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Quantitative Analysis of a National Security Strategy for Investment Management Decisions

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Abstract

The objective of the internship and this project was to research quantitatively the impact of government policy in respect of national security on the public securities market and dynamics of certain sectors of the economy. The research findings should be incorporated into an existing portfolio management methodology for improving the quality of portfolio management. It was decided to focus on a US National Security Strategy (US NSS) as the most comprehensive guidance devoted to national security in a broad context that outlines the government's objectives, priorities, and plans addressing key national challenges. Due to its' regular publication NSS could serve as permanent long-term guidance for investors.

National Security Strategies contains a wealth of information about complex and dynamic array of existing and prospective threats in the fields of physical, information, social and economic security, the current international and domestic order and a government's strategic vision for a change. Despite its importance, the document lacks a quantification that makes it difficult to translate into a clear set of rules for a practical application. We propose a method that allows us to structure basic threats, gives them a quantitative assessment that highlights their trends. The proposed methodology could be applied to other documents related to national security and strategy.

We also propose a practical application based on this quantitative assessment of national security threats in application to the stock market portfolios. We proposed a sample rule for balancing the weights of stocks in US equity portfolios according to this quantification, which allowed us to modestly improve long-term absolute and risk-adjusted performance in 88% and 96% of cases respectively according to our simulation on hundreds of randomly selected equity portfolios on US stock market.

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CHAPTHER 1. Introduction

Governments prepare strategies to clearly define and communicate their objectives, priorities, and plans addressing key national challenges. Miskimmon, O'Loughlin and Roselle (2013) carefully describe how strategic narratives play important role in shaping the world order by linking the Communication Theory and International Relations. Strategies guide decision-making, coordinate actions across different sectors, and communicate intentions to both domestic and international audiences. By outlining threats, opportunities, and desired outcomes, governments aim to promote stability, security, and prosperity over the long term. The texts of the strategies usually relate to many aspects of the state functioning and security, comprehensive in wording and appeal to the emotional intelligence of a reader. We focused our attention on National Security Strategies as the most comprehensive documents of its kind, including aspects of physical, information, social and economic security of a country and its citizens and selected the USA as the basis of our research as the U.S. President has a legal obligation to publish regularly NSS according to Goldwater-Nichols Department of Defense Reorganization Act of 1986.

DeSouza (2000) argues that American national security must be rethought to include not only military threats but economic, financial, technological, and regulatory domains. In the years following the publication of the book, the focus of national security strategy has indeed shifted significantly to economic, technological and other aspects.

We propose a quantitative assessment of NSS strategic narratives that makes possible to visualize trends, their pivots in dynamics and find correlations. Practical application of this data can be useful in various fields. For example, for corporate strategic planning of an industrial company or an international conglomerate. We used U.S. National Security Strategies from 2000 to the present time as a basis for research and used the data from it in application to investment portfolio management on the US stock market.

Investment managers face serious difficulties in today's complex and fast-changing global environment. They must constantly adapt to new technological trends, regulations, manage growing risks like cybersecurity and climate change, respond to intense competition and client demands for higher returns with lower risk. Rapid market fluctuations, driven by global economic shifts, internal and external political instability make it challenging to predict asset performance accurately. The overwhelming volume of information and the speed at which markets react require quick, well-informed decisions under pressure. At the same time, stock market provides an excellent back-testing opportunities for quantitative evaluation of various hypotheses and methods. The U.S. equity market is the most developed and effective that allows to track correlations and influence of the threats and government initiatives described in a strategy on various sectors of the economy. In this work we propose a practical case for a quantitative assessment of US NSS and develop a methodology that makes it possible to support investment decision-making process and improve the performance of investment portfolios in the US public securities market by adjusting them to the government policies outlined in the strategies.

Our work concerns completely different fields of knowledge, including semantic and syntactic text analysis, classification of threats and challenges facing the country, developing supportive software that allows us to download and prepare the data, conduct Monte Carlo simulations and make recommendations regarding the current configuration of investment portfolios. The application of methodology, even in a primitive version, allows to improve log-term performance and risk-adjusted performance of the portfolios in 80% and 98% of cases respectively according to the simulations. The results allow us to count on further successful improvement of the methodology and the development of more advanced models based on it.

CHAPTHER 2. The Modern Concept of National Security

2.1. Grand Strategy and National Security

Grand Strategy is the highest level of national strategic thinking, a crucial component of a state's foreign policy and the overall vision of a state's national security goals and determination of the most appropriate means by which to achieve these goals. It outlines a nation's long-term vision for securing its core interests, including survival, prosperity, and global influence. The Grand Strategy is also the overarching framework that guides how the country uses its political, military, economic, and diplomatic power to achieve long-term national objectives and maintain global influence. As an example, B. Posen and A Ross (1997) made a remarkable analysis and comprehensive classification of main competitive U.S. Grand Strategy visions of their time but still actual in many dimensions. The table below could help to illustrate the Grand Strategy concept and related discourse:

Table 2.1.1

Strategy	Core Idea	Key Features	Pros & Cons
Neo-Isolationism	Minimalist, defensive realism. The U.S. should avoid entanglements abroad unless directly threatened; focus on core homeland defense	Sharp reductions in overseas military deployments; diplomatic engagement limited; avoid commitments that are costly or peripheral; nuclear deterrence is central; fewer overseas alliances	*Pros:* saves resources; less risk of being dragged into unwanted wars; more domestic focus *Cons:* may allow threats (especially regional issues, proliferation, instability) to grow; allies may feel abandoned; U.S. influence declines
Selective Engagement	Traditional balance-of-power realism but with some restraint: engage abroad to prevent major threats emerging (especially in Eurasia), but don't try to shape every global event	The U.S. commits where national interests are deeply engaged; keeps forward presence; maintains alliances for key regions; intervenes selectively; avoids overcommitment in humanitarian or low-stakes scenarios	*Pros:* balances risk and cost; retains ability to respond to serious threats; more sustainable *Cons:* ambiguity over when to intervene; possible underreaction; allies may press for more U.S. involvement; domestic politics may push for inconsistency

Strategy	Core Idea	Key Features	Pros & Cons
Cooperative Security	Blend of realism and liberalism. Emphasizes multilateral norms, institutions, cooperation, and "collective security." Threats are not only military but also proliferation, environmental, humanitarian crises	Heavy use of alliances and international institutions; collective action; non-military tools (diplomacy, treaties, nonproliferation); willingness to engage in humanitarian interventions; working with other states to share burdens	*Pros:* legitimacy; can spread costs; good for tackling transnational threats; can reduce blowback and international resentment. *Cons:* slower decision making; freerider problems; difficult to mobilize multilateral cooperation in crises; institutions may constrain U.S. flexibility
Primacy	Maximal realism / assertive unilateralism. U.S. seeks to maintain overwhelming power globally, to deter all potential rivals, shape the international order proactively, and ensure global leadership	Large forward military presence; readiness to use force unilaterally; shaping global norms and order; containing threats preemptively; interventions more frequent; extreme commitment to alliances/institutions that support U.S. leadership	*Pros:* maximum deterrent effect; strong capacity to shape the environment; preserves global influence *Cons:* very high cost; risk of overextension; moral/political backlash; burden on resources; provokes balancing by other states

Generally speaking, Grand Strategy in many dimensions answers fundamental questions such as:

- What are the nation's core interests?
- Who are its allies and adversaries?
- What role should the country play in the world?
- How should it balance domestic priorities with international commitments?
- What threats are most important, and where might they arise?
- How should the country use its power, military, economic, and diplomatic etc., to secure its interests?
- What are the acceptable costs and risks of pursuing a strategy?
- How do domestic politics and public support affect strategic choice?

If we follow again B. Posen and A Ross (1997) the answers to those questions would be:

Question	Neo-Isolationism	Selective Engagement	Cooperative Security	Primacy
1. What are the nation's core interests?	Protect homeland security, economic well-being, and democracy at home	Prevent great-power conflict in key regions (Europe, East Asia, Middle East)	Promote global peace, democracy, and human rights through institutions	Maintain U.S. global dominance and prevent rise of any peer competitor
2. Who are its allies and adversaries?	Few or no formal allies; alliances seen as costly entanglements	Traditional allies (NATO, Japan) valued for regional stability	Broad alliances and partnerships via international institutions	Allies are subordinate partners; adversaries are any challengers to U.S. hegemony
3. What role should the country play in the world?	Minimal global role; focus inward and avoid intervention	Engage selectively where vital interests are at stake	Lead multilaterally to build and enforce a cooperative world order	Lead unilaterally to shape and dominate the global order
4. How should it balance domestic priorities with international commitments?	Strongly prioritize domestic renewal; cut foreign commitments	Balance essential overseas commitments with domestic resource needs	Argue international engagement sustains domestic prosperity and peace	See global leadership as essential to long-term domestic strength
5. What threats are most important, and where might they arise?	Overextension and entanglement in foreign wars	Regional great-power conflicts threatening key interests	Internal conflicts, civil wars, and norm violations undermining global peace	Rising peer competitors (China, Russia) or challenges to U.S. preeminence
6. How should the country use its power (military, economic, diplomatic etc.)?	Maintain strong defense for homeland; avoid power projection	Use alliances, deterrence, and diplomacy selectively	Use collective, multilateral action combining diplomacy, economics, and force	Use preponderant military, economic, and diplomatic power to maintain supremacy
7. What are acceptable costs and risks of pursuing the strategy?	Very low; avoid high costs or foreign entanglements	Moderate; accept limited costs to protect vital regions	Moderate to high; willing to bear costs for global stability	High; global dominance justifies high defense spending and risk
8. How do domestic politics and	Public likely supports	Politically sustainable	Relies on public and elite support for multilateralism	Requires elite and public belief in U.S. exceptionalism;

Question	Neo-Isolationism	Selective Engagement	Cooperative Security	Primacy
public support affect strategic choice?	restraint and domestic focus	due to limited commitments	and moral leadership	vulnerable to fatigue or cost backlash

It is worth to mention that since World War II, the United States has pursued a global leadership strategy ("deep engagement") strategy that has been widely approved by the elite, professional, and academic communities (S. Brooks, W. Wohlforth (2016)) and only now with the new administration the shift to isolationism occurred.

Grand Strategy and National Security Strategy are closely linked, but they operate at different levels of planning and focus. National Security Strategy (NSS) should be considered a subset of Grand Strategy, focused more narrowly on how to manage national threats and protect from them through military, intelligence, diplomatic, and economic means. Grand Strategy usually is being set for long-term (decades) to shape the international environment in favor of national interests, while National Security Strategy is a medium-term (4-8 years) concentrated on current and emerging threats, policies. resource allocation, and strategic priorities. Grand Strategy is more conceptual and enduring - often not written down in one place.

The concept of "National Security" has undergone significant transformation over the past century. Originally focused on the protection of a state's territorial integrity through military strength, national security today encompasses a much broader increasingly complex array of interconnected concerns. According to B. Buzan (1991), "national security does not belong exclusively to the military sector. It also includes political, economic, societal and environmental dimensions, each with its own dynamics of threat and vulnerability." They can arise from traditional conflicts, cyberattacks, pandemics, environmental disasters, economic instability, or efforts to undermine public trust. Globalization, technological advancements, environmental challenges, and socio-political shifts have expanded the understanding of security to include economic stability, social cohesion, informational resilience, and political integrity. Consequently, modern national security must be understood as a multidimensional

and dynamic framework, where weakness in one security component could gradually weaken others. “Security is not a fixed category but a practice - something states and other actors do through discourse” (L. Hansen (2006). So, National Security is the comprehensive framework through which a nation safeguards its sovereignty, territorial integrity, political system and its legitimacy, economic well-being including technological resilience, and the safety of its citizens against a wide range of threats. In the conditions of increasing global strategic competition among countries and their alliances the importance of a national security strategy has significantly emboldened. As such, an approach to national security should be holistic, flexible and proactive, ensuring that all critical sectors and important national assets in a broad sense are protected and resilient.

National Security Strategy also is a formal, published document (e.g., the U.S. NSS issued by the White House), translating grand strategic principles into actionable policies. Grand Strategy integrates all instruments of national power: Military (hard power), Economic (trade, subsidies, sanctions, development), Diplomatic (alliances, institutions) and Ideological/Informational (“soft power”), According to J. Nye (2004), “soft power is the ability to get what you want through attraction rather than coercion or payments. It arises from the attractiveness of a country's culture, political ideals, and policies.”. Soft power became a very important tool of international influence during the last century and along with hard power creates a mighty “smart power” combination that for a long time allowed the USA “using both carrots and sticks, as well as attraction and persuasion - to achieve foreign policy goals” (J. Nye (2009). We are going to divide the National Security into four basic blocks: Physical Security, Information Security, Social & Political Security and Economic Security.

2.2. Physical Security

Physical security remains the foundation of national security, focusing on defending the nation's, primarily physical objects: borders, infrastructure, land, resources and population against direct physical threats. This includes protection from military aggression by foreign states, including foreign military operations, terrorism, transnational organized crime, pollution

and degradation of nation's natural resource, and large-scale natural disasters such as earthquakes or pandemics.

Traditional defense through the military - army, navy, air, space force, and special forces remains vital. M. Clarke (2021) as a modern researcher of U.S. grand strategies treats traditional military security (wars, armed forces, alliances) as a central variable in grand strategy but always filtered through political culture. Clarke argues that when high defense spending and military interventions proved unsustainable after President Bush's "grand strategic overreach" (e.g. Iraq, Afghanistan), domestic opinion (shaped by political culture) demanded a pull-back. Thus, military threats remain vital inputs to strategy, but how America responds depends on which statecraft culture dominates.

Nowadays, a significant part of physical security integrates aspects like border control, securing critical infrastructure, such as power plants, transportation networks, communication systems, government buildings by law enforcement and special services, and emergency management agencies that withstand public unrest, natural disasters, biological or chemical threats. It involves the national health system that provides consistent protection of the health of the population in physical, mental and emotional domains as an ongoing process throughout their lives and in a case of emergency. Overall physical security requires constant vigilance, investment in modern defense, health and consistent coordination management technologies among all the government bodies and agencies.

2.3. Information Security

Information security is a vital pillar of modern national security, concerned with the protection of a nation's sensitive data, digital infrastructure, and communication systems from a range of adversarial threats. These threats include cyberattacks, electronic espionage, hacking, and the proliferation of disinformation. While information security was initially treated as a technical subset of physical security, primarily involving the safeguarding of computer systems and classified files, its significance has grown exponentially with the rise of digital technologies,

global interconnectivity, and hybrid warfare. Richard A. Clarke, R. Knake (2010) argues that nowadays cyber threats are central components of national security, not just technical problems.

J. Nye and W. Owens (1996) astutely predicted that “the one country that can best lead the information revolution will be more powerful than any other. … Yet its more subtle comparative advantage is its ability to collect, process, act upon, and disseminate information, an edge that will almost certainly grow over the next decade.” Today, information security is recognized not merely as a technical discipline, but as a strategic domain of national power, closely intertwined with political stability, public trust, and geopolitical competition. It encompasses cybersecurity measures such as firewalls, intrusion detection systems, and encryption protocols to defend against unauthorized access and sabotage. Simultaneously, it includes information assurance practices that ensure data integrity, confidentiality, and availability across both civilian and military networks. Protecting critical information infrastructure - including government databases, financial systems, power grids, transportation system, and emergency communication channels - has become a top priority, as disruptions can paralyze key sectors and erode national resilience. International cooperation, robust legal frameworks, cyber diplomacy, and public-private partnerships are increasingly necessary to address the borderless nature of digital threats.

Crucially, information security also involves countering hostile information operations, such as foreign-sponsored disinformation campaigns, propaganda, and psychological operations designed to influence public opinion, undermine democratic institutions, or incite social unrest. These operations may be orchestrated through social media, fake news websites, or coordinated inauthentic behavior, often blurring the lines between warfare and manipulation. With the recent rise of hybrid warfare this type of hostile operations starts to play a special role and drags serious attention from the governments and N. Kovalčíková (2024) provides its’ ultra-actual description in detail.

In this context, information security not only serves as a protective function but also acts as a strategic enabler of broader national security and foreign policy objectives. Nations that effectively secure their information ecosystems are better positioned to safeguard sovereignty, maintain public confidence, and deter adversarial influence in an era where information is both a target and a weapon.

Moreover, the information technology sector has been the fastest growing element of the economy of developed countries over the past 30 years. This makes information security extremely important for national development and nation's position in the competitive world.

2.4. Political and Social Security

Political and social security involves maintaining the stability of the political system, protecting democratic institutions, and promoting social cohesion. It addresses risks like political extremism, social unrest, foreign interference in domestic affairs, and the erosion of public trust in governance. As R. Luckham & T. Kirk (2013) fairly stated "security is not necessarily obtained even when states consider themselves to be at peace, as in conditions of authoritarian rule, social injustice or structural violence." This section of national security or a "foreign hostile influence" is closely intertwined with information security, as such impacts as election interference, political and social process including through the creation of fake news, disinformation and misinformation campaigns which often channeled through social and other media platforms, espionage, and the introduction of hostile agents of influence into government agencies and political parties.

P. Lægreid and L. Rykkja (2019) emphasize that capacity (governance) and legitimacy (people's trust in institutions) are central to social stability and thus political security of states. Formally, the issues of social security and the stability of the national political system are not primarily associated with the concept of national security from the first sight. However, most political scientists pay significant attention to this segment, since the coherence and efficiency of the national political system is responsible for the discourse and formation of Grand Strategy

which itself define a strategy for national security. M. Clarke (2021) explicitly incorporates domestic social factors as part of national security. His core thesis - that culture "conditions" strategy – means that politics, ideology and cohesion are not peripheral but central to security.

2.5. Economic Security

Economic security focuses on ensuring the strength and resilience of the economy. It includes protecting critical industries, securing supply chains, managing financial risks, providing certain resource security, promoting fair trade, and guarding against economic espionage or dependency on hostile foreign actors. The number of dimensions of economic security surpasses all other segments of national security and will continue to grow with the population, number of new industries, technologies, domestic and international bodies and their interrelations.

Economic strength is treated as a core pillar of national power, probably the most important one. This became especially actual since XIX century for market democracies. For example, recent National Security Strategy of Japan (2022) places it first. The most prominent revisionist historians of American diplomacy of XX century, W. Williams (1959) observed that the U.S. sought an "Open Door" world order so that "America's preponderant economic power would extend the American system throughout the world". Economic leverage, i.e. trade policy, sanctions, resource security should be interpreted through statecraft cultures, a view that treated global markets and institutions as security assets. G. Shiffman and J. Jochum (2011) provide a detailed description of economic instruments of security policy. So, energy security, trade imbalances, human resources or unsustainable debt must also be seen in the international political context. For a researcher, this section is the most attractive due to its importance.

We would like to link economic security with the concept of economic assets. The category of economic assets can include the state of the country's scientific and technological base, public, corporate and private finances, the development of the corporate sector, quality of a human

capital, sectoral diversification and self-reliance of the economy, various aspects of international trade, the state of public infrastructure and many other components. In the US NSS over the past 30 years, unfair trade, supply chain disruptions, corruption, poor infrastructure, inflation, unsustainable debt levels, and others have been mentioned with varying degrees of frequency, depending on the weakness of a particular segment, as threats to national economic security. The basic classification of economic assets could be the following:

- Strategic industries and technologies (e.g., semiconductors, advanced manufacturing, new materials, aerospace & defense)
- Critical infrastructure (energy grids, transportation, communications networks)
- Natural resources and supply chains (rare earths, critical minerals, energy resources)
- Intellectual property, knowledge assets (trade secrets, R&D capacity)
- Financial assets and reserves (state holdings, sovereign wealth funds, foreign currency reserves)
- Firms or entities whose control or ownership may have national security implications (especially with foreign investment)
- Human Resources (educational level of the population, researchers and research institutions, the level of creativity and entrepreneurship)
- Digital/virtual assets: data, networks, platforms

CHAPTHER 3. Classification of Threats to National Security

3.1. Various Classification Approaches to National Security Threats

There are many approaches to the classification of security threats. The primitive logic suggests that the basis structure of threats description could be the following: an adversary, domain of a threat and an importance level. J. Richards (2012) offers a structured approach to understanding national security threats by categorizing them into three tiers:

- Direct and immediate threats to national survival, such as terrorism and cyberattacks

- Significant but less immediate challenges, including organized crime and pandemics
- Long-term issues like climate change and resource scarcity

P. Paleri (2008) expands the concept of national security beyond traditional military concerns, identifying 14 distinct elements from various fields:

- Military Security
- Economic Security
- Resource Security
- Border Security
- Demographic Security
- Disaster Security
- Energy Security
- Geostrategic Security
- Informational Security
- Food Security
- Health Security
- Ethnic Security
- Environmental Security
- Cyber Security

The official comprehensive report Annual Threat Assessment of the U.S. Intelligence Community (2025) categorizes threats based on their originating actors:

- Nonstate Actors: Including terrorist organizations and transnational criminal networks
- Nation-States: China, Russia, Iran, and North Korea, focusing on their espionage, cyber capabilities, and geopolitical strategies
- Emerging Technologies: Assessing how advancements like artificial intelligence and biotechnology can be exploited by various actors

At the same time the Office of Intelligence and Analysis of the Department of Homeland Security in Homeland Threat Assessment (2025) outlines the threats by four major fields with a sub-division and actors:

- Public Safety and Security
    - Terrorism by Domestic, including homegrown, and Foreign Violent Extremist (DVE and FVE), Foreign Terrorist Organizations (FTO) such as ISIS, al-Qa'ida, Hamas etc., Iran
    - Illegal Drugs by Transnational Criminal Organizations (TCO) such as Sinaloa Cartel and New Generation Jalisco Cartel from Mexico, China-based companies and other
    - Influence Operations and Transnational Repression by state-sponsored actors especially China, Iran, and Russia
- Border and Immigration Security
    - Human and Drug Smuggling by TCOs mainly based in South and Central America, Caribbean, including
    - Violations by terrorists
    - Crossings by Illegal Migrants from Mexico and Canada borders
- Critical Infrastructure Security by terrorists, adversarial nation-states (China, Russia, Iran, North Korea) and nonstate actors
    - Disruption of US services in IT
    - Espionage
    - Disruptive and Destructive Physical Attacks
    - Fake News and Manipulative Media using Generative Artificial Intelligence
- Economic Security
    - Anticompetitive, Coercive Policies from state actors, primarily China
    - Economic Espionage and Influence i.e. theft of US intellectual property, technology, and trade secrets from state actors, primarily China

- Supply Chains Disruptions due to foreign manipulation (China), conflict, economic shocks abroad, climate-related events, and public health crises

According to the US Office, climate change and natural disasters compound national security threats. This view is radically at odds with the position of the previous administrations of Joseph Biden and Barack Obama, that considered the risks of climate change, primarily due to uncontrolled rise in CO2 emissions, as one of the key ones for the world and the United States.

3.2. Proposed Own Classification

We decided to follow the above descriptions of the main areas of national security described in chapters 2.2 – 2.4 and use them as a basis for classification. Our classification system will be two-dimensional i.e. any threat can have a source in addition to the security domain, which could be a country, a criminal organization, or an informal unifying concept such as domestic extremists. In addition to the above 4 main domains, we have added General Threats, which assumes the presence of a wide range of threats, military, information, economic, mainly due to a hybrid character of the geopolitical opponents activity and is classified primarily by a source:

- General Threats
- Physical Security
- Cybersecurity & Intelligence
- Political & Social Stability
- Economic & Trade Security

This combination could be considered as a basic “vector of threats” in analogy to computer and network security. We have studied the texts of the US national security strategies since 2000 and, based on it, divided each of the main domains of threats, except for General Threats, into segments and subsegments according to the below:

Table 3.2.1

General Threats
Physical Security
Military & Defense
Nuclear
Conventional Warfare
Weapons of Mass Destruction (WMDs)
Space & Air Defense
Terrorism & Crime
Terrorism & Extremism
Illegal Immigration & Border Infiltration
Narcotics, Trafficking & Organized Crime
Environmental & Health
Pandemics & Biothreats
Ecology, Climate Change & Natural Disasters
Food & Water Security
Information Security
Cybersecurity & Intelligence
Foreign Espionage & Surveillance
Intellectual Property Theft & Espionage
Cyberattacks on Critical Infrastructure
Political & Social Stability
Foreign Influence & Psychological Warfare
Social Polarization & Civil Unrest
Economic & Trade Security
Economic Coercion & Unfair Trade
Supply Chain Disruptions & Transport
Economic Downturn & Weakness
Poverty & Inflation
Bureaucracy & Corruption
Poor Infrastructure & Industrial Base
Demography & Health
Education & Science
Globalization
Energy & Resource Security
Sanctions Evasion & Illicit Finance

We do not claim to fully cover the entire range of threats with this classification and expect to gradually add to this system new ones if needed.

Let's take an example of an attack on a private corporation with the aim to steal state secrets committed by hackers presumably linked to Chinese military. According to our system the threat will be classified as a threat to "Information Security/ Cybersecurity & Intelligence/ Intellectual Property Theft & Espionage" coming from "China". In some situations, one threat could have double treatment, for instance, a threat of a terrorist attack from radical religious terrorists using bacteriological weapons could be both classified as "Physical Security/ Military & Defense/ Weapons of Mass Destruction (WMDs)" and "Physical Security/ Terrorism & Crime/ Terrorism & Extremism". The categories are not mutually exclusive. To provide a correct quantitative ranking we score a threat at both subsegments via attributing 50% weights to each subsegment.

CHAPTHER 4. Language of Public Political Documents

A National Security Strategy refers to the type of official documents designed to inform citizens about the challenges, government's achievements, intentions and future plans in the field of national security. It also serve as a communication tool with external actors. Sir L. Freedman (2013) states that "strategy is as much about telling a credible story as it is about setting priorities. A strategy must persuade its audiences that power and purpose are aligned." , Therefore, this document, like most political texts, includes the basic principles of persuasion of a reader. Convincing someone effectively comes down to clear communication, emotional intelligence, and strategic persuasion techniques. Writing political documents that convince people requires a combination of persuasion, clarity, and emotional appeal. J. Farwell (2012) provides a comprehensive overview and classification of various examples of political persuasion in strategic communications including historical political speeches and documents and modern communication by US state agencies. With his help we outline the key principles to follow to convince a reader within a clear and straightforward text structure and rules:

- **Clarity of Purpose**

Stating the objective from the very beginning using direct and unambiguous language the document should be clear about the aims to achieve.

- **Audience Awareness**

Knowing who you are addressing. Tailoring tone, priorities, and language to resonate with the intended audience (e.g., citizens, policymakers, allies), anticipate objections and acknowledge concerns and address them calmly and convincingly.

- **Logical Structure**

Using a clear outline. Typically:

a) Introduction
b) Challenge or Problem
c) Vision or Principles
d) Actions and Solutions
e) Call to Unity or Urgency

Each section should build upon the last. Show cause and effect, not just assertion.

- **Credibility and Authority**

Citing facts and evidence, using data, past success, and expert consensus when appropriate, consistent tone and reasoning but also avoiding emotional excess or exaggeration. The text should be firm and measured.

- **Strategic Framing**

Strategic narratives frame challenges in broad terms, connect specific issues to larger values (e.g., freedom, security, prosperity) and highlight shared goals, emphasize unity and collective benefit from a strategic point of view. R. Entman (2004) describe framing as the process of selecting some aspects of perceived reality and making them more salient in a communicating text. Catanzaro and Coticchia (2022) go further

by arguing for four levels used in a discourse: frame → strategic narrative → master narrative → ideology.

- **Forward-Looking Language**

  Use active and future-oriented verbs. (e.g., “We will secure...”, “We are committed to…”). Provide a sense of direction. Make clear how today’s decisions shape tomorrow’s outcomes. This sort of language is also important in a strategic framing context.

- **Brevity and Simplicity**

  Using plain language whenever possible, keep sentences and paragraphs concise with each one making a distinct point. Avoid jargon.

  Call to Action or Commitment

  Ending with a resolve by making clear what is expected of the reader or what the next steps are. Use persuasive closing lines. Reaffirm the urgency and importance of collective action.

With the aim to perform a quantitative analysis of the text that we discuss further we follow the ideas of R. Scholz (2019) who emphasizes that intra-textual patterns (frequency, collocation, topic clusters) must always be interpreted against extra-textual frames such as genre, media form, and communication purpose. As we outlined before NSS is a special genre of official political communication with its own specifics. So, aiming to simplify the quantitative analysis of the text of NSS and based on the principles outlined above, any sentence, a block of sentences or paragraphs in NSS, including address and introduction chapters can be logically divided roughly into three types by meaning and linguistically:

The Challenge We Face

[This type is an emotionally involving presentation of the challenges facing the nation and external threats. It supports the view that the threats and challenges are grave. Presents key facts, statistics, and historical context. Frames the problem in a way that aligns with reader's perspective such as

- *Fact 1 or Statistic*
- *Fact 2 or Statistic*
- *Example of real-world impact*

[Also usually accompanied by a narrative that a fail to address this challenge, the consequences will be severe, affecting key stakeholders or groups].

Recent Developments

[Factual information on various aspects of domestic and foreign policy, the assessment of the situation, and description of the latest achievements countering the threats and challenges, emphasizing the creditworthiness in the government and its ability to solve the challenges it faces].

Our Vision for Change & Call to Action

[A clear and actionable plan to ensure a desired outcome. Description of the certain vision guided by commonly accepted by society principles, norms and ideas including justice, equality, prosperity etc. With the details such as:

1. *[Policy Proposal 1] – [Brief description and expected benefit].*

……..……..

N. [Policy Proposal N] – [Brief description and expected benefit].

The clear and certain statement that with implementation of proposed measures, the country will achieve desired positive outcomes or goals, ensuring a better future for all also mentioning that delaying action is not an option and could worsen the stance.]

As soon as the first type, The Challenge We Face" is responsible for informing about certain threats to national security, emotional impact on a reader, creation of a sense of urgency, justification for the need for change, the more attention is paid to a specific threat, the greater the impact on a reader should be, and the easier it is to justify a certain response (ensure financing of some spheres, geopolitical alliances, military invasion etc.). Usually, in addition to a threat to national security itself, the strategy indicates its source or domain of a threat, a country, organization or a type of an adversary such as radical religious extremists, organized crime or drug cartels.

The second type of sentences is being used for informing, providing factual evidence to convince the reader in the position. It also helps to involve the reader by enforcement of emotional contact with the reader by repeating common narratives, principles and ideals, shared by a nation, outlining the previous achievements of the country or the government, adding to the trust based on the facts presented.

The third type is a strong call to action with a description of plans and future steps. Since politics and national security are types of "simultaneous games," the authors of a strategy cannot provide detailed plans in order not to disclose them to other geopolitical players, to preserve a strategic "fog of war". The very nature of geopolitical relations interactions suggests that strategy can be very adaptive and dynamic depending on the social and economic situation, the electoral period, and the complexity of the strategic challenges facing the country and many other factors, the volume of the text, the form and expressiveness of the presentation, which falls on one type or another, may vary.

CHAPTHER 5. Scoring of National Security Strategy Texts

Extracting quantitative information from text is important because it transforms qualitative, unstructured language into measurable data that can be systematically analyzed and used for decisions making using clear mathematical algorithms and rules:

- Enables Objective and Data-Driven Analysis

  Texts often contain subjective or descriptive information. Quantifying aspects of that text such as frequency of specific words, sentiment scores, or counts of certain threat mentions allows for objective comparisons across documents, time periods, or policy areas.

- Facilitates Pattern Recognition and Trend Analysis

  Quantitative data extracted from text helps identify patterns, trends, and correlations that might not be obvious from a qualitative reading alone.

- Supports Statistical and Computational Modeling

  Once text data is quantified, it can be used in statistical models, machine learning, and serve as a feeding data for autonomous agents.

- Increases Reproducibility and Transparency

  Quantitative extraction allows other researchers to replicate findings and verify interpretations. This strengthens the scientific rigor of textual or policy analysis by grounding conclusions in measurable evidence.

Our goal is to extract practical information from NSS. It demands us to perform analysis of a text and get quantitative characteristics that highlight trends and policy changes. Quantifying political texts can be highly useful, especially regarding economic matters, because it allows researchers to systematically identify patterns, priorities, and shifts in economic policy discourse over time. By converting qualitative statements into measurable data, one can track

how often specific economic issues such as trade, inflation, or inequality are emphasized, and how their framing changes with political or global events. This approach also enables comparisons across administrations, parties, or countries, revealing underlying ideological differences or consistencies in economic strategy. Moreover, quantitative analysis helps detect subtle and general trends in rhetoric that may precede policy changes, offering valuable insights for economists, policymakers, and political analysts.

The pre-graduate internship was linked to the investment advisory matters, so we decided to use quantified data extracted from NSS and search for its' application to investment decision-making on a stock market. There are many common methods of quantitative text analysis that allow us to understand the context and perform a comparative analysis based on various algorithms and approaches that mentioned for example by C. Aggarwal (2018) and practitioners in their works:

a) Word Frequency Analysis

Purpose: Identify the most common terms to reveal key themes or priorities.

Method: Count and rank word/token occurrences.

Tools: Python (NLTK, spaCy), R (tm), WordStat.

b) Keyword – in - Context (KWIC)

Purpose: Show how a word is used in context to understand meaning or framing.

Method: Display occurrences of a word with surrounding words in a fixed window.

Tools: AntConc, Python (NLTK), Voyant Tools.

c) Term Frequency - Inverse Document Frequency (TF-IDF)

Purpose: Identify distinctive words by comparing term frequency to how commonly they appear across documents.

Method: Calculate the weight of words to highlight unique or important terms in one text versus many.

Tools: Python (scikit-learn), R (text2vec), Tidytext.

d) Sentiment Analysis

Purpose: Measure emotional or evaluative tone (e.g., positive, negative, neutral).

Method: Use dictionaries or machine learning models to classify sentiment by sentence or document.

Tools: VADER, TextBlob, LIWC, NRC Lexicon.

e) Topic Modeling

Purpose: Discover abstract topics within a corpus.

Method: Unsupervised machine learning (e.g., Latent Dirichlet Allocation - LDA) clusters words into topics.

Tools: Gensim (Python), MALLET, STM (R).

f) Collocation and N-Gram Analysis

Purpose: Identify common multi-word phrases (bigrams, trigrams, etc.) that convey meaning beyond single words.

Method: Detect statistically significant word pairings.

Tools: NLTK, spaCy, Quanteda (R).

g) Concordance and Co-occurrence Analysis

Purpose: Explore how words are associated with others.

Method: Build co-occurrence matrices and networks to analyze relationships between terms.

Tools: Gephi (for networks), Textstat, Quanteda.

h) Readability Metrics

Purpose: Assess the complexity or accessibility of the text.

Method: Compute indices like Flesch-Kincaid, Gunning Fog, or SMOG.

Tools: Textstat (Python), KoRpus (R).

i) Supervised Text Classification

Purpose: Automatically label or categorize text (e.g., classify as “threat,” “vision,” etc.).

Method: Train machine learning models using labeled data (e.g., logistic regression, SVM, random forests).

Tools: scikit-learn, FastText, spaCy.

j) Stylometric Analysis

Purpose: Measure writing style to detect authorship or shifts in tone/style.

Method: Analyze metrics like word/sentence length, punctuation use, function word frequency.

Tools: Stylo (R), JStylo.

A simple example of a supervised text that searches Internet for NSS pdf-file, prepares the text and performs a primitive word frequency analysis based on embedded vocabulary using Python (NTLK) could be found in Appendix I.

I. Budge and P. Pennings (2007) argue that word-frequency approaches for political texts lack the needed accuracy and usually miss some important nuances. Dictionaries, simple or advanced, associated with predefined categories (e.g. sentiment, topics, frames) researchers build or use and counting of the word occurrences in texts are applicable almost to all the abovementioned methods. W. Atteveldt (2019) dedicated his work to automatic analysis and

recognition of political texts. According to the author the supervised Machine Learning (ML) techniques is more flexible and typically more accurate than naive dictionary methods. The combination of human knowledge and computer capabilities are the most powerful in general while unsupervised Machine Learning is useful for exploratory analyses that can reveal surprising patterns.

As we noted above, the purpose of the NSS publication is not only to inform, but also to promote the view and convince the reader of the chosen foreign policy or economic course. Therefore, a direct analysis of the text, by counting the number of occurrences of phrases and expressions, even considering definitions that add emotional coloring, should not fully reflect how serious, from the point of view of the authorities, the threat is. Modern analysis tools have made great progress, but they do not yet have the full range of emotional intelligence. Also, a deep understanding of the text requires a certain level of knowledge in the field of national and international politics, familiarity with the news background, which only a very advanced language model can afford. Although, the methods provided above based on word counting give some reliable result, we choose to rely on our human-based text analysis with the support of computer, i.e. computer-assisted instead of supervised machine learning. At the same time, we clearly understand that in the nearest future capabilities of language models will surpass human ones.

We focus our analysis on security threats instead of the ways to confront them. This kind of information is much more static, as counteracting actions can change dynamically depending on the actions of geopolitical opponents, due to internal risk assessment, political conjuncture etc. As B.Buzn (1983) have noted, “the constellation of threats is remarkably consistent over time, even as their perceived urgency fluctuates”. Our logical assumption is that the number of words dedicated to description of a certain threat is strongly positively correlated to the level of threat. We calculate the number of words devoted to its description of a particular threat or “The Challenge We Face” as the primary basis for evaluation and attribute it to one or several threats according to the classification provided in 3.2. We pay attention to key words, that give

the text emotional color, so the reader could answer positively to the question: “Does this text make me feel unsafe?”. If a sentence or a block of sentences relates to several threats/ sources of threats, we divide it proportionally by the number of threats/ sources of threats.

Please find below the example from US NSS dated February 2015. We highlighted the text related to “The Challenge We Face” with bold font and marked key words that give emotional patterns to the text with a blue color:

II. Security

The United States government has no greater responsibility than protecting the American people. Yet, our obligations do not end at our borders. We embrace our responsibilities for underwriting international security because it serves our interests, upholds our commitments to allies and partners, and addresses threats that are truly global. There is no substitute for American leadership whether in the face of aggression, in the cause of universal values, or in the service of a more secure America. Fulfilling our responsibilities depends on a strong defense and secure homeland. It also requires a global security posture in which our unique capabilities are employed within diverse international coalitions and in support of local partners. Such a shift is possible after a period of prolonged combat. Six years ago, there were roughly 180,000 U.S. troops in Iraq and Afghanistan. Today, there are fewer than 15,000. This transition has dramatically reduced U.S. casualties and allows us to realign our forces and resources to meet an evolving set of threats while securing our strategic objectives.

In so doing, we will prioritize collective action to meet the persistent threat posed by terrorism today, especially from al-Qa’ida, ISIL, and their affiliates. In addition to acting decisively to defeat direct threats, we will focus on building the capacity of others to prevent the causes and consequences of conflict to include countering extreme and dangerous ideologies. **Keeping nuclear materials from terrorists and preventing the proliferation of nuclear weapons remains a high priority, as does mobilizing the international community to meet the urgent challenges posed by climate change and infectious disease. Collective action is needed to assure access to the shared spaces—cyber, space, air, and oceans—where the dangerous behaviors of some threaten us all.**

Our allies will remain central to all these efforts. The North Atlantic Treaty Organization (NATO) is the world’s preeminent multilateral alliance, reinforced by the historic close ties we have with the United Kingdom, France, Germany, Italy, and Canada. NATO is stronger and more cohesive than at any point in its history, especially due to contributions of the Nordic countries and newer members like Poland and the Baltic countries. Our alliances in Asia underwrite security and enable prosperity throughout Asia and the Pacific. We will continue to modernize these essential bilateral alliances while enhancing the security ties among our allies. Japan, South Korea, and Australia, as well as our close partner in New Zealand, remain the model for interoperability while we reinvigorate our ties to the Philippines and preserve our ties to Thailand. And our allies and partners in other regions, including our security partnership and people-to-people ties with Israel, are essential to advancing our interests.

This text mentions several threats that fall into the categories: Nuclear, Weapons of Mass Destruction (WMDs), Space & Air Defense, Terrorism & Extremism, Supply Chain Disruptions & Transport, Climate Change & Natural Disasters, Pandemics & Biothreats, Cyberattacks on

Critical Infrastructure. The total number of words is 83. The rating for a particular threat in our calculation index is 83/7 = 11,9.

CHAPTHER 6. US NSS 2000-22 Threats

For our research, we took the US NSS as a basis, since the country is the most powerful country in the world in all spheres, especially in aspects related to promoting of its' global leadership according to its' Grand Strategy. In particular, the country's stock market is the most developed. This represents the perfect combination for us. We took the period covering the new century, from 2000 to 2022, as a basis of our research. During this period 5 US Presidents outlined their views on national security in these 7 NSS (see Appendix II for the manually labeled US NSS files embedded vocabularies). The new administration of Donald Trump has not yet released an updated vision of the strategy. We made the manual scoring of these documents word by word, sentence by sentence according to the methodic and classification system described in previous chapters. Please find below the statistics of threats and challenges in dynamics:

Table 8.1

US NSS Threat Description Wording							
Administration	**Clinton**	**G. W. Bush**		**Obama**		**Trump**	**Biden**
	2000	**2002**	**2006**	**2010**	**2015**	**2017**	**2022**
Overall Threats (words)	**6'694**	**1'323**	**2'619**	**2'633**	**2'599**	**5'044**	**3'677**
% of words dedicated to threats	15.1%	10.3%	13.6%	8.9%	16.9%	22.1%	15.9%
General Threats (words)	146	212	43	56	208	1'527	953
% of words dedicated to General Threats	2.2%	16.0%	1.6%	2.1%	8.0%	30.3%	25.9%
Physical Security	**55.0%**	**68.6%**	**65.9%**	**60.0%**	**44.8%**	**49.7%**	**60.5%**
Military & Defense	**33.5%**	**38.0%**	**25.5%**	**21.3%**	**22.6%**	**27.9%**	**21.9%**
Nuclear	10.7%	14.5%	14.1%	15.2%	5.9%	6.9%	8.6%
Conventional Warfare	15.2%	6.0%	3.2%	4.1%	6.6%	1.4%	8.5%
Weapons of Mass Destruction (WMDs)	4.5%	13.9%	8.1%	0.6%	2.1%	3.4%	1.1%
Space & Air Defense	3.1%	3.6%	0.0%	1.4%	8.0%	16.3%	3.6%
Terrorism & Crime	**13.6%**	**20.9%**	**35.8%**	**21.3%**	**15.1%**	**19.3%**	**13.1%**
Terrorism & Extremism	6.8%	16.8%	33.0%	17.2%	10.5%	14.2%	7.0%
Illegal Immigration & Border Infiltration	2.1%	0.0%	0.2%	1.0%	2.8%	3.0%	4.7%
Narcotics, Trafficking & Organized Crime	4.7%	4.1%	2.6%	3.2%	1.8%	2.1%	1.4%
Environmental & Health	**7.9%**	**9.7%**	**4.6%**	**17.4%**	**7.1%**	**2.5%**	**25.5%**
Pandemics & Biothreats	2.5%	4.8%	2.4%	8.5%	4.3%	2.5%	4.7%
Ecology, Climate Change & Natural Disasters	2.6%	3.6%	2.2%	6.7%	1.8%	0.0%	14.6%
Food & Water Security	2.8%	1.3%	0.0%	2.2%	1.0%	0.0%	6.2%
Information Security	**10.4%**	**1.1%**	**0.6%**	**8.3%**	**6.0%**	**21.5%**	**9.5%**
Cybersecurity & Intelligence	**10.4%**	**1.1%**	**0.6%**	**8.3%**	**6.0%**	**21.5%**	**9.5%**
Foreign Espionage & Surveillance	2.3%	0.0%	0.6%	2.0%	0.5%	4.5%	2.7%
Intellectual Property Theft & Espionage	2.9%	1.1%	0.0%	2.0%	2.8%	8.0%	1.3%
Cyberattacks on Critical Infrastructure	5.2%	0.0%	0.0%	4.2%	2.7%	9.0%	5.5%
Political & Social Stability	**10.0%**	**2.5%**	**13.2%**	**6.6%**	**20.4%**	**12.0%**	**5.8%**
Foreign Influence & Psychological Warfare	0.0%	0.0%	0.0%	0.0%	9.7%	9.4%	1.6%
Social Polarization & Civil Unrest	10.0%	2.5%	13.2%	6.6%	10.7%	2.6%	4.2%
Economic & Trade Security	**24.6%**	**27.8%**	**20.3%**	**25.1%**	**28.8%**	**16.9%**	**24.2%**
Economic Coercion & Unfair Trade	3.5%	6.1%	5.5%	0.0%	4.0%	4.4%	6.5%
Supply Chain Disruptions & Transport	2.1%	0.0%	0.0%	0.0%	3.4%	0.7%	1.3%
Economic Downturn & Weakness	7.1%	4.1%	1.9%	8.9%	3.8%	2.6%	1.2%
Poverty & Inflation	0.0%	4.0%	1.7%	3.4%	1.0%	0.0%	2.7%
Bureaucracy & Corruption	3.2%	0.0%	4.6%	3.1%	3.8%	4.1%	2.5%
Poor Infrastructure & Industrial Base	0.0%	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%
Demography & Health	0.0%	2.1%	0.0%	1.8%	0.0%	0.0%	0.0%
Education & Science	0.3%	3.2%	0.0%	1.9%	0.0%	0.0%	1.4%
Globalization	3.4%	0.0%	1.8%	1.0%	3.1%	0.0%	1.3%
Energy & Resource Security	4.4%	8.3%	4.8%	4.0%	7.5%	0.0%	3.1%
Sanctions Evasion & Illicit Finance	0.7%	0.0%	0.0%	1.0%	2.2%	0.0%	4.2%

Sources: US National Security Strategy, own calculations

Threats to national security cannot be perceived in isolation from key events that have influenced the domestic and foreign policy of a country and the world as a whole. In particular, during this period, several serious events occurred that had an impact on the development of the United States and the world in subsequent years, and were reflected in the US national security strategy in various aspects:

Table 8.2

Event and Direct Consequences	Security Segment	Date	Related Sectors & Industries
Dot-com Bubble	Economic Downturn & Weakness	Mar-00	Communication Services,
soft monetary policy			Information Technology
Terrorist Attack 911	Terrorism & Extremism, Conventional	Sep-01	Aerospace & Defense, Energy
Afghanistan War	Warfare, WMD, Energy & Resource	Oct-01	
Iraq War	Security	Mar-03	
SARS	Pandemics & Biothreats	Nov-02	Health Care
GFC	Economic Downturn & Weakness,	Aug-08	Financial, Real Estate, broad
QE-1	Poverty & Inflation	Nov-08	economy
QE-2		Nov-10	
QE-3		Sep-12	
Arab Spring, Civil War in Syria and Libya	Terrorism & Extremism, Energy &	Jan-11	Aerospace & Defense, Energy
ISIS War	Resource Security, Conventional	Dec-13	
MERS	Pandemics & Biothreats	Sep-12	Health Care
Euromaidan in Ukraine	Terrorism & Extremism, Energy &	Nov-13	Aerospace & Defense, Energy
Crimea Annexaion & War in Donbass	Resource Security, Conventional	Mar-14	
Special War Operation	Warfare	Feb-22	
Trump Trade War 1.0	Economic Coercion & Unfair Trade,	Mar-18	broad economy
Phase One Trade Deal with China	Economic Downturn & Weakness		
COVID-19	Pandemics & Biothreats, Economic	Feb-20	Health Care, broad economy
CARES, PEPP, TLTRO-3, QE, IRA	Downturn & Weakness, Supply Chain	Mar-20	
Hamas Attack	Terrorism & Extremism, Energy &	Oct-23	Aerospace & Defense, Energy
Israel War with Hamas	Resource Security		
Trump Trade War 2.0	Economic Coercion & Unfair Trade,	Feb-25	broad economy
	Economic Downturn & Weakness		

Source: Wikipedia

The first thing that catches the eye is the lack of predictive power and proactivity in NSS. For example, the relative importance of Physical Security in the total threats bullion was 55%, slightly below the average, right before the 911 attacks, while after the event it reached 69% in 2022 and 66% in 2006 against the background of ongoing anti-terrorist operations by the American armed forces in the Middle East and a significant deterioration in the country's energy security situation amid rising energy prices. The hazards that fall into the Economic Downturn & Weakness section are assessed at minimum levels just before the serious economic crisis of 2008-09. According to heuristics, this is logical in several ways:

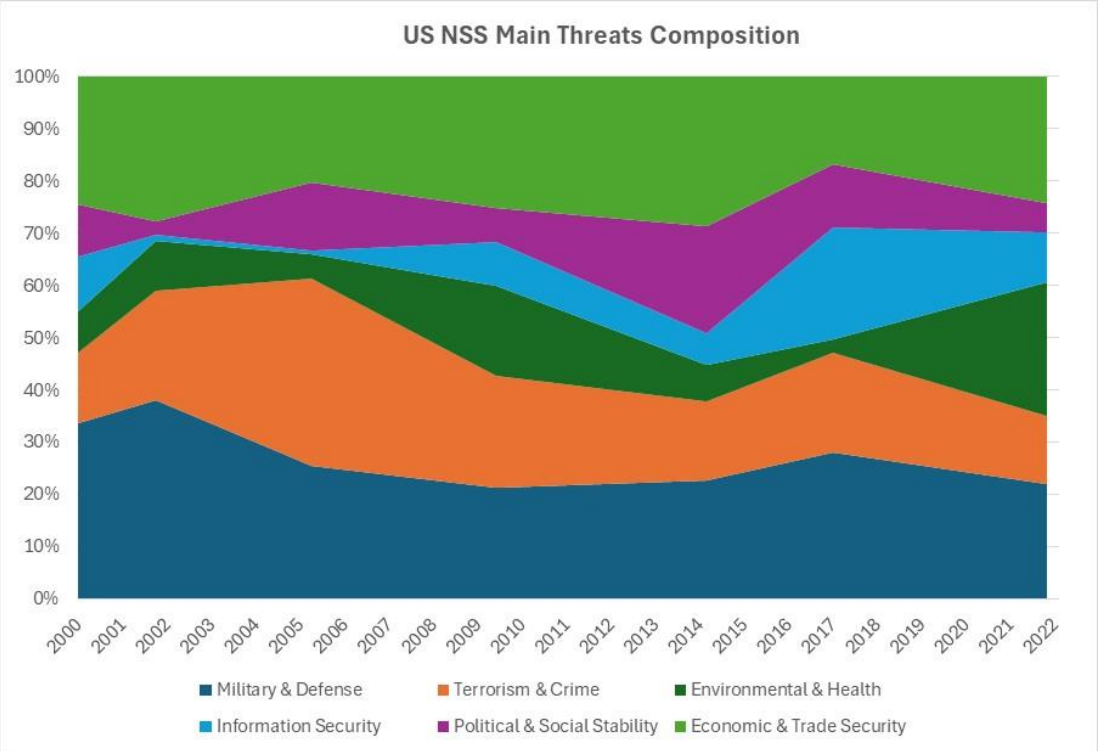
- Adversaries are constantly looking for vulnerabilities in national security to gain an advantage in a hybrid conflict.

- The absence of active threats in a particular area shifts the government's focus away, leaving it less secure leaving it less secure and protected. As a result, the impact of an adversary, natural disasters or market forces has the maximum hit in the area.

- In market democracies NSS should help the government to facilitate a budget process in certain spheres, providing justification for an increase or decrease in government spending. The legislative power and the general public could agree with the spending only if it sees the threat as real, for example, after an economic downturn or a recent attack against the state.

- National Security is a complex stochastic field with a limited predictability. In this condition the best forecast is a current state of affairs.

Chart 8.3



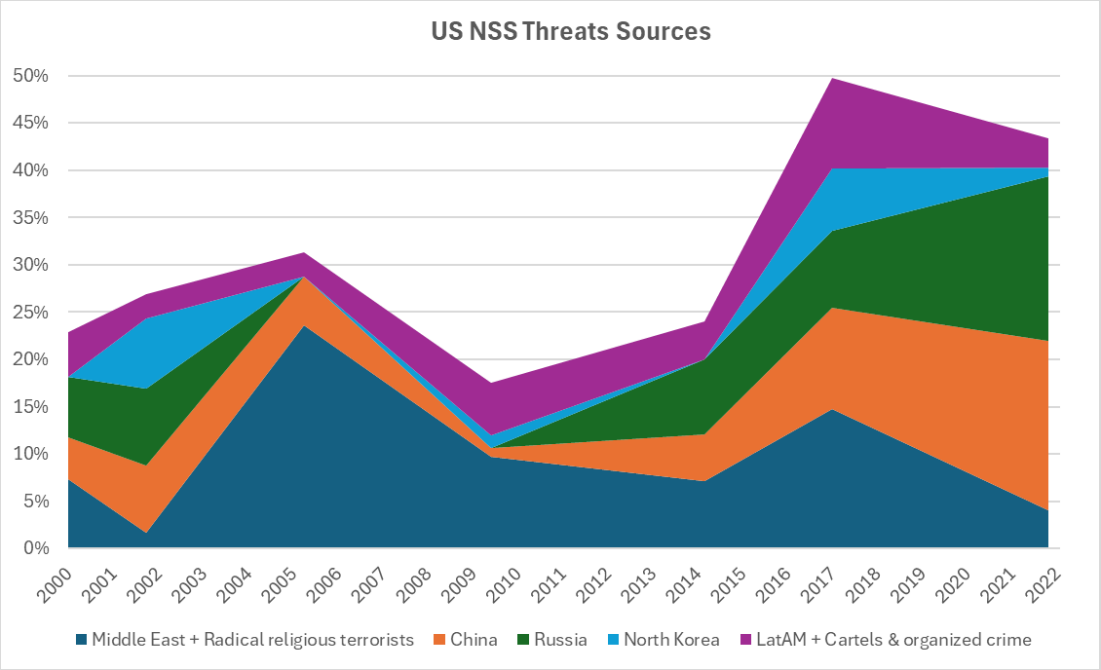
Sources: US National Security Strategy, own calculations

Exactly the same can be said about the sources of threats. For example, in 2010, the Barack Obama administration did not mention Russia as a geopolitical opponent at all, hoping for a reset in relations between the countries. However, since President Barack Obama's reelection in 2012, there has been a growing perception in the United States and abroad that American primacy in the international system is under threat from multiple fronts. A rising China and a reassertive Russia are demonstrating their willingness to use (or threatening to use) military

means to achieve their political ends in Ukraine and the South China Sea, directly challenging existing security and strategic orders which have been largely underwritten by the United States. After Euromaidan (2013-14) till the so called “special war operation” (2022) in Ukraine, a perception of a threat from Russia is dramatically growing. The same can be said about the threat to US security from China, which began to be mentioned often only after China switched to aggressive policy of economic coercion and hardened its’ stance toward Taiwan independence and control over South China Sea. According to M. Clarke (2021), despite the growing perception of threat from both challengers among the officials and the society incline to the new strategies of “decline management” and “decline denial” rather than endless armed primacy.

There are also some partisan patterns. There is enhanced attention to environmental issues during democratic administrations and higher share of Military & Defense during the GOP presidency. Democrats are less likely to focus on countering certain countries, preferring a more general rhetoric of fighting global problems rather than geopolitical competition. It is interesting to note that despite the different approaches toward China and Russia all administrations saw increasing hazards from the countries that in 2022 reached exceptionally high aggregate level of 35%.

Chart 8.4



Sources: US National Security Strategy, own calculations

Table 8.5

US NSS Source of Threat Description Wording							
Administration	**Clinton**	**G. W. Bush**		**Obama**		**Trump**	**Biden**
	2000	**2002**	**2006**	**2010**	**2015**	**2017**	**2022**
China	4.4%	7.2%	5.2%	0.9%	4.9%	10.7%	17.9%
Russia	6.4%	8.1%	0.0%	0.0%	8.0%	8.1%	17.4%
Cartels & organized crime	4.1%	2.6%	0.0%	5.6%	4.0%	8.4%	3.0%
Iran	2.8%	0.0%	7.3%	4.1%	2.3%	4.9%	2.5%
Radical religious terrorists	0.0%	1.7%	8.9%	4.0%	4.8%	9.9%	1.6%
North Korea	0.0%	7.4%	0.0%	1.3%	0.0%	6.6%	0.9%
Domestic terrorists	4.7%	0.0%	4.8%	1.4%	2.1%	0.0%	0.9%
EU	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
ASEAN	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Turkey	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Serbia	1.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Iraq	2.3%	0.0%	2.9%	0.0%	0.0%	0.0%	0.0%
India	1.2%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Venezuela	0.0%	0.0%	0.6%	0.0%	0.0%	0.6%	0.0%
Afghanistan & Pakistan	2.2%	0.0%	2.3%	1.5%	0.0%	0.0%	0.0%
Syria	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%
Sudan	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%	0.0%
Belarus	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
Columbia	0.2%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
Ethiopia & Eritrea	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
Uganda	0.0%	0.0%	0.8%	0.0%	0.0%	0.0%	0.0%
Burma	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
Zimbabwe	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%
Cuba	0.5%	0.0%	1.3%	0.0%	0.0%	0.6%	0.0%
Unspecified	**63.9%**	**70.9%**	**60.8%**	**81.0%**	**73.9%**	**50.2%**	**55.8%**

Sources: US National Security Strategy, own calculations

Table 8.6

US NSS China Threat Description Wording							
	2000	2002	2006	2010	2015	2017	2022
Overall Threats	**6'694**	**1'323**	**2'619**	**2'633**	**2'599**	**5'044**	**3'677**
China	4.4%	7.2%	5.2%	0.9%	4.9%	10.7%	17.9%
General China Threats	-	95	-	-	45	395	384
% of words dedicated to General Threats	0.0%	100.0%	0.0%	0.0%	35.2%	73.3%	58.3%
Physical Security	**64.5%**	**0.0%**	**39.0%**	**100.0%**	**0.0%**	**7.3%**	**50.1%**
Military & Defense	**43.1%**	**0.0%**	**39.0%**	**100.0%**	**0.0%**	**7.3%**	**29.4%**
Terrorism & Crime	**21.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Environmental & Health	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**20.7%**
Information Security	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**37.8%**	**5.2%**	**13.1%**
Cybersecurity & Intelligence	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**37.8%**	**5.2%**	**13.1%**
Political & Social Stability	**0.0%**	**0.0%**	**12.5%**	**0.0%**	**0.0%**	**54.2%**	**0.0%**
Economic & Trade Security	**35.5%**	**0.0%**	**48.5%**	**0.0%**	**0.0%**	**33.3%**	**36.8%**

Sources: US National Security Strategy, own calculations

Table 8.7

US NSS Russia Threat Description Wording							
	2000	2002	2006	2010	2015	2017	2022
Overall Threats	**428**	**1'323**	**2'619**	**2'633**	**2'599**	**5'044**	**3'677**
Russia	6.4%	8.1%	0.0%	0.0%	8.0%	8.1%	17.4%
General Russia Threats	-	107	-	-	12	349	213
% of words dedicated to General Threats	0.0%	100.0%	0.0%	0.0%	5.5%	85.2%	33.3%
Physical Security	**76.0%**	**0.0%**	**0.0%**	**0.0%**	**4.7%**	**0.0%**	**60.8%**
Military & Defense	**76.0%**	**0.0%**	**0.0%**	**0.0%**	**4.7%**	**0.0%**	**58.8%**
Terrorism & Crime	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Environmental & Health	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.9%**
Information Security	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**
Cybersecurity & Intelligence	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**12.4%**	**11.9%**
Political & Social Stability	**24.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**87.6%**	**14.7%**
Economic & Trade Security	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**12.6%**

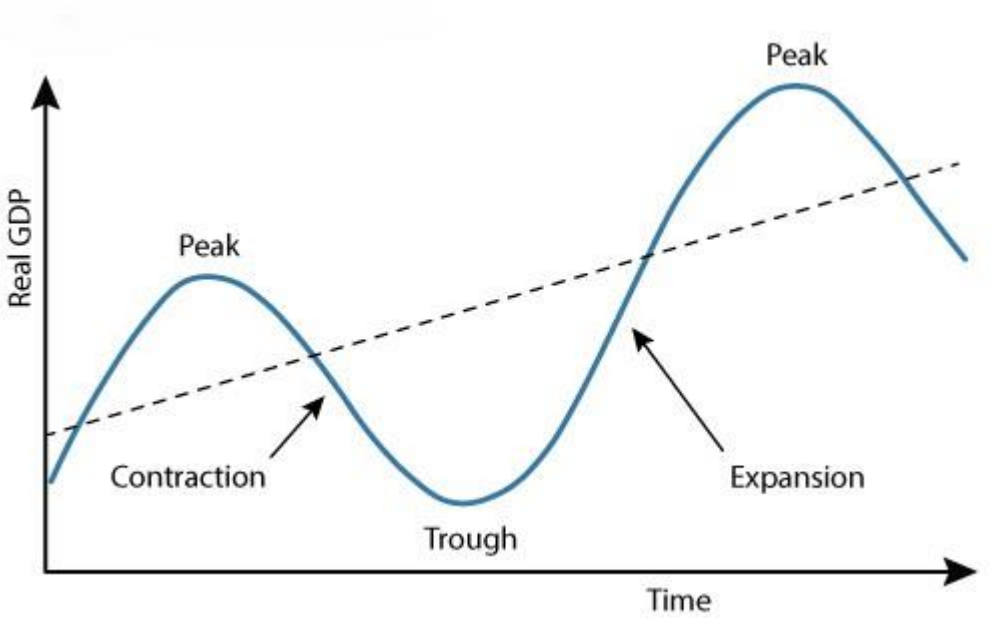
Sources: US National Security Strategy, own calculations

CHAPTHER 7. Economic Policy and National Security

7.1. Economic Sectors and Cycles

A typical economic cycle, also known as the business cycle, refers to the natural fluctuation of the economy through periods of expansion and contraction. Though no two cycles are identical, most follow a recognizable pattern first mentioned by W. Mitchell (1913) consisting of four main phases: expansion, peak, contraction (recession), and trough. These phases influence everything in the economy: employment, production, spending, and financial markets, particularly the stock market, which often moves in anticipation of economic trends. The average historical lag between changes in the economy and a stock market dynamic is around 6 months. This lag is usually explained by the delayed response of the economy to changes in government policy.

Chart 7.1.1



Source: Federal Reserve Bank of St. Louis

a) Expansion

This phase marks a period of economic growth. Gross Domestic Product (GDP) increases, unemployment falls, and consumer and business confidence strengthen. During expansion, consumer spending rises, investment increases, and companies often report growing revenues and profits, and government tax collection improves. Central banks may raise interest rates gradually to prevent the economy from overheating and to keep inflation in check.

He broad stock market typically outperforms the real economy during this stage, driven by investors' optimism about the future, rising corporate revenues and earnings, and increased risk appetite and low volatility. Stocks of cyclical economic sectors, including Information Technology (IT), Consumer Discretionary, Industrials, Materials, Energy, Financials and Real Estate typically rally (M. Everts (2006)).

Non-cyclical sectors (also called defensive sectors), industries that provide essential goods and services that consumers continue to purchase regardless of economic conditions tend to

be more stable and are less affected during the expansion and recessions. Classical examples of non-cyclical sectors: Utilities (electricity, water), Healthcare, Consumer Staples (food, beverages, household ad hygiene products), basic Communications.

b) Peak

The peak is the point at which economic growth hits its maximum output. It is often marked by high consumer demand, rising wages, and significant inflationary pressure. Asset prices, such as stocks or real estate, may become overvalued. The economy becomes more vulnerable to shocks as central banks increase interest rates to counter inflation, and gradually leading indicators like softening consumer sentiment or slowing business investment may signal that a downturn is approaching. At this stage the stock market often shows gradually increasing volatility as downturn is approaching according to G. Schwert (1989) and overstretched valuations of cyclical sectors with professional investors starting to question whether growth is sustainable. Investors start rotation from cyclical stocks to defensive.

c) Contraction (Recession)

During a contraction, economic activity slows down significantly, unemployment rises, and consumer spending and corporate earnings fall. The formal definition of recession is the decline of GDP during at least two consecutive quarters. Businesses may cut back on production and hiring, and investment declines and investor sentiment turns risk-averse. Recessions can be triggered by various factors, including financial crises, tightening credit, external shocks, or loss of confidence. Governments and central banks often intervene through stimulus measures to mitigate the downturn. The stock market often enters a bear market, with broad declines in asset prices. Cyclical sectors are usually the hardest hit. The flight to safety accelerates, money shifts to bonds, gold, and defensive stocks.

d) Trough

The trough marks the bottom of the economic cycle, the point where contraction ends and recovery begins. Economic indicators stabilize, and the groundwork is laid for a new phase of

expansion. Interest rates are typically low, and stimulus policies may be already in place. Business and consumer confidence start to rebuild, setting the stage for renewed growth. Stock prices often rebound before the economy as investors anticipate improving conditions. This early optimism can lead to gains in undervalued cyclical stocks and riskier assets.

Conclusion

Economic cycles are a fundamental feature of market economies. While their timing and intensity can vary, understanding the cycle's stages helps governments, businesses, and investors make informed decisions. Policies such as countercyclical fiscal measures and interest rate adjustments are often used to smooth out the extremes of these cycles and support long-term economic stability. The stock market is both a barometer and a predictor of the economic cycle, often moving ahead of economic data. While economic fundamentals drive the long-term market trajectory, investor psychology plays a powerful role in short-term dynamics. Understanding how markets react to each phase of the cycle helps investors and policymakers make better-informed decisions and prepare for turning points.

7.2. Government Economic Intervention

Governments have an important role in stabilizing, guiding, and promoting economic growth and development. We pay attention to the government interventions into economy, since this aspect is also reflected in the national security strategy. These actions are designed to correct market failures, support employment, encourage investment, and ensure equitable access to essential services. Particularly during times of economic distress or uncertainty, governments may intervene broadly in the economy using a wide range of fiscal, monetary, regulatory, and structural tools. Typically, the most important role is performed by central banks via monetary policy, which have a dual mandate: controlling inflation and ensuring full employment. However fiscal adjustments are also becoming more often tool. Below are the principal methods through which governments carry out such interventions.

a) Fiscal Policy Measures

Fiscal policy refers to government spending and tax decisions designed to influence economic conditions. One of the most direct ways governments support the economy is by increasing public spending during downturns. Investments in infrastructure, education, healthcare, and research not only provide immediate employment but also create long-term productive capacity.

In recessionary periods, governments often adopt countercyclical spending while running budget deficits to stimulate demand when private consumption and investment are weak. This includes programs such as unemployment insurance, stimulus checks, or subsidies for specific industries.

Tax policy also plays a role. Reducing income taxes can increase disposable income for consumers, while offering tax incentives for businesses can encourage investment and hiring. Governments may also temporarily reduce indirect taxes like VAT to lower the cost of goods and services.

b) Monetary Policy Support

Monetary policy is a typical domain of central banks. Monetary policy is a fundamental and primary arm of economic intervention, often coordinated with government objectives. During periods of low growth or deflation, central banks may reduce interest rates, making borrowing cheaper and thereby encouraging consumer spending and business investment. In a modern governing set-up central banks are independent decision-makers from other governing bodies with a dual-mandate to control inflation while promoting full employment.

In recent decades, non-traditional monetary policies such as quantitative easing (QE) have gained prominence. Under QE, central banks purchase long-term securities to inject liquidity into the financial system, boost asset prices, and lower long-term interest rates. This policy is usually implemented in close coordination with the Treasury/ Ministry of finance. This has been used extensively during financial crises, such as the 2008 global recession and the COVID-19 pandemic.

Governments may also influence monetary policy indirectly by changing the legal framework under which central banks operate or by appointing officials aligned with certain economic priorities.

c) Subsidies and Incentives

To support critical sectors or emerging industries, governments often provide direct subsidies, tax credits, or guaranteed loans as we discussed in 7.1. These interventions help firms overcome barriers to entry, scale innovation, or sustain operations during downturns. This type of economic support usually serves as fine-turning to the powerful common measures of economic support such as monetary and tax policy shifts.

During economic shocks, governments may target support to the most vulnerable sectors such as tourism, manufacturing, or small businesses. Loan guarantees and grants during the COVID-19 pandemic helped many firms avoid bankruptcy and retain workers.

d) Public Ownership and Nationalization

In extreme cases, such as systemic collapse or strategic importance, governments may intervene through temporary or permanent public ownership of companies. The nationalization of banks during the 2008-09 financial crisis and European debt crises of 2011-12 in several countries was aimed at stabilizing the financial system and restoring public confidence.

Governments may also create state-owned enterprises (SOEs) in areas deemed essential, such as transportation, energy, and defense. This way of support is not frequent in market economies, however popular in mixed economic models. These entities serve both economic and social functions, ensuring service provision in sectors where private incentives are insufficient or prone to market failures.

e) Regulatory and Legal Interventions

Governments shape economic outcomes through regulations that control labor markets, financial activities, environmental standards, and trade. By adjusting these rules, they can influence productivity, equity, and sustainability in the long-term.

Labor regulations, including minimum wage laws, worker protections, and training programs, can improve workforce participation and household income. In finance, prudential regulations such as capital requirements help ensure stability and reduce systemic risks.

Trade policy is another tool. By using tariffs, quotas, or export incentives, governments can protect domestic industries or promote foreign market access. However, such interventions must balance short-term economic support with long-term efficiency and global cooperation.

f) Social Welfare and Redistribution

A key part of economic support is income redistribution through welfare programs. Governments provide support to low-income groups via social safety nets such as unemployment benefits, pensions, housing support, and food assistance.

Redistribution helps smooth consumption during downturns and prevents poverty from worsening. These programs can also stabilize demand in the broader economy, as lower-income households tend to spend a higher proportion of their income.

g) Industrial Policy and Strategic Planning

Governments may adopt industrial policies that guide long-term economic transformation. This includes setting priorities for research and development (R&D), investing in infrastructure, and fostering clusters of innovation.

Strategic public-private partnerships, government-funded research institutions, and procurement policies that favor domestic innovation are all methods through which states can shape the future economy. Although this type of measure does not have immediate effect it improves the long-term robustness of the economy.

h) Conclusion

Government intervention in the economy is a multifaceted and often necessary response to the complexities of modern market systems. While overreach can risk inefficiency or crowd out private initiative, strategic and well-designed interventions can stabilize economies, spur innovation, and promote equity. Balancing these tools with transparency and accountability ensures that interventions support both short-term recovery and long-term resilience.

7.3. Government Policies for National Security

The state systems of the developed countries are predominantly market democracies. Even the largest emerging economies are mostly market economies. Many of them have features, albeit imperfect, but democracies. Even China ruled by the Communist Party could be considered as market economy with the strong positions of the government-controlled companies. Some exceptions exist but concern very little quantity of planned economies such as North Korea. So, most government incentive policies are common among the countries. National security policies are a subset of general incentive policies.

When a particular industry faces an elevated threat on a certain front that implicates national security, whether due to foreign economic coercion, supply-chain disruption, cyber vulnerabilities, or strategic resource scarcity - the government has a range of policy tools to shore up that sector. Below are the key mechanisms (S. Greenlaw et al. (2022)), illustrated with examples that could be found in US “CHIPS and Science Act” of 2022 or a series of “Made in China” policy (2022):

Table 7.3.1

Policy Tool	Description	Example/Application
Targeted Subsidies & Grants	Direct financial support to firms for R&D, capacity expansion, or resilience measures.	Semiconductor manufacturers receive R&D grants to develop domestic chip fabrication capabilities, reducing reliance on foreign supplies.
Tax Incentives & Credits	Permanently or temporarily lower tax burdens for eligible investments, hiring, or capital expenditures.	Green-energy, EV companies gain investment tax credits to build domestic solar and wind farms, develop EVs thus bolstering energy security.

Policy Tool	Description	Example/Application
Public–Private Partnerships (PPPs)	Joint projects where government co-invests with industry to build critical infrastructure or technology.	A PPP to modernize the electric grid with smart-grid technology, shared costs and risks between utilities and the government.
Procurement Preferences & Buy-national Rules	Government procurement policy that favors domestic suppliers in defense, infrastructure, and critical technologies.	The government "set-asides" for small-business contractors or mandates to purchase certain nationally made equipment.
Regulatory Relief & Fast-Track Approvals	Streamlining regulations or accelerating licensing for critical-security projects.	Expedited approval pathways for domestically produced medical countermeasures during a biosecurity emergency or in preparation for possible biothreats.
Strategic Stockpiles & Inventory Support	Government purchase and storage of critical materials to buffer supply shocks.	Forming of national strategic reserves of petroleum, critical metals, minerals and food.
Export Controls & Investment Screening	Restricting foreign acquisition of sensitive technologies, control in strategic enterprises and limiting exports that could bolster adversary capabilities.	Reviews of investment in AI startups, critical transport infrastructure strategic natural resources such as oil deposits; export licenses required for advanced encryption technologies, semiconductors.
Workforce Development & Training Programs	Subsidized education, apprenticeships, and certification programs to ensure skilled labor in security-critical sectors, granting work-permits to foreign talents.	Grants for IT camps and STEM scholarships tied to service in critical-infrastructure firms, grants for talented foreign students.
Infrastructure & Facility Upgrades	Direct investment or low-interest loans for modernizing plants, factories, or R&D centers.	Loans from the upgrade of electric grids, battery-manufacturing facilities, strategic weapon production programs etc.
Risk-Sharing Insurance & Guarantee Schemes	Government-backed insurance to cover "force majeure" losses from natural disasters events or extreme political risks.	Terrorism risk insurance for critical infrastructure such as ports and logistics companies; crop insurance expansions for agri-food security.

Sources: "CHIPS and Science Act" (2022), "Made in China" (2022)

Governments can use different combinations of the above incentive measures, depending on the industry, network urgency, and the intensity of the threat.

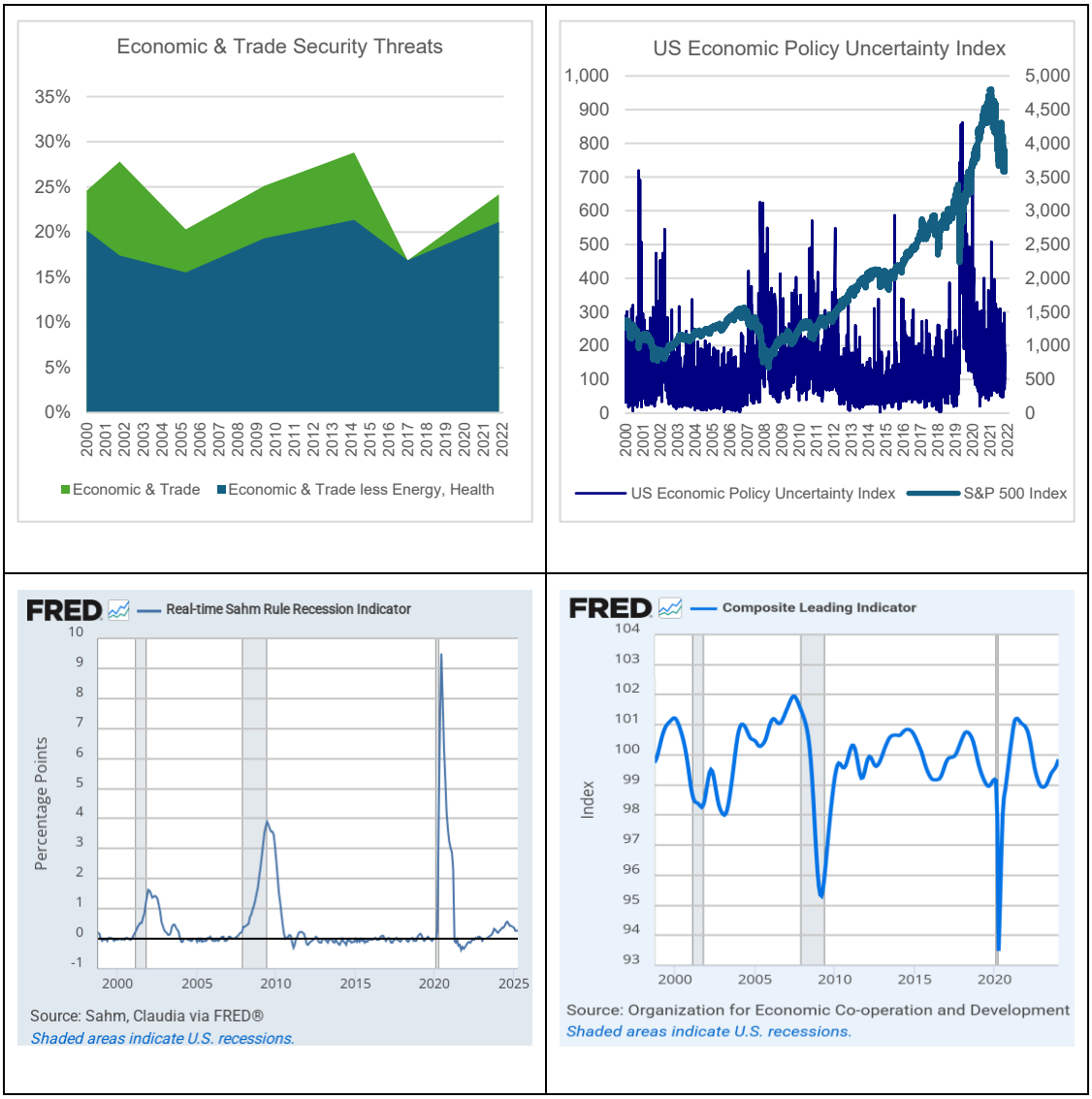
CHAPTHER 8. Adjusting Equity Portfolio to NSS Threats

8.1. Economy, Stock Market and NSS Economic Threats Index

The government in the NSS provides an indirect assessment of the economy by indication of various economic threats. The key issue for the investor is the interpretation of this information. What is the significance of this data? Should we continue to invest in cyclical sectors of the economy when the overall threat assessment is at its lowest, or should we reduce aggressive market positions, preferring to preserve capital, or is there no significance in this information? Does the government support of certain industries mentioned as weak in NSS help to gain them competitive positions and grow faster? What can be the algorithm of weights adjustment of instruments in an investment portfolio depending on changes in the assessment?

As we may have noticed in the previous chapter, the NSS threat assessment does not have significant predictive power in the area of the economic cycle phase. Heuristically, this fact seems to be logical. The role of the state in a market economy is to intervene only in conditions where the market adaptation mechanisms fail, and the economic system is approaching a spiral of self-destruction, when decrease in employment leads to lower consumption, lower consumption leads to lower production and thus weaker labor market, and all this is being coupled with tighter credit and higher interest rates. Statistically, the maximum of consumer confidence and business optimism occurs on the eve of the economic peak, and the maximum of pessimism is at the bottom of the recession (P. Howrey (2001). The assessments of the state of the economy given in the NSS are not, in the strict sense, a leading economic indicator, but rather should coincide with the assessment of the economic situation by businesses and the public. So, we see the correlation of our index derived from the NSS with the US Economic Policy Uncertainty Index, the calculation of latest is based on frequency of keywords such as crisis, inflation, economic recession, etc. The correlation with leading economic indicators such as the Composite Leading Economic Index and the Samh Recession Rule Indicator is also noticeable, but it is worth noting that these indicators are also not very successful in predicting a cyclical economic downturn.

Chart 8.1.1 – 8.1.4



Sources: Federal Reserve Bank of St. Louis, Bloomberg

However, the stock market has slightly greater predictive power, since the value of financial assets consists of discounted future cash flows and, accordingly, the asset price itself is a leading economic indicator. Therefore, in our opinion, it is logical to use the Economic Threat Index as a countercyclical indicator. Its low value (insignificant risks) implies a reduction in positions in sectors focused on economic growth and an increase in positions in defensive sectors, and vice versa, its high value should lead to an increase in positions in cyclical stocks and a reduction in non-cyclical ones. In view of the above, we can propose the following

mechanism for adjusting the weights of shares of companies in cyclical sectors based on the economic threat index:

$$w_n = \frac{\left(E_n - \sum_{i=1}^{n} \frac{E_i}{n}\right)}{\left(\max\limits_{1 \le i \le n} E_i - \min\limits_{1 \le i \le n} E_i\right)}, \qquad (8.1.1)$$

where E_i is i_{th} value of Economic Threat Index derived on the certain date of publication i_{th} NSS. For defensive stocks we will use at the rebalancing date i (the date of publication i_{th} NSS) the correction of weight should be taken with a negative sign: $-w_n$. However, we should test this assumption via simulations.

8.2. Economic Sectors and Specific NSS Threats

Segments of national security have a direct link to certain sectors and industries of the economy, as government agencies purchase products and services from companies in these industries. We will provide a list of industry correspondence based on corporate revenues for further use in portfolio simulations according to (8.1.1). We used the widely adopted classification of economic sectors, industries - General Industry Classification System (GICS).

Table 8.2.1

National Security Fields	Sector	Industry Group	Industry	Sub-Industry
Military & Defense + Terrorism	Industrials	Capital Goods	Aerospace & Defense	Aerospace & Defense
			Industrial Conglomerates	Industrial Conglomerates
Energy & Resource Security	Energy	Energy	Oil, Gas & Consumable Fuels	Integrated Oil & Gas
				Oil & Gas Exploration & Production
				Oil & Gas Refining & Marketing
				Coal & Consumable Fuels
				Oil & Gas Storage & Transportation
			Energy Equipment & Services	Oil & Gas Equipment & Services
				Oil & Gas Drilling
	Materials	Materials	Chemicals	Specialty Chemicals
				Industrial Gases
				Commodity Chemicals
				Diversified Chemicals
				Fertilizers & Agricultural Chemicals
Climate Change	Utilities	Utilities	Independent Power and Renewables	Independent Power Producers & Energy Traders
Cybersecurity + Science & Techologies	Communication Services	Media & Entertainment	Interactive Media & Services	Interactive Media & Services
	Information Technology	Software & Services	IT Services	Internet Services & Infrastructure
				IT Consulting & Other Services
			Software	Application Software
				Systems Software
		Technology Hardware & Equipment	Health Care Providers & Services	Electronic Manufacturing Services
				Electronic Components
				Electronic Equipment & Instruments
				Technology Distributors
			Technology Hardware, Storage & Communications Equipment	Technology Hardware, Storage & Communications Equipment
		Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	Semiconductors
				Semiconductor Materials & Equipment
	Real Estate	Equity Real Estate Investment Trusts	Specialized REITs	Data Center REITs
Pandemics & Biothreats	Health Care	Pharmaceuticals, Biotechnology	Life Sciences Tools & Services	Life Sciences Tools & Services
			Biotechnology	Biotechnology
			Pharmaceuticals	Pharmaceuticals
		Health Care Equipment & Services	Health Care Providers & Services	Health Care Services
				Managed Health Care
				Health Care Facilities
				Health Care Distributors
			Health Care Equipment & Supplies	Health Care Equipment
				Health Care Supplies
			Health Care Technology	Health Care Technology

Sources: US National Security Strategy, own calculations

Military & Defense + Terrorism: almost 100% of the state defense order is carried out by contractors from **Aerospace & Defense** with a smaller share performed by **Industrial Conglomerates.** The government is a key source of income for companies in the sector.

Energy & Resource Security: since early 70s of the XX century in the USA, **Energy** sector companies, their resource base and the dependence of the economy on energy prices have been understood in this context, with a huge impact on the sector from Middle East policy (OPEC) and USSR/ Russia. Now the concept of energy security is much broader and also includes alternative energy sources. We are also linked the **Chemical** industry in the Materials sector to this source of NSS as it uses energy produced by gas-fired power plants, oil and gas as the main raw materials.

Climate Change: this aspect of national security is also linked to **Independent Power Producers & Energy Traders** and alternative generation equipment producers. It also

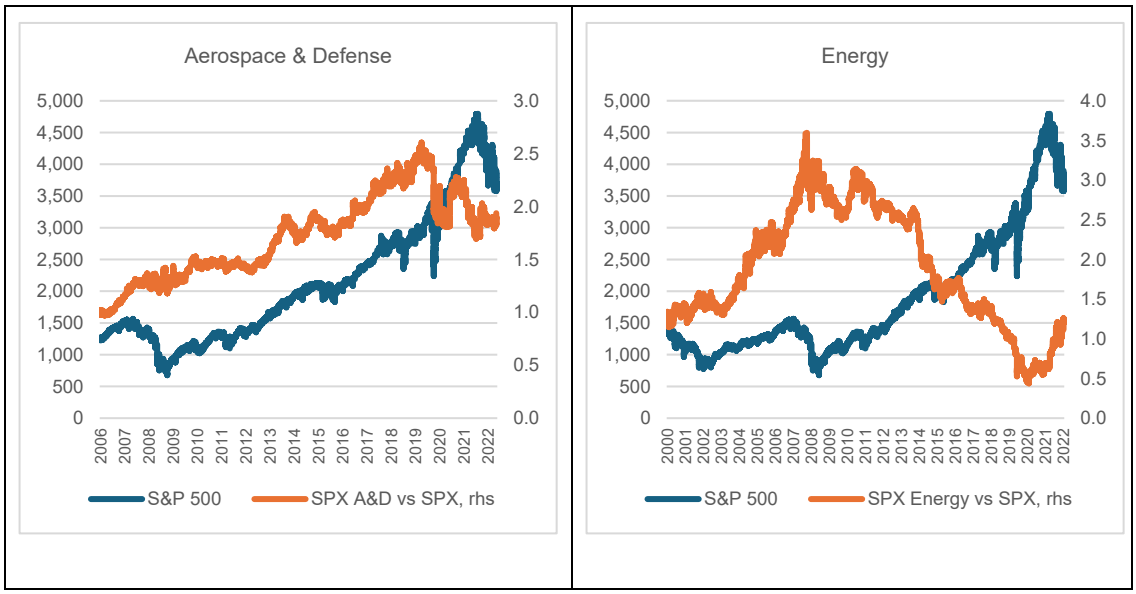
strongly linked to energy security, as most of the emissions affecting the climate come from fossil fuels.

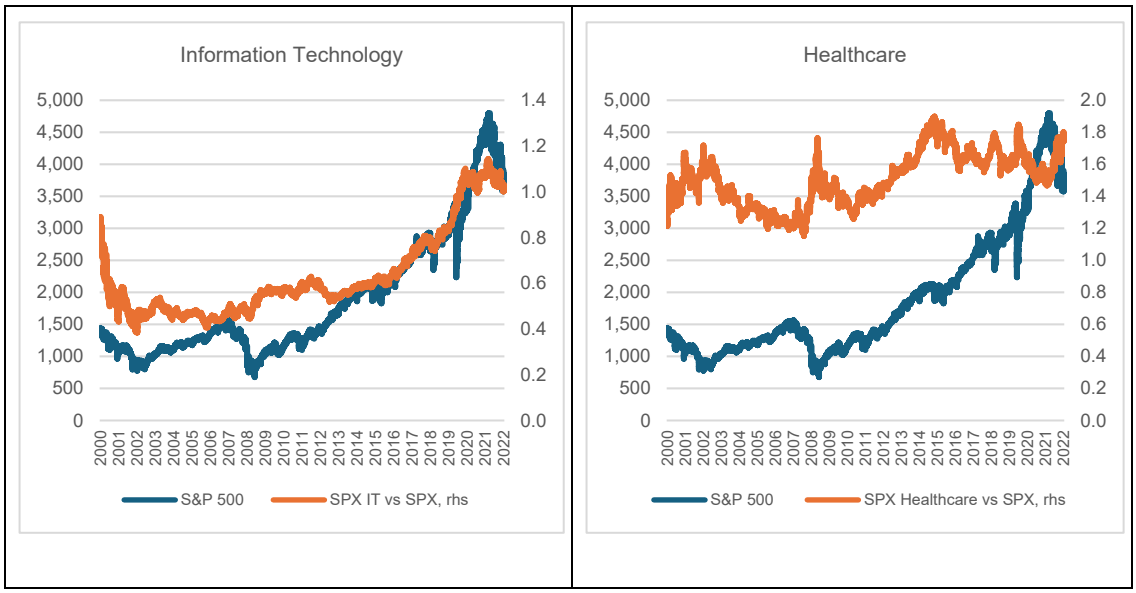
Cybersecurity + Science & Technology: apart from Aerospace & Defense this is one of the most extensive sections of national security, since the entire economy of the country and its long-term competitiveness in one way or another depend on **Information Technology**. In addition, **Real Estate Investment Trusts (REITs) Data Centers** and new types of communications of **Interactive Media & Services** are also directly connected to IT.

Pandemics & Biothreats: countering this type of threat is linked to the development of the entire **Health Care** sector from Pharmaceuticals & Biotechnology to Health Care Services ae medical equipment production.

The graphs below illustrate the performance of core abovementioned US sectors and industries and their relative performance with the broad market represented by S&P 500 Index.

Chart 8.2.1 – 8.2.4





Source: Bloomberg

A visual analysis shows relative outperformance of the sector/industry S&P 500 indices with the growth of the corresponding threat indexes as charted in the Chart 8.3 and vice-versa. The behavior of a certain sector of the economy usually is more predictable and manageable compared to the economy as a whole. In market democracies, the government is in permanent contact with corporations and investors, which can provide influence through lobbyists, and, conversely, the government can influence large businesses through the above-mentioned economic measures (J. Bruce & J. de Figueiredo (2020)). There is constant interaction between relevant ministries and agencies, business and national intelligence. Any threat does not appear immediately, so business is usually prepared to the growth of threats noted in the NSS to a certain extent. Businesses begin to invest in expanding production capacities and creating new necessary technologies, well in advance, usually long before threats made public. Similarly, stock market professionals carefully study all available information in advance, interact with corporations, analyze data and adapt investment portfolios.

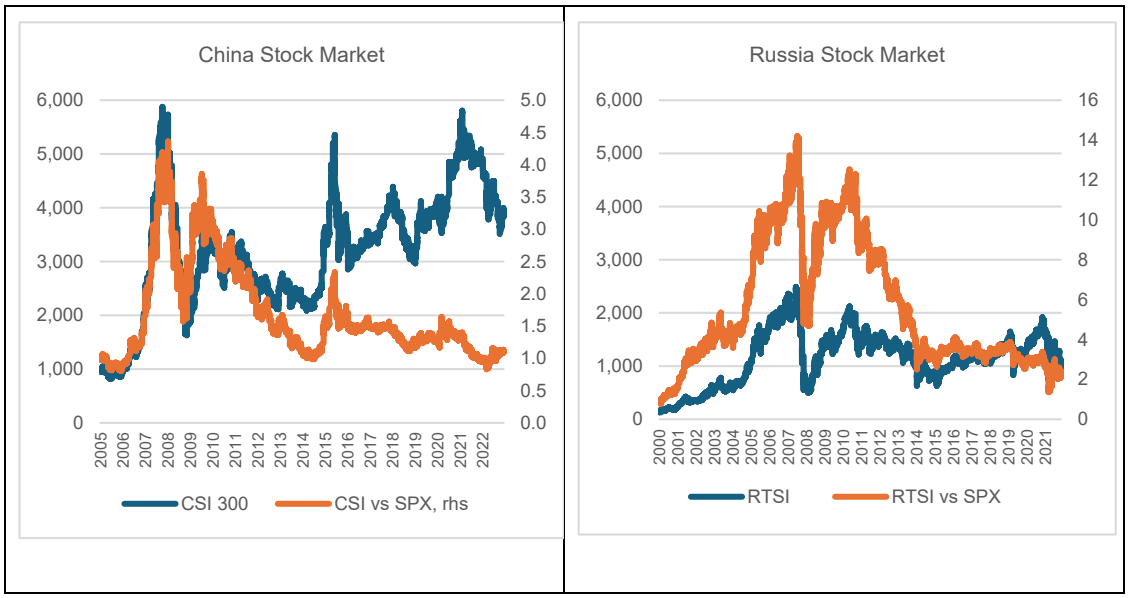
According to E.Fama (1970) Efficient Market Hypothesis (EMH) asset prices fully reflect all available information at any given time. This means that it is impossible to consistently achieve higher-than-average returns by using any information that the market already knows, because prices adjust instantaneously to new data.

Three Forms of EMH

1. Weak Form Efficiency:
    - Prices reflect all past trading information, such as stock prices and volume.
2. Semi-Strong Form Efficiency:
    - Prices reflect all publicly available information, including financial statements, news, and economic data.
    - Fundamental analysis can consistently yield superior returns.
3. Strong Form Efficiency:
    - Prices reflect all information, both public and private (insider information).
    - No one can earn excess returns, even with insider knowledge.

The US stock market is the most efficient and effective in the world. Therefore, here we can suggest the fulfillment of the Efficient Market Hypothesis there in a strong form in the context of national security. It means that all the information available to professional market participants has already been reflected in financial asset prices. Therefore, the maximum of threats in the NSS should correspond to the local maximum of the stock prices of the sector that benefit from countering the threats.

The logic that should apply to investments into countries that pose a threat to national security according to NSS is quite simple: the greater the threat from a country, the less national investors should support its' economy and invest in it. The charts below show the dynamics of the stock indexes of China and Russia in recent years relative to the American stock market.



Sources: Bloomberg, Moscow Exchange

As can be seen from Graph 8.4, the minimum threats from Russia occurred in the period 2000 - 2010. At that time, the Russian stock market was showing excellent outperformance. Equally until about that time, China was not perceived by the United States as a problem for national security, and its stock market was on the rise. However, after the crisis of 2009, relations between these countries and the United States began to deteriorate gradually for various reasons. From that moment on, the stock indices of these countries no longer demonstrated muted performance compared to the US.

NSS Threat Country Indicies							
China	-17.1%	-0.9%	-12.4%	-37.6%	-14.3%	19.9%	62.4%
Russia	-2.7%	6.9%	-39.4%	-39.4%	6.6%	7.3%	60.6%

Sources: US National Security Strategy, own calculations

So using formula 8.1.1 we get the following portfolio adjustment coefficients that should be applied to the weights of instruments in the investment portfolio:

Tables 8.2.2 – 8.2.3

NSS Threat Segment Indicies							
	2000	2002	2006	2010	2015	2017	2022
Military & Defense + Terrorism	-10.4%	-55.3%	-34.2%	23.5%	32.9%	-1.3%	44.7%
Economic & Trade Security less Energy, Health	23.5%	-24.5%	-56.6%	8.4%	43.4%	-33.6%	39.5%
Cybersecurity + Science & Techology	-7.9%	26.7%	39.0%	-6.4%	13.4%	-61.0%	-3.7%
Energy & Resource Security	29.2%	-31.0%	-62.3%	-3.4%	-4.2%	33.9%	37.7%
Climate Change	5.0%	7.4%	20.3%	-11.8%	17.4%	30.9%	-69.1%
Pandemics & Biothreats	29.3%	-27.2%	30.1%	-69.9%	6.9%	29.5%	1.4%

Sources: US National Security Strategy, own calculations

Table 8.2.4

National Strategic Assets										
Sector	**Industry Group**	**Industry**	**Sub-Industry**	**01.12.2000**	**01.09.2002**	**01.03.2006**	**01.05.2010**	**01.02.2015**	**01.12.2017**	**01.10.2022**
Industrials	Capital Goods	Aerospace & Defense	Aerospace & Defense	10,4%	55,3%	34,2%	-23,5%	-32,9%	1,3%	-44,7%
		Trading Companies & Distributon	Trading Companies & Distributon	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Electrical Equipment	Electrical Components & Equipment	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Heavy Electrical Equipment	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Industrial Conglomerates	Industrial Conglomerates	10,4%	55,3%	34,2%	-23,5%	-32,9%	1,3%	-44,7%
		Construction & Engineering	Construction & Engineering	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Building Products	Building Products	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Machinery	Construction Machinery & Heavy Transportation Equipment	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Agricultural & Farm Machinery	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Industrial Machinery & Supplies & Components	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Commercial & Professional Services	Professional Services	Human Resource & Employment Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Data Processing & Outsourced Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Research & Consulting Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Commercial Services & Supplies	Environmental & Facilities Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Diversified Support Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Commercial Printing	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Security & Alarm Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Office Services & Supplies	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Transportation	Ground Transportation	Cargo Ground Transportation	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Passenger Ground Transportation	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Rail Transportation	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Marine Transportation	Marine Transportation	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Air Freight & Logistics	Air Freight & Logistics	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Transportation Infrastructure	Airport Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Highways & Railtracks	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Marine Ports & Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Passenger Airlines	Passenger Airlines	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
Communication Services	Media & Entertainment	Entertainment	Interactive Home Entertainment	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Movies & Entertainment	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Interactive Media & Services	Interactive Media & Services	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
		Media	Advertising	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Cable & Satellite	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Broadcasting	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Publishing	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Telecommunication Services	Diversified Telecommunication	Alternative Carriers	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Integrated Telecommunication Services	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
		Wireless Telecommunication Services	Wireless Telecommunication Services	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
Consumer Discretionary	Automobiles & Components	Automobiles	Automobile Manufacturers	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Motorcycle Manufacturers	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Automobile Components	Automotive Parts & Equipment	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Tires & Rubber	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Consumer Discretionary Distribution & Retail	Specialty Retail	Automotive Retail	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Apparel Retail	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Other Specialty Retail	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Computer & Electronics Retail	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Homefurnishing Retail	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Home Improvement Retail	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Distributors	Distributors	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Broadline Retail	Broadline Retail	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Consumer Services	Diversified Consumer Services	Education Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Specialized Consumer Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Hotels, Restaurants & Leisure	Hotels, Resorts & Cruise Lines	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Restaurants	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Leisure Facilities	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Casinos & Gaming	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Consumer Durables & Apparel	Household Durables	Household Appliances	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Home Furnishings	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Homebuilding	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Housewares & Specialties	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Consumer Electronics	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Leisure Products	Leisure Products	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Textiles, Apparel & Luxury Goods	Footwear	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Textiles	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Apparel, Accessories & Luxury Goods	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
Consumer Staples	Food, Beverage & Tobacco	Beverages	Soft Drinks & Non-alcoholic Beverages	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Distillers & Vintners	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Brewers	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
		Tobacco	Tobacco	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
		Food Products	Agricultural Products & Services	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Packaged Foods & Meats	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
	Consumer Staples Distribution & Retail	Consumer Staples Distribution & Retail	Food Retail	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Food Distributors	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Consumer Staples Merchandise Retail	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Drug Retail	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
	Household & Personal Products	Personal Care Products	Personal Care Products	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
		Household Products	Household Products	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%

Energy	Energy	Oil, Gas & Consumable Fuels	Integrated Oil & Gas	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Oil & Gas Exploration & Production	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Oil & Gas Refining & Marketing	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Coal & Consumable Fuels	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Oil & Gas Storage & Transportation	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
		Energy Equipment & Services	Oil & Gas Equipment & Services	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Oil & Gas Drilling	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
Financials	Banks	Banks	Diversified Banks	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Regional Banks	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Financial Services	Capital Markets	Investment Banking & Brokerage	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Financial Exchanges & Data	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Diversified Capital Markets	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Asset Management & Custody Bank	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Consumer Finance	Consumer Finance	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Financial Services	Transaction & Payment Processing Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Multi-Sector Holdings	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Commercial & Residential Mortgage Finance	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Specialized Finance	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Diversified Financial Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Mortgage Real Estate Investmen	Mortgage REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Insurance	Insurance	Life & Health Insurance	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Property & Casualty Insurance	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Reinsurance	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Insurance Brokers	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Multi-line Insurance	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
Health Care	Pharmaceuticals, Biotechnology	Life Sciences Tools & Services	Life Sciences Tools & Services	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
		Biotechnology	Biotechnology	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
		Pharmaceuticals	Pharmaceuticals	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
	Health Care Equipment & Services	Health Care Providers & Services	Health Care Services	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
			Managed Health Care	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
			Health Care Facilities	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
			Health Care Distributors	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
		Health Care Equipment & Supplies	Health Care Equipment	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
			Health Care Supplies	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
		Health Care Technology	Health Care Technology	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
Information Technology	Software & Services	IT Services	Internet Services & Infrastructure	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
			IT Consulting & Other Services	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
		Software	Application Software	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
			Systems Software	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
	Technology Hardware & Equipment	Electronic Equipment, Instruments	Electronic Manufacturing Services	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
			Electronic Components	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
			Electronic Equipment & Instruments	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
			Technology Distributors	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
		Technology Hardware, Storage &	Technology Hardware, Storage &	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
		Communications Equipment	Communications Equipment	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
	Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	Semiconductors	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
			Semiconductor Materials & Equipment	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
Materials	Materials	Containers & Packaging	Paper & Plastic Packaging Products	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Metal, Glass & Plastic Containers	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Paper & Forest Products	Forest Products	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Paper Products	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Chemicals	Specialty Chemicals	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Industrial Gases	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Commodity Chemicals	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Diversified Chemicals	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
			Fertilizers & Agricultural Chemicals	-29,2%	31,0%	62,3%	3,4%	4,2%	-33,9%	-37,7%
		Metals & Mining	Steel	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Aluminum	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Copper	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Diversified Metals & Mining	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Silver	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Gold	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Construction Materials	Construction Materials	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
Real Estate	Equity Real Estate Investment Trusts (REITs)	Residential REITs	Multi-Family Residential REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Single-Family Residential REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Specialized REITs	Other Specialized REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Timber REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Telecom Tower REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Self-Storage REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Data Center REITs	7,9%	-26,7%	-39,0%	6,4%	-13,4%	61,0%	3,7%
		Office REITs	Office REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Health Care REITs	Health Care REITs	-29,3%	27,2%	-30,1%	69,9%	-6,9%	-29,5%	-1,4%
		Hotel & Resort REITs	Hotel & Resort REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Diversified REITs	Diversified REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Industrial REITs	Industrial REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
		Retail REITs	Retail REITs	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
	Real Estate Management & Development	Real Estate Management & Development	Diversified Real Estate Activities	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Real Estate Operating Companies	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Real Estate Development	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
			Real Estate Services	-23,5%	24,5%	56,6%	-8,4%	-43,4%	33,6%	-39,5%
Utilities	Utilities	Multi-Utilities	Multi-Utilities	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
		Electric Utilities	Electric Utilities	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
		Independent Power and Renewables	Independent Power Producers & Energy Traders	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
			Renewable Electricity	-5,0%	-7,4%	-20,3%	11,8%	-17,4%	-30,9%	69,1%
		Water Utilities	Water Utilities	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%
		Gas Utilities	Gas Utilities	23,5%	-24,5%	-56,6%	8,4%	43,4%	-33,6%	39,5%

Sources: US National Security Strategy, own calculations

CHAPTER 9. Portfolio Simulation

To test our hypothesis about adjusting the investment portfolio in accordance with the level of national threats that corresponds to a particular sector of the economy, we need historical stock prices of a wide range of companies that continued to operate from 2000 to 2025, the period covered by our NSS threat statistics. We cannot do the testing taking into account all the bankrupt or acquired companies, since there are no available historical stock price data. However, for our research this sort of distortion in population selection is not significant. We need a tool to download historical prices.

9.1. Python Code for Download and Preparation of Market Data

We chose Interactive Brokers LLC, which has an open API for uploading data, as the data source and used Python to write scripts that downloads historical prices. The historical price data is stored in separate comma-delimited files.

```
#Downloading historical quotes via Interactive Brokers LLC API interface

from ibapi.client import EClient
from ibapi.wrapper import EWrapper
from ibapi.contract import Contract
from datetime import datetime
import threading
import time
import pandas as pd

class IBapi(EWrapper, EClient):
    def __init__(self):
        EClient.__init__(self, self)
        self.data = [] #Initialize variable to store market data
    def historicalData(self, reqId, bar):
        self.data.append([bar.date, bar.close])

def run_loop():
    app.run()
```

```
app = IBapi()
app.connect('127.0.0.1', 7496, 123)

#Start the socket in a thread
api_thread = threading.Thread(target=run_loop, daemon=True)
api_thread.start()

time.sleep(3) #Sleep interval to allow time for connection to server
STK_param = ['ADJUSTED_LAST']
vol_days = 30
tickers = pd.read_csv('C:\Tables\Quotes\SPX_Tickers.csv')
m = 0
l = 0
k = 0
comparison_date = pd.to_datetime('01.12.2000', dayfirst=True)

while m < tickers.size:

    ticker = tickers.at[m,'Ticker']
    #Create contract object
    STK_contract = Contract()
    STK_contract.symbol =  ticker
    STK_contract.secType = 'STK'
    STK_contract.exchange = 'SMART'
    STK_contract.currency = 'USD'

    i = 0

    #Request historical data
    for param in STK_param:

        app.reqHistoricalData(1, STK_contract, '', '25 Y', '1 day', param,
0, 1, False, [])
        time.sleep(15) #sleep to allow enough time for data to be returned
        k = len(app.data)

        if i == 0:
            df_download = pd.DataFrame(app.data[l:k], columns=['DateTime',
param])
```

```
        else:
            df_temp = pd.DataFrame(app.data[l:k], columns=['DateTime',
param])
            df_download = pd.concat([df_download, df_temp[param]], axis=1)
        l = k
        i = i + 1

    df_download['DateTime'] = pd.to_datetime(df_download['DateTime'])
    df_download.index = df_download['DateTime']
    df_download.drop(df_download.columns[0], axis=1, inplace=True)

    #saving the downloaded dataframe into separate CSV-file with the
ticker name
    filename = ticker + '.csv'
    if df_download.index[0] <= comparison_date:
        df_download.to_csv(filename)
    m = m + 1

app.disconnect()
```

```
import pandas as pd
from datetime import datetime

# Load the Excel file with the US public companies' tickers
file_path = "c:\Tables\Quotes\SPX_Tickers_New.xlsx"
df = pd.read_excel(file_path, sheet_name="SPX_Tickers_New")
dates_list = pd.read_excel(file_path, sheet_name="Rebalancing Dates")

# Get the list of tickers
tickers = df["Ticker"].tolist()

dates = dates_list["Dates"]
last_date = datetime.strptime(input('Last date for portfolio performance
analysis in dd/mm/yyyy format:'), "%d/%m/%Y")
total_days = last_date - dates[0]
total_days = total_days.days
date_index = pd.date_range(start=dates[0], periods=total_days, freq='D')

# Prepearing historical quotes files viw filling the gaps in quotes
for ticker in tickers:
```

```
filename = "C:/Tables/Quotes/" + ticker + ".csv"
prices_rough = pd.read_csv(filename)
price_ticker = pd.DataFrame(index=date_index)
i = 0
for date in price_ticker.index:
    while pd.to_datetime(prices_rough.at[i, 'DateTime']) < date:
        last_price = prices_rough.loc[i, 'ADJUSTED_LAST']
        i += 1
    price_ticker.loc[date,'ADJUSTED_LAST'] = last_price
price_ticker.index.name = 'DateTime'
price_ticker.to_csv(filename)
```

9.2. Python Code for Portfolio Simulation

The main stage of our analysis should be a portfolio simulation. Our idea for testing the hypothesis is based on the following set of postulates:

- We randomly select 50 stocks of the American stock market from completely different sectors and industries.
- The weights of individual securities in the portfolio of stocks in the portfolio are also randomly selected so that they add up to 100%.
- The funds received on a particular security are reinvested in it.
- On each rebalancing date, according to formula (8.1.1), we adjust the weights of all instruments in the portfolio so that the portfolio of stocks with adjusted weights on the rebalancing date has the same value as the portfolio before rebalancing, proportionally increasing or decreasing the value of the securities of the entire portfolio.
- We generate statistics based on 100 random numbers for each a_n = *+1, -1* for both the rebalancing of cyclical/protective sectors of the economy and for individual sectors with a direct link to the NSS.

Please find below the Python code for the simulations:

```
import pandas as pd
from datetime import datetime
import random
import numpy as np
import matplotlib.pyplot as plt

portfolio_size = int(input('Number of stocks in the portfolio:'))

# Load the Excel file with the US public companies tickers, industries,
dates ad coefficiens of NSS
file_path = "c:\Tables\Quotes\SPX_Tickers_New.xlsx"
df = pd.read_excel(file_path, sheet_name="SPX_Tickers_New")
dates_list = pd.read_excel(file_path, sheet_name="Rebalancing Dates")

dates = dates_list["Dates"]
last_date = datetime.strptime("21/04/2025", "%d/%m/%Y")
total_days = last_date - dates[0]
total_days = total_days.days
date_index = pd.date_range(start=dates[0], periods=total_days, freq='D')

# Get the list of tickers
tickers = df["Ticker"].tolist()
df.index = tickers

statistics = pd.DataFrame(index=date_index)

number_runs = int(input('Number of runs in simulation:'))

for i in range(number_runs):
    #Randomly select portfolio_size tickers
    random_selection = random.sample(tickers, portfolio_size, )

    prices = pd.DataFrame([[0 for _ in range(portfolio_size    )] for _ in
range(total_days)], index=date_index, columns=random_selection)

    for ticker in random_selection:
        filename = "C:/Tables/Quotes/" + ticker + ".csv"
        prices_rough_csv = pd.read_csv(filename)
```

```
        prices_rough_csv.drop(prices_rough_csv.columns[0], axis=1,
inplace=True)
        prices_rough_csv.index = date_index
        prices[ticker] = prices_rough_csv['ADJUSTED_LAST']

    # creating lists for portfolio weights
    initial_weights = pd.DataFrame([[0 for _ in range(portfolio_size    )]
for _ in range(total_days)], index=date_index, columns=random_selection)
    weights = pd.DataFrame([[0 for _ in range(portfolio_size    )] for _
in range(total_days)], index=date_index, columns=random_selection)

    m = 0
    for date in weights.index:
        if m < dates.size and date == dates[m]:
            sum = 0
            new_sum = 0
            if m == 0:
                sum = 100
                # creating simulation portfolios with random initial
weights
                random_weights =
np.random.dirichlet(np.ones(len(random_selection)), size=1)[0]
                random_weights_series = pd.Series(random_weights,
index=random_selection)

                # adjusting weights of a compnay in portfolio according to
the NSS-based rules
                for ticker in random_selection:
                    initial_weights.loc[date, ticker] = sum *
random_weights_series[ticker] / prices.loc[date, ticker]
                    new_sum = new_sum + initial_weights.loc[date,ticker] *
prices.loc[date,ticker] * (1 + df.loc[ticker,dates[m]])
                for ticker in random_selection:
                    weights.loc[date, ticker] = initial_weights.loc[date,
ticker] * (1 + df.loc[ticker, dates[m]]) / (new_sum / sum)
            else:
                for ticker in random_selection:
                    sum = sum + weights.loc[previous_date, ticker] *
prices.loc[date, ticker]
```

```
                    new_sum = new_sum + weights.loc[previous_date, ticker]
* prices.loc[date, ticker] * (1 + df.loc[ticker, dates[m]])
                for ticker in random_selection:
                    weights.loc[date, ticker] = weights.loc[previous_date,
ticker]*(1 + df.loc[ticker, dates[m]]) / (new_sum / sum)
                initial_weights.loc[date] =
initial_weights.loc[previous_date]
            m += 1
        else:
            weights.loc[date] = weights.loc[previous_date]
            initial_weights.loc[date] = initial_weights.loc[previous_date]
        previous_date = date

    base_performance = pd.DataFrame([[0 for _ in
range(portfolio_size    )] for _ in range(total_days)], index=date_index,
columns=random_selection)

    performance = pd.DataFrame([[0 for _ in range(portfolio_size    )] for
_ in range(total_days)], index=date_index, columns=random_selection)

    #calculation of portfolio performance series
    base_performance = prices * initial_weights
    performance = prices * weights

    total_base_performance = base_performance.sum(axis=1)
    total_base_performance.index =
total_base_performance.index.strftime('%d/%m/%Y')
    total_base_performance = pd.DataFrame(total_base_performance,
columns=['Initial Weights'])
    total_base_performance['Daily Change'] =
total_base_performance['Initial Weights'] /
total_base_performance['Initial Weights'].shift(1)

    total_performance = performance.sum(axis=1)
    total_performance.index = total_performance.index.strftime('%d/%m/%Y')
    total_performance = pd.DataFrame(total_performance, columns=['Adjusted
Weights'])
    total_performance['Daily Change'] = total_performance['Adjusted
Weights'] / total_performance['Adjusted Weights'].shift(1)
```

```
    base_perfromance_composition = base_performance.iloc[-1, ]
    perfromance_composition = performance.iloc[-1, ]
    sectors = df.loc[random_selection, 'GICS_SECTOR_NAME']
    performance_components = pd.concat([sectors,
base_perfromance_composition, perfromance_composition], axis=1)
    performance_components = performance_components.reset_index(drop=True)
    performance_components.columns = ['Sector', 'Initial Weights',
'Adjusted Weights']
    performance_components.index = performance_components['Sector']
    performance_components = performance_components.drop('Sector', axis=1)
    performance_components =
performance_components.groupby(performance_components.index).sum()

    if i==0:
        total_performance_components = performance_components
        statistics = pd.concat([total_base_performance,
total_performance], axis=1)
    else:
        total_performance_components =
pd.concat([total_performance_components, performance_components], axis=0,
ignore_index=False)
        statistics = pd.concat([statistics, total_base_performance,
total_performance], axis=1)

#write the portfolio performance statistics and aggregate sector data to
the file
file_path = "C:\Tables\Quotes\Performance Statistics.xlsx"
with pd.ExcelWriter(file_path, engine='openpyxl') as writer:
    statistics.to_excel(writer, sheet_name='Performance', index=True)
    total_performance_components.to_excel(writer, sheet_name='Components',
index=True)
```

9.3. Simulation Results

We divided our simulation tests with the adjustment of the portfolio weights into two components:

- threats to the economy associated with the adjustment of stock weights of cyclical and defensive sectors of the economy

- specific threats corresponded to certain sectors of the economy

We performed a simulation on 650 random portfolios separately according to the above with weights of a_n = *+1, -1* and compared it to the initial portfolios where no weight adjustment was performed. This allows you to evaluate the contribution of each of the components and compare:

Tables 9.3.1 – 9.3.3

Coefficients, a_n

	Industries		
Economy	(-1,-1)	(-1,0)	(-1,1)
	(0,-1)	(0,0)	(0,1)
	(1,-1)	(1,0)	(1,1)

Mean

	Industries		
Economy	-0,10%	-0,26%	-0,62%
	0,27%	0,00%	-0,43%
	0,72%	0,40%	-0,20%

Standard Deviation

	Industries		
Economy	0,26%	0,16%	0,05%
	0,04%	0,00%	-0,07%
	0,04%	-0,17%	-0,10%

Sources: US National Security Strategy Bloomberg, own simulations

The distribution of portfolio samples portfolios showed returns of 7.20% per annum for initial portfolios from December 2000 to April 2025 with a standard deviation of 2.36% and 7.92% per annum (see table 9.3.4 below).

Tables 9.3.4

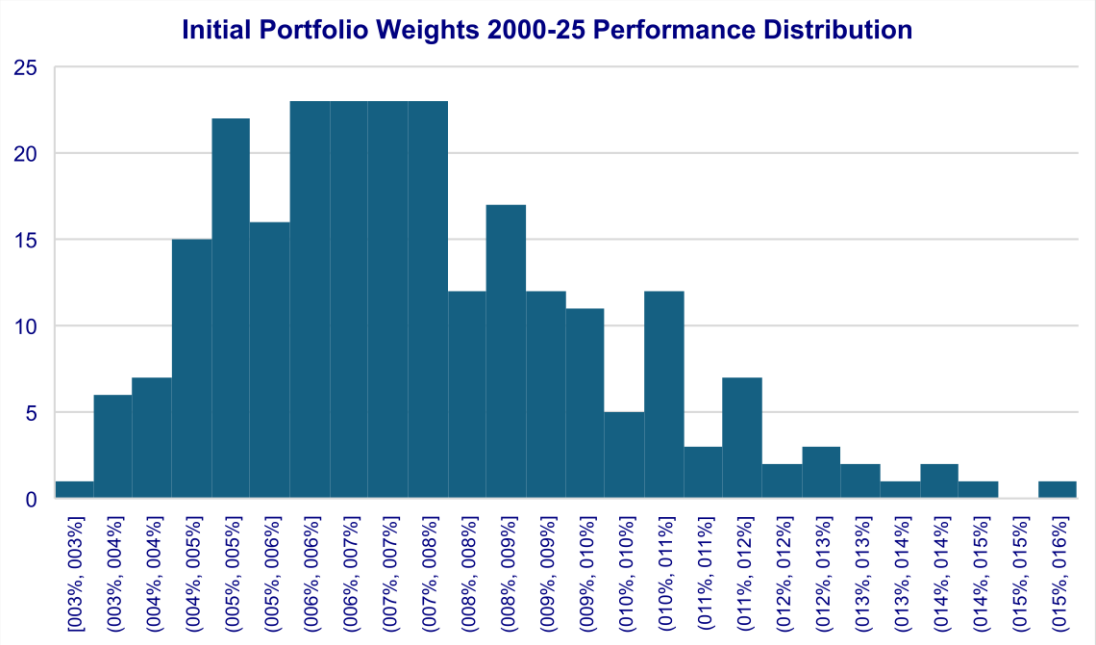
Performance Distribution, 2000-25			
	Initial Weights	**Adjusted Weights**	**Difference**
Mean	7.20%	7.92%	0.72%
Median	6.91%	7.56%	0.65%
Standard Deviation	2.36%	2.40%	0.04%

Skewness	0.745	0.644	-0.101
Kurtosis	0.393	-0.118	-0.511

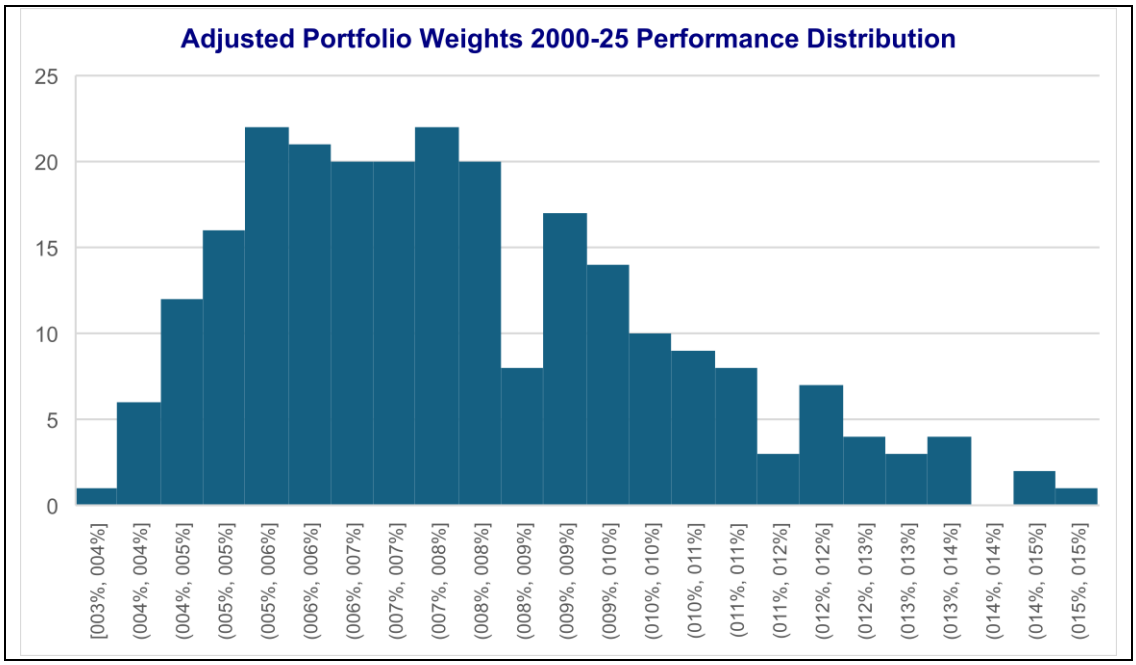
Sources: US National Security Strategy Bloomberg, own simulations

As can be seen from Table 9.3.2, the improvement in investment results occurs by approximately 2/3 due to a systematic reduction in investments in cyclical sectors of the economy when the economy is on the rise and vise-versa and by 1/3 due to a reduction in positions in sectors that are associated with threats when the treats are on the rise and vise-versa. As a result of applying both types of portfolio weight adjustments, the overall result improved by 0.72% per annum or approximately by 10% with approximately the same variance. This result can be considered a significant increase, given that we have adjusted the weights of stocks in the portfolio only 7 times in 25 years, on the date of publication of the NSS. A nice addition to the improvement in absolute returns there is a reduction in the skewness and kurtosis of the distribution of returns. That is, the results become a little denser with fewer "long tails". Adjusted portfolios provide higher and more predictable returns.

Charts 9.3.5 – 9.3.6



Sources: US National Security Strategy Bloomberg, own simulations



Sources: US National Security Strategy Bloomberg, own simulations

In terms of the industrial composition of the improvement in the sectoral dynamics of the adjusted portfolios as a result of the comprehensive rebalancing, almost all sectors showed a an advanced results compared to the initial portfolios. The aggregate portfolio index separated by economic sector (the starting value of all the portfolios is 100) are provided in the table 9.3.5 below:

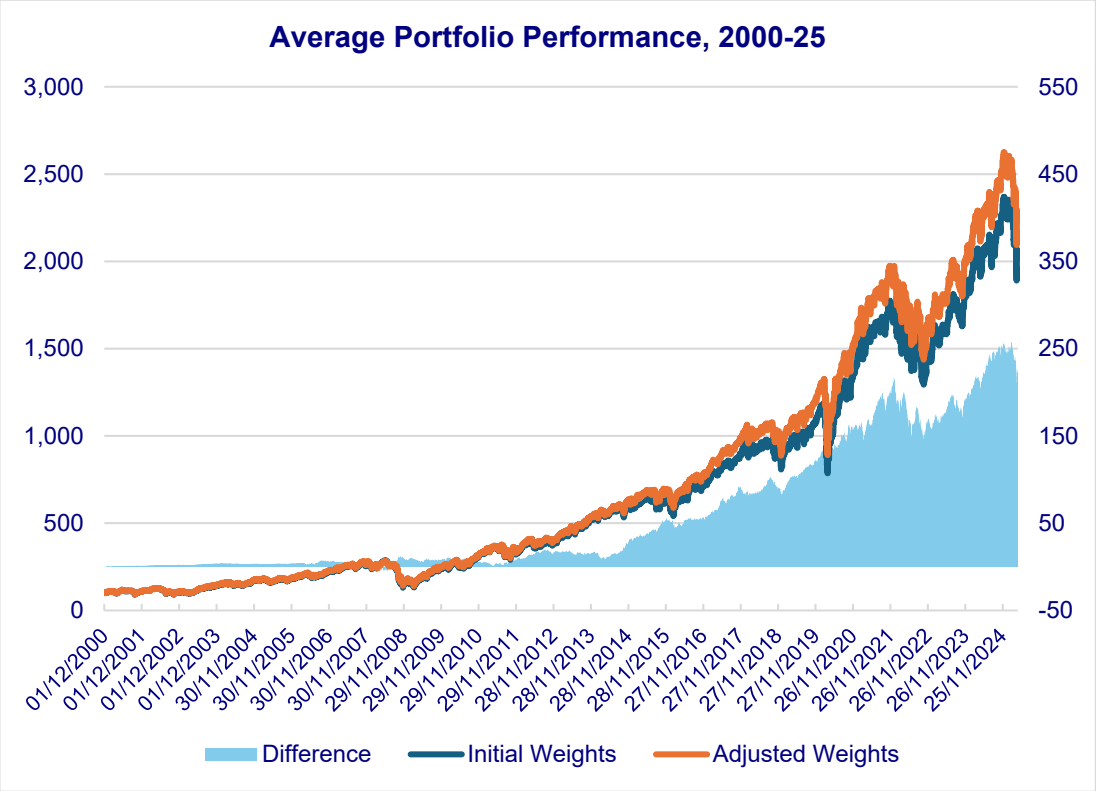
Tables 9.3.5

	Initial Weights	Adjusted Weights	Difference
Communication Services	65.753	66.540	1,2%
Consumer Discretionary	145.147	140.897	-2,9%
Consumer Staples	12.836	15.520	20,9%
Energy	17.500	20.215	15,5%
Financials	26.303	29.148	10,8%
Health Care	48.834	50.505	3,4%
Industrials	48.224	53.439	10,8%
Information Technology	84.537	116.512	37,8%
Materials	26.755	29.588	10,6%
Real Estate	27.349	34.895	27,6%
Utilities	7.591	9.025	18,9%

Sources: US National Security Strategy Bloomberg, own simulations

The outperformance of the aggregate adjusted portfolio constructed on the basis of our portfolio samples expectedly even more effective and smooth dynamics with average annual yield of 9.54% for adjusted portfolios against 8.88% of initial with annual volatility of 19.41% against 20.31% (see the chart 9.3.4).

Chart 9.3.6



Sources: US National Security Strategy Bloomberg, own simulations

Internship Report

The evolving international system is increasingly shaped by geopolitical rivalry, strategic competition, and complex security challenges that directly affect global economic stability, performance of financial markets and their assets and thus investment decision-making which is being often noted by leading economists and financial executives. “Trade tensions and fractious geopolitics risk exposing deep fault lines in the global financial system” according to The Bank for International Settlements (2025). Natixis in its’ 2025 International Outlook states basing on a survey of large asset managers: “geopolitical risk now tops the list of economic concerns for institutional investors.” In this context, international politics and security issues have become essential analytical dimensions for strategic planning in both public and private sectors. For asset managers and investment advisors, understanding geopolitical risks and strategic opportunities associated with certain economic regions, sectors and industries is no longer optional but a critical component of sustainable investment strategy.

This internship practice was conducted within AS Frigate and formed integral part of the International MSc Degree program in Engineering Technology for Strategy and Security at the University of Genoa. The internship was devoted to the analysis of international political and security developments and their application to investment strategy formulation and portfolio management. This work served as a basis for the thesis. The primary objective was to connect theoretical strategic concepts studied in the academic curriculum with practical investment-oriented analysis in a professional environment.

Throughout the internship, particular attention was given to the examination of national security strategies, foreign policy doctrines, and defense and security priorities of major states, as these documents provide structured insights into long-term political intentions, threat perceptions, and strategic economic priorities. The analysis focused on how such strategic frameworks influence geopolitical risk, country-specific issues, exposure of sanctions, industrial policy, and sectoral investment attractiveness.

The internship involved the application of analytical tools from international relations and security studies to investment research tasks using quantitative apparatus and simulations. These included the systematic review of national security strategy documents, the identification of key geopolitical risk drivers, and the assessment of their implications for asset allocation, regional exposure, and sectoral weighting within investment portfolios. By integrating qualitative geopolitical assessment with investment strategy considerations, the internship contributed to a more forward-looking and risk-aware approach to portfolio management.

Learning Outcomes and Acquired Competencies

As a result of the internship practice at Frigate SA Mr. Anton Zatolokin developed a methodology for quantitative analysis of the text of the US national security strategy, identified certain trends and dependencies based on it, and proposed an approach to improve the long-term portfolio performance in accordance with the obtained results. The following learning outcomes and professional competencies were also developed, with a specific focus on the application of national security strategy analysis to investment portfolio strategy:

1. Strategic Interpretation of National Security Documents

Developed the ability to analyze national security strategies as forward-looking policy signals rather than purely political statements. Identified how stated threat perceptions, strategic priorities, and regional focus areas translate into long-term economic and investment implications. Learned to distinguish between declarative policy language and actionable strategic commitments relevant for investors.

2. Geopolitical Risk Assessment for Investment Purposes

Acquired skills in translating geopolitical and security risks into investment-relevant risk categories, including country risk, regulatory risk, sanctions risk, and supply-chain vulnerability. Assessed how shifts in national security priorities affect sovereign risk, market

volatility, and capital flow dynamics. Integrated geopolitical scenarios derived from security strategies into broader investment risk assessments.

3. Portfolio Adjustment and Strategic Asset Allocation

Applied insights from national security strategy analysis to adjust portfolio exposure across regions and sectors. Evaluated the impact of defense spending priorities, industrial policy, and technological competition on sectoral allocation (e.g., defense, energy, critical infrastructure, technology). Contributed to strategic recommendations aimed at reducing exposure to politically vulnerable assets while enhancing resilience and diversification.

4. Sectoral and Regional Investment Analysis

Assessed how security-driven policies influence specific industries, including energy, transportation, technology, and infrastructure. Identified regions likely to benefit from increased strategic investment or state support, as well as regions facing elevated geopolitical or sanctions-related risks. Enhanced the ability to align portfolio strategy with long-term geopolitical and security trends.

5. Strategic Foresight and Scenario-Based Thinking

Developed scenario-building skills based on alternative geopolitical and security developments outlined in national security strategies. Evaluated how different strategic trajectories could affect investment performance over medium- and long-term horizons. Improved strategic foresight capabilities relevant to both academic analysis and professional investment decision-making.

6. Interdisciplinary Analytical Competence

Strengthened the ability to combine political, security, and economic analysis into a coherent investment framework. Applied academic concepts from the Strategies course to real-world

investment challenges faced by AS Frigate. Improved professional analytical writing and presentation skills tailored to investment and strategy-focused audiences.

Conclusion of the Internship Framework

Overall, the internship illustrates the practical value of national security strategy analysis as a tool for enhancing investment decision-making and portfolio resilience. By systematically incorporating geopolitical and security considerations into investment strategy, the practice reinforced the importance of strategic foresight, risk management, and interdisciplinary analysis in contemporary investment management. [6]

CONCLUSIONS

This work presents a comprehensive and interdisciplinary contribution at the intersection of national security analysis and financial portfolio management. The primary goal of the research was to develop a methodology that enables the translation of qualitative strategic policy documents into quantitative frameworks with actionable insights for financial decision-making. The results achieved throughout this work demonstrate not only the feasibility of such integration but also its practical value.

The first major accomplishment of the research is the creation of a complete and systematic classification of threats to national security. By carefully analyzing strategic documents and categorizing threats into a structured framework, the research offers a tool that enhances clarity, consistency, and analytical depth in understanding complex security environments. This taxonomy of threats provides a robust foundation for subsequent analyses and allows policymakers, analysts, and researchers to monitor the evolution of national security concerns with greater precision and coherence.

[6] As a practical example of the work prepared during the internship, we present a brief analysis of the new US National Security Strategy of 2025 in Appendix III.

Building upon this classification, the second key contribution involves the development of a novel method for converting the narrative content of National Security Strategy (NSS) documents into time series data. This methodological innovation enables the quantification of national security threats over time, offering a dynamic and data-driven perspective on policy priorities and perceived risks. By extracting threat signals from strategic texts and mapping them onto temporal trends, the research introduces a powerful new tool for tracking how security concerns evolve and how they may correlate with broader socio-economic or geopolitical developments.

The third and most novel contribution of this work lies in its application of these threat time series to financial markets, specifically, to the performance and rebalancing of equity portfolios. By empirically linking identified security threat trends to the behavior of equity assets, the research demonstrates that aligning portfolio allocations with national security threat profiles can yield significant financial benefits. A method for rebalancing portfolios based on the intensity and nature of these threats was proposed and tested. Back testing results revealed that this threat-aligned strategy outperformed conventional approaches by approximately 10%, while also producing a more stable return profile. This finding not only validates the methodological approach but also highlights the real-world utility of incorporating national security intelligence into investment strategy formulation.

In conclusion, this research makes a multifaceted contribution: it advances the analytical tools available for national security assessment, pioneers a methodology for converting qualitative strategy into quantitative time series and demonstrates a novel application of this data in financial portfolio management. The interdisciplinary nature of the work underscores the growing importance of cross-domain approaches in addressing complex modern challenges. Future research can build on this foundation by extending the methodology to other policy domains, incorporating additional data sources, or exploring its implications for risk management in sectors beyond finance. Ultimately, the findings presented here show that

national security insights, when systematically harnessed, can not only inform policy but also empower more resilient and responsive economic strategies.

Despite its contributions, this work is subject to several limitations. The methodology relies on the availability and consistency of official strategic documents, which may vary in frequency, structure, and level of detail across time and administrations. Additionally, the translation of qualitative policy language into quantitative indicators inevitably introduces some degree of interpretation bias, while the financial back testing results may be sensitive to specific market regimes and historical sample periods

Looking ahead, a promising direction for the future development of this work is the creation of an autonomous system based on artificial intelligence that continuously monitors not only National Security Strategy documents but also a broad spectrum of government publications related to national security. Such a system would ingest and analyze real-time data from diverse sources, including policy statements, legislative updates, intelligence assessments, and international communications and dynamically update the threat classification and time series models developed in this work. Crucially, the system would incorporate a learning component, allowing it to adapt and improve its threat-detection capabilities and portfolio adjustment strategies over time. This evolution would enable a fully integrated, automated pipeline from real-time threat monitoring to data-driven portfolio rebalancing offering investors a cutting-edge tool for proactively aligning their financial strategies with emerging geopolitical and domestic risks. The development of such a system holds significant potential for both the financial and national security sectors, fostering more agile, intelligent, and resilient responses in an increasingly complex global environment.

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APPENDIX I

Simple Python Code

```
import requests
import re
import pandas as pd
import nltk
from bs4 import BeautifulSoup
from pdfminer.high_level import extract_text

def search_nss_document(year):
    search_url =
f"https://www.google.com/search?q={year}+US+National+Security+Strategy+fil
etype:pdf"
    headers = {'User-Agent': 'Mozilla/5.0'}
    response = requests.get(search_url, headers=headers)
    soup = BeautifulSoup(response.text, 'html.parser')
    links = [a['href'] for a in soup.find_all('a', href=True) if 'pdf' in
a['href']]
    return links[0] if links else None

def extract_text_from_pdf(pdf_url):
    response = requests.get(pdf_url)
    with open("nss_document.pdf", "wb") as file:
        file.write(response.content)
    return extract_text("nss_document.pdf")

def clean_and_refine_sentences(sentences):
    refined = []
    for sentence in sentences:
        # Remove special characters and extra spaces
        sentence = re.sub(r'[^A-Za-z0-9.,!?\s-]', '', sentence)
        sentence = re.sub(r'\s+', ' ', sentence).strip()
        sentence = sentence.capitalize()

        # Remove sentences that are too short (less than 8 words)
        if len(sentence.split()) >= 8:
            refined.append(sentence)

    return refined
```

```
def split_into_sentences(text):
    sentences = re.split(r'(?<=[.!?])\s+', text)
    return clean_and_refine_sentences([s.strip() for s in sentences if s])

def classify_sentence(sentence):
    categories = {
        "The Challenge We Face": ["threat", "danger", "challenge",
"risk"], "Our Vision for Change and Addressing Concerns": ["policy",
"approach", "goal", "vision"], "The Time to Act is Now & Call to Action":
["implement", "act", "ensure", "strategy"]
    }
    for category, keywords in categories.items():
        if any(word in sentence.lower() for word in keywords):
            return category
    return "Uncategorized"

def classify_threat(sentence):
    threats = {
        "General Threats": ["threat", "risk"], "Physical Security":
{"Military & Defense": {"Nuclear": ["nuclear", "atomic"], "Conventional
Warfare": ["army", "military"], "Weapons of Mass Destruction (WMDs)":
["bioweapon", "chemical weapon"], "Space & Air Defense": ["satellite",
"air defense"]},"Terrorism & Crime": {"Terrorism & Extremism":
["terrorist", "extremist"], "Illegal Immigration & Border Infiltration":
["border", "immigration"], "Narcotics, Trafficking & Organized Crime":
["drug", "trafficking"]}, "Environmental & Health": {"Pandemics &
Biothreats": ["virus", "pandemic"], "Ecology, Climate Change & Natural
Disasters": ["climate", "earthquake"], "Food & Water Security": ["food
shortage", "water crisis"]} }, "Cybersecurity & Intelligence": {"Foreign
Espionage & Surveillance": ["espionage", "spy"], "Intellectual Property
Theft & Espionage": ["intellectual property", "trade secret"],
"Cyberattacks on Critical Infrastructure": ["cyberattack", "hacking"]},
 "Political & Social Stability": {"Foreign Influence & Psychological
Warfare": ["propaganda", "foreign influence"], "Social Polarization &
Civil Unrest": ["protest", "civil unrest"]}, "Economic & Trade Security":
{"Economic Coercion & Unfair Trade": ["sanction", "tariff"], "Supply Chain
Disruptions": ["supply chain", "shortage"], "Economic Downturn &
Weakness": ["recession", "economic crisis"]}
```

```
    }
    for category, subcategories in threats.items():
        if isinstance(subcategories, dict):
            for subcategory, specific_threats in subcategories.items():
                if isinstance(specific_threats, dict):
                    for threat, keywords in specific_threats.items():
                        if any(word in sentence.lower() for word in
keywords):
                            return category, subcategory, threat
                elif any(word in sentence.lower() for word in
subcategories[subcategory]):
                    return category, subcategory, None
        elif any(word in sentence.lower() for word in subcategories):
            return category, None, None
    return "Uncategorized", None, None

def process_nss_text(text):
    sentences = split_into_sentences(text)
    data = []
    for sentence in sentences:
        category = classify_sentence(sentence)
        threat_class, subclass, particular_threat =
classify_threat(sentence)
        data.append([sentence, len(sentence.split()), category,
threat_class, subclass, particular_threat])
    return pd.DataFrame(data, columns=["Text", "Word Count", "Category",
"Threat Class", "Subclass", "Particular Threat"])

year = input("Enter the year of the National Security Strategy: ")
pdf_url = search_nss_document(year)
if pdf_url:
    text = extract_text_from_pdf(pdf_url)
    df = process_nss_text(text)
    print(df.head())
    df.to_csv(f"NSS_{year}_Analysis.csv", index=False)
else:
    print("No document found.")
```

APPENDIX II


US NSS 2000.docx
US NSS 2002.docx
US NSS 2006.docx
US NSS 2010.docx
US NSS 2015.docx
US NSS 2017.docx
US NSS 2022.docx

APPENDIX III

Brief analysis of National Security Strategy of the United States of America 2025

The new US national security strategy, published in November 2025, differs significantly from previous versions created under the administrations of Bill Clinton, George W. Bush, Barack Obama, Donald Trump and George Biden. The differences lie in all aspects, starting from the principles and goals of the strategy, ending with the structure, style and size of the document. At the very beginning of the strategy text, the authors point out its differences:

> "A "strategy" is a concrete, realistic plan that explains the *essential connection between ends and means,* it begins from an accurate assessment of what is desired *and* what tools are available, or can realistically be created, to achieve the desired outcomes.
>
> A strategy must evaluate, sort, and prioritize. Not every country, region, issue, or cause - however worthy - can be the focus of American strategy. The purpose of foreign policy is the protection of core national interests; that is the sole focus of this strategy.
>
> American strategies since the end of the Cold War have fallen short - they have been laundry lists of wishes or desired end states; have not *clearly defined what we want* but instead stated vague platitudes; and have often misjudged what we *should* want".

Unlike the historical tradition of political communication in democracies, which requires the document to use the techniques of persuading the reader, these elements are almost completely absent in this strategy. The authors set out in a straightforward manner the general strategic goals and objectives in the field of national security and the corresponding approaches to international and domestic policy, counting on the guaranteed support of these initiatives by overwhelming majority of the electorate. Therefore, we will not use quantitative approach to analyze this document, relying on classical empirical approach to considerations in international politics.

The summary of 2025 National Security Strategy of the United States of America

1. Strategic Vision and Philosophical Foundations, Core Principles

1.1. America-First Realism

- The NSS frames U.S. national security through a realist lens, prioritizing direct threats and strategic competition over abstract ideals or universal agendas.
- The U.S. declares respect to other countries, their souverenity, political and social systems, religious freedoms unless it does not pose a threat to the U.S.
- It asserts that the U.S. will intervene only when core interests are at stake rather than pursue broad global leadership or nation-building.
- The U.S. is to retain “soft power” through which we exercise positive influence throughout the world that furthers its interests, however, declares a limited use of the approach

1.2. Economic and Technological Security

- Economic strength and technological leadership are declared foundational to national security as a mail pillar of global power.
- Domestic industrial revival, supply-chain resilience, and a special protection of critical technologies (e.g., semiconductors).
- Special focus on innovative industries that form the global future: AI, biotech, and quantum computing.
- The U.S. aims to continue dominate in energy and finance with the dollar #1 global reserve currency status.

1.3. Redefinition of Threats

- Border security, illegal migration, economic coercion, and transnational crime are depicted as part of the national security landscape alongside traditional military challenges.

2. Strategic Priorities

2.1. Defense of the Homeland

- Strengthening U.S. borders and homeland defense is elevated to primary national security importance.
- Reducing vulnerabilities from migration, drug trafficking, and illicit flows are explicitly named security issues.

2.2. Western Hemisphere Focus

- The NSS adopts a neo-Monroe Doctrine stance, spotlighting the Americas and Western Hemisphere as a strategic sphere and aiming for greater influence and security leadership there.
- Efforts include boosting military presence and partnering with regional states against external influence and destabilizing forces.

2.3. Great Power Competition

China

- While China is viewed more as an economic and technological competitor than a primary existential military threat, deterring its regional ambitions (e.g., in the Indo-Pacific) remains essential.
- The strategy emphasizes competition in advanced technologies (AI, semiconductors, supply chains).

Europe and Russia

- The U.S. aims to support European allies in preserving the freedom and security of Europe; while restoring Europe's civilizational self-confidence and Western identity at the same time the strategy pushes for deeper European defense autonomy and frames the continent as needing to correct security responsibility in a broad move from traditional collective security toward conditional cooperation.
- The NSS calls for strategic stability with Russia, aiming to prevent misunderstandings and uncontrolled escalation and encourages Europe-led solutions for the Ukraine conflict, while integrating economic and defense cooperation with Ukraine with a moderate U.S. involvement in a military aspect.

Defense Burden Sharing and Allies

- The USA insists that allies must take greater responsibility for their own defense, encouraging increased defense spending and strategic autonomy.
- NATO is recast not merely as a security alliance but as a partnership where the U.S. demands more equitable burden sharing.

3. Diplomacy, Global Order, and International Relations

3.1. Global Engagement Philosophy

- The NSS moves away from post–Cold War global leadership ideology toward selective engagement aligned with U.S. interests.
- Multilateral obligations are balanced against national priorities, with less emphasis on universal democratic promotion.

3.2. Regional Approaches

Europe

- The strategy's language on Europe has been viewed as confrontational by some European officials, pressuring the EU to reform and assuming Europe must secure itself more independently.

Middle East and Africa

- U.S. focus on these regions is reduced, with a shift toward economic engagement, energy interests, and stable partnerships rather than direct military entanglement.
- The U.S. is to prevent an adversarial power from dominating the Middle East as the region is crucial to the global energy supplies due to tremendous oil and gas reserves.

Asia and Pacific

- The Indo-Pacific remains key, particularly deterrence of Chinese ambitions and support for regional partners like Japan, South Korea, and others.

3.3. Economic Security and Industrial Base

- The NSS emphasizes economic nationalism — reshoring strategic industries, securing supply chains, and enhancing technological self-sufficiency.
- Economic tools are portrayed as instruments of power, alongside military capability.

3.4. Technology, Innovation, and Security

- Maintaining technological leadership is identified as central to competitive advantage in national security, with focus areas including advanced computing, AI, and critical supply chains.

3.5. Domestic Security Linkages

- Domestic issues like immigration and border control are framed as inseparable from national security, reflecting an expanded view of what constitutes a threat.

General View

The 2025 National Security Strategy is almost 100% focused on the economy, as the basis of the country's dominance in the world. Historically large trade deficits provoke deficit of federal funds that put overall government finances in the U.S. on unstable footing. The debt burden is also significant in the corporate and private sectors. Bringing the country's economy to a sustainable development pass is a strategic priority of national security, therefore, aspects of the NSS must be interpreted through the prism of economic development. The NSS effectively reorders the U.S. industrial landscape around strategic function rather than pure market efficiency. Information Technology, Industrials, Energy, Materials, Financials and selected Health Care sub-industries emerge as structurally attractive not simply due to growth prospects, but because they are embedded in the architecture of national power. The U.S. economic dominance has to be supported through diplomacy, military might, sanctions, protectionist policies American companies, soft power, etc.

No country can compete with the United States in all aspects as a stand-alone entity. However, several political, regional, or economic alliances are competitive in certain areas. The United States intends to protect its dominant position by deterring competing countries and their associations using various tools. In particular, the EU, with more than half a billion people, high human and technological potential, increasingly resembling a state-nation due to integration processes, is no longer only an ally, but also an economic competitor in certain areas with its' own geostrategic interests. Among the organizations, the development of which the United States is also likely to restrain due to its economically or politically competitive nature: BRICS, OPEC+, SCO. At the same time the U.S. could build in a long-term a sort of economic block in the Western Hemisphere with the population of more than 1 bn people that could support its' economic might.

The U.S. is going to restrain rivals as a financial superpower including the rise of alternative reserve currencies and favors countries that do not devalue their currencies to get competitive advantage for its exports. The U.S. is protecting its domestic market with tariffs, introduce anti-migration initiatives to protect the local labor market, keep high employment and thus, consumption, and indirectly political and social stability. We expect the rise of export-supporting initiatives as tool of trade deficit reduction.

Regional Focus

The 2025 NSS rather clearly outlines possible economic cooperation with countries that do not have a competitive trade advantage over the United States and thus a significant trade surplus, involved in largescale purchases of U.S. production and services, in particular, weapons, energy, agricultural production, high-tech exports of goods and services and others. Partners should not be members of anti-American blocs or led by politicians who profess anti-American stance.

The table below summarizes key abovementioned parameters for the largest global economies (GDP of more than $200 bn). We roughly divided the countries shown in the table into 4 groups based on the indicated parameters reflecting the likelihood of increasing of economic cooperation with the U.S. (inflows of direct and portfolio investments from the U.S.) in the medium term (green - high probability, yellow – moderate, brown – likely decrease, red - decrease). Thus, the list of potentially lucrative equity markets from a geostrategic point of view includes Argentina, Australia, Chili, Greece, Israel, Peru, Philippines, Qatar, Turkey, Ukraine, the U.K. and the UAE. Most of these countries are already core U.S. regional partners in various fields. Our long-term recommendation for these markets **strategically overweight**. Among the emerging economies we would pay a special attention to Argentina, Turkey and Ukraine that suffered a prolonged period of economic instability and underinvestment. Argentina, Chili and Peru also fall into US Western Hemisphere strategic focus, Australia is a key U.S. maritime partner in AUKUS and Israel is a key ally on the Middle East.

Country	GDP, 2025	US Trade Deficit, 2024, $ bn	As of GDP	BRICS	SCO	OPEC+	EU	Current Stance of Relations with the U.S.
Algeria	288,01	1,3	0,5%	no	no	yes	no	neu.
Argentina	683,37	-1,9	-0,3%	no	no	no	no	pos.
Australia	1 829,51	-17,5	-1,0%	no	no	no	no	pos.
Austria	566,46	11,8	2,1%	no	no	no	yes	neu.
Bangladesh	475,01	5,7	1,2%	no	no	no	no	neu.
Belgium	716,98	-6,2	-0,9%	no	no	no	yes	neu.
Brazil	2 256,91	-6,8	-0,3%	yes	no	no	no	neg.
Canada	2 283,60	54,8	2,4%	no	no	no	no	neg.
Chile	347,17	-1,6	-0,5%	no	no	no	no	pos.
China	19 398,58	270,4	1,4%	yes	yes	no	no	neg.
Colombia	438,12	-1,0	-0,2%	no	no	no	no	neg.
Cuba	201,99	-0,5	-0,3%	yes	no	no	no	neg.
Czechia	383,38	3,5	0,9%	no	no	no	yes	neu.
Denmark	459,61	3,6	0,8%	no	no	no	yes	neu.
Egypt	349,26	-2,9	-0,8%	yes	no	no	no	neu.
Finland	314,72	4,9	1,6%	no	no	no	yes	pos.
France	3 361,56	15,1	0,4%	no	no	no	yes	neu.
Germany	5 013,57	76,4	1,5%	no	no	no	yes	neu.
Greece	282,02	-0,3	-0,1%	no	no	no	no	neu.
Hong Kong	428,23	-21,2	-4,9%	no	no	no	no	neg.
Hungary	247,76	8,3	3,3%	no	no	no	yes	pos.
India	4 125,21	41,5	1,0%	yes	yes	no	no	neg.
Indonesia	1 443,26	16,4	1,1%	yes	no	no	no	neu.
Iran	356,51	-0,1	0,0%	yes	yes	yes	no	neg.
Iraq	265,46	5,4	2,0%	no	no	yes	no	pos.
Ireland	708,77	80,5	11,4%	no	no	no	yes	pos.
Israel	610,75	6,7	1,1%	no	no	no	no	pos.
Italy	2 543,68	39,7	1,6%	no	no	no	yes	pos.
Japan	4 279,83	62,6	1,5%	no	no	no	no	pos.
Kazakhstan	300,05	1,1	0,4%	yes	yes	yes	no	neu.
Malaysia	470,57	22,1	4,7%	yes	no	yes	no	neu.
Mexico	1 862,74	157,2	8,4%	no	no	yes	no	neg.
Netherlands	1 320,64	-50,5	-3,8%	no	no	no	yes	neu.
New Zealand	262,91	1,1	0,4%	no	no	no	no	neu.
Nigeria	285,00	1,4	0,5%	yes	no	yes	no	neu.
Norway	517,10	1,6	0,3%	no	no	no	yes	neu.
Pakistan	410,50	2,7	0,7%	no	yes	no	no	neu.
Peru	318,48	-2,1	-0,6%	no	no	no	no	pos.
Philippines	494,16	4,4	0,9%	no	no	no	no	pos.
Poland	1 039,62	1,4	0,1%	no	no	no	yes	neu.
Portugal	337,94	3,2	0,9%	no	no	no	yes	neu.
Qatar	222,12	-1,4	-0,6%	no	no	no	no	neu.
Romania	422,51	2,4	0,6%	no	no	no	yes	neu.
Russia	2 540,66	2,4	0,1%	yes	yes	yes	no	neg.
Saudi Arabia	1 268,54	0,1	0,0%	yes	no	yes	no	pos.
South Africa	426,38	7,9	1,8%	yes	no	no	no	neg.
South Korea	1 858,57	60,2	3,2%	no	no	no	no	pos.
Spain	1 891,37	-2,1	-0,1%	no	no	no	yes	neu.
Sweden	662,32	8,8	1,3%	no	no	no	yes	neu.
Switzerland	1 002,67	25,5	2,5%	no	no	no	no	eng.
Taiwan	884,39	67,4	7,6%	no	no	no	no	pos.
Thailand	558,57	41,5	7,4%	yes	no	no	no	neu.
Turkey	1 565,47	1,9	0,1%	no	no	no	no	pos.
Ukraine	209,71	-0,4	-0,2%	no	no	no	no	neu.
United Arab Emirates	569,10	-17,8	-3,1%	yes	no	yes	no	pos.
United Kingdom	3 958,78	-10,3	-0,3%	no	no	no	no	neu.
Vietnam	484,73	113,1	23,3%	yes	no	no	no	neg.

Long-Term Sectoral Analysis and Strategic Attractiveness Under the 2025 U.S. NSS (GICS-Based)

1. Information Technology

The strategy stresses that the U.S. must remain “the world’s most scientifically and technologically advanced and innovative country. Technological primacy is at the center of long-term U.S. security, explicitly linking control over advanced computing, artificial intelligence (AI), and microelectronics to military effectiveness, economic competitiveness, and geopolitical leverage. Semiconductors are treated not merely as commercial inputs but as strategic chokepoints whose disruption would undermine defense systems, communications, and industrial production. The implementation of AI into advanced manufacturing and robotics (autonomous and semi-autonomous systems) should give a boost to the productivity and thus decrease a competitive advantage of strategic rivals such as China gained through outnumbered population. The sector has a tremendous export potential in all its’ components: hardware, software and services as it enjoys almost monopoly in the world.

Key Drivers:

- Persistent federal intervention (CHIPS-style incentives, export controls, security screening)
- High barriers to entry and capital intensity
- Embedded dual-use demand (civilian and defense)

As a result, leading firms in advanced chips, AI software, and secure cloud infrastructure enjoy policy-backed demand durability, making the sector structurally attractive despite cyclicality. The sector enjoyed a stable capital inflow during the past decade that resulted in hyper-stretched valuations. This factor decreases the medium-term attractiveness of the sector however the long-term picture remains solid due to innovative character of its’ industries.

Threats group:

- Economic & Trade Security
- Military & Defense
- Cybersecurity & Intelligence

2. Industrials

The NSS identifies the defense industrial base as a strategic vulnerability and calls for long-term capacity rebuilding, domestic sourcing, and allied integration. Aerospace, weapons systems, space platforms, and logistics infrastructure are framed as essential for deterrence, power projection, and crisis response. Beyond defense primes, the strategy emphasizes tier-2 and tier-3 suppliers, signaling sustained support for precision manufacturing, advanced materials processing, and industrial automation.

Key Drivers:

- Long contract cycles and predictable government demand
- Reduced exposure to global price competition
- Strategic reshoring trends

This produces lower volatility and long-horizon cash-flow visibility, enhancing attractiveness for patient capital. The sector has some export potential however the global industrial landscape is rather competitive.

We expect the U.S. to rebuild its industrial might with the help of large IT conglomerates that could boost productivity and thus competitiveness of the sector. The M&A activity could increase as well as appearance of a new industrial startups focused on new automation capabilities. The current valuations in the sector seem to be reasonable given its strategic importance and an early stage of its' strategic transformation.

Threats group:

- Economic & Trade Security
- Military & Defense
- Cybersecurity & Intelligence

3. Energy and Electric Utilities

The NSS frames energy security as national security and global might, emphasizes resilience, domestic production capacity, and infrastructure hardening. While the strategy supports innovation and modernization, it explicitly rejects energy dependency as a strategic risk, preserving a role for traditional energy alongside grid reliability and nuclear capacity.

Electric utilities and energy infrastructure are treated as critical national assets, especially given cyber, climate, and sabotage risks.

Key Drivers:

- Electric utilities enjoy regulated or quasi-regulated revenue stability
- Strategic protection from foreign competition
- Long-term capital deployment supported by public policy
- Strategic interest from IT and Industrial sectors that increase a long-term demand for energy onshore
- Government support on the international markets as energy exports and global presence of the U.S. energy companies is being considered to project U.S. power globally

Attractiveness stems less from high growth and more from strategic indispensability and downside protection. Sufficient low-cost energy on the domestic market increase competitiveness of industrial production and fuels IT infrastructure such as datacenters.

Threats group:

- Economic & Trade Security

4. Materials

The NSS highlights supply chain security and strategic materials as prerequisites for technological leadership. Rare earth elements, advanced alloys, battery materials, and specialty chemicals are treated as enabling inputs for semiconductors, defense systems, and energy technologies and other industrial use. Domestic and allied sourcing is emphasized to reduce exposure to geopolitical coercion.

Key Drivers:

- Strategic pricing power
- Policy-driven demand insulation
- Increased likelihood of government offtake agreements

This shifts parts of the materials sector from commodity exposure toward strategic asset status. Although the U.S. strategy emphasizes the self-sufficiency in all the materials, production and technologies, the difference between rare/ strategically important materials and “usual” commodities makes the latest not strategically important and thus less long-term attractive from the investment point of view.

Threats group:

- Economic & Trade Security

5. Health Care

While less overtly militarized, the NSS treats biotechnology and health security as strategic enablers of national resilience. Pandemic preparedness, biomanufacturing capacity, and biomedical innovation are framed as essential to both civilian stability and defense readiness. Healthcare technologies are also recognized as strategic due to their positive impact on human capital, which is important economic aspect. Health care technology—particularly AI-enabled diagnostics and bio-data platforms—sits at the intersection of innovation, security, and economic growth.

Key Drivers:

- Strong public-private research ecosystems
- Dual-use innovation pathways
- Persistent federal funding and regulatory engagement

Attractiveness is highest in platform technologies and tools, rather than single-product therapeutics. In couple with healthcare hardware and software the sector has significant export potential albeit some cost control is needed. The valuations in the sector are within historical norms.

Threats group:

- Economic & Trade Security
- Environmental & Health

Attractiveness is assessed on a 1–5 scale in a table below based on (a) national security relevance, (b) policy durability, (c) capital protection, and (d) insulation from global competition.

Sector	Primary NSS Strategic Function	Industry Group	Industry	Long-Term Strategic Attractiveness (1-5)
Industrials	Force readiness, deterrence, industrial mobilization, economic security	Capital Goods	Aerospace & Defense	5
			Trading Companies & Distributon	1
			Electrical Equipment	3
			Industrial Conglomerates	4
			Construction & Engineering	3
			Building Products	1
			Machinery	3
		Commercial & Professional Services	Professional Services	1
			Commercial Services & Supplies	1
		Transportation	Ground Transportation	1
			Marine Transportation	3
			Air Freight & Logistics	2
			Transportation Infrastructure	3
			Passenger Airlines	1
Communication Services	Information dominance, cyber resilience	Media & Entertainment	Entertainment	1
			Interactive Media & Services	1
			Media	1
		Telecommunication Services	Diversified Telecommunication	3
			Wireless Telecommunication Services	4
Energy	Energy independence, operational resilience	Energy	Oil, Gas & Consumable Fuels	5
			Energy Equipment & Services	4
Financials	Economic security	Banks	Banks	3
		Financial Services	Capital Markets	4
			Consumer Finance	2
			Financial Services	2
			Mortgage Real Estate Investmen	1
		Insurance	Insurance	3
Health Care	Population resilience, biosecurity, innovation base	Pharmaceuticals, Biotechnology	Life Sciences Tools & Services	4
			Biotechnology	4
			Pharmaceuticals	3
		Health Care Equipment & Services	Health Care Providers & Services	3
			Health Care Equipment & Supplies	4
			Health Care Technology	5
Information Technology	Technological leadership, military superiority, economic coercion resistance	Software & Services	IT Services	4
			Software	5
		Technology Hardware & Equipment	Electronic Equipment, Instruments	5
			Technology Hardware, Storage &	5
			Communications Equipment	4
		Semiconductors & Semiconductor Equipment	Semiconductors & Semiconductor Equipment	5
Materials	Supply chain security, strategic inputs	Materials	Containers & Packaging	1
			Paper & Forest Products	1
			Chemicals	3
			Metals & Mining	5
			Construction Materials	1
Utilities	Critical infrastructure protection, domestic stability	Utilities	Multi-Utilities	3
			Electric Utilities	4
			Independent Power and Renewables	4
			Water Utilities	2
			Gas Utilities	1