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USING THE FEATURES OF THE PRESIDENTIAL ELECTION CYCLE TO IDENTIFY THE DOMINANT TREND IN GLOBAL STOCK MARKETS

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Abstract

The article is devoted to the study of the socio-political cyclical pattern "Presidential Election Cycle" in economics and its practical application for forecasting the dynamics of stock markets.

The methodology is based on a statistical analysis of the US stock market, which is a key component of the global financial market. The study used statistical data on the value of the Dow Jones Industrial Average from 1897 to 2025. Characteristic patterns that determine the behavior of the stock market in different phases of the "Presidential Election Cycle" in modern economic conditions were identified. It was found that within this cycle, only the pre-election year is of practical interest, in which the average increase in the Dow Jones Industrial Average is 2–4 times higher than the increase in other years of the cycle. It was established that the thesis about the higher dynamics of the stock market during the rule of the Democratic Party is confirmed in modern conditions.

Keywords

Presidential election cycle, stock market, prevailing trend, Dow Jones Industrial Average, forecasting.

Problem statement

The stock market has a pronounced cyclical nature, which is confirmed by numerous studies by scientists. For the first time, the hypothesis of the possible recurrence of economic processes was put forward in 1801 by William Herschel. He suggested the existence of a relationship between the cycles of sunspots and weather, which, in turn, could affect productivity and, as a result, the economy (Schwager, 2001). A few decades later, in 1870, W.S. Jevons and S. Benner drew attention to the recurrence of economic data. In 1875, S. Benner published a graph on which economic changes were predicted up to 1895. This graph turned out to be quite accurate in predicting peaks and declines in economic development.

Over time, the issue of cyclicality in the economy has become the subject of study by many researchers, which has led to the emergence of a significant number of scientific works devoted to this topic (Afonin, Bandurka, and Martynov, 2008, Amadeo and Berry-Johnson, 2020, Benenson, Velesco, and Dzhusov, 2021, Dzhusov, 2013 Dzhusov, Smerichevskyi, Sardak, and Benenson, 2019). However, despite the accumulated scientific material, today the theory of economic cycles remains mainly conceptual and insufficiently developed for its practical application.

Relevance of the chosen topic

Since the stock market is an integral part of the global socio-economic system, it is also prone to cyclical fluctuations. Understanding the patterns of these fluctuations and their use in forecasting market movements opens up opportunities for increasing the efficiency of investment activities and obtaining significant profits. In this regard, research aimed at the practical application of the theory of cycles in global stock markets is a promising direction in economic science and finance.

Analysis of recent research and publications

One of the most significant works devoted to the study of the cyclical nature of the economy is the book by E. Dewey and O. Mandino "Cycles: The Mysterious Forces That Trigger Events" (Dewey and Mandino, 1973). In this work, the authors studied the cycles observed in nature and society from 1415 to 1930, and discovered patterns in various areas, such as:

- 22,2-year cycle of military conflicts,
- 11,11-year cycle of solar activity,
- 18,33-year cycle in real estate trading and a number of others.

A significant contribution to the study of stock market cyclicality was made by W.L. Crum and D. Kitchin, who discovered a repeating cycle with a duration of 40 months when analyzing commercial paper quotations in New York (Colby and Meyers, 2000), as well as the work of C. Dow and his follower W.P. Hamilton, who actually described the principles of cyclical movement of financial markets.

Another important milestone in the study of cycles was the work of J.M. Hurst, in which he presented the stock market as a set of waves that overlap and create repeating cycles of a certain duration (Hurst, 1970). In 1990, D. Katz and D. McCormick published the Calendar Effects Chart, which contained tables and graphs that demonstrated the relationship between the dynamics of the Standard & Poor's - 500 index and calendar dates (Katz and McCormick, 1990, 1997, 2002). The research of J. M. Hurst, D. Katz, and D. McCormick was continued and expanded by a number of Ukrainian scientists (Dzhusov, 2013, 2019, Apalkov, Benenson, et al. 2021, etc.).

Of considerable practical interest are also the studies of A. Merrill, who, analyzing data on the US stock market for the period from 1886 to 1983, discovered a stable pattern, which was called the "Presidential Election Cycle". According to his observations, a month before the presidential election, the stock market showed growth that lasted until the end of January of the following year (Merrill, 1984). After the inauguration of the new president, a decline in quotes began, which usually lasted until June of the second year of the presidential term. Then the market again entered a phase of growth that lasted until the next presidential election.

The identified cyclicality of market dynamics, according to A. Merrill's studies, allows it to be used as a tool for predicting the trends of the prevailing trend in the stock market for the coming years. But almost fifty years have passed since the publication of the research results, and therefore the hypothesis requires updating based on modern financial data and in the conditions of the modern economic environment.

Purpose of the article

The purpose of this work is to establish the features of the manifestation of the pattern "Presidential Election Cycle" (hereinafter referred to as PEC) on global stock markets in modern conditions and to develop recommendations for the practical application of this pattern when carrying out investment activities.

Presentation of the main research material and results obtained

The PEC cycle lasts four years and has been observed in the US stock market since 1832. According to the theory of this phenomenon, the current administration, in order to secure re-election for a new term, uses various economic incentives to support the economy in the pre-election period. Historically, it is believed that a similar strategy was used by all presidents, starting with Herbert Clark Hoover (1929–1933) (Dzhusov, 2013).

The mechanism of this cycle is that in the first two years after the election, the ruling party, as a rule,

adheres to a tough economic policy, creating the foundation for the possibility of maneuvering in the future. As a result, the stock market during this period demonstrates more restrained dynamics. However, in the last two years of the presidential term, especially in the pre-election year, economic policy becomes softer, which leads to a significant increase in stock prices.

Statistical data confirm the existence of the presidential cycle. According to studies conducted from 1833 to 2004, the total growth of the Dow Jones Industrial Average index during the two years preceding the elections was 746%, while during the first two years after the elections it was only 228%, which is three times less (Shabanov and Kalachev, 2008). The most pronounced and stable growth was observed during the pre-election year.

Open sources contain research results on the manifestation of PEC in the US stock market, which include analysis of various time intervals. In particular, they provide the results of studying the dynamics of the US stock market from 1832 to 1904 and from 1904 to 1986 (Meladze, 2023). In the course of these studies, the profitability of each year of the cycle was calculated, after which the results were summed up for the two specified time periods. The final data demonstrating the patterns inherent in different historical periods are presented in Table 1.

Table 1: Total changes in the US stock market for each year of the presidential cycle

	Cumulative change between 1832 and 1986, %	Cumulative change over the period from 1904 to 1986, %
Election year	235	197
Post-election year	-37	-38
Midterm year	89	70
Pre-election year	280	202

Source: compiled by the author

As can be seen from the data presented in Table 1, despite some differences in the calculation periods, the general trends in stock market dynamics within each of the four years of the presidential cycle demonstrate similarity. In particular, the pre-election year and the election year are characterized by higher profitability compared to the other two years of the cycle.

In 1973, David MacNeil (D. MacNeil) developed an investment strategy based on the identified seasonal component of the presidential cycle. According to his approach, in the pre-election and election years one should invest in stocks, while in the following two years one should transfer funds to government bonds. The application of this strategy during the period from 1962 to 1984 would have yielded a return of 1860%, while the alternative "Buy and hold" strategy (long-term asset holding strategy) would have yielded only 518% profit over the same period (Colby and Meyers, 2000).

In order to study the phenomenon of the presidential cycle in more detail, the first intention of the authors of this work was to compile a summary table of annual changes in the US stock market for the entire period of historical observations of the dynamics of the US stock market, that is, from 1833 to the current, 2025. But this approach faced a significant problem, namely: the Dow Jones Industrial Average was first calculated and published only on May 26, 1896, which made it impossible to use it for earlier periods of time.

An alternative solution could be to borrow data from the research of D. Hirsch and T. Brown, who developed their own methodology for calculating the so-called «composite index of the 19th century stock market». Their approach was based on the share prices of leading companies of that time (mainly railway and industrial) (Hirsch, 2006). However, using a different calculation methodology compared to the original methodology of C. Dow would potentially introduce a significant error in the results of the analysis. In this regard, it was decided to limit the period under study to the beginning of the publication of the actual values of the Dow Jones Industrial Average, that is, the last trading day of December 1896.

An additional complication was the fact that 1896 was the final year of the presidential cycle, which fell on the second term of Stephen Grover Cleveland (03.03.1893 – 04.03.1897). In this regard, the starting point of the study was chosen as the first year of the new four-year presidential cycle, namely 1897.

The information basis of the study was the statistical data presented in the works of R. Colby and T. Meyers (Colby and Meyers, 2000), D. Hirsch and T. Brown (Hirsch, 2006), as well as D. Hirsch and J. Hirsch (Hirsch, 2017-2019) and D. Kaeppel (Kaeppel, 2009), as well as data presented on the Internet resources: https://investing.com/indices/us-30-historical-data and https://index.minfin.com.ua/markets/stock/dji/. As a result of processing the listed sources of information, data were collected on annual changes in the leading US stock

index - the Dow Jones Industrial Average in each of the four years of the presidential cycle, which are presented in Table 2.

The second column of the table indicates the name of the president who was in power during the calculated four-year cycle. The third column contains the letter designations of the party that was in power during the corresponding period: D - Democratic Party, R - Republican Party. Columns 5-8 show changes in the Dow Jones index in percentage terms relative to the previous year. For example, the 32nd row of the table corresponds to the four-year cycle of the presidency of D. Biden. The number 18,73 in the 5th column of this row means that the Dow Jones Index increased by 18,73% in 2021 compared to the index value on the last trading day of December 2020. The number -8,78 in the 6th column of this row means that the Dow Jones Index decreased by 8,78% in 2022 compared to its value on the last trading day of 2021, etc.

Table 1: Annual changes of the Dow Jones Industrial Average (%) by year of the four-year presidential cycle from 1897 to 2025

No.	President	Party	Cycle Beginning	Post-election year	Midterm year	Pre-election year	Election year
1	2	3	4	5	6	7	8
1	McKinley	R*)	1897	21,3	22,5	9,2	7,0
2	McKinley	R	1901	-8,7	-0,4	-23,6	41,7
3	T. Roosevelt	R	1905	38,2	-1,9	-37,7	46,6
4	Taft	R	1909	15,0	-17,9	0,4	7,6
5	Wilson	D	1913	-10,3	-5,4	81,7	-4,2
6	Wilson	D	1917	-21,7	10,5	30,5	-32,9
7	Harding	R	1921	12,7	21,7	-3,3	26,2
8	Coolidge	R	1925	30,0	0,3	28,8	48,2
9	Hoover	R	1929	-17,2	-33,8	-52,7	-23,1
10	F. Roosevelt	D	1933	66,7	4,1	38,5	24,8
11	F. Roosevelt	D	1937	-32,8	28,1	-2,9	-12,7
12	F. Roosevelt	D	1941	-15,4	7,8	13,8	12,1
13	F. Roosevelt	D	1945	26,6	-8,1	2,2	-2,1
14	Truman	D	1949	12,8	17,6	14,4	8,4
15	Eisenhower	R	1953	-3,8	44,0	20,8	2,3
16	Eisenhower	R	1957	-12,8	34,0	16,4	-9,3
17	Kennedy	D	1961	18,7	-10,8	17,0	14,6
18	Johnson	D	1965	10,9	-18,9	15,2	4,3
19	Nixon	R	1969	-15,2	4,8	6,1	14,6
20	Nixon	R	1973	-16,6	-27,6	38,3	17,9
21	Carter	D	1977	-17,3	-3,1	4,2	14,9
22	Reagan	R	1981	-9,2	19,6	20,3	-3,7
23	Reagan	R	1985	27,7	22,6	2,3	11,8
24	G.H.W. Bush	R	1989	27,0	-4,3	20,3	4,2
25	Clinton	D	1993	13,0	2,1	33,5	26,0
26	Clinton	D	1997	22,6	16,1	25,2	-6,2
27	G.W. Bush	R	2001	-7,1	-16,8	25,3	3,1
28	G.W. Bush	R	2005	-0,6	16,3	6,4	-33,8
29	Obama	D	2009	18,8	11,0	5,5	7,3
30	Obama	D	2013	26,5	7,5	-2,2	13.4
31	Trump	R	2017	24.1	5.64	22.34	7,2
32	Biden	D	2021	18,7	-8,78	13,7	12,88
33	Trump	R	2025				
Total index change				242,63	138,46	389,94	249,13
Average growth over the whole period				7,58	4,20	12,19	7,79

The total change in the index for the period from 1897 to 1944	77,8	35,6	82,7	141,3
Average growth for the period from 1897 to 1944	6,48	2,97	6,9	11,78
The total change in the index for the period from 1945 to 1992	48,8	69,8	177,5	77,9

Continuation of table 1

Average growth for the period from 1945 to 1992	4,1	5,82	14,8	6,49
The total change in the index for the period from 1993 to 2025	116,03	33,06	130,34	29,88
Average growth for the period from 1993 to 2025	14,50	4,13	16,30	3,73

*) The letters R and D stand for the Republican Party and the Democratic Party, respectively

Source: compiled based on statistical material contained in the works (Hirsch, 2017-2019 Colby and Meyers, 2000; Hirsch, 2006; Kaeppel, 2009) and on the authors' calculations

The entire volume of data was structured and divided into three periods, reflecting the key stages of the evolution of the stock market and the world economy:

1. The period of the "old economy" (1887-1944). This time period is characterized by the dominance of enterprises that had significant fixed assets. This was due to the specifics of industrial development at that time. The leading positions in the stock market were occupied by enterprises of the railway industry, metallurgy and other capital-intensive sectors. The economy of this period was built on material-intensive production, and stock markets mainly reflected the dynamics of traditional industrial sectors.
2. The period of recovery and industrial development (1945-1991). This period covers the post-war recovery of the world economy and further industrial development, which led to structural changes in the economic system. The development of the stock market during this period was associated with the growth of industrial production, the strengthening of the role of transnational corporations and the formation of a modern financial system.
3. The period of globalization and information technologies (from 1993 to the present). The allocation of this time interval into a separate period is due to a number of significant socio-economic and technological changes that determined the further development of the world economy.

First, the beginning of the 1990s was marked by the collapse of the socialist bloc and the Soviet Union, which led to a fundamental change in the geopolitical balance. The United States became the only world superpower, which contributed to the strengthening of its financial markets and the global spread of market economic models.

Secondly, during this period the transition from an industrial to an information economy began. The mass spread of the Internet and the rapid development of digital technologies have radically changed the structure of financial markets, contributing to the emergence of new technological sectors and companies focused on intangible assets.

Perhaps it would be more correct to start the specified period not from 1993, but from 1991 or 1992, when the above-mentioned socio-political and economic changes began to occur in the world, but 1991 and 1992 correspond to the end of the next PEC cycle - the period of the reign of D. Bush. Therefore, we decided to start a new calculation period from the beginning of the new presidential cycle, that is, from 1993. The results of the calculations are presented in graphic form in Figure 1.

Analysis of the graph presented in Figure 1 shows that the PEC cycle, which was in the original form proposed by Arthur Merrill, is clearly traced only in the period 1897–1944. In the following time periods, a different dynamic is observed: the largest increase in the Dow Jones index is recorded mainly in the pre-election year, after which it is followed by a significant decrease. At the same time, the election year itself demonstrates a significantly smaller increase of the index compared to the previous year.

When considering the dynamics of the PEC in two annual intervals (dividing them into the two most favorable and two least favorable years), the following pattern can be identified: the cumulative increase in the Dow Jones index for the entire observation period (from 1897 to the present) in the first year after the election

was 242,63%, and in the intermediate year: 242,63%. At the same time, the increase in the index in the year before the election was 389,94%, and in the election year itself: 236,20%. Thus, in the last two years of the PEC presidential cycle (pre-election year and election year), the stock market showed a cumulative growth of 639,07%, which corresponds to an average annual growth of 9,99% (or rounded to 10%). However, in the first two years of the cycle (the year after the election and the interim year), growth was only 381,09%, which is equivalent to 5,95% per year. Thus, the second half of the presidential cycle provided a 1,68-fold increase in stock market growth compared to the first half of the cycle.

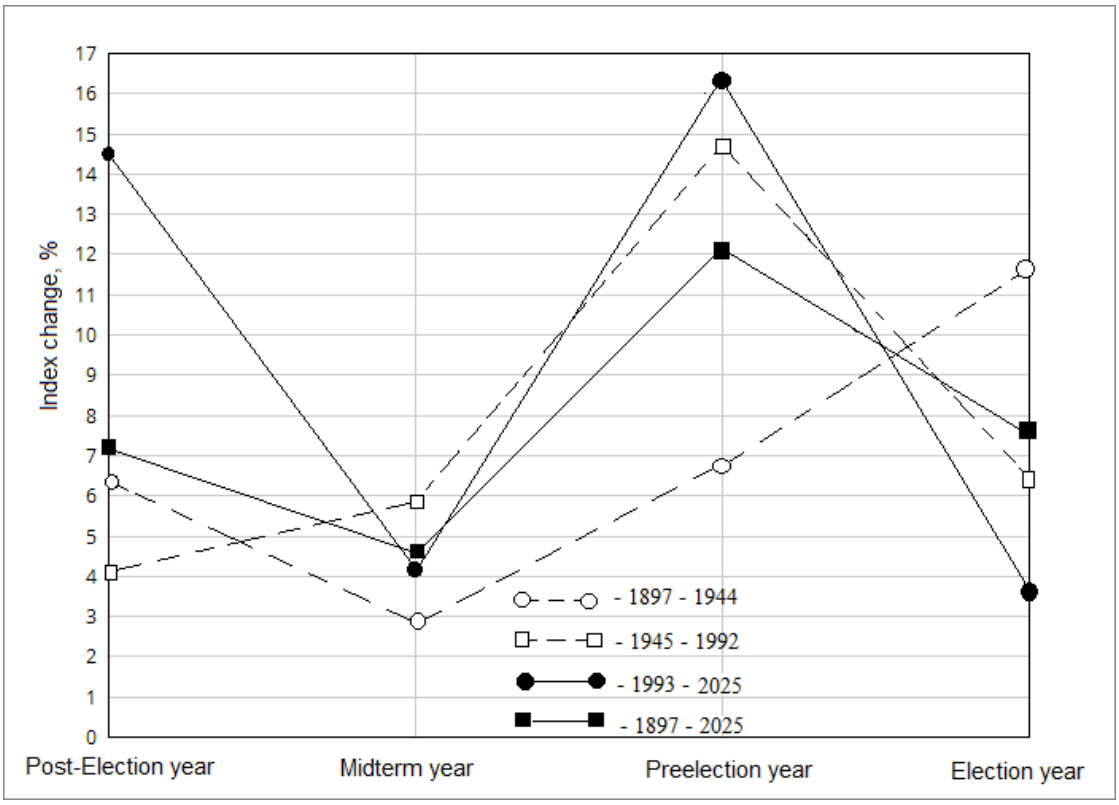

Fig. 1: Dynamics of the average annual growth rate of the Dow Jones Industrial Average by years of the presidential election cycle in different periods of economic development and for the entire observation period (from 1897 to 2025).

Source: conducted on the base of the authors' research.

Considering two other time periods – 1945–1992 and from 1993 to the present, the following features can be identified:

- In 1945–1992, the average increase in the Dow Jones Industrial Average in the election cycle became 10,65%, while in the first two years of the cycle it was significantly lower: 4,96%, so the size is 2,15 times less.
- In 1993–2025 the dynamics of the market have changed: the average increase in the index in the pre-election year and the election year became 10,01%, and in the first two days of the cycle: 9,32%, which indicates a decrease in the impact of the previously identified pattern of PEC on market dynamics.

Thus, we can formulate a thesis that in modern economic conditions there is only one stable trend remains: the greatest increase in the value of the Dow Jones Industrial Average is observed in the year, that is ahead of the elections. Starting from 1943 (the administration of Franklin Roosevelt) to the present day, this phenomenon is clearly manifested in the US stock market. The established pattern has only one exception: in 2015, a slight decrease in the index of 2,2% was recorded. In the last 20 cycles, this year was characterized by an increasing index (from 2,3% in 1987 to 38,3% in 1975), with the average increase during this period becoming 16,2% per year.

Specialized literature contains data on the influence of the party power of the administration that is in power on the dynamics of the stock market. Based on research (Hirsch, 2006), the 10’000 USD invested in the market during the Democratic Party would have increased to 279’705 USD over the period 1901–2004. The similar investment made during periods when the Republican Party was in power would have increased to 80’466 USD. Based on these studies, the average increase of the Dow Jones Industrial Average under the Democrats was

13,3%, while for the Republicans it was only 6,9%.

Later studies (Dzhusov, 2013), covering the period 1913–2011, confirm this trend: during the Democratic rule, the Dow Jones Industrial Average grew by 176,1% (6,8% per year), and during the Republican rule – by 172,4% (4,8% per year). However, the author emphasizes the gradual smoothing of the difference in the growth rates of the stock market under different administrations. Thus, if in 1901–2004 the growth rates under the Democrats exceeded the similar indicator under the Republicans by 1,9 times, then in 1949–2011 this ratio decreased to 1,4 times.

Analysis of data corresponding to the period of development of the modern economy (1993-2025, Table 2, rows 25-32) shows that the growth of the Dow Jones Industrial Average during the Democratic presidential administration was 256,63% (12,8% per year), and during the Republican administration – 52,13% (4,3% per year). Thus, the pattern of faster growth of the stock market during periods of Democratic party rule, revealed in the old economy, not only persists, but also becomes even more pronounced in the conditions of the modern economy. The results obtained may be of considerable interest in developing forecasts and forming long-term investment strategies that take into account the influence of political factors on the stock market.

Conclusions

Changing patterns in the presidential cycle: The patterns of the average annual growth of the Dow Jones Industrial Average in different years of the presidential cycle in the modern economy differ significantly from those observed before 1993. In modern conditions, only the year preceding the elections is of practical interest, since in this year the average growth of the index is 2–4 times higher than its growth in other years of the cycle. Thus, for predicting the prevailing trend in the stock market based on the presidential cycle, the pre-election year is of the greatest importance.

The influence of the party affiliation of the president on the market: The thesis that when the Democratic Party is in power, the US stock market grows faster is also confirmed in the conditions of the modern economy. At the same time, this pattern, which was discovered in the conditions of the old economy, becomes even more pronounced in modern conditions.

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