Pillars of a Stock Market Performance

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Abstract

The outperformance of certain stock markets over others is a phenomenon that has long intrigued economists, investors, and policymakers. This paper explores the factors contributing to this disparity, focusing on why some markets, such as the U.S., consistently lead in terms of returns and resilience. The paper examines the key drivers of stock market performance by conducting a comparative analysis of historical market data, regulatory frameworks, economic conditions, and innovation trends. The analysis identifies that transparent regulatory environments, strong economic fundamentals, and high levels of innovation are critical factors. These findings are contextualized through case studies, such as the U.S. market's growth fueled by technological innovation and a stable economy. The paper's implications are significant for investors seeking insights into market dynamics and policymakers looking to replicate successful models. Future research could explore these factors within emerging markets and evaluate their long-term sustainability. The hypothesis guiding this research is that a combination of regulatory stability, economic strength, and innovation-driven growth underpins the outperformance of stock markets.

1.1 Introduction

In the 1990s, global investors sought to identify stock markets with the greatest potential for long-term growth. Fast forward to the year 2024, and it becomes evident that while many markets have experienced significant growth, few have matched the consistent outperformance of the U.S. market. The U.S. stock market has grown exponentially, outpacing markets in Europe, Asia, and beyond. This raises the question: What factors have driven this exceptional growth?

1.2 Importance of Analyzing Market Outperformance

Recognizing high-performing markets helps investors optimize portfolio strategies, while policymakers may seek to replicate successful models. This paper explores why some stock markets consistently outperform others, offering insights into cultivating sustainable growth.

1.3 Key Factors Contributing to Market Outperformance

Three main factors are hypothesized for the superior performance of certain stock markets:

1. **Transparent and Stable Regulatory Environment**: Markets with well-enforced, transparent regulations, such as those governed by the SEC in the U.S., foster greater investor confidence and market integrity.
2. **Strong Economic Fundamentals:** Markets supported by strong economic fundamentals attract foreign investment, increasing market liquidity.
3. **Innovation**: Countries with a culture of innovation, backed by technological advancements, see consistent market growth.

1.4 Statement of the Hypothesis

This paper hypothesizes that stock markets outperform others due to a combination of regulatory transparency, economic strength, and innovation.

2 The Role of Transparency in the U.S. Stock Market

In the largely complicated world of stock markets, transparency stands as a key factor that differentiates some markets from others. Transparency in stock markets is important because it allows investors to be more confident. Transparent markets provide clear, accurate, and timely information about financial conditions. For example, the United States stock market benefits from a strong regulatory framework that enforces high standards of transparency. One of the most significant changes was the Sarbanes-Oxley Act of 2002 (Kenton, 2004). This legislation protects investors from corporate fraud because it improves the financial reporting and auditing standards. Additionally, the Securities and Exchange Commission (SEC) plays a pivotal role in ensuring transparency through its vast disclosure requirements (Adam, 2024). Publicly traded companies must file detailed reports using forms such as Form 10-K and Form 10-Q. These reports are important because they provide essential financial information for investors such as income statements, balance sheets, cash flow statements, etc. Adding on, the Regulation Fair Disclosure (Reg FD) ensures that all investors have equal access to information, preventing selective disclosure (Hayes, 2022). These are just a few of the regulations that all work together to contribute to a high level of transparency in the U.S. market. The SEC actively pursues companies that violate such roles, by imposing penalties (SEC, 2024). For example, in 2009 JPMorgan Chase had to pay $1.7 billion to the victims of Bernard Madoff's Ponzi scheme (Peralta, 2014). The bank was charged with two violations of the Bank Secrecy Act. Such enforcement actions send a clear message to companies that transparency is non-negotiable. High levels of transparency help in turn to boost investor confidence. Investors are more likely to trust a market in which they believe the information they are getting is accurate and comprehensive. This has led to higher market valuations, where investors are willing to pay a premium for stocks in markets with reliable information.

In this section, we will explore how transparency plays a critical role in stock market success.

2.1 Methodology for Regulatory Oversight Comparison Graph

The objective of this graph is to compare the regulatory oversight of the U.S. stock market with other global markets based on three key criteria: the independence of the regulatory bodies, the strength of enforcement, and the comprehensiveness of the market regulations.

1. Independence of Regulatory Body: the degree to which a country's primary financial regulatory body operates independently from government influence and potential other political pressures.
   Scoring:
   - High(9-10): The regulatory body operates with complete independence and minimal government interference.
   - Medium(5-8): The regulatory body has some level of government influence but still maintains a level of independence.
   - Low(1-4): The regulatory body is heavily influenced or controlled by the government, and does not maintain independence at all.
2. Enforcement Strength: the effectiveness and frequency with which a country's regulatory body enforces regulations and penalties.
   Scoring:

- High(9-10): There is a large amount of enforcement of the regulations and substantial penalties for any violators.
- Medium(5-8): Enforcement is regular but it is not as strict, with moderate penalties.
- Low(1-4): Enforcement does not happen, if it does rarely, and penalties for violations are minimal or rarely applied.

3. The comprehensiveness of Market Regulations: The breadth and depth of financial regulations in a country. This includes all of the rules on corporate governance, fraud prevention, and reporting requirements.
   Scoring:
   - High(9-10): A large amount of regulations covering multiple areas, with detailed requirements for companies.
   - Medium(5-8): Adequate regulations address some of the key areas, but it lacks some of the aspects of financial oversight.
   - Low(1-4): Limited or a small amount of regulations with significant gaps in its oversight.

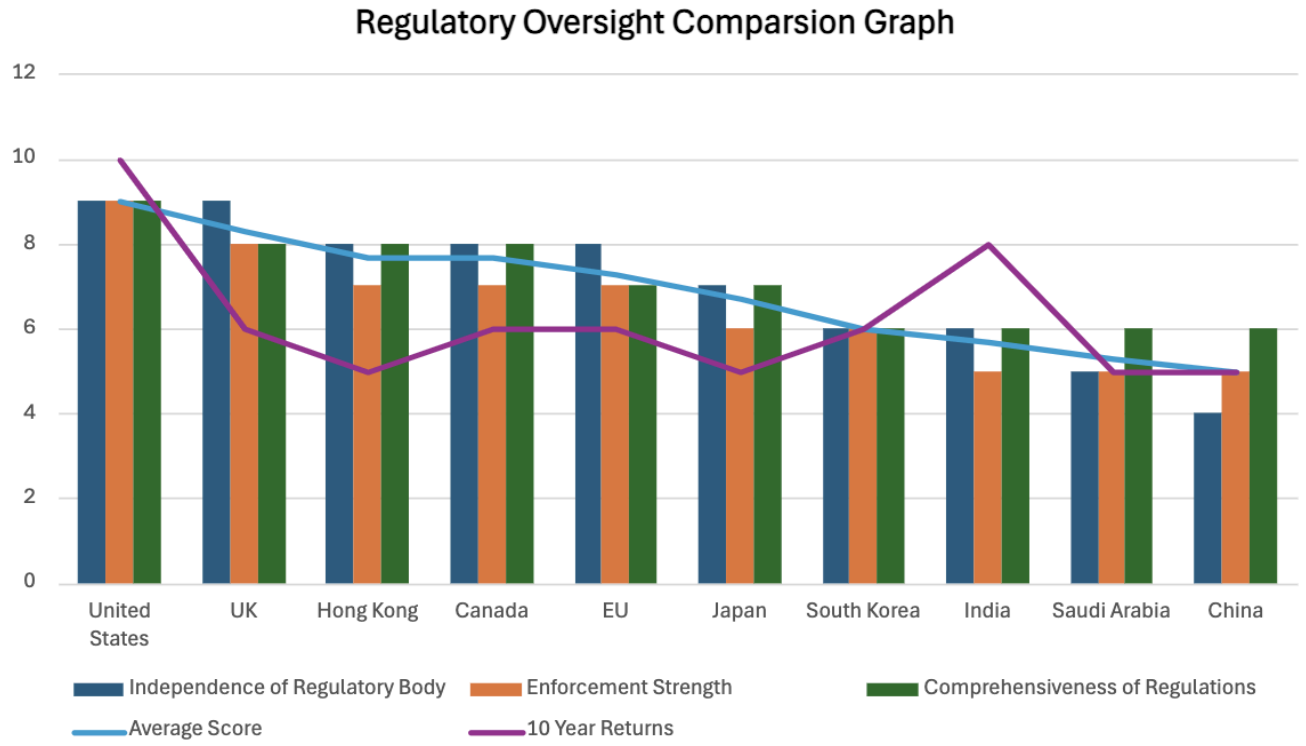
Here are the scores for each section:

Country	**Independence of Regulatory Body (1-10)**	**Enforcement Strength (1-10)**	**Comprehensiveness of Regulations (1-10)**	**Average Score**
United States	9 (SEC is independent with strong oversight). The SEC's budget and operational decisions are made independently from political influences, further ensuring its effectiveness in regulation interference(SEC),	9 (Frequent enforcement and penalties). The SEC has a dedicated Division of Enforcement that investigates and prosecutes violations of securities laws with significant penalties(SEC).	9 (Comprehensive regulations). The U.S. has extensive and detailed regulations like the Sarbanes Oxley Act (Sarbanes Oxley Act).	9.0
EU	8 (ESMA coordinates, but fragmented). The EU's centralized regulations are often implemented differently across member states, impacting uniformity(European Commission).	7 (Moderate enforcement across countries). The European Court of Justice plays a role in ensuring that member states adhere to EU regulations(European Court of Justice).	7 (Strong regulations but varies by country). The EU continues to update its regulations to address market fragmentation(ESMA).	7.3

China	4 (CSRC under government influence). Recent reforms aim to enhance the CSRC's independence but challenges remain(Glass Lewis).	5 (Moderate enforcement but less strict). Recent crackdowns on corporate misconduct show improving enforcement(Wedeman).	6 (Regulations exist but are less comprehensive). China is working on regulatory updates to address gaps and enhance market transparency(Wedeman).	5.0
Japan	7 (FSA is independent but conservative). The FSA's conservative stance reflects a cautious approach to market regulation(FSA).	6 (Moderate enforcement). Less aggressive policies(FSA).	7 (Improving regulations, focus on corporate governance). Japan is improving its regulations(FSA).	6.7
India	6 (SEBI is independent but under-resourced). SEBI's efforts to increase independence are ongoing but are limited by budgetary constraints(Moneycontrol)	5 (Enforcement improving). Recent initiatives aim to enhance enforcement but challenges persist(SEBI).	6 (Developing but not comprehensive). The Indian government is working on expanding and strengthening regulations, but gaps still exist compared to international standards(The Economist).	5.7
Hong Kong	8 (SFC independent, but China ties). Hong Kong maintains a relatively high degree of regulatory independence despite political pressures from China(CFR).	7 (Strong enforcement). Recent enhancements in regulatory enforcement have strengthened Hong Kong's market integrity(CFR).	8 (Strong regulations, aligned with global standards). The SFC has implemented measures to align Hong Kong's regulations with international standards(China	7.7

			Briefing).	
Canada	8 (CSA independent, decentralized). Despite decentralization, CSA members work collaboratively to maintain regulatory independence(CSA).	7 (Strong enforcement). Enforcement agencies in Canada are increasingly focused on financial crime(Bivar).	8 (Comprehensive regulations but decentralized). Canadian regulations are frequently updated to address emerging financial issues(Cassels).	7.7
UK	9 (FCA is strong and independent). The FCA's regulatory decisions are made autonomously, reinforcing its independence(FCA).	8 (Strong enforcement). The FCA has continued robust enforcement practices, adapting to regulatory changes post-Brexit(FCA).	8 (Strong regulations but adapting post-Brexit). The UK's regulatory framework continues to evolve, aiming to balance stability and flexibility(FCA).	8.3
Saudi Arabia	5 (CMA under government control). The CMA remains subject to significant government influence(CMA).	5 (Moderate enforcement). Recent efforts are being made to strengthen enforcement practices(Daglas).	6 (Improving regulations but not comprehensive). Saudi Arabia is enhancing its regulatory framework to increase comprehensivenes s(HKTDC Research).	5.3
South Korea	6 (FSC has some independence). The FSC operates with a degree of autonomy but is still subject to political influences(Lee).	6 (Moderate enforcement). South Korea is focusing on improving enforcement practices and regulatory compliance(Kim and Chang).	6 (Improving regulations but governance issues). The Financial Services Commission (FSC) has been updating regulations to enhance market stability(FSC).	6.0

Graph 1: Regulatory Oversight Comparison Graph



Analysis:

The graph above shows the average scores for regulatory oversight across the ten different countries. The graph focuses on three key aspects: the independence of regulatory bodies, enforcement strength, and the comprehensiveness of market regulations. The United States stands out with the highest average score out of all ten countries with a score of 9.0. This high rating reflects the U.S.'s strong regulatory framework. The independence of the SEC operates with substantial independence from government influence. The U.S. is known for its rigorous enforcement of regulations, including the use of penalties for violations which correlates with its high score in enforcement strength. Key regulations such as the Sarbanes-Oxley provide extensive coverage of the various market aspects while ensuring thorough oversight and transparency. The UK follows closely with an average score of 8.3 The Financial Conduct Authority(FCA) demonstrates a strong independent stance and a very effective enforcement. Hong Kong and Canada both have an average score of 7.7. This still indicates strong regulatory environments. Hong Kong's SFC offers a high level of independence but has potential political issues because of its ties to China. Canada's regulatory system, the CSA, is effective but decentralized which can create inconsistencies. Japan's score of 6.7 shows a solid framework but with room for improvement. South Korea and India both have an average score of 6.0 and 5.7, respectively. South Korea's FSC has made improvements, but issues related to corporate governance and enforcement persist. In India, the SEBI has strengthened its regulations over time, but there are challenges in its enforcement, and resource limitation plays a key factor in affecting India's overall score. China and Saudi Arabia score lower, with scores of 5.0 and 5.3 respectively. China's CSRS operates with a significant amount of government influence. The

regulatory enforcement is moderate and transparency remains a major concern. Similarly, Saudi Arabia's CMA faces challenges due to state control and its limited transparency. Overall, the U.S.'s superior regulatory environment which is measured by the three factors plays a key role in its stock market's outperformance compared to the other global markets. This highlights the true importance of transparent and effective regulatory practices because they help to maintain market stability and attract investments. There is a tendency for countries with higher Average Scores to also have higher 10-year Returns. The United States has the highest Average Score and also the highest returns. This suggests a positive relationship between both variables. The only exception to this is India which has a low average score, but a higher 10-Year Return. This section supports the hypothesis that transparent and well-enforced regulatory frameworks contribute to stock market outperformance. The findings indicate that countries with high scores in regulatory oversight, enforcement strength, and comprehensiveness—such as the United States—tend to achieve higher long-term returns. This positive correlation between regulatory transparency and market success reinforces the hypothesis, with few notable exceptions.

2.2 Methodology for Transparency Requirements Graph

The objective of this analysis is to compare the different disclosure requirements for the companies across all of the various countries. This is done by standardizing the reporting forms and practices into similar generalized categories. This will help to evaluate how the different countries meet the essential disclosure requirements and highlight the differences in transparency/regulatory environments for each of the markets.The Generalization is broken down into different categories: annual reports, quarterly reports, interim/semi-annual reports, current Reports/significant events, corporate governance reports, insider trading and ownership disclosures, investment disclosures, and any additional reports. This information will then be categorized into a graph that has checked for the countries that meet those requirements. The categorization of each is shown below:

Annual Reports: ● **U.S.**: Form 10-K ● **EU**: Annual Report (IFRS) ● **China**: Annual Audit Report ● **Japan**: Annual Securities Report ● **India**: Annual Report ● **Hong Kong**: Annual Report ● **Canada**: Annual Report ● **UK**: Annual Report ● **Saudi Arabia**: Annual Report ● **South Korea**: Annual Report	**Quarterly Reports**: ● **U.S.**: Form 10-Q ● **EU**: None (typically semi-annual) ● **China**: Quarterly Reports ● **Japan**: Quarterly Securities Reports ● **India**: Quarterly Reports ● **Hong Kong**: Quarterly Report ● **Canada**: Quarterly Reports ● **UK**: Interim Report ● **Saudi Arabia**: Quarterly Reports ● **South Korea**: Quarterly Reports

Interim/Semi-annual Reports: ● **U.S.**: None ● **EU**: Half-Year Report ● **China**: Interim Reports ● **Japan**: Extraordinary Reports ● **India**: None ● **Hong Kong**: Interim Report ● **Canada**: None ● **UK**: Half-Year Report ● **Saudi Arabia**: Interim Report ● **South Korea**: Semi-Annual Reports	**Current Reports/Significant Events**: ● **U.S.**: Form 8-K ● **EU**: Significant Event Reports ● **China**: None ● **Japan**: Extraordinary Reports ● **India**: None ● **Hong Kong**: None ● **Canada**: None ● **UK**: Strategic Report ● **Saudi Arabia**: None ● **South Korea**: None
Corporate Governance Reports: ● **U.S.**: Proxy Statement ● **EU**: Corporate Governance Statement ● **China**: Corporate Governance Reports ● **Japan**: Corporate Governance Reports ● **India**: Corporate Governance Report ● **Hong Kong**: Corporate Governance Report ● **Canada**: Corporate Governance Report ● **UK**: Corporate Governance Report ● **Saudi Arabia**: Corporate Governance Report ● **South Korea**: Corporate Governance Report	**Insider Trading and Ownership Disclosures**: ● **U.S.**: Forms 3, 4, 5, Schedule 13D, Form 144 ● **EU**: None ● **China**: None ● **Japan**: None ● **India**: None ● **Hong Kong**: Disclosure of Interests ● **Canada**: Insider Trading Reports ● **UK**: None ● **Saudi Arabia**: None ● **South Korea**: None
Investment Disclosures: ● **U.S.**: Foreign Investment Disclosures ● **EU**: None ● **China**: None ● **Japan**: None ● **India**: None ● **Hong Kong**: None ● **Canada**: None ● **UK**: None ● **Saudi Arabia**: None	**Additional Reports**: ● **U.S.**: Various additional disclosures ● **EU**: None ● **China**: Various additional disclosures ● **Japan**: Various additional disclosures ● **India**: Directors' Report, Auditor's Report ● **Hong Kong**: Disclosure of Interests ● **Canada**: Management Discussion and Analysis (MD&A)

• **South Korea**: None	• **UK**: Strategic Report • **Saudi Arabia**: Additional Disclosures • **South Korea**: Various additional disclosures

Figure 1: Transparency Requirement Check Graph

Requirement	United States	Japan	Hong Kong	UK	China	Saudi Arabia	South Korea	Canada	India
Annual Reports	☑	☑	☑	☑	☑	☑	☑	☑	☑
Quarterly Reports	☑	☑	☑	☑	☑	☑	☑	☑	☑
Interim/Semi-annual Reports	☐	☑	☑	☑	☑	☑	☑	☐	☐
Current Reports/Significant Events	☑	☑	☐	☑	☐	☐	☐	☐	☐
Corporate Governance Reports	☑	☑	☑	☑	☑	☑	☑	☑	☑
Insider Trading and Ownership Disclosures	☑	☐	☑	☐	☐	☐	☐	☑	☐
Investment Disclosures	☑	☐	☐	☐	☐	☐	☐	☐	☐
Additional Reports	☑	☑	☑	☑	☑	☑	☑	☑	☑
10 Year Returns Yearly(%)	10	5	5	6	5	5	6	6	8
Degree of Requirements Met									

Analysis:
The comparative analysis of the disclosure requirements across the various countries shows an advantage of the U.S. stock market's regulatory framework. The U.S. consistently shows a high level of transparency in its disclosure practices compared to all of the other major global markets.

Disclosure Requirements and Market Returns:

1. **United States:**
- **Disclosure Requirements:** 7/8 requirements (88%)
- **10-Year Returns:** 10
- **Analysis:** The U.S. leads in disclosure practices, meeting 88% of the requirements, including comprehensive annual and quarterly reports, current event disclosures, and stringent insider trading and ownership disclosures. This high level of transparency contributes to the U.S. achieving the highest 10-year returns of 10, indicating a strong positive correlation between comprehensive disclosure and market performance.

2. **Japan, Hong Kong, UK:**
- **Disclosure Requirements:** 6/8 requirements (75%)
- **10-Year Returns:** Japan (3), Hong Kong (5), UK (6)
- **Analysis:** These countries meet 75% of the disclosure requirements but have lower 10-year returns compared to the U.S. The lower returns suggest that while they have robust disclosure practices, they may lack in other areas such as regulatory independence or enforcement strength, affecting their overall market performance.

3. **China, Canada, Saudi Arabia, South Korea:**
- **Disclosure Requirements:** 5/8 requirements (63%)
- **10-Year Returns:** China (5), Canada (6), Saudi Arabia (5), South Korea (6)

- **Analysis:** Countries in this group meet 63% of the requirements. Their market returns are relatively modest, indicating that while they have some level of transparency, gaps in disclosure may limit investor confidence and market performance.

4. **EU, India:**

- **Disclosure Requirements:** 4/8 requirements (50%)
- **10-Year Returns:** EU (6), India (8)
- **Analysis:** These countries meet only 50% of the disclosure requirements. The EU and India show varied market returns, with India outperforming the EU despite both having similar disclosure scores. This suggests that other factors beyond disclosure requirements influence market returns.

The U.S., with its high level of transparency requirements (88%), exhibits the highest 10-year returns. This demonstrates a strong positive relationship between detailed disclosure practices and market performance. In contrast, countries that have fewer disclosure requirements such as China and the EU have lower market returns at only an average of 6%. The U.S.'s rigorous approach to transparency helps to create a more confident investor base which thus helps its market returns. By comparing these disclosure practices with market returns, it is evident that higher total checks lead to better market performance. This supports the idea that greater transparency helps to drive higher returns.

2.3 Methodology for Stock Market Volatility vs Transparency Score

The purpose of this analysis is to examine the relationship between stock market volatility and its transparency score across different stock markets. We aim to investigate whether stock markets that have a higher transparency score exhibit lower volatility.

Stock Market Volatility Calculation:

To measure the volatility of stock markets, we can use historical data to find a rough estimate of the volatility over the last 30 years.

The reported volatility values are as follows:

United States: 13%, EU: 20%, China: 22%, Japan: 18%, India: 25%, Hong Kong: 16%, Canada: 30%, UK: 23%, Saudi Arabia: 28%, South Korea: 20%.

Inverted Volatility:

To facilitate a good comparison with transparency scores, the volatility will be inverted. This process involves flipping the scale so that higher volatility is represented as lower on the graph. The formula used to calculate this is:
Inverted Volatility = Maximum Volatility - Actual Volatility

The new volatility is as follows:

United States: 17%, EU: 10%, China: 8%, Japan: 12%, India: 5%, Hong Kong: 14%, Canada: 0%, UK: 7%, Saudi Arabia: 2%, South Korea: 10%.

Transparency Score Calculation:

This was derived based on 2 key factors. The first was the average scores from the “Regulatory Oversight Comparison Graph”. The second was the “Transparency Requirements Graph”. The percentages for the second graph were converted to numbers out of 10. For example, 88%=8.8/10.

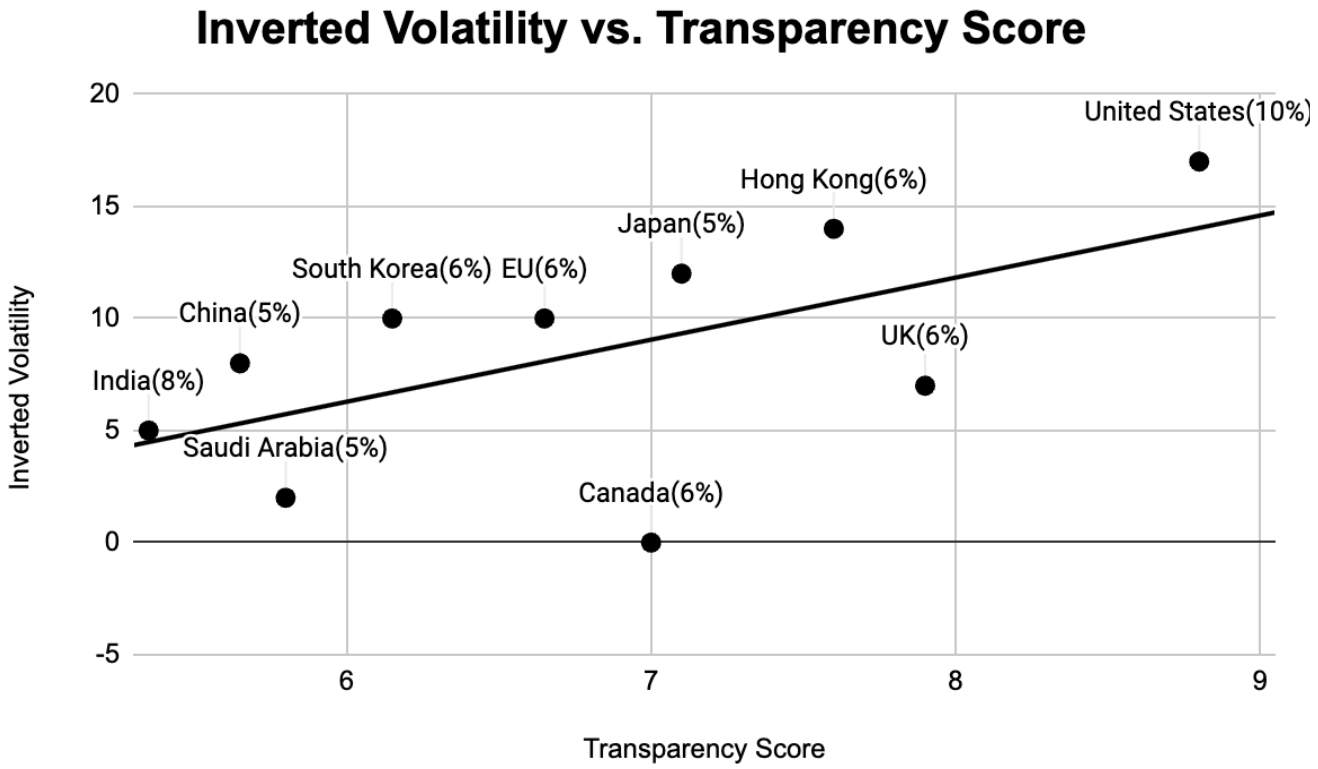
Then for each country, each number out of 10 was averaged to find the overall transparency score. For example, USA's “Regulatory Oversight Comparison Graph” score was 9.0 and for the “Transparency Requirements Graph” the score was 88% converted to 8.8/10. The average would be (8.8+9.0)/2= 8.9.

Here are the results from this:

Country	Transparency Score
United States	8.8
EU	6.65
China	5.65
Japan	7.1
India	5.35
Hong Kong	7.6
Canada	7
UK	7.9
Saudi Arabia	5.8
South Korea	6.15

Once these two factors were calculated a graph to visualize the relationship between these two variables was created.

Inverted Volatility vs Transparency Score



Analysis:
There is a general trend that indicates countries with higher transparency scores have higher inverted volatility values. This suggests that more transparent markets often exhibit lower volatility. The scatter plot, which compares the transparency score and volatility score, helps support the idea that the U.S. stock market outperforms other global markets because of its transparent and stable regulatory environment. Higher transparency scores are associated with lower volatility. The U.S. exhibited the highest transparency score among all the other countries analyzed. This demonstrated the effectiveness of its regulatory framework in maintaining market stability. The United States is a benchmark because of its transparency score of 8.8 and its inverted volatility of 17. Canada has a high transparency score of 7 but shows the lowest inverted volatility of 0. Markets with higher transparency scores generally also exhibited better market returns. The U.S., with the highest transparency score of 8.8 also showed the highest market returns of 10%. This suggested that transparency contributes to higher investor confidence and better market performance. There is a negative relationship between inverted volatility and market returns. This means that markets with lower volatility(higher inverted volatility) tend to also have higher returns. For example, the United States has an inverted volatility of 17% and the highest market returns of 10%. Conversely, counties with high volatility tend to have lower returns.

Conclusion:
The methodologies that were outlined provide a comprehensive approach to comparing regulatory oversight, transparency requirements, and the stock market politically across ten major global markets. By looking at the first graph of regulatory oversight we can see how the U.S. consistently outperforms other countries in terms of regulatory independence, enforcement strength, and the comprehensiveness of market regulations. The strong regulatory framework is a very important factor that helps contribute to the stock market's superior performance. The last graph demonstrates a clear relationship between transparency, stock market volatility, and market returns. Countries that have a higher transparency score, such as the U.S., have lower market volatility which is good for the stock market. In summary, these methodologies employed in this analysis underline the true importance of robust regulatory frameworks and transparent disclosure practices in achieving superior stock market performance.

3. The Stock Market as a Leading Indicator of Economic Growth

While the stock market and the economy are usually discussed together, they are far from the same. The distinction is the timing, the stock market is a leading indicator, predicting where investors believe the economy is headed. Investors react to data and signals with an eye on the future economy. They anticipate changes before they are fully reflected in economic metrics. In both developed and emerging markets, investor sentiment, and their expectation drive stock prices in response to economic signals. Economic stability is a state in which an economy experiences consistent sustainable growth, low inflation, and low unemployment. The following factors can categorize it: Consistent GDP Growth: GDP is a measure of the total income in an economy earned. GDP is very important to the stock market because it measures the overall health of the economy. Steady and positive growth reflects a healthy economy that is growing. When GDP growth is too high or volatile it can indicate that the economy is not stable. Low Inflation: Inflation measures the rate at which the price of goods and services rises over time. Low and stable inflation is the best-case scenario because high inflation leads to less purchasing power and deflation, negative inflation, is a sign of a weakening economy(Sharma, 2023). Gross National Income(GNI) Per Capita(PPP): This offers a comprehensive view of the economic well-being and living standards of a country. It accounts for all of the income earned by residents and from abroad. It standardizes this by adjusting the cost of living differences for each of the countries. This is critical for showing economic stability because it reflects the purchasing power.

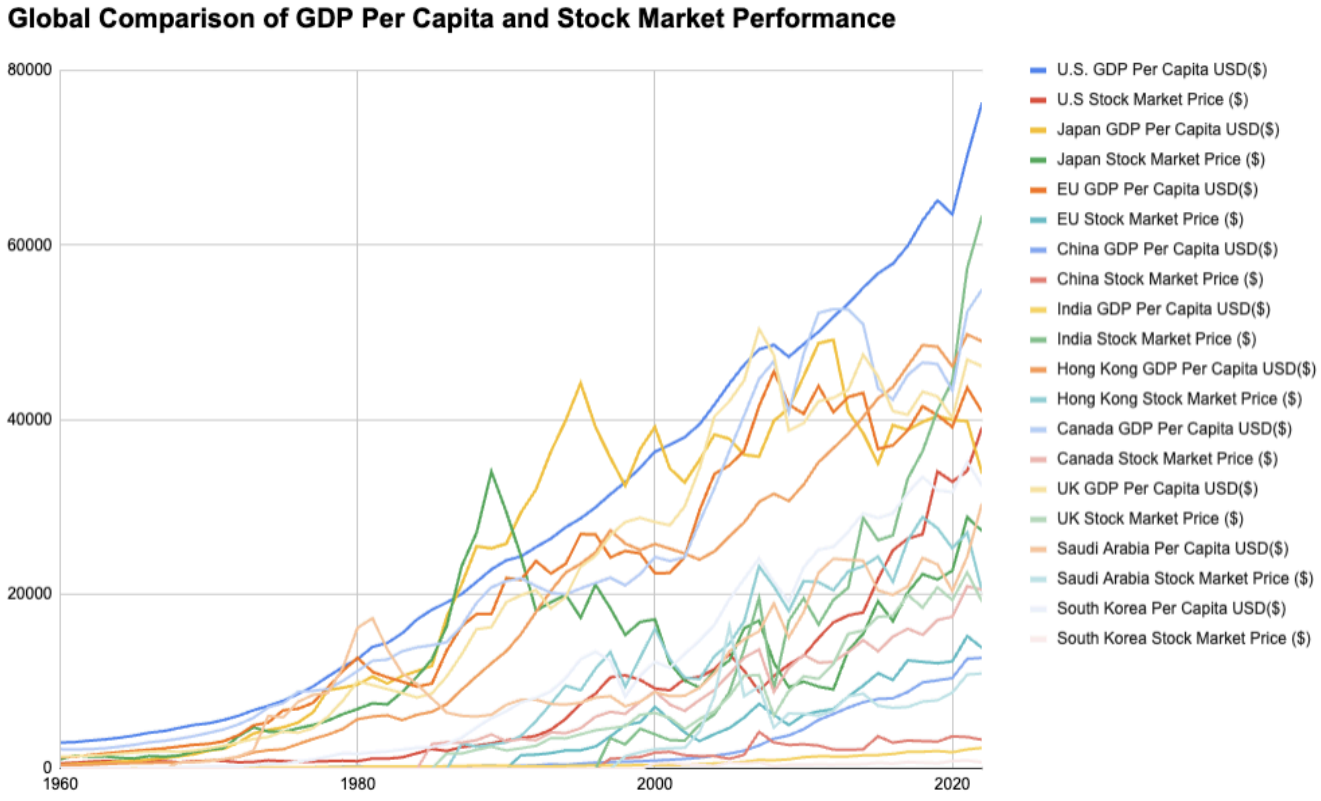
Methodology:
This study aims to investigate the relationship between economic stability and stock market performance. We aim to analyze how key economic indicators relate to stock market performance over time and contribution to the U.S. stock market's relative outperformance.

3.1 GDP Growth vs. Stock Market Performance

Methodology for GDP Growth vs. Stock Market Performance:
GDP data for each country was sourced from the World Bank data spanning from 1960 to 2022. Stock market data was represented by the major index in each of the countries. The 10 countries involved include Hong Kong, Canada, the UK, Saudi Arabia, South Korea, the United States, the EU, China, Japan, and India. The time frame varies by each country based on the

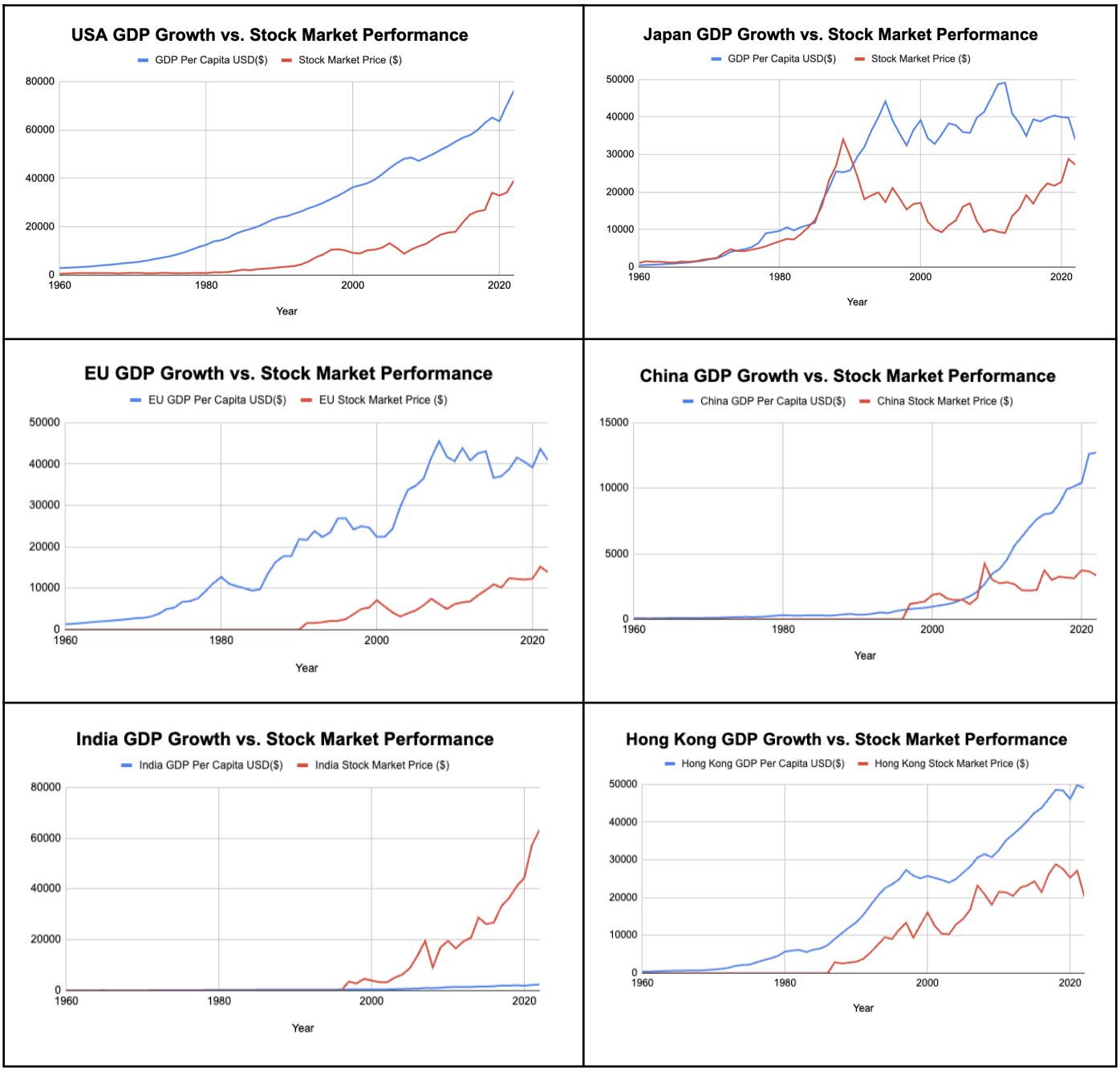
availability of data. For example, stock market growth for the U.S. spans from 1960 to 2022, while South Korea spans from 2000 to 2022. To standardize, countries lacking data were assigned a value of 0 for that year. This ensures uniformity between the graphs. A combined graph was created that helps to visualize GDP growth and stock market performance for each of the 10 countries. After this big graph was created, two countries were selected for a detailed analysis of these trends. These two were the United States and Japan. 10 individual graphs for each country were also made to see this relationship better.

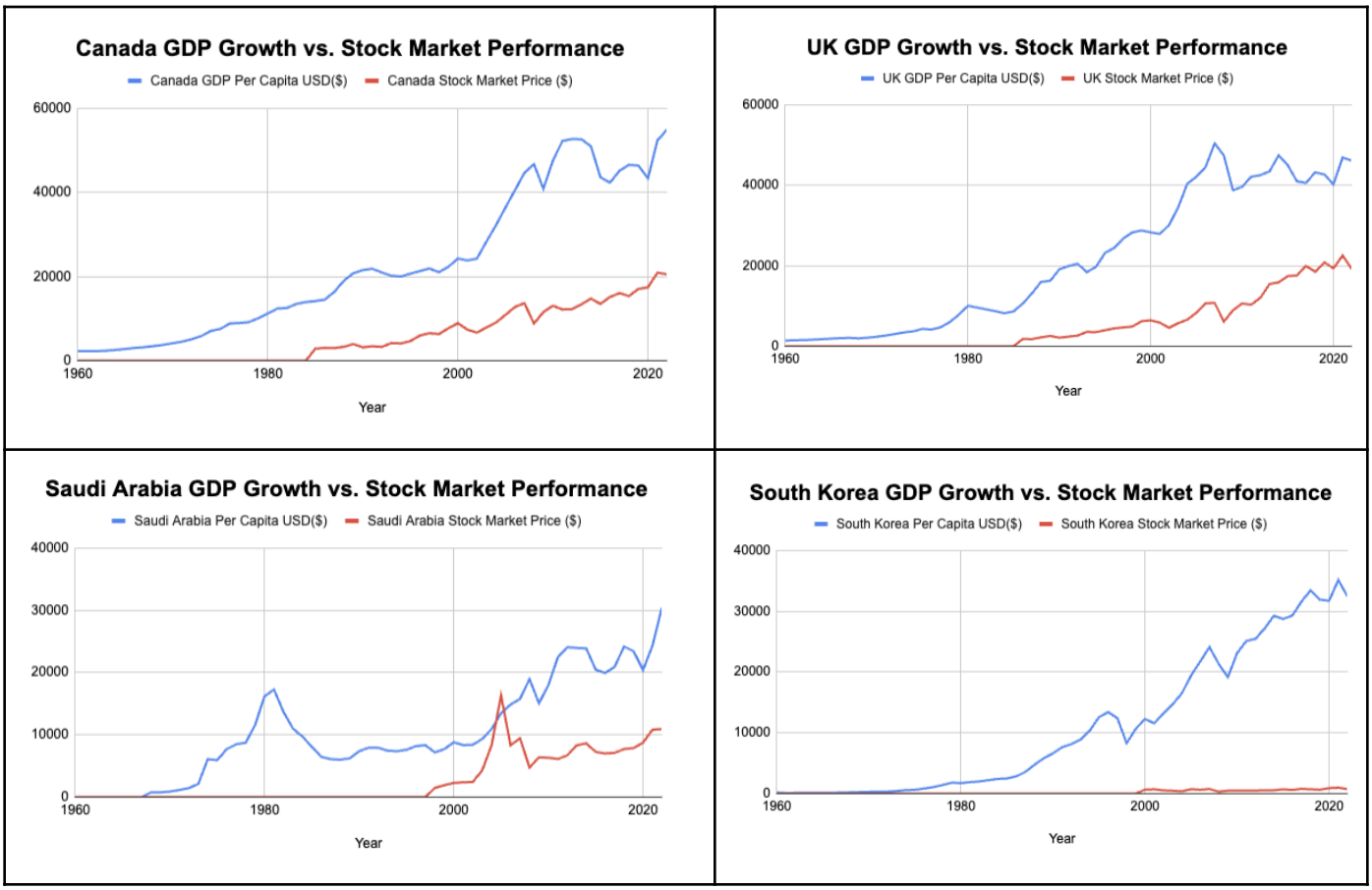
Graph 3: GDP Per Capita vs. Stock Market Performance



Analysis:
This graph represents a comparative analysis of GDP growth rates and stock market performance across ten countries. This analysis seeks to identify the general trend in economic growth to help answer the question of what factors contribute to certain stock markets' outperformance. The majority of the countries in the graph exhibit a positive correlation between GDP growth and stock market performance. As the GDP increases stock market returns tend to rise. This suggests that a healthy economy will lead to higher market returns. Countries such as the United States and India show consistent trends, where periods of strong GDP growth align with rising stock indices.

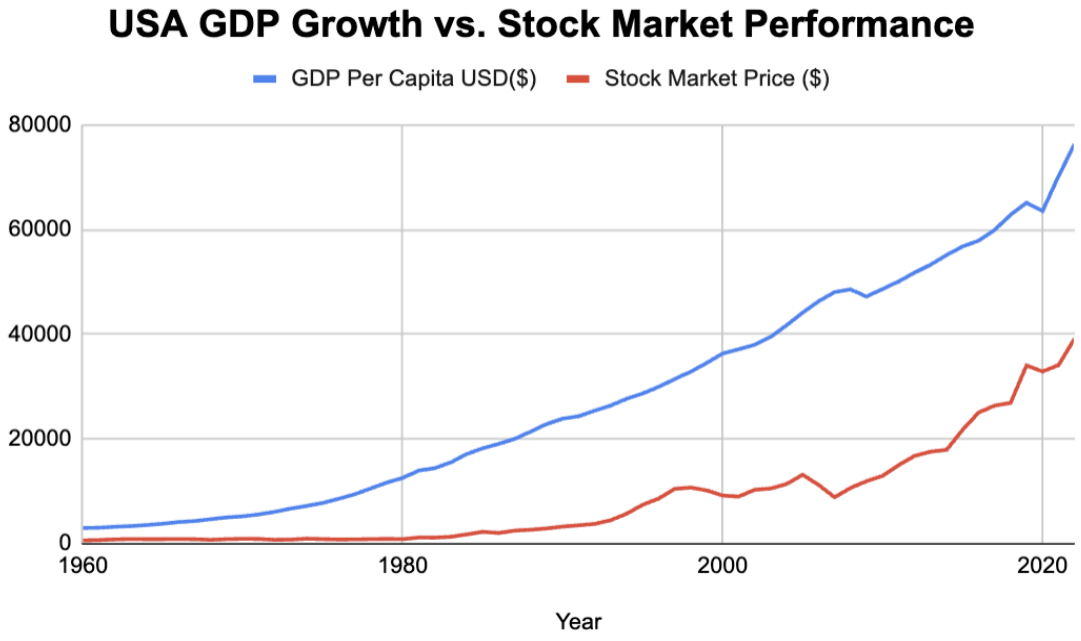
Graph 3.1 All 10 Countries GDP Growth (%) vs Stock Market(%)





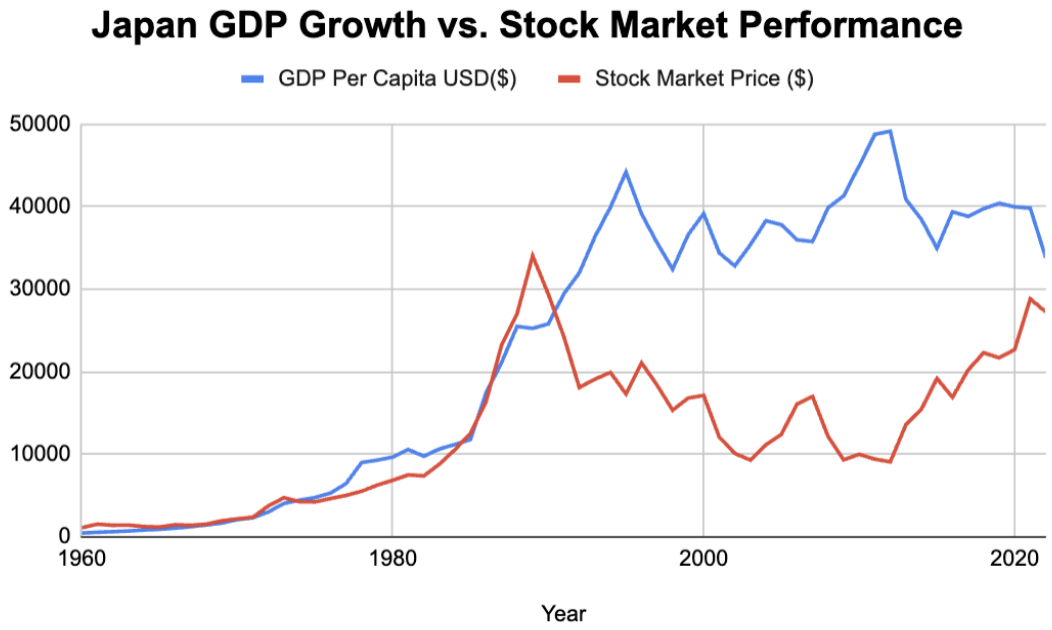
2 Specific Examples:

Graph 3.2: US GDP Growth vs. Stock Market Performance



This graph compares the United States GDP growth and stock market performance. The graph clearly shows a strong positive correlation between GDP growth and stock market performance in the U.S. As the economy expands the stock markets also tend to rise. This trend is especially evident during periods of economic recovery and expansion. For example in 2008, during the financial crisis, both the GDP and the stock market went down. The market crash was driven by the housing market's collapse which led to recession. Following the crisis, both the GDP and the stock market rebounded. This graph's consistent positive correlation does suggest that when the economy thrives so does the stock market.

Graph 3.3: Japan GDP Growth vs. Stock Market Performance



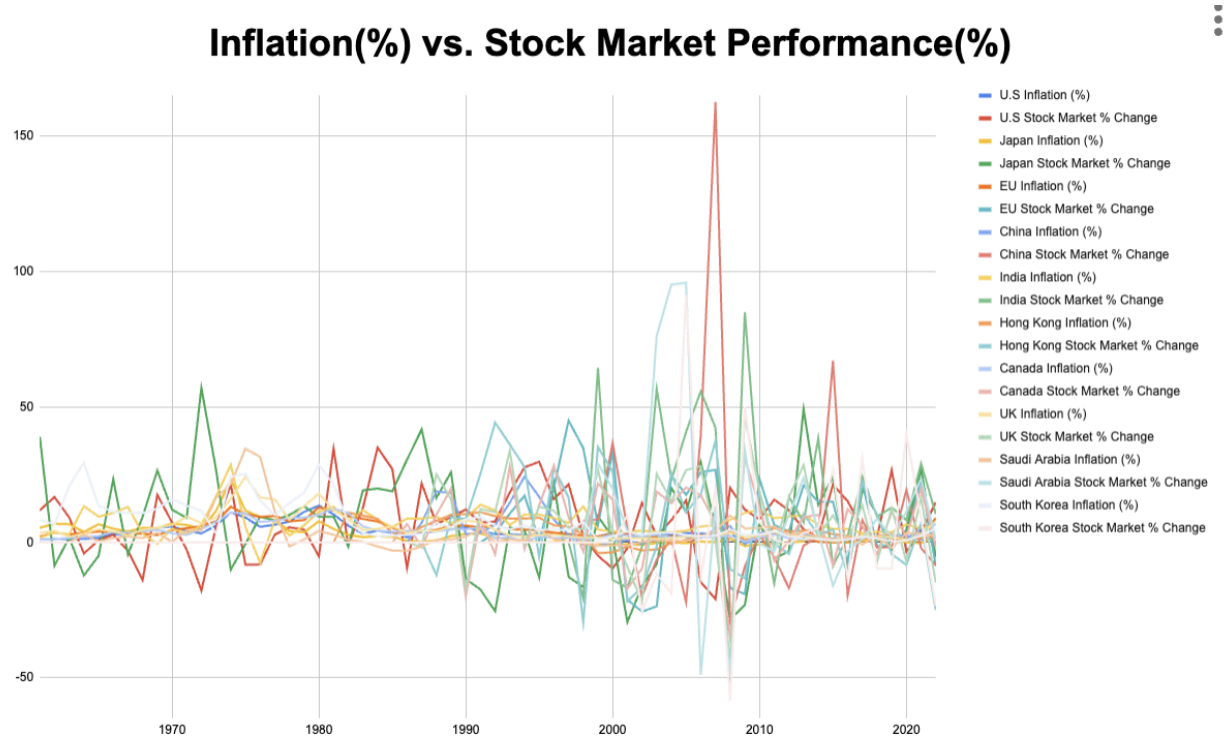
This graph compares Japan's GDP growth and stock market performance. The graph demonstrates that when Japan's GDP decreases, the stock market tends to follow the same trend. This highlights a key relationship between the two. During periods of recession, both the GDP and the stock market go down. This relationship indicates that as GDP declines, so does consumer spending, lower corporate profits, and increased uncertainty. Together these factors affect the price of stocks. Understanding the connection between the two is important as it helps to understand why the economy is such an important factor for the stock market.

3.2 Inflation Rates vs. Stock Market Returns

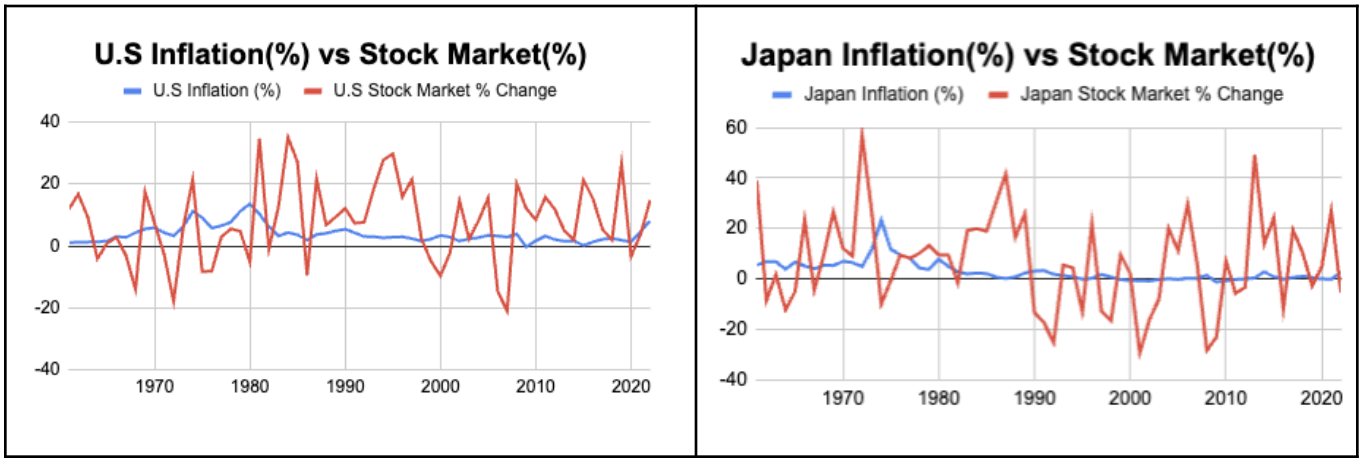
Methodology for Inflation Rate vs. Stock Market Performance:
Inflation rate data was collected from the World Bank Group. This is the data for all the countries. Since some of the countries don't have data going back to 1960 they get a value of 0 for that year. Inflation rates are presented as annual percentages and stock market performance is calculated as the numerical change in index values from year to year. This is done to allow for a direct comparison between the two. A graph was then created to compare inflation rates to

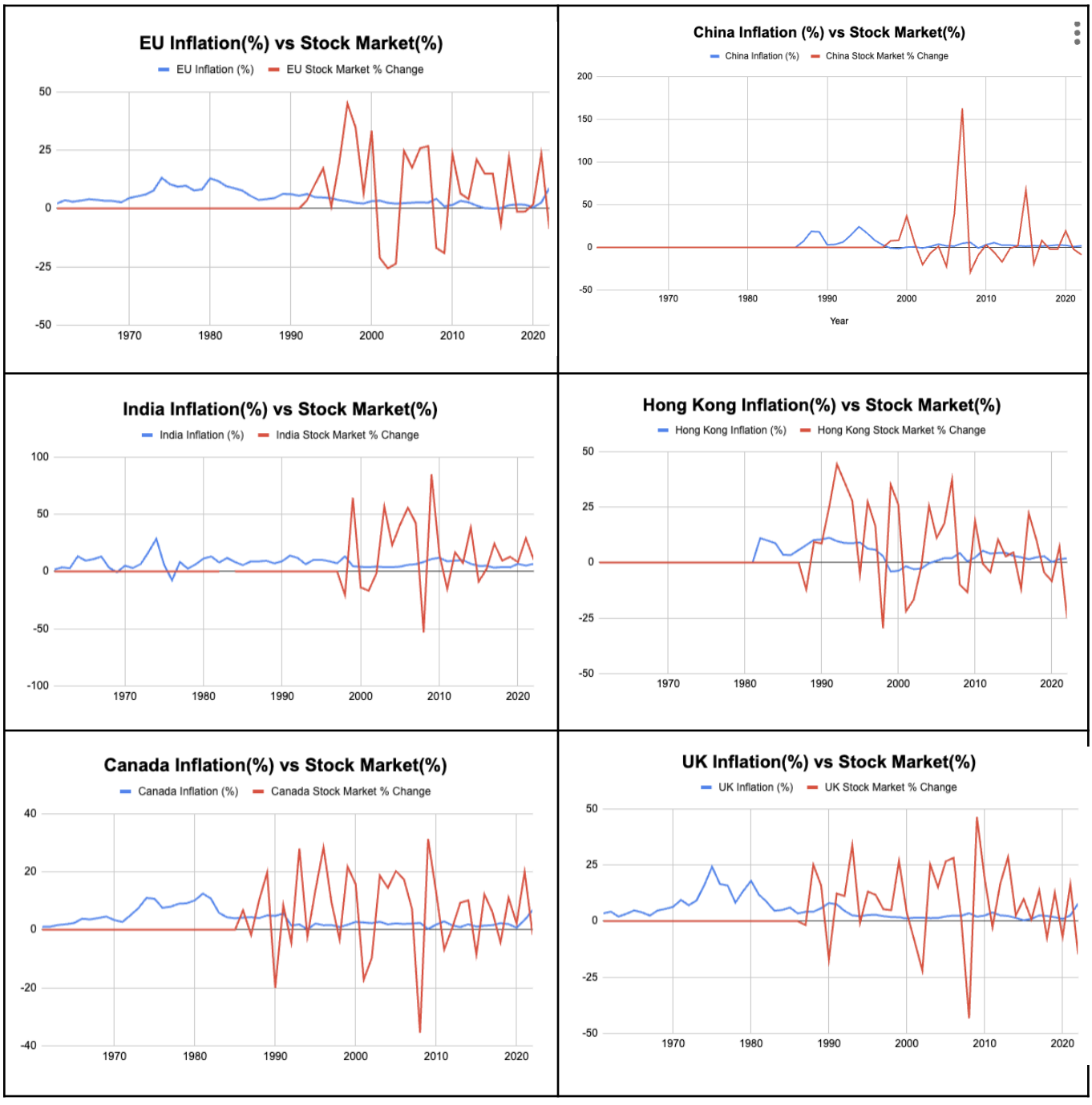
stock market returns to see if such a relationship exists. 10 individual graphs for each country were also made to see this relationship better.

Graph 3.4: Inflation(%) vs. Stock Market Performance(%)



Graph 3.5: All 10 Countries Inflation(%) vs Stock Market(%)




EU Inflation(%) vs Stock Market(%)
EU Inflation (%)
EU Stock Market % Change
50
25
0
-25
-50
1970
1980
1990
2000
2010
2020
China Inflation (%) vs Stock Market(%)
China Inflation (%)
China Stock Market % Change
200
150
100
50
0
-50
1970
1980
1990
2000
2010
2020
Year
India Inflation(%) vs Stock Market(%)
India Inflation (%)
India Stock Market % Change
100
50
0
-50
-100
1970
1980
1990
2000
2010
2020
Hong Kong Inflation(%) vs Stock Market(%)
Hong Kong Inflation (%)
Hong Kong Stock Market % Change
50
25
0
-25
-50
1970
1980
1990
2000
2010
2020
Canada Inflation(%) vs Stock Market(%)
Canada Inflation (%)
Canada Stock Market % Change
40
20
0
-20
-40
1970
1980
1990
2000
2010
2020
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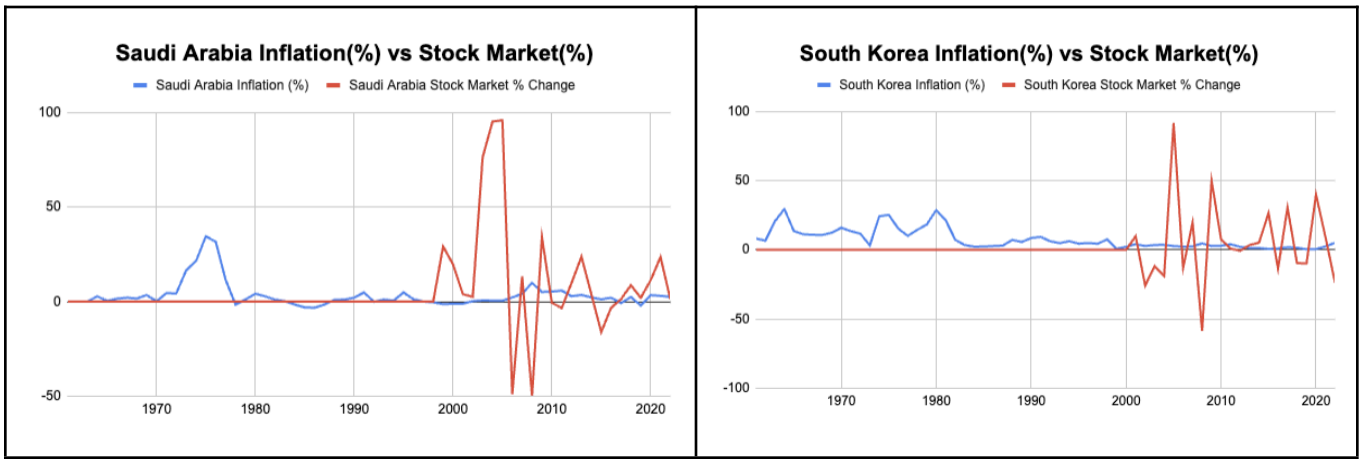
UK Inflation (%)
UK Stock Market % Change
50
25
0
-25
-50
1970
1980
1990
2000
2010
2020

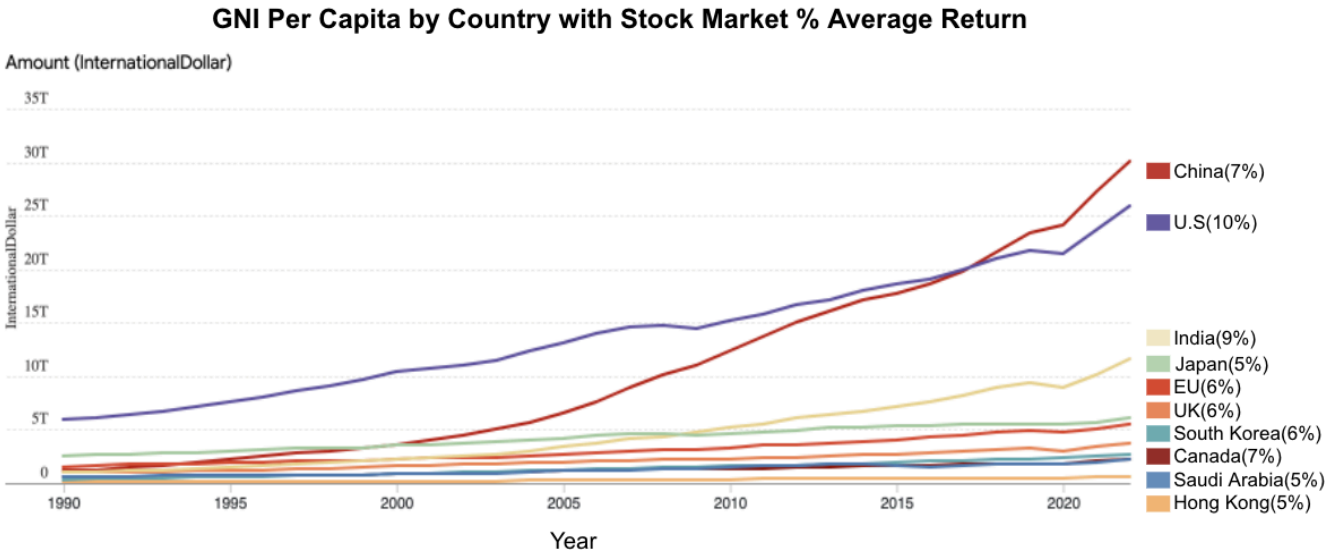


Analysis:
This relationship between inflation rates and stock market performance is complicated. There are two main types of inflation: cost-push inflation and demand-pull inflation. Cost pull inflation occurs when the production costs increase which means that companies have to raise their prices. In this case, rising inflation does lead to higher stock market performance. However, some companies may face shrinking profit margins which can lead to a decrease in stock prices. Demand-pull inflation happens when there is an increase in consumer demand for goods and services that outpaces the supply. When consumer confidence is high, companies get more sales. This leads to more profit leading to higher stock prices. In many cases, a notable correlation exists between inflation and stock market performance. As inflation rates change, so does the stock market. Investor sentiment and market dynamics change. In certain countries, rising inflation has been associated with increased stock market performance. This may be because investors expect that companies will pass on higher costs to consumers, so will increase profits. However, there are some scenarios where low inflation doesn't directly correlate with low stock market performance. The data that I collected does not show this to be true. This raises questions about whether low inflation does predict stock market performance or not. The data collected does not support the hypothesis that low inflation predicts high stock market performance. While some instances showed a positive relationship between inflation and stock market returns, there were also cases where low inflation did not lead to expected stock market gains. This suggests that other economic factors, such as investor sentiment, GDP growth, and the type of inflation (demand-pull vs. cost-push), play a more significant role in determining stock market performance.

3.3 GNI Per Capita vs. Stock Market Returns

Methodology for GNI Per Capita vs. Stock Market Performance:
Data was gathered on GNI per capita(PPP) from the World Bank. The data ranges from 1990-2022. Stock market data came from historical average annual returns as a percentage. A graph was plotted that shows GNI per capita(PPP) on the y-axis and the value on the x-axis.

Graph 3.6: GNI Per Capita by Country with Stock Market % Average Return



Analysis:
This graph reveals a general trend where countries with higher GNI per capita correspond with better stock market returns. For example, the United States has a high GNI per capita and achieves a 10% stock market growth rate. Similarly, India has a great increase in GNI and also experiences a high amount of growth at 9%. While China has the highest GNI per capita its stock market has 7% average returns which is slightly lower than the U.S. and India. This discrepancy can arise from various other factors that may affect the stock market performance. Countries like Japan (5%), Saudi Arabia (5%), and Hong Kong (5%) present lower stock market growth rates with their low GNI per capita. Overall, the evidence suggests that a strong economy, as measured by GNI per capita, is generally associated with better stock market performance.

3.7 Conclusion:

This analysis highlights the intricate relationship between economic indicators and stock market performance. This reinforces the idea that a strong economy correlates to better stock market outcomes. Through a detailed examination of GDP growth, inflation rates, and GNI per capita we find this trend to be consistent. Specifically, the positive correlation between GDP growth in countries like the U.S. and India illustrates how economic expansion can lead to better stock market growth. On the other hand, in Japan, declining economic performance can lead to lower stock market returns. The GNI per capita analysis furthers this trend, but countries like China remind us that many other factors affect this. Ultimately, we can see how a strong robust economy does lead to certain stock markets outperforming others.

4. Innovation

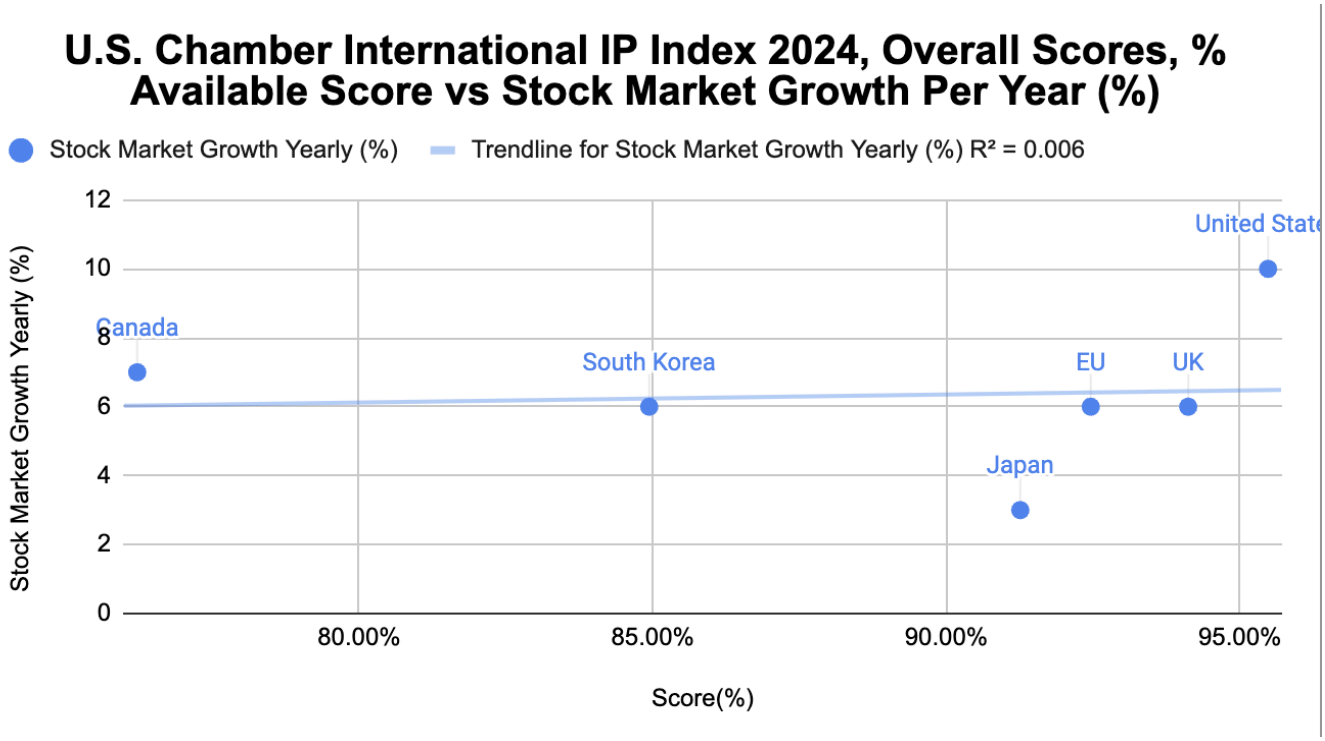
4.1 Definition of Innovation

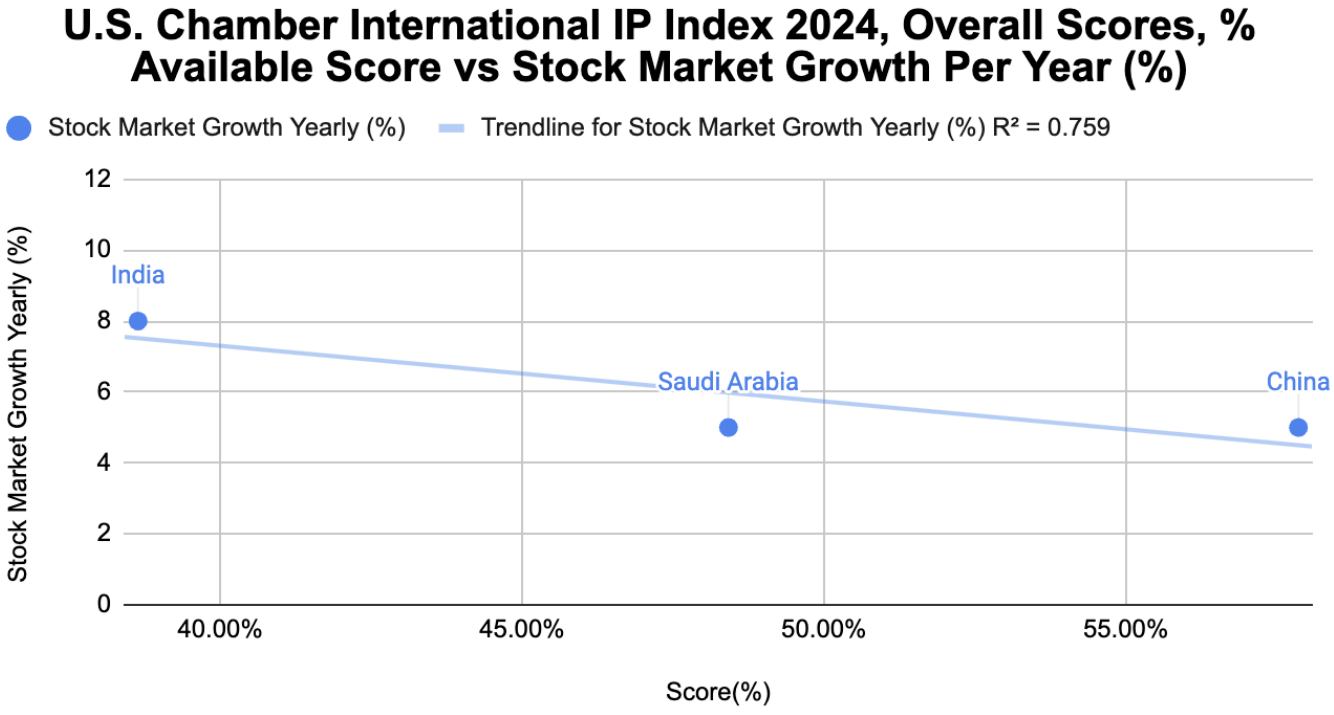
Understanding the dynamics of innovation is important to understand why certain markets outperform others. This section outlines three key factors that contribute to this. Intellectual Property (IP) Laws and Speed of IP Protection: The strength and efficiency of IP laws play a crucial role in an innovative environment. Strong IP laws protect inventors and companies. This then encourages more investments in new technologies and products. Global Innovation Index (GII): The GII serves as a metric that shows a country's innovation capabilities and performance. It reveals the most innovative economies in the world(WIPO, 2024). Higher GII scores indicate a favorable environment for innovation. Number of Patents Filed and Granted: The volume of patents filed and granted is another way to measure innovation. More patents mean more invention and more advancement. Companies with many patents have competitive advantages leading to stock market success.

4.2 Intellectual Property (IP) Laws and Speed of IP Protection

Intellectual Property laws protect the rights of investors and companies as they give them exclusive control over their creations(Deel, 2023). These laws cover patents, trademarks, copyrights, and trade secrets. Strong IP laws provide a secure environment where businesses can invest in new technologies because their inventions will be legally protected. Innovation thrives when creators and companies feel confident that their ideas will be protected(Kuber, 2024). IP laws ensure the protection that offers exclusivity over inventions. Now we will look at the Chamber's International IP Index(U.S. Chamber of Commerce, 2024). This index shows the scores of the IP systems across the world using 50 unique criteria. It shows innovation and creativity per country. Note: Hong Kong does not have a score and will not be included in the graph. To better understand the relationship between IP protection and stock market performance, the data from the U.S. Chamber International IP Index 2024 will be split into three groups based on IP Index scores. The tiers will be 30-50, 50-70, and 70-100. This allows for a more nuanced analysis of the relationship between IP protection and stock market performance.

Graph 3.7: U.S. Chamber International IP Index 2024, Overall Scores, % Available Score vs Stock Market Growth Per Year (%)





Key Observations

United States: High IP Score, High Stock Market Growth: The United States leads with an IP score of 95.48% and an average annual stock market growth of 10%. This suggests a strong positive correlation between effective IP protection and market performance. The U.S. is known for its robust IP laws, streamlined patent processes, and enforcement mechanisms, which have fostered a vibrant innovation ecosystem, especially in the tech and pharmaceutical sectors. This has translated into sustained stock market growth over the years, as companies can confidently invest in R&D and bring new products to market without fear of intellectual property theft.

UK, Canada, and the EU: High IP Scores, Moderate Stock Market Growth: The UK (94.12%), Canada (76.22%), and the EU (92.46%) have relatively high IP protection scores but show moderate stock market growth rates ranging between 6-7% annually. These regions maintain strong IP frameworks, which support innovation, but other factors, such as economic growth rates, market size, and sectoral focus, might influence the slightly lower stock market growth compared to the U.S. Nonetheless, the strong IP environment in these economies provides a stable foundation for businesses to innovate and grow.

Japan: High IP Score, Low Stock Market Growth: Japan presents an interesting case with a high IP score of 91.26% but a relatively low annual stock market growth of 3%. While Japan has a robust IP system and is known for its technological innovation, other economic factors, such as demographic challenges (aging population) and slower economic growth, may limit stock market expansion. This suggests that, while strong IP protection is essential for fostering innovation, it alone may not be sufficient to drive high stock market growth without a supportive economic environment.

South Korea: Moderate IP Score, Moderate Stock Market Growth: South Korea has an IP score of 84.94% and a corresponding average market growth rate of 6%. South Korea's well-established IP system, along with its focus on rapid innovation cycles (especially in tech and manufacturing), aligns well with its steady market performance. Efficient IP processing and enforcement contribute to a thriving innovation ecosystem, helping to maintain consistent stock market gains.

India: Low IP Score, High Stock Market Growth: India's data shows a lower IP score of 38.64% but a surprisingly high average stock market growth of 8%. This anomaly suggests that other factors, such as a rapidly expanding economy, a growing middle class, and increased foreign investments, are driving stock market growth despite weaker IP protection. However, for sustained long-term growth, strengthening IP laws could help India attract more innovation-driven industries and enhance its market performance further.

Saudi Arabia and China: Lower IP Scores, Moderate Stock Market Growth: Both Saudi Arabia (48.42%) and China (57.86%) have lower IP scores and exhibit moderate stock market growth rates of 5%. In China's case, recent efforts to improve IP protection are still ongoing, and while some sectors (like technology) are seeing strong growth, weaker overall IP enforcement has historically deterred certain high-value industries. Saudi Arabia's lower IP score reflects a new IP framework, and while economic diversification efforts are underway, stronger IP laws could play a role in fostering a more innovation-driven market environment. The analysis

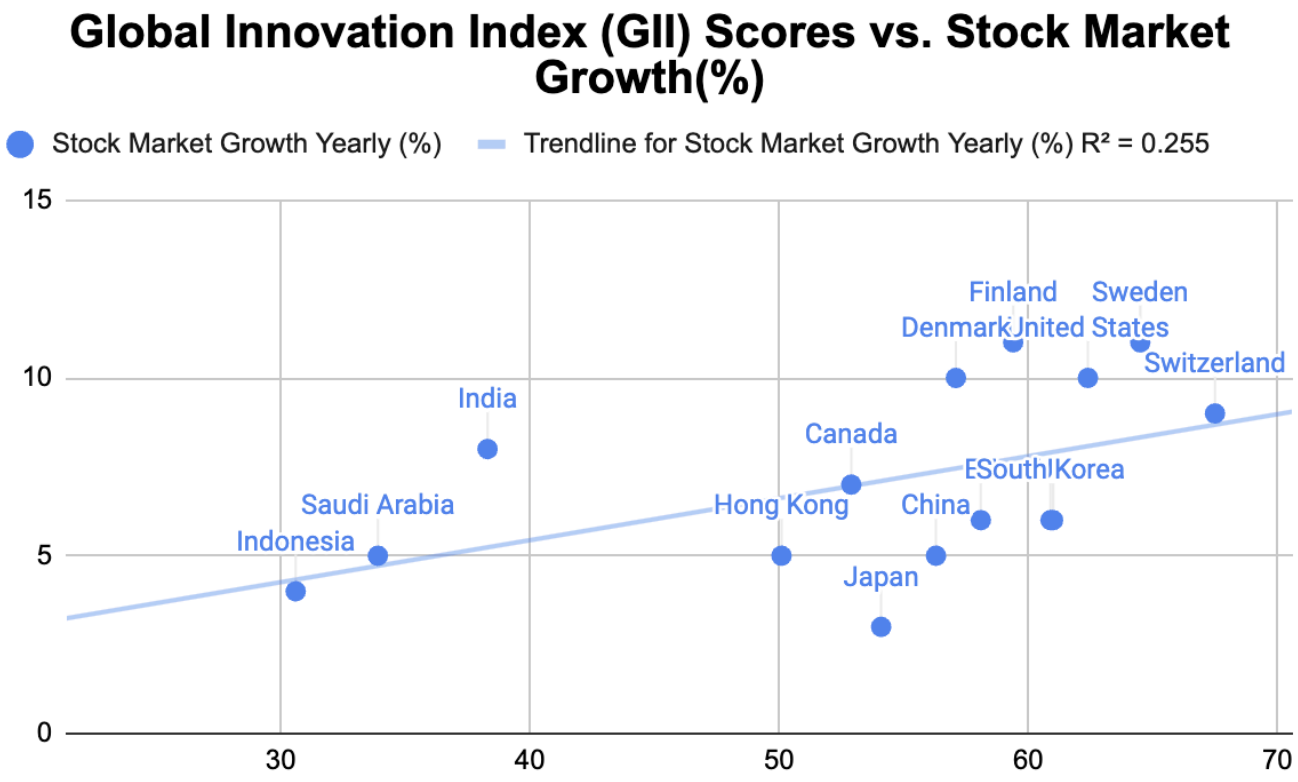
suggests a clear trend: countries with stronger IP protection tend to experience higher stock market growth rates, as seen in the United States. Effective IP laws help create an environment where businesses can safely invest in innovation, leading to a more dynamic and competitive economy.

Given the data, the results do not fully support the hypothesis that stock markets outperform others primarily due to a combination of regulatory transparency, economic strength, and innovation. As the data for this graph was being collected I tried to include more countries to see if the relationship would be better. However, many countries were missing clear stock market data. While there is a general trend where countries with stronger IP protection tend to have higher stock market growth, there are notable exceptions. For example, India, with a relatively low IP score of 38.64%, shows a high stock market growth rate of 8%, suggesting that factors other than regulatory transparency and innovation—such as rapid economic expansion and foreign investment—are contributing more to stock market performance. Similarly, Japan, with a high IP score of 91.26%, has a low stock market growth of only 3%, indicating that while IP protection may foster innovation, it alone may not be enough to drive high stock market growth without a favorable broader economic environment. Therefore, while the hypothesis holds in some cases, the data reveals that other factors, such as economic strength, play a significant role in determining stock market performance, and regulatory transparency and innovation alone may not always result in superior stock market growth.

4.3 Global Innovation Index (GII)

The Global Innovation Index (GII) is an annual ranking that evaluates and compares the innovation capabilities and performance of countries around the world(WIPO, 2024). It shows the most innovative countries and ranks them. For this graph, I included many other countries to better show the relationship between GII and stock market growth.

Graph 3.8: Global Innovation Index (GII) Scores vs. Stock Market Growth(%)



Key Observations

United States: Highest GII Score and Stock Market Growth: The United States has the highest GII score of 62.4 and an average annual stock market growth rate of 10%. This strong correlation suggests that the U.S.'s commitment to innovation—through substantial R&D investments, a robust legal framework for IP protection, and a thriving startup ecosystem—directly contributes to its leading stock market performance.

UK and South Korea: Moderate GII Scores and Stock Market Growth: The UK (61.0) and South Korea (60.9) have similar GII scores and moderate stock market growth rates of 6%. This indicates that both countries have established conducive environments for innovation, though their stock market performance may be influenced by other factors such as market maturity, sectoral composition, and external economic conditions.

Canada: Lower GII Score, Moderate Stock Market Growth: Canada's GII score of 52.9 corresponds with a 7% annual stock market growth. Despite a relatively lower score compared to the U.S. and UK, Canada shows resilience in its market performance, potentially due to strong economic fundamentals, diverse industries, and a growing tech sector.

China: Moderate GII Score, Low Stock Market Growth: With a GII score of 56.3 and an average stock market growth of 5%, China's performance highlights the ongoing efforts to

improve its innovation environment. While the GII score is decent, challenges such as regulatory complexities and issues related to IP enforcement might limit market growth, indicating that further reforms are necessary to harness its innovation potential.

India: Low GII Score, High Stock Market Growth: India presents a contrasting scenario with a GII score of 38.3 but a relatively high stock market growth of 8%. This suggests that while India's innovation ecosystem faces challenges, factors such as a large consumer market, increasing foreign investments, and a booming tech sector contribute to its strong stock market performance. However, the low GII score indicates significant room for improvement in fostering a more supportive innovation environment.

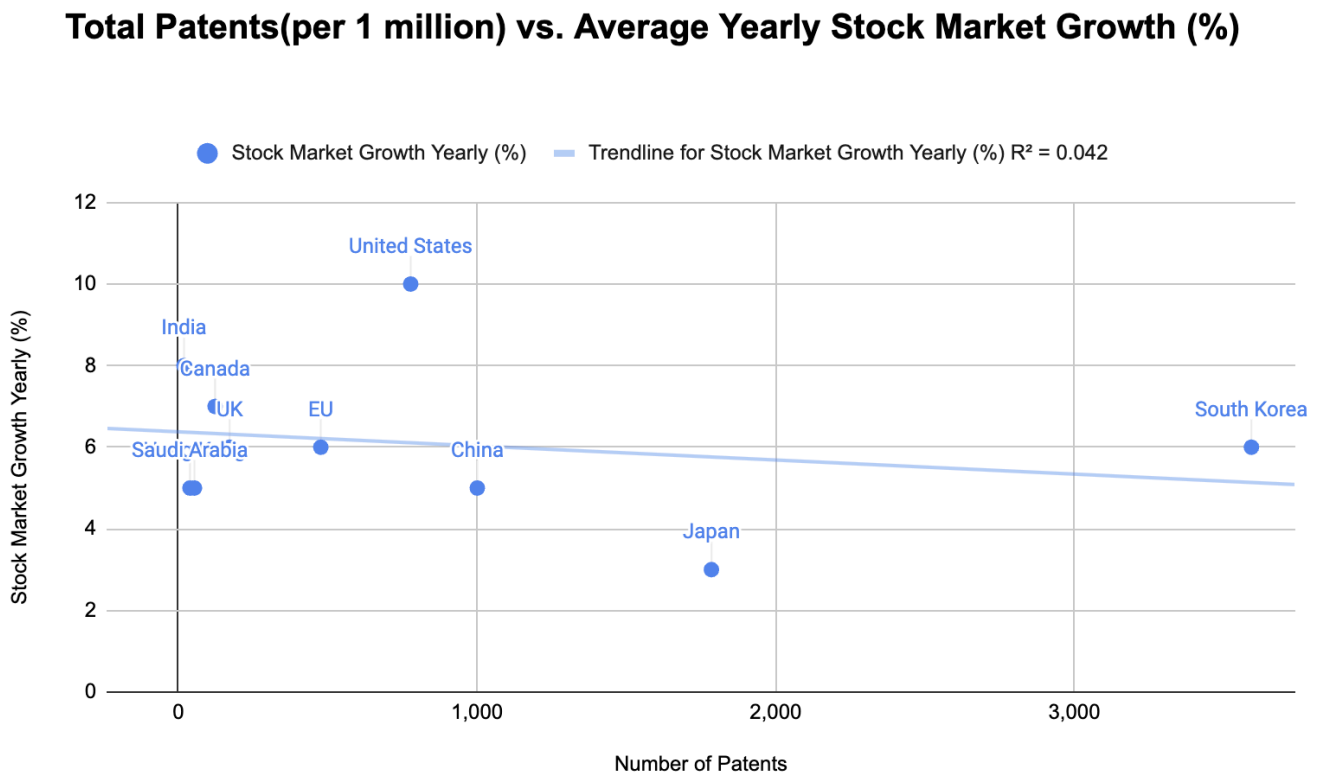
Saudi Arabia: Lowest GII Score and Moderate Stock Market Growth: Saudi Arabia has the lowest GII score at 33.9 and a stock market growth rate of 5%. This reflects the country's ongoing efforts to diversify its economy beyond oil reliance, but a weak innovation environment limits its potential for higher market growth. Strengthening IP laws and fostering innovation could be key strategies for future economic development. The analysis of the GII scores against stock market growth rates indicates a general trend where higher innovation capabilities are associated with stronger market performance. Countries like the United States, the UK, and South Korea exemplify how a supportive environment for innovation can lead to significant economic growth. However, anomalies such as India's high stock market growth with a lower GII score suggest that other factors also play a crucial role in market performance. The r^2 value for this graph is 0.255 which indicates that the relationship between the two isn't strong. It does show a clear relationship with some countries, but there are other countries where this relationship doesn't hold through. The data from the Global Innovation Index (GII) strongly supports the hypothesis that innovation contributes to stronger stock market performance. Countries with higher GII scores, such as the United States (62.4), Sweden (64.5), Finland (59.4), and Switzerland (67.5), exhibit higher stock market growth rates, typically around 9-11% annually. This suggests that nations that prioritize innovation, through robust legal frameworks, substantial R&D investments, and a favorable environment for startups, tend to experience stronger economic growth and more dynamic stock markets. On the other hand, countries with lower GII scores, like Saudi Arabia (33.9) and Indonesia (30.6), show lower stock market growth rates of around 4-5%. This reinforces the idea that a weak innovation ecosystem limits stock market performance, as these nations are still in the early stages of economic diversification and innovation-driven growth. However, there are some interesting anomalies, such as India, with a lower GII score of 38.3 but a relatively high stock market growth rate of 8%. While this may seem contrary to the general trend, it likely reflects other factors such as rapid economic expansion, a growing middle class, and an influx of foreign investments, which also contribute to market performance. Still, the overall trend in the data supports the hypothesis that innovation plays a critical role in driving stock market growth, confirming the importance of fostering innovation for sustained economic and market success.

4.4 Number of Patents Filed and Granted

The number of patents filed/granted serves as a key indicator of a country's innovation. Patents are legal protections to inventors to protect them for a certain period. A higher number of patents indicates a strong environment for innovation. Companies with more patents get a competitive edge and this can lead to an increased market share. We will make a graph that compares the

number of patents to the average annual stock market growth. The data for the number of patents will come from Our World in Data based on 2021 data. For the graph, we will measure the number of patents per capita, or per 1 million people. This is because countries with a greater population will most definitely have a greater number of patents. To make it fair a per capita approach should be used.

Graph 3.9: Total Patents vs. Average Yearly Stock Market Growth (%) All Countries



Key Observations:
The data suggests that there is no strong correlation between the number of patents and average yearly stock market growth, challenging the hypothesis that innovation directly drives market performance. For instance, Japan, with the highest number of patents (1,785), has one of the lowest growth rates (3%), while China, with 1,001 patents, also shows only moderate growth (5%). In contrast, India, which has the fewest patents (19), experiences one of the highest growth rates (8%). Additionally, countries with similar growth rates, such as the UK, South Korea, and the EU (all at 6%), exhibit vastly different patent numbers, further weakening the assumption of a linear relationship between patents and stock market performance.

4.5 Conclusion
IP Laws, GII, and patent activity all demonstrate a strong link between innovation and stock market performance. Countries that invest in an innovative ecosystem, supported by strong IP protection, and higher patent activity, tend to show stronger and more consistent stock market growth. The data reveals that nations like the U.S. which lead all three areas outperform others

in stock market growth. Countries with moderate innovative indicators such as Canada and the EU see steady market growth. On the other hand, anomalies such as India and China indicate that while innovation is critical other factors impact stock market performance. The combination of strong IP laws, a supportive business environment, and active patent protection can help countries drive economic growth and enhance stock market performance.

5.0 Overall Conclusion

This research paper has investigated the factors driving the outperformance of certain global stock markets, with a particular focus on the role of innovation. Through an in-depth analysis of key metrics, including regulatory transparency, economic stability, and innovative capacity, the paper demonstrates that countries fostering a robust, transparent, and innovation-friendly environment tend to see stronger stock market growth. The study reveals that regulatory transparency plays a vital role in market performance. Markets with transparent, stable regulations, such as the United States, the UK, and Canada, foster investor confidence, resulting in lower volatility and higher returns. The U.S. stock market, for instance, benefits from strict enforcement by independent bodies like the SEC, comprehensive disclosure requirements, and landmark regulations that ensure accountability. This transparency is crucial in maintaining market integrity and stability, making the U.S. a preferred destination for investors globally. Additionally, economic stability remains a key determinant of stock market success. Through the analysis of economic indicators like GDP growth, inflation, and GNI per capita, the paper finds a strong correlation between healthy economies and robust stock market performance. Countries like the United States and India, which consistently display positive GDP growth and manageable inflation, exhibit superior market outcomes. Conversely, markets with economic instability, such as Japan, experience slower growth, underscoring the importance of maintaining a stable macroeconomic environment. The research highlights the significant role of innovation in driving stock market performance. Countries that invest in a culture of innovation characterized by strong intellectual property (IP) laws, high Global Innovation Index (GII) scores, and substantial patent activity—tend to lead in market growth. The U.S. stands out as a leader in this regard, with a high GII score and an IP protection system that encourages technological advancements and entrepreneurship. Countries like the UK and South Korea also display moderate innovation levels, translating to steady market performance, while emerging economies like India show strong growth despite lower GII scores, indicating that factors like market size and foreign investment play a complementary role. The paper further supports these findings by examining specific innovation metrics. Patent activity serves as a critical indicator of a country's innovative output, with the data showing that higher patent numbers correspond with stronger market growth. The U.S. and South Korea, known for their technology sectors, demonstrate this relationship well. However, outliers such as China, with high patent activity but moderate market growth, highlight that other factors, including regulatory challenges and economic structure, can impact the benefits of innovation.

By graph:

1. Regulatory Oversight Comparison Graph: The U.S. shows the highest regulatory score, supporting the hypothesis that stronger regulatory independence, enforcement, and comprehensive regulations contribute to stock market growth. Countries with high scores

generally achieve higher long-term returns, though there are exceptions like India, which has a lower regulatory score but high market returns.

2. Transparency Requirements Graph: The U.S., with high transparency and disclosure practices (88%), achieves the highest 10-year returns, reinforcing the idea that comprehensive disclosure positively impacts market performance. Countries with lower transparency, such as China and the EU, show lower returns, partially validating this hypothesis, though other factors likely play roles as well.

3. Stock Market Volatility vs. Transparency Score: Higher transparency scores correlate with lower market volatility and better returns. For example, the U.S. shows both high transparency and lower volatility, supporting the hypothesis that transparency contributes to market stability and improved returns.

4. GDP Per Capita vs. Stock Market Performance: This analysis finds a positive correlation between GDP growth and stock market performance, with countries like the U.S. and India exemplifying this trend. Thus, the hypothesis that economic growth contributes to stock market success is largely validated, especially in growth-oriented economies.

5. Inflation(%) vs. Stock Market Performance(%): The data shows a complex relationship between inflation and stock market performance, with low inflation not consistently predicting high market returns. This suggests that factors such as investor sentiment and GDP growth may be more significant, partially refuting the hypothesis that low inflation directly enhances stock market growth.

6. GNI Per Capita by Country with Stock Market % Average Return: Higher GNI per capita generally corresponds with better stock market performance, validating the hypothesis. However, the example of China, with high GNI but moderate market returns, suggests additional factors that affect performance.

7. U.S. Chamber International IP Index 2024, Overall Scores, % Available Score vs Stock Market Growth Per Year (%): Strong IP laws positively correlate with market growth, as seen in the U.S., where robust IP protections align with high market returns. Countries with weaker IP protections, like China and Saudi Arabia, show moderate growth, supporting the hypothesis that effective IP laws contribute to stock market success

8. Global Innovation Index (GII) Scores vs. Stock Market Growth(%): Higher GII scores generally align with stronger market growth, particularly in countries like the U.S. and South Korea. However, India's high market growth with a low GII score indicates other factors can drive growth, showing partial validity for the hypothesis.

9. Total Patents vs. Average Yearly Stock Market Growth (%) All Countries: This graph shows no strong correlation between patent numbers and stock market performance. For instance, Japan has high patent numbers but low growth, and India, with fewer patents, has higher growth. This suggests patents alone are not a reliable predictor of market performance, refuting the hypothesis that higher patent numbers directly drive market growth.

In examining global stock market performance, some notable outliers defy typical trends. For example, India demonstrates strong stock market growth despite relatively low scores in innovation and intellectual property (IP) protection. India's rapid economic expansion, a burgeoning middle class, and increasing foreign investment have propelled its market returns, suggesting that factors such as domestic consumer growth can compensate for lower regulatory and innovation infrastructure. In contrast, China faces unique challenges: despite a high Global Innovation Index (GII) score and one of the highest patent counts globally, its market performance is often moderate. China's regulatory environment, lower transparency, and state intervention create an atmosphere of investor caution, revealing that innovation alone may not yield strong stock performance without a supportive regulatory framework. Similarly, Japan maintains high transparency, regulatory stability, and robust IP laws but experiences slow market growth. Persistent demographic issues, such as an aging population and economic stagnation, hinder its stock market performance, suggesting that even a highly stable regulatory and economic environment may not offset deeper structural challenges. These cases highlight how complex interactions among regulatory, economic, and social factors can result in unexpected outcomes in stock market growth. Despite the insights gained, there are areas where additional resources or time could enhance this study. For instance, incorporating a broader range of markets, especially emerging economies, could help deepen the understanding of market dynamics across different economic environments. Expanding data on political and social factors impacting stock markets could also clarify the role of government policies and investor sentiment. In conclusion, the success of a stock market is multi-faceted, relying on a blend of regulatory transparency, economic stability, and a culture of innovation**.** The U.S. market exemplifies how these factors, when combined effectively, contribute to consistent and superior stock market performance. For other countries aiming to replicate this success, fostering a transparent regulatory environment, ensuring stable economic conditions, and encouraging innovation through supportive policies will be crucial. As the global financial landscape continues to evolve, these insights provide a roadmap for achieving sustainable market growth.

References

1. About ESMA. (n.d.). https://www.esma.europa.eu/about-esma
2. About us. (2024, September 9). FCA. https://www.fca.org.uk/about
3. Administrative Action in th. . . : FSA. (n.d.). https://www.fsa.go.jp/en/refer/guide/action.html
4. Al Nasser, Omar M., and Massomeh Hajilee. “Integration of Emerging Stock Markets with Global Stock Markets.” Research in International Business and Finance, vol. 36, Jan. 2016, pp. 1–12, https://doi.org/10.1016/j.ribaf.2015.09.025.
5. Annual patent applications per million people. (n.d.). Our World in Data. https://ourworldindata.org/grapher/patent-applications-per-million?tab=table&country=~USA
6. Azarenkova Galina, Shkodina Iryna, and Kavun Sergii, “Analysis of the Global Stock Market Trends.” Journal of Finance and Economics, vol. 3, no. 4 (2015): 67-71. doi: 10.12691/jfe-3-4-2.
7. Backtesting for the European index investor. (n.d.). https://curvo.eu/backtest/en/market-index/msci-europe?currency=eur
8. Briefing, C. (2024, June 28). Annual compliance requirements in China: Step by step. China Briefing News. https://www.china-briefing.com/news/annual-compliance-requirements-in-china-a-step-by-step-guide/
9. Canadian government unveils proposal for major financial crimes investigative body | DLA Piper. (n.d.). https://www.dlapiper.com/en-us/insights/publications/2023/07/canadian-government-unveils-proposal-for-major-financial-crimes-investigative-body
10. Cassels. (2023, November 24). Financial Services and Consumer Protection Regulatory Update | Cassels.com. https://cassels.com/insights/financial-services-and-consumer-protection-regulatory-update/
11. Chukwuogor, Chiaku Nwamu. “Stock Markets Returns and Volatilities: A Global Comparison.” Ssrn.com, June 2007, papers.ssrn.com/sol3/papers.cfm?abstract_id=1536099. Accessed 28 July 2024.
12. CSRC. (n.d.). http://www.csrc.gov.cn/csrc_en/
13. Daglas, A., & Rahman, S. A. (2024, July 30). Tax compliance and enforcement in Saudi Arabia. Grant Thornton Saudi Arabia. Home. https://www.grantthornton.sa/en/insights/articles-and-publications/tax_compliance_enforcement_in_KSA/
14. Data Commons. (n.d.). https://datacommons.org/
15. Deel, G. L. (2024, May 3). What Is Intellectual Property Law? And Why Does it Matter? American Public University. https://www.apu.apus.edu/area-of-study/security-and-global-studies/resources/what-is-intellectual-property-law/
16. Enforcement - Canadian securities administrators. (2024, July 5). Canadian Securities Administrators. https://www.securities-administrators.ca/enforcement/
17. Enforcement actions. (2023, September 28). Securities & Futures Commission of Hong Kong. https://www.sfc.hk/en/Regulatory-functions/Enforcement/Enforcement-actions

18. Enforcement. (2024, October 14). FCA. https://www.fca.org.uk/about/how-we-regulate/enforcement
19. European Commission, official website. (2024, November 5). European Commission. https://commission.europa.eu/index_en
20. Financial Instruments and Exchange Act : Financial Services Agency. (n.d.). https://www.fsa.go.jp/en/policy/fiel/index.html
21. Financial reporting. (n.d.). Finance. https://finance.ec.europa.eu/capital-markets-union-and-financial-markets/company-reporting-and-auditing/company-reporting/financial-reporting_en#:~:text=Under%20EU%20rules%2C%20listed%20companies,standards%20(IFRS%20accounting%20standards).
22. Financial Services Commission. (n.d.). https://www.fsc.go.kr/eng/index
23. Global economy, world economy | TheGlobalEconomy.com. (n.d.). TheGlobalEconomy.com. https://www.theglobaleconomy.com/
24. Global Innovation Index (GII). (n.d.). Global-innovation-index. https://www.wipo.int/web/global-innovation-index
25. Gratton, P. (2024, April 12). What is the stock market and how does it work? Investopedia. https://www.investopedia.com/terms/s/stockmarket.asp
26. Hayes, A. (2022, April 27). Regulation Fair Disclosure (Reg FD): Definition, transparency. Investopedia. https://www.investopedia.com/terms/r/regulationfd.asp
27. Hayes, A. (2024, June 17). SEC filings: Forms you need to know. Investopedia. https://www.investopedia.com/articles/fundamental-analysis/08/sec-forms.asp#:~:text=Key%20Takeaways&text=Registration%20statements%20are%20required%20when,144%2C%20and%20Foreign%20Investment%20Disclosures.
28. HKTDC Research. (n.d.). https://research.hktdc.com/en/article/MTE3MjczNDIyNA
29. Home - Court of Justice of the European Union. (n.d.). CURIA. https://curia.europa.eu/jcms/jcms/j_6/en/
30. Home. (2024, April 18). Securities & Futures Commission of Hong Kong. https://www.sfc.hk/en/
31. Homepage - Canadian Securities Administrators. (2024, November 5). Canadian Securities Administrators. https://www.securities-administrators.ca/
32. Kenton, W. (2024, June 27). Sarbanes-Oxley Act: What it does to protect investors. Investopedia. https://www.investopedia.com/terms/s/sarbanesoxleyact.asp
33. KFTC announces enforcement plan for 2023 - Kim & Chang. (n.d.). © 2019 Kim & Chang. All Rights Reserved. https://www.kimchang.com/en/insights/detail.kc?sch_section=4&idx=26614
34. Kuber, S., & Kuber, S. (2024, November 4). Understanding Intellectual Property: Protect your innovation. BlueNotary • Online Notarization. https://bluenotary.us/intellectual-property/
35. Maizland, L. (2024, March 19). Hong Kong's freedoms: what China promised and how it's cracking down. Council on Foreign Relations. https://www.cfr.org/backgrounder/hong-kong-freedoms-democracy-protests-china-crackdown
36. MIFID II | European Securities and Markets Authority. (n.d.). https://www.esma.europa.eu/publications-and-data/interactive-single-rulebook/mifid-ii
37. Navigating Hong Kong's ESG: regulations, trends, and opportunities - Hong Kong Guide | Doing Business in Hong Kong. (n.d.).

https://www.china-briefing.com/doing-business-guide/hong-kong/sector-insights/navigating-hong-kong-s-esg-regulations-trends-and-opportunities
38. Overview. (n.d.). http://www.csrc.gov.cn/csrc_en/c102023/common_zcnr.shtml?channelid=e9958c689bef4d468d81dc93c8d3479f
39. Peralta, E. (2014, January 7). JPMorgan Chase to pay $1.7 billion to Madoff victims. NPR. https://www.npr.org/sections/thetwo-way/2014/01/07/260442151/jpmorgan-chase-to-pay-1-7-billion-to-madoff-victims
40. PricewaterhouseCoopers. (n.d.). EU audit legislation. PwC. https://www.pwc.lu/en/audit/eu-audit-legislation.html#:~:text=On%2016%20June%202014%2C%20new,can%20obtain%20from%20its%20auditor.
41. Pti. (2024, June 6). Sebi issues financial disincentives guidelines for bourses, other MIIs for surveillance lapses. Moneycontrol. https://www.moneycontrol.com/europe/?url=https://www.moneycontrol.com/news/business/markets/sebi-issues-financial-disincentives-guidelines-for-bourses-other-miis-for-surveillance-lapses-12742689.html
42. Qiu, J. (2023, August 28). China's Independent Director System Faces Reforms. Glass Lewis. https://www.glasslewis.com/chinas-independent-director-system-faces-reforms/
43. Sanctions and enforcement. (n.d.). https://www.esma.europa.eu/esmas-activities/supervision-and-convergence/sanctions-and-enforcement
44. SEBI | Enforcement. (n.d.). https://www.sebi.gov.in/enforcement.html
45. SEC.gov | Consequences of noncompliance. (n.d.). https://www.sec.gov/resources-small-businesses/capital-raising-building-blocks/consequences-noncompliance
46. SEC.gov | Division of Enforcement. (2024, November 8). https://www.sec.gov/about/divisions-offices/division-enforcement
47. SEC.gov | Enforcement and Litigation. (n.d.). https://www.sec.gov/enforcement-litigation
48. SEC.gov | SEC Announces Enforcement Results for Fiscal Year 2023. (n.d.). https://www.sec.gov/newsroom/press-releases/2023-234
49. SEC.gov | SEC updates auditor independence rules. (n.d.). https://www.sec.gov/newsroom/press-releases/2020-261
50. Securities and Exchange Board of India. (n.d.). https://www.sebi.gov.in/
51. Sharma, J. L., and Robert E. Kennedy. "A Comparative Analysis of Stock Price Behavior on the Bombay, London, and New York Stock Exchanges." The Journal of Financial and Quantitative Analysis, vol. 12, no. 3, Sept. 1977, p. 391, https://doi.org/10.2307/2330542. Accessed 25 Oct. 2019.
52. Sharma, R. (2023, September 12). Can deflation ever be good? Investopedia. https://www.investopedia.com/articles/markets/111715/can-deflation-be-good.asp
53. The Economist. (2024, April 22). India's financial system has improved dramatically in the past decade. The Economist. https://www.economist.com/special-report/2024/04/22/indias-financial-system-has-improved-dramatically-in-the-past-decade
54. The Sarbanes Oxley Act. (n.d.). https://www.sarbanes-oxley-act.com/
55. This is the official website of Financial Services Agency. (n.d.). https://www.fsa.go.jp/en/

56. Transparency International. (2024, January 30). The ABCs of the CPI: How the Corruption Perceptions Index is calculated - News. Transparency.org. https://www.transparency.org/en/news/how-cpi-scores-are-calculated
57. Wedeman, A. (2017). China's Corruption Crackdown: War Without End? Current History, 116(791), 210–216. https://www.jstor.org/stable/48614268
58. | European Securities and Markets Authority. (n.d.). https://www.esma.europa.eu/
59. 上海证券交易所. (n.d.). SHANGHAI STOCK EXCHANGE. SHANGHAI STOCK EXCHANGE. https://english.sse.com.cn/access/qfiirqfii/rules/