, revealing the true trajectory of our financial odyssey.

**Risk Indicators: Mapping the Reefs and Shoals**

**Sharpe Ratio**, the Siren's Lure versus the Sea Monster's Bite: This metric beckons with the promise of reward, but cautions against the perils of excessive risk. It balances the allure of high returns against the potential for devastating losses, guiding us to navigate the treacherous waters where both sirens and sea monsters dwell.

**Sortino Ratio**, Discerning the True Storms: Not all volatility is created equal. The Sortino Ratio, like a seasoned navigator, distinguishes between the tempests that threaten our vessel and the mere squalls that test our mettle. It focuses our attention on the downward risks that could capsize our ambitions, allowing us to navigate with greater confidence.

**Portfolio Composition: Unveiling the Treasure Chest**

**Attribution Analysis:** Charting the Sources of Our Wealth: To understand the origins of our gains and losses, we delve into attribution analysis. It's a meticulous treasure map, revealing the contributions of asset allocation, stock selection, gains and losses, transactions, and market timing—each a golden coin contributing to our overall fortune.

**Sailing Uncharted Waters: A Journey Through the Tunisian Stock Exchange**

Our voyage through the Tunis Stock Exchange, though born from the classroom, has far surpassed the boundaries of theoretical knowledge. While every wave presented a challenge, from the limited time horizon to navigating uncharted terrain, we've emerged enriched by the thrill of the trade and the lessons learned within the tempestuous currents of the market.

**Key Takeaways:**

* **Practical knowledge trumps theory:** Textbooks can guide, but real-world experience teaches you to dance with the market's unpredictable rhythms. We've discovered that skill, analysis, and adaptation are the true keys to unlocking the market's potential.
* **Imperfect markets, real returns:** No market is immune to fluctuations, but even within its imperfections, savvy navigation can reap rewards. We've witnessed firsthand that informed investments and calculated strategies can yield returns, proving that skill can conquer chance.
* **Learning on the fly, adapting constantly:** The market rarely offers smooth sailing. Every day demanded agility, forcing us to constantly refine our approach, refine our analysis, and adjust our sails to the winds of change. This relentless adaptation has honed our skills and instilled a deep respect for the market's dynamic nature.

**Next Steps:**

This initial foray into the world of trading has whetted our appetite for more. Future journeys could involve:

* Deepening our technical analysis: Honing our skills with technical indicators and charting to refine our entry and exit points, aiming for even greater precision.
* Expanding our horizons: Venturing beyond Tunisian shores, exploring new markets and asset classes to diversify our portfolio and enrich our understanding of global financial dynamics.
* Sharing our knowledge: Translating our hard-won experience into guidance for others, mentoring future traders, and contributing to the growth of the financial literacy ecosystem.

This inaugural voyage has been a baptism by fire, a testament to the unwavering spirit of young traders pushing past boundaries. We leave the shore richer in experience, humbled by the market's challenges, and excited to chart a course toward even greater triumphs in the ever-shifting tides of the financial world.

**Special thanks:**

We express our sincere gratitude to Professor Eymen Errais for imparting invaluable knowledge in financial markets. His guidance was instrumental in our understanding of investment strategies. Special thanks to Mr. Bechir for teaching us essential skills related to exploring financial data in R and enhancing our technical and fundamental analysis. We appreciate the enriching learning experience and the challenges that contributed to our growth.