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Potential Effects of ESG (Environmental, Social, and Governance) Policies on the Returns of an Investment Portfolio

Galina Klimova

ABSTRACT

The objective of this work is the corporate ESG policies as they relate to the company's financial and the consequent stock performance. The subject of the work is the effects of such policies on stock returns and stock portfolio performance. In order, to tackle the problem, the author taken several steps, namely:
Study of history and underlying principles of the ESG policies
Gathered information concerning common investor approaches to the adoption of the ESG mandates to their investment strategies
Tracked the performance of the broader market indices that follow ESG mandates
Considered particular example of the financial performance of an ESG adhering company
Developed recommendations relating to the appropriate selection of positions to the portfolio with ESG mandate
Overview of the findings and the recommendations for portfolio construction using the ESG principals as a selection criteria are presented in conclusion.
Keywords: ESG policies; stock portfolio; market indices; financial performance; Global Financial Crisis

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ОРИГИНАЛЬНАЯ СТАТЬЯ

Потенциальные эффекты политики ЭСУ (экология, социальная сфера, управление) на доходность инвестиционного портфеля

Галина Климова

АННОТАЦИЯ

Цель исследования — попытка определить влияние корпоративной политики ESG (ЭСУ — Экология, Социальная сфера, Управление) на доходность портфельных акций. Для решения поставленной проблемы автор применил несколько общенаучных методов: анализ истории и основополагающих принципов политики ESG; сбор и анализ информации об общих подходах инвесторов к внедрению требований ESG в их инвестиционные стратегии; анализ показателей более широких рыночных индексов, соответствующих требованиям ESG; анализ финансовых показателей компании, придерживающихся ESG. По **результатам** исследования автором разработаны рекомендации по правильному подбору позиций в портфеле с мандатом ESG и построению портфеля с использованием принципов ESG в качестве критериев отбора.
Ключевые слова: политика ESG; портфель акций; рыночные индексы; финансовые показатели; Глобальный финансовый кризис

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Introduction

Over the last several decades political and economic discourse has been dominated by the debates surrounding the question of which direction the global development should take next after the unprecedented scientific and industrial advances made over the 20th century. While many advocated for the prospects of continued fast paced progress fueled by the ever surging scientific discoveries and accelerate rates of information processing, there were those who warned against the untampered economic growth. The latter argued that natural resources required to support such rates of expansion were simply lacking and that their consumption was unsustainable in the long run.

Then came the seeming evidence of what first appeared to be the Global Cooling, then was reclassified as Global Warming, and eventually stapled as the Global Climate Change. As troubling as this may sound, the greater challenge for the humanity was the purported anthropogenic nature of the Earth temperature changes. Thus, argued the supporters of limited economic growth, instead of advancement, the humankind had to refocus its efforts on curbing and restoring the damage it has already caused the environment. By artificially hampering the industrial growth, the problem of limited natural resources would also automatically be addressed, as fewer would be consumed over an extended period of time. Having received the boost from scientific publications and considerable government support and armed with essentially Malthusian–based theories, groups of politicians, scientists, and social advocates began to form and promote ideas of the environmental agenda and sustainable development.

For businesses, those ideas became succinctly encapsulated into the abbreviation of ESG principles, where E stands for environmental, S for social, and G for governance. Following the ESG principals implies expanding the company's usual scope of business to incorporate the social and environmental outreach into its practices. In addition to following the governmental regulations that often fail to encompass the entirety of the corporate activity that may be connected to the use of natural resources or pollution, ESG acts as a somewhat formalized moral obligation of businesses to adopt the best possible practices in order to reduce the footprint of humanity on the environment and provide support for the broader society. That is at least the idea of it.

Out of the trio, the governance principal, perhaps deservers a separate discussion. While the set of criteria applied to governance is in flux the same way it is for the other two principals, at its core it is aimed at improving the compliance and transparency of the business practices. Indeed, fair and transparent conduct benefits the company and its stakeholders in the long run. To illustrate, one could recall the infamous case of Enron and Arthur Anderson. After finding itself in a difficult financial position, Enron elected not to address its problem head on, but instead pretend as though nothing ever happened, forge its operating results, and find an accomplice willing to cover up its misdeeds long enough for the company to find a way out of trouble. Arthur Anderson filled the place of such a willing accomplice all too easily, knowingly signing off on the forged reports and perpetuating the deceit to the investment communities and the government agencies. Going as far as fake furbishing a new office space and sitting actors as employees, for when an outsider would show up for a sight visit, the top management of Enron clearly disregarded any pretense at responsible business practices and drew righteous ire from all over the country after the scheme finally came undone. Both Enron and Arthur Anderson shut down and many of their executives were given prison time.

It would seem that a scandalous case as that of Enron and Arthur Anderson would deter anyone else from following in their footsteps. However, in the years leading up to the Global Financial Crisis, practically entire industries got entangled in pyramid like schemes involving subprime mortgages and their derivative products led by non–other than the pinnacles of the US and world financial system — the bulge bracket investment banks. More than ever before the unraveling of the Great Financial Crisis spurred legislative action to force increased transparency on the banks and the corporate sector in general. Independent industry associations strengthened their governance policy guidelines in the efforts to try and prevent such system distress from happening again. Given the collapse of the financial system during the 2008 crisis, it comes as no surprise that the investment community has become overly sensitive to policies of transparency, proper busi-

ness practices, and compliance in the years that followed. Collectively known under the umbrella term, Governance, those policies continue to be on the forefront of the investment decision making by any experienced professional irrespective of their view on the environmental and social principals.

1. ESG Definition and Background

In the past decade, social responsibility concerns have moved to the forefront of the investment decision making considerations in most developed economies and forced the developing world to adapt to the demands of the staunch supporters of the ESG (Environmental, Social and Governance) policies. Due to the widespread support for corporate social responsibility and the fight against anthropogenic climate change, ESG investment products continue enjoying increased popularity. In its latest report, The European Fund and Asset Management Association estimates that the net sales of ESG related UCITS funds grew from 19.5 billion euros to 235 billion euros in 2020 with the grand total Assets Under Management (AUM) reaching 1.2 trillion euros.

1.1. History

As recent as in 2019, investments into the sustainability related financial instruments amounted to 10.7 trillion euros, which represented nearly 43% of the total fund AUM in the European Union. Despite the strong trend and a large share of capital already invested in the ESG invested products, the untapped opportunities for the broader sustainable development related market indicate that the era of ESG investments is just beginning.

More and more investors seek to incorporate the ESG mandate into their portfolio strategy. By doing so they hope to strongarm businesses into adopting environmentally friendly practices and following the principles of corporate social responsibility. Ambitious as it is, the true challenge lies with the fact that there is not neither has there ever been a universal set of consistent and concrete rules or even guidelines with respect to the principles of ESG.

Depending on the provider the definitions and demands will differ. To demonstrate the problem using the simplest example, clean energy is at the top of the list when it comes to environmental considerations. Nuclear power is one of the cleanest ways to produce electricity. Yet the treatment of the nuclear power stations varies drastically with many denouncing them for their potential to harm millions.

Another example is electric vehicles. While it is evident that electric cars do not themselves emit carbon dioxide, mining and processing the nickel ore required to produce the electric car batteries can be quite a polluting endeavor. As a result, evaluating the full scope of potential impact on the ESG principals proves to be an arduous and ambiguous task even when considering a single company. That is why the investment community experiences a great urge for a unified, clear, and transparent set of ESG norms that could be readily applied by the portfolio managers.

Most reputable investment funds that purport to follow the ESG mandate, typically provide a somewhat comprehensive list of requirements that a company needs to pass in order to be included in the portfolio. While investment mandates themselves are generally written to allow the greatest flexibility to the investor, additional requirements and specifications can be adopted by individual portfolio managers with the consent from the Board of Directors to better suit the market demands. Since the variability between the standards and perceptions with respect to the ESG standards are so great, portfolio managers try to adopt the one size fits all model as much as possible. The requirements they release to their clients are more or less akin to a litmus test designed to determine if a company upholds any legitimate ESG standard.

Generally lacking a science background, clients in turn have a very vague understanding of what should be a part of the ESG criteria beyond the general words often repeated on the media. Having heard of the idea and being sold on the premise they rush to incorporate ESG principals into their investment practices. That, however, soon proves to be overly optimistic and ambivalent a task. Immediate questions arise in relation to how far and wide do investors and clients want to do due diligence in order to trace the full scale of the carbon footprint or other forms of pollution in order to assess the environmental friendliness of a company.

How much of that data is publicly available is a completely different matter. Far from every even public company chooses to publish open–

access environmental reports. Vendors of larger firms are frequently too small to even care about such reports. Thus, while larger corporations have started requiring their downstream suppliers to provide some forms of verification that the output they produce and sell to the company in question is "clean", it is often too expensive and resource intensive a task for the smaller market participant. Extensive requirements may go as far as suffocating the smaller businesses due to the sheer lack of resources on their end to ensure all standards are met and all the reporting is complete in line with the clients' expectations.

So why do investors and their clients concern themselves with ESG practices so extensively? For a long time, with the media being dominated by discussions of climate change, environment has been the central theme used to justify the move to sustainable practices. However, lately, the social responsibility side of the issue has also come under increased scrutiny. Here, not only sustainability business practices and supply chains are analyzed from a fair trade perspective, but also the rights of employees, anti–discrimination and inclusion policies, as well as community outreach programs are given considerable weight.

In the age of economic strain that the corona–virus engendered restrictions have put on the global markets, corporate social responsibility arguably gains greater significance, with emphasis on the word corporate. As the first wave of quarantine rampaged through the world, small and mid–sized businesses suffered the shock, from which many never recovered sending myriads of entrepreneurs into bankruptcy with the situation only intensifying as the lockdowns persisted. With business owners in arrears and fighting for survival, smaller businesses could do little to ease the pains of their employees, who were being laid off, furloughed, or deprived of the main source of income such as tips for restaurant workers. Not in a completely dissimilar way, larger corporations faced also challenges from the economic downturn and the consumer spending slump. They, however, generally had better footing to weather the economic crisis be it due to heftier safety cushions or stronger negotiating positions with banks and vendors. With that and even as the relief checks arrived from the government, a significant portion of the workforce simply became redundant during the times of the pandemic. With no operating cash inflows to fund the employee wages and benefits, multiple corporations were forced to also lay off or furlough many of their employees, airline, cruise, and hospitality industries being the primary examples.

Yet, unlike the smaller mom and pop shops, corporations on average possess higher liquidity and are better positioned to extend benefits and support to their employees in the times of dire need. And what a need did the pandemic present. As the private sector, and at this point most of the public sector as well even in the developed world, faced plunging demand, supply chain interruptions, and threats of surging inflation, the world population experienced a noticeable loss of income. Furthermore, overextended resources of the healthcare sector meant that those in need of medical attention were unlikely to receive adequate care and that more resources would be necessary to resolve medical problems. Therefore, many companies responded to the situation by reinforcing their social obligations and also implementing higher social standards within the company as well as with suppliers.

ESG investors often invest many clients' money in stable stocks and bonds. These often considerable sums, of course, provide some bargaining power and therefore influence. In addition, many asset managers and fund managers are now actively involved in the activities of companies with a view to sustainable transformation. For example, discussions with management that require stricter environmental protection, fair wages, or certain employee rights take place. If the company is not ready for negotiations and is not constructive, the investor as a shareholder can certainly bring it up at the general meeting. Or demand a change in investor voting behavior ("impact investing") there — these direct tools of influence have been used more and more often lately.

From an economic point of view, there are several reasons for investing in ESG stocks: Resilient companies often operate in dynamic emerging markets with good prospects. And sometimes they can have lower risks, for example in terms of reputation or future viability. This good risk and reward profile also appears to have a positive effect on returns: many studies now show that sustainable investments in the past did not lead to worse investment results than their classic counterparts — often even slightly better.

It is worth a note that past performance is not a reliable indicator of future result. Broad diversification across asset classes, regions, themes and industries is now possible thanks to strong growth in the market for "resilient" stocks or corporate bonds, green or social bonds. In addition, ESG investors are effectively promoting sustainable development that can protect our future and the world of our children.

The vast majority of 2,000 ESG ROI studies and analyzes paint a clear picture: On average, ESG portfolios are no worse than conventional products — often even better. The reasons for this are clear: sustainable investment is a shift from social awareness to more global responsibility and climate protection. In addition, due to its orientation, sustainable investments have fewer systemic or reputational risks in their business model. A prerequisite for this is proper risk management and careful selection of systems.

The growing popularity of ESG investments has contributed to the fact that, in the medium to long term, they can definitely improve the portfolio's risk and return profile. For example, a performance analysis commissioned by the Bundesverband Alternative Investments eV (BAI) shows that in the past, sustainable development funds have fluctuated less dramatically in value, that is, they posed less risk than conventional funds. One reason for this is that companies that are proactive and fair, practice responsible leadership and are not focused on short–term profit maximization are often in a stronger position.

Analyzing the multiple criteria that play a role in assessing sustainability, as well as continuously monitoring them, is complex, time consuming and costly. It is mainly undertaken by rating agencies that specialize in ESG or certain sub–regions of the ESG universe. For example, they assess the CO_2 emissions of countries or companies, check supply chains, or analyze whether a company is following good corporate governance rules.

Financial companies that create dedicated resilience funds or ESG funds often use multiple ratings at the same time to get as complete a picture as possible of the resilience of the security or the respective issuer.

In practice, three approaches have proven effective in recognizing the sustainability of companies:

Best-in-class approach. The best–in–class approach focuses on investing in those companies in the industry that are particularly resilient, that is, leaders in the implementation of ESG criteria. For this, issuers are evaluated by rating agencies based on specific ESG criteria and a rating is created. Investments are made only in securities whose issuers are doing well.

Exclusion criterion. The main criticism of the "best-in-class" approach is that, in principle, all industries can be considered, including arms, oil, tobacco and gambling. The extended approach filters out disputed companies or industries through an exclusion process. A more rigorous version of this approach allows you to invest only in companies that clearly meet certain ethical requirements. This could include, for example, adhering to the UN Global Compact, avoiding animal testing, or excluding relationships with countries that violate human rights.

ESG integration. Finally, the ESG integration approach intentionally incorporates non–financial information into financial analysis for investment decisions. This is based on the knowledge that aspects of sustainable development that are not reflected in the balance sheet, however, can have a large impact on the long–term development of the company.

1.2. The impact of ESG factors on corporate governance

As sustainable investing become more and more important, so do the demands of investors and their perspective. There is more and more talk about ESG, which stands for environmental, social, and governance, and makes it clear that social aspects of business and corporate governance are increasingly being considered in addition to the environment [1]. There is still a lot of talk about the environmental footprint, but increasingly there is a demand for fair terms for employees and suppliers or corporate governance issues.

In general, it can be said that investors now want more control over what happens to their money. However, there is still no single definition of what sustainable investing is. According to the fund company Invesco, five ESG strategies have now emerged and been implemented:

- Negative screening: Here certain industries or topics are excluded from the outset, such as arms or gambling

• Integration: in this paragraph, ESG factors such as the environment, human rights or corruption are consistently taken into account throughout the investment process — from financial analysis to implementation — and the quality of the company is assessed against them

• Active shareholder status: Investors attempt to influence companies through direct dialogue with company management and the purposeful use of their voting rights

• Norms-based screening uses criteria based on international standards and recommendations.

In essence, investors have to choose between two approaches: either using positive criteria, or identifying companies that specifically meet environmental and social requirements — be it climate efficiency, low water consumption or labor safety. Or, with negative criteria, they exclude from the outset companies, industries or countries that do not meet certain ESG requirements or violate international norms and standards. Such negative screening is one of the most common approaches.

In the next step, investors can use either an absolute or a relative approach. With positive screening, the absolute approach means that it is all about how well the company meets the ESG requirements, regardless of how it compares to other companies [2]. Similarly, companies that perform activities that do not qualify for ESG avoid negative screening. As a result, a very small number of stocks are excluded from one sector and a large number of stocks from another and individual sectors may even be excluded entirely. Thus, the absolute approach offers the advantage of setting certain minimum standards for different sectors, but because of the exclusion of certain stocks or sectors, it can lead to portfolio diversification.

With the relative approach, you first sort companies into groups, such as sectors or industries, and then filter out the best stocks from each individual group. In this way, the best–in–class principle applies. Here you select companies that are leaders in their industries in terms of environmental, social and corporate governance [3]. It is not limited to the classic sectors of sustainable development, such as renewable energy and environmental technology. Automobile manufacturers, oil companies, and chemical companies can also be considered if they do particularly well on ESG ratings and are best at implementing environmental and social standards in their industry.

One of the biggest criticisms of this approach is that companies do not have to be particularly sustainable; they only need to be among the best in their sector. On the other hand, it may exclude stocks that, while not the best in their peer group, are still better than most companies in another industry. Because many best–in–class indexes are weighted according to market capitalization, relatively small companies often have no chance of achieving significant weighting in the index.

More and more investors are beginning to use their voting power to influence companies. Rather than focusing solely on individual criteria, institutional investors and investment funds in particular are relying on direct dialogue with management to point out things that are important to them in terms of sustainability and to draw attention to complaints [4]. The confluence of several investors' interests, which is typical of active shareholders, often has a great impact on companies: after all, rejecting or ignoring proposed improvements can lead to disinvestment to the company's detriment.

Against this background, it is likely that sustainable investing and consideration of ESG factors should not necessarily result in lost profits. If investors prefer sustainable companies, it supports their stock price — and the link between sustainability and performance is automatically established, as many scientific studies have now proven.

On the other hand, the investment environment should not be so constrained by overly strict sustainability criteria that the portfolio can no longer be effectively diversified. Excluding entire industries can make it difficult to achieve an appropriate risk–return profile. Investors need to weigh carefully [5].

One of the biggest criticisms of best–in–class concepts is that companies do not have to be particularly resilient to be included in an investment fund. Rather, they are likely to be among the best in their sector. It can also mean excluding stocks that, while not among the best in their peer group, are still better than most companies in another industry.

Another weakness of this approach is that many best–in–class indexes are weighted according to market capitalization, and relatively small companies often have no chance of achieving significant

weight in the index. Accordingly, many best–in–class products select the best among large corporations, while the sustainability performance of medium or small companies is hardly considered, although interesting investment targets can be found here.

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On the other hand, large corporations usually have multiple lines of business, and so the problem is that they offer both ESG-compatible and ESG–incompatible products and services. In addition, their long supply chains also include countries where working conditions are unacceptable and the environment is damaged [6]. Even if the best-in-class concept results in a sustainable fund considering only those companies that do the least, they are nevertheless involved in the exploitation and destruction of the environment.

So-called "active shareholder status" is not about choosing or excluding companies to invest using criteria. Rather, more and more institutional investors, and investment funds are using their voting rights to directly influence companies in terms of sustainable investment.

In addition, in addition to the annual general meeting, they also engage in regular dialogue with management to point out things that are important to them in terms of sustainability and to call attention to shortcomings. The pooling of the interests of several investors, which is typical of active shareholders, often has a big impact on companies: after all, rejecting or ignoring proposed improvements can lead to disinvestment to the detriment of the company. [7]

Active ownership or participation, as this approach is also called, is particularly well developed in the Anglo-Saxon countries, Scandinavia, the Netherlands, Belgium, and France. In the U.S., the focus is on improving corporate governance as well as social issues — perhaps because, unlike in Europe, social systems are not very well developed. The Calpers pension fund, along with other big investors, has warned automakers General Motors and Ford to sell equity stakes if they do not disclose their greenhouse gas and climate strategies.

A pioneer among active shareholders is the Norwegian state pension fund. Not only was it one of the first investors to try to encourage companies to do business more sustainably, in direct dialogue, but with assets under management now exceeding $ 1 trillion, it is a real heavyweight. He is a real heavyweight whose voice no one can ignore [8]. He has made a name for himself in particular because he has sold stakes in companies for several years for environmental and social reasons on the advice of his ethics board and made it public. Financially, the pension fund's decisions are less painful than the snowball effect caused by the wannabes encouraged by this example.

The pension fund's commitment focuses not only on classic issues such as shareholder influence and the right to information, but also on certain eco–social issues such as climate protection, children's rights, and water. On the one hand, it actively uses its right to vote at general meetings; on the other hand, it directly addresses individual companies. Because of his influence, Norwegians find open ears and, as they say, can talk to any CEO they want. [9]

Major shareholders are increasingly pooling their strengths to get clear on specific company topics and minimize risk. Examples of this are the CDP investor initiative that emerged from the Carbon Disclosure Project, which was later merged with the Forest Footprint Disclosure (FFD) initiative. There are also the UN Principles for Responsible Investment, i.e., the UN Principles for Responsible Investment, under the auspices of the United Nations.

While ESG driven investment decisions, that is investment decisions that take into account environmental aspects, social issues and corporate governance criteria were previously mostly concerned with the equity markets, many investors today have turned their attention to gold and its full supply chain for proof of ESG compliance. In other words, the yellow precious metal must also now be green.

Therefore, the still fairly new concept of responsible exploration begs the question, under what conditions was the gold mined? Who benefited from it? How were the miners paid, how were the suppliers treated? Investors also want to eliminate the risk that gold was used to launder money, support terrorism, or finance wars [10]. Investors who want to act responsibly when it comes to gold must make sure that their shiny metal has no dark past.

Answering any of these questions can prove to be an arduous task because gold has an unlimited lifespan. Once produced, it does not disintegrate or change its qualities. Thus, it continues to circulate the market no matter the form. And in fact, there are gold bars in circulation that were mined and processed using methods and conditions that are no longer acceptable today. This is where the gold mining industry itself has been claimed and put.

Two of the most important organizations in the industry, the World Gold Council (WGC) and the London Bullion Market Association (LBMA), have developed guidelines for responsible gold mining and processing through which they set ESG–compliant environmental, social and corporate standards and want to prevent abuse. London Good Delivery ingots, which have been produced since 2012 based on the so–called LBMA Responsible Sourcing Program, meet these requirements. [11]

One gold ETF that meets these guidelines is the Royal Mint Physical Gold ETF from independent ETF specialist HANetf of London. It has been listed on the London Stock Exchange and Xetra since mid-February 2020, hedges 100% of its volume with physical gold and uses only bullion that fully meets the LBMA's strict requirements for responsible mining. In this way, investors can be assured that illegal activities or wars have not been financed and that human or other rights have not been violated. [12]

Gold ETCs that traded before LBMA standards went into effect also adhere to this, such as Invesco: because a fund company can only be assured that production is consistent with gold mined after 2012. The LBMA has instructed its depositary to minimize Invesco Physical Gold ETC investments in gold mined before then. On days when unit redemptions exceed new investments and more gold is sold by the fund, the custodian bank therefore tries to sell gold bullion mined before 2012, particularly to service redemptions.

ESGs have become a tough criterion for investment decisions and a strong trend that integrates environmental, social and governance considerations. Rather, the problem today is that there is still no single, universally applicable definition of sustainability.

In just a few years, the topic of "sustainable investing" has moved from the periphery to the center of investor interest. Gone are the days when the investment community was unwavering in its conviction that mandates outside of the direct financial concern that translated into company profitability were the only indicators of the success of the investment and that the do-gooders were wasting their potential returns on companies promoting ESG. Today, the idea of combining investment profitability with environmentally and socially conscious mandates has become pervasive. It tends to find great support in the annals of the high society and wealthy investors almost universally.

1.3. ESG and its effect on corporate profitability

Despite its immense popularity, many investors wonder what impact ESG has on profitability. This shows that it is not true that sustainable investment leads to lower returns, as is often claimed. According to various studies, sustainable funds often perform better than the corresponding traditional funds. They are even the real driving force behind portfolio returns. From 2009 to the end of 2020, almost 59% of ESG funds surpassed their average.

On the one hand, the good results can be attributed to the increased interest in sustainable investment. In particular, young investors are increasingly relying on ESG strategies. Companies that care about the environment, social issues and good corporate governance are increasingly the focus of this group of investors. Another reason for performance can also be found in industry

aspects. This year, for example, the fall of many traditional stocks, for example, in the energy sector, widened the difference in profitability.

When it comes to ESG ROI, the investment community seems to be split among the three domineering points of view:

- For a clear conscience, you have to pay with a lower rate of return compared to conventional investments
- Investing in ESG will lead to higher returns
- ESG criteria will not have a negative or positive impact on profitability.

Consider the arguments for lower returns. At the company level, incorporating sustainability criteria results in costs that are not borne by companies that ignore such criteria. In addition, investors with strict ESG mandates on sustainability choose their investments based on the criteria other than profitability. The investment universe becomes smaller due to additional selection restrictions, which reduces the expected return. Consequently, ESG criteria result in lower returns both at the company level and at the portfolio selection level.

In a similar fashion, arguments for higher returns can be made. ESG measures lead to more prudent management and better understanding of risks in a company, which reduces the risk of costly negative events (for example, litigation). This reduces funding costs. It is true that the implementation of ESG initially increases operating costs, but it often increases productivity at the same time, for example, through using less resources. One particularly stark example of this are the hotels that switched from changing the guest's towels on a daily basis, instead requiring the guests to leave the towels that need changing on the floor and putting the green use of water notices in the bathrooms. That practice alone saved hotel managers on the time that the room services spend making up the rooms and on the daily basis and the water and electricity that would otherwise, often unduly, be spent on the washing machines. As a result of these factors, sustainable companies tend to receive higher long-term profits than companies that do not take any or only the most essential ESG measures. At the portfolio level, choosing security based on ESG criteria means that well–managed companies are selected that are less risky than non-ESG companies.

There is also a third possibility that the effect is nil and ESG does not have any effect on corporate profitability whatsoever. Investments in ESG have grown significantly in recent years (annual growth since 2006 is 15 to 30%). This strong growth in the ESG sector means that an increasing number of market participants are considering sustainability issues and taking them into account in their considerations. In addition, since financial markets are highly efficient, especially in terms of relative prices and returns, it is unlikely that excess or insufficient returns can persist on ESG investments. Thus, the ESG factor is fully included in today's prices, the profitability does not differ from ordinary investments.

Anyone who has done sufficient research on sustainability and its effect on profitability should unfortunately find that the results, as is often the case in the social sciences, are not as straightforward as they would like. There are studies that find evidence that ESG investors should settle for lower returns, there are studies that show higher returns, and there are studies that cannot determine any impact on returns. So is the investor at the same point as before?

Not really, because it seems that some conclusions can be drawn from scientific research. First, ESG investors are less price sensitive than other investors. This is good news for suppliers of ESG products because it allows them to charge higher prices. However, for investors, higher prices usually mean lower returns. This is why price comparison is especially important when it comes to investing in ESG.

ESG profitability studies also in no way appear to be evenly distributed in terms of their results; there are relatively few studies that show the negative impact of ESG criteria. On the other hand, the vast majority see a positive impact on profitability. There seem to be niches in which the ESG approach is performing particularly well, for example in emerging markets.

There are also differences between the individual ESG factors. Management measures (G) have the most beneficial effect on profit, outpacing environmental measures (E) and the inclusion of social objectives (S).

In particular, the use ESG indices from reputable vendors such as MSCI or FTSE, on which numerous ESG products are based. MSCI, in particular, stands out for its wide range of ESG indices.

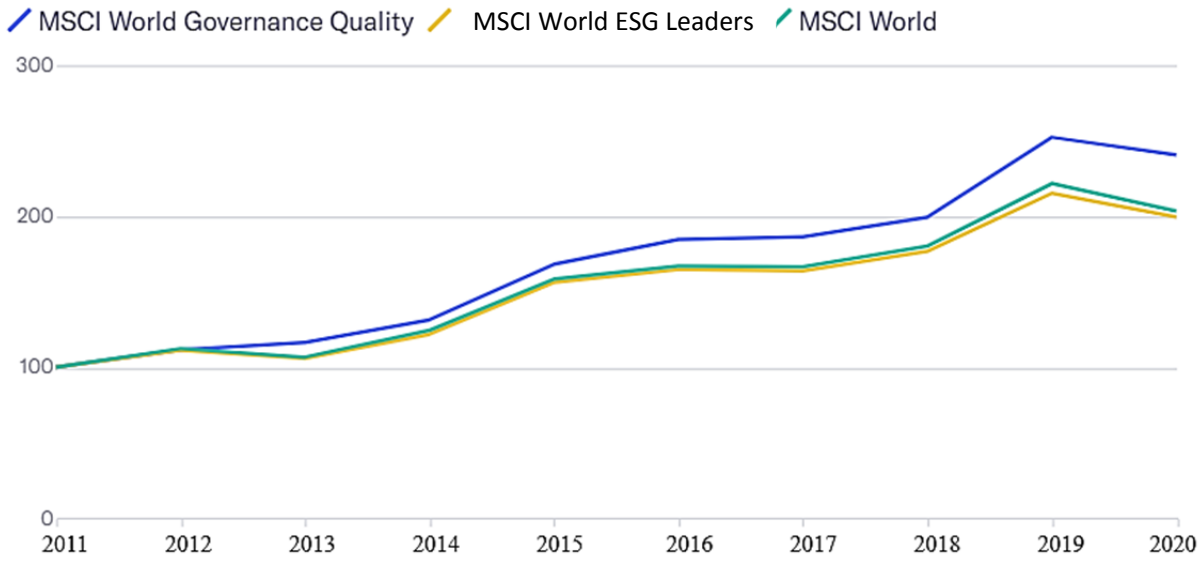

Fig. 1. **ESG Leadership Index, Governance Quality Index and MSCI World versus 100 Index**

Source: [8].

Governance part in ESG brings in higher profits.

ESG provides a performance advantage at the individual company level, but fund managers cannot necessarily translate this performance advantage into exceeding their fund's performance.

When the results of financial market research are so mixed, it might be a good idea to look at the results of real market instruments. The easiest option is to:

If you compare the performance of ESG indexes with the corresponding comparison indexes, you can see that in most cases the performance is almost the same. One example of this is the ACWI–ESG-Universal-Index from MSCI; its annual performance from 2009 to 2020 is 8.68%, benchmark performance is 8.58%.

In emerging markets, ESG products show a weak advantage. Both the FTSE Emerging ESG Index and similar Emerging Markets ESG products from MSCI performed slightly better than the corresponding benchmark index.

However, in one central point, the analysis of the index confirms the conclusion of the financial market research: the factor of governance is of great importance. The MSCI World Governance Quality Index significantly surpasses its MSCI World benchmark. The annual performance of the Governance Index since 2009 was 12.18% and the MSCI World Index was 9.83%. However, investors are disappointed that there is no product for private investors in this highly profitable ESG index.

In general, investors should state that while investing in ESG can provide a return advantage, existing products rarely, on average, significantly outperform after cost accounting.

In fact, taking into account the ESG criteria (environment, social, and governance) when selecting emerging market stocks for a portfolio can achieve an important superiority factor.

In terms of sustainability, emerging markets have some unique characteristics. Climate risks are greatest here, and in some developing countries, energy consumption will change significantly over the next twenty years. China is a classic example of this: the country currently still relies heavily on coal, but the share of renewables is likely to increase significantly by 2040.

Corporate governance is also one of the greatest challenges emerging markets face. Their standards in this area are sometimes very different from those of industrialized countries. There are also significant differences within emerging markets.

A recent study by Candriam Research Group examined how ESG stock selection affects the performance of an emerging market equity portfolio. Over the years, inadequate data sets and a narrow traditional approach to emerging markets have led to the belief that ESG strategies are not generating additional financial returns or may even reduce investment performance.

Research shows the opposite. Comparison of emerging market issuers that perform best in accordance with ESG criteria with companies included in the MSCI Emerging Markets Index shows that the set of stable emerging market stocks that meet ESG requirements outperformed on average 2 times a year over a period of 10 years, 4% according to the MSCI EM Equity Index. The volatility of the ESG portfolio was about the same as that of the traditional portfolio. Despite the better performance, the risk remains the same.

The excess returns across all regions analyzed (Asia, Latin America, the Middle East, and Africa) were particularly noticeable in Asia, where two-thirds of the MSCI EM index components are located (by quantity).

Excess returns versus market capitalization were also examined: ESG–compliant companies performed excess returns compared to the MSCI index in all three classes of market capitalization. However, this advantage is more pronounced for small and medium investments than for large ones.

The analysis also shows that all but two sectors benefit from the selection of an issuer based on ESG criteria. Interesting results were seen in the energy sector: 37 ESG stocks achieved an average performance of 3.7% and thus performed worse than equities in the MSCI Emerging Markets Index (4.2%). However, performance varied greatly depending on the ESG rating. The top–rated stocks achieved an average return of 7.3%, while the worst–rated stocks achieved just 1.1%.

Filtered asset allocation provides a performance advantage. Individual filters for the selection of the most sustainable companies are especially influential. This is the case, for example, with filters that exclude companies that are active in controversial areas (for example, weapons, gambling, alcohol and tobacco) or are the subject of controversy. By excluding such companies from emerging markets, investors can improve their averages by about 0.4%. If investors use regulatory filters (corruption risk, labor or human rights compliance, environmental risk) when selecting companies, the productivity gain is about 0.2%.

An ESG downgrade can be a useful leading indicator of future relative stock returns (over a period of six months to three years). As it turns out, the ESG rating downgrade is usually directly related to a serious lag.

Sustainable investing, such as in the form of an ESG ETF, has a promising future and makes sense. Member States of the United Nations want to achieve 17 Sustainable Development Goals by 2030. Thus, the ESG criteria will become more and more relevant.

2. Company's General Characteristics and Analysis of Chevron's Securities Portfolio

2.1. Brief description of Chevron Corporation

Chevron Corporation (Chevron), incorporated January 27, 1926, manages its investments in subsidiaries and affiliates and provides administrative, financial, managerial and technological support to the United States and international subsidiaries that conduct integrated energy and chemicals operations. The company operates in two business segments: Upstream and Downstream.

Upstream operations consist primarily of oil and natural gas exploration, development and production; liquefaction, transportation and regasification related to liquefied natural gas (LNG); oil transportation by international oil pipelines; natural gas processing, transportation, storage and marketing; and gas-to-liquids installation.

Refining operations consist primarily of refining crude oil into refined products; marketing crude oil and refined products; transporting crude oil and refined products through pipelines, marine vessels, motor equipment and railcars; and manufacturing and marketing commodity petrochemicals, plastics for industrial use and fuel and lubricant additives. The Company sells crude oil and natural gas from its production operations under various contractual obligations [13].

Exploration and production activities in the United States are primarily concentrated in the mid–continent region, the Gulf of Mexico, California and the Appalachian Basin. In California, the company produces in the San Joaquin Valley. Chevron is also engaged in various exploration, development and production activities in the deepwater Gulf of Mexico. The company has interests in the deepwater Jack and St. Malo fields. The company is interested in a production facility that is designed to accommodate production from the Jack/St. Malo development and third-party

tiebacks. Chevron is the operator of an exploration and appraisal and potential development program called Tigris, covering a number of jointly held offshore leases in northwest Keithley Canyon.

The Company's operations in the Mid-continent region relate primarily to Colorado, New Mexico, Oklahoma and Texas. As of December 31, 2020, the Company had approximately 500,000 and 1,000,000 net acres of shale and tight resources in the Midland and Delaware basins, respectively, in the Permian Basin of West Texas and southeastern New Mexico. As of December 31, 2020, the Company had approximately 472,000 net acres in the Marcellus Shale and 309,000 net acres in the Utica Shale, primarily located in southwestern Pennsylvania, eastern Ohio and West Virginia. the Company had approximately 500,000 and 1,000,000 net acres of shale and dense resources in the Midland and Delaware Basins in the Permian Basin of West Texas and southeast New Mexico, respectively.

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Other countries in the Americas include Argentina, Brazil, Canada, Colombia, Greenland, Mexico, Suriname, Trinidad and Tobago, and Venezuela. Exploration and production activities in Canada are concentrated in Alberta, British Columbia and the offshore Atlantic region. The company also has exploration interests in the Beaufort Sea region of the Northwest Territories. The company is interested in the Hibernia field, which consists of the Hibernia and Ben Nevis Avalon (BNA) reservoirs, as well as the unified Hibernia South Extension (HSE) areas in offshore Atlantic Canada. As of December 31, 2020.

The Company has a working interest in two exploration blocks in the Flemish Passage Basin offshore Newfoundland. As of December 31, 2020, the Company had approximately 228,000 net acres in the Duvernay Shale in Alberta and approximately 200, 000 above ground acres in the Montney Dense Rock. Chevron is interested in the proposed Kitimat LNG and Pacific Trail Pipeline projects. As of December 31, 2020, the Company was interested in 300,000 net acres in the Horn and Liard River basins in British Columbia. The company is interested in Aitken Creek and the Alberta Hub natural gas storage facilities.

In Greenland, the company is interested in Blocks 9 and 14, located in the Canumas area, off the northeast coast of Greenland. Chevron is interested in an exploration license for Block 3 in the deepwater Perdido region of the Gulf of Mexico. As of December 31, 2020, the Company was interested in two concessions covering about 73,000 net acres in the Vaca Muerta Shale formation in Argentina.

In Brazil, Chevron has interests in the Frade and Papa-Terra deepwater fields located in the Campos Basin. Chevron is also interested in the CE-M715 block located in the Ceará Basin offshore Brazil. Chevron operates the offshore Chuchupa and onshore Ballena fields. Chevron is interested in the deepwater Blocks 42 and 45 offshore Surinas. As of December 31, 2020, the Company was interested in three blocks in the East Coast offshore area on the Trinidad Coast, which includes the Dolphin, Dolphin and Sea Fish natural gas fields. Chevron's production activities in Venezuela are carried out by two branches in western Venezuela and a branch in the Orinoco belt.

In Africa, Chevron is engaged in exploration and production in Congo, Liberia, Morocco, Nigeria, and the Republic of Congo. In Angola, the Company operates and has interest in Block 0, a concession adjacent to the Cabinda Coast, and has interest in a production sharing contract (PSC) for Deepwater Block 14. The company is also interested in crossing the Congo River Canyon Pipeline Project.

Chevron is working on and has interest in the Lianzi Unitization Zone, located in an area equally shared by Angola and the Republic of Congo. Chevron is interested in an offshore concession in the Democratic Republic of Congo. Chevron is interested in the offshore high-trade permit areas (Nkossa, Nsoko and Moho-Bilondo) in the Republic of Congo. It is interested in Block LB-14 off the coast of Liberia. As of December 31, 2020,

the Company had three operated deepwater areas offshore Morocco. As of December 31, 2020, the Company was interested in eight managed concessions in the coastal and nearshore areas of the Niger Delta. Chevron has operations and interest in the Agbami field located in deepwater oil producing lease (OML) 127 and OML 128 [13].

In Asia, the Company has exploration and production activities in Azerbaijan, Bangladesh, China, Indonesia, Kazakhstan, Kurdistan Region of Iraq, Myanmar, Divided Zone located between Saudi Arabia and Kuwait, the Philippines, Russia and Thailand.

In Azerbaijan, Chevron is interested in the Azerbaijan International Operating Company (AIOC) and oil production from the Azeri-Chirag-Gunashli (ACG) fields. Chevron is also interested in joining the Baku-Tbilisi-Ceyhan (BTC) oil pipeline, which transports most ACG production from Baku, Azerbaijan, through Georgia to the Mediterranean deepwater port facilities at Ceyhan, Turkey.

In Kazakhstan, the Company has an interest in the Tengizchevroil (TCO) subsidiary and an idle working interest in the Karachaganak field. In Bangladesh, the Company operates and is interested in Block 12 (Bibiyan field) and Blocks 13 and 14 (Jalalabad and Mulawi Bazar fields). In China, Chevron has operating and non–operating interests in various areas of China.

In China, the company operates and has a working interest in the Chuandongbei project located onshore in the Sichuan Basin. The company also has non–operating working interests in the QHD 32–6 field, Block 11/19 in Bohai Bay and Block 16/19 in the Rust Belt.

In Indonesia, Chevron has working interests through various PSCs in Indonesia. Chevron has contractor interests in PSC Sarta and Qara Dagh. The company has operating and has an interest in the Chuandongbei project located onshore in the Sichuan Basin. The company also has idle working interests in the QHD 32–6 field, Block 11/19 in Bohai Bay and Block 16/19 in the Rust Belt.

In Australia/Oceania, the Company has exploration and production interests in Australia and New Zealand. In Australia, Chevron's exploration and production activities are concentrated in offshore Western Australia. As of December 31, 2020, the Company operated two LNG projects, Gorgon and Wheatston, and has a non–operating working interest in the North West Shelf (NWS) Venture and Exploration Area in the Review Basin and Carnarvon Basin. The company is also exploring in the South Australian Bay offshore area. Chevron is interested in the Gorgon project, which includes the Gorgon and Jansz-Io fields. The company is also managing the Wheatston project, which includes development of the Wheatston and Jago fields. Chevron has a non–operating working interest in the NWS venture in Western Australia. As of December 31, 2020, the Company was interested in three blocks in the Review Basin. As of December 31, 2020, the Company was interested in and was managing three deepwater exploration permits in the Pegasus and East Coast offshore basins.

In Europe, the Company has exploration and production interests in Denmark, Norway and the United Kingdom. As of December 31, 2020, it was interested in the Danish Underground Consortium (DUC), which produces crude oil and natural gas from 13 North Sea fields. It is interested in the Alder project, the Clair Ridge project and the Rosebank project in the UK. Chevron is interested in the PL 859 exploration block located in the Barents Sea. The company is involved in exploration and production in Denmark, Norway and the United Kingdom. As of December 31, 2020, it was interested in the Danish Underground Consortium (DUC), which produces crude oil and natural gas from 13 North Sea fields. It is interested in the Alder project, the Clair Ridge project and the Rosebank project in the UK. Chevron is interested in the PL 859 exploration block located in the Barents Sea.

The company sells petroleum products under its main brands Chevron, Texaco, and Caltex in various parts of the world. In the United States, the Company sells its products under the Chevron and Texaco brands. As of December 31, 2020, the Company provided approximately 7,800 Chevron and Texaco automotive service machines directly or through retailers and marketers, primarily in the southern and western states. As of December 31, 2020, approximately 325 of these locations were company-owned or descent stations. As of December 31, 2020, Chevron provided directly or through retailers and marketers about 6,000 branded service stations, including affiliates outside the United States. In British Columbia, Canada, the company operates under the Chevron brand. The company sells the Texaco brand in Latin America.

In Asia-Pacific, Southern Africa, and the Middle East, the company uses the Caltex brand. The company also operates through affiliates under various brand names. The company also sells a line of lubricant and cooling products under the product names Havoline, Delo, Ursa, Meropa, Rando, Clarity and Taro in the United States and worldwide under three brands: Chevron, Texaco and Caltex.

Chevron Oronite develops, manufactures and markets performance additives for lubricating oils and fuels and conducts research and development for additive components and blended packs. Chevron owns an interest in its subsidiary, Chevron Phillips Chemical Company LLC (CPChem). PChem produces olefins, polyolefins and alpha–olefins and is a supplier of aromatics and polyethylene pipes, in addition to participating in specialty chemicals and specialty plastics markets.

Chevron also has operations in the petrochemicals business through GS Caltex, a subsidiary of the Company. GS Caltex produces aromatic compounds, including benzene, toluene and xylene. These base chemicals are used to make a number of products, including adhesives, plastics and textile fibers. GS Caltex also produces polypropylene,

Chevron owns and operates a network of crude oil, natural gas and products pipelines, and other infrastructure assets in the United States. The Company's marine fleet includes both U.S. and foreign–flag vessels. U.S.-flag vessels are primarily engaged in the transportation of petroleum products in coastal waters of the United States. Foreign-flag vessels transport crude oil, liquefied natural gas, petroleum products and raw materials in support of global upstream and downstream operations. The Company's other businesses include research and technology and environmental protection. The Company's energy technology organization supports upstream and downstream activities. On November 14, 2006 a joint venture with Gazprom Neft, OOO Severnaya Taiga Neftegaz, was registered in Noyabrsk (Yamalo-Nenets Autonomous District) (exploratory drilling at a number of sites in the YNAO is underway).

2.2. Analysis of Chevron's financial situation

The bulk of the company's equity is estimated based on the Brent test. After the start of 2020, WTI's discount to Brent has widened due to rising U.S. production, a rebound in inventories and growing concern that infrastructure constraints would again limit flows at export points on the Gulf Coast.

Financial results improved significantly in 2020 (see Table 2.1), with a net income of $ 8.2 billion (see Table 2.1). Net income of $ 8.2 billion compared to a loss of $ 2.5 billion in 2019. USD 2.2 billion in 2019.

Production in 2020 was 2.728 million barrels of oil per day, which was 5% higher than in 2019. Upstream capital expenditures in 2020 were $ 16.4 billion. U.S. Portfolio management activities resulted in proceeds of $ 3.4 billion. This included the sale of geothermal assets in Indonesia and the Philippines and mature production assets in the United States [**7**].

In 2020, the capital and research budget totaled $ 15.8 billion. USD. Approximately $ 8.7 billion in planned capital expenditures are expected. The $ 8.7 billion will be used to maintain current assets, including $ 3.3 billion for the Permian Basin. The $ 8.7 billion is for the Permian Basin and $ 1.0 billion for the other shale and oil shale assets. The $ 1.0 billion will be for other shale and hard cap investments. Approximately $ 5.5 billion is planned for major capital expenditures. This includes $ 3.7 billion planned for major capital projects, including $ 3.7 billion related to projects related to the Permian Basin. The Company's investment in Tengizchevroil (TCO) in Kazakhstan is expected to be approximately US$ 3.7 billion related to projects related to the Future Growth and Well Pressure Management Project (FGP/WPMP). Exploration funding is expected to be $ 1.1 billion. USD 1.1BN. The remaining production costs are mainly related to early stage projects supporting potential future developments.

Dividends — Dividends of $ 8.1 billion were paid. The 2020 dividend is for the 30th consecutive year with a higher annual dividend payout. Capital and research spending. Invested $ 18.8 billion in the company's business. The company has invested $ 18.8 billion, including $ 4.7 billion (Chevron's share). The company's share (Chevron's share) of affiliate spending. The 2020 announcement projected spending of $ 18.3 billion. The 2020 announcement projected spending of $ 18.3 billion, including $ 5.5 billion.

Spending in 2020 is focused on short–term and high-yield investments, including the Permian

Table 1
Consolidated Balance Sheet

Millions of dollars	2020	2019	2018	2017	2016
Cash and cash equivalents	4,813	6,988	11,022	12,785	16,245
Time deposits	–	–	–	8	8
Marketable securities	9	13	310	422	263
Accounts and notes receivable, net	15,353	14,092	12,860	16,736	21,622
Inventories:					
Crude oil and petroleum products	3,142	2,720	3,535	3,854	3,879
Chemicals	476	455	490	467	491
Materials, supplies and other	1,967	2,244	2,309	2,184	2,010
Total inventories	5,585	5,419	6,334	6,505	6,380
Prepaid expenses and other current assets	2,800	3,107	3,904	4,705	4,391
Total current assets	28,560	29,619	34,430	41,161	48,909
Long–term receivables, net	2,849	2,485	2,412	2,817	2,833
Investments and advances	32,497	30,250	27,110	26,912	25,502
Properties, plant and equipment, at cost	344,485	336,077	340,277	327,289	296,433
Less: Accumulated depreciation, depletion and amortization	166,773	153,891	151,881	144,116	131,604
Properties, plant and equipment, net	177,712	182,186	188,396	183,173	164,829
Deferred charges and other assets	7,017	6,838	6,155	6,228	5,501
Goodwill	4,531	4,581	4,588	4,593	4,639
Assets held for sale	640	4,119	1,449	–	580
Total assets	253,806	260,078	264,540	264,884	252,793
Liabilities and equity					
Short–term debt	5,192	10,840	4,927	3,790	374
Accounts payable	14,565	13,986	13,516	19,000	22,815
Accrued liabilities	5,267	4,882	4,833	5,328	5,402
Federal and other taxes on income	1,600	1,050	1,073	1,761	2,509
Other taxes payable	1,113	1,027	1,118	1,233	1,335
Total current liabilities	27,737	31,785	25,467	31,112	32,435
Long–term debt	33,477	35,193	33,542	23,926	19,930
Capital lease obligations	94	93	80	68	97
Deferred credits and other noncurrent obligations	21,106	21,553	23,465	23,549	22,982
Noncurrent deferred income taxes	14,652	17,516	20,165	21,626	20,954
Noncurrent employee benefit plans	7,421	7,216	7,935	8,412	5,968
Total liabilities	104,487	113,356	110,654	108,693	102,366
Common stock	1,832	1,832	1,832	1,832	1,832
Capital in excess of par value	16,848	16,595	16,330	16,041	15,713
Retained earnings	174,106	173,046	181,578	184,987	173,677
Accumulated other comprehensive loss	(3,589)	(3,843)	(4,291)	(4,859)	(3,579)
Deferred compensation and benefit plan trust	(240)	(240)	(240)	(240)	(240)
Treasury stock, at cost	(40,833)	(41,834)	(42,493)	(42,733)	(38,290)
Total Chevron Corporation stockholders' equity	148,124	145,556	152,716	155,028	149,113
Noncontrolling interests	1,195	1,166	1,170	1,163	1,314
Total equity	149,319	146,722	153,886	156,191	150,427
Total liabilities and equity	253,806	260,078	264,540	264,884	252,793

Source: The author.

Basin and other shale and tight plays, as well as the completion of major projects and development of the Future Pressure Management Project and the Wellhead Management Project (FGP/WPMP) at Tengizchevroil (TCO) in Kazakhstan.

Portfolio management — realized $ 5.2 billion in proceeds from divestments. USD 5.2 billion in proceeds from the disposal of assets.

Revenue in the reporting period increased by 23.2% to $ 40.49 billion, compared to $ 32.87 billion a year earlier (Table 2.2). The analysts forecasted the indicator at the level of $ 40.78 billion.

In the U.S. Upstream segment, Chevron recorded a profit of $ 838 million, compared to a loss of $ 102 million in the same period a year earlier. The average realized price for U.S. crude oil in the first quarter rose to $ 59 a barrel from $ 41 a barrel. In the International Upstream segment, earnings rose from $ 955 million to $ 2.457 billion due to strong oil prices as well as higher natural gas sales volumes. The average realized oil price rose from $ 45 per barrel to $ 68 per barrel in the second quarter. Chevron's oil and gas production rose 1.7 percent to 2.826 million barrels of oil equivalent per day in the reporting period compared to the same period a year ago.

In addition, Chevron's costs in the second quarter rose 14.77% to $ 37.33 billion from $ 32.527 billion a year earlier. Chevron reported net income of $ 3.41 billion, or $ 1.78 per share, compared to $ 1.45 billion, or $ 0.77 per share, in the year–ago period, while analysts had projected earnings per share of $ 2.06.

Free cash flow from operations in the second quarter of 2020 was $ 6.855 billion, up from $ 4.971 billion, allowing the company to announce a $ 3 billion buyback program.

Capital expenditures for the period were $ 4,816 billion, up from $ 4,538 billion a year earlier.

2.3. Analysis of investment attractiveness of Chevron shares

Chevron (NYSE: CVX) shares rose to $ 105.25 and even surpassed it slightly, and certain technical conditions are now in place that are favorable for earnings growth.

On a daily price chart for the last year, several patterns are easily observable. First, the stock price has successfully pushed and established itself above the 200-day Exponential Moving Average (EMA) in November for the first time over the last year as demonstrated by the red line on the chart. Second, and perhaps even more telling, the orange line, which represents the 50-day EMA, crosses the 200-day EMA in February of 2021 creating one of the most bullish patterns, the Golden Cross. Since November the stock tested the 50-day EMA on at least 5 different occasions, but bounced back every time, which signals the strength of the stock on the market.

More recently, the stock price has been forming what seems to be the Cup and Handle pattern. Aided by the Relative Stochastic Index (RSI) is approaching the overbought territory, the pattern might indicate a short-term backdrop in the stock price, which presumably could be followed by a rapid breakout. The stock is approaching the second Fibonacci band indicating a bullish pattern, but also signaling of a potential for a short term reversal back to the third and fourth bands in the medium term.

Another aspect of the chart that might be giving an indication as to why the price is hanging around the 110 level is the local maximum on the chart back in late June, which formed a ceiling for future price moves. The stock price was able to break that upper bound back in March, however, it did not hold the level to long before falling back down to the pre-break out level. It retested the level in May, and it appears that the stock price is gathering strength to make a more substantial run up higher after a short period of drop and consolidation.

In the longer term, it is noteworthy that the price has hit its channel line — during the year it was pushing down from that line, and it is likely to do the same this time. In that case, the down-correction could reach as far down as the $ 65 level. However, it is more likely that the stock price would retest the 50-day EMA once again during a short-term correction and should it bounce back up, continue its upward trend bar any negative developments in the oil market. In a worst case scenario not precipitated by the events akin to the ones that triggered the April 2020 oil sell off, the share price might fall through the supporting 50–day EMA and retest the 200-day EMA still facing the third Fibonacci band on its way down. $ 98 per share, however, appears as another strong support level formed by the earlier three attempts at breaking out of the channel back in December 2020 and January of this year.

Table 2
Consolidated Statement of Income

Millions of dollars	2020	2019	2018	2017	2016
Revenues and other income					
Total sales and other operating revenues	134,674	110,215	129,925	200,494	220,156
Income from equity affiliates	4,438	2,661	4,684	7,098	7,527
Other income	2,610	1,596	3,868	4,378	1,165
Total revenues and other income	141,722	114,472	138,477	211,970	228,848
Purchased crude oil and products	75,765	59,321	69,751	119,671	134,696
Operating expenses	19,437	20,268	23,034	25,285	24,627
Selling, general and administrative expenses	4,448	4,684	4,443	4,494	4,510
Exploration expenses	864	1,033	3,340	1,985	1,861
Depreciation, depletion and amortization	19,349	19,457	21,037	16,793	14,186
Taxes other than on income	12,331	11,668	12,030	12,540	13,063
Interest and debt expense	307	201	–	–	–
Total costs and other deductions	132,501	116,632	133,635	180,768	192,943
Income (loss) before income tax expense	9,221	(2,160)	4,842	31,202	35,905
Income tax expense (benefit)	(48)	(1,729)	132	11,892	14,308
Net income (loss)	9,269	(431)	4,710	19,310	21,597
Less: Net income attributable to noncontrolling interests	74	66	123	69	174
Net income (loss) attributable to Chevron Corporation	9,195	(497)	4,587	19,241	21,423

Source: The author.

The cumulative effect of the characteristics of the shares by the issuer may be called management of the investment attractiveness of its own corporate shares. In this context, it is important to identify the macroeconomic factors affecting the Chevron corporate stock market.

The investment attractiveness of Chevron corporate stock is influenced by many factors that an investor considers when making an investment decision. The systematization of existing classifications of macroeconomic factors influencing the Chevron corporate stock market, analysis and synthesis of the factual material allowed the author of this work to propose generalized classification criteria.

In general, the key 2020 macroeconomic factor affecting the Chevron corporate stock market appears to be the price of purchased gas and oil.

According to the analysis shown in this work, purchased oil and gas costs increased by $ 235,407 million. The increase was $ 627,258 million for the six months ended June 30, 2020 and totaled $ 627,258 million for the six months ended June 30, 2020. The increase in purchased gas and oil expense for the six months ended June 30, 2020 was $ 627,258 million compared to $ 391,851 mil-

Fig. 2. **Chart of Chevron shares quotation for 1 year**

Source: TradingView.

lion for the same period last year. The company's natural gas purchases increased by $ 8.4 million in the same period last year. Gas purchases increased by $ 215,353 million, or 76 percent. Gas purchased for the six months ended 30 September 2011 was USD 499.486m, up 76% from USD 391.851m for the same period the previous year. Gas purchases for the six months ended June 30, 2020, compared to $ 284,133 million for the same period last year. The Company had a net loss of $ 11.8 billion for the same period last year.

Systematic risk, which is measured by the β–coefficient, which characterizes the response of an individual security's quotations to changes in external factors that respectively characterize the overall state of the economy.

The β–coefficient defines the change in the security's price relative to the whole market. It is considered as a coefficient of linear regression of security's yield relative to the yield of the market as a whole. This coefficient can be calculated using the formula [8]:

β_1= (Covariance of the asset with the market portfolio)/(Dispersion of the market portfolio) =σ_im/(σ_m^2) (2.1)

Or

β_i=(σ P/P)/(σ I/I) (2.2)

where σ P/P is the relative change of the market price of an asset for a certain time interval;

σ I/I — respectively, the relative change for the same period of the leading stock market index of the country.

In fact, β is the result of the variability of stock returns relative to market returns and the correlation between them. If the relationship between changes in stock returns and market returns is absolute (correlation equals 1), then the relative risk will be determined only by the volatility of the stock. Then the more substantial the volatility of a stock's return, the higher β and the higher the idiosyncratic risk of a return, all other things being equal.

When β > 1, the price of the stock changes faster than the market on average, and when β < 1–122 much slower.

Consequently, higher values of beta point to greater returns in a bullish market. Accordingly, higher beta also indicates a deeper dive of the stock price, when the bear stake over the market.

Let us calculate the β–coefficient of Chevron stocks.

Chevron's β coefficient in 2017 indicates that the stock is moving much higher than the market at a much faster speed. This claim is also evidenced by a significant increase in its market value (four times higher than in 2016). In 2018, the price declined by a factor of four. Such a sharp drop also dragged the value for the beta down to below 1

Table 3
Calculation of β–coefficient for Chevron in 2016–2020

Indicator	2016	2017	2018	2019	2020
Price per Share (P), USD	4.46	16.49	4.42	5.76	11.19
Equity Index (I)	498.86	1174.02	301.42	572.91	975.05
ΔP	–	269.73	–73.20	30.32	94.27
ΔI	41.33	135.34	–74.33	90.07	71.19
β	–	1.99	0.98	0.34	1.34

Source: The author.

to 0.98, bringing the overall price moves closer to the market rates. The 2019 β coefficient value indicates a much slower pace of stock movement relative to the market performance making it both a laggard in that year and a potential target for long–term investors looking for stocks in their latent phases. As the 2020 progressed and saw a massive global market crash across multiple asset classes, Chevron's stock declined more than did the broader S&P index. That particular move is most likely attributable to the oil glut in the first and second quarters of 2020 triggered by the slowed economic growth and the attempts by some members of the OPEC+ to curb the rise of shale producers. As storage facilities became replete with oil that had no prospects of being used any time soon producers started looking for space, in which to keep the overflow. Traders were in no better positions as they were faced with the dilemma of either taking the delivery of the barrels they owned futures on and finding storage or selling their positions at a loss. In its unprecedented move, the quagmire that ensued sent the WTI down to zero and from then on plummeting to the whooping negative $ 37.63 per barrel.

Chevron Corporation (Chevron), incorporated January 27, 1926, manages its investments in subsidiaries and affiliates and provides administrative, financial, managerial and technological support to the United States and international subsidiaries that conduct integrated energy and chemicals operations. The company operates in two business segments: Upstream and Downstream.

The majority of the company's equity is valued based on the Brent test. After the start of 2020, WTI's discount to Brent widened due to rising U.S. production, recovering inventories and growing concerns that infrastructure constraints would again restrict flows at export points on the Gulf Coast. Financial results improved significantly in 2020, with net income of $ 8.2 billion. Net income of $ 8.2 billion compared to a loss of $ 2.5 billion. USD 2.5 billion in 2019.

Production in 2020 was 2.728 million barrels of oil per day, which was 5% higher than in 2019. Upstream capital expenditures in 2020 were $ 16.4 billion. U.S. Portfolio management activities resulted in proceeds of $ 3.4 billion. The portfolio management activity generated $ 3.4 billion, including the sale of geothermal assets in Indonesia and the Philippines and mature production assets in the United States.

Chevron (NYSE: CVX) shares rose to and even slightly above $ 110. The investment appeal of Chevron corporate stock is influenced by many factors that an investor considers when making an investment decision. The systematization of existing classifications of macroeconomic factors influencing the Chevron corporate stock market, analysis and synthesis of the factual material allowed the author of this work to propose generalized classification criteria. In general, the key 2020 macroeconomic factor affecting the Chevron corporate stock market appears to be the price of purchased oil and gas.

3. Proposals for the Development of Investment Activity on the Stock Market with the Help of ESG-investment

3.1. Development of socially responsible innovations and socially responsible investing in the context of the stakeholder concept of value–oriented management of enterprise innovation activities

The activity of enterprises has always been accompanied by the creation of certain negative effects on society, which are manifested, for ex-

ample, in environmental pollution, deterioration of consumer health (during the production, and goods harmful to health or the use in the production of low-quality or hazardous substances), reduction of social well-being of society (when a lower level of compensation or reduction of jobs), etc.

Despite the constant existence of such externalities, they have not always been taken into account and not considered in the process of creating the added value of the enterprise, because they do not directly affect the key components of value creation (price, costs, income, risks). The concept of "enterprise value" and "public value" were absolutely separated.

However, in order to ensure long-term and sustainable development, modern conditions of economic management require enterprises to change their attitude to the creation of "social value" — positive effects beneficial to society, in particular environmental, ethical, social and others. This occurs, firstly, due to the fact that the generated negative effects in some cases reach a global scale and begin to affect the financial performance of the enterprises themselves, worsening the conditions for conducting business activities and leading to an increase in their costs or directly the formation of losses.

For example, for domestic enterprises the emergence of the main negative externalities is associated with significant energy and resource costs of production, in the chemical industry an additional significant factor is the negative impact on human health due to the capacity of harmful substances in products, as well as significant environmental pollution in the production and consumption process [15].

The second factor that induces enterprises to participate in the internalization of external effects, i.e. their transformation into internal ones on the basis of the convergence of marginal private and public costs, is the increase in public awareness of such effects, a more critical attitude to the nature of business activity, which is reflected in consumer demand and, consequently, in the financial results of enterprises.

It should be noted that enterprises and society are not completely separate from each other. Each of these entities has needs, the satisfaction of which depends on the other entity. Thus, it is important for enterprises to operate in a market where consumers are not only interested in its goods, but also financially able to purchase them. The conditions of the business environment also play a significant role, such as the regulatory environment, the permitting system, the availability and reliability of suppliers, and the development of infrastructure, which determine the ease and overall possibility of doing business.

On the other hand, for the society, the development of the industrial sector on their territory means jobs and employment, guaranteeing tax payments to local and national budgets, etc.

Thus, in the area of intersection of the interests of society and individual enterprises it is possible to define the formation of common value or value for them, which consists in the simultaneous provision of competitiveness of enterprises and their compliance with social, environmental, ethical, economic needs of society [12].

The basis for the management of the creation of such common value in modern economic and investment theory is the concept of "value-based investing" (VBI) — value-based investing. The essence of this concept lies in the choice of such areas of investment that provide the greatest increase in the total value, that is not only the creation of value for the enterprise (for example, in the form of an increase in market capitalization), but also public value in the form of positive environmental, social and economic effects [7]. The concept of value–based investment (VBI) is based on the ESG-criterion (E – "environmental", S — "social", G — "governance"), that is, taking into account the tasks of environmental, social development and corporate management in making investment decisions along with the analysis of financial indicators and achieving the desired level of return on investment.

It is necessary to note, that value–oriented investing is rather a criterion, a basis for creation of the corresponding methodology for making investment decisions when choosing directions of investments, and therefore only indirectly influences creation of the enterprise's common value for it and society.

Accordingly, the more developed the stock market and the stronger the influence of stakeholders (primarily, investors) on the activities of enterprises, the more actively the ESG criterion will be implemented in the design of development strategies of economic entities themselves.

Table 4
Types of investment strategies in VBI "values-based investing"

Strategy	Characteristics
Sustainability themed	Making investments in areas and assets that narrowly relate to the implementation of the ESG criterion, covering one or more specific areas (e.g., investments in «green» technology, the sustainable development of a particular industry).
ESG integration	Formation of an investment portfolio based on a systematic combination of traditional financial analysis and assessment of environmental, social and managerial impact factors.
Best–in–class/positive screening	Investing in industries, companies or projects that demonstrate a better or higher level of positive ESG effects than others in the field
Exclusionary/negative screening	Approach involving the exclusion from the investment portfolio of certain assets related to companies, industries, countries, demonstrating the presence of negative effects on the ESG criterion
norms–based screening	Inclusion in the investment portfolio of those assets that, according to ESG criteria, are consistent with existing international standards and requirements
Impact/ community investing	Investments in companies, organizations and funds that aim to achieve significant social and environmental benefits in addition to financial returns. Includes investments in both developed and emerging markets, and may provide for returns below the market average
Corporate engagement and shareholder action	Investing in order to participate as a shareholder in voting and influencing management decisions in companies with a focus on meeting the ESG criterion

Source: The author.

It is also necessary to take into account that if the stakeholder approach is applied, the main driving force for the enterprise to take into account environmental, social, ethical sustainable development objectives in the design of its own strategies will be the response of its stakeholders and the value for them of the principles of value-oriented investment. If the ESG criterion does not play a key role for shareholders (investors), then enterprises will mostly focus on the achievement of high performance of a purely financial nature.

In order to develop a socially responsible attitude of stock market participants to the management of their assets and ensure that they take into account social and environmental objectives, and not only focus on obtaining high financial results, a number of international institutions and organizations, as well as leading investment companies, conduct active explanatory and educational activities in this direction, develop appropriate methodological support, as well as promote the Principles of responsible investing.

Development and introduction into practice of value-based investing (VBI) principles, formation of appropriate methodology of investment assessment and making investment decisions based on the principles of environmental, social, ethical efficiency contributed to the emergence of a wide range of new research in the investment sphere, highlighting new approaches to the formation of investment portfolios and the choice of investment strategies.

For designation of all directions of the investment which realization is based on application of the VBI concept and ESG–criteria in foreign literature and practice of the financial companies several terms are used, namely: in publications of "KPMG" the concept of responsible investing (RI – responsible investing), in "GSIA" (Global Sustainable Investment Alliance) the term of socially — responsible investing (SRI — socially responsible investing), also applied term of investments in sustainable development (sustainable investing) is most generalized.

The implementation of the concept of VBI today covers a wide range of strategies by asset classes and various actors — from institutional participants, investment funds, to private investments. In accordance with this new models and strategies of investment are formed and developed, which allow taking into account both the desired level of return on investment, and the positive social, environmental or other effects provided by them.

In general, all types of strategies in VBI can be classified by the breadth of objectives (investments by thematic areas and cross-industry investments that integrate all components of the ESG criterion) and the degree of importance of the ESG criterion in making investment decisions (strategies with the minimum ESG criterion — selection based on regulatory requirements and investments with exclusion of negative effects; strategies with the maximum ESG criterion — socially influential investments). Chevron Corporation today identifies 7 main investment strategies that are subject to the ESG criterion. The characteristic of these strategies is presented in Table 3.1.

In recent years, there has been an increase in investor interest in the use of socially responsible strategies in the process of forming portfolios of shares of industrial enterprises.

The orientation of investors to achieve the goals of environmental, social development and corporate governance in the activities of the enterprise forces the enterprises themselves to revise their investment, production, financial policies and to design a development strategy taking into account these objectives.

In addition to the conscious choice of investors as the main stakeholder group, the factors that transform the priorities of enterprises' activities are the market environment (primarily changes in the values and priorities of consumers), as well as global factors of influence on sustainable development — climate change, increase in population, completeness of energy and fuel resources, water and material resources shortages, deforestation, urbanization, deterioration of ecosystems, increasing requirements for product safety and ensuring the welfare of the population.

The global factors of influence on sustainable development determine the formation of new risks and opportunities for the enterprises. Ignoring the challenges of the external environment can lead to non–compliance with new standards and regulatory requirements for product quality, used raw materials, materials, etc. (regulatory risks); increased costs due to outdated production technologies, energy inefficiency (resource risks); loss of market share due to reduced competitiveness of products, customer dissatisfaction with quality or harm (market, reputational, judicial risks); deterioration of reputation among society and the labor market, loss of qualifications of the enterprise (reputational risks).

At the same time the readiness of the enterprise to respond to the needs and challenges of the economic situation allows to implement new opportunities and ensure the creation of additional competitive advantages: to achieve a lower than the industry average level of costs; to strengthen the market position as a socially responsible brand; to ensure the sustainability of economic development by responding to the needs of consumers and society, creating innovative products; to increase the interest of investors in investing in the enterprise.

Thus, properly assessing the global challenges of influencing sustainable development, enterprises can form effective strategies for their activities to minimize risks and simultaneously take advantage of the emergence of new opportunities. At the same time the key place in providing sustainable and effective development of the enterprise should be occupied by innovations.

In order for the innovation activities carried out by the company to meet the modern requirements of the company's stakeholders, in particular investors (shareholders), in the development and evaluation of innovative projects it is also necessary to take into account the factors provided by the investment ESG-criterion, i.e., the possibility of obtaining a positive effect from the implementation of these innovations or minimizing the negative impact of environmental, social and ethical nature.

On this basis, there is a need to consider innovation as a tool to create social value and to allocate a separate class of "socially responsible" innovation.

Summarizing the theoretical foundations and practical aspects of the implementation of socially responsible investing, as well as scientific and theoretical approaches to understanding the es-

Table 5
Comparative analysis of annual returns of companies investing in sustainable development for 2013–2020, %

Asset	Year							
	2013	2014	2015	2016	2017	2018	2019	2020
Chevron Corporation	–39.02	31.58	17.99	–3.83	9.03	10.06	15.42	19.07
MSCI World	–42.08	26.98	9.55	–7.62	8.17	9.14	11.20	14.75
Deviation	3.06	4.60	8.44	3.78	0.86	0.92	4.22	4.32

Source: The author.

Table 6
Comparative analysis of key profitability indicators of companies investing in sustainable development over the period 2013–2020, %

Asset	Sales Profitability	Asset Profitability	Return on Equity
Chevron Corporation	12.72	6.16	16.42
MSCI World	6.27	3.16	5.51
MoRE World/ MSCI World	2.03	1.95	2.98

Source: The author.

sence of innovation and innovation activities of enterprises, under socially responsible innovations in the work it is proposed to understand new or significantly improved products, technological processes, organizational changes, marketing strategies, the implementation of which at the enterprise provides the creation of new value for the enterprise and public value.

This approach allows, firstly, to focus attention on the key role of innovation in providing sustainable development of enterprise and its response to new global risks and opportunities and, secondly, to transform the investment criterion of ESG and move from the level of stakeholders and the formation of investment strategies at the level of the enterprise.

Studying the peculiarities of functioning of enterprises in the sphere of socially responsible innovations, there is often an erroneous opinion about the formation of significantly lower financial performance of such enterprises, because part of the profit is redistributed in favor of society. In reality, the situation is reversed. The growth in world practice of requirements for transparency and disclosure of information by business entities on the direction and nature of their activities to ensure sustainable development has made it possible to form significant statistical databases, allowing making investment decisions more consciously and responsibly.

A study of statistical data (Tables 5, 6) regarding the profitability and profitability levels of businesses shows that companies that are more resource efficient (use less water, fuel and other energy resources, and have lower emissions into the environment) have significantly better results.

Thus, the data in Table 5 show that for companies that are among the top 10% of the real sector leaders in the global economy for resource efficiency, the formation of their annual profitability level indicators during 2013–2020 was characterized by the same trends as for all companies in general, but their actual values of these indicators were always higher.

Similar conclusions can be drawn with regard to the profitability indicators of the studied groups of enterprises (Table 6). Thus, the average values of the levels of return on sales, assets and equity for 2013–2020 indicate that the return on sales and assets of the most resource-efficient enterprises is approximately twice as high as similar indicators summarized for all real sector companies, and the return on equity of such enterprises is almost three times higher than the global indicator.

The obtained results indicate that innovation-active enterprises, which are focused on sustain-

able development, not only ensure the achievement of socially significant goals, but are also able to provide financial advantages to investors in the form of higher return on capital.

One more confirmation of economic expediency of development of socially responsible innovations is the forecast indicators of innovative technologies market growth, including, in particular, implementation of circular supply chains, energy-efficient innovations, renewable energy sources, "smart city" technology.

The development of these areas is not only an opportunity to reduce the level of costs of enterprises and their dependence on the cost and supply of exhaustive resources, including fuel and energy, but also the prospect of creating new innovative products and new markets.

Thus, modern conditions of economic management require enterprises to reorient from ensuring the increase exclusively of their market value to the additional creation of "social value", i.e. satisfaction of certain social, environmental, ethical needs of society in the form of formation of positive effects or minimization of negative impacts. Innovations are the key tool of creation of a social value and maintenance of steady and effective development of the enterprise.

To ensure their competitiveness not only in commodity markets, but also in resource markets and, above all, the capital market, manufacturing enterprises in the process of evaluation and selection of innovative projects must take into account changes in the priorities of shareholders, potential investors and other stakeholders [7]. The growing role of ESG–factors (environmental, social effects and corporate governance) in the construction of investment strategies and the formation of investment portfolios stimulates the introduction of appropriate criteria for the evaluation and comparison of innovative projects.

Today there are several types of investment strategies that can be used in the implementation of socially responsible investments. In turn, enterprises in the process of developing their own innovation policy can also be guided by these strategies in a certain way and give different degrees of importance to the creation of environmental and social external effects along with the formation of an increase in added corporate value and the achievement of the desired financial indicators [12]. For example, due to the traditional approach to doing business, innovative activity is carried out exclusively for the purpose of increasing profits, increasing profitability, entering new markets, that is, its effectiveness is evaluated exclusively by "internal" for the enterprise indicators mainly of financial character. Socially responsible innovations are actually not implemented or are very limited, and all the created surplus value is distributed for the needs of the enterprise itself.

Characterizing modern approaches to enterprise management and the formation of its innovation policy, it should be noted that despite the relevance of taking into account the interests of society in modern business, still the main goal of the business entity remains profit making. Thus, the approach based on the adaptation of the investment ESG-criterion in the innovative activity of the enterprise causes the formation of several basic approaches, which are a middle ground between traditional business and charitable, non-profit activities, depending on the degree of consideration and implementation of the ESG-criterion.

The minimum degree of consideration of ESG–criterion at socially — responsible innovations provides formation of such innovative strategies which put the primary goal of improvement of risk — management in the company, avoidance of corporate conflicts, and also minimization of legal, ecological, ethical risks connected with discrepancy of product policy or technological equipment of the enterprise to existing standard requirements or expected changes in normative–legal regulation [6].

The following strategy of implementation of innovations to ensure sustainable development of the enterprise involves not only a passive response to regulatory requirements and minimization of risks, but also the active use of new opportunities arising from changes in the social, environmental and ethical nature in the external environment. This approach implies the application of innovation selection strategies, which ensure the creation of positive externalities, as well as integrated ESG strategies, which allow combining the financial goals of the company and the needs of society.

Concentration of company efforts on achievement of essential positive effects in a certain direction of realization of socially responsible innovations (for example, on introduction of renewable

energy sources, creation of socially significant innovative products and the like) defines transition to thematic innovations with maintenance of essential growth of public value in the chosen direction [15]. If within the framework of realization of thematic innovations the enterprise carries out development and introduction of new products, it can provide growth of its financial indicators, creation of new markets and consolidation of competitive positions.

Maximum consideration in innovative activity of the enterprise of ESG-criterion leads to change of strategic reference points of conducting entrepreneurial activity and approaching to non–profitable organizations by certain features. This is due to the fact that to achieve a large-scale positive impact in the direction of environmental, social and other socially necessary innovations, part of the enterprise profit is redistributed in favor of creating new social value.

Thus, depending on the chosen strategy of innovative activity the enterprise can focus on the maximum scale of implementation of ESG-criterion, i.e. on creation of positive effects, implementation of socially influential innovations, or on its minimal consideration — ensuring compliance with regulatory requirements and elimination of negative effects.

3.2. Methodological basis of the influence of ESG factors on the stock returns depending on the value of the increase in the aggregate value of the enterprise

The spread of the approach to the combination of corporate and social values in the process of innovative activity of enterprises requires the development and improvement of appropriate methodological support to compare, evaluate and select innovative projects that would simultaneously meet the criteria of both financial efficiency and formation of corporate value, and satisfaction of social and environmental needs and creation of value for society. Classical theories, which reveal the essence and methods of transferring external negative effects, created by enterprises for society, into internal effects (internalization of external effects), are theories of A. Pigou and G. Coase.

A. Pigou regarded external externalities as "market failures", which arise as a result of enterprises focusing exclusively on their own benefits and overproduction of goods with negative externalities, or vice versa — underproduction of goods with positive externalities. On this basis, he considered government intervention in the form of an additional tax on negative effects or provision of subsidies for the creation of positive externalities as the main method of influence on the internalization of externalities. In R. Coase's approach, the method of overcoming negative externalities was not a direct state regulation, but a clear definition of property rights and creation of a free market for their purchase/sale, and thus transferring key resources (water, air) from the category of unlimited to the category of rare ones.

Thus, the considered theories of A. Pigou and G. Coase explain the mechanisms of possible redistribution of negative externalities between enterprises and society with the help of methods of state intervention — through direct establishment of subsidies and taxes, or at the expense of further development of private property — formation of the institution of ownership rights on resources (air, water and others).

However, modern enterprises do not always need incentives from the state, as they gradually become active participants in the process of managing external effects themselves. Therefore, there is an objective need not only for scientific and theoretical substantiation of the mechanism of internalization of external effects, but also for a comprehensive assessment of the total value obtained for society and enterprise from the implementation of socially — responsible innovation.

Significant interest of international organizations, associations and associations (Natural Capital Coalition, World Business Council for Sustainable Development), international financial and analytical centers and companies (PwC, KPMG), as well as the public, public movements and associations (B Lab, Shared Value Initiative, True Price) in the development of socially responsible investing and new standards of functioning of enterprises contributed to the development of a number of methods and recommendations for companies to adopt responsible investing principles and consider ESG factors in their activities [12, 16, 8, 2].

Let's analyze the most popular in the world practice methodologies for assessing the value created by the company for all stakeholders. One of such techniques is "B Impact Assessment" — a set of standards developed by a group of experts

of "B Lab" on various industries and directions of activity.

The work of "B Lab" is based on the belief that in the future the evaluation of the effectiveness of the enterprise will be based on the analysis of its impact on the environment as one of the key indicators along with profitability and other financial indicators of activity [9]. Thus it is necessary to estimate not only sales volume, profit and scales of business, but also the created value for consumers, employees, society and environment.

By its structure, the "B Impact Assessment" methodology includes three components:

Standards — Contains reliable, comprehensive, transparent and independent standards of social and environmental performance that allow businesses to assess the total value created

Indicators — the publicly available performance of other companies which can be used to compare the environmental and social impact of different enterprises and calculate the normative value

Tools — specific practical proposals that allow enterprises to improve their impact on the environment.

Direct development of standards and definition of norms in the group "B Lab" is engaged in about 20 experts who are members of the Advisory Council for the development of standards and are recognized experts in their field and have experience in applying the stakeholder approach in management. The methodology takes into account the interests of different stakeholder groups by, among other things, involving experts representing businesses, government and non–profit organizations.

The advantage of the methodology "B Impact Assessment" is the separation of two separate groups of regulations, standards and tools designed for developing countries and for developed countries. This allows taking into account the peculiarities of the functioning of the markets of each of them and the specifics of the assessment of the created value [12].

Another methodology, which involves a comprehensive assessment of the total value created by the enterprise, "Total Impact Measurement & Management" (TIMM), developed by PwC [2]. This approach applies the most multidimensional view of the sources of creation or reduction of value and takes into account the need to simultaneously meet the needs and requirements imposed on the business entity by consumers, regulators, employees, suppliers, shareholders.

The implementation of the Total Impact Measurement & Management methodology is based on the following basic principles:

A holistic view of value — PwC proposes a comprehensive assessment of the value created (or reduced) by a business in the process for its shareholders and other stakeholder groups relevant to the operation of the business. In particular, it is proposed to take into account social, environmental, economic and fiscal effects: the value created for the local society, the contribution to the economy and public finances through the payment of taxes, the impact on the environment and society, and the like

Understanding impact-using a holistic, integrated approach to value assessment promotes an understanding of the overall impact, outcomes and consequences of alternative strategies, including innovative strategies, and makes it easier to choose the best strategy for all stakeholders

Monetization of impact-one feature of Timm's methodology is to take a value-based approach and give monetary expression to both individual and aggregate indicators. This provides a more reliable and powerful basis for justification of management decisions

Optimization of management decisions — availability of conducted assessments of business options and implementation of alternative innovation and investment projects allows optimizing the decision–making process and ensuring maximum business efficiency [5].

The analysis of risks of internalization of negative external influences, arising as a result of activity of the enterprise, should be carried out taking into account the medium- and long-term perspective and the tendency to increase such risks with expansion of the time horizon of the analysis. According to the results of the second stage of the methodology of true value assessment with application of economic and mathematical modeling methods, forecasts of reflection of the highest identified risks on the financial results of the company are formed.

Taking into consideration that the purpose of functioning of any enterprise should be not only to gain profit in the current period, but also to maintain or increase its volume in the future, so investment and innovation activity of the enter-

prise will be aimed at minimization of the identified risks and formation of conditions for development of the enterprise. Thus, the third stage of the methodology "KPMG True Value" focuses on the choice of investment and innovation projects that can provide the maximum efficiency of the enterprise and include management of the creation of both corporate and public value.

The components of the implementation of the third stage of the methodology "KPMG True Value": identification of possible investment and innovation projects, the calculation of "true value" indicators for each of the projects, comparing the projects with each other and making a decision.

The first component on identification of possible projects may include development of new products, improvement of technological processes or separate operations, changes in sales policy and the like.

It should be noted that the selection of projects that meet the criterion of creating both corporate and public value includes two categories:

Investment (innovation) projects, the implementation of which is aimed at reducing the negative impacts on society and provides a reduction in the cost of the enterprise to pay taxes (for example, for pollution) or penalties, as well as losses associated with the activities of stakeholders and market dynamics

Investment (innovation) projects, the implementation of which is aimed at creating a positive impact on society and provides an increase in income due to the formation of additional competitive advantages, strengthening the brand, employee loyalty, providing tax benefits.

Both of the above investment directions are not mutually exclusive and can be implemented simultaneously.

After all possible investment projects have been formed, their evaluation is carried out, namely direct financial benefits from their implementation and the potential future income from internalization and the creation of additional value for society are calculated.

The final stage of the analysis is the construction of marginal aggregate cost (utility) curves for the projects and a comparison on their basis of the income generated by the implementation of each of the proposed projects. In doing so, depending on the ratio of corporate and societal value, all projects can be assigned to one of three categories:

Projects that are characterized by a positive net cash flow due to direct revenues from their implementation, independent of the creation of social value

Projects for which the positive value of net cash flow is formed only under the condition of taking into account revenues from the creation of public value

Projects, which are characterized by a negative value of net cash flow, but can be accepted for consideration, since they provide the creation of high value for society.

It should be noted that the methodology "KPMG True Value" does not give unambiguous recommendations for the choice of investment (innovation) projects, this choice depends on the priorities of the enterprise to create company profits and value for society [16].

One of the methodologies for assessing the environmental effects of a company's activities is the Environmental Profit & Loss Account, in which all indicators characterizing the company's impact on water, soil, air and the use of other resources are put into monetary terms. The development of this methodology was designed to eliminate the problem of incomparability of data and to provide a unified measurement of indicators, characterizing the level of environmental pollution, carried out by the enterprise at all stages of production and sales of products. Maintenance of the ecological account of profits and losses allows to estimate and compare according to the given characteristics both separate companies and separate kinds of the goods [17].

From the point of view of the subject of management, the cost estimate of its risks and opportunities associated with the level of environmental impact is determined by the amount of payments that are transferred as taxes or mandatory fees for the use of water resources, energy resources, waste management, land use, and the like. In contrast, the methodology attempts to determine the real impact of the enterprise on the environment and calculate the real cost of environmental pollution.

The implementation of the methodology includes several stages, namely:

Analysis of the financial indicators of the enterprise in accordance with the industry affiliation, sphere of activity

Processing of data on the enterprise, compiling its environmental profile, including the calcula-

tion of direct environmental losses and damage in the supply chain

Collection and processing of data about the enterprise from other sources of information (information from governmental and non-governmental organizations on pollution levels and so on)

Determination of priority spheres in which reduction of the negative environmental impact of the enterprise is of primary importance

Expression of environmental impact in cost indicators.

The advantages of forming the environmental profit and loss account of the enterprise are:

Assessment of financial risks associated with limited natural resources and regulatory regulation of this area

Comparing environmental costs of different types of raw materials, production processes, location of facilities, suppliers, and different stages of the life cycle of products

Identifying opportunities to optimize the company's operations, supply chains, and product mix based on resource availability and environmental cost levels

Ensuring transparency of environmental activities of business managers, consumers, investors and other stakeholders.

Among the complex methodologies of aggregate value assessment it is worth considering the approach of the World Business Council for Sustainable Development (WBCSD), which is called "Redefining Value", that is, "revaluation of value". The general basis of the concept of "Redefining Value" formation of true (true) value by determining the true income and real expenses of the enterprise and application of these indicators in the internal and external reporting [**9**].

In order to integrate the concept of creating total value in the process of making management decisions by business entities, it is necessary to make changes in the evaluation and measurement of value, as well as in the formation of financial statements, in particular the allocation of such components as social and natural capital. In order to achieve these objectives, the following priorities have been defined for the organization in the near future:

1) Formation of the conceptual framework — development and consolidation of the key elements of the "Redefining Value" program, definition of basic concepts and the role of integrated value management, identification of existing management tools and target benchmarks

2) Management of natural capital–harmonization of approaches to assessment and measurement of natural capital for the purposes of integrated management of enterprise value and performance, identification of leading methods of assessment and measurement of components of natural capital

3) Management of social capital-harmonization of approaches to the assessment and measurement of social capital for the purposes of integrated management of the enterprise's value and performance, identification of the leading methods for assessing and measuring the components of social capital

4) Improvement of reporting — ensuring interrelation between different systems of reporting and disclosure requirements of governments, non-governmental organizations, stock exchanges, investors; taking into account their focus on the long-term perspective as well as tracing and distribution of innovations in financial reporting that contribute to implementation of an integrated approach to value management;

5) Education, capacity building and exchange — increasing awareness and developing skills among employees of companies to assess, measure and report on the creation of financial value, non–financial influences and dependencies

6) Change of operating rules — advocacy and support to market participants (enterprises, investors, stock exchanges, regulators, etc.), which carry out complex value management according to proposed methodology.

Within the framework of realization of one of directions of the program "Redefining Value", namely concerning management of ecological effects and natural capital, the separate project under the direction of "Natural Capital Coalition" which has received the name "Natural Capital Protocol" was founded [1]. Its development was based on already existing documents in this area, in particular the protocol on greenhouse gas ("GHG Protocol") and the recommendations on corporate ecosystem valuation ("Guide to Corporate Ecosystem Valuation").

The primary goal of this program is to develop a methodological framework for assessing and improving the system of management of direct and indirect impact of business activities on the

state of ecology and natural capital. Taking into account the existence of other methodologies for assessing natural capital, developed both at the level of international organizations and individual enterprises, when applying the "Natural Capital Protocol" the following tasks are solved:

Developing clear and understandable recommendations on the quantitative, qualitative and monetary evaluation of natural capital, relevant influences and dependencies, as well as on the choice of the level of evaluation

To provide a possibility of using the methodology in various areas of business activity (risk management, innovative activity, in the study of new sources of income, etc.)

Creating recommendations for applying the methodology at various organizational levels of management and in various business structures, based on the formation of a value chain

Ensuring the possibility of applying the methodology in all industries and sectors of the economy, as well as in all geographical regions.

So, in general, the methodology of the "Natural Capital Protocol" is not new in the assessment of natural capital and the environmental effects created as a result of business activities. However, it is aimed at the development of existing leading approaches to the management of natural capital, neutralizing the shortcomings and deficiencies and ensuring consistency and comparability of approaches in different industries and geographical regions [18].

Just as the Natural Capital Protocol methodology is limited to the assessment of environmental effects, there are a number of approaches that focus on the management of social capital and solving social problems through entrepreneurial activities. The most popular among such approaches is the concept of Shared Value, which is being developed by the global community of business leaders. The idea of Shared Value is that businesses can benefit economically if they create value for society by meeting its needs.

Using this approach helps to redirect company funds from highly specialized and charitable programs, which have a limited range of impact, to more serious and large-scale projects that can make a tangible impact on improving the functioning of society as a whole. It has its advantages also for development foundations and other agencies on assistance on more effective use by them of opportunities of business sector for economic and social development [11].

The assessment of the social value created can be conducted not only by businesses to analyze the effectiveness of their activities, but also by other actors (investors, trade intermediaries, social protection agencies) for their own purposes. For example, for investors, this information is important in determining the social and environmental risks of investments and in forming an overall investment decision.

Among the most informative indicators that are used to measure and account for the value, which includes social, environmental and economic results of business activities, is the social return on investment — SROI ("Social Return on Investment"). SROI is a relative indicator that reflects the ratio of public benefits expressed in monetary form (social, environmental, economic effects) obtained as a result of the project (changes, innovations) to the amount of costs incurred.

There are two types of SROI — evaluation and forecast.

The first is used to determine the results of investment (implementation of activities) on the basis of actual indicators. Forecast SROI is calculated to estimate the potential social value that can be created by achieving the planned performance indicators or results of project implementation.

The calculation of SROI includes several stages. The first step is to determine the scope of the evaluation and the list of stakeholders in order to establish the boundaries of the analysis and include only the effects and indicators that are relevant to the study. The next step is to build models of the impact of the enterprise's activities on various stakeholders by mapping input, output and outcome parameters.

The third stage of SROI calculation includes statistical substantiation of the relationships identified during the preliminary stage and providing the initial parameters with a cost estimate. Taking into account the results of the third stage of SROI evaluation, those effects and changes are identified and excluded from the study, the occurrence of which is the result of the influence of other factors and parameters and occurs independently of the activities of the enterprise under study.

At the fifth stage, SROI is calculated directly by finding the sum of cost estimates of positive effects created as a result of the economic activ-

ity of the subject, reducing it by the cost value of negative effects, and comparing the obtained result with the volume of investment. This stage may also include an assessment of the sensitivity of the result indicator to the volume of investment. The final stage is reporting, dissemination of the obtained data among the stakeholders of the enterprise, realization of investments with positive SROI and verification of the results. The advantage of the social return on innovation analysis is, first, the possibility of applying this indicator both to the business entity as a whole and to individual types of works, technological processes, products. Secondly, SROI is a universal indicator, as its calculation and application of the results can be carried out by both internal and external stakeholders of the enterprise [8].

Let's summarize the considered documents and methodological developments in the sphere of assessment and management of creation of corporate and public value in table 7.

Taking into account established in international and domestic practice scientific and methodological bases of innovative projects assessment and approaches to enterprise value creation management taking into account external effects of its activity, in the work it is proposed to assess innovative projects taking into account ESG-criterion and the value of created total (corporate and public) value according to such scientific and methodological approach, which involves realization of 5 main stages:

The choice of the enterprise's goal in the implementation of ESG-criterion in innovation activities

Selection of innovation strategy type with consideration of ESG-criterion; identification of types of external effects of enterprise activity and evaluation of the probability of their positive or negative influence in the process of realization of the innovation project with the use of the method of scenarios

Calculation of the value of created social value and total net cash flow from innovation

Verification of compliance of the obtained indicators with the goal of implementing socially responsible innovation and making a decision on the innovation project.

The first stage of realization of the offered methodical approach provides establishment by the enterprise of a desirable degree of consideration of ESG-factors at formation of innovative policy: restriction by performance of only minimal requirements; active participation in creation of positive external effects or priority of consideration of ESG-factors over reception of financial benefits and maintenance of the maximum impact on social development.

Each chosen goal of implementation of socially responsible innovations corresponds to several possible strategies, within which the degree of consideration of ESG-factors is also differentiated. Determination of the strategy for the implementation of innovation activities of the enterprise is the second step in the implementation of the scientific and methodological approach to the assessment of socially responsible projects.

The next step is to identify the types of external effects of the enterprise's activities and assess the likelihood of their positive or negative impact using the method of scenarios. Depending on the industry, scale of production and other features of functioning of the enterprise the composition, types and directions of its influence of externalities (external effects) may be different.

In the most generalized form all the external effects of economic entities can be divided into spheres of influence — economic, social, environmental and others; and by the direction of influence — into positive and negative. The composition and characteristics of the main types of externalities of enterprises in each sphere and direction of impact are presented in Table 8.

It should be noted that in the process of implementation of innovations not all of the expected external effects can actually be achieved. So, if the indicator of corporate value is sufficiently predictable, the formation of public value is characterized by a high degree of uncertainty. This is caused, firstly, by the use of mainly qualitative indicators for its expression and by the complexity of their translation into monetary form. Secondly, the formation of social value is beyond the direct influence of the enterprise, is not controlled by it, and therefore, the planned results may not be achieved due to the action of various external factors, including the activities of competitors, government policies and the like.

The most appropriate method for assessing the possible results of the implementation of an innovative project, taking into account the created

Table 7
Current methodological developments in the assessment and management of corporate and public value creation

Documents and Methodologies	Developer	General Characteristics
B Impact Assessment	B Lab	Contains standards, regulations, and tools that allow companies to assess, compare, and improve the social and environmental effects they create over the long term
Environmental Profit & Loss (EP&L) Statement	IT company BSO/ Origin (Eckart Wintzen)	The first attempt to put a monetary value on the environmental impact created throughout the production process chain
Total Impact Measurement & Management (TIMM)	PwC	A new approach designed to help companies understand the overall impact of their operations
KPMG True Value	KPMG	A methodology that involves 3 steps and allows companies to 1) estimate their «present» profit taking into account externalities; 2) determine future risk–weighted revenues; 3) develop business approaches that create both corporate and public value
Social Return on Investment (SROI)	SROI Network	The methodology is based on generally accepted accounting principles to help manage and understand the social, economic and environmental consequences of an enterprise's activities
Redefining Value	World Business Council for Sustainable Development (WBCSD)	A work program to help WBCSD member companies standardize their tools for measuring and managing their impact on society and the environment
Natural Capital Protocol	Natural Capital Coalition (previously TEEB for Business)	Harmonized methodology for capital assessment in the investment decision–making process
Shared Value	Shared Value Initiative	Management strategy focused on creating business value by identifying and solving social
True Price	True Price	A non–profit socially oriented organization whose purpose is to help multinational corporations, small and medium–sized businesses, nongovernmental organizations, and governments quantify and qualify their economic, social, and environmental impact, particularly at the product creation level

Source: The author.

social value is the method of scenarios, because it allows you to consider different reactions of the market, stakeholders and regulators to innovation, as well as take into account the different degrees of achievement of the social, environmental and economic objectives [19].

Classically, this method involves the development of three basic scenarios: optimistic, realistic and pessimistic. To apply the scenario method, all the external effects created by the activities of the enterprise were divided into highly probable, probable and unlikely.

In this case, comparing the probability of achieving different in the direction of the impact of external effects, it can be noted that the minimization of negative externalities is more likely, because it includes such parameters controlled by the enterprise, as: refusal to produce certain types of products (for example, harmful or hazardous to health products, goods or services of

Table 8
Systematization of the main types of external effects of production enterprises

Scope and direction of externalities		Types of externalities	Characteristic Impact
Economic	Positive	Taxes	Proceeds to the economy from all types of taxes and fees
		Dividends	Securing public wealth by making payments to shareholders
		Interest on Loans	Ensuring the prosperity of the financial sector of the economy through the development of credit
		Wages	Ensuring a stable income and quality of life for employees
	Negative	Tax Evasion	Economic losses due to under–receipt of taxes and fees by budgets
		Corruption	The factor of economic inefficiency
Social	Positive	Infrastructure	Infrastructure development (e.g., roads, energy production and transmission) that improves the quality of life and creates new economic opportunities
		Health Care	Providing recreational wellness services, including to employees and the local community. Providing improved quality of life and overall health
		Education	Providing educational services, including employees and the local community. Providing for the enhancement of productivity and quality of life
	Negative	Low Wages	Not providing workers with enough money to live and maintain a normal quality of life due to a low cost of living, creating unsatisfactory working conditions. Use of child labor
		Health Care and Security	Damage to health, injury or death caused by insufficient funding for occupational safety measures
		Pollution	Damage to the health of workers and the public due to air, water, and noise pollution

Source: The author.

unethical nature); reduction of pollution due to the introduction of new technology and the like.

Positive externalities, on the contrary, can only be categorized as probable or unlikely, since their achievement requires a positive feedback from the market environment.

According to overestimation by the enterprise of possibilities to achieve all positive effects or underestimation of real value of negative effects, which remained, at an estimation of the innovative project will lead to artificial overestimation of an indicator of expected total

cost and acceptance of irrational innovative decisions.

The method of scenarios, which covers the construction of at least three alternative variants of events, allows avoiding the risk of incorrect assessment of the indicator of the expected total cost from the implementation of the project. As part of the proposed approach to assessing socially — responsible innovation, the formation of scenarios was similar to the division of all enterprise externalities on the probability of their occurrence, namely:

Pessimistic scenario of the implementation of the innovation project provides for the coverage of only a small proportion of external effects associated with the minimization of negative externalities, that is, it takes into account only highly probable external effects

The realistic scenario assumes partial achievement of the goals of minimizing negative effects and creating positive effects — when calculating, it covers externalities attributed to high probability and probability

The optimistic scenario assumes that all positive external effects will be achieved, and therefore the high-probability, probable and low-probability externalities are taken into account to determine the total cost indicator.

At the fourth stage of implementation of the scientific and methodological approach to the evaluation of innovative projects, taking into account the ESG-criterion, the key indicators characterizing the effectiveness and efficiency of innovation are calculated for each proposed scenario. For key indicators of evaluation of socially responsible innovations the value of created total value and net cash flow from innovations were chosen.

The algorithm for calculating the first of these indicators, which characterize the financial results of innovations implementation, involves:

1) Formation of corporate value — the amount of profit formed by the results of innovation activity as the difference between the income received and the total amount of costs incurred for the implementation of the innovation project

2) Formation of public value is carried out on the basis of finding the net financial result between positive and negative effects in the context of all spheres of external influence of the enterprise — economic, ecological, social and other

3) Evaluation of aggregate value indicator as a sum of corporate and public value.

The more the enterprise will be oriented to the maximum implementation of ESG-criterion, the greater will be the positive effect and the total value of the actually created public value. Conversely, the failure of an enterprise to ensure a sufficient level of environmental safety will lead to the loss of value of its innovations due to the formation of a significant amount of costs to society.

The traditional indicator of estimation of productivity of innovative projects is a net cash flow. The difference of its formation in the process of implementation of socially responsible innovations is the inclusion in the final indicator as a result of the project directly on the enterprise, and the estimated income in the social and environmental directions.

It should be noted that the assessment of the cost (value) of environmental and social effects is quite subjective and depends on the importance of these factors for the stakeholders of the enterprise.

The last step of the proposed scientific-methodological approach is to check the compliance of the innovation project with the goal of implementing socially responsible innovation. In case the calculated expected indicators of public value, net cash flow taking into account the internalization of external effects and total corporate and public value are consistent with the goal, the chosen innovation strategy and the degree of importance of ESG factors for the enterprise, this is the basis for a positive decision on the implementation of this innovation project.

Thus, the need for enterprises to take into account the social, environmental and economic effects arising in the course of their business activities forms new requirements for the process of selection and assessment of the effectiveness of innovative projects. To perform this task, the paper proposes a scientific and methodological approach to the evaluation of innovative projects, taking into account the ESG-criterion and the value of the created total (corporate and public) value. Its application will allow selecting innovative projects that would simultaneously meet the criteria of financial efficiency and value creation for society.

4. Conclusion

ESG principals have gained a firm ground in the investment decision making for many

modern allocators forcing portfolio managers and even companies themselves to adopt to their demands. Best described as Value Based Investments or VBI, such a strategy relies on the ideas of financing only those projects or companies that benefit the greater causes for humanity such as reduce pollution, promote social equality, or repair the damage done to the environment by toxic industrial production.

Despite their generally negative reputation, companies in the dirtiest industries such as petrochemical can still successfully adopt and implement relevant ESG policies and satisfy the criteria for some ESG mandates imposed by the environmentally conscious investor community. Notably, it is safe to say that the Environmental and Social principals in the ESG trio were originally primarily targeted at companies, whose production processes create the most pollution. It was done in order to incentivize them to limit the poisonous emissions and clean the pollution already caused. Even though, lately, this goal was seemingly replaced by a much more ambitious one of eradicating polluting production altogether, the current state of affairs and the level of scientific advancement prohibits any such radical transitions any time soon. However, the underlying aforementioned principals of still keeping corporations on their toes regarding the use of cleaner production technologies is still sound and can fit certain ESG investment mandates.

Significant uncertainty still remains in the domain of what investors consider as sufficient adherence to the ESG principals, however, numerous recognized protocols exist in order to aid companies and investors to navigate these dark waters more easily. Natural Capital Protocol is one example of such an assessment tool that allows companies to evaluate their dependence on the natural resources. Investors in turn can also utilize the program to gage their interest in a project or company depending on their level of commitment to the environmental agenda.

Overall, adopting ESG practices clearly comes with a set of positive and negative consequences. Thus, among the advantages of those policies are the social and environmental contribution to the planet and posterity inherent to the idea of ESG. Investor confidence generally tends to rise as the company improves its ESG standing and can expect greater institutional ownership from the larger investment houses servicing wealthy clients with the VBI agenda. On the other hand, the costs in the form of capital expenditures and forms of contribution to the social causes can cause the companies to bleed cash and reduce the Free Cash Flow to Firm.

With that in mind, financial and operational health of the companies remain paramount to the investment decision making with or without a high ESG rating of a specific investment target. Only a comprehensive and detailed business valuation coupled with the assessment of the implemented ESG practices can provide a valid glimpse into the potential success of the investment position regardless of its ESG rating. Detailed approach to ESG selection criteria were presented in Chapter 3 along with the recommendations on how to interpret and implement such criteria.

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ABOUT THE AUTHOR

Galina Klimova — post-graduate student, Financial University, Moscow, Russia.

ИНФОРМАЦИЯ ОБ АВТОРЕ

Галина Климова — аспирантка, Финансовый университет, Москва, Россия.