Youth Impact

Impact Report

Covering fiscal year 2021

WE SUPPORT

UN GLOBAL COMPACT

Youth Impact
FY2021 Impact Report

About Youth Impact

Youth Impact is a social venture dedicated to empowering the world's youth to take concrete actions to solve real-world problems.

About This Report

This report is intended to share Youth Impact's social impact activities and outcomes for FY2021 (April 2021 – March 2022).

Authors

Robert Choi, Y-Chief Executive Officer (Y-CEO)
Yeonwoo Lee, Y-Chief Operating Officer (Y-COO)
Thomas Lee, Y-Chief Financial Officer (Y-CFO)
Seoyoung Lee, Y-Chief Technology Officer (Y-CTO)
Jisoo Kim, Y-Chief Marketing Officer (Y-CMO)
Sejun Lee, Y-Chief Sustainability Officer (Y-CSO)
Jae Jin Lim, Chief Executive Officer & Mentor

Website www.youthimpact.com
Email contact@youthimpact.com
Instagram @youthimpact.co

Content

Youth Leading the Change

Jae Jin Lim
CEO & Mentor
Youth Impact

There has never been more interest by youth to get involved in social impact activities and to even take the lead in creating a better, more sustainable future. However, we rarely see this interest get translated into concrete actions that produce meaningful results and lasting impact. Rarely do we offer our youth a real channel and opportunity to put their ideas and visions into actions that have the potential to solve real-world problems and change the world. Despite having so much more to offer, students are limited to fixed and prearranged learning opportunities that restrict their creativity, ambition, and potential to act and contribute in meaningful ways.

Youth Impact was founded to remove these barriers to youth engagement and to channel young people's creativity, ambition, problem-solving skills, tech-savviness, and unlimited potential to global efforts to address poverty, eliminate hunger, provide quality education, promote gender equality, protect the environment, and ultimately advance the United Nations 2030 Sustainable Development Goals (SDG). That is why our purpose and mission is to **empower youth to become agents of change taking concrete actions to solve real-world problems.**

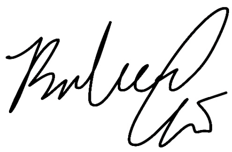
Rather than pretending to be diplomats in Model United Nations (MUN) or participating in one-time volunteer events, we call on all high school students across the world to roll up their sleeves and join us on our mission to solve real-world problems through concrete and scalable actions. Why wait until you become an adult to change the world? Why not just become the diplomat, entrepreneur, social activist, artist, and programmer of your dream to effect change and create meaningful impact today?

By leveraging technologies that help us connect with anyone and anywhere, engage in collaborative work, and share our impacts with the rest of the world, we aim to create a global network and community of young problem solvers tackling the world's most challenging problems. Through Youth Impact's website and mobile application, students from all over the world can search and join from more than a dozen impact projects, interact in customizable virtual spaces in real-time, and share their achievements using images and videos on their personal visual resume pages.

At the current pace, the global community is expected to achieve the entirety of the Sustainable Development Goals by 2082. Only by getting everyone on board can we get on track to achieve the Sustainable Development Goals by their target year of 2030. As future leaders, youth can and must play a significant role in the global effort to create a better, more sustainable future. Youth Impact is here to make that a reality.

Thank you,

Jae Jin Lim
CEO & Mentor



Rober Choi
Y-CEO

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Y-COO

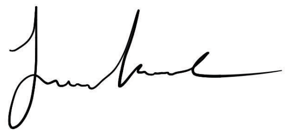
Thomas Lee
Y-CFO

Seoyoung Lee
Y-CTO

Jisoo Kim
Y-CMO

Sejun Lee
Y-CSO

Jungwoo Cha
Y-Head of MS Expansion



Jangkyung Choi
Fmr. Y-CEO
(2020 ~ 2021)

Our Mission

The beginning of a global platform for youth impact

Youth Impact was founded with the vision that youth can and must play an important role in leading a more sustainable future.

We genuinely believe that, with the advancement of modern technology and education, youth are equipped with the power to make lasting changes as much as do adults.

By harnessing the creativity, ambition, challenging mindset, global view, and endless potential of our youth, we can accomplish the impossible and accelerate progress toward the 2030 United Nations Sustainable Development Goals.

Stop waiting.
Start acting!

Mission

That is why our mission is to empower youth to become agents of change taking concrete actions to solve real-world problems.

70+	150+	8
Members	Participants	Countries

Our Story

> **We believe youth have endless potential to change the world**

Gen Z: Generation of Influencers

Members of Gen Z are true digital natives: from earliest youth, they have been exposed to the internet, to social networks, and to mobile systems. As the world becomes more connected than ever, this new "Generation of Influencers" is using its digital prowess to not only create and interpret trends but also put into action imaginative and innovative ideas for solving real-world problems. From global icons like Greta Thunberg to Malala Yousafzai, more and more Gen Zers are stepping up as leaders to make a better, more sustainable world. Why wait until you become an adult to change the world? Why not just do it now?

*Kids born between 1995 and 2010

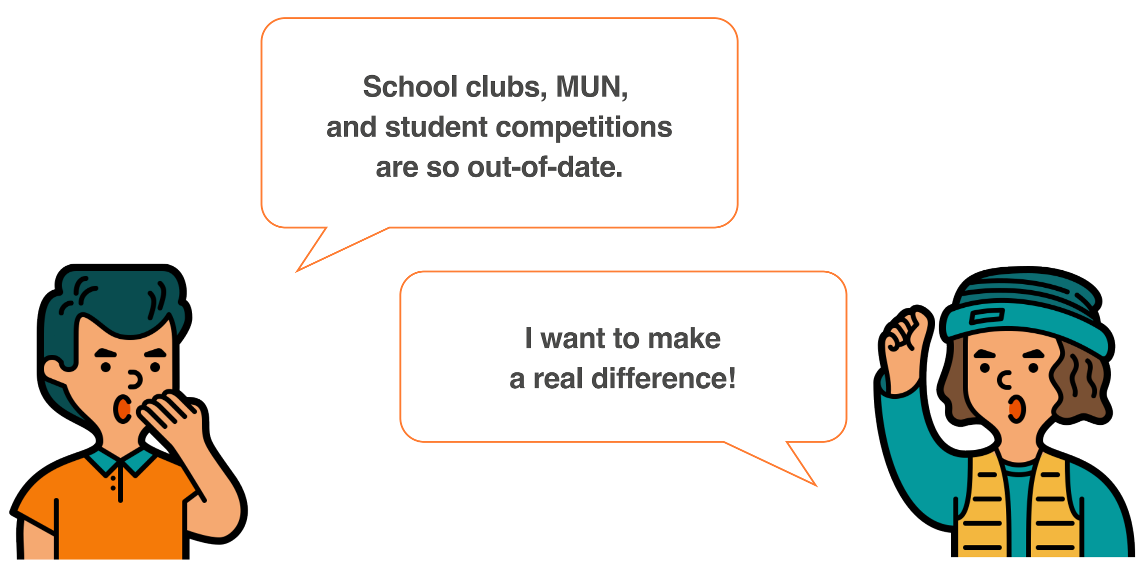
Problem

The only problem is that student extracurriculars are a complete mess.

Students: lack of information and opportunities for real-world experiences.

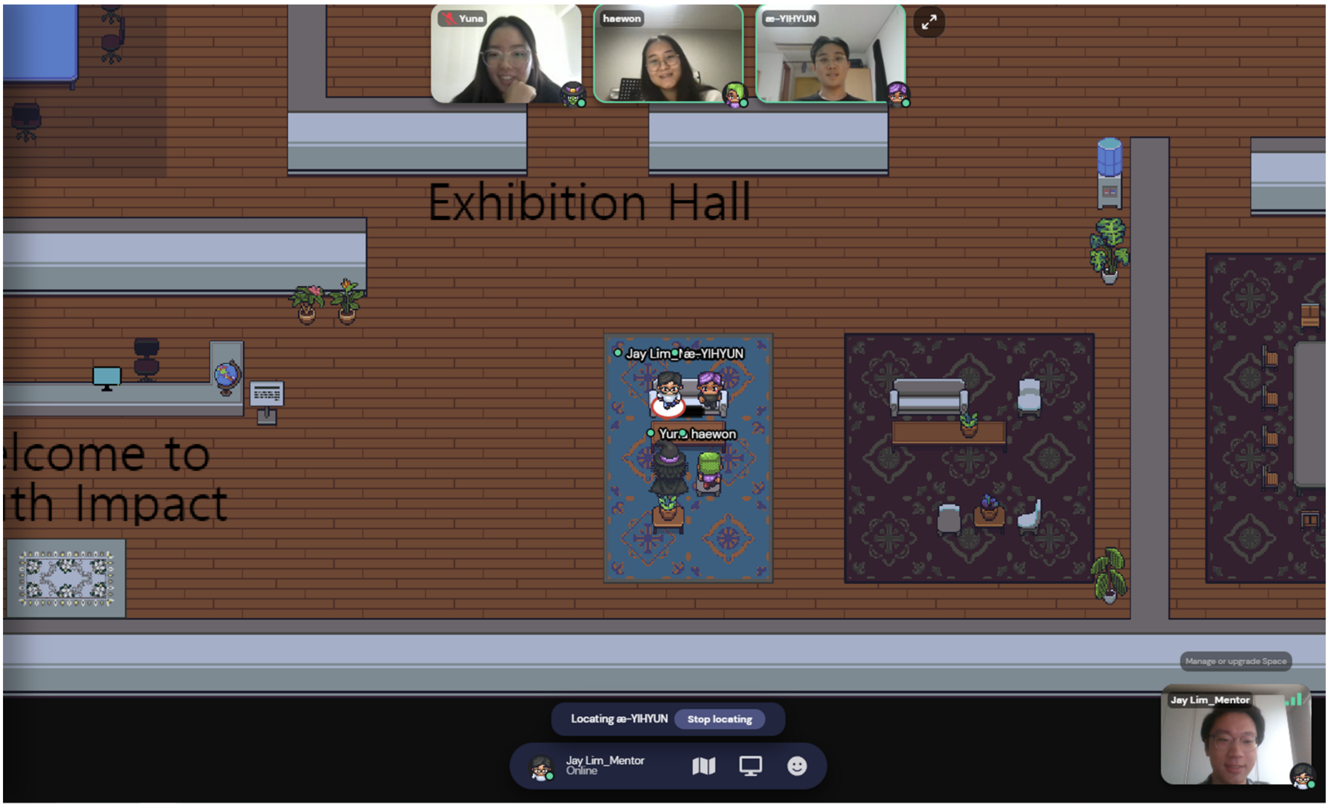
Schools: lack of resources to provide personal instruction.

There is a gap between what Gen Zs want to do for extracurricular activities and what schools and academic institutions can provide. Both inside and outside of school, students struggle to find opportunities to get involved in activities that make a real difference. Rather than imitating the work of diplomats in Model UN or competing for prizes in student competitions, they want to work together to come up with and implement innovative solutions to the world's most pressing problems, including poverty, hunger, gender inequality, and climate change.



Solution

That is why we aim to mobilize and empower future leaders to become agents of change taking concrete actions to solve real world problems. We intend to accomplish this by providing an online platform and community for student extracurricular activities. On our platform, students can receive online mentoring to create and run global impact projects, interact with other students in real-time in our virtual spaces, and create a personal visual resume to share their achievements and impact using photos and videos.



“As future leaders, youth can and must play a significant role in the global effort to create a better, more sustainable future.”

Robert Choi, Y-CEO

Box Gallery

About

Box Gallery is an art project dedicated to providing financial assistance to senior citizens collecting wastepaper for a living, by purchasing used boxes from them at three times the market price and upcycling those used boxes to produce eco-friendly paper canvases.

Social Problem

- According to the Organization for Economic Co-operation and Development (OECD), poverty rates of people aged 60 or above were 50% in South Korea, the highest among OECD countries.
- The Korea Resource Recycling Association estimates that there are 1.75 million seniors who collect wastepaper for a living.
- The average monthly income from collecting wastepaper was about ₩200,000 ($173), which is only 10% of the national minimum wage.
- More than 800 tons of paper are produced every minute, and ten liters of water are needed to make on piece of A4 paper.
- Paper accounts for 25% of landfill waste and 33% of municipal waste, and recycling one ton of paper saves 682 gallons of oil, 26,500 liters of water, and 17 trees.

Objective

- Upcycle used boxes purchased from local seniors to create eco-friendly canvases.
- Paint works related to the United Nations Sustainable Development Goals (SDG), and hold annual exhibitions to raise public awareness about the SDGs.
- Publish coloring books, and donate them to elderly care centers, local schools, and orphanages.

EduConnect

About

EduConnect aims to ensure equal access to quality education and extracurricular activities for all students by providing tablet PCs to students who cannot afford a smart device. The donated tablet PCs are also used to connect underprivileged students with student volunteers to provide free online English tutoring and give students the tools to participate in Youth Impact's projects. EduConnect is sponsored by the Youth Impact Fund and Happy Tree Plus Scholarship Foundation.

Social Problem

- The reopening of schools across the country continues to be delayed due to the spread of COVID-19, and online education remains the only option for students to attend class.
- According to the Ministry of Education, there are more than 223,000 students in Korea who do not own a smart device.
- Online education has fueled disparities in academic achievement and is widening the educationgap today.

Objective

- We seek to provide smart devices to orphanages and child care facilities with a low uptake rate of smart devices to improve access to online public education and to help students easily access various high-quality online educational contents after school.
- By the end of 2022, donate 30 tablet PCs (worth a total of $10,000) to elementary and secondary students who cannot afford a smart device.

$5,000
Worth of tablet PCs donated

$1,000
Worth of accessories donated

6
Students receiving weekly online tutoring

healthyi

About

healthyi is a nonprofit organization dedicated to building healthy communities through the treatment of neglected tropical diseases (NTD).

Social Problem

- NTD is a collection of health complications that generally distress the poor but haven't received enough recognition or attention to provide treatment and vaccination for. NTD consists of 17 different conditions identified by the World Health Organization that are mainly notorious in, as its name suggests, tropical areas. Many of these can easily develop to chronic illnesses if not treated or identified in its beginning stages.
- NTDs mainly affect impoverished communities where the transmission of diseases can be as fast and easy as through drinking unfiltered water or stepping on contaminated soil, causing devastating health issues to more than one billion people worldwide.
- A type of NTD, soil-transmitted helminths (STH) are divided into three main intestinal worms that infect humans through ingesting or making physical contact with contaminated soil: Ascaris, whipworm, and hookworm.

Objective

- Our objective is to provide impoverished communities around the world with medications to treat STH. By doing so, we aim to provide basic medication and care to people who need them most, enable people to become productive members of society, lower child mortality rates, and ultimately empower impoverished communities.

Plantris

About

Plantris is a social venture dedicated to reducing CO_2 emissions through campaigning and by developing a mobile platform that allows users to record their activities and automatically calculate their CO_2 emissions, which they can opt to negate through our carbon offset projects.

Social Problem

- Every action, no matter how small, leave a CO_2 footprint on the environment. Electricity used to power our electronic devices, food that we consume, transportation are all examples of activities that directly impact the environment.
- A carbon footprint allows us to understand the impact our activities have on the environment and therefore be able to reduce it.
- There is no sign of greenhouse gas emissions peaking the next few years. By 2030, emissions would need to be 25% and 55% lower than in 2018 to limit global warming to below 1.5°C and 2°C, respectively.
- Planting new trees is the most efficient and effective way to remove CO_2 from the atmosphere, and everyone needs to be and can get involved.

Objective

- Develop carbon offset projects to offset CO_2 emissions from the activities of our users.
- Develop a mobile platform for recording and automatically calculating user activities and CO_2 emission levels.
- Campaign to reduce activities that emit high levels of CO_2.

V.Farm

About

V.Farm combines the advantages of aquaponics with the advantages of vertical farming to raise vegetables and aquatic animals in a more efficient and sustainable method. Aquaponics is a combination of aquaculture, which is growing fish and other aquatic animals, and hydroponics, which is growing plants without soil. Located in the beautiful city of Seosan, V.Farm produces 100% organic salad vegetables that are sold online directly individual customers.

Social Problem

- Agriculture – including how we grow, raise, transport, process, and store agricultural products – has a profound effect on the planet.
- Global food cultivation is responsible for about 1/5 of all greenhouse gas emissions, excluding transportation involved in producing, marketing, and selling the crops.
- Approximately 70% of the world's drinking water is used for agriculture, despite half the world's population facing serious water shortages.

Objective

- Build and operate a small greenhouse farm in the city of Seosan.
- Currently, we are raising catfish on the first level and salad vegetables, including lettuce, romaine, and kale, on the second level.
- Sell products online through crowdfunding, SNS channels, and local blogs.

$1,700	66m^2	6
Raised through crowdfunding	**Glass greenhouse**	**Types of vegetables**

WhaleMom

About

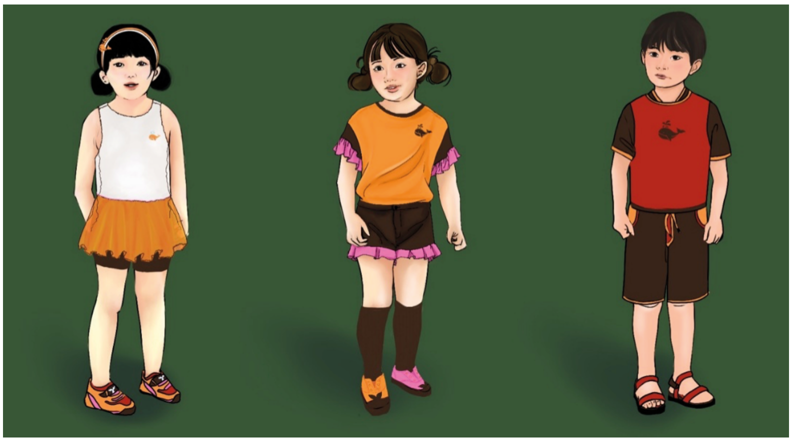
WhaleMom is a sustainable fashion brand that designs, produces, and sells kids' clothing. Our goal is to provide quality kids clothes that are affordable and leave a minimal footprint on the environment. We also aim to provide secure jobs to single parents by hiring them in the design and production processes. WhaleMom receives project mentoring and logistical assistance from NAKES, a local sustainable fashion brand based in South Korea.

Social Problem

- According to the World Economic Forum (WEF), the fashion industry causes 10% of all humanity's carbon emissions.
- 85% of all textiles produced end up in landfills each year.
- 1 out of 5 single moms live in poverty in the United States.
- Less than half of single parents have a job in South Korea.

Objective

- Create quality and affordable kids clothing that is sustainable from start to finish.
- Hire single parents in the process so as to provide them with secure jobs, source of income, and career experience in the fashion industry.



Designed by Chaemin Lee

Youth Impact Fund

About

Youth Impact Fund is the world's first youth-managed impact fund, with over $50,000 in assets under management. The fund uses environmental, social, and governance (ESG) factors to make investments with not only high potentials for growth, but also low long-term risk related to sustainability. It also campaigns against companies that pose significant ESG risks, so as to pressure them to change their unethical and unsustainable business practices.

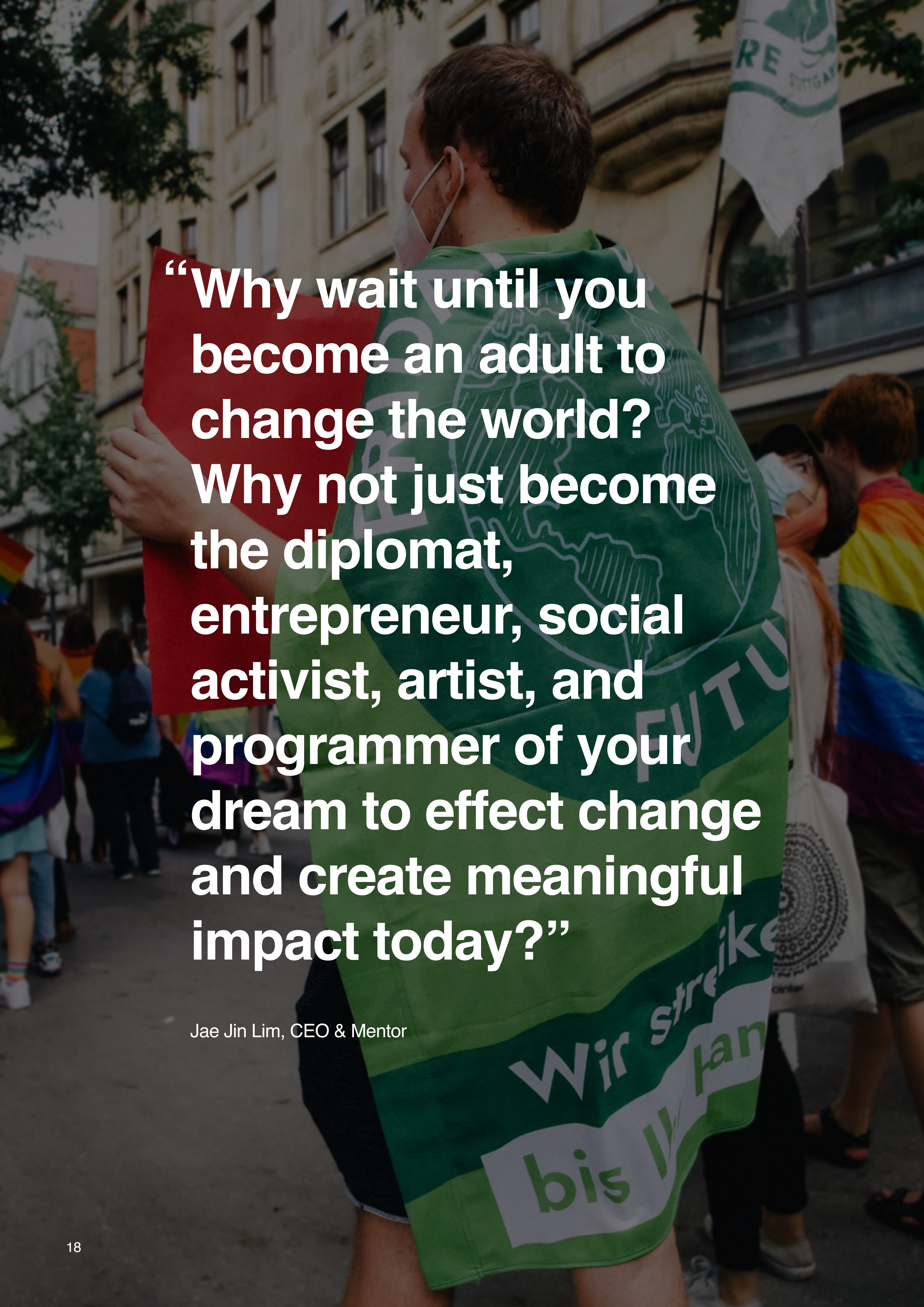
Social Problem

- Companies are lagging behind in the global effort to create a more sustainable future by integrating sustainability principles into their core business strategies and practices.

Objective

- Promote and educate youths about ESG investing.
- Leverage our social media presence and global network to influence companies to change their unethical behaviors.
- Use ESG factors to make investments in sustainable businesses with minimal risk and maximum potential for growth.
- Provide seed funding to innovative startups, social ventures, nonprofit organizations, and projects with the potential to create positive and scalable impact.

40+	$50K	30+
Members	**Participants**	**Investments**



“Why wait until you become an adult to change the world? Why not just become the diplomat, entrepreneur, social activist, artist, and programmer of your dream to effect change and create meaningful impact today?”

Jae Jin Lim, CEO & Mentor

Make Your Impact

BOX GALLERY 2021 REPORT

Creating impact through art

Box Gallery
2021 Report

About This Report

This report is intended to share the Box Gallery project's activities and outcomes for fiscal year 2021 (March 2021 – February 2022).

Team

Yeonjun Lim, Project Leader & Artist
Jian Suh, Artist & Project Manager
Lee Jeung Han, Artist & Project Manager
Minjoon Kim, Technology Manager
Yuna Bae, Artist & Project Manager

Supporters

Leonard Cho

About Box Gallery

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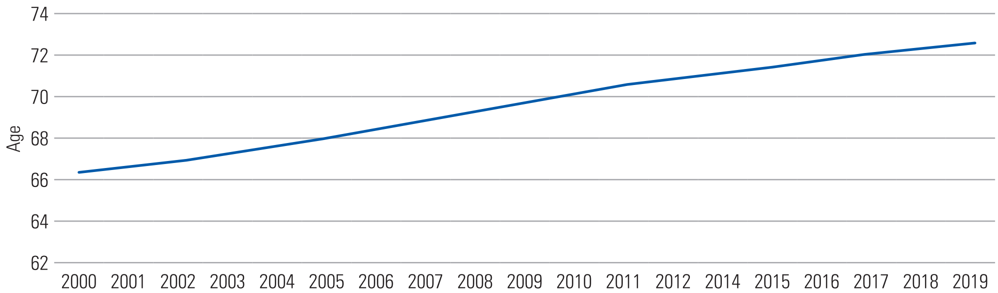
Content

An Ageing Population

With advancements in technology, changes in lifestyles, or simply better medical care, the average life expectancy has been increasing every year. The global average life expectancy has increased by more than six years between 2000 and 2019, from sixty years in 2000 to seventy-two years in 2019.

Life Expectancy



Source: Our World in Data

Living longer is, without a doubt, a huge progress, but it comes with several side-effects – one of them being an aging population. The United Nations defines people sixty-five years of age or older as “elderly” and classifies the population as an 'aging society' if the proportion of the elderly population of the total population is more than seven percent, an “aged society” if it is fourteen percent or more, and a “super-aged society” if it is more than twenty percent.

South Korea’s Aging Population

Several countries, including South Korea, are now experiencing a rapidly aging population. South Korea is one of the world’s fastest aging countries. South Korea entered an aging society in 2000 – with seven percent of the total population being sixty-five years or older, and an aged society in 2018, with fourteen percent of the total population being sixty-five years or older and it is expected to become a super-aged society by 2025, when the elderly population reaches twenty percent of the total population.

The UN Ageing Population Classification

Ageing Society: 7% of total population (is over 65 years old)
Aged Society: 14% of total population (is over 65 years old)
Super-Aged Society: 20% of total population (is over 65 years old)

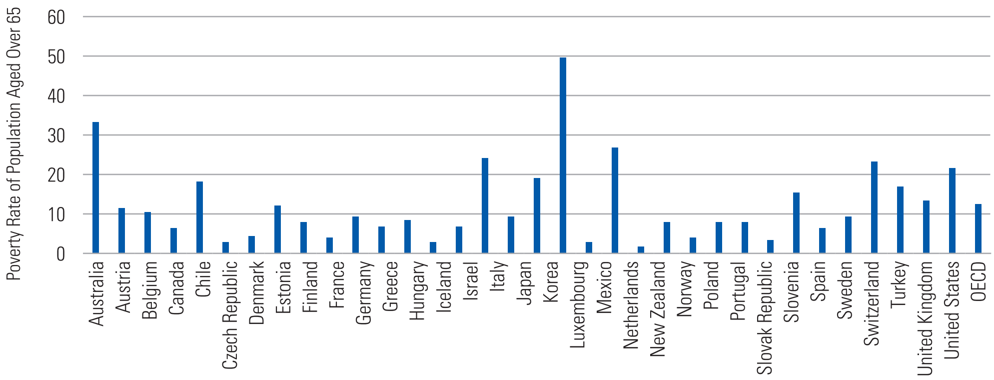
South Korea’s Ageing Population

2000: 7.2% of total population
2018: 14.4% of total population
2025: 20.3% of total population

Poverty Stricken Seniors

A rapidly aging population is not the only social problem South Korea is facing. As people get older, they are also getting poorer. According to the Organization for Economic Co-operation and Development (OECD), poverty rates of people aged sixty-five or above were fifty percent in South Korea, the highest amongst OECD countries. Additionally, older women are at greater risk of poverty than older men in all countries, including South Korea; the average poverty rate for men was eight percent but twelve percent for women.

OECD Poverty Rates of Population Aged Over 65



Source: OECD

Seniors Collecting Wastepaper

According to the "Basic Study on the Status of the Elderly Collecting Wastepaper" submitted to the Ministry of Health and Welfare by the Korea Human Resources Development Institute for the Elderly:

- About one in a hundred senior citizens in South Korea collect wastepaper for economic reasons.
- About 66,000 people aged sixty-five and over picked up wastepaper based on the registered resident population. This is one percent of the total elderly and three percent of the working elderly.
  - -In total, the Korea Resource Recycling Association estimates that there are 1.75 million seniors who collect wastepaper.
- The average monthly income from collecting wastepaper was about ₩200,000 ($173), which is only around 10% of the national minimum wage.
  - -A kilogram of wastepaper sells for around 83 KRW (USD $0.07).

From Trees to Paper to Waste

Today, many people are considering going paperless. However, there is still a long way to go before we can completely claim our independence from using paper. Everything from gift wrappings to our local newspapers uses paper and most of them end as waste. Paper production creates several problems including deforestation, massive consumption of energy and water, air pollution, water pollution, and many more.

More than 800 tons of paper are produced every minute.

93% of paper comes from trees.

Ten liters of water are needed to make one piece of A4 paper.

The average household throws away 13,000 separate pieces of paper each year. Most is packaging and junk mail.

Paper accounts for 25% of landfill waste and 33% of municipal waste.

Recycling one ton of paper saves around 682.5 gallons of oil, 26,500 liters of water, and 17 trees.

Box Gallery Project

The Box Gallery Project was first started to upcycle used boxes, which often end up in landfills, to make art canvases. One day, however, I spotted a small old woman – who seemed like she was in her 70s – having a difficult time pulling her cart full of used boxes and plastic bottles up a small hill. I approached the woman to lend her a hand. When I asked the woman what she was going to do with the boxes and cans, she answered that she was going to sell them at the local junk shop. I accompanied her to the junk shop, and when I got there, I realized that the woman was paid only 4,500 KRW ($4) for a cart full of boxes and plastic bottles. When I asked her how much the boxes weighed, she answered with a furious voice, "I was able to collect only 40 kilograms of boxes today."

It's not difficult to spot elderly men and women collecting wastepaper, aluminum cans, plastic bottles, or anything that can be recycled in any neighborhood in Korea. From as early as 4 a.m., in order to beat their competitors, these elders wander around their neighborhoods, each with a cart full of folded boxes and recyclable containers that weigh as much as 70 kilograms at the end of the day. After 12 hours of intense labor, they receive around 3,000 to 5,000 KRW ($2.6 – 4.4) from local junk shops that buy the boxes for 83 KRW ($0.07) per kilogram. On average, these elders make as little as 100,000 KRW ($87) each month, which comes nowhere close to Korea's minimum wage of 8,720 KRW ($7.62) per hour, or approximately 1.8 million KRW per month.

After learning about the economic difficulties these waste-collecting elders were going through, members of the Box Gallery project decided to buy some of the used boxes from the local elders at 3 times the market price. This was intended to provide financial assistance to people who needed help the most and were trying their best to make a living, but did not have the means to make their situations any better. Although our support alone is not enough to help these elders escape poverty, we believe that we have made an important first step toward creating a self-sufficient business model that could scale rapidly to help a much larger number of people and create significant social impact.

Recycling Wastepaper into Canvases

Used boxes purchased from local elders are upcycled to create art canvases. Instead of mailing already-made canvases to project members all over the world, members of the Box Gallery project have decided to mail DIY (Do It Yourself) kits consisting of all the materials needed to create a box canvas. Project members can use the DIY kit to make their own canvases, and this will help them understand how the box canvases are made and will enable them to replicate the production system at their own homes and schools.

Materials needed: cardboard box, glue, white cardstock, linen canvas roll, brush, and gesso.

01 Cut three cardboard boxes in equal sizes.
02 Glue the three cardboard boxes on top of each other.
03 Cut a white cardstock equal in size as the cardboard boxes.
04 Glue the white cardstock on one side of the stacked cardboard boxes.
05 Cut the linen canvas roll.
06 Glue the linen canvas roll on top of the white cardstock.
07 Glue the leftover sides of the linen canvas roll around the cardboard box stack.
08 Apply gesso on the glued linen canvas roll with a brush.
09 Let the gesso dry for an hour.
10 Draw a painting on one of the Sustainable Development Goals (SDGs).

Creating Additional Value

The Box Gallery project will recollect completed paintings from its project members in Korea, Singapore, Japan, and the United States to hold an exhibition in Korea later this year. The exhibition will be open to the public at free of cost and is intended to raise public awareness of the United Nations Sustainable Development Goals.

Additionally, the paintings will be used to create and publish a coloring book that will be sold in the main bookstores – Kyobo Book Center and Youngpoong Bookstore – and donated to local schools, orphanages, and elderly care centers. By informing the general public about the SDGs and Youth Impact’s activities, we hope to garner more support for scaling our project to create greater economic and social value.

SDG 6

Clean Water and Sanitation

Yeonjun Lim

According to UNICEF and the World Health Organization, 1 in 3 of the world population do not have access to safe drinking water.

This artwork portrays the contrast between people with access to clean water and those who do not. The upper half of the painting represents countries and regions in the northern hemisphere, which in general is believed to be wealthier and have more favorable weather conditions that make water plentiful. This region contains photos of children taking showers, swimming in pools, and drinking clean water. The lower half represents countries and regions in the southern hemisphere, where conditions are harsher and people cannot enjoy the same, if not the most basic, privileges of living in the 21st century. Photos of children drinking contaminated water and traveling long distances to collect water in buckets show how difficult it is for people in these regions of the world to access water.

Clean water is a limited resource. Yet, some parts of the world take our abundant and clean water for granted, and this is often at the expense of those who do not have the same access to clean water. Access to clean water and sanitation is a basic right that everyone should be able to enjoy, and it is important for us to not only conserve and make efficient use of our limited supply of water but also come up with creative and innovative solutions to make water readily available for everyone.

SDG 14

Life Below Water

Jian Suh

Marine life is currently facing severe threats such as marine pollution, overfishing, acidification, and countless more. Many of such challenges imposed on life underwater were either a direct or indirect result of human activities. For example, people carelessly discharge toxic chemicals and plastic waste into the ocean, create an imbalance in the ecosystem by hunting down a massive number of fish and release higher rates of carbon dioxide each year without thinking about its consequences. According to research by PlasticOceans, 10 million tons of plastic are disposed of in the ocean annually, and over I million marine animals are killed as a result. As part of the Box Gallery Project, I focused on the SDG 14: Life Under Water for preventing ocean pollution.

In this painting, I tried to give emphasis on how marine pollution is not going to disappear by itself but that it requires human action. The girl collecting plastic litter represents efforts people have to put in order to reduce ocean pollution. In addition, rather than explicitly depicting the miserable reality marine animals are facing, I gave my painting a more optimistic and uplifting mood. The fish are dynamically swimming in an upward motion without any impediments, and light is shining through the clear blue water. This shows how our efforts can make a difference in reducing ocean pollution, therefore encouraging people to take action. Becoming the girl in the painting requires a minimum amount of effort. Even taking simple steps, such as reducing the use of plastic in everyday life and recycling can make a huge difference.

SDG 14
Life Below Water

Leonard Cho

We come across hundreds, if not thousands, of recyclable objects, such as soda cans and newspaper copies, every day. As a result of the daily nature of these objects, we often use and dispose of them without seriously thinking about the negative impact they could cause on our environment. This is evident in a recently published PNAS's (Proceedings of the National Academy of Sciences of the United States of America) research article that point to the significant increase in the use of single-use plastic since the outbreak of the COVID-19 pandemic and how more than 25,000 tons of plastic waste have entered the global ocean. Plastic waste not only pollutes the marine environment, but also makes its way back to humans by entering and accumulating inside our bodies when we consume the aquatic animals that have consumed the hazardous microplastic we actively let out into the ocean.

Observing all the waste that was being thrown away gave me the inspiration and idea to look at waste from a different perspective. Rather than perceiving empty soda cans, used foils, and scraps of metal as uninteresting everyday objects, I wanted to give them a new meaning and purpose that could be easily understood by others. By combining seemingly uninteresting objects to create a piece of artistic work, I wanted to convey the message that even trash can be used to create art – and, even further, be used to power our homes, be recycled to make components for our cars, and much more. Just stay a few seconds more to observe the ordinary objects with a hint of imagination, and you will notice the difference between trash and art.


총 내용량 240 ml
24 kcal

SDG 14

Life Below Water

Seohyun Lee

More than 3 billion people rely on the oceans for their livelihoods, and more than 80 percent of world merchandise trade by volume is carried by sea. The oceans, seas, and marine resources are under constant threat from global warming, acidification, and pollution that are disrupting marine ecosystems and the communities they support. These changes have long-term repercussions that require the world to urgently scale up the protection of marine environments, support small-scale fishery communities, investment in ocean science, and the sustainable management of the oceans. To showcase this urgent need, I highlighted SDG 14: Life Under Water through my artwork.

This piece underlines the critical need for close and careful inspection of our marine environment. The main subject, the girl, can be seen looking at life underwater through a magnifying glass. However, only the part looking through the lens is colored while the rest is not, symbolizing the urgency for us to start viewing the world through a different lens and changing our old perceptions to start taking action.

SDG 15

Life on Land

Yuna Bae

As important as any other creatures on the planet Earth, animals deserve to be treated humanely with compassion and benevolence. The number of species on the threat of extinction has been increasing for every year for the past few centuries. Furthermore, the world has lost 100 million hectares of forest in the past two decades. This is significant, because forests provide not only habitats for animals but also the air that we breathe, protection against natural hazards, and many more.

This artwork depicts a girl hugging a wild Caspian tiger, a subspecies of tiger that has been extinct since the early 1970s due to hunting of tigers and their prey, and habitat loss mostly due to settlement in its range. In the background is a thick forest, which is the Caspian tiger's natural habitat, and it emphasizes the importance of embracing and protecting nature.

- Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

SDG 1

No Poverty

Yuna Bae

This work was inspired by the literary fairy tale A Little Match Girl by Danish poet and author Hans Christian Andersen. The tale is about a poor little girl selling her match sticks in the bitter cold weather, while everyone was busy celebrating the New Year's Eve with candles. While people returned to their warm homes after the celebration, the girl was found frozen to death, with her hands still holding on to the matches she was not able to sell that night.

The spread of Covid-19 has affected us substantially. Covid-19 has not only affected our daily lives, but also led to the first rise in extreme poverty. An additional 119-124 million people were pushed back into extreme poverty in 2020. The United Nations aims to end poverty in all its forms everywhere by 2030. The importance of this action it that every individual has the right to the most basic needs like health, education, and access to water and sanitation.

SDG 3

Good Health and Well-Being

Yuna Bae

Goal 3 includes targets such as:

- 3.1: By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births.
- 3.4: By 2030, reduce by one third premature mortality from non-communicable diseases through prevention, treatment and promote mental health and well-being.
- 3.6: By 2020, halve the number of global deaths and injuries from road traffic accidents.

When mothers receive inadequate maternity care, their babies also face risks. This burden can also be borne by their families and communities that depend on them. Healthy well-being is essential to overall health and happiness, enabling people to overcome challenges and achieve what they want out of life.

SDG 4

Quality Education

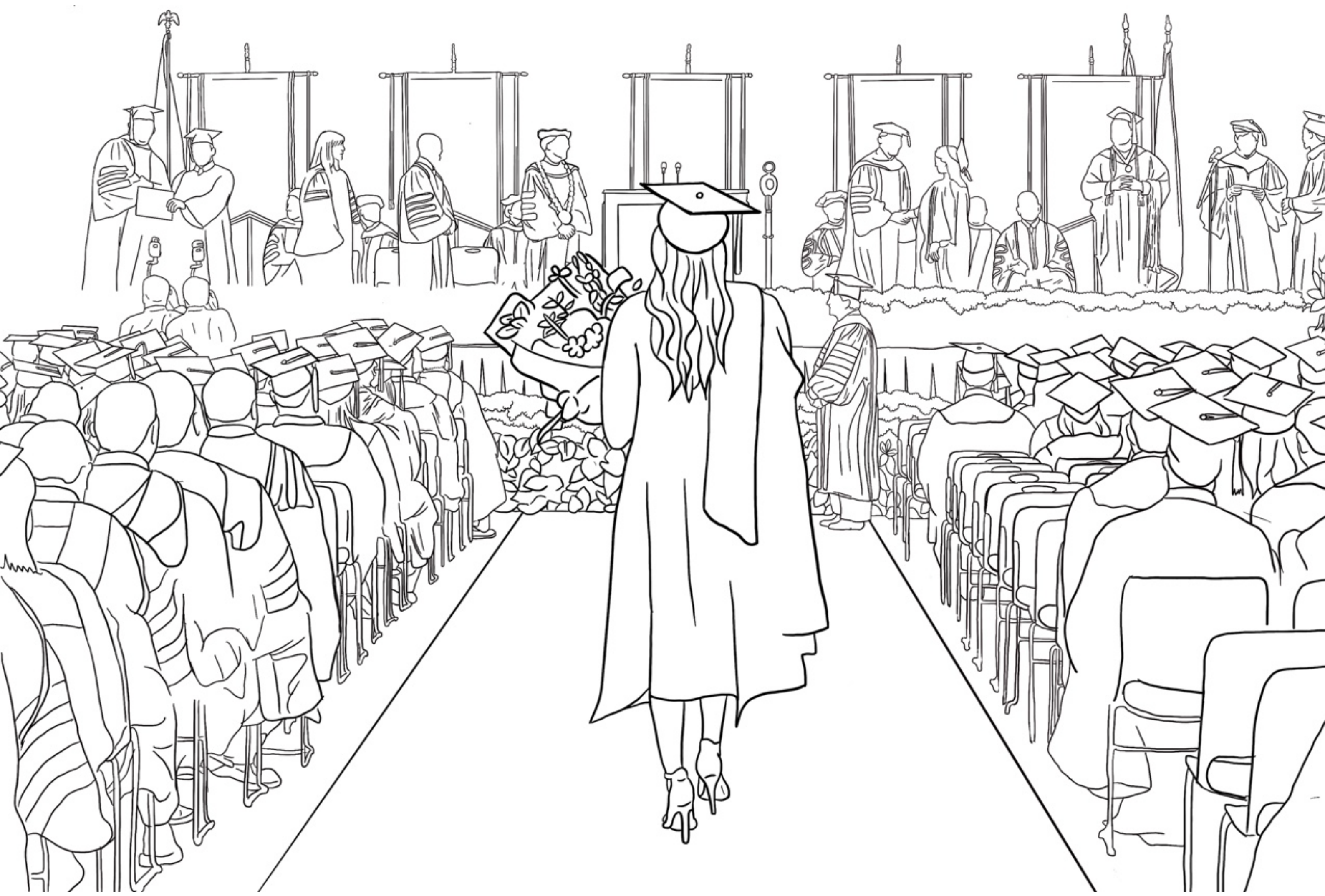
Yuna Bae

“Education remains the primary vehicle by which children lift themselves out of poverty and obtain the means to participate fully in their communities”
- Austin Hickle, Founder of GEM (Global Education Mission)

The COVID-19 pandemic has wiped out 20 years of educational gains. In 2020, an additional 101 million students in grades 1 to 8 fell below minimum reading proficiency levels.

I believe one of the most important goals in the Sustainable Development Goals is SDG 4: Quality Education. The reason is that by successfully achieving this goal, it allows people to break the cycle of poverty; it encourages gender equality; and it makes it possible for communities to develop a sustainable future and peaceful societies, which leads to the achievement of Goals 3, 5, 10, and 11.

This artwork captures the scene of a girl walking down the red carpet at her graduation ceremony, which highlights her achievements so far and the endless possibilities and potential that lies ahead of her.



SDG 5

Gender Equality

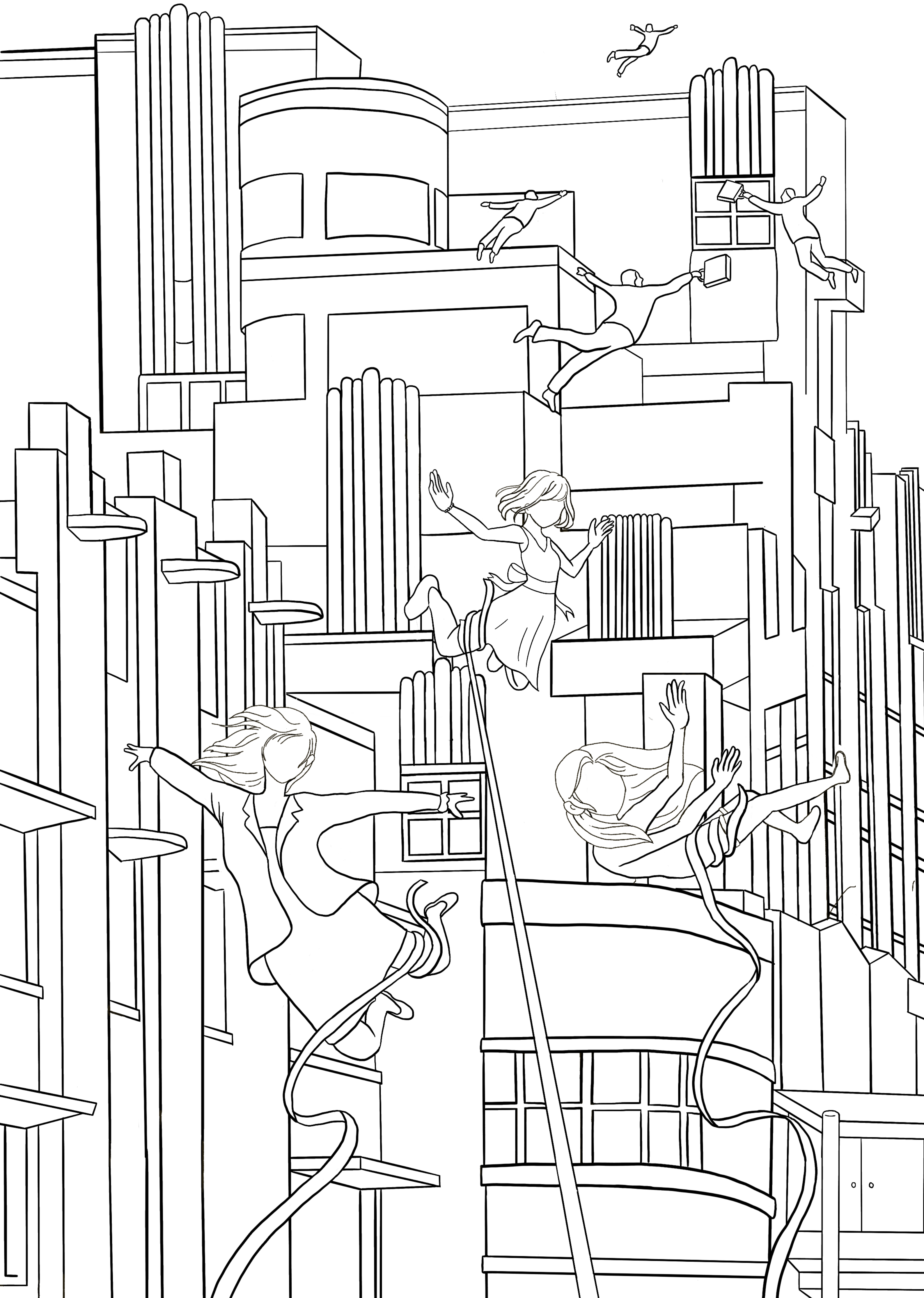
Yuna Bae

Before joining Youth Impact and the Box Gallery project, I had a very narrow understanding of gender inequality. I initially understood gender inequality as being only limited to women being paid less than their male peers or being undervalued in society. However, gender inequality encompasses a wide range of immediate issues in need of urgent attention and creative solutions:

- 1 in 3 women (736 million) has experienced physical and/or sexual violence at least once in their lifetime since the age of 15.
- Up to 10 million girls will be at risk of child marriage.

In addition, Covid-19 is adding to the burden of unpaid domestic and care work, squeezing women out of the labor force. This leaves a long-lasting effect on societies' perceptions of the roles of women.

This piece portrays the limitations of women, who are entangled and bound by strands of ribbon that restrict them from going beyond a certain point and reaching the same heights as do men, which reflects the differences in incomes, job positions, and roles of women within and outside the household.



SDG 9

Industry, Innovation, and Infrastructure

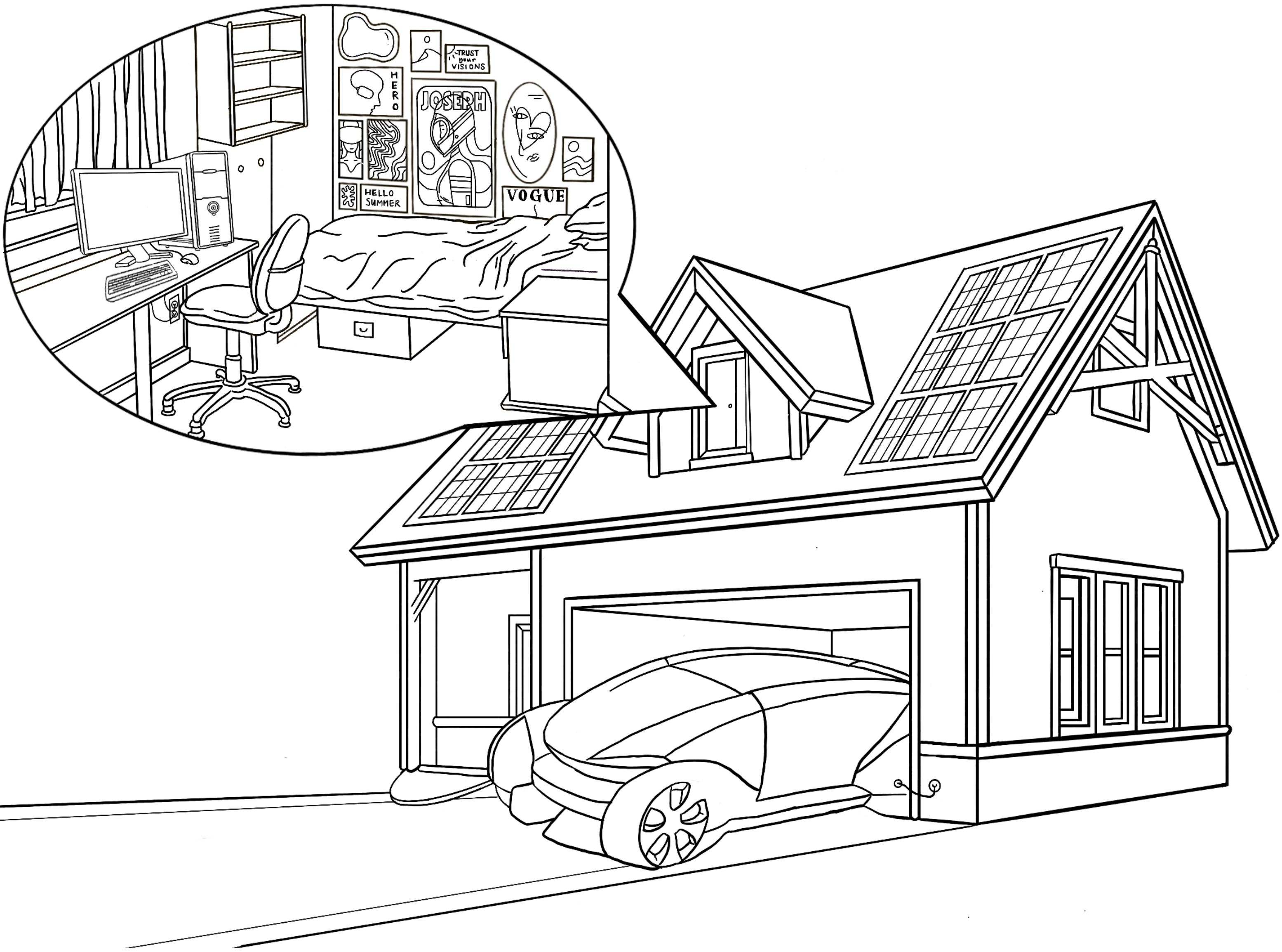
Yuna Bae

Goal 9 includes targets such as:

- 9.4: By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes.
- 9.c: Significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.

This piece illustrates a futuristic house that uses renewable energy generated by the solar panels on the roof of the house to power an electric vehicle and electronic devices within the house.

Innovation is important as it can encourage and lead to new discoveries, opportunities, and the ability to react to fast changes. It can also serve as a catalyst for increased productivity, which leads to higher standards of living for millions of people worldwide.


TRUST your VISIONS
HERO
JOSEPH
VOGUE
HELLO SUMMER

SDG 15

Life on Land

Yuna Bae

As important as any other creatures on the planet Earth, animals deserve to be treated humanely with compassion and benevolence. The number of species on the threat of extinction has been increasing for every year for the past few centuries. Furthermore, the world has lost 100 million hectares of forest in the past two decades. This is significant, because forests provide not only habitats for animals but also the air that we breathe, protection against natural hazards, and many more.

This artwork depicts a girl hugging a wild Caspian tiger, a subspecies of tiger that has been extinct since the early 1970s due to hunting of tigers and their prey, and habitat loss mostly due to settlement in its range. In the background is a thick forest, which is the Caspian tiger's natural habitat, and it emphasizes the importance of embracing and protecting nature.

- Target 15.5: Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species.

SDG 16

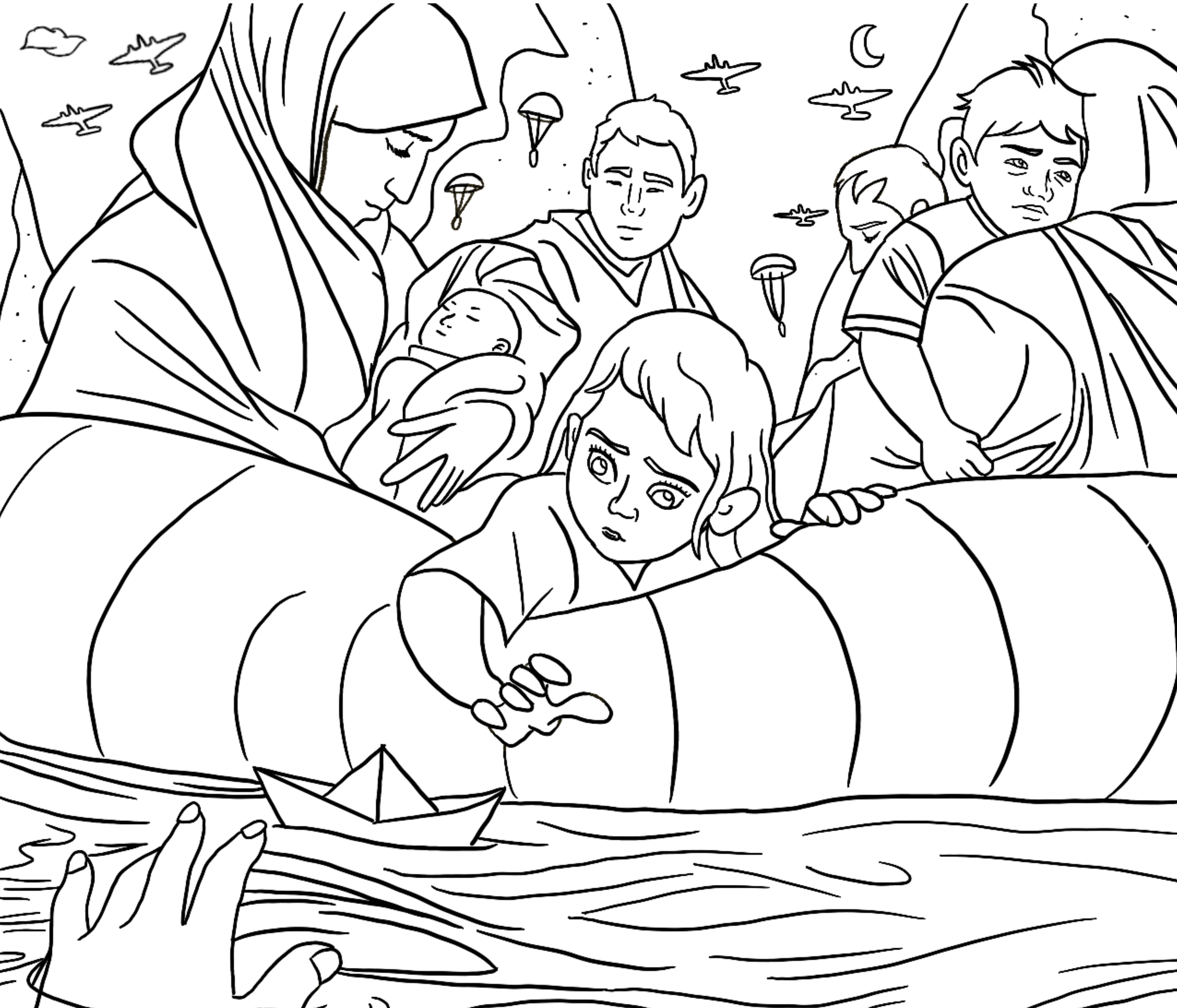
Peace, Justice, and Strong Institutions

Yuna Bae

Goal 16 includes targets such as:

- 16.1: Significantly reduce all forms of violence and related death rates everywhere.
- 16.4: By 2030, significantly reduce illicit financial and arms flows, strengthen the recovery and return of stolen assets and combat all forms of organized crime.

This piece illustrates the tragedies of war and conflict. The ongoing war between Ukraine and Russia has forced families to be separated, to flee their homes, and to watch their loved ones die, inflicting unimaginable pain and suffering on millions of people. War and conflict do not discriminate against age, gender, and nationality but equally affect everyone involved equally. In order to create a more sustainable world and future for all, all forms of violence and conflict must be put to an end, and instead people of all nationalities, ethnicities, religious beliefs, ideologies, cultures, and ages must work together to get the world on track to achieve the Global Goals by its target year of 2030.



EduConnect

2021 Half-Year Report

Youth Impact

EduConnect

2021 Half-Year Report

About This Report

This report is intended to share EduConnect's activities and outcomes for the first half (January – June) of the year 2021.

Team

Yihyun Nam, Project Manager
Jangkyung Choi, Project Manager

Volunteer Tutors

Haewon Yun, Jihu Park

About EduConnect

EduConnect aims to ensure equal access to quality education and extracurricular activities for all students by providing tablet PCs to students who cannot afford a smart device. The project also uses the donated tablet PCs to connect students in orphanages with student volunteers to provide free online English tutoring and give students the tools to participate in a dozen Youth Impact projects.

About Youth Impact

Youth Impact is a social venture dedicated to inspiring, empowering, and connecting the world's youths to take concrete actions to solve real-world problems.

Website www.youthimpact.com
E-mail contact@youthimpact.com
Instagram youthimpact.co

Content

Widening Education Gap in the Contactless Era

The reopening of schools across the country continues to be delayed due to the spread of COVID-19, and online education remains the only option for students to attend classes. The Ministry of Education of Korea has been implementing remote classes since April 9, 2020. Online classes are conducted remotely through smart devices without teachers and students meeting face-to-face in physical classrooms. Instead, remote classes are conducted through online platforms such as Zoom and Google Meet, and in order to participate, each individual must have a smart device such as a computer, laptop, tablet, or smartphone.

In addition to online classes provided by schools, online platforms such as YouTube and EBSi offer customized high-quality learning materials for major subjects such as Korean, math, social studies, history, English, and science which are useful for self-learning by age. Moreover, learning topics in accordance with each student's preferences and skills, such as coding, music, and physical education, all require a smart device to access them.

What is equally important is that students today enjoy various cultural and artistic contents, such as online performances, exhibitions, and various events through smart devices, during their adolescence years when development of cultural sensitivity is crucial, rendering the remote learning project more important.

According to a survey taken by the Ministry of Education in April 2020, there are more than 223,000 students nationwide who do not own a desktop computer, laptop, tablet PC, or a smartphone at home. Despite the smart device rental business offered by the Ministry of Education and non-profit organizations and the support from various organizations and individuals, many students within the blind spot of the system are still in need of smart devices. As the most basic state-provided public education to all citizens requires smart devices, students who do not have smart devices can be deprived of their right to access the basic education they should receive during the years of their intellectual growth. In addition, as the COVI-19 era is prolonged due to disruptions in vaccine supply and difficulties in quarantining school sites, it is uncertain when institutional education will go back to normal.

Moreover, while students from affluent families continue to have access to and receive private education through online tutoring, online academy lessons, and other online resources, students from families with less means continue to struggle with new problems associated online learning. School experience has completely changed, and less personal care and attention are given to individual students as teachers, too, must instead spend more time and effort to teaching remotely with a number of limitations. However, what has not changed is colleges still requiring the same level academic achievement and test scores and families spending more money than ever so that their children would not fall behind in their studies. According to an article by Hankyoreh, students with an average score of 70 to 80 before COVID-19 have seen their scores fall to below 60, while students in the top percentile show no change in their scores. Those interviewed for the article attribute this problem to how teachers must teach as much content as they used to before COVID-19 but are finding it difficult to teach effectively using the limited online tools. Therefore, students who have access to private education continue to perform well, but those without the same privilege are showing difficulties with their studies. It is apparent that COVID-19 has fueled disparity in academic achievement and is widening the education gap today.

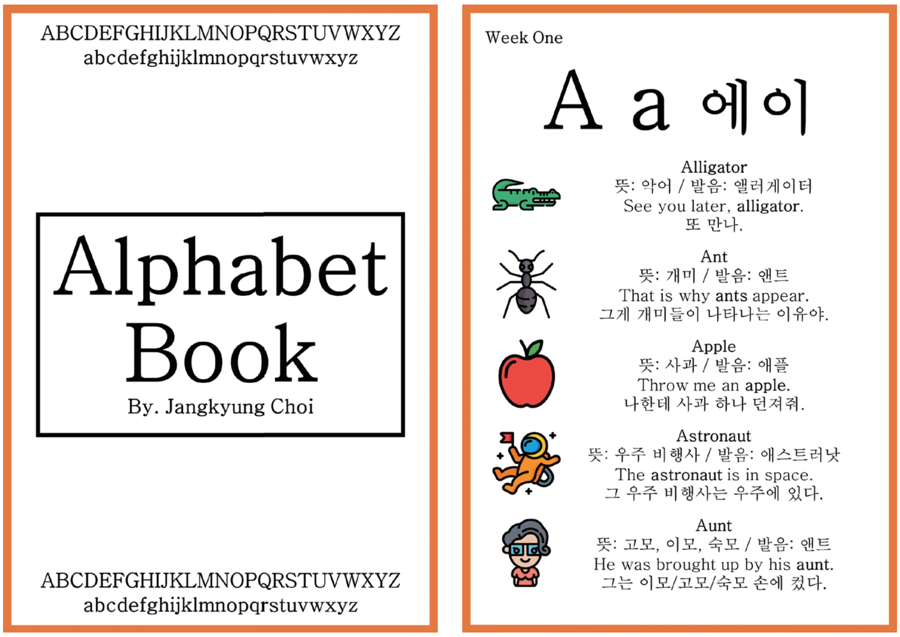
EduConnect:
Bridging the Education Gap Caused by COVID-19

Smart devices have become an indispensable element as online classes continue in elementary, middle, and high schools due to COVID-19. In line with these needs, we seek to provide smart devices to orphanages and child care facilities with a low uptake rate of smart devices to improve access to online public education and to help students easily access various high-quality online educational contents after school.

In light of students in orphanages and childcare facilities being unable to participate in online classes due to their lack of necessary devices, we donated tablets and computers to be utilised for the English tutoring sessions we provide. To make the learning more personalised and effective, we also designed and supplied our own textbooks and other supplementary learning materials to these facilities. These materials also had the added benefit of allowing us to help students who were unable to receive donations, allowing us to have a more profound impact in our initiative.

The efforts above were organised by Jang Kyung Choi in hopes of narrowing the education gap and contributing to social equality. His efforts were crucial in advocating our organisation's social mission, "Inspire, empower, and connect the world's youths."

Our project's goal is to donate 30 tablet PCs to elementary, middle, and high school students who cannot afford a smart device, by the end of this year. We hope to continue to scale our project in the next few years to provide more students with access to quality online education and extracurricular activities.



The "Alphabet Book"
created by
Jankyung Choi

Donation

From January to June 2021, EduConnect donated a total of 15 Samsung Galaxy Tab A7 tablet PCs to students from two child care facilities: Chamnamu Group Home and Dasom's Nest. Recipients include a total of 12 students in grades 1, 2, 5, 7, 10, and 11 as well as 3 college students who are over the age of 18 and thus have "graduated" from the child care facilities.

Donated Items

Category	Product Name	Price	Number of Items	Total Amount
Tablet PCs	Samsung Galaxy Tab A7	₩300,000 (USD $260)	15	₩4,500,000 (USD $3,900)
Earphones	Samsung AKG C-Type Earphones	₩12,900 (USD $11)	15	₩193,500 (USD $165)
	Total			**₩4,693,500 (USD $4,065)**

Sponsorship

Happy Tree Plus agreed to be part of our project as a partner organization this year and has so far sponsored more than $850 worth of accessories that go with the tablet PCs. Happy Tree Plus is a nonprofit organization that provides academic scholarships to underprivileged students. Many scholarship recipients perform as singers and musicians in the organization's annual music concerts, which are featured by Korean celebrities and world-renowned singers.

Sponsored Items

Category	Product Name	Price	Number of Items	Total Amount
Accessory	Galaxy Tab A7 Stylus S6 Pen	₩43,700 (USD $37)	10	₩437,000 (USD $372)
	Galaxy Tab A7 S7-Plus Cover	₩31,990 (USD $27)	10	₩319,900 (USD $272)
	VISBYH Screen Protector	₩9,700 (USD $8)	10	₩97,000 (USD $83)
	Total			**₩853,900 (USD $727)**

Donation Ceremony

Due to COVID-19, only two donation ceremonies have been held so far. At the donation ceremonies, Yihyun Nam, Chief Technology Officer of Youth Impact and Project Manager of EduConnect, handed the tablet PCs and the sponsored items to students from Chamnamu Group Home and Dasom's Nest. However, government regulations restricting the number of people who could attend public and private events prevented some students from participating in the ceremonies.

On June 1, 2021, EduConnect held its first donation ceremony at Happy Tree Plus's office in Gwanak-gu. Four students attended the ceremony, and the ceremony was led by Youth Impact Head Mentor Jae Jin Lim and Happy Tree Plus Secretary-General Jungsik Park. College students living in other parts of the country were not able to attend due to schedule conflicts and COVID-19 restrictions.

Another donation ceremony was held on June 26, 2021, in the city of Gwangju, with Director Jinyoung Kim from the Chamnamu Group Home. COVID-19 cases started spiking again around the time the ceremony was held, so the local government advised against people gathering for both public and private events and against guests visiting local child care facilities. Therefore Director Kim suggested having a small ceremony at a local café instead. At the donation ceremony, Yihyun explained to Director Kim Youth Impact's social mission and the EduConnect project's goal to provide equal access to quality online education, online resources, and extracurricular activities to students who do not own smart devices. At the ceremony, Director Kim also agreed to introduce our program to students at her facility, so that they can receive online English lessons from members of Youth Impact.

Online English Tutoring

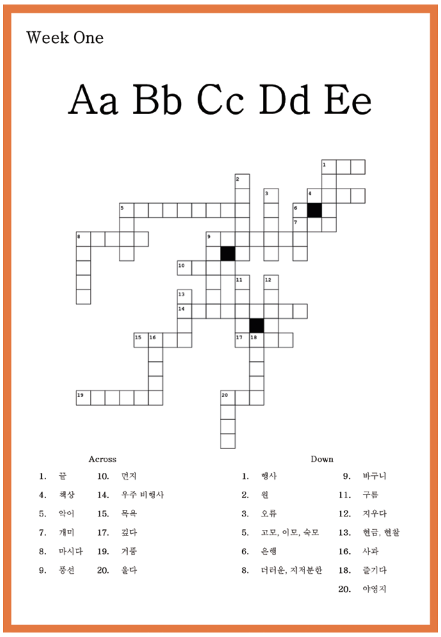
Online English tutoring sessions have been held since the last week of July. Every Saturday, four students – two elementary school students, a middle school student, and a high school student – from Chamnamu Group Home use the tablet PCs to meet online with four students from Youth Impact. For each week's lessons, Jangkyung Choi has been preparing materials that student volunteers can use to teach English to the Chamnamu Group Home students. Jangkyung is currently putting together an exercise book, which he intends to distribute to students at the child care facilities for a more systemized and effective learning experience.

The first month of classes were set up to familiarize students who are not familiar with the English language with a variety of familiar topics. Making the most out of the digital tools at our disposal, volunteer students from Youth Impact used visual materials and electronic boards to make the remote class more fun and engaging. It is our hope that the students participating in our online classes will not only benefit from our classes and see their English grade improve, but also have access to a variety of online resources with the tablets we donated.


Week One

Aa Bb Cc Dd Ee

Alligator	Balloon	Camp	Deep	End
Ant	Bank	Cash	Desk	Erase
Apple	Basket	Circle	Dirty	Error
Astronaut	Bath	Cloud	Dust	Enjoy
Aunt	Bubble	Cry	Drink	Event


Week One

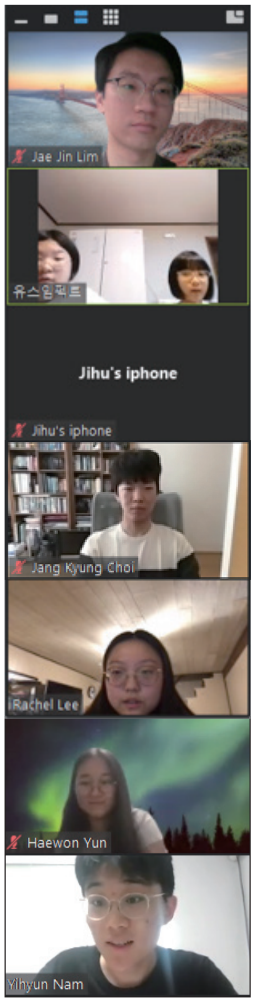
Aa Bb Cc Dd Ee

Across

1. 끝
4. 책상
5. 악어
7. 개미
8. 마시다
9. 풍선
10. 먼지
14. 우주 비행사
15. 목욕
17. 깊다
19. 거품
20. 울다

Down

1. 행사
2. 원
3. 오류
5. 고모, 이모, 숙모
6. 은행
8. 더러운, 지저분한
9. 바구니
11. 구름
12. 지우다
13. 현금, 현찰
16. 사과
18. 즐기다
20. 야영지



First online English lesson with three elementary students from Chamnamu Group Home

EduConnect

2021 Half-Year Report

Youth Impact

Youth Impact Fund

Creating impact through ESG investing

2021 Half-Year Report

Youth Impact

Youth Impact Fund
2021 Half-Year Report

About This Report

This report is intended to share the Youth Impact Fund's activities and outcomes for the first half (January – June) of the year 2021.

Team

Jangkyung Choi, Chief Executive Officer
Robert Choi, Head of Sustainability
Ju Hwan Kim, Head of Communications
Thomas Lee, Head of Finance
SeoJeong Park, Head of Training

Byungkyu Yi, Eric Kim, Haewon Yun, Hansoo Bae, Ji Hu Park, Kayden Whang, Woobin Rhee, Yeheun Kim, Yeonjun Lim, Yihyun Nam, Youngwoong Kim

About the Youth Impact Fund

The Youth Impact Fund is the world's first youth-managed ESG fund, with over $50,000 in assets under management. It uses environmental, social, and governance (ESG) factors to make investments with not only high potentials for growth, but also low long-term risk related to sustainability. The Fund also campaigns against companies that act against society's expectations in terms of ESG and corporate social responsibility, so as to pressure them to change their unethical and unsustainable business practices.

About Youth Impact

Youth Impact is a social venture dedicated to inspiring, empowering, and connecting the world's youths to take concrete actions to solve real-world problems.

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Content

Stock Market Analysis

Company Analysis

COVID-19 and Sustainable Transformation

Jangkyung Choi

The COVID-19 pandemic has had an immense impact on our lives. Wearing masks in public spaces has become a daily routine, working or attending classes from home is something that everyone now has to get used to for a while, and using our smartphones to consume not only digital contents but also physical products through online platforms has become a must. The highly transmissible nature of the disease has opened what many people are calling it a new "untact era" and with it, society-wide transitions to digital, or smarter, technology. As Satya Nadella, CEO of Microsoft, put it, "we've seen two years' worth of digital transformation in two months."

COVID-19 has accelerated not only digital transformation but also sustainable transformation. Ever since the outbreak of the disease, the United Nations has been calling on governments and the global community to not just return to the world before the pandemic but to "build back better" by creating more sustainable, resilient, and inclusive societies. "The current crisis is an unprecedented wake-up call… We need to turn the recovery into a real opportunity to do things right for the future," said Secretary-General António Guterres in his International Mother Earth Day message. Following suit, governments around the world have turned their attention to and even went as far as to propose national policies, such as the Green New Deal, in order to steer their countries toward a greener economy. As governments made announcements to make major investments in industries and businesses that tackle climate change, people have turned their attention to SRI and ESG investing.

SRI and ESG Investing

Jangkyung Choi

Investors used to invest in businesses with, essentially, just good numbers – that is, companies with strong financial performances, high growth potentials, high-yield dividends, and market shares. For decades, profits were up year after year, and the world experienced unprecedented economic growth and development.

However, this was achieved at the expense of the well-being and health of our planet and society. As businesses chased after endless greed and expansion, they were increasingly polluting our planet, polarizing our society, and engaging in corrupt and unfair practices that made them vulnerable to both internal and external stresses.

Consequently, business was long seen as a force for evil. It was widely believed that a business's purpose and goal to generate maximum profit could not go hand in hand with a social mission to improve social objectives and serve the common good.

It was not long ago that the private sector had realized their vast resources and influence could be used as a force for good and the creative opportunities for integrating social impact into their business operations and strategies. As environmental and social issues became major global concerns, businesses also began to assume corporate social responsibility (CSR) and contribute to efforts to address global issues such as climate change, starvation, gender inequality, and even national conflict.

Investors, too, recognized the need for more responsibility in their investment choices and have started to practice what is known as Socially Responsible Investing (SRI) since the 1970s. In its early stages, SRI served primarily as a negative screening method to exclude investments in guns, tobacco, gambling, adult entertainment, and other vices. Investing in these stocks was seen as supporting morally bad or socially irresponsible business. The philosophy behind this practice was that capital should be used for morally good industries. This strategy, however, emphasized financial returns as a secondary consideration after the investors' moral values have been accounted for in their decision making.

In more recent years, ESG investing has risen in popularity among socially conscious investors. ESG investing is the integration of environmental, social, and governance factors into the fundamental investment process. Investors who engage in ESG investing consider ESG risks and opportunities that can have material impacts on a business's performance, and thus are able to invest sustainably while maintaining the same level of financial returns as they would with a standard investment approach.

Youth Impact Fund

Jangkyung Choi

What is significant about BlackRock's sweeping decision to overhaul its strategy to focus on climate change and sustainable investing is that it will use its financial clout to combat climate change and address other sustainability-related issues. As a major investor in companies all over the world, BlackRock has the power to influence and change the behavior of businesses through shareholder activism. By threatening to divest its investments from coal companies and other businesses that generate significant negative externalities, BlackRock can essentially force those companies to shift to more sustainable activities with lower ESG risks.

Youth Impact Fund was created for the very same reason. As the world's first student-led impact investing fund, Youth Impact Fund invests in sustainable businesses that provide solutions to the world's most pressing challenges, such as climate change, and with large potentials for growth in the long-run. Our mission is to create meaningful impact through investments. That is why our investment decisions are made based on not only how much profit our investments are going to generate, but also whether the companies we invest in produce positive externalities and have strong corporate governance structures in place.

At the same time, we engage in shareholder activism by investing minimal amounts in unsustainable companies and exercising our shareholder voting rights to make requests and demands. We aim to increase our influence by leveraging our social media presence and global network as an international youth-led social enterprise to initiate public campaigns against companies that pose significant ESG risks.

ESG Criteria

Environmental

- Climate change and emissions reduction
- Rational use of water
- Biodiversity
- Energy efficiency
- Reforestation
- Waste management
- Circular economy

Social

- Customer satisfaction
- Gender equality and diversity
- Support for vulnerable groups and social assistance
- Health and safety
- Contribution to the community
- Human rights

Governance

- Corporate governance system
- Remuneration
- Cyber security
- Responsible supply chain
- Compliance system


Seguiu els
consells
sanitaris
Ajuntament
de Sitges
PAY
PAY
TABAC

Recovering From a Pandemic

Jangkyung Choi

In 2020, the Coronavirus Disease-19 (COVID-19) hit the world economy, thereby hampering economic growth of most countries in the world. In the first few months of the crisis, all of the major stock markets saw huge falls as the number of COVID-19 cases grew. While most of Asian and U.S. stock markets like the Dow Jones Industrial Average and the Nikkei recovered from their sharp decline, especially after the announcement of a vaccine in November, FTSE remains to be in negative territory.

The COVID-19 pandemic also had a profound impact on the global GDP, with it causing the worst recession since the end of World War II. The global economy contracted by around 3.5% in 2020, according to the International Monetary Fund (IMF). This is a 7% loss in global economic growth (as the world economy was projected to grow 3.4% according to a forecast from October 2019).

To combat the decline of major stock markets and the global GDP, central banks in many countries cut down interest rates. In theory, this would allow for easier (cheaper) borrowing and encourage spending, which could boost the economy at a time when consumers are cautious to spend their money. In addition, the pandemic prompted an unprecedented fiscal response. Globally, the total fiscal support reached over $16 trillion - approximately 15% of the global GDP - in 2020.

While a strong fiscal and monetary policy response may aid in revitalizing the economy, it is not without consequences; when too much money chases too few goods and services, price levels start to rise. Similarly, if the central bank prints excessive amounts of money or makes borrowing very easy by keeping interest rates low, then prices will rise. The U.S. government, in particular, has not spent this much money on fiscal stimulus since World War II. This will likely boost consumer spending beyond the point where the economy can sustainably produce, which in turn would lead to more inflation.

Indeed, inflation is starting to show, with the Consumer Price Index sharply rising to 5% (year over year) in May (compared to the Fed's targeted 2%). While inflation itself is not necessarily a problem, sharp, unexpected inflation often poses problems for the stock market as a whole. This is because unexpected inflation makes it difficult for investors to anticipate their returns, and they will demand higher return on investment to compensate for the higher risk. If, for instance, inflation suddenly goes from 1% to 5%, investors might now demand a 4% higher return on their investment. It's also important to note that some sectors of the stock market perform better than others at times of high inflation. For example, growth stocks, which depend heavily on future expectations, take the biggest hit when inflation rates rise. That's because high rates hurt future earnings expectations. Higher inflation rates and interest rates can hamper the future growth of companies - hence reducing their profitability. Because of the stock market's tendency to underperform at times of high inflation, investors usually turn to government bonds (for which the returns on the risk-free rate of return goes higher).

That said, the economy and the stock market have rebounded at a remarkable pace. For the year 2021, the U.S. GDP is expected to grow 7.2%, and major indices like the S&P 500 have already recorded year to date returns of over 12%. According to CFRA Chief Investment Strategist Sam Stovall, “we’re likely to have a 50% advance of the first half” gain in the second half of the year, indicating that these indices will likely grow 6~7% in the remaining months of 2021.

S&P Global U.S. Economic Forecast Overview

June 2021

Key indicator	2020	2021f	2022f	2023f	2024f
Real GDP (year % ch.)	(3.5)	6.7	3.7	2.6	1.8
(March forecast)		6.5	3.1	1.7	2.1
Real consumer spending (year % ch.)	(3.9)	8.1	4.1	2.1	1.7
Real equipment investment (year % ch.)	(5.0)	15.0	3.7	4.0	3.3
Real nonresidential structures investment (year % ch.)	(11.0)	(6.2)	6.6	6.8	5.1
Real residential investment, (year % ch.)	6.1	11.4	(1.6)	0.1	2.1
Core CPI (year % ch.)	1.7	2.8	2.4	2.5	2.3
Unemployment rate (%)	8.1	5.6	4.5	3.8	3.3
Housing starts (annual total in mil.)	1.40	1.59	1.53	1.47	1.48
Light vehicle sales (annual total in mil.)	14.5	16.8	16.5	16.7	16.6
Federal Reserve's fed funds policy target rate range (year-end %)	0-0.25	0-0.25	0-0.25	0.50-0.75	1.00-1.25

Source: S&P Global

Period of Uncertainty Ahead

Robert Choi

The first half of 2021 saw double-digit percentage gains in the stock market, which was primarily powered by an economic recovery that many investors believe is still gathering pace.

- The S&P 500 is up 14% this year, closing the first half of the year at a record.
- The Dow Jones Industrial Average has climbed 13%.
- Q2 2021 will mark both indices' fifth consecutive quarter of gains, their longest such streak since a nine-quarter stretch that lasted through 2017.
- Data on everything from hiring to consumer spending to small business-owners' confidence have bounced back and stayed above their pandemic lows.

However, many say the outlook is growing increasingly opaque. There seems to be no definable trend, and there is little agreement in the market.

- Investors are heading into the second half of the year weighing whether a recent acceleration in inflation is shaping up to be transitory, or the start of a longer-term trend that might force the Federal Reserve to pick up its pace of interest-rate increases. San Francisco Federal Reserve President Mary Daly stated in a July interview that "it's appropriate to start talking about tapering asset purchases" and that tapering of bond purchases may start by year-end.
- Yields on 10-year U.S. Treasury, suggest that after snapping back from the COVID-19 shutdown, longer-term economic growth might be more muted than investors expected a few months ago. That is in part due to dimming prospects for additional, huge stimulus from the federal government.

Value stocks were among the best performers in the second quarter, but growth stocks have also maintained its strong position and recently started to reclaim center stage, as interest rates declined from over 1.7% in April to 1.3% in early July. This is unusual, because the two typically move in opposite directions. Investors tend to favor pricier growth stocks when they believe economic growth will be scarce and turn to more economically sensitive value stocks when they anticipate a pickup in the economy.

Due to the lack of a coherent narrative across the market, investors are less certain about what is going to happen in 2022. The bull case for markets is that the economy's rebound has been undeniable. Corporate earnings are expected to continue to reach record numbers, although growing at a slower pace than in the second quarter. A record number of S&P 500 companies have issued positive earnings and sales guidance for the remainder of the year.

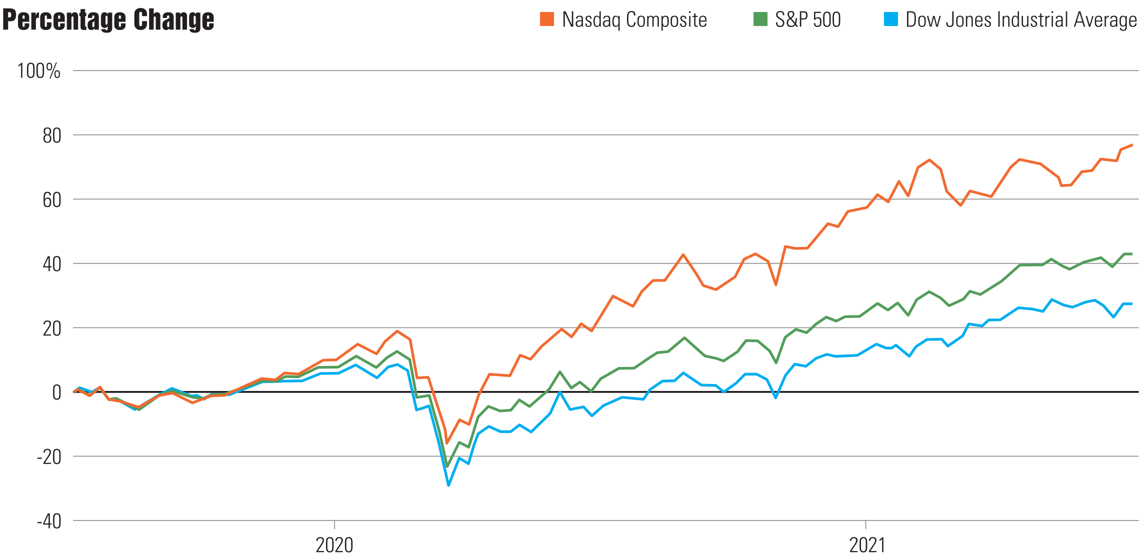
The bear case is that many investors believe much of the economy's rebound has been priced in. Money managers also say they believe that with major indexes trading at records, markets look priced for perfection. This means it might not take much to send stocks lower. The trigger could be inflation rates rising again, a slower-than-expected recovery, lower corporate earnings, or a surge in the number of the new Delta variant cases.

- In a June survey, Deutsche Bank AG found that investors identified higher-than-expected inflation, new Covid-19 variants that often bypass vaccines, and a central bank policy error as the three top risks to market stability.

- Goldman Sachs is forecasting that the core consumer-price index will pull back from recent highs to around 2.3% next year. The Labor Department's reading of core inflation had come in at 3.8% in May, the biggest year-over-year increase since 1992.

- Whether soaring prices across markets from used cars to housing to gasoline are being caused by one-time issues, or are a prelude to more long-lasting and broad inflation is the key question as we head into the second half of 2021.

Percentage Change



Source: FactSet

As of June 30, 5-23 p.m. ET

Two Big Concerns

Ju Hwan Kim

Stocks head into the second half of the year at record levels and should continue to gain, powered by a strong economy and robust earnings growth. However, inflation and the possibility of tighter Fed policy are two concerns for the market.

- Strong earnings gains, super-charged economic growth, low interest rates, and a dormant bond market are expected to drive the stock market higher in the second half of 2021.

- There are still risks. One is the potential for choppy trading when the Federal Reserve begins to discuss slowing down its bond buying, which would be its first step away from the easy policies put in place during the pandemic. The second is the fear that hot inflation readings are not really going to be as fleeting the Federal Reserve Chairman Jerome Powell expects, and that rising prices could become a bigger problem for the economy. Higher inflation readings could speed up the Federal Reserve's timeframe on interest rate hikes, currently forecast by Fed officials to start in 2023.

September is when extended unemployment benefits run out for many Americans. It may also be the month when parents are freed up to return to the workforce as children go back to school. It is also when many workers are expected to return to their offices.

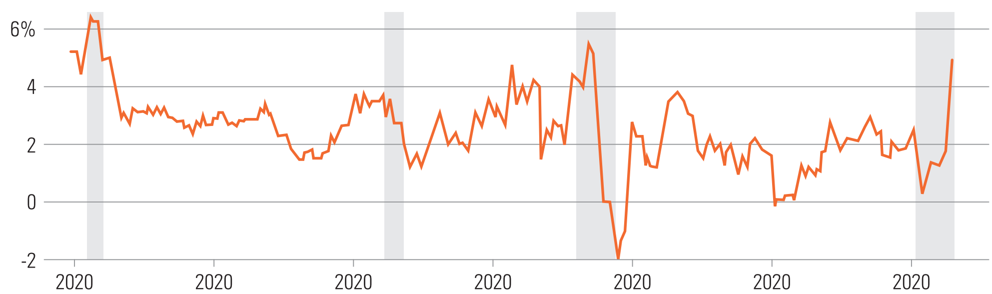
- The biggest concern to returning to "normal" is the spread of the delta variant, which is causing economic shutdowns in parts of Asia. The delta variant is known to spread more rapidly.

- However, bulls believe that the more people become vaccinated, the more markets will be able to deal with the pandemic and return to "normal."

Inflation seems to be the biggest concern for markets. Rising inflation rates will leave the Federal Reserve with no choice but to taper.

- The Consumer Price Index jumped sharply this spring, and was up 5% year over year in May, the hottest pace since 2008 when oil prices were skyrocketing. The Fed has targeted an average range of around 2%.

Consumer Price Index
(Percent change from prior year)



Source:
Federal Reserve Bank of St. Louis

ESG Dominates Global Headlines

SeoJung Park

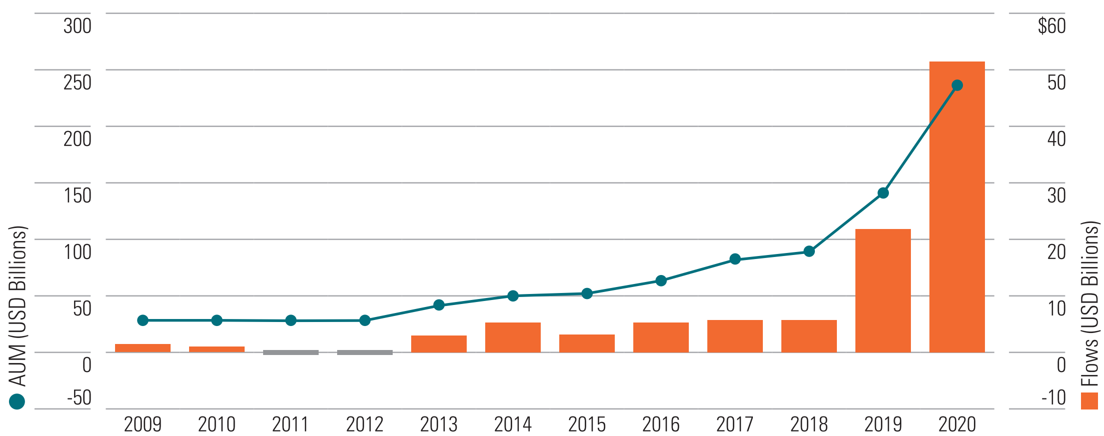
COVID-19 has caused major economic and social disruptions across the globe. Interestingly, the pandemic has also triggered a debate on what society really values, and at the same time exposed the extent of global interconnectedness, whereby societies fail to plan in the longer term and only address issues when it is too late. This focus has continued throughout 2020, and many see ESG, corporate social value (CSV), and sustainability as an opportunity to rebuild their businesses and economies.

- According to Morningstar, during 2020, flows into sustainable open-end and exchange-traded funds available to U.S. investors reached $51.1 billion. That was a significant increase over 2019 when flows were $21.4 billion, and a nearly tenfold increase over 2018 when flows were $5.4 billion.

- S&P Global Market Intelligence analyzed 26 ESG Exchange trading funds and mutual funds with assets of more than $250 million under management. From March 5, 2020, to March 5, 2021, when the World Health Organization officially declared COVID-19 an epidemic, 19 funds performed better than the S&P 500. During that period, those outstanding performances rose between 27.3% and 55%. By comparison, the S&P 500 rose 27.1%.

- The two highest-grossing U.S. equity funds of 2020 both focused on clean energy, with ESG's highest-rated companies outperforming non-ESG companies. Global inflows to sustainable funds rose from $20 billion in Q1 2018 to $80 billion in Q3 2020. However, criticism has continued against certain ESG funds. For example, according to research by Common Wealth, nearly a third of the UK's ‘climate funds’ are invested in oil and gas, which some view as inconsistent with being an ESG fund.

Sustainable Funds Annual Flows and Assets



Source: Morningstar.

- According to a recent survey, 75% of respondents responded that the social factors "S" are the most difficult areas among the three areas for companies to integrate, but the second half of 2020 continued to emphasize "S" in ESG. Demand for greater gender and racial diversity at management and board levels resulted in many U.S. corporations pledging to report on their diversity, equity, and inclusion (DEI), to increase transparency. In December 2020, BlackRock announced plans to vote against directors who did not take steps to improve board diversity and asked U.S. companies to disclose their employees' race and gender composition

- ESG matters increasingly found their way onto the slate of resolutions at shareholders' meetings in 2020, particularly those related to climate change. For example, JPMorgan backed 38% of environmental resolutions globally in 2020, up from 10% in 2019, while Wellington supported almost 42% of such resolutions, up from 8.5% in 2019. Moreover, Russell 3000 Director Diversity Disclosure Initiative encouraged U.S. public companies to disclose the racial makeup of their boards in an effort to encourage and increase board diversity. Pension funds have also begun to take greater action in the ESG sphere - for example, in November 2020, Scottish Window, an insurance company, announced that it would divest nearly half a billion pounds from companies that fail to meet ESG standards.

- Securities and Exchange Commission Chairman Gary Gensler is examining a deeper look into ESG investigating issues. He even launched a climate and ESG enforcement task force. Gensler also wants to know if companies are fulfilling any commitments that have already been made on climate-related issues. Furthermore, he wants more information regarding human capital disclosure or how companies interact with employees to make the workforce more diverse, healthy, and safe.

- The Biden administration will reinvigorate ESG policies and climate currency in the United States. On his first day in office, President Joe Biden took steps to rejoin the Paris Agreement on climate change and pledged to set the United States on the path to net-zero greenhouse gas emissions by 2050, with an interim goal of decarbonizing the power sector by 2035.

Source: Barron's

A New Generation of Investors

SeoJung Park

Different generations have different ideas about ESG. People today value ESG and it will become more important as generations change and develop. Nearly 7 out of 10 active investors say ESG investments are profitable. While many in the financial industry argue that ESG is a growing sector that has a swell of retail investor support behind it, Republicans argue that it is a way for Democrats and political activists to influence environmental policies while skirting Congress.

- According to a recent Morning Consult poll, 69% of investors said ESG investments were "very" or "somewhat" profitable, while 15% said sustainable investments were "not too profitable" or "not profitable at all". They also are more likely to say that it’s important for investors to make profitable investments (54%), according to the survey, than say it's more important for them to make socially responsible ones (35%).

- According to Morning Consult, ESG's perception of profitability varies greatly from generation to generation. Millennials say ESG investment is 65%, much higher than GenXers' 51% and baby boomers' 42%.

- Political leaning also seems to affect ESG's perspective: 63% of Democrats said this type of investment was profitable, and 47% of independents and 44% of Republicans said the same. More Republicans said that sustainable investment is more profitable than otherwise. The poll was conducted May 17-19 among 2,200 U.S. adults, with a margin of error of 2% points.

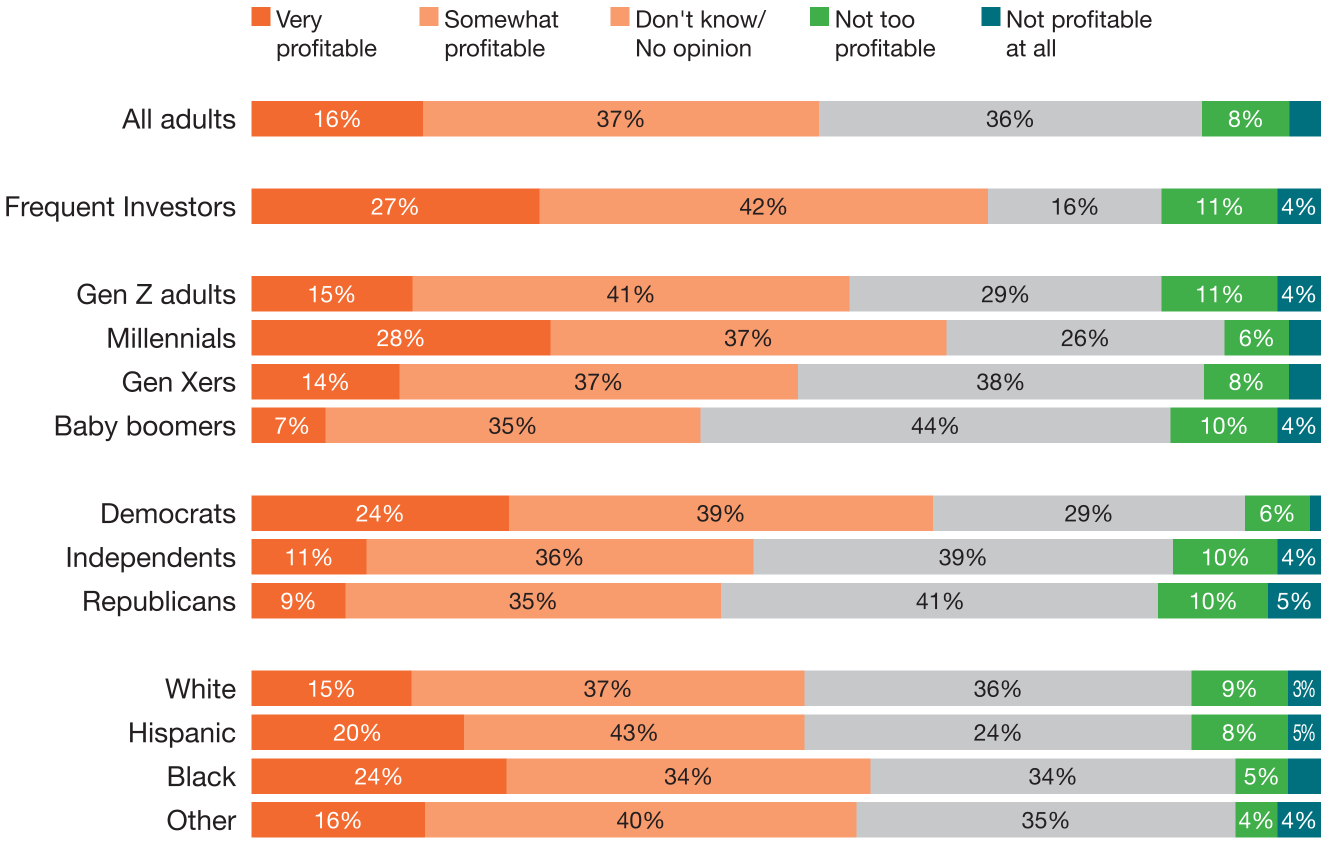
- As for the financial industries, BlackRock Inc. and Blackstone Group Inc, some of the largest investment companies, have made large commitments to these investments. Moreover, the Securities and Exchange Commission, the investment company institute, argues that the disclosures would help investors make more profitable decisions.

- Eric Pan, President & CEO of the Investment Company Institute, stated that from the financial point of view, there has been increasing recognition that ESG, whether diversity or climate, actually does affect the values of companies.

- According to Industry Reports, Millennials spurred the growth of sustainable investing throughout the 2010s - investors contributed $51.1 billion to sustainable funds in 2020, compared with less than $5 billion five years ago. Moreover, about 76% of millennials consider climate change to pose a serious threat to society. About one-third of millennials often or exclusively use investments that take ESG factors into account, while baby boomers invest only 2% into ESG. However, the difference in adoption is not because other generations are not interested in investing in sustainability. A 2019 report from Morningstar found that 72% of the U.S. population “expressed at least a moderate interest in sustainable investing,” and the preference did not change significantly between generations.

Nearly 7 in 10 Active Investors Say ESG Investments Are Profitable

Share of the following groups who said ESG and socially responsible investments are profitable or not:



Source: Morning Consult

2021 ESG Trends

Thomas Lee

1. Protection Against Climate Change:

Companies will seek to progress towards net-zero emissions across all sectors. Investors will coerce companies into making changes beyond that required by government introduced climate regulations.

2. Governance for Environmental and Social Issues:

Investors will push companies to incorporate sustainability to manage risk and create value.

3. ESG Disclosure:

corporate disclosures revealing executive compensation, gender diversity, and climate-related policies will become common. Frameworks will be put into place to confirm the accuracy of these disclosures.

4. From Stewardship to Integration:

Investment professionals will incorporate ESG risk assessment into investment decisions.

5. ESG Engagement:

More proactive stance by asset managers to create gender diversity and higher accountability.

6. Economic Activism:

Corporate governance will play a greater role as activist investors seek to unlock superior returns.

7. Analytics Drive ESG Practices:

Data and technology will be used to help companies better measure, calculate and monitor ESG factors to aid long-term value creation.

8. Diversity and Inclusion:

Issues of equal pay, equal opportunity, and corporate culture will be observed. Female executives will become more commonplace.

9. Executive Compensation:

Executive incentives will be linked to ESG metrics. Increased transparency and consideration over the appropriateness of performance metrics and targets

10. Political ESG Impact:

Companies will face geopolitical tensions, populism, and trade wars which will influence partnerships, mergers and acquisitions, and corporate governance.

The Beginning of the End of Oil

SeoJung Park

Source: Engine No. 1

As investors become increasingly aware of issues regarding climate change, global warming, and ethical work practices, ESG (Environmental, Social, and Governance) investing is quickly becoming mainstream among companies. As a result, most of the oil and gas companies said they would convert to renewable energy. However, instead of cutting back on oil drilling, ExxonMobil decided to make an even bigger bet on oil's future.

- Henisz, Faculty Director of the Wharton Political Risk Lab and founder of Wharton's ESG Analytics Lab, has mentioned ExxonMobil as a "poster child for failed corporate diplomacy" and the stock price has been suffering as "ExxonMobil has made very little adaptation to the reality of climate change," unlike other major oil and gas companies.

- According to Knoweldge@Wharton, there will be a transition from fossil fuels to cleaner alternatives such as solar energy, wind energy, or battery storage. They have also pointed out that even though it is not happening now, but 5, 10, or 15 years from now, there will be a radical shift in energy supplies.

- Engine No. 1, succeeded in getting three of its nominees elected on the board of ExxonMobil with the aim of pushing the company to reduce its carbon footprint.

- Engine No. 1 only held a minor stake of 0.02% in ExxonMobil. Therefore, the activist fund reached out to a wide range of institutional investors to receive support: BlackRock, Vanguard, State Street, CalPERS, CalSTRS, and New York State Common. The willingness of these large players to support a small activist fund fighting for a cause reflect an increased awareness of and interest in tackling climate risks through ESG investing.

- Engine No. 1's case for replacing members of ExxonMobil's Board of Directors was that the company has consistently disappointed shareholders over the past decade and that it needed fresh direction in a rapidly decarbonizing world. Over the past decade, ExxonMobil's total shareholder income (including dividends) languished at -15%, compared to 271% return the S&P 500 provided, which has threatened shareholder value.

- This year, BlackRock, Vanguard, and State Street all signed on to the Net Zero Asset Managers Initiative, a commitment to push the companies in cutting their greenhouse gas emissions completely by 2050. According to Morningstar, the average shareholder support for resolutions on this year's ESG has risen from 32% to 44%, by 12%. They have noted that strong levels of support are likely driven by more support of ESG by the three large fiduciaries. In BlackRock's 2021 annual letter to CEOs, BlackRock CEO Larry Pink even reiterated the company's commitment to tackling climate change, as he had said that "climate risk is investment risk."

- The success of the Engine No.1 campaign against ExxonMobil wasn't driven merely by environmental activists. Far beyond the votes from environmental activists and people who are engaged in climate change or environmental issues, the majority of the ESG investing came from pension funds, asset managers, and big institutional investors because they saw the business risk in the strategy ExxonMobil has taken.

This decline occurred while oil and gas are still the dominant forms of global energy

ExxonMobil	2010	2015	2020*
Market Capitalization	Largest company in the world at ~$370 bn market cap; #1 in the Dow Jones	~$370 billion market capitalization; #3 company in the Dow Jones	Removed from DJIA. ~$250 billion market cap pre-COVID / ~$176 billon pre-Engine No. 1 engagement.
S&P Credit Rating	AAA	AAA	Downgraded three times (twice pre-COVID) by S&P and put on negative outlook
Balance Sheet	Net Debt: $7 bn Net Debt / CFO: 0.15 x	Net Debt: $39 bn Net Debt / CFO: 1.8x	Net Debt: $63bn Net Debt / CFO: 4.0x
Dividend Capability	Consistent dividend growth. Total of $163bn returned over 2005-2010 including share buybacks. Free Cash generated covered dividend by over 2 times	37 straight years of dividend increases	Free Cash flow fell short of dividend by over $20bn from 2017-2020, forcing the Company to borrow to pay the dividend

Source: Engine No. 1

Global ESG Trend After COVID-19

SeoJung Park

Investors are increasingly considering ESG factors in their investment decisions, in an attempt to plug in the gaps created by the pandemic. This global crisis has had an undeniable impact on ESG investing, as U.S. assets under management (AUM) that mandate ESG factors rose about $5 trillion in just two years.

The COVID-19 crisis has reinforced the importance of ESG, as the pandemic has highlighted "the urgency to combat climate change and social inequality," said Helene Li, the CEO, and Co-founder at GoImpact. During 2020, it showed record inflows into ESG funds, and this trend will only keep growing.

The next few decades will see the biggest transfer of generational wealth in history: estimated at $30 trillion from baby boomers to millennials. According to Helene, this will be an important milestone in ESG investment, as "thousands of years are filtered by the responsibility to focus on value-based investment."

> COVID-19 has highlighted the urgency to combat climate change and social inequity, prompting a sense of urgency for rebalancing."

HELENE LI,
CEO and Co-Founder at GoImpact

As the pandemic continues to reveal our society's weaknesses and emphasizes the need for social responsibility for the local community, the social element of ESG will become increasingly important. Investors are likely to put higher emphasis on companies that manage to maintain a humane approach and put their employees first as sustainable long-term investments.

> 2021 will be characterised by three key trends or three "S" words: Simplicity, Social, and Stability. There will be a clearer focus on Social indicators as investors assess and amplify their influence on creating more sustainable and inclusive societies."

ELENA PHILIPOVA,
Global Head of ESG Proposition at Refinitiv

- Transparency and ESG integration will become more profound, and data will play an important role in the development of ESG investments in 2021. The move to clear performance indicators will be imperative as the new decade begins. The year 2021 will be the watershed year in terms of data availability and consistency, which will drive the whole world to change. The most striking example of a country that has begun leveraging data to drive change is China.

- Parallel to the rising importance of data, new technologies and new concepts will emerge to support investors in making the right decisions. According to Jeff Gitterman, Co-founding Partner of Gitterman Wealth Management, financial models often use the past to guide the future. However, after experiencing a climate crisis that they have never experienced, investors must ensure that climate science is reflected in asset valuations.

> “Financial models often use the past to guide the future. However, we’ve never experienced a climate crisis like this – and investors must ensure climate science is reflected in asset valuations."
>
> 
>
> **JEFF GITTERMAN,**
> **Co-founding Partner, Gitterman Wealth Management**

- The year 2021 will be considered the year of green bonds. Even though it may not satisfy investor demands, the global green bond supply is predicted to jump 50% in 2021. However, the climate is not the only focus of 2021. According to the Refinitiv Sustainable Finance Review, the social bond issuance rate in the sustainable financial bond market has increased from 5% in 2019 to 30% in 2020.

- As the world emerges from an unprecedented economic and social crisis, our attention will inevitably shift to new areas that have been put behind the scenes in the past, if not completely ignored. Investors will drive a growing demand for resilient and renewable energy sources, next to greener and more sustainable transport networks and buildings. Finally, biodiversity will start to get more attention, as its loss continues to have serious implications for our livelihoods and economies.

Stop Altria's Unethical Marketing of Juul E-Cigarettes to Children

Kayden Whang

Source: Juul Labs

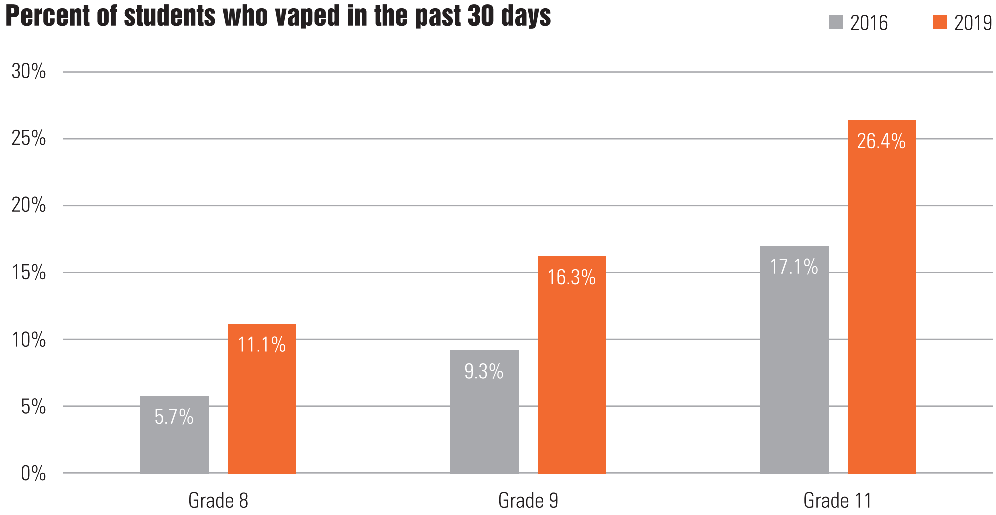
Until 1954, when Scientists Cuyler Hammond and Daniel Horn discovered a cause-and-effect relationship between lung cancer and smoking, the general public was largely unaware of the negative effects of smoking (Mendes). As such, smoking was a societal norm for most of the 20th century, with "around half of the population of industrialized nations [smoking]" (Rodrigues) in the late 1950s. Taking advantage of its widespread popularity, Big Tobacco not only marketed its products to adults, but also to children. Ad campaigns such as the Smooth Joe ads, advertising the Camel brand of cigarettes, were targeted to "children and young adolescents" (Burns, etl). This advertising was deemed so harmful that even the United States Department of Justice sued "several major tobacco companies" for "[targeting] the youth" (Eubanks).

Fortunately, in today's society, the problem of smoking has largely been alleviated with smoking rates declining since 1959 (Burns, etl). Whilst this harmful vice is meeting its slow end, in its demise, vaping has taken place. Vaping refers to the inhaling of "vapor created by an electronic cigarette". While electronic cigarettes (e-cigs) have fashioned themselves as a healthier alternative to smoking, in reality, vaping is extremely harmful with it having been linked to "serious lung damage and even death" (Gordan).

Adding insult to injury, cigarette companies such as the Altria Group Inc., the parent company to Malbrough Cigarette, have managed to adapt to the current marketplace, becoming major stakeholders in the vaping industry themselves. With its acquisition of 35% of Juul Labs Inc., the largest vaping company in the world, Altria has become the largest shareholder of Juul. With this acquisition, Altria has managed to control Juul from the background with the former's own Chief Growth Officer, K.C Crosthwaite, being placed as Juul's CEO. Altria's domination over Juul's operations has led to the continuation of unethical practices by Big Tobacco with Altria bringing back old strategies, such as marketing to children, to Juul. For example, Juul has purchased ad space on several child-focused websites such as "Nickelodeon, the Cartoon Network, Seventeen magazine and educational sites for middle school and high school students" (Kaplan). Furthermore, Juul has also created fruit and candy-flavored e-cigarette flavors as these flavors are perceived as being less dangerous by the youth (British Medical Association).

By not only buying up ad space on platforms where children commonly frequent but also by creating vaping flavors that appeal to and seem safer for teenagers to use, it is clear that Juul and its parent company, Altria, are marketing their product towards the youth population. As a result of this strategy, roughly 20% of high school students are reported to have vaped in the United States according to the Partnership to End Addiction. In 2018, the National Institute of Health also reported that 37.3 percent of 12th graders reported having used a vaping product in the past 12 months, compared to just 27.8 percent in 2017.

Percent of students who vaped in the past 30 days



Source: Minnesota Department of Health

While it may be too hard to hold Juul and Atria legally accountable for their harmful marketing strategies and product, it is possible to spread awareness of their unethical business practices. Young students should not only be made aware of the extent to which vaping can harm them but also of how they have been lied to by Juul and Altria as e-cigarette flavors such as fruit or candy are dangerous despite the safe allure of these flavors. By spreading awareness of their unethical business practices, it may be possible to live in a future where children are no longer taken advantage of by vaping companies.

The most effective strategy to get Juul to change its unethical marketing practices is to effect change from within. Recently, Engine No. 1, an investment firm creating long-term value and driving positive impact through active ownership, was able to impact real change in the energy company ExxonMobil, a company notorious for its disregard of the environment, by winning three seats on ExxonMobil's board. They were able to do this, ironically, by becoming shareholders of ExxonMobil themselves and winning the support of major institutional investors and pension funds with large investments in the company, including CalPERS, CalSTRS, and New York State Common Retirement Fund. Taking advantage of the current ESG trend, Engine No. 1 was able to bring the oil giant to its knees by effecting change from the inside. Similarly, like Engine 1, we can pursue a similar course of action towards Altria.

Recently, Youth Impact started its own campaign against Juul and Altria through the Youth Impact Fund. The Youth Impact Fund is the world's first youth-managed social impact fund that uses environmental, social, and governance factors in deciding how its managers will invest $50,000. The Youth Impact Fund also tries to pressure global companies that go against today's ESG trend and people's expectations in terms of corporate social responsibility, by initiating various campaigns against the company. Like Engine No. 1, one strategy that the Youth Impact Fund uses is symbolically buying a share of the company it is campaigning against and, as a shareholder, rightfully demanding the company's leadership to act in the best interest of its shareholders - specifically, to minimize long-term ESG risks, which has become more important than ever.

The Youth Impact Fund has symbolically bought a share of Altria Group Inc. (NYSE: MO) to start a campaign objecting the company's advertising of e-cigarettes to children through Juul, which Altria effectively has control over as the majority shareholder. Through this petition, the Youth Impact Fund aims to spread awareness about Altria's behind-the-scenes involvement in the vaping pandemic all over the world, and to mobilize support for the newly launched campaign. Please sign this petition to express your support for our campaign and to demand Altria to stop all marketing of Juul's e-cigarette products to children. The Youth Impact Fund will also send a copy of our petition and the signatures we receive to the U.S. Food and Drug Administration (FDA), which has the authority to reject Juul's application to continue marketing and selling highly addictive menthol-flavored and high-nicotine e-cigarettes.

You can support our campaign against Altria Group by signing our petition at: https://bit.ly/3j9KAI4

YIF Stock Pitch Competition

Led by Jangkyung Choi, Youth Impact Fund (YIF) is launching its first ever ESG (environmental, social, and governance) Stock Pitch Competition on September 1, 2021. Teams of 1 to 4 high school students are encouraged to sign up and compete for a chance to invest real money in their names through YIF's new $5,000 Future Fund.

The event challenges high school students to analyze a publicly traded company and prepare a "buy" or "sell" recommendation in the form of a written report. Judged by panel of industry experts and Youth Impact Fund executives, the competition is designed to replicate the experience of analysts and asset managers.

Eligibility

Eligibility
Grade 9 – 12 students

Submission materia
Registration and maximum 5-page report

Registration deadline
October 31 23:59 EST

Winner announcement
October 8, 2021

1st Place Award
$3,000 investment made in winner's name

2nd Place Award
$1,500 investment made in winner's name

3rd Place Award
$500 investment made in winner's name

Report Requirements

- Your report should include an industry overview, business description, thesis summary, supporting evidence, valuation including key drivers, ESG compliance, risks, and a conclusion.
- You may analyze and write about any publicly traded company in any country.

Competition Schedule

September 1 – Registration Opens
Registration for the 2021 Youth Impact Fund ESG Stock Pitch Competition opens. Teams of 1 to 4 students can register down below.

October 31, 23:59 EST – Submission Deadline
Teams must register and submit their report at the bottom of this page.

November 8 – Winners Announced
Winners will be announced at www.youthimpactfund.com, and investments will be made in the winners' names.

November 15 – 30 – Online Interviews with Winners
YIF executives will reach out to the winners for an interview.

Youth Impact Fund Portfolio

Country	Company	Symbol	Shares	Investment	Current Valuation	Total Return
USA	American Well Corp	AMWL	15	$380.25	$603 (1/27/2021)	$222.72 (+58.57%)
	Airbnb Inc	ABNB	2	$279.76	$364 (1/22/2021)	$84.23 (+30.11%)
			8	$1,556.89	$1,198.83	-$358.06 (-23.00%)
	Advanced Micro Devices, Inc.	AMD	17	$1,430.47	$1,605.87	$175.4 (+12.26%)
	Apple Inc	AAPL	14	$1,647.51	$1,954.53	$307.02 (+18.64%)
	Canadian Solar	CSIQ	10	$385	$536 (1/6/2021)	$151 (+39.22)
	Citigroup Inc	C	7	$527.44	$491.64	-$35.8 (-6.79%)
	Coca-Cola Co	KO	18	$928.77	$972.80	$44.03 (+4.74%)
	Deutsche Bank AG	DB	116	$1,471.62	$1,504.22	$32.6 (+2.22%)
	General Electric Company	GE	148	1,659.05	1,972.84	304.72 (+18.36%)
	II-VI, Inc.	IIVI	7	$619.43	$635.67 (2/19/2021)	$16.25 (+2.62%)
	Marvell Technology Group Ltd.	MRVL	4	$185.2	$212.32 (1/27/2021)	$27.12 (+14.64%)
	Maxar Technologies Inc	MAXR	30	$862.45	$1,197.29	$334.84 (+38.82%)
	Microsoft Corporation	MSFT	4	884.95	1,111	221.07 (+24.98%)
	NextEra Energy Inc	NEE	5	$362.41	370.47	$8.06 (+2.22%)
	Nike Inc	NKE	3	$389.47	$478.02	$88.55 (+22.74%)
	Nio Inc – ADR	NIO	6	$286.02	$312 (1/5/2021)	$26 (+9.10%)
			20	$953.4	$1,283 (1/11/2021)	$329.66 (+34.58%)
	NVIDIA Corporation	NVDA	2	$1,065.54	$1,634.85	$569.31 (+53.43%)
	Palantir Technologies Inc	PLTR	37	$813.22	$902.01	$88.79 (+10.92%)
	ProShares Online Retail ETF	ONLN	10	$777.04	$788.12	$11.08 (+1.43%)
	PVH Corp	PVH	4	385.46	$436.26	$50.8 (+13.18%)
	salesforce.com, inc.	CRM	5	$1,075.42	1,239.9	$158.70 (+14.75%)
	Starbucks Corporation	SBUX	6	$642.85	$688.09	$45.24 (+7.04%)
	ChargePoint Holdings Inc	CHPT	25	$904.5	$1,105 (1/11/2021)	$200.4 (+22.16%)
			14	$566.82	$447.16	-$119.66 (-21.11%)
	Teladoc Health Inc	TDOC	5	$972.05	$1,435 (1/27/2021)	$462.97 (+47.63%)
	Taiwan Semiconductor Mfg. Co. Ltd.	TSM	12	$1,461.15	$1,423.35	-$37.8 (-2.59%)
	Uber Technologies Inc	UBER	17	932.05	865.3	-71.24 (-7.64%)
	Unity Software Inc	U	7	$1,038.8	$1,163.26 (1/25/2021)	$124.45 (+11.98%)
	Waste Management, Inc.	WM	2	$231.98	$283.23	$51.25 (+22.09%)
	Xpeng Inc - ADR	XPEV	24	$1,040.7	$1,047.13	$6.43 (+0.62%)
	Yum! Brands, Inc.	YUM	4	$453.33	$466.63	$13.3 (+2.93%)
	Yum China Holdings Inc	YUMC	5	$331.33	$330.62	-$0.71 (-0.21%)
	Zillow Group Inc Class A	ZG	6	$811.44	$1,014.21 (2/25/2021)	$202.77 (+24.99%)
Subtotal				$28,313.77	$32,074	$3,760.23 (+13.28%)

Country	Company	Symbol	Shares	Investment	Current Valuation	Total Return
Korea	CS Wind	112610	24	1,496,000	1,903,200	402,324 (+26.89%)
	Doosan Fuel Cell	336260	25	1,056,000	1,265,000	199.986 (+18.94%)
	Hanwha Solution	009830	24	1,294,850	1,196,100	-101,860 (-7.87%)
	KB Financial Group	105560	40	1,584,900	1,953,500 (3/8/2021)	355,620 (+22.44%)
			9	485,400	484,200	-2,453 (-0.51%)
	KineMaster Corp	139670	28	624,000	756,000	130,062 (+20.84%)
	LG Electronics	066570	12	1,030,100	2,040,000	1,004,758 (+97.54%)
Subtotal ($1 = 1132.11)				7,571,250 ($6,687.74)	9,598,000 ($8,477.98)	2,026,750 ($1,790.24) (+26.77%)
Hong Kong	China Longyuan Power Group Corp Ltd	0916	2,000	12,893.53	26,531.39	13,637.86 (+105.77%)
Subtotal ($1 = HK$7.77)				12,893.53 ($1,660.04)	26,531.39 ($3,415.90)	13,637.86 ($1,755.87) (+105.77%)
China	LONGi Green Energy Technology Co Ltd	601012	100	6,726.73	11,540.19	4,813.46 (+71.56%)
	Shanghai Putailai New Energy Tech Co Ltd	603659	140	10,239.6	14,518 (5/31/2021)	4,278 (+41.78%)
	Xinjiang Goldwind Science & Technology Ord Shs A	002202	600	7,184.27	7,092.74	-91.53 (-1.27%)
Subtotal ($1 = ¥0.15)				24,150.60 ($3,737.04)	33,150.93 ($5,129.74)	9,000.33 ($1,392.70) (+37.27%)
Total (USD)				$40,398.59	$49,098	$8,699.04 (+21.53%)

Blacklist

Country	Company	Symbol	Shares	Investment	Current Valuation	Total Return
	Altria Group Inc	MO	1	50.13	47.41	-$2.72 (-5.43%)
USA	Exxon Mobil Corporation	XOM	1	37.77	63.01	+25.24 (+66.83%)
Total (USD)				87.90	110.42	22.52 (+25.62%)

Cash

Cash	$1,256.42

Coca-Cola Co

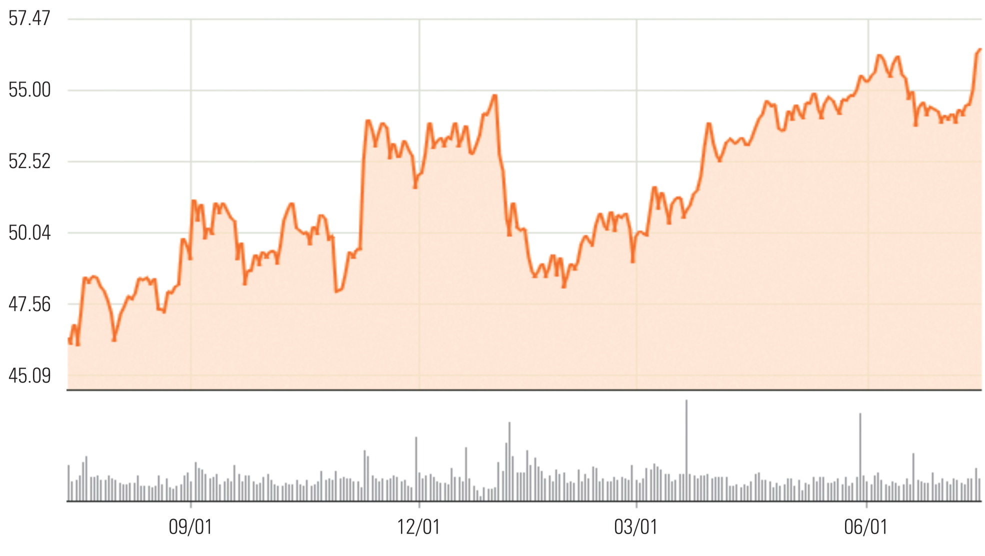
NYSE: KO

Ju Hwan Kim

Coca-Cola was founded in 1892, in Atlanta, and since it has emerged and solidified its position as the largest beverage company in the world. Virtually everyone knows its drinks, with Coca-Cola selling in over 200 countries. The company also owns over 200 beverage brands, ranging from bottled water to kombucha and sugary drinks. It is notable that recently, due to a rising trend for healthy beverages, Coca-Cola has been releasing more less-sugar and zero-sugar drinks.

The Coca-Cola Company operates its business through the Concentrate Business and Finished Products Business. The former is primarily focused around supplying concentrates and syrups to authorized bottling partners, which are responsible for manufacturing, packaging, merchandising, and distributing final branded beverages to customers and vending partners. The latter supplies the beverages (mainly still beverages such as juices and ice tea) directly to retailers, wholesalers, or bottling partners. It also sells concentrate for soda fountains of major restaurants and foodservice distributors.

Based on Interbrand's "best global brand" study of 2020, Coca-Cola was the world's sixth most valuable brand. In 2013, Coke products were sold in over 200 countries worldwide, with consumers drinking more than 1.8 billion company beverage servings each day.



Valuation Measures	
Market Cap (intraday)	234.21B
Enterprise Value	268.82B
Trailing P/E	32.53
Forward P/E	23.02
PEG Ratio (5 yr expected)	2.73
Price/Sales (ttm)	7.01
Price/Book (mrq)	11.50
Enterprise Value/Revenue	8.04
Enterprise Value/EBITDA	22.81
Profitability	
Profit Margin	21.59%
Operating Margin (ttm)	30.66%
Management Effectiveness	
Return on Assets (ttm)	6.96%
Return on Equity (ttm)	34.28%
Income Statement	
Revenue (ttm)	33.43B
Revenue Per Share (ttm)	7.78
Quarterly Revenue Growth (yoy)	4.90%
Gross Profit (ttm)	19.58B
EBITDA	11.79B
Net Income Avi to Common (ttm)	7.22B
Diluted EPS (ttm)	1.67
Quarterly Earnings Growth (yoy)	-19.10%
Balance Sheet	
Total Cash (mrq)	12.6B
Total Cash Per Share (mrq)	2.92
Total Debt (mrq)	45.23B
Total Debt/Equity (mrq)	202.53
Current Ratio (mrq)	1.33
Book Value Per Share (mrq)	4.72
Cash Flow Statement	
Operating Cash Flow (ttm)	10.92B
Levered Free Cash Flow (ttm)	5.82B

Stock Price History	
Beta (5Y Monthly)	0.61
52-Week Change	22.71%
S&P500 52-Week Change	37.80%
52 Week High	56.48
52 Week Low	43.83
50-Day Moving Average	54.88
200-Day Moving Average	52.52
Share Statistics	
Avg Vol (3 month)	14M
Avg Vol (10 day)	12.76M
Shares Outstanding	4.31B
Implied Shares Outstanding	4.31B
Float	3.88B
% Held by Insiders	0.64%
% Held by Institutions	68.70%
Shares Short (Jun 14, 2021)	24.99M
Short Ratio (Jun 14, 2021)	1.63
Short % of Float (Jun 14, 2021)	0.58%
Short % of Shares Outstanding (Jun 14, 2021)	0.58%
Shares Short (prior month May 13, 2021)	31.03M
Dividends & Splits	
Forward Annual Dividend Rate	1.68
Forward Annual Dividend Yield	3.09%
Trailing Annual Dividend Rate	1.65
Trailing Annual Dividend Yield	3.06%
5 Year Average Dividend Yield	3.24
Payout Ratio	98.80%
Dividend Date	Jun 30, 2021
Ex-Dividend Date	Jun 13, 2021
Last Split Factor	2:1
Last Split Date	Aug 12, 2012

Business Review

Coca-Cola is widely regarded as a safe recovery stock and a dividend aristocrat.

- The company was unable to avoid the impact of COVID-19, with its revenue decreasing from $37 billion in 2019 to $33 billion in 2020. Still it coped relatively well with the pandemic with cost-reducing measures like restructuring and cutting on marketing expenditure. As COVID-19 restrictions become more lax, Coca-Cola's revenue has started growing again, with its revenue for the quarter ending March 31, 2021 seeing a 4.87% increase YoY.

- Coca-Cola is a "dividend king," which refers to a list of companies that have been raising their dividends annually for at least 50 years; Coca-Cola has been raising it for 59 years straight. Despite the COVID-19 pandemic leading to a 11% sales decrease, Coca-Cola still paid out dividends to its investors, certifying their reliability when it comes to dividend investing.

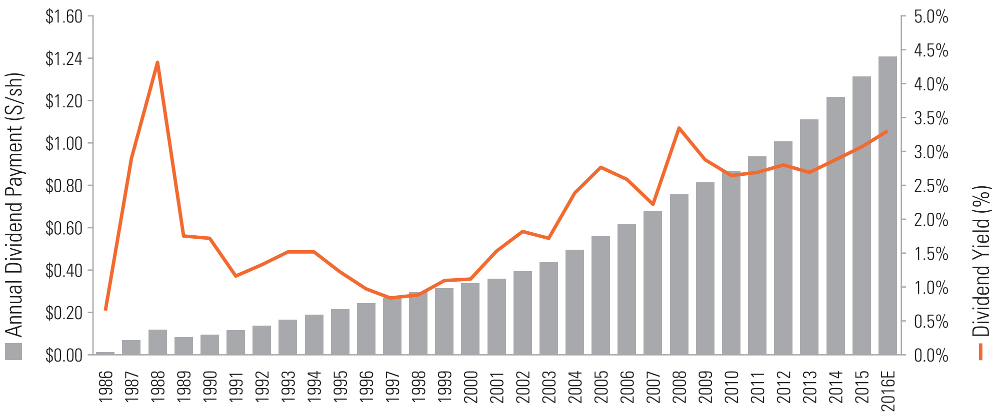
- While Coca-Cola may have matured in many of its markets, the company still packs a lot of growth potential, with it only controlling 13% of the market in developed countries and 5% in underdeveloped markets. These markets represent 80% of the global population, indicating high growth potential for Coke.

- As consumer taste gears more towards healthy beverages, Coca-Cola is projected to benefit from its wide variety of offerings such as their trademark Coca-Cola, juice, and many other plant-based drinks.

- In an increasingly consumer-centric market, Coca Cola is further enhancing consumer connections, also pursuing digital-enabled initiatives to attract online demand. The beverage company has been focusing more on e-commerce, which has been doubling in many countries. Such changes allow the company to operate marketing, sales, and distribution both online and offline.

- Recently, the soccer superstar Cristiano Ronaldo removed bottles of Coca-Cola in a press conference, encouraging consumption of water. Coca-Cola lost almost $4 billion in market value after the press conference, with its shares dropping by 1.6% and another 1.34% the day after. Nevertheless, with the world recovering from COVID-19 and restaurants and movie theatres reopening, such a drop is likely to be only temporary.

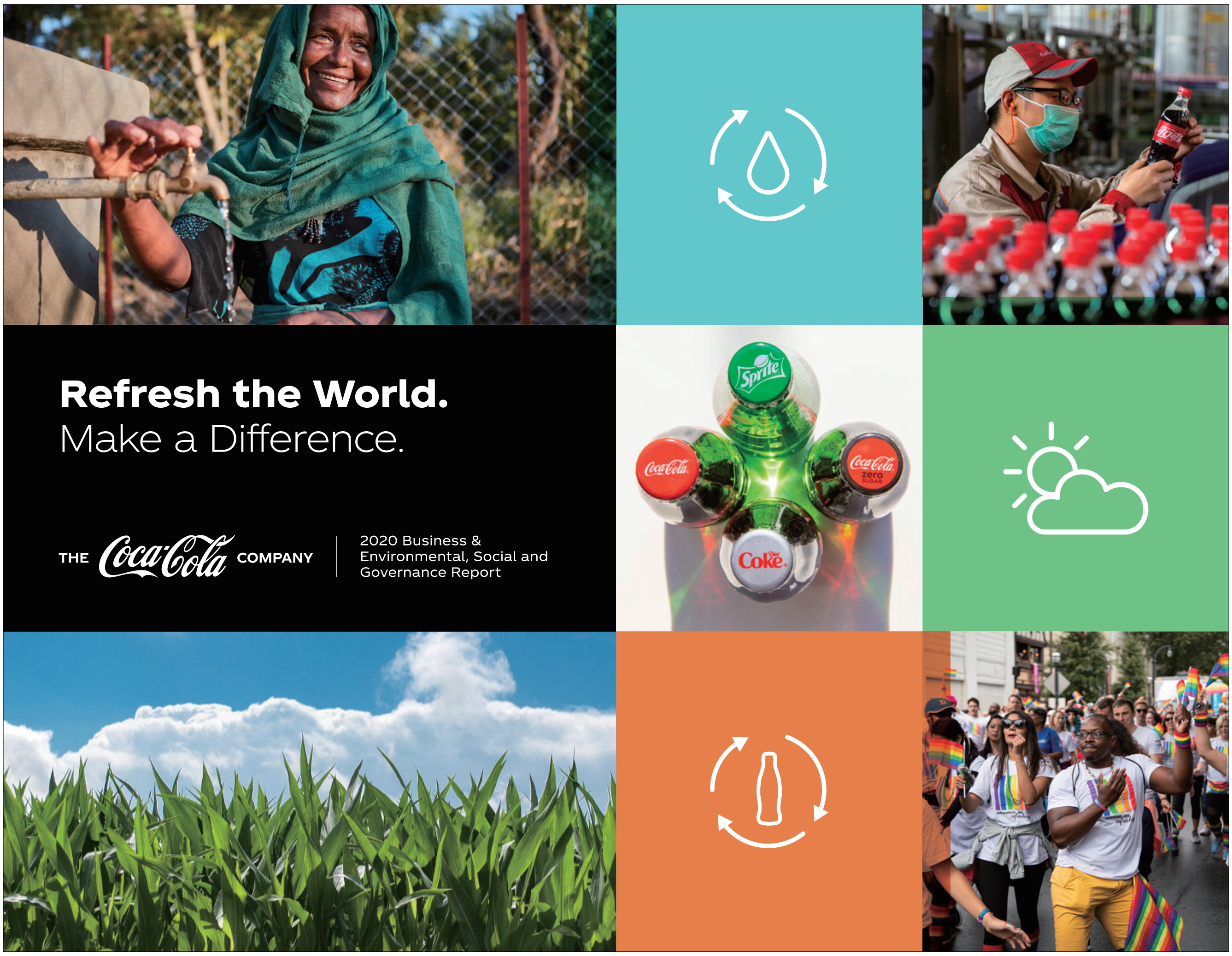
KO Dividend Histoty



ESG Review

The company produces an immense amount of bottled drinks, so plastic pollution is a natural byproduct of its production. Therefore, it is no surprise that Coca-Cola was ranked as the number one plastic polluter in the world in an annual audit by Break Free From Plastic. However, major changes are being made.

- According to Reuters in February, Coca Cola announced to sell all its sodas in recycled bottles in the United States, reducing its use of new plastic by 20% in North America.
- In 2020, Coca Cola announced to make its packaging all biodegradable by 2023, using a new bioplastic material called PEF.
- The company has been implementing policies geared towards diversity. The company spent $800 million on diverse suppliers in the United States in 2020.
- As for governance, Coca Cola's committee updates its policy on critical ESG issues regularly. Furthermore, the committee reviews, at least annually, all shareowner proposals, public policy advocacy efforts, political contributions and charitable contributions to ensure alignment with its company policy.



General Electric

General Electric Company

NYSE: GE

Robert Choi

GE became incorporated in 1892 through the merger of Edison General Electric Company, the Thomson-Houston Electric Company and Drexel, Morgan & Co. Throughout its history, GE has expanded into multiple industries, such as television, power, computing, aviation, finance, appliances and plastics. It produces one of the largest lines of electrical consumer goods in the world and, through its General Electric and Hotpoint appliance brands, became a top seller of various types of home appliances.

GE's business groups in the early 21st century were in the areas of commercial finance, consumer finance, infrastructure (including diesel locomotives, jet engines, water treatment systems, and energy delivery systems such as power grids), consumer and industrial technologies (including appliances and lighting products), health care (including diagnostic and imaging products), and media and entertainment through NBCUniversal. In 2011 GE sold a majority stake in NBCUniversal to Comcast, which acquired the remaining shares two years later.

In 2008, when GE had a lot of businesses distributed into a lot of different areas, the financial crisis hit them hard. The company's stock fell 42% during the year; on June 19, 2018, GE's more than 100-year run on the Dow Jones Industrial Average (DJIA) came to an end and the last remaining original component of the Dow was dropped from the index. After the 2008 recession, it became clear that GE was overstretched and bloated. The GE Capital financial segment nearly toppled the company during the Great Recession because it did not have a competitive advantage over other financial services companies.

The company was forced to strip down GE Capital, divest billions of dollars in loans and real estate, and trimmed down its business by selling off NBCUniversal, GE Plastics, GE Water, and GE Appliances. Today, General Electric distributes its business down into four main categories, being one of the most prominent ESG stocks: power (21% of sales), renewable energy (20%), aviation (32%), and healthcare (26%).

Valuation Measures	
Market Cap (intraday)	111.49B
Enterprise Value	160.96B
Trailing P/E	N/A
Forward P/E	24.42
PEG Ratio (5 yr expected)	0.16
Price/Sales (ttm)	1.44
Price/Book (mrq)	3.32
Enterprise Value/Revenue	2.08
Enterprise Value/EBITDA	28.47

Profitability	
Profit Margin	-4.27%
Operating Margin (ttm)	-0.29%

Management Effectiveness	
Return on Assets (ttm)	-0.05%
Return on Equity (ttm)	-1.35%

Income Statement	
Revenue (ttm)	77.25B
Revenue Per Share (ttm)	8.82
Quarterly Revenue Growth (yoy)	-12.20%
Gross Profit (ttm)	13.51B
EBITDA	5.65B
Net Income Avi to Common (ttm)	-968M
Diluted EPS (ttm)	-0.45
Quarterly Earnings Growth (yoy)	N/A

Balance Sheet	
Total Cash (mrq)	26.6B
Total Cash Per Share (mrq)	3.03
Total Debt (mrq)	74.5B
Total Debt/Equity (mrq)	211.93
Current Ratio (mrq)	1.96
Book Value Per Share (mrq)	3.83

Cash Flow Statement	
Operating Cash Flow (ttm)	1.87B
Levered Free Cash Flow (ttm)	595M

Stock Price History	
Beta (5Y Monthly)	1.07
52-Week Change	79.89%
S&P500 52-Week Change	31.96%
52 Week High	14.42
52 Week Low	5.93
50-Day Moving Average	13.25
200-Day Moving Average	12.79

Share Statistics	
Avg Vol (3 month)	60M
Avg Vol (10 day)	58.68M
Shares Outstanding	8.78B
Implied Shares Outstanding	N/A
Float	8.75B
% Held by Insiders	0.24%
% Held by Institutions	65.50%
Shares Short (Jun 14, 2021)	83M
Short Ratio (Jun 14, 2021)	1.55
Short % of Float (Jun 14, 2021)	0.95%
Short % of Shares Outstanding (Jun 14, 2021)	0.95%
Shares Short (prior month May 13, 2021)	100.08M

Dividends & Splits	
Forward Annual Dividend Rate	0.04
Forward Annual Dividend Yield	0.31%
Trailing Annual Dividend Rate	0.04
Trailing Annual Dividend Yield	0.33%
5 Year Average Dividend Yield	2.55
Payout Ratio	N/A
Dividend Date	Jul 25, 2021
Ex-Dividend Date	Jun 24, 2021
Last Split Factor	104:100
Last Split Date	Feb 25, 2019

Aviation Sector

- Most of GE's recent revenue decline - 21% to $76.2b over the last 12 month period - can be attributed to lower sales in aviation (aviation revenue was down 33% YoY in 2020) due to significantly reduced demand for air travel during the pandemic, which had a flow-on effect on the demand for GE's engines. However, with vaccination rates increasing and major tourist destinations opening their borders, such as the United Kingdom on July 19, international travel is expected to boom.

- The CFM RISE project was announced in collaboration with Safran that aims to reduce fuel and CO2 emissions in aircraft engines by more than 20% and will be compatible with sustainable aviation fuel and hydrogen. This partnership has been extended through 2050. This is consistent with GE's ESG efforts.

- Three key factors which point to improved revenue growth for GE in coming years are related to the recovery of its aviation sector:

  1. Airbus plans to accelerate production of its A220 and A350 aircraft in 2022.
  2. Boeing plans to accelerate production of 737 MAX by over 60% to 42 aircraft per month by fall 2022, compared with 26 per month by the end of 2021.
  3. United Airlines announced an additional order of 200 737 MAX aircraft and 70 Airbus A320 NEO jets.

Renewable energy Sector

- The Biden administration has proposed enabling electric utilities tax credits to be used like cash without any tax liability. The goal is to move the power sector to 100% emissions-free electricity by 2035 and the economy to net zero emissions by 2050. This proposal would benefit GE considerably. Further, given GE's large, expanding wind-power business, the 2035 goal would also be of great potential benefit to GE.

- GE's power sector should also experience growth due to Biden's efforts to boost EV sales.

- On June 17, GE announced that they will provide 55 sets of wind turbines for India. This is prospective since it suggests GE is gaining momentum, which can spread to other major Asian markets.

Healthcare Sector

- Demand for ventilators and other COVID-treatment-related equipment grew in 2020, offsetting the disruptions to elective procedures and other services.

- Stable, low to mid-single-digit growth is expected in 2021, as the vaccine rollout is expected to cease the disruption to usual procedures.

Financials

- GE, widely known as a corporation with a lot of debt, turned cash positive a year ahead of schedule in 2020. GE generated $606 million in free cash flow.

- GE is initiating a reverse stock split in July-August.

LONGi Solar

LONGi Green Energy Technology Co Ltd

SHA: 601012

Eric Kim

LONGi Green Energy Technology Co. (LONGi), formerly Xi'an Longi Silicon Materials Corporation, is a major Chinese manufacturer of photovoltaics and a developer of solar projects. Since its modest founding in 2000, the company has grown to become the world's largest manufacturer of monocrystalline silicon wafers. Today, the company is valued at over $70 billion, with its globalized reach expanding into Asia, America, Europe, Africa, and Oceania. LONGi has plants in China, India, and Malaysia, and has acquired production facilities from other companies, including from US manufacturer SunEdison. It is recognized as one of the most important players in the renewable energy and ESG wave spreading throughout the world, as more and more governments around the world announce their plans for going carbon neutral in the coming decades.

LONGi's businesses are: 1) mono-Si wafers (39% of revenue); 2) mono-Si modules (44%); and 3) other (cells, power plants, etc.; 16%). The company is best known for its highly-efficient mono-Si wafers, which rapidly broke world solar efficiency records three times within five months. One of its subsidiaries also recently achieved a new industry record with 23.6% conversion efficiency with its P-type monocrystalline PERC solar cells.

LONGi is the fastest growing PV manufacturer in the industry. LONGi's annual revenue in 2013 was derived entirely from selling around US$330 million of mono c-Si wafers, but by 2016 that annual revenue had skyrocketed to approximately US$1.67 billion. Through technological advancements, LONGi has quickly risen to become a prominent figure in the solar energy industry.

Valuation Measures	
Market Cap (intraday)	490.95B
Enterprise Value	423.97B
Trailing P/E	52.25
Forward P/E	N/A
PEG Ratio (5 yr expected)	N/A
Price/Sales (ttm)	7.94
Price/Book (mrq)	11.47
Enterprise Value/Revenue	6.86
Enterprise Value/EBITDA	34.10
Profitability	
Profit Margin	14.86%
Operating Margin (ttm)	16.56%
Management Effectiveness	
Return on Assets (ttm)	8.18%
Return on Equity (ttm)	25.56%
Income Statement	
Revenue (ttm)	61.84B
Revenue Per Share (ttm)	11.73
Quarterly Revenue Growth (yoy)	84.40%
Gross Profit (ttm)	13.07B
EBITDA	12.43B
Net Income Avi to Common (ttm)	9.19B
Diluted EPS (ttm)	1.74
Quarterly Earnings Growth (yoy)	34.20%
Balance Sheet	
Total Cash (mrq)	22.45B
Total Cash Per Share (mrq)	4.23
Total Debt (mrq)	7.65B
Total Debt/Equity (mrq)	18.22
Current Ratio (mrq)	1.29
Book Value Per Share (mrq)	7.91
Cash Flow Statement	
Operating Cash Flow (ttm)	9.94B
Levered Free Cash Flow (ttm)	7.45B

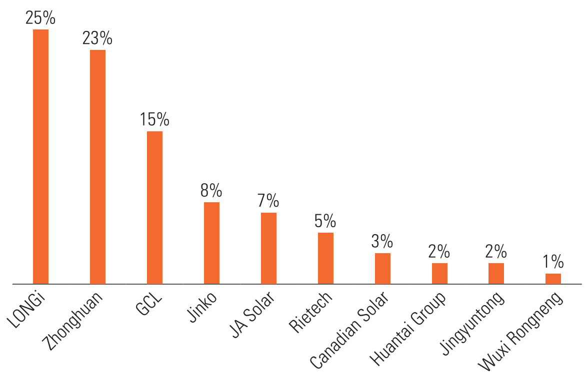
Stock Price History	
Beta (5Y Monthly)	N/A
52-Week Change	171.48%
S&P500 52-Week Change	37.80%
52 Week High	93.00
52 Week Low	31.86
50-Day Moving Average	76.07
200-Day Moving Average	71.78
Share Statistics	
Avg Vol (3 month)	86.26M
Avg Vol (10 day)	100.54M
Shares Outstanding	5.41B
Implied Shares Outstanding	N/A
Float	2.83B
% Held by Insiders	30.48%
% Held by Institutions	25.57%
Shares Short (Jun 14, 2021)	N/A
Short Ratio (Jun 14, 2021)	N/A
Short % of Float (Jun 14, 2021)	N/A
Short % of Shares Outstanding (Jun 14, 2021)	N/A
Shares Short (prior month May 13, 2021)	N/A
Dividends & Splits	
Forward Annual Dividend Rate	0.38
Forward Annual Dividend Yield	0.44%
Trailing Annual Dividend Rate	0.31
Trailing Annual Dividend Yield	0.34%
5 Year Average Dividend Yield	0.41
Payout Ratio	15.64
Dividend Date	N/A
Ex-Dividend Date	Jun 22, 2021
Last Split Factor	1:1
Last Split Date	May 28, 2018

Business Review

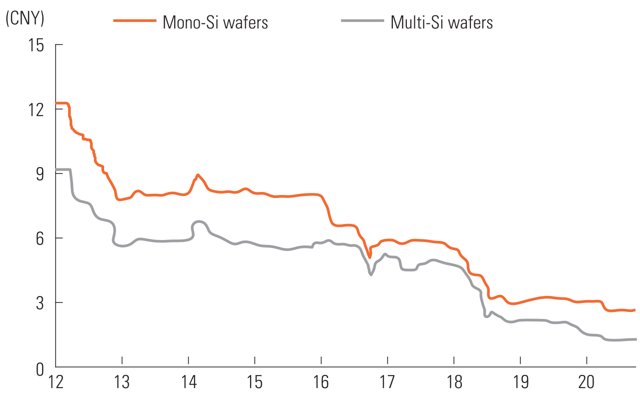
LONGi's stock has received much attention from analysts and investors lately as a result of: 1) the global ESG wave leading to higher usage of solar energy; 2) continuous decline in generation costs; 3) and China's strengthening stance on climate change; and 4) greater inflow of funds into ESG and climate-related investments.

- In 2019, LONGi was the no. 1 player in mono-Si wafers and the no. 4 player in modules. The company is poised to be no. 1 in both markets.
- LONGi's revenue from exports, which has grown steadily over the past few years, reached 38% in 1H20 and is expected to grow at a faster rate than that of its competitors – Jinko (83%) and JA Solar (70%) – due to its relatively short history in the module market and as a result of growing solar PV demand both in China and abroad.
- According to Mirae Asset Daewoo, global solar PV demand is expected to expand at around 10% annually in the medium and long term. China's solar PV demand is expected to increase by more than 40GW annually.
- Wood Mackenzie estimates that China will need to add 1,905GW of solar power generation capacity (equivalent to around 50GW per year) to achieve its goal of net-zero emissions by 2060. LONGi stands to benefit as the market leader.
- As the market shifts from multi-Si to the more efficient mono-Si wafers, LONGi stands to benefit as the market leader in mono-Si wafer development. The global market share of mono-Si is projected to rise from 62% in 2019 to 88% in 2023.
- As the Chinese government phases out solar PV subsidies, project owners are showing greater preference for mono-Si wafers.

Global wafer M/S in 2019(by production volume)



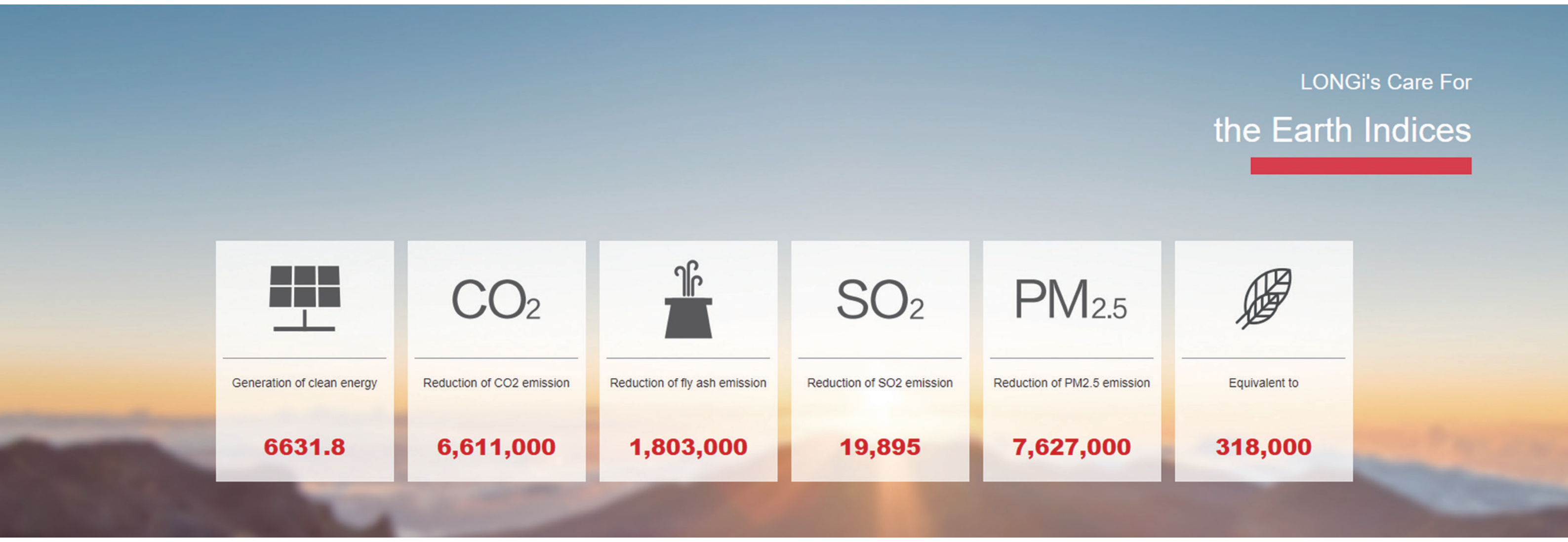
Mono-Si and multi-Si wafer price trends



Source: Mirae Asset Daewoo

ESG Review

- LONGi received the title of "National Green Factory" twice for its green practices in its Southeast Asian factories.
- Over 90% of the company's modules are comprehensively recycled and reused.
- LONGi has created a women workers' committee with the purpose of serving women worker concerns and has even set up a mother-baby room for mothers.
- The company created the Longi One Percent Education Fund under the Chinese Red Cross One Percent Foundation, sponsoring education opportunities and scholarships for poverty-stricken students at prestigious Chinese universities such as the Tsinghua University, Xi'an Jiaotong University, Lanzhou University and Sun Yat-Sen University
- LONGi participated in the construction of a 37.6 MW photovoltaic power station for poverty alleviation in Dongxiang County of Gansu Province, a 41.52 MW one in Kangbao County of Hebei Province, a 100 MW one in Gonghe County of Qinghai Province, and many more, thus generating high, stable income brought by power generation to the local people.
- However, the process of governance within Longi is unclear as the relationship between investors and board of directors is not disclosed publicly.



Source: Longi Green Energy Technology Co

Maxar Technologies Inc

NYSE: MAXR

Hansoo Bae

Maxar Technologies, a space technology company based in Colorado, specializes in manufacturing satellites and spacecraft components for communications. The company operates through two segments, Earth Intelligence and Space Infrastructure, which help government and commercial customers to monitor, understand and navigate changing planet; deliver global broadband communications; and explore and advance the use of space. Specifically, the company delivers end-to-end capabilities in satellites, robotics, earth imagery, geospatial data, analytics, and insights. Maxar Technologies' largest customer is the United States government, for which it provides satellite images and expert intelligence which all contribute to national security.

Maxar Technologies has expanded its business to 70 countries, and serves industries such as civil government, defense and intelligence, automotive, consumer mapping, energy, telecommunications, satellite communications, among others. It has built a reputation as a leading space technology company by putting 80 satellites in orbit with more than 285 built spacecraft launches. Maxar trades on the New York Stock Exchange and Toronto Stock Exchange as MAXR.

Valuation Measures	
Market Cap (intraday)	2.44B
Enterprise Value	4.84B
Trailing P/E	7.87
Forward P/E	6.80
PEG Ratio (5 yr expected)	1.25
Price/Sales (ttm)	1.41
Price/Book (mrq)	1.95
Enterprise Value/Revenue	2.79
Enterprise Value/EBITDA	12.39
Profitability	
Profit Margin	15.40%
Operating Margin (ttm)	3.40%
Management Effectiveness	
Return on Assets (ttm)	0.79%
Return on Equity (ttm)	-5.46%
Income Statement	
Revenue (ttm)	1.73B
Revenue Per Share (ttm)	28.02
Quarterly Revenue Growth (yoy)	2.90%
Gross Profit (ttm)	730M
EBITDA	391M
Net Income Avi to Common (ttm)	-52M
Diluted EPS (ttm)	4.31
Quarterly Earnings Growth (yoy)	N/A
Balance Sheet	
Total Cash (mrq)	22M
Total Cash Per Share (mrq)	0.31
Total Debt (mrq)	2.36B
Total Debt/Equity (mrq)	188.93
Current Ratio (mrq)	0.73
Book Value Per Share (mrq)	17.38
Cash Flow Statement	
Operating Cash Flow (ttm)	231M
Levered Free Cash Flow (ttm)	464.38M

Stock Price History	
Beta (5Y Monthly)	1.33
52-Week Change	109.10%
S&P500 52-Week Change	37.41%
52 Week High	58.75
52 Week Low	16.25
50-Day Moving Average	36.94
200-Day Moving Average	39.47
Share Statistics	
Avg Vol (3 month)	1.27M
Avg Vol (10 day)	1.33M
Shares Outstanding	71.86M
Implied Shares Outstanding	N/A
Float	70.25M
% Held by Insiders	1.54%
% Held by Institutions	75.02%
Shares Short (Jun 14, 2021)	6.14M
Short Ratio (Jun 14, 2021)	5.45
Short % of Float (Jun 14, 2021)	8.64%
Short % of Shares Outstanding (Jun 14, 2021)	8.55%
Shares Short (prior month May 13, 2021)	6.7M
Dividends & Splits	
Forward Annual Dividend Rate	0.04
Forward Annual Dividend Yield	0.11%
Trailing Annual Dividend Rate	0.04
Trailing Annual Dividend Yield	0.11%
5 Year Average Dividend Yield	3.15
Payout Ratio	N/A
Dividend Date	Jun 29, 2021
Ex-Dividend Date	Jun 13, 2021
Last Split Factor	N/A
Last Split Date	N/A

Business Analysis

Commercial space travel and the so-called space race of the world's billionaires have officially kicked off with Richard Branson's Virgin Galactic and Jeff Bezos's Blue Origin successfully completing their suborbital spaceflights. With commercial interest in space travel gaining traction, space-related stocks are gaining in popularity among investors.

- Maxar Technologies last posted its quarterly earnings results on May 2nd. The company reported -$1.30 earnings per share for the quarter, missing analysts' consensus estimates of -$0.06 by -$1.24. Maxar Technologies had a negative return on equity of 13.42% and a net margin of 15.40%. The firm had revenue of $392.00 million for the quarter, compared to analyst estimates of $435.81 million. During the same period last year, the company posted ($0.80) earnings per share. The firm's quarterly revenue was up 2.9% compared to the same quarter last year.
  - Maxar's shares tumbled 24.5% after the company announced a worse-than-expected quarterly results.

- In June, the company announced that it delivered 3D data products and high-resolution satellite imagery to the Australian Department of Defence under recent multi-million-dollar contracts. This includes a 3D Surface Model which provides a high-fidelity, positionally accurate and photorealistic view of terrain and surface features and textures. These latest contracts illustrate the increased adoption of commercial satellite imagery and derived data products for critical national defense and intelligence missions.

- Maxar acquired a contract for WorldView Legion satellite constellation capacity, which is a multi-year, $35 million contract that extends the customer's ability to directly task and download 30 cm-class satellite imagery to its ground station from Maxar's current constellation under the Direct Access Program. With this, it would enhance situational awareness and decision-making for the customer's critical government missions.
  - Morgan Stanley analyst Matthew Sharpe expects accelerated revenue growth and improved margins as the planned WorldView Legion constellation of satellites appear online later this year. He expects the satellites to contribute about 10% revenue growth by 2023.

- DigitalGlobe acquisition in 2018 is expected to produce great synergy with Maxar's core businesses. Maxar can use its ability to have a low-level orbital satellite structure and assimilate the data that they receive from that for a variety of demands from companies on Earth.

- Maxar's work on a Power and Propulsion Element (PPE) for NASA's lunar Gateway has passed its first Preliminary Design Review (PDR) and remains on track for launch in 2024.. Overall, Senior VP Chris Johnson believes that Maxar's progress on the PPE serves to show that the company is gearing up to "meet a broad range of civil, commercial, and national security mission needs."

- S&P Global Market Intelligence expects Maxar to turn free cash flow positive this year ($28 million), then grow that number 14-fold over the next three years, generating positive cash profits of $385 million by 2024.

Microsoft Corporation

NASDAQ: MSFT

Yihyun Nam

Microsoft was founded on April 4, 1975, by Bill Gates and Paul Allen. Gates and Allen started Microsoft—originally called Micro-Soft, for microprocessors and software—in order to produce software for the Altair 8800, an early personal computer. By the end of 1978, Microsoft's sales topped more than $1 million. The company went on to license its MS-DOS operating system to IBM for its first personal computer, which debuted in 1981. Afterward, other computer companies started licensing MS-DOS, which had no graphical interface and required users to type in commands in order to open a program.

In 1985, Microsoft released a new operating system, Windows, with a graphical user interface that included drop-down menus, scroll bars and other features. By the late 1980s, Microsoft had become the world's biggest personal-computer software company, based on sales. In 1995, amidst skyrocketing purchases of personal computers for home and office use, Windows 95 made its debut. It included such innovations as the Start menu , and 7 million copies of the new product were sold in the first five weeks. During the second half of the 1990s, Internet usage took off, and Microsoft introduced its web browser, Internet Explorer, in 1995.

In 2000, Gates relinquished his role as CEO of Microsoft to Steve Ballmer; in 2008, Gates left the day-to-day running of the company, though he remained as chairman of the board. In 2014, Microsoft executive Satya Nadella replaced Ballmer as CEO. Despite the leadership change, the company retained its top spot in both business and consumer segments, including operating systems, productivity software, and online gaming services. In 2012 it introduced Surface, a line of hybrid tablet computers with hardware designed by Microsoft itself, a first for the company. It also had competitive products in almost all areas of business information technology and applications.

Valuation Measures	
Market Cap (intraday)	2.11T
Enterprise Value	2.04T
Trailing P/E	38.15
Forward P/E	33.45
PEG Ratio (5 yr expected)	2.07
Price/Sales (ttm)	13.18
Price/Book (mrq)	15.68
Enterprise Value/Revenue	12.77
Enterprise Value/EBITDA	27.03
Profitability	
Profit Margin	35.02%
Operating Margin (ttm)	40.15%
Management Effectiveness	
Return on Assets (ttm)	13.51%
Return on Equity (ttm)	44.99%
Income Statement	
Revenue (ttm)	159.97B
Revenue Per Share (ttm)	21.16
Quarterly Revenue Growth (yoy)	19.10%
Gross Profit (ttm)	96.94B
EBITDA	75.58B
Net Income Avi to Common (ttm)	56.01B
Diluted EPS (ttm)	7.34
Quarterly Earnings Growth (yoy)	43.80%
Balance Sheet	
Total Cash (mrq)	125.01B
Total Cash Per Share (mrq)	16.6
Total Debt (mrq)	81.26B
Total Debt/Equity (mrq)	60.41
Current Ratio (mrq)	2.29
Book Value Per Share (mrq)	17.85
Cash Flow Statement	
Operating Cash Flow (ttm)	72.7B
Levered Free Cash Flow (ttm)	37.78B

Stock Price History	
Beta (5Y Monthly)	0.79
52-Week Change	31.91%
S&P500 52-Week Change	31.96%
52 Week High	284.10
52 Week Low	196.25
50-Day Moving Average	266.27
200-Day Moving Average	246.63
Share Statistics	
Avg Vol (3 month)	24.87M
Avg Vol (10 day)	25.16M
Shares Outstanding	7.53B
Implied Shares Outstanding	N/A
Float	7.52B
% Held by Insiders	0.07%
% Held by Institutions	72.05%
Shares Short (Jun 14, 2021)	50.82M
Short Ratio (Jun 14, 2021)	2.2
Short % of Float (Jun 14, 2021)	0.68%
Short % of Shares Outstanding (Jun 14, 2021)	0.67%
Shares Short (prior month May 13, 2021)	46.47M
Dividends & Splits	
Forward Annual Dividend Rate	2.24
Forward Annual Dividend Yield	0.81%
Trailing Annual Dividend Rate	2.19
Trailing Annual Dividend Yield	0.78%
5 Year Average Dividend Yield	1.57
Payout Ratio	29.16%
Dividend Date	Sep 08, 2021
Ex-Dividend Date	Aug 17, 2021
Last Split Factor	2:1
Last Split Date	Feb 17, 2003

Business Review

Microsoft's core software business remains the cash cow investors have relied on for decades. This core business has been extremely successful, and is likely to continue its success over the long-term. It has provided growing recurring cash flows that have given Microsoft the ability to aggressively expand into other key businesses.

- Windows software already boasts 1.3 billion users, but among the two focal points many growth investors appreciate are cloud computing and gaming. According to the company's recent financial results, these two segments were among the fastest growing of all the company's core businesses.
- Intelligent Cloud, which includes Azure, made up $15.1 billion of the $41.7 billion reported in overall revenue for Microsoft this past quarter. On a year-over-year basis, this segment was up 26%. Intelligent Cloud now makes up more than 36% of Microsoft's business. Its Azure cloud platform is seeing the most robust growth, as its revenue was up 50% year-over-year in their most recent quarterly results.
- MS has 16.9% market share in IAAS business which is an infrastructure cloud service.
- The company's gaming business falls under the "More Personal Computing" category, which made up approximately 31% of Microsoft's overall revenue this past quarter. The company's impressive growth rate in its Xbox content and services business of 34% suggests the pandemic-related catalysts that carried this segment last year are far from over.
- Microsoft has released Windows 11, a new operating system in six years. The free update policy from Windows 10, the latest OS with #1 share (78.89%) within Windows, will make the market share of the Windows combines even larger.
- Microsoft is a monopoly in PC OS market, taking up 87.56% if the market share.
- Microsoft is expected to report 16% sales growth in fiscal 2021 ending June, while profit is forecast to rise to $7.77 a share from $5.76 a share in fiscal 2020
- Microsoft's value grew 30% in 2020, which is the biggest growth amongst tech companies.

ESG Review

Beyond its impressive numbers, Microsoft is also gaining fans for its commitment to be a good corporate citizen.

- Microsoft has achieved 100% carbon neutrality across the world since 2012 and commits to being carbon negative by 2030. The company as a whole reduced collective carbon footprints by 21B metric tons.

- Over 60,000 metric tons of waste were diverted from landfills in MS over the last fiscal year.

- 10 petabytes of environmental and Earth observation data are available on MS Azure for the conservation community.

- MS announced $1B investment for Climate Innovation Fund: $50 million in Energy Impact Partners' global platform for innovation of new carbon technologies; $30 million in Closed Loop Partners fund for waste innovation; and, $10 million in Emerald Technology Ventures fund to accelerate water technologies.

- MS announced a partnership with Sol Systems for 500MW renewable energy investment.

- MS's Social and Environmental Accountability Academy (SEA) platform was used to train 2,234 supplier employees to improve SEA management capabilities.

- The company has made a $500 million investment in loans and grants to help create more affordable housing in the Puget Sound area.

- The company boasts a long list of global recognitions in ESG, including #1 position on the JUST Capital's Top 33 Companies for Workers by Industry, #1 overall on the Ranking Digital Rights Corporate Accountability Index, inclusion in the FTSE4Good Index, inclusion in the Euronext World 120 and Euronext US 50 indexes, #1 rating for Environment and Social scores within the ISS E&S QualityScore, #1 on the 2019 Just 100 by Just Capital and Fobes, inclusion in the Carbon Disclosure Project's Climate A List, its 11th year on the Dow Jones Sustainability Indices North America Index and 10th consecutive year on the World Index, AAA rating on MSCI Ratings, and "Outperformer" rating from Sustainalytics.

Nike Inc

NYSE: NKE

Haewon Yun

NIKE, Inc., together with its subsidiaries, designs, develops, markets, and sells athletic footwear, apparel, equipment, and accessories worldwide. The company offers NIKE brand products in six categories, including running, NIKE basketball, the Jordan brand, football, training, and sportswear. It also markets products designed for kids, as well as for other athletic and recreational uses, such as American football, baseball, cricket, golf, lacrosse, skateboarding, tennis, volleyball, walking, wrestling, and other outdoor activities; and apparel with licensed college and professional team and league logos, as well as sells sports apparel. In addition, the company sells a line of performance equipment and accessories comprising bags, socks, sport balls, eyewear, timepieces, digital devices, bats, gloves, protective equipment, and other equipment for sports activities; and various plastic products to other manufacturers. Further, it provides athletic and casual footwear, apparel, and accessories under the Jumpman trademark; casual sneakers, apparel, and accessories under the Converse, Chuck Taylor, All Star, One Star, Star Chevron, and Jack Purcell trademarks; and action sports and youth lifestyle apparel and accessories under the Hurley trademark.

Additionally, the company licenses agreements that permit unaffiliated parties to manufacture and sell apparel, digital devices, and applications and other equipment for sports activities under NIKE-owned trademarks. It sells its products to footwear stores; sporting goods stores; athletic specialty stores; department stores; skate, tennis, and golf shops; and other retail accounts through NIKE-owned retail stores, digital platforms, independent distributors, licensees, and sales representatives. The company was formerly known as Blue Ribbon Sports, Inc. and changed its name to NIKE, Inc. in 1971. NIKE, Inc. was founded by Charge Bowerman and Phil Knight in 1964 and is headquartered in Beaverton, Oregon. The name "Nike" is derived from the Greek goddess of victory.

Valuation Measures	
Market Cap (intraday)	263.15B
Enterprise Value	262.49B
Trailing P/E	46.73
Forward P/E	32.62
PEG Ratio (5 yr expected)	2.16
Price/Sales (ttm)	5.91
Price/Book (mrq)	20.56
Enterprise Value/Revenue	5.89
Enterprise Value/EBITDA	32.70
Profitability	
Profit Margin	12.86%
Operating Margin (ttm)	16.24%
Management Effectiveness	
Return on Assets (ttm)	13.08%
Return on Equity (ttm)	55.01%
Income Statement	
Revenue (ttm)	44.54B
Revenue Per Share (ttm)	28.31
Quarterly Revenue Growth (yoy)	95.50%
Gross Profit (ttm)	20B
EBITDA	8.03B
Net Income Avi to Common (ttm)	5.73B
Diluted EPS (ttm)	3.56
Quarterly Earnings Growth (yoy)	N/A
Balance Sheet	
Total Cash (mrq)	13.48B
Total Cash Per Share (mrq)	8.52
Total Debt (mrq)	12.81B
Total Debt/Equity (mrq)	100.36
Current Ratio (mrq)	2.72
Book Value Per Share (mrq)	8.09
Cash Flow Statement	
Operating Cash Flow (ttm)	6.66B
Levered Free Cash Flow (ttm)	5.62B

Stock Price History	
Beta (5Y Monthly)	0.86
52-Week Change	71.13
S&P500 52-Week Change	36.19%
52 Week High	166.45
52 Week Low	95.80
50-Day Moving Average	147.61
200-Day Moving Average	139.52
Share Statistics	
Avg Vol (3 month)	7.04M
Avg Vol (10 day)	5.55M
Shares Outstanding	1.28B
Implied Shares Outstanding	1.58B
Float	1.26B
% Held by Insiders	0.28%
% Held by Institutions	83.50%
Shares Short (Jun 14, 2021)	13.08M
Short Ratio (Jun 14, 2021)	1.49
Short % of Float (Jun 14, 2021)	1.34%
Short % of Shares Outstanding (Jun 14, 2021)	0.83%
Shares Short (prior month May 13, 2021)	12.81M
Dividends & Splits	
Forward Annual Dividend Rate	1.1
Forward Annual Dividend Yield	0.66%
Trailing Annual Dividend Rate	1.07
Trailing Annual Dividend Yield	0.65%
5 Year Average Dividend Yield	1.04
Payout Ratio	30.06%
Dividend Date	Jun 30, 2021
Ex-Dividend Date	May 27, 2021
Last Split Factor	2:1
Last Split Date	Dec 23, 2015

Business Analysis

Nike had underperformed the market in 2021 until it posted blowout fourth quarter fiscal 2021 results on June 24. With growth rebounding across all major geographies and booming online sales, the sportswear giant's stock price has surged 20% to reach new highs.

- COVID-19 not only forced Nike to temporarily close its stores but also put a halt on all businesses related to professional sporting events.

- Nike's business, however, recovered at a much faster rate than originally expected.
  - Nike's fourth quarter revenues jumped 96% YoY and 21% compared to the fourth quarter of 2019. The company also swung from an adjusted loss of -$0.51 a share to +$0.93. Earnings per share soared 123% to $3.56.
  - Last year's top-line growth marked the company's best in decades—pulling in $44.54 billion—as it proves once again it is the undisputed champion of the sports apparel and sneaker world.
  - In North America, Nike delivered record revenues, which were up 141% on a reported basis for the fourth quarter and up 29% compared to the fourth quarter of 2019.
  - Europe, Middle East, and Africa sales jumped 107% to $3 billion.
  - Asia Pacific & Latin America sales surged 76% to $1.46 billion.
  - Greater China sales grew 9% to $1.9 billion, despite Chinese consumers calling for a boycott of Western goods after Nike and others accused Chinese officials of using forced labor against Uighur Muslims in Xinjiang. However, China will be the key market to watch given the fact it comprises around 20% of overall revenue and is Nike's fastest-growing business.
  - Management sees fiscal 2022 sales topping $50 billion.

- The company's margins climbed as its Consumer Direct Acceleration strategy focusing on online sales gained momentum this year, with Nike Direct sales increasing 73% to $4.5 billion. CEO John Donahoe expressed continual support and investment in "innovation and digital leadership to set the foundation for Nike's long-term growth."
  - Nike's membership program, which now tops 300 million worldwide, is helping to boost online sales.
  - Nike continued to see growth from the connections it built with fans during the pandemic. It encouraged fans to use its training apps for workouts and tips, which translated into sales.

- The company showed remarkable outperformance across the board, including its subsidiary Jordan brand. Jordan brand sales rose an impressive 31% to $5 billion.

- Nike has also battled against supply chain headwinds that have plagued many in the sportswear industry. However, due to its size and scale, as well as recent acquisitions to digitalize the supply chain, the company is in a better position than its rivals to overcome the supply bottleneck issue.

ESG Analysis

- 99.9% of Nike's manufacturing scraps at NikeTier 1 finished goods footwear suppliers were diverted from landfills. Since FY15, more than 47 million kilograms of manufacturing scraps were recycled into new footwear products.
- Nike exceeded its FY20 target by achieving a 30% reduction in textile dyeing and finishing supplier freshwater use per kilogram of material, which translates to a cumulative 40 billion liters of freshwater avoided by their suppliers since FY16.
- The company is currently using 100% renewable energy in the United States and Canada for its owned or operated sites. Globally, Nike was powered by 48% renewable energy in FY20. Since FY15, its footwear suppliers have achieved a nearly 10% reduction in energy consumption per pair produced.
- Women make up 49.5% of the company's total employee base.
- Racial and ethnic minorities at the Vice President (VP) levels in the U.S. increased 8 p.p. in 2020 to 29%.

2020 Targets Overview

Target met · Substantial progress · Target not met

Key	△ Increase	▽ Decrease
Favorable	▲ (orange)	▼ (orange)
Unfavorable	▲ (blue)	▼ (blue)

Metric	Unit of Measurement	FY15 Baseline	FY20	FY20 Change vs. Baseline	Final status
Community Impact					
Invest a minimum of 1.5% of pre-tax income to drive positive impact in our communities	%	1.9%	1.9%	N/A	Target met
Manufacturing					
Source 100% from factories that meet our definition of sustainable (rated bronze or better)	%	86%	94%	▲45 p.p. (VS. FY11 BASELINE)	Substantial progress
Eliminate excessive overtime (EOT)	%	3.3%	0.8%	▼2.5 p.p.	Substantial progress
Product					
80% product scored on sustainability performance	%	27%	60%	▲33 p.p.	Substantial progress
10% reduction in the average product carbon footprint per unit	(kg CO_2e/unit)	7.33	7.33	0%	Target not met
Materials					
Increase use of more sustainable materials in apparel	%	19%	59%	▲40 p.p.	Target met
Increase use of more sustainable materials in footwear	%	31%	29%	▼2 p.p.	Target met
Source 100% of our cotton more sustainably	%	24%	100%	▲76 p.p.	Target met
Carbon and Energy					
100% renewable energy in owned or operated facilities (by FY25)	%	14%	48%	▲34 p.p.	Target met
25% reduction in energy use in key operations	(kWhe/unit)	5.79	5.62	▼3%	Target not met

Metric	Unit of Measurement	FY15 Baseline	FY20	FY20 Change vs. Baseline	Final status
25% reduction in carbon emissions per unit in key operations	(kg CO_2e/unit)	2.02	1.91	▼5%	Target not met
35% reduction in energy use in textile dyeing and finishing	(kWhe/kg)	15.86	13.30	▼16%	Substantial progress
35% reduction in carbon emissions in textile dyeing and finishing	(kg CO_2e/kg)	4.78	4.05	▼15%	Substantial progress
Waste					
Eliminate footwear manufacturing waste to landfill or incineration	%	-	0.1%	▼6.5 p.p.	Target met
10% reduction in waste index, covering FW Manufacturing, Distribution Centers, and HQs	-	100	97	▼3%	Target not met
Increase landfill diversion at Distribution Centers and HQs	%	88%	88%	0 p.p.	Target not met
Water					
20% reduction in freshwater in textile dyeing and finishing	L/kg	-	88.2%	▼30 p.p.	Target met
Chemistry					
100% compliance with NIKE Restricted Substance List (RSL)	%	95%	98%	N/A	Target met
100% compliance with the zero discharge of hazardous chemicals (ZDHC) Manufacturing Restricted Substance List (MRSL)	%	-	85%	▲18 p.p.	Substantial progress
100% of focus suppliers meeting NIKE's wastewater quality requirements for textile dyeing and finishing processes	%	-	69%	▲29 p.p.	Target not met

Source: FY2020 NIKE, Inc. Impact Report

NVIDIA Corporation

NASDAQ: NVDA

Jangkyung Choi

NVIDIA Corporation is an American multinational technology company founded on April 5, 1993, by Jensen Huang, its current CEO. Headquartered in Santa Clara, California, It mainly designs graphics processing units (GPUs), targeted at both the consumer and the enterprise market. NVIDIA's graphics processing units (GPUs) are used for a range of high-performance computing tasks, such as powering live-streamed video, artificial intelligence (AI) assistants, weather forecasting, medical imaging, and even fraud detection in financial services. NVIDIA currently has a strong presence in the gaming industry. In addition to manufacturing consumer GPUs (mainly targeted at gaming), they also offer cloud gaming service called GeForce Now. Its professional line of GPUs are targeted at fields such as engineering, architecture, and scientific research. Their thriving consumer and professional GPU businesses have allowed NVIDIA to become the most dominant GPU manufacturer in the world. That said, NVIDIA's largest competitors include Advanced Micro Devices (AMD), which is also a manufacturer of computer processors. Although AMD has been growing significantly lately, especially in their CPU business, NVIDIA remains to have a firm grip on the GPU market, with over 80% market share (compared to AMD's 10%).

Valuation Measures	
Market Cap (intraday)	507.66B
Enterprise Value	502.74B
Trailing P/E	96.32
Forward P/E	47.24
PEG Ratio (5 yr expected)	1.95
Price/Sales (ttm)	26.36
Price/Book (mrq)	27.04
Enterprise Value/Revenue	26.11
Enterprise Value/EBITDA	72.10
Profitability	
Profit Margin	27.66%
Operating Margin (ttm)	29.61%
Management Effectiveness	
Return on Assets (ttm)	13.18%
Return on Equity (ttm)	33.43%
Income Statement	
Revenue (ttm)	19.26B
Revenue Per Share (ttm)	31.12
Quarterly Revenue Growth (yoy)	83.80%
Gross Profit (ttm)	10.56B
EBITDA	6.97B
Net Income Avi to Common (ttm)	5.33B
Diluted EPS (ttm)	8.46
Quarterly Earnings Growth (yoy)	108.50%
Balance Sheet	
Total Cash (mrq)	12.67B
Total Cash Per Share (mrq)	20.33
Total Debt (mrq)	7.74B
Total Debt/Equity (mrq)	41.22
Current Ratio (mrq)	4.53
Book Value Per Share (mrq)	30.14
Cash Flow Statement	
Operating Cash Flow (ttm)	6.79B
Levered Free Cash Flow (ttm)	3.87B

Stock Price History	
Beta (5Y Monthly)	1.38
52-Week Change	93.85%
S&P500 52-Week Change	38.26%
52 Week High	835.00
52 Week Low	391.08
50-Day Moving Average	711.70
200-Day Moving Average	592.97
Share Statistics	
Avg Vol (3 month)	9.81M
Avg Vol (10 day)	10.28M
Shares Outstanding	623M
Implied Shares Outstanding	N/A
Float	599.22M
% Held by Insiders	4.02%
% Held by Institutions	67.48%
Shares Short (Jun 14, 2021)	7.46M
Short Ratio (Jun 14, 2021)	0.69
Short % of Float (Jun 14, 2021)	1.25%
Short % of Shares Outstanding (Jun 14, 2021)	1.20%
Shares Short (prior month May 13, 2021)	6.68M
Dividends & Splits	
Forward Annual Dividend Rate	0.64
Forward Annual Dividend Yield	0.08%
Trailing Annual Dividend Rate	0.64
Trailing Annual Dividend Yield	0.08%
5 Year Average Dividend Yield	0.31
Payout Ratio	7.57%
Dividend Date	Jun 30, 2021
Ex-Dividend Date	Jun 08, 2021
Last Split Factor	3:2
Last Split Date	Sep 10, 2007

Business Review

Despite already having a sizable market share in its core businesses, NVIDIA has consistently beaten investors' expectations with massive growth.

- In 2021 Q1, NVIDIA reported a revenue of $5.66 billion, up 84% YoY. Its diluted earnings per share was reported at $3.03, which is up 106%.

- NVIDIA's rapid growth can be attributed to its booming gaming and data center business (the two segments that make up the most of the company's revenues.

  - Bank of America Securities analyst Vivek Arya expects the data center segment to overtake gaming, bringing in an estimated $30 billion in revenue annually by 2025. Over the last four quarters, the data center segment generated $7.6 billion, so there are huge growth expectations here
  - Its gaming segment, which makes up 47% of their revenue, has grown 41% year over year in fiscal 2021 (caused by a very strong upgrade cycle to its new Ampere GPUs).
  - NVIDIA's data center segment is also showing promising growth, with a five year compound annual growth rate of 82%.

Segment	Q1 Fiscal 2022	Q1 Fiscal 2021	Growth (Decline)
Gaming	$2.76 billion	$1.34 billion	106%
Data center	$2.05 billion	$1.14 billion	79%
Pro visualization	$372 million	$307 million	21%
Automotive	$154 million	$155 million	(0.65%)
OEM and other	$327 million	$138 million	136%
Total	$5.66 billion	$3.08 billion	84%

- In addition, NVIDIA has announced, back in September of 2020, that they will acquire Arm from Softbank Group for $40 billion.

  - If the Arm deal is completed, which NVIDIA believes will happen by 2022, it will accelerate NVIDIA's deployment of AI computing across all of the markets where Arm's chip architecture is already dominant, in addition to paving a path for NVIDIA's expansion into new markets, such as bringing AI computing to the edge on 5G networks.
  - Three top customers of Arm -- Broadcom, MediaTek, and Marvell Technology -- recently threw their support behind the deal, which significantly raises the chances that NVIDIA will receive approval from the U.K.

- That said, this deal has been met with a lot of backlash, and it's possible that regulators may block the acquisition.

  - However, if the acquisition is to take place, it would solidify NVIDIA's place as one of the most important semiconductor companies of the future; last year alone, Arm has sold over 22 billion chips (compared to NVIDIA's 100 million).

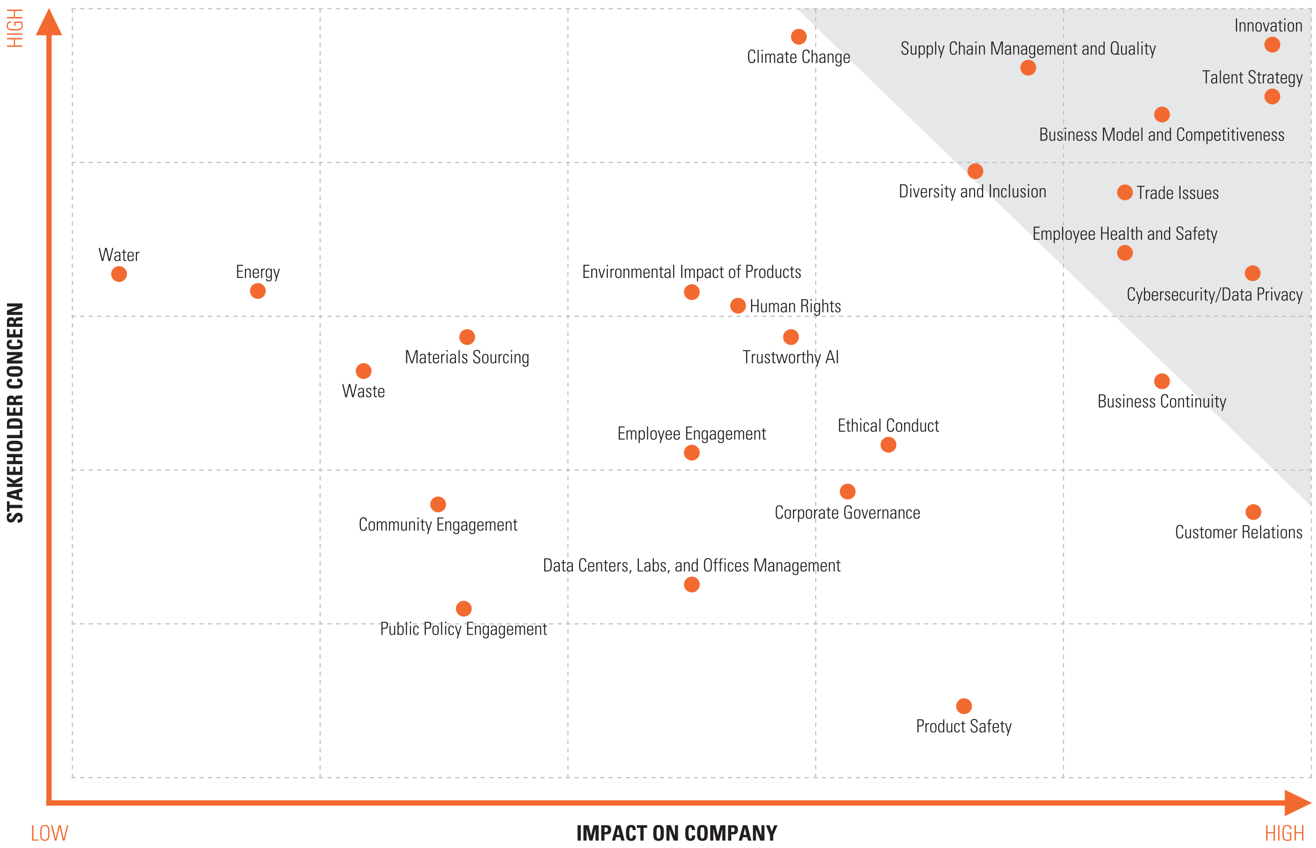
- The company announced a four-for-one stock split in May, which is likely to drive up demand for NVIDIA's shares.

With NVIDIA showing very promising future growth, despite the global chip shortage, it makes an excellent buy.

ESG Review

- NVIDIA established a 'board-level' committee to oversee ESG issues, which is very uncommon.
- NVIDIA aims to have 65% of their global energy use from renewable sources by 2025.
- They contributed $17 million to support COVID-related causes.
  - $430,000 was donated to Wuhan University for virus research; they gave researchers free licenses to aid their research.
- NVIDIA remains exceptionally transparent about ESG disclosures.

NVIDIA FY22 CSR Priorities



Source: NVIDIA

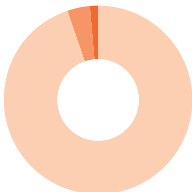
ProShares Online Retail ETF

NYSEARCA: ONLN

Woobin Rhee

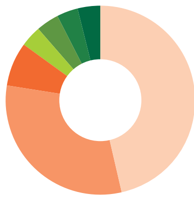
ONLN is part of a suite of ProShares products that focus on retail disruption. The fund tracks an index of global companies that mainly sell online or through other non-store sales channels, such as mobile or app purchase and excludes online travel companies. Components of ONLN are held on a modified market-cap basis, which gives a big boost to the largest stocks in the segment, like Amazon and Alibaba. The modified market cap adjusts to the following: individual company weight may not exceed 24% of the index and the sum of all companies weighing more than 4.5% may not exceed 50% of the index's value. A cap of 25% is placed on non-US holdings. The index is reconstituted annually in June and rebalanced monthly.

ONLN Top 10 Countries



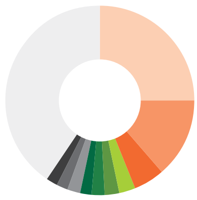
United States	94.91%
Hong kong	3.79%
China	1.30%

ONLN Top 10 Sectors



Department Stores	46.49%
Internet Services	31.18%
Other Specialty R...	7.47%
Software	3.74%
Drug Retailers	3.73%
Advertising & Mar...	3.72%
Discount Stores	3.67%

ONLN Top 10 Holdings [View All]

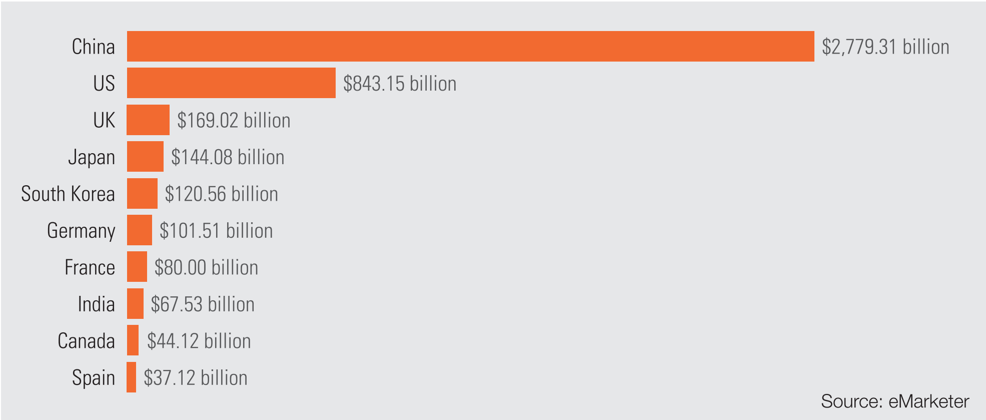


Amazon.com, Inc.	24.88%
Alibaba Group Ho...	13.51%
Newegg Commer...	5.37%
Stamps.com, Inc.	2.77%
DoorDash, Inc. Cl...	2.47%
eBay, Inc.	2.30%
Etsy, Inc.	2.04%
Betterware de Me...	2.00%
Lands' End, Inc.	1.94%
Chewy, Inc. Class.A	1.90%
Total Top 10 Weig...	59.19%

Description	Ticker Symbol	Market Value ($)	Percentage (%)	Shares/Contracts
AMAZON.COM INC	AMZN	$254,057,382.19	25.06%	71,101.00
ALIBABA GROUP HOLDING-SP ADR	BABA	$142,701,259.34	14.07%	677,626.00
NEWEGG COMMERCE INC	NEGG	$51,477,260.89	5.08%	1,779,373.00
STAMPS.COM INC	STMP	$29,338,576.41	2.89%	90,381.00
DOORDASH INC - A	DASH	$26,144,467.08	2.58%	147,243.00
EBAY INC	EBAY	$24,488,013.87	2.42%	351,991.00
ETSY INC	ETSY	$22,127,098.76	2.18%	113,548.00
WAYFAIR INC- CLASS A	W	$19,617,087.60	1.93%	65,880.00
CHEWY INC - CLASS A	CHWY	$19,609,741.30	1.93%	237,119.00
BETTERWARE DE MEXICO SAB DE	BWMX	$19,533,789.90	1.93%	435,051.00
LANDS' END INC	LE	$19,232,626.98	1.90%	520,786.00
DULUTH HOLDINGS INC - CL B	DLTH	$18,721,896.27	1.85%	1,057,137.00
SHUTTERSTOCK INC	SSTK	$18,144,187.47	1.79%	179,521.00
REVOLVE GROUP INC	RVLV	$17,409,899.50	1.72%	261,803.00
QUOTIENT TECHNOLOGY INC	QUOT	$17,333,591.10	1.71%	1,597,566.00
POSHMARK INC-CLASS A	POSH	$17,289,661.35	1.71%	416,117.00
PINDUODUO INC-ADR	PDD	$17,151,517.25	1.69%	167,741.00
STITCH FIX INC-CLASS A	SFIX	$17,086,956.20	1.69%	301,570.00
LIQUIDITY SERVICES INC	LQDT	$17,043,907.84	1.68%	827,776.00
FIGS INC-CLASS A	FIGS	$16,907,219.48	1.67%	432,631.00
CARPARTS.COM INC	PRTS	$16,700,278.20	1.65%	957,036.00
1STDIBS.COM INC	DIBS	$16,555,417.34	1.63%	741,398.00
QURATE RETAIL INC-SERIES A	QRTEA	$16,544,706.57	1.63%	1,403,283.00
OVERSTOCK.COM INC	OSTK	$16,331,782.50	1.61%	197,961.00
1-800-FLOWERS.COM INC-CL A	FLWS	$16,228,018.00	1.60%	538,600.00
ORIGINAL BARK CO/THE	BARK	$15,622,198.46	1.54%	1,835,746.00
GROUPON INC	GRPN	$15,453,569.53	1.52%	396,347.00
PETMED EXPRESS INC	PETS	$15,008,196.00	1.48%	512,400.00
SEA LTD-ADR	SE	$14,242,904.12	1.40%	50,933.00
REALREAL INC/THE	REAL	$14,197,461.26	1.40%	860,974.00
CONTEXTLOGIC INC - A	WISH	$13,641,950.40	1.35%	1,345,360.00
JD.COM INC-ADR	JD	$13,164,963.66	1.30%	178,218.00
MERCADOLIBRE INC	MELI	$10,804,302.90	1.07%	7,006.00
COUPANG INC	CPNG	$8,712,947.21	0.86%	224,387.00
FARFETCH LTD-CLASS A	FTCH	$2,738,516.61	0.27%	57,909.00
VIPSHOP HOLDINGS LTD - ADR	VIPS	$2,280,236.07	0.22%	126,469.00
OZON HOLDINGS PLC - ADR	OZON	$2,264,810.00	0.22%	42,136.00
GLOBAL-E ONLINE LTD	GLBE	$1,938,404.04	0.19%	34,602.00
AIHUISHOU INTERNATIONAL -ADR	RERE	$1,913,114.55	0.19%	142,239.00
FIVERR INTERNATIONAL LTD	FVRR	$1,909,813.92	0.19%	8,452.00
MYT NETHERLANDS PARENT BV	MYTE	$1,901,436.09	0.19%	65,319.00
BAOZUN INC-SPN ADR	BZUN	$1,735,531.20	0.17%	55,626.00
CANGO INC/KY - ADR	CANG	$1,696,880.32	0.17%	375,416.00
UXIN LTD - ADR	UXIN	$1,651,709.80	0.16%	485,797.00
JUMIA TECHNOLOGIES AG-ADR	JMIA	$1,600,134.71	0.16%	68,587.00
DADA NEXUS LTD-ADR	DADA	$1,560,180.14	0.15%	63,242.00
YATSEN HOLDING LTD-ADR	YSG	$1,483,944.62	0.15%	203,002.00
NET OTHER ASSETS / CASH	-	$583,795.52	0.06%	583,795.52

Online Retail Market Analysis

E-commerce Sales by Country (2021)



Despite rising vaccination rates, declining average daily COVID-19 cases, and more cities and states reopening, people are still shopping online. Nearly $1 in $5 spent on retail purchases during the Q1 2021 came from online orders, as government stimulus checks fueled an online spending spree during the pandemic.

- The global e-commerce market is expected to total $4.89 trillion this year.
  - According to UN Conference on Trade and Development (UNCTAD), the e-commerce sector saw a “dramatic” rise in its share of all retail sales, from 16% to 19% in 2020. Over 2 billion people in the world are expected to be among the online shopping demographic in 2021.
  - China leads the global ecommerce market with online sales totaling around $2.8 trillion.
  - In 2020, retail e-commerce sales grew 27.6% worldwide. Fastest growth was recorded in Latin America at 36.7%, followed by North America at 31.88%, Central & Eastern Europe at 29.1%, Asia-Pacific at 26.4%, Western Europe at 26.3%, and Middle East at 19.8%.
  - The digital retail economy experienced most growth in the Republic of Korea, where internet sales increased from around one in five transactions in 2019, to more than one in four last year.
  - GroupM expects the global market for e-commerce to rise to about $7 trillion by 2024, and $10 trillion by 2027, up 43.7% YoY. The 39.0% growth in Q1 2021 is the second-highest pandemic period increase behind that Q2 2020 peak.

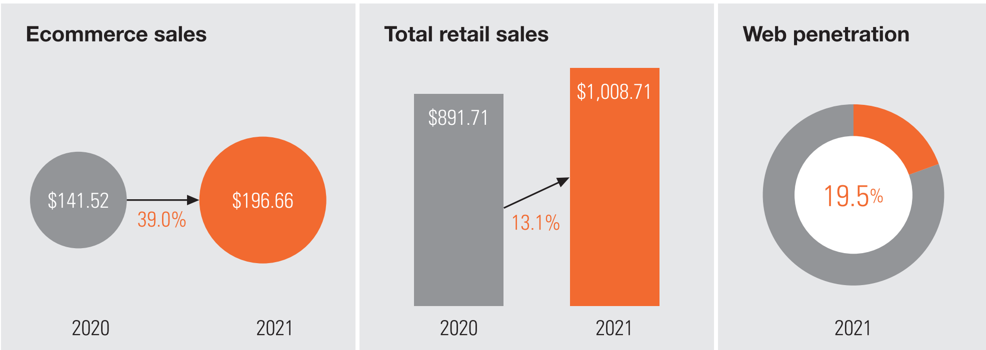
Online retail sales, selected economies, 2018-2020

Economy	Obline retail sales ($billions)			Retail sales ($billions)			Online share ($billions)		
	2018	2019	2020	2018	2019	2020	2018	2019	2020
Australia	13.5	14.4	22.9	239	229	242	5.6	6.3	9.4
Canada	13.9	16.5	28.1	467	462	452	3.0	3.6	6.2
China	1,060.4	1,233.6	1,414.3	5,755	5,957	5,681	18.4	20.7	24.9
Korea(Rep.)	76.8	84.3	104.3	423	406	403	18.2	20.8	25.9
Singapore	1.6	1.9	3.2	34	32	27	4.7	5.9	11.7
United kingdom	84.0	89.0	160.6	565	564	560	14.9	15.8	23.3
United States	519.6	598.0	791.7	5,269	5,452	5,638	9.9	11.0	14.0
Economies above	**1,770**	**2,038**	**2,495**	**12,752**	**13,102**	**13,003**	**14**	**16**	**19**

Source: UN Conference on Trade and Development

- According to U.S. Department of Commerce, consumers closed out the first quarter of 2021 spending significantly more online with U.S. retailers than the same period last year.
  - E-commerce made up about 13.6% of retail sales in the United States in the first quarter of 2021, and large-scale logistics operators and retailers are continuing to invest in IT and automation to continue the e-commerce supply chain for their consumers, according to Kraig Foreman, the president of e-commerce for DHL Supply Chain North America.
  - E-commerce in the United States reached $196.66 billion in Q1 2021, up 39.0% YoY from $141.52 billion in the same quarter of 2020.
  - At least a third of the shoppers in the United States would continue shopping online, while about 25% would use online shopping for groceries at least.
  - eMarketer estimates that U.S. retail e-commerce sales will grow by 13.7% this year and by 15% next year, with consumers expected to spend over $1 trillion via digital retail channels in 2022.
  - Amazon.com Inc. reported rapidly growing sales so far in 2021. The company's U.S. revenue hit $60.44 billion in Q1, up 42.3% from $42.48 billion last year. That is nearly double Amazon's 23.9% revenue growth for the same quarter in 2020. Amazon-owned sales alone accounted for 30.7% of all U.S. e-commerce in Q1 and were responsible for nearly a third of growth in the online sector.
  - Amazon is projected to be raking in more than 40% of U.S. e-commerce sales by the end of 2021.

US retail landscape during Q1 2021, in $billions



Source: U.S. Department of Commerce

E-commerce Trends

- AR enhances the reality of online shopping.
- There will be a growing volume of voice search.
- AI helps shops learn about shoppers.
- On-site personalization uses those insights to create individualized experiences.
- Big data plays a big part in creating personalized experiences.
- Chatbots improve the shopping experience.
- Mobile shopping is still on the move.
- More ways to pay.
- Headless and API-driven ecommerce allow continued innovation.
- Customers respond to video.
- Subscriptions keep customers coming back.
- Sustainability is becoming more important.
- Businesses should optimize digital strategy for conversion.
- B2B is growing and changing.

Source: BigCommerce

Starbucks Corporation

NASDAQ: SBUX

Thomas Lee

Originally founded in the Pike Place Market of Seattle in 1971 by Jerry Bladwin, Zeg Siegl, and Gordon Bowker, Starbucks was named after the first mate of Melville's novel, Moby Dick. Originally founded as a seller of coffee and coffee machine equipment, Starbucks was inspired by Peet's Coffee and Tea in Berkeley, California. Like Peets, Starbucks sought to encourage the consumption of coffee through an education of coffee beans as well as roasting and blending techniques. However, as their business grew, a young man named Howard Schultz joined the company and promoted a different vision for the company.

Unlike the original founders of Starbucks, Howard Schultz was inspired by the multitudes of cafes in Italy to change the business direction of the firm. Rather than continue selling equipment and coffee, Schultz believed that the company needed to market directly to consumers. Although the original founders of Starbucks did not agree to this, Howard Schultz would eventually take over the company in 1987 and implement his vision. As CEO of Starbucks, Howard Schultz was able to transform Starbucks from a regional seller of coffee beans and coffee related paraphernalia into the largest coffee-house chain in the world. As of 2020, Starbucks had over 32,660 stores spread across 83 countries.

Kevin Johnson, who is the current CEO of Starbucks, leads a reinvigorated international entity that is currently listed on the Nasdaq stock exchange. With revenues exceeding 29 billion in the fiscal year 2020, as well as GAAP earnings per share of USD 0.79 (down from USD 2.92 the previous year), Starbucks currently has a market cap of approximately $138 billion, making it one of the top 110 companies in the world.

Valuation Measures	
Market Cap (intraday)	138.03B
Enterprise Value	154.99B
Trailing P/E	137.97
Forward P/E	32.54
PEG Ratio (5 yr expected)	0.74
Price/Sales (ttm)	5.79
Price/Book (mrq)	N/A
Enterprise Value/Revenue	6.50
Enterprise Value/EBITDA	45.65
Profitability	
Profit Margin	4.18%
Operating Margin (ttm)	7.82%
Management Effectiveness	
Return on Assets (ttm)	4.18%
Return on Equity (ttm)	N/A
Income Statement	
Revenue (ttm)	23.84B
Revenue Per Share (ttm)	20.33
Quarterly Revenue Growth (yoy)	11.20%
Gross Profit (ttm)	5.14B
EBITDA	3.39B
Net Income Avi to Common (ttm)	995.8M
Diluted EPS (ttm)	0.85
Quarterly Earnings Growth (yoy)	100.80%
Balance Sheet	
Total Cash (mrq)	4B
Total Cash Per Share (mrq)	3.4
Total Debt (mrq)	23.52B
Total Debt/Equity (mrq)	N/A
Current Ratio (mrq)	1.07
Book Value Per Share (mrq)	-6.50
Cash Flow Statement	
Operating Cash Flow (ttm)	3.84B
Levered Free Cash Flow (ttm)	1.98B

Stock Price History	
Beta (5Y Monthly)	0.88
52-Week Change	59.22%
S&P500 52-Week Change	38.26%
52 Week High	118.98
52 Week Low	71.82
50-Day Moving Average	112.34
200-Day Moving Average	108.97
Share Statistics	
Avg Vol (3 month)	5.43M
Avg Vol (10 day)	5.04M
Shares Outstanding	1.18B
Implied Shares Outstanding	N/A
Float	1.18B
% Held by Insiders	0.17%
% Held by Institutions	71.07%
Shares Short (Jun 14, 2021)	12.07M
Short Ratio (Jun 14, 2021)	2.56
Short % of Float (Jun 14, 2021)	1.03%
Short % of Shares Outstanding (Jun 14, 2021)	1.02%
Shares Short (prior month May 13, 2021)	9.75M
Dividends & Splits	
Forward Annual Dividend Rate	1.8
Forward Annual Dividend Yield	1.57%
Trailing Annual Dividend Rate	1.76
Trailing Annual Dividend Yield	1.52%
5 Year Average Dividend Yield	1.79
Payout Ratio	202.35%
Dividend Date	Aug 26, 2021
Ex-Dividend Date	Aug 10, 2021
Last Split Factor	2:1
Last Split Date	Apr 08, 2015

Business Review

As the world economy starts to shift gears to come out of the COVID-induced recession, past analysis of Starbucks' future growth potential should be reevaluated to determine whether or not Starbucks is worth investing in the future.

- One of the potential negatives of investing in Starbucks is the fact that the price of the company is currently near its all time high. At $117, Starbucks is currently only approximately 5% off it's all time high on April 12, 2021. Furthermore, with a PE ratio of 131.91, Starbucks is currently being valued as if it is a high growth technology company when in reality, it belongs to the consumer discretionary sector. In fact, compared to the S&P 500 which has an average P/E ratio of 13-15, the current price of Starbucks looks extremely overvalued.

- However, if one were to dig deeper into the metrics, Starbucks begins to look like a better buy. In terms of sales growth, the reopening of the world economy after the COVID-19 crisis is enabling Starbucks to return to, and exceed, its previous pattern of growth.

    - The company started recovery in the Q4 2020 (ended September 2020) and Q1 2021 (ended December 2020). The momentum continued in Q2 2021 (ended March 2021) as the company recorded revenue of $6.7 billion, up 11% YoY while earnings improved to $0.58 per share compared to $0.28 per share in the same period of the previous year. The revenue growth was driven by the International market as comparable store sales grew by 35% YoY.
    - For the fiscal year 2021, sales are predicted to increase 21-25%. This would exceed 2019 (pre-covid) levels by 8-11%.
    - Starbucks will also return to opening new stores, with 282 new stores already in the fiscal year 2021. This includes 110 new stores in China alone.

- Starbucks has recently made updates to its customer experience by including app and kiosk-based ordering platforms to its stores. In the background, the company has streamlined inventory and supply chain processes with machine learning and predictive intelligence.

- Starbucks has successfully penetrated the Chinese market for coffee, aided by a nascent middle class and millennial-based demand. This was a particularly impressive achievement, as China's culture had and does revolve around tea. Today, Starbucks has 1,000 stores in 15 different cities across the world's most-populous country.

- The Stars for Everyone loyalty rewards program has helped to increase membership to record numbers and expanded the company's extremely devoted customer base.

ESG Review

- Starbucks as a company has been implementing a climate change strategy since 2004, focusing on renewable energy, energy conservation, climate adaptation and mitigation efforts.
  - Starbucks recognizes that it currently has a greenhouse gas footprint of 16,581,000 metric tons of carbon dioxide and in 2020. It openly stated that it is actively seeking to cut not only this measure but also its water usage and waste generation in half. Furthermore, Starbucks is seeking to develop carbon neutral green coffee by working with sustainable farmers. Whether or not these processes of further reducing Starbucks' footprint will have an impact on Starbucks' bottom line remains to be seen.
  - From FY19to FY20, the company reported an 11% reduction in carbon emissions against its 2030 carbon goal; 4% water reduction against its 2030 water goal; and 12% reduction in waste against its 2030 waste goal.
  - Through Starbucks Farmer Support Centers and a new soil scanning mobile app, the company is helping farmers understand the specific nutrients and fertilizer needed to increase farm productivity.
  - Over the last year, Starbucks purchased nearly 600 eco-mills that have been distributed to coffee farms in Guatemala, Mexico, Peru, Kenya, and Rwanda. The result has been up to 80% water savings in coffee processing where installed.
- As of March 2021, the composition of the Starbucks Board of Directors is 45% people of color and 36% women.
  - In 2020, for the eighth consecutive year and eleventh year overall, Starbucks achieved a 100% rating from the Human Rights Campaign's Corporate Equality Index based on corporate policies and practices for LGBTQIA2+ equality.
  - In 2015, 2016, 2017 and 2019, Starbucks scored 100 out of 100 on the Disability Equality Index (DEI) and was recognized as a "Best Place to Work."
  - Starbucks has achieved and maintained 100% pay equity for women and men, and for people of all races performing similar work in the United States, Singapore, the Philippines, and India.

Xpeng Inc - ADR

NYSE: XPEV

Byungkyu Yi

Xpeng Motors is a Chinese electric vehicle (EV) manufacturer founded in 2014 and headquartered in Guangzhou, China, with offices in Beijing, Shanghai, Silicon Valley, and San Diego. It is one of China's leading smart electric vehicle (EV) companies. The company designs, develops, manufactures, and markets smart EVs that are seamlessly integrated with advanced internet, AI and autonomous driving technologies.

Xpeng's mission is to drive Smart EV transformation with technology and data, shaping the mobility experience of the future. For this, the company is committed to in-house research and development and intelligent manufacturing to create a better mobility experience for its customers. 43% of Xpeng's 3,676 employees are working in research & development related areas.

The company went public last summer on the New York Stock Exchange (NYSE), raising $1.5 billion. Since 2018, the company has launched two EVs — the G3 SUV, followed by the P7 sedan in 2019. Xpeng recently announced pre-orders for a new sedan model called P5. In addition to electric vehicles, XPeng is currently developing flying car technologies through its wholly owned company, XPeng Huitian. Xpeng's flying car, Voyager X1, has undergone more than 10,000 test flights and is scheduled to begin test drives in China by the end of the year

Valuation Measures	
Market Cap (intraday)	35.2B
Enterprise Value	3.13B
Trailing P/E	N/A
Forward P/E	-93.23
PEG Ratio (5 yr expected)	12.49
Price/Sales (ttm)	4.20
Price/Book (mrq)	1.03
Enterprise Value/Revenue	0.37
Enterprise Value/EBITDA	-0.77
Profitability	
Profit Margin	-34.22%
Operating Margin (ttm)	-53.50%
Management Effectiveness	
Return on Assets (ttm)	N/A
Return on Equity (ttm)	-15.64%
Income Statement	
Revenue (ttm)	8.38B
Revenue Per Share (ttm)	15.81
Quarterly Revenue Growth (yoy)	616.10%
Gross Profit (ttm)	329.24M
EBITDA	-4.08B
Net Income Avi to Common (ttm)	-4.74B
Diluted EPS (ttm)	-1.38
Quarterly Earnings Growth (yoy)	N/A
Balance Sheet	
Total Cash (mrq)	33.55B
Total Cash Per Share (mrq)	41.76
Total Debt (mrq)	3.93B
Total Debt/Equity (mrq)	11.62
Current Ratio (mrq)	4.48
Book Value Per Share (mrq)	42.64
Cash Flow Statement	
Operating Cash Flow (ttm)	-16.64M
Levered Free Cash Flow (ttm)	N/A

Stock Price History	
Beta (5Y Monthly)	N/A
52-Week Change	92.08%
S&P500 52-Week Change	31.96%
52 Week High	74.49
52 Week Low	17.11
50-Day Moving Average	40.63
200-Day Moving Average	38.03
Share Statistics	
Avg Vol (3 month)	15.33M
Avg Vol (10 day)	9.98M
Shares Outstanding	803.33M
Implied Shares Outstanding	N/A
Float	468.01M
% Held by Insiders	6.88%
% Held by Institutions	30.02%
Shares Short (Jun 14, 2021)	22.86M
Short Ratio (Jun 14, 2021)	1.32
Short % of Float (Jun 14, 2021)	N/A
Short % of Shares Outstanding (Jun 14, 2021)	2.85%
Shares Short (prior month May 13, 2021)	26.98M
Dividends & Splits	
Forward Annual Dividend Rate	N/A
Forward Annual Dividend Yield	N/A
Trailing Annual Dividend Rate	N/A
Trailing Annual Dividend Yield	N/A
5 Year Average Dividend Yield	N/A
Payout Ratio	0.00%
Dividend Date	N/A
Ex-Dividend Date	N/A
Last Split Factor	N/A
Last Split Date	N/A

Business Analysis

By being one of the most technologically advanced electric vehicle companies in China, XPeng has all the chances to become the top EV seller in China, which is the biggest EV market in the world.

- The company ended the first half of the year with cumulative sales of 30,738 vehicles (+459% compared to H1 2020).

- Xpeng Motors registered sales of 6,565 electric cars in June, up 617% YoY and 15% MoM.

- The stronger-than-expected sales throughout this year's first half are especially impressive as they come during a global shortage of semiconductor chips that has led more established automakers to curtail production and revise down their sales forecasts for this year.

- Xpeng priced versions of its new P5 EV from 160,000 yuan ($24,700) to 230,000 yuan after subsidies, to attract price-sensitive Chinese buyers. That would imply Xpeng's pricing undercuts Tesla's Model 3 sedan in China, which starts at $38,700 in China.
    - Xpeng describes the P5 as the world's first lidar-equipped electric car. It touts an autonomous driving system enabled by 32 sensors, including two lidar units and 13 high-definition cameras.
    - The XPeng P5 will bring Navigation Guided Pilot capabilities to city roads for the first time in a production vehicle. This will be powered by the company's in-house-developed autonomous driving system known as XPILOT 3.5.

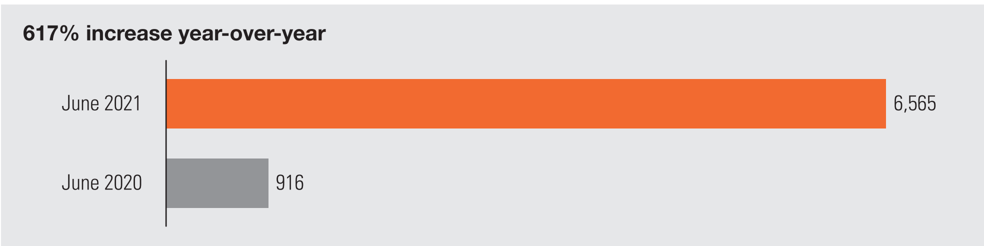
- XPeng announced its own battery lease program last year. Under the XPeng model, buyers can reduce the price of a P7 by RMB 75,000 ($11,600) and the price of a G3 by RMB 60,000 ($9,300) compared to the non-subsidized price. In exchange for the subsidy, battery leasing costs for the G3 are RMB 780 ($120) per month and RMB 980 ($150) per month for the P7.

- The company has already entered the Norwegian market this year, and it plans on using the Nordic country as a springboard to the rest of Europe.

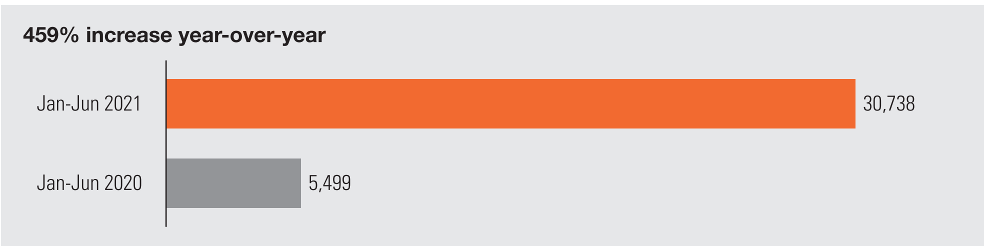
- Following its stock market debut in the USA last year, the Chinese electric carmaker is now officially listed on the Hong Kong Stock Exchange.

- He Xiaopeng, co-founder, chairman and CEO of Xpeng, expects the penetration rate of plug-in hybrid and electric cars in China to reach 30 per cent by 2025 – as high as 60 per cent in major cities due to emission restriction policies.

6,565 Smart EVs delivered in june 2021



30,738 Smart EVs delivered jan-jun 2021



Source: Xpeng

Youth Impact Fund

2021 Half-Year Report

Youth Impact

Make Your Impact

Impact Fund FY2021 Report

Investing for change

Youth Impact

THE GLOBAL COMPACT
WE SUPPORT

Youth Impact Fund
FY2021 Report

About This Report

This report is intended to share the Youth Impact Fund's activities and outcomes for the second half (September – March) of fiscal year 2021.

Team

Robert Choi: Chief Investment Officer
Thomas Lee: Chief Operating Officer
Sejun Lee: Chief ESG Officer

David Koo, Donghwan Kim, Donghyun Kim, Heechan Lee, Hyeogdu Choi, Jihu Park, Jisun Hwang, Juna Hong, Jungwoo Cha, Moojin Jaegar, Royce Lee, Woobin Rhee, Yeonjun Lim, Yoon Seo Kim

About the Youth Impact Fund

The Youth Impact Fund is the world's first youth-managed Impact fund, with over $50,000 in assets under management. It uses environmental, social, and governance (ESG) factors to make investment decisions with not only high potentials for growth but also low long-term risk related to sustainability. The Fund also campaigns against companies that act against society's expectations in terms of ESG and corporate social responsibility, so as to pressure them to change their unethical and unsustainable business practices.

About Youth Impact

Youth Impact is a social venture dedicated to empowering the world's youth to take concrete actions to solve real-world problems.

Website www.youthimpact.com
Email contact@youthimpact.com
Instagram @youthimpact.co

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2021 Stock Market Recap

Juna Hong

Another year into the pandemic, 2021 was just as hectic as the year preceding it. With the rise of world affairs, alongside the appearance of 2 widespread COVID variants (Delta and Omicron), the world was once again taken aback and the effects mirrored consumer expectations in the equity market. Each quarter comes with its share of financial turbulence and successes. However, many investors boast the exceptional cumulative performance of American equities: an estimated 45.1 YoY earnings growth rate, the highest since 2008. Below is a recap of the 2021 stock market with a focus on the American markets.

First Quarter

In Q1 (January 1st to March 31st), investor sentiment grew positive, as indicated by 99% of S&P 500 companies reporting 79% positive earnings. The first quarter also experienced a record pace for SPACs (Special Purpose Acquisition Company) making private equities accessible to public investors. In retrospect, 613 SPAC listings were reported in 2021 raising a total of 145 billion dollars - a 91% increase from the last year. SPACs also contributed to record level IPOs - over 1000 listings.

Source UNCTAD

In February, market sentiment was on the demand side, with consumer spending steadily increasing. Retail also came to a rise in Q1, having risen 5.3% in the following 3 months of pandemic induced declines.

Also aiding market sentiment was the passing of a $1.9 trillion fiscal relief bill in March, the Fed's reassurance of maintaining the near-zero interest rate policy and the monthly bond purchase program. Though the effects of the bill would not be known until April's Q1 GDP report, looking back, the United States' GDP increased 10% to $22.99 trillion, in comparison to 2020's 2% decrease to $20.94 trillion.

By the end of Q1, major U.S. indexes started their 4th continuous highest quarter. After hitting a pandemic in the March of 2020, the S&P 500 has appreciated 76% on its one-year anniversary.

Second Quarter

2021's second quarter (April 1st to June 30th) had a less stable start despite continuing its momentum from Q1. Investor sentiment wavered as a result of an acceleration in the inflation rate in anticipation that the Fed would start tapering the aforementioned easy-money policies earlier than expected.

Following the unsteady start was a wave of positive news as banks had passed the Fed Stress test and a booming labour market was steadily arising. Unemployment claims finally reached a 52-week low with weekly jobless claims falling below 400,00 for the first time since the pandemic.

By the end, energy, tech, and real estate made substantial gains over the quarter. Energy was the best performing index component due to strong rebounds in crude oil and natural gas as economic activity increased, resulting in commodity price recovery. However, utilities and consumer staples lagged in growth. Q2 ended with 99% of S&P 500 companies reporting 86% positive earnings with an average earnings growth rate of 61.0%

Third Quarter

In Q3 (July 1st to September 30th), investor sentiment wavered once again with the key drivers as the following: an uptick in COVID cases resulting in supply chain disruptions, inflationary pressures alongside an increased economic slowdown in China.

U.S. equity momentum slowed as a result of the not yet named Delta variant leading to decelerations among multiple industries. As a result, supply and labour shortages emerged. As an example, a semiconductor shortage limited automobile production, delaying import duties to Asian ports. Furthermore, as credit growth and PMI (Purchasing Manager's Indexes) slowed;September became volatile with real estate developers facing debt difficulties. Thus, the Federal Open Market Committee's economic projections from September reelected a cautious view of the economy: GDP growth projections revised from June estimated 7.0% to 5.9%, while inflation was estimated to jump from 3.4% to 4.2%.

The momentum of the last 2 quarters drastically shut down with stocks rebounding to the start of 2021. The sectors that did continue with substantial growth, however, were manufacturing and transportation. 82% of S&P 500's companies reported an earnings growth rate of 39.8% in the third quarter. The quarter ended with S&P 500 with a slight gain while the Dow Jones and NASDAQ all reported a dip.

Fourth Quarter

Vaccinations rates peaked in the fourth quarter (October 1st-December 31st) with at least 60% of the country double vaccinated. After a Delta induced slowdown in Q3, indications of the future are strong, with 2022 January's GDP report predicting an annualized 7.2% growth rate. Additionally, Indications of Omicron's health effects as significantly less severe than its predecessors relieved initial fears. Investor sentiment thereby increased, pushing stocks into the higher end to December.

In November, the labor market had as many as 600,000 Americans enter the labor market, thus labor participation rose to its pre-pandemic levels. In addition, U.S.' manufacturing industry regained momentum as the ISM index indicated a rise in November with a trend of faster acceleration. American consumers reached $2.3 trillion of excess savings in comparison to pre-pandemic labels thus providing fuel to future economic activity. However, in mid-December, the FOMC (Federal Open Market Committee) announced its plans to fasten its bond purchase tapering schedule in addition to a proposed rate hike in the March of 2022.

By the end of December, The Dow Jones Industrial Average on Friday fell by 0.16%, to 36,338.30. The S&P 500 fell 0.26% to close of 4,766.18 and the NASDAQ Composite fell 0.61% to 15,644.97. All 3 indexes finished the month higher, with December marking the Dow's 5th and NASDAQ's 6th-month winning streak. To conclude the year, the S&P 500, Dow and NASDAQ all gained 26.89%, 18.73% and 21.39% for 2021, respectively

In conclusion, 2021 was driven by earning growth that continued from 2020. The rise in vaccination rates shifted public healthcare sentiments into the equities market. The S&P 500 made a total of 70 record closes with energy and real estate performing the best with upwards of 45% surges. The Dow's gain was led by Home Depot and Microsoft, each rising more than 50% and NASDAQ's top gainers were large tech companies like Alphabet, Apple, Meta Platforms and Tesla. However, the year concluded with the CPI rising at its fastest rate since the 1980s, and consumer optimism has yet to return to pre-pandemic levels. With 2022 starting off with the Fed's proposed rate hike and geopolitical tensions, it bears another year of interesting stock market activity.

The Federal Reserve vs Inflation

Juna Hong

Source CNBC

Following the beginning of the COVID-19 pandemic, the Federal Reserve (Fed) implemented its interest rate cut in the March of 2020. The new federal fund rate was thus targeted to be 0%-0.25%, an adjustment from the previous 1%-1.25% target. Furthermore, following this was a $700 billion quantitative easing program. However, as two years of the pandemic have now passed and over 60% of the world have been vaccinated, global economies are slowly opening up and adjusting to "the new normal." As a result, ever since the beginning of 2022, rising anticipations of the Fed's interest rate hike for March have been in the minds of investors. On March 2, 2022, Federal Reserve Chair Jerome Powell said he and the Fed are inclined to support a 25-basis point rate increase at the March policy meeting, but said the central bank is prepared to move more aggressively later if inflation does not abate as expected. The implementation of such hikes may dissuade investors from the high-risk equity premium towards saving and bonds.

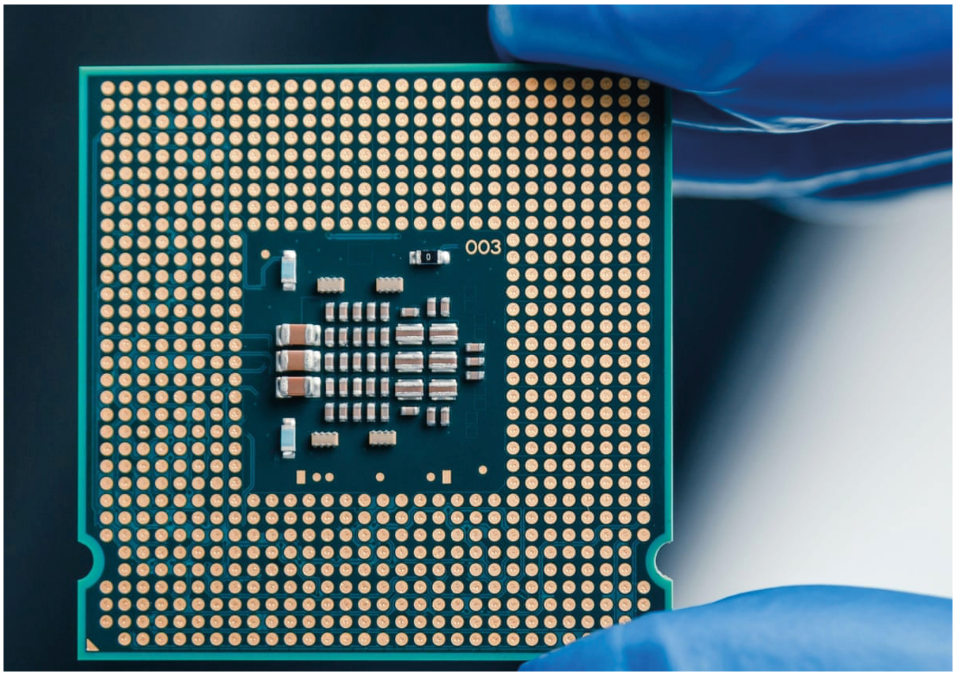
As of January, the stock market showed that the S&P 500 is down 6.5% with NASDAQ down over 10% and the DJI is down 6%. At the end of February, the Dow dropped another 464.85 points, NASDAQ lost 2.6% falling into correction territory and the S&P 500 fell a further 12% since its January 3rd record. The combination of interest rate hikes and uncertainty concerning the US' position in the Russia-Ukraine crisis resulted in the price fall across all industries, especially transportation and retail. These industries that were initially hit the hardest during the peak of the pandemic is once again under the scrutiny of rate hikes. This is evident with Macy's, TJX, Best Buy, and Nordstorm falling by 5.2%, 4.2%, 2.1% and 3.4% respectively alongside transport companies Tesla and Delta Air falling by 7% and 4.1% respectively. On average, both sectors still remain 10% below their pre-pandemic prices. However, this widespread phenomenon is not limited to the aforementioned two sectors. E-commerce, as indicated by Amazon's 3.6% drop seems to also be oversold in anticipation of rising rates. Perhaps the most affected, however, are equities with relations to Russia as the VanEck Russia ETF dropped by 9.3% on February 23rd.

Following the previous economic trends, growth stocks, characterized by their high P/E and insubstantial dividends, have their current values discounted in high rate environments, thus becoming the subject to overselling. In contrast, value stocks characterized by high dividend yields and lower P/E perform relatively better and tend to be highly correlated to the federal fund rate.

At the current moment, it seems evident that a substantial number of investors (one in three) believe in the plausible half-point rate hike. Acting simultaneously with the current Russia-Ukraine crisis, the American stock market is heading bearishly. Whether market anticipations change will be determined by the Fed's remaining meetings till March and the prolonging of tensions between NATO and Russia.

Supply Chain Bottleneck & Global Chip Shortage Crisis

Yeonjun Lim



Source The Guardian

The supply chain bottleneck issue has been a major cause of concern for the global economy as it reopens from the closed borders, closed economies, and disruptions caused by the COVID-19 pandemic. The impact of the global supply chain bottleneck issue is felt most severely in the semiconductor industry, which relies on only a handful of high-tech companies such as Samsung Electronics and Taiwan Semiconductor Manufacturing

Company (TSMC). The global chip shortage crisis has affected more than 169 industries and thousands of businesses, including some of the world's most powerful companies like Apple, GM, and NVIDIA.

There are three main reasons to the global supply chain bottleneck problem: First, the spread of COVID-19 has led many businesses and people to transition from the offline realm to the online realm. This has led to a dramatic increase in market demand for semiconductor chips, which require some of the most cutting-edge technology and state-of-the-art facilities that require not only huge amounts of investment but also time to build or expand. In order for Samsung Electronics and TSMC to expand their supply capacity, for example, they must purchase extreme ultraviolet lithography (EUV) machines from the Dutch manufacturer ASML. However, ASML can only produce so many EUV machines in a single year, and it is the sole supplier of EUV machines in the world, leaving no other option for Samsung Electronics and TSMC but to wait. Moreover, electric cars require two to three times as many semiconductor chips than do conventional internal combustion engine vehicles. Increasing popularity in electric cars all over the world has exacerbated the chip shortage crisis that has forced most car manufacturers and businesses to close their factories.

Second, when the COVID-19 pandemic first began, many companies halted their purchase of chips because they expected significant drops in sales and disruptions to their operations. However, as global economies are starting to turn

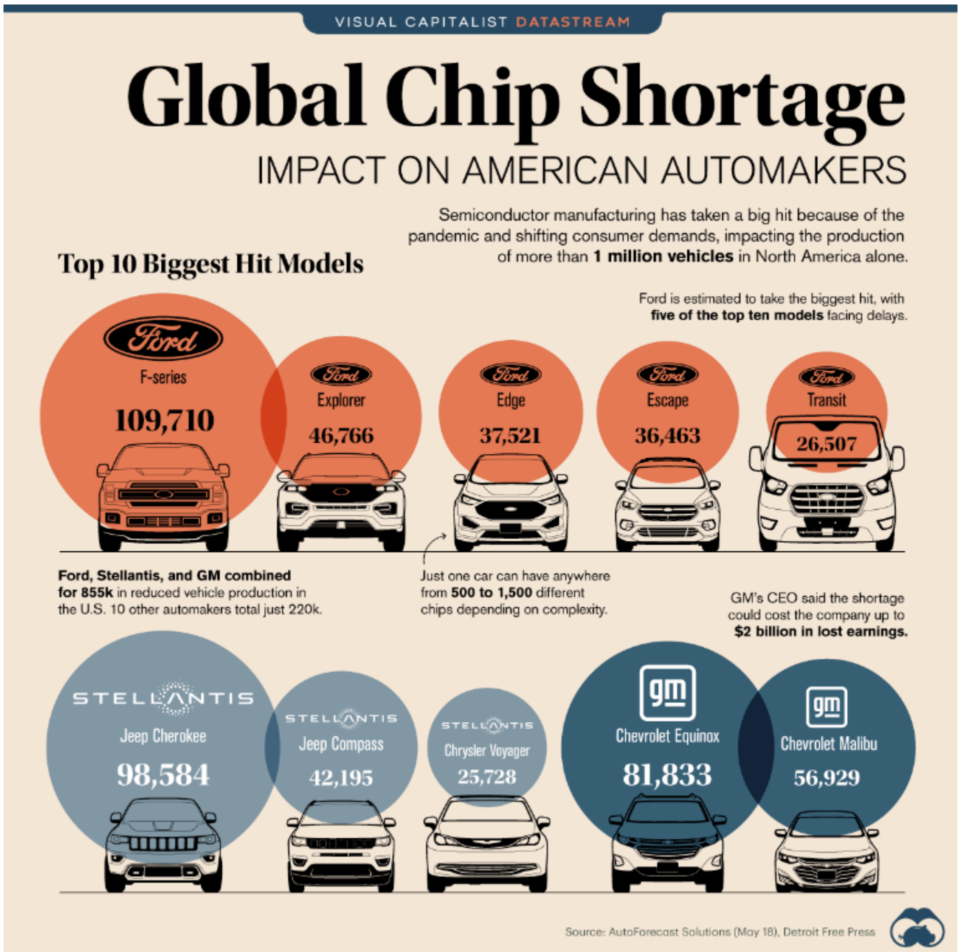
around and reopen from the COVID-19 recession, demand for basically everything, including semiconductor chips, is booming. This high demand for chips has, again, led to a serious gap between supply and demand that many experts and corporate leaders predict will not be resolved in the near future. Some even predict that the problem will continue throughout the decade.

Third, the ongoing trade war and geopolitical tensions between the United States and China are exerting even more stress on the global supply chain bottleneck problem that is already in a very fragile state. Chinese companies play an immense role in the global supply chain system, as many countries source their raw materials and components for their products from China. The same applies to the semiconductor industry, although China is still decades behind in technology against Samsung Electronics and TSMC. The United States Department of Commerce implementing sanctions against Semiconductor Manufacturing International Corporation of China, which is the largest Chinese semiconductor manufacturer, was a calculated move by the U.S. government to prevent China from obtaining much-needed components for high-end technologies. However, this has also caused major disruptions to the global supply chain and is partly responsible for the ongoing global chip shortage crisis.

- Major automobile companies reported noticeable drops in profit in 2021 due to the global chip shortage. For example, Toyota, one of the largest automobile companies in the world, had its profits fall by 2 percent for the last three months of 2021. Last September, Toyota also had to decrease its production globally by 40 percent due to chip shortage. This issue is not exclusive to Toyota. Ford’s net income fell 23 percent compared to a year ago and General Motors's profit decreased 40 percent compared to a year ago during the third-quarter last year.

- Car companies also had to ditch some optional features that required semiconductors. For example, Ford had to remove satellite navigation from some of their vehicles; BMW had to remove touchscreen from some of their vehicles; and General Motors had to remove wireless charging from some of their vehicles.

- Automobile companies had to shut down their factories. General Motors had to shut down four of its factories in North America for four months due to chip shortage. However, increasing the production of chips in a short period of time is physically not feasible. Not only is it costly to build semiconductor fabrication facilities, but also those factories require high-tech or rare elements: dust-free facilities, wafer machines, and rare earth elements.



Source Visual Capitalist

The Downfall of Meta (Facebook)

Robert Choi

Big Stock, Big Misery
Facebook owner sets record for biggest one-day drop in market history

Company name	Decline in market value	Date
Meta Platforms	**$252B**	**Feb. 3, 2022**
Apple	180B	Sept. 3, 2020
Microsoft	178B	March 16, 2020
Tesla	140B	Nov. 9, 2021
Amazon	130B	July 30, 2021
Facebook	121B	July 26, 2018

Source Bloomberg

In early December 2021, Meta entered major correction territory, with its shares dropping more than twenty percent from its September record as a result of increased criticism and regulatory action against the company.

- Meta shares plunged 20% in after-hours trading on February 2nd, erasing $175 billion from their market capitalization.
- Since October 2021, a number of events has caused this decline in value, including a historic drop in daily users, whistleblower claims, reduced profits from advertising dollars and a revised FCC antitrust lawsuit.

In October 2021, following the company's change in name from Facebook, Meta has been pushing the concept of metaverse to its stakeholders. However, at this stage, it appears to be little more than a concept, with very little actual development completed on the metaverse.

- In a February 2022 statement by Meta CEO Mark Zuckerberg, he stated that, in order to develop the metaverse, partnerships to develop connectivity and infrastructure would be required. He also added that Meta was available and willing to work with others in order to bring as many users to the metaverse as

- possible. The implications of this statement are twofold: one, it shows that very little concrete development has occurred from Meta on the metaverse, meaning it is still a highly conceptual idea. Furthermore, it shows that Meta has established very few partnerships, if any, since its announcement of the metaverse.

- The actual vision of a metaverse is that a range of virtual spaces will possess interoperability of profiles, permissions and technology. In reality, such technology is still a pipe dream and, despite a surge in searches for the term metaverse, the discussions online about what is occurring in the “metaverse”, such as weddings or virtual real estate, are simply occurring in a singular, walled virtual reality or online application.

Meta’s Facebook social media network suffered its first drop in daily average users for the first time in its history, falling by 1 million in Q4 2021.

- Meta acknowledges their struggle against the rise of other social media apps, such as Tik Tok, which had over 1.2 billion active users in Q4 2021. The company has always insisted that their answer to Tik Tok is Reels, their own short form video format.

- Meta has resisted boosting efforts to draw users into Reels and improve the quality of videos on the format. Creators are paid little for their content, and agreements to boost payments to creators have an end date of December 2022. Setting a timetable for this additional spending shows that the company has little interest in the long-term sustenance of content creators on its Reels platform.

Apple’s new privacy policy, which allows users to restrict access to their data through its App Tracking Transparency feature, will cost Meta an estimated $10 billion in revenue in 2022.

- This privacy feature restricts many behind-the-scenes mechanics for mobile ads, especially those which confirm downloads and purchases.

- Privacy has been a huge issue for Meta in recent years, particularly through the non-consensual use of private Facebook data used in Donald Trump’s 2016 presidential election campaign.

- Cambridge Analytica, a private upstart voter-profiling company, harvested private information from more than 50 million U.S. Facebook profiles without their permission and this data was then used to shape President Trump’s 2016 election campaign.

- The data was used to build a system that could profile individual US voters, allowing them to be targeted with personalized political advertisements.
- Meta initially refused to acknowledge the data leak, failed to notify users and took very limited steps in order to recover and secure the leaked data.
- The data was initially harvested through the guise of academic research, which then simultaneously collected data on participants' friends despite Facebook's platform policy stating otherwise.

Whistleblower Frances Haugen, a former Meta data scientist, testified before a Senate subcommittee in October 2021 regarding the way in which the Facebook platform ignores user safety, especially children, and subverts democracy, disseminating misinformation in order to achieve record profits and growth. Prior to leaving Meta, Haugen copied thousands of pages of confidential documents and shared these with public officials and the press.

- She revealed that Meta chose to ignore the use of safeguards and instead allow for the proliferation of misinformation and exploitation by foreign agencies.
- Meta also concealed internal research from the public eye that revealed the harms of its platform. For example, internal studies showed that, after using Instagram, 13.5% of UK teen girls' suicidal thoughts became more frequent and 17% stated their eating disorders became worse. 32% stated that when they felt bad about their bodies, Instagram made them feel even worse.
- Leaks also reveal internal data that Meta struggled to identify, remove and prevent vaccine misinformation on its platforms.
- Haugen also revealed that Meta prematurely turned off Facebook safeguards after Trump lost to Biden in the 2020 election, contributing to the spread of misinformation which eventually led to the Jan 6 US Capital invasion.

Source Meta

Meta planned to launch its own cryptocurrency and digital payment system known as Diem (known as Libra prior to December 2020) but this was abandoned in January 2022.

- From the beginning, the project was in doubt as concerns were expressed about Meta's ability to manage issues such as money laundering and consumer protection.
- Despite redesigning Diem around stablecoins, which are tied to the value of a major currency rather than being fluid and not linked with anything external like other cryptocurrencies, this did little to alleviate the regulatory concern of how such a large company entering cryptocurrency would affect the whole system.
- Abandonment was due to government regulators across the world who had concerns relating to financial stability, antitrust, privacy and money laundering.

Source The Guardian

The Russia-Ukraine War's Effects on the Global Economy

What is the history behind it?

- In February 2014, pro-Russian president Viktor Yanukovych was removed from office after a revolution in response to his decision to ignore the overwhelming opinion in parliament to sign a political association and free trade agreement with the European Union (EU), but instead strengthen ties with Russia and the Eurasian Economic Union.
- In March 2014, the new Prime Minister signed the Ukraine–European Union Association Agreement and the Deep and Comprehensive Free Trade Area (DCFTA), improving and strengthening relations between Ukraine and the EU.
- This led to Russian soldiers, without uniforms or insignia, taking strategic control of the Ukrainian territory of Crimea and seizing its parliament. After this, Russia organized a referendum which resulted in Crimea joining Russia, and then Russia annexed Crimea. This escalated into a conflict between the Ukrainian military and Russian-backed separatists in the Donetsk and Luhansk republics. Despite many attempts at ceasefires or signing agreements, this conflict never fully subsided.
- In 2021 and early 2022, a major Russian military build-up around Ukraine's borders occurred, prompting NATO to accuse Russia of planning an invasion. U.S. intelligence also signaled that Russia would attempt a false flag invasion. In response to this, Russian President Vladimir Putin stated that NATO's presence in the region was a threat to his country and demanded that Ukraine be barred from entering the alliance.
- On February 21, 2022, Russia formally recognized the separatist Donetsk and Luhansk republics, sending troops to these territories. On February 24, 2022, Russia invaded Ukraine.

The invasion was justified using falsehoods from the Russian government.

- It was stated that the Eastern Donbas region faced humiliation and genocide from the Ukrainian government. Neo-Nazis had seized power in Kyiv and Russia aimed to "denazify" Ukraine.

- Ukraine had aspirations to acquire nuclear weapons, despite surrendering their nuclear arsenal, which was the third-largest in the world at the time, in the 1990s.
- Russia's initial goal appeared to be taking over Ukraine by military force, deposing the Zelensky government and ending its desire to join NATO.

The conflict has inflicted upon Ukraine a great deal of human and financial losses.

- The Ukrainian government estimates that the loss of civilian life in Ukraine is at approximately 6,800 (March 31st). 4,000 members of the Ukrainian forces have also died.
- As of April 1st, over 4.1 million refugees have left Ukraine due to the conflict, with a total of 6.5 million people displaced.
- An analysis by the Kyiv School of Economics (KSE) found that, as of March 24, an estimated $63 billion of infrastructure damage has occurred in Ukraine. Including indirect losses, such as declines in GDP and production, the total loss ranges from $543-600 billion.
- According to the KSE, infrastructure that has been damaged since the February 24 Russian invasion are: 4,431 residential buildings, 92 industrial buildings, 378 education institutions, 138 healthcare facilities, 12 airports and 7 power plants.
- Due to the ongoing conflict, Ukraine is suffering from a sharp recession.

In response to the conflict and war crimes committed, Russia is facing severe, primarily economic, repercussions.

- The West has implemented a range of sanctions on Russia, targeting wealthy Russian individuals and state-owned banks and restricting access to SWIFT, an international payments system.
- Russian central bank assets have been frozen, preventing it from accessing about half of the USD $643 billion it holds in foreign exchange reserves by preventing conversion from international currencies into rubles. Furthermore, Russia is unable to access its emergency sovereign wealth fund, the National Wealth Fund.
- Prior to the conflict, Russia was the 11th largest economy worldwide and a key supplier is commodities, such as food and energy. Russia's GDP is expected to fall 2.6 per cent by end 2023.

- Certification of the Nord Stream 2 gas pipeline project has been suspended by Germany. The Nord Stream pipelines are offshore gas pipelines that are used to supply gas from Russia to Europe.
- Due to higher import prices due to the fall of the ruble, lower confidence, trade disruptions and weaker incomes, inflation in Russia is expected to rise above 20 per cent in 2022.

Impact Worldwide

- The conflict has negatively changed the global economy in just one week. It will affect the global economy via three main channels: financial sanctions, commodities prices and supply-chain disruptions.
- China, US, Germany, France and Italy are all key trading partners with Ukraine.
- The Ukrainian and Russian economies are key suppliers of titanium, palladium, corn and wheat. Disruption to these supply chains will lead to price increases on a range of consumer goods, such as cars and smartphones.
- Higher worldwide inflation due to energy price escalation - Russia is one of the world's largest oil producers and energy exporters.
- Estimates indicate that oil prices could rise by $40 a barrel, remaining above US$100 a barrel as long as there is conflict in Ukraine.
- Gas prices will rise by at least 50% in 2022.
- Air ties between Europe and Russia and Asia and Russia are severely hampered by the EU decision to close airspace to Russian aircraft and cargo.
- Global inflation will rise above 6% this year.
- Large-scale emigration from Ukraine will also have a significant impact. The United Nations High Commissioner for Refugees (UNHCR) reported that there could be 4 million refugees from this crisis.
- The National Institute of Economic and Social Research estimates that the Ukraine conflicts will result in a decline of the global GDP level of 0.5% in 2022, and close to 1% in 2023 (an approximately $1 trillion reduction). This could result in adding 3 per cent to global inflation in 2022 and 2 per cent in 2023, increasing the cost of living and putting increased pressure on household consumption.
- The EU is facing significant pressure as it relies on Russia for more than 60 per cent of its energy needs. In the EU, inflation is expected to rise 5.5 per cent in 2022 and 2.1 per cent in 2023.

- Europe’s growth forecast for 2022 has been reduced from 3.9% to 2% by the Economist Intelligence Unit.

- There is a stagflation risk for Europe, as inflation will rise but economic growth will stagnate.

- Russia cannot export oil to producers in different countries, limiting their production.

- Russia is trying to stop countries from joining NATO. The country has warned Finland and Sweden against joining NATO. Recent opinion polls in both countries have shown that their people are in favor of the two countries joining NATO since Russia’s invasion of Ukraine. Both Sweden and Finland have rejected Russia’s pressure, stating that they make their own decisions. Sweden’s Prime Minister Magdalena Andersson stated that, if they joined, it could lead to further tension in Europe.

Any resolution to the Russia-Ukraine Conflict will be complex, multilayered and involving compromises on both sides. Should the conflict go on for an extended period of time, Russia will face severe economic consequences. If the conflict is extended, the repercussions for the world will be far more dire than rising commodities costs or inflation.

- Economically, if sanctions are extended to Russian energy exports, or if Russia lowered its gas exports as leverage, European energy prices would rise significantly, increasing the chances for a recession and resulting in very strong inflation.

- China’s involvement has the potential to lead to more conflict and create a major divide between the so-called Eastern and Western hemispheres.

- Despite President Zelensky calling on NATO to impose a no-fly zone over Ukraine, the implications of this could be far-reaching. If a no-fly zone is declared, all aircraft will be prohibited from entering the airspace. These zones require one or more parties willing to enforce them, meaning that they can shoot down any violating aircraft. This would mean Russia cannot use air attacks on Ukraine. It also means Ukraine could not use its aircraft and drones to defend against the Russians. It would allow civilians to flee conflict with more safety. However, it also means that any NATO participants who shoot down Russian aircraft are direct participants in the war, putting their citizens at risk. Putin stated that any country enforcing a no-fly zone over Ukraine “will be considered by us as participation in an armed conflict by that country.”

- Should Russia take over Ukraine, they will likely install a pro-Russian government. However, they would be faced with a population of angry, nationalistic and armed Ukrainians. In order to maintain this government, Russia would need to occupy the country with military and security forces, which would be a huge drain on an economically-weakened Russia.
- On March 8, President Zelensky stated that he may no longer push for NATO membership and was open to compromise on the Donbas regions. He is not open to ultimatums.
- With his current course, Putin's idea of a military "victory" seems to be years or decades long occupation of a hostile, anti-Russian Ukraine, with political isolation from most of the world and economic sanctions that will devastate the Russian economy.
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Trends Driving the Global ESG Wave

Thomas Lee

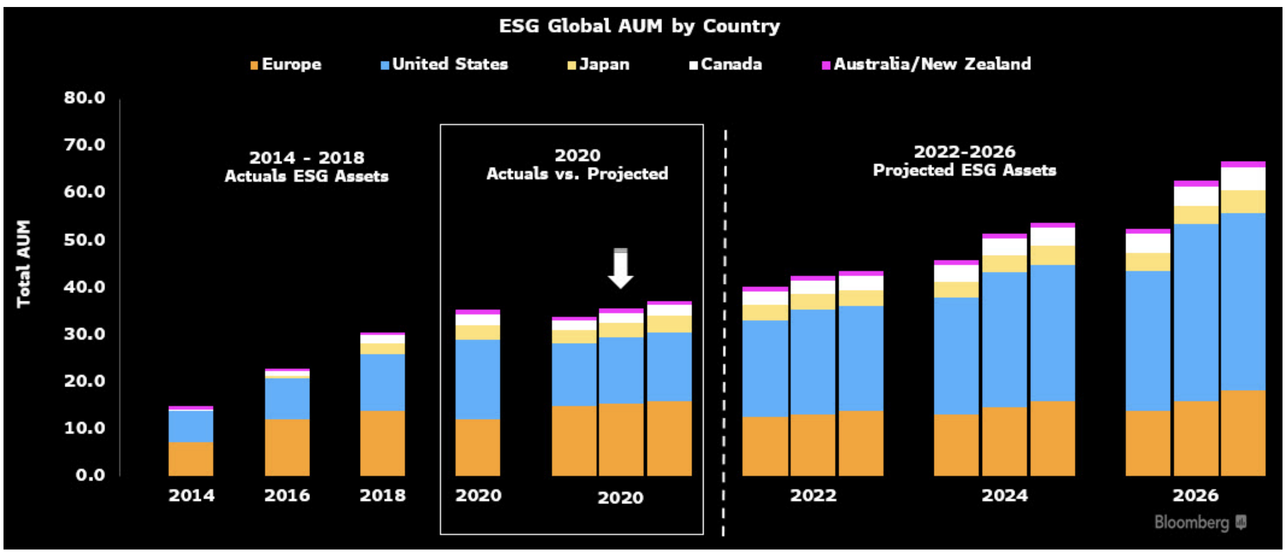
The year 2021 was hectic, to say the least. There was a rampant increase in social justice, ranging from climate change awareness, police brutality, racial injustice, and more. To cater and capitalize on these issues, companies around the globe have successfully pushed companies and regulators to make changes amid record inflows to funds focused on environmental, social, and corporate governance ESG issue".

One particular benefactor to the rise in ESG funding was when BlackRock (the largest investment management company in the world) CEO Larry Fink declared that a fundamental reshaping of global capitalism was underway and that his firm would help lead it by making it easier to invest in companies with favorable environmental and social practices. This made many companies desire funding from investment managements to implement ESG goals in their marketing systems, hence the record inflows to ESG funds. With BlackRock shifting sustainability as their new standard for investing, a record $649 billion poured into ESG-focused funds worldwide through Nov. 30, up from the $542 billion and $285 billion that flowed into these funds in 2020 and 2019, respectively. ESG funds now account for 10% of worldwide fund assets.

In addition, the evident impact of climate change, and events of social injustice such as George Floyd's death in Minneapolis have contributed to ESG rising to the top of the agenda of investors, companies, and policymakers. Stocks of companies rated highly for their sustainability efforts also notched gains. The MSCI World ESG Leaders' index has risen 22% so far this year, compared with the MSCI World Index's gain of 15%, evidently showing the grown impact of 2021's events on the rise of ESG in companies.

The recent events have illuminated the effects of systemic racism and injustice on Black Americans, including threats to physical safety, psychological trauma, and economic disparity. CEOs worldwide and across industries have spoken out, expressing their horror and outrage, as well as their resolve to do more. Companies have announced significant financial commitments; others have referred to actions to be taken, and early movers have begun to announce or amplify business-related initiatives. Institutional investors, asset owners, asset managers, private equity fund limited partners, and investor groups have also begun speaking out and considering action with respect to companies in their portfolios. One such example is Neuberger Berman, an independent, employee-owned private investment management firm. Recently becoming the first U.S. asset manager to implement a sustainability-linked revolving credit facility, Neuberger specifically selected increasing diversity at management levels as one of the key ESG metrics that would impact borrowing costs.

Despite continued inflows throughout 2021, ESG funds may face challenges in 2022. The expansion of the ESG sector may stall if funds start to underperform benchmarks, as figures released near 2021 year-end began to suggest. ESG funds typically benefited throughout 2021 by taking disproportionate positions on high-performing tech stocks, but this option is not guaranteed to continue into 2022. In addition, ESG funds typically underweight energy and mining stocks in their portfolios, if those are included in their portfolio at all. Energy stocks have represented the top-performing sector in the S&P 500 in 2021, with a 50% increase compared to their value in 2020. Conversely, a return to strong profitability of renewable projects — which suffered throughout 2021 from higher manufacturing costs and low renewable generation — may determine whether ESG funds hit key benchmarks in 2022.



Source Bloomberg Intelligence

2021 ESG Trends

Thomas Lee

Throughout the course of 2021, there were 6 news ways in which ESG became embedded within the economy.

1. Companies are now aiming for their CEOs to be skilled with ESG, having criteria such as needing to and wanting to authentically focus on how CEOs care for people. Bonnie Gwin, Vice Chairman of Heidrick & Struggles' New York office and a Co-Managing Partner of the Global CEO and Board of Directors Practice, and a co-author of the "Route to the Top" report that published such criteria stated that ESG is a clear component to electing the most suited and well-prepared CEO of a company.

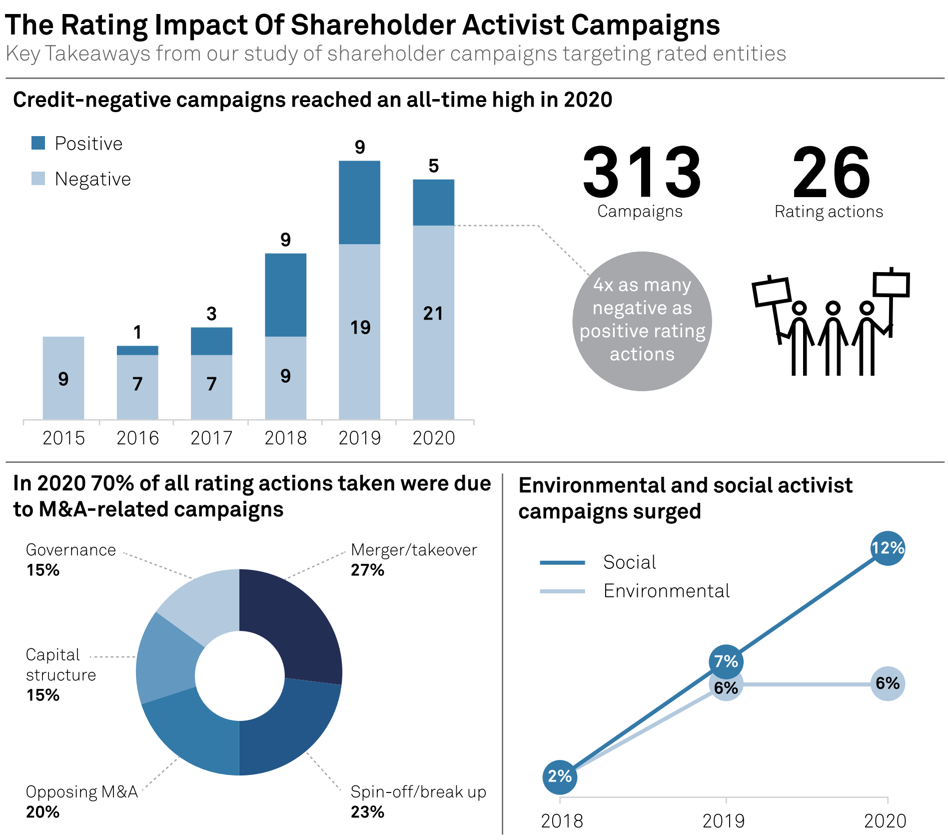
2. The Securities and Exchange Commission (SEC) has made steps towards mandatory ESG reporting, hoping to ensure that financial reports include material, decision-useful environmental, social, and governance, or ESG factors with an eye toward facilitating the disclosure of consistent, comparable, and reliable information on climate change.

3. BlackRock, the powerhouse entity possessing over $130 trillion in investment assets, has signed onto the Glasgow Financial Alliance to Net Zero which could cause major issues as it will force companies to disclose the bad and the ugly, not just the good news, in their "sustainability" or "corporate responsibility" reports or the like, and importantly, they will need to put these results in their audited financial statements filed with the SEC.

4. ESG values aligned with the Great Resignation, where more than 24 million people quit their jobs during the pandemic due to a lack of spotlight on employee wellbeing, workplace safety, and merit-based on the talent of workers.

5. Due to ESG, NASDAQ now requires each NASDAQ-listed company, subject to certain exceptions, to publicly disclose information on the voluntary self-identified gender and racial characteristics and LGBTQ+ status of the company's board of directors, with the threat of being delisted if said expectations are not met.

6. The impact of ESG has reached new positions within firms, with the exponential increase of chief sustainability and chief diversity officers. With women's advancement within the workplace being a core principle of ESG, women are benefitting from the new job opportunities as shown in the 53% of S&P 500 firms now have one (or a similar role), an increase from 47% in 2018. Over 51% of them being women.



Brookfield Renewable Corp

NYSE : BEPC

Juna Hong

Background: Brookfield Asset Management

Founded in 2011, Brookfield Renewable Corp (BEPC) is a public limited company under the parent company of Brookfield Asset Management - a Canadian multinational company founded in 1899 in Brazil. They are one of the largest alternative investment management corporations with a focus on renewable energy, infrastructure, real estate, credit and private equity.

Background: Brookfield Renewable Corp

Parent company Brookfield Asset Management owns 60% of BEPC - one of the largest publicly traded pure-play renewable power platforms with portfolios covering hydroelectric, wind and solar energy. With headquarter operating in Toronto, Ontario, Canada, its corporate offices are based in New York City, London, São Paulo, Mumbai, Shanghai, Dubai, and Sydney.

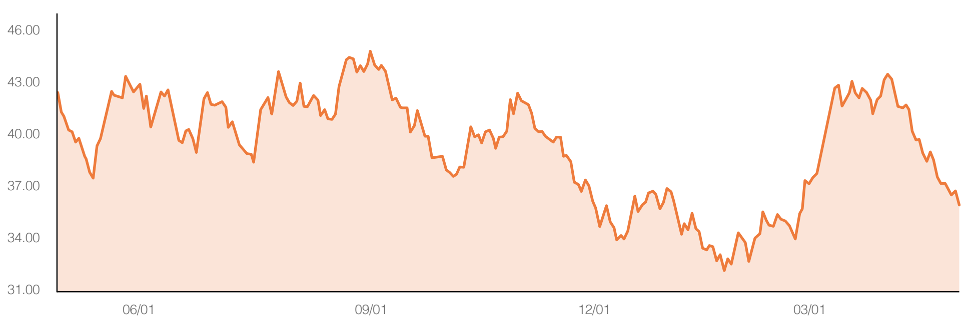
The company invests in distressed securities through Oaktree Capital (an American global asset management firm), which it bought 62% in 2019. Investment into distressed securities allows Brookfield to turn a profit if the company recovers.

Brookfield Renewable Corp: Shares Information

BEPC is traded on the New York Stock Exchange.

Class A shares of BEPC provide an economic return and distribution equivalent to BEP units. It is exchangeable at the shareholder's option for 1 BEP unit.

The trailing annual dividend yield is 3.61% and Class A shares are declared and paid at the same time and amount (on a pershare and unit basis) on units of Brookfield Renewable Partners LP. The quarterly dividend payable on Brookfield Renewable Corporation's Class A shares are declared in U.S. dollars.



Valuation Measures	
Market Cap (intraday)	6.01B
Enterprise Value	19.11B
Trailing P/E	6.33
Forward P/E	N/A
PEG Ratio (5 yr expected)	N/A
Price/Sales (ttm)	1.78
Price/Book (mrq)	1.63
Enterprise Value/Revenue	5.68
Enterprise Value/EBITDA	6.30
Profitability	
Profit Margin	27.60%
Operating Margin (ttm)	27.78%
Management Effectiveness	
Return on Assets (ttm)	1.46%
Return on Equity (ttm)	7.17%
Income Statement	
Revenue (ttm)	3.43B
Revenue Per Share (ttm)	9.47
Quarterly Revenue Growth (yoy)	12.40%
Gross Profit (ttm)	2.24B
EBITDA	2.07B
Net Income Avi to Common (ttm)	946M
Diluted EPS (ttm)	2.62
Quarterly Earnings Growth (yoy)	N/A
Balance Sheet	
Total Cash (mrq)	410M
Total Cash Per Share (mrq)	1.13
Total Debt (mrq)	13.51B
Total Debt/Equity (mrq)	94.99
Current Ratio (mrq)	0.26
Book Value Per Share (mrq)	10.14
Cash Flow Statement	
Operating Cash Flow (ttm)	395M
Levered Free Cash Flow (ttm)	-738.5M

Stock Price History	
Beta (5Y Monthly)	N/A
52-Week Change	-26.66%
S&P500 52-Week Change	10.87%
52 Week High	49.68
52 Week Low	31.10
50-Day Moving Average	34.53
200-Day Moving Average	39.18
Share Statistics	
Avg Vol (3 month)	869.59k
Avg Vol (10 day)	653.52k
Shares Outstanding	172.2M
Implied Shares Outstanding	N/A
Float	114.42M
% Held by Insiders	0.04%
% Held by Institutions	71.93%
Shares Short	3.48M
Short Ratio	3.79
Short % of Float	N/A
Short % of Shares Outstanding	2.02%
Shares Short	1.66M
Dividends & Splits	
Forward Annual Dividend Rate	1.28
Forward Annual Dividend Yield	3.78%
Trailing Annual Dividend Rate	1.23
Trailing Annual Dividend Yield	3.63%
5 Year Average Dividend Yield	N/A
Payout Ratio	22.12%
Dividend Date	Mar 30, 2022
Ex-Dividend Date	Feb 24, 2022
Last Split Factor	3:2
Last Split Date	Dec 13, 2020

Business Review

BEPC practices strong ESG values as a global leader in decarbonization whilst being one of the few publicly traded renewable energy vehicle companies. Additionally, it has the renewable capacity across large areas of technology and geographic diversity. Moreover, it boasts a high-quality cash flow and investment-grade balance sheet ensuring downside protection. Lastly, BEPC represents the combination of growth and value investment alongside capital discipline targets of 12-15% total returns and 5-9% annual distribution growth.

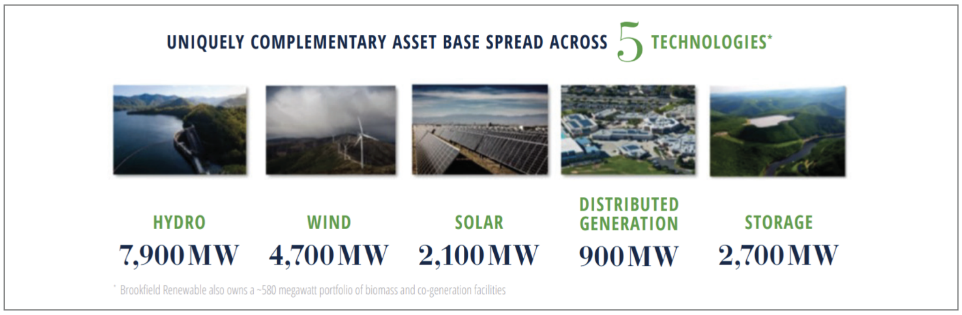
Throughout the last financial year, CEO Connor Teskey said BEPC had achieved record achievements. Even in the course of the last year's instability, BEPC demonstrated resilient expansion nonetheless.

As of the end of 2021, BEPC:

- Achieved its highest ever funds from operations (FFO) per-unit amount - an FFO of $934 million or $1.45 per Unit of FFO, which is a 10% increase from the prior year.
- Deployed capital is in the late stages to expand from 15k megawatts to 62k megawatts.
- Secured contracts are set to deliver 11k gigawatt hours of clean energy annually including 6k gigawatts hours to corporate off-takers.
- Completed cost-saving initiatives total up to $20 million per annum.
- Commissioned 1k megawatts worth of new capacity while progressing 15k megawatts through construction development.
- Agreed investments of $4.3 billion (~$1.1 billion net to Brookfield Renewable) of capital across every major market and technology they operate in.
- Diversified business investment into offshore wind, hydroelectric and battery storage.
- Maintained a robust investment-grade balance sheet with over $4billion in available equity.
- Signed a 40-year power purchase agreement with Hydro Quebec. Raising an additional C$1.0 billion of 40-year investment-grade debt that will be redeployed into growth. This is expected to generate over $100 million of annual net FFO.
- Signed a 15-year power purchase agreement to serve the entirety of their load requirements in the U.S. Northwest.
- Signed an agreement with a leading battery energy storage solutions provider to fund and own up to 800 megawatts of battery energy storage projects over the next five years.
- Completed the acquisition of over 300 megawatts of wind in Asia. Including a

transaction alongside Apple's Renewable Energy Fund, increasing their footprint in the region.

- The hydroelectric segment delivered an FFO of $639 million. The wind and solar segments generated a combined $581 million of FFO, representing a 55% increase over the prior year. And the energy transition segment generated $162 million of FFO.
- Agreed to acquire clean power developer Urban Grid.
- Announced a 5% dividend increase, which marks the 11th consecutive year of dividend raises.



Source Brookfield Renewable Energy

ESG Review

BEPC's renewable operations around the globe aid the decrease of 56 million tons of carbon dioxide (CO_2) emissions annually. BEP's business model is to acquire and develop high-quality assets that decarbonize global electricity grids below intrinsic value in the long-term. The integration of ESG principles is a fundamental component of BEPC to create long-term value for their investors.

Environmental

- BEPC is a signatory to the United Nations-supported Principles for Responsible Investment (PRI).
- BEPC's parent company, Brookfield Asset Management, announced in late 2020 the creation of the company's Impact Funds, which have the dual objectives of earning an attractive financial return whilst generating a measurable positive environmental change.
- BEPC operates one of the world's largest publicly traded, pure-play renewable power platforms.
- BEPC operates 2 global waste management initiatives: At one of their wind farm sites in China, BEPC employed measures to ensure the proper handling and warehousing of hazardous waste material in accordance with best practices and applicable regulations. In India, BEPC conserves water with their pilot project via robotic cleaning modules. This initiative is expected to save 20k liters of water per month and acts as an additional benefit to surrounding communities.
- At BEPC's Canadian business, several initiatives were implemented. They have eliminated all single-use items in its kitchens, improved signage for recycling, composting and trash, and implemented a new smart printing process that also uses recycled paper. These initiatives have eliminated the need for over 100,000 plastic utensils, 4,000 plastic bowls and 25,000 paper cups, sleeves and covers.
- BEPC, whilst measuring and disclosing their carbon emissions, also announced ambitions to double its avoided carbon emissions by 2030. The company has thus published a report disclosing their alignment with the UN's Task Force on Climate-related Financial Disclosures (TCDF) at the end of 2021.

Source Brookfield Renewable Energy

Social

- BEPC made approximately $5 million in charitable donations across over 500 organizations in 2020.
- BEPC cultivates local relationships by directly engaging through in-person meetings with stakeholders while also proactively engaging with communities through charity work as it is integral to their operations as it creates an alignment of values and earns the company its social license to operate.
- BEPC seeks to continuously monitor and report on health and safety metrics with the ultimate target of eliminating high-risk incidents. Furthermore, they operate a comprehensive health and safety training program in which all employees and contractors must participate.
- The company focuses on the development of our human resources as key assets to delivering long-term value. This includes managing issues that affect the recruitment and motivation of employees including managing labor relations and offering leadership training programs

- BEPC follows diversity and inclusion within recruitment policies. With the aim of an inclusive workplace, BEP considers the importance of diversity by gender, ethnicity, sexual orientation, cultural background and age.

Governance

- BEPC is committed to conducting business in an ethical and responsible manner through the elimination of discrimination in employment, the prohibition of child and forced labor, and the eradication of harassment and physical or mental abuse in the workplace.
- BEPC has a zero-tolerance approach to bribery, including facilitation payments, and requires each and every employee to complete annual anti-bribery and corruption training.
- BEPC utilizes Third-Party Due Diligence guidelines in place to set requirements for assessing bribery risk of third parties including vendors, consultants, partners, joint venture partners and service providers.
- BEP manages ESG risks within their supply chain, and therefore, contractors are required to adhere to the company's Code of Conduct and Business Ethics as well as its Anti-Bribery and Anti-Corruption Policy.
- Risk management is integral to BEPC. To manage investors' risks and create long-term value, the company takes a disciplined approach to clear operating methods and compensations through performance-based arrangements.

At Brookfield, women comprise:

60% of our independent board directors
38% of our board directors
46% of our overall workforce
26% of managing partners, managing directors and senior vice presidents

At our portfolio companies, women comprise:

14% of CEOs/heads of businesses
28% of senior leadership

Source Brookfield Renewable Energy

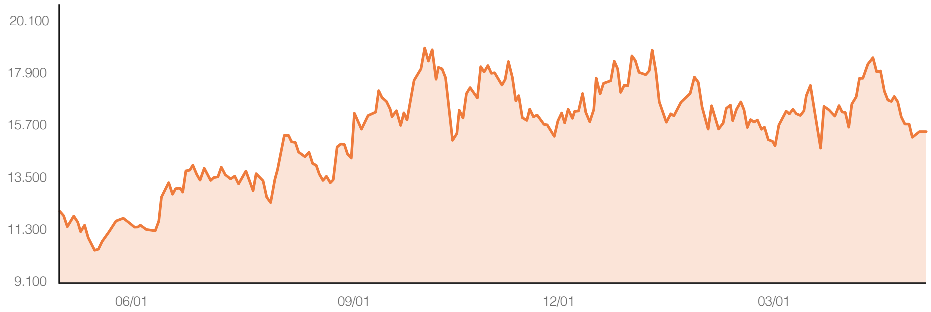
China Longyuan Power Group Corp Ltd

HKG: 0916

Jinhyeok (Robert) Choi

As the largest wind power generator in Asia, China's Longyuan Power Group Corporation Limited produces and sells both wind and coal power in the People's Republic of China, but it has also expanded into Canada and South Africa. Founded in 1993, the company was formerly known as China Longyuan Electric Power Group Corporation and is located in Beijing. It is a partially-owned subsidiary of the state-owned China Energy Investment, for which it manages renewable energy assets. Longyuan Power is not only involved in wind and coal power, but also other renewable energy projects, including thermal and solar. Primarily, Longyuan Power designs, develops, constructs, manages and operates wind and coal farms, generating electricity which is then sold to external power grid companies. Although energy is Longyuan Power's main business, the company is also involved in coal trading, the manufacture and selling of power equipment, consulting and training services, as well as maintenance to other power companies.

Recently, the company made commitments to expand its capacity by 30 gigawatts, though issues relating to the cost of solar material prices point to the company instead further expanding its wind production facilities. In order to restructure the renewable energy segment of its state-owned parent company, China Energy Investment Corporation Limited (CHN Energy), Longyuan Power entered into multiple agreements in January 2021. Under these agreements, Longyuan will merge with Pingzhuang Energy, another CHN Energy subsidiary, to acquire additional wind power assets, adding over 2,000 megawatts of wind power capacity to Longyuan.



Valuation Measures	
Market Cap (intraday)	204.43B
Enterprise Value	310.58B
Trailing P/E	17.21
Forward P/E	14.79
PEG Ratio (5 yr expected)	0.68
Price/Sales (ttm)	3.16
Price/Book (mrq)	1.75
Enterprise Value/Revenue	9.61
Enterprise Value/EBITDA	15.82
Profitability	
Profit Margin	18.04%
Operating Margin (ttm)	35.66%
Management Effectiveness	
Return on Assets (ttm)	N/A
Return on Equity (ttm)	N/A
Income Statement	
Revenue (ttm)	34.27B
Revenue Per Share (ttm)	4.26
Quarterly Revenue Growth (yoy)	33.70%
Gross Profit (ttm)	21.63B
EBITDA	19.87B
Net Income Avi to Common (ttm)	5.88B
Diluted EPS (ttm)	0.601
Quarterly Earnings Growth (yoy)	-8.90&
Balance Sheet	
Total Cash (mrq)	3.69B
Total Cash Per Share (mrq)	0.46
Total Debt (mrq)	90.25B
Total Debt/Equity (mrq)	128.02
Current Ratio (mrq)	N/A
Book Value Per Share (mrq)	7.60
Cash Flow Statement	
Operating Cash Flow (ttm)	N/A
Levered Free Cash Flow (ttm)	N/A

Stock Price History	
Beta (5Y Monthly)	0.82
52-Week Change	27.73%
S&P500 52-Week Change	10.87%
52 Week High	20.250
52 Week Low	7.730
50-Day Moving Average	16.845
200-Day Moving Average	15.288
Share Statistics	
Avg Vol (3 month)	22.08M
Avg Vol (10 day)	18.63M
Shares Outstanding	3.34B
Implied Shares Outstanding	N/A
Float	3.33B
% Held by Insiders	0.00%
% Held by Institutions	62.92%
Shares Short	N/A
Short Ratio	N/A
Short % of Float	N/A
Short % of Shares Outstanding	N/A
Shares Short	N/A
Dividends & Splits	
Forward Annual Dividend Rate	0.14
Forward Annual Dividend Yield	0.96%
Trailing Annual Dividend Rate	0.12
Trailing Annual Dividend Yield	0.80%
5 Year Average Dividend Yield	1.78
Payout Ratio	15.80%
Dividend Date	N/A
Ex-Dividend Date	May 31, 2021
Last Split Factor	N/A
Last Split Date	N/A

Business Review

Longyuan pioneered China's wind power development, building the country's first wind farm in Xinjiang province in the late 1980s and the country's first offshore wind project in 2009. This first-mover advantage, coupled with a capable management team, helped the company secure better wind farm locations. which helps to maximize wind farm utilization rates.

- Longyuan has consistently outperformed the broader Chinese wind farm average by 50-200 hours during the past decade.
- Longyuan is now the world's largest wind power producer with installed capacity of over 22 gigawatts. It targets to add 30 GW renewable capacity during the 14th five-year period, which implies an average of 18.6% annual capacity growth between 2020 and 2025.
- Longyuan is well poised to benefit from a strengthening cost advantage, on improved utilization and higher operating efficiency. Further, because wind farms are sensitive to weather conditions and wind resources, Longyuan's cross-country portfolio will help reduce sensitivity to these localized fluctuations.
- Longyuan Power expanded its 14th Five Year Plan from 20GW to 30GW new installation target, consisting of 11GW of wind power and 19GW of solar power. Longyuan will gain an additional 2GW of wind power assets from its merger with Pingzhuang Energy.

Longyuan's competitive advantage is also reflected in its rising operating efficiency.

- Despite the cuts in subsidies, Longyuan's net profit grew at a five-year CAGR of 10.4% between 2015 and 2020, outpacing the 7.2% growth in capacity, driven by margin improvements.
- While the cut in subsidies remains the biggest risk to wind operators, Longyuan is expected to maintain its profitability through efficiency gains.

The company is also poised to benefit greatly from China's transition to clean energy and goal to reach carbon net zero by 2060.

- The Chinese government is moving to create policy for the upgrade of aging wind infrastructure, assisting in the creation of further upside in generation capacity.
- In February 2021, China State Council issued guidance on developing a green and low carbon recycling economy, reiterating the government's push for renewable energy, particularly wind and solar.

- Longyuan jointly established the Guoneng Low-carbon Fund with China Shenhua, GD Power, China Energy Capital and Guoneng Fund Management Company. This is a limited partnership and the fund will run for eight years, with a three year investment period. The fund's investment scope includes green low-carbon projects and CHN Energy's enterprise and scientific research.

Source Caixin Global

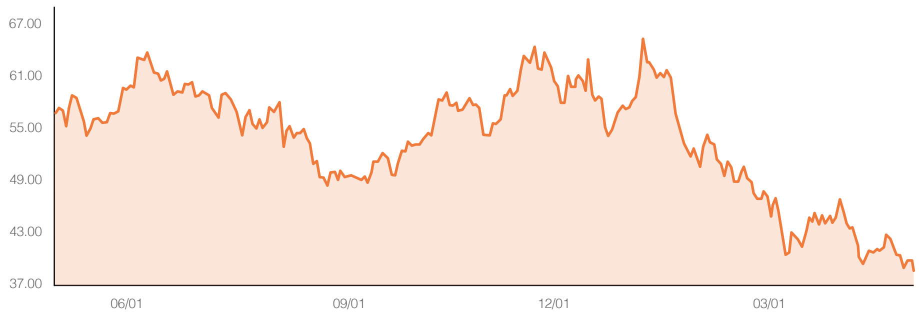
General Motors Company

NYSE: GM

Yeonjun Lim

General Motors is an American automotive company that has its headquarters in Detroit, Michigan. The company was founded on September 16, 1908, by William C. Durant. It is the mother company of several automotive brands - Chevrolet, Cadillac, Buick and GMC. Its product ranges from a city car to a heavy truck. The company fell into bankruptcy in 2009 due to the automotive industry crisis of 2008-2010 and was founded again as a separate entity called General Motors Company LLC. Today, it is the 7th largest automotive manufacturer by market capitalization.

General Motors is devoting itself to become an environmentally friendly company. In 2008, the company turned half of its car manufacturing plants to be landfill free. Also, it has been investing heavily into research and production of alternative fuel vehicles such as hydrogen fuel cell and Lithium-ion battery electric vehicles. The car manufacturer is planning to offer 30 new electric vehicles globally by 2025. The company is currently listed in the New York Stock Exchange market as GM. Its stock dropped rapidly in September 2021 due to the recall of the battery of Chevrolet Bolt EV. Recently, however, its stock value has shown resilience as a value stock and as the company steps up gear to become a major rival to Tesla.



Valuation Measures	
Market Cap (intraday)	70.62B
Enterprise Value	152.33B
Trailing P/E	7.25
Forward P/E	6.90
PEG Ratio (5 yr expected)	1.66
Price/Sales (ttm)	0.56
Price/Book (mrq)	1.18
Enterprise Value/Revenue	1.20
Enterprise Value/EBITDA	5.92
Profitability	
Profit Margin	7.89%
Operating Margin (ttm)	9.00%
Management Effectiveness	
Return on Assets (ttm)	2.98%
Return on Equity (ttm)	17.22%
Income Statement	
Revenue (ttm)	127B
Revenue Per Share (ttm)	87.53
Quarterly Revenue Growth (yoy)	-10.50%
Gross Profit (ttm)	18.08B
EBITDA	16.89B
Net Income Avi to Common (ttm)	9.84B
Diluted EPS (ttm)	6.70
Quarterly Earnings Growth (yoy)	-38.80%
Balance Sheet	
Total Cash (mrq)	24.68B
Total Cash Per Share (mrq)	16.98
Total Debt (mrq)	110.59B
Total Debt/Equity (mrq)	168.04
Current Ratio (mrq)	1.10
Book Value Per Share (mrq)	39.83
Cash Flow Statement	
Operating Cash Flow (ttm)	15.19B
Levered Free Cash Flow (ttm)	-8.25B

Stock Price History	
Beta (5Y Monthly)	1.20
52-Week Change	-9.64%
S&P500 52-Week Change	10.87%
52 Week High	67.21
52 Week Low	43.91
50-Day Moving Average	55.13
200-Day Moving Average	56.12
Share Statistics	
Avg Vol (3 month)	20.21M
Avg Vol (10 day)	17.15M
Shares Outstanding	1.45B
Implied Shares Outstanding	N/A
Float	1.38B
% Held by Insiders	4.93%
% Held by Institutions	84.63%
Shares Short	22.61M
Short Ratio	0.99
Short % of Float	1.56%
Short % of Shares Outstanding	1.56%
Shares Short	26.72M
Dividends & Splits	
Forward Annual Dividend Rate	N/A
Forward Annual Dividend Yield	N/A
Trailing Annual Dividend Rate	0.00
Trailing Annual Dividend Yield	0.00%
5 Year Average Dividend Yield	N/A
Payout Ratio	0.00%
Dividend Date	Mar 19, 2020
Ex-Dividend Date	Mar 04, 2020
Last Split Factor	N/A
Last Split Date	N/A

Business Review

In the midst of the recent market correction, GM's stock has shown resilience as value stock and as the company continues to expand aggressively in the electric vehicle space.

- GM reported record earnings for 2021, despite struggling with a shortage of computer chips and other parts that prevented the company from keeping up with demand.
  - 2021 4Q earnings reached nearly $2 billion, topping the consensus forecast of $1.7 billion from analysts. Full-year earnings came in strong at $10.4 billion, up from $7.1 billion a year earlier.
  - However, the number of vehicles it sold fell to 6.3 million worldwide, down 8% from 2020 and a decline of 18% from the pre-pandemic sales of 2019.
  - GM currently has reservations from customers for 59,000 of the Hummer EVs and 110,000 of the Silverado EVs. The company expects similar levels of demand for the Cadillac Lyriq, which is due later this year.
- The company is considering restoring the dividend that it suspended in the midst of the COVID-19 pandemic in April 2020.
- The company expects full-year 2022 net income to be in a range of $9.4 billion - $10.8 billion and EBIT-adjusted to be in a range of $13.0 billion - $15.0 billion, assuming continued steady demand for new vehicles and no significant new economic or supply chain challenges.
- In 2020, GM increased financial commitment to $27 billion through 2025 for EVs and AVs.
- On November 5th, 2020, General Motors recalled its battery electric subcompact hatchback called 50,932 Chevrolet Bolt EV vehicles of model year 2017 to 2019 has been recalled due to potential battery fire risk of the battery produced by LG Chem. On August 20, 2021, General Motors recalled additional Chevrolet Bolt EV vehicles of model year 2019 (remaining vehicles that were not recalled on November 5th, 2020) and 2020~2022 along with newly introduced Chevrolet Bolt EUV. In October 2021, LG Electronics agreed to pay up to $1.9 billion to recall and fix Chevrolet Bolt EV vehicles. Despite this setback, the agreement with LG Electronics is expected to have very little impact on GM's bottom line.
- Although General Motors halted production of its recently recalled battery EV Bolt, the company has kept on its effort to produce electric vehicles. In November 2020, General Motors opened its electric vehicle-dedicated manufacturing factory "Factory ZERO" in Detroit that will produce the company's flagship electric vehicle GMC Hummer EV.

- General Motors has also unveiled its next generation EV batteries, drive units and platform called Ultium. Specifically, according to the company, an electric vehicle with the Ultium battery cell is expected to have a GM estimated driving range of 450+ miles when the car is fully charged, which is the longest range yet in the industry. The battery costs nearly 40 percent less than the one installed in the Chevrolet Bolt EV. The company is also planning to offer a second generation Ultium battery cell, which is expected to cost 60% less than conventional batteries. Based on its Ultium platform, the company is planning to offer 30 new electric vehicles by 2025.
- The company is currently suffering from a major shortage of semiconductors, along with all other automobile manufacturers around the world. In September 2021, the company had to shut down several factories in America and four other factories in Mexico and Canada due to a chip shortage. The company experienced a stock fall as its 3rd quarter sales fell due to semiconductor shortage.
- GM and Cruise entered long-term strategic relationship with Microsoft to accelerate the commercialization of self-driving vehicles.

Source General Motors

ESG Review

GM's ESG strategy is to deliver safe and responsible transportation solutions for its customers. In doing so, the company has vowed to work toward realizing its vision of a world with zero crashes, zero emissions, and zero congestion while working to become the most inclusive company in the world.

Environmental

- General Motors is planning to reduce its operational energy by 35% until 2035 and is planning to become a carbon neutral company by 2040.
- General Motors is also planning to use only renewable energy in U.S. sites by 2030 and globally by 2035.
- By 2035, GM is planning to remove tailpipe emissions from LDV (light-duty vehicles).
- Since 2010, General Motors has been trying to achieve following goals:
  - 22% reduction in absolute energy use,
  - 11% reduction in energy intensity,
  - 29% reduction in emissions intensity,
  - 95% increase in renewable energy use,
  - 31% reduction in waste intensity,
  - 13% reduction in water intensity,
  - 38% reduction in scope 1 (emission from facilities controlled or owned by
  - the company) and 2 (emissions from purchased or acquired energy)
  - absolute emissions,
  - 20.8M metric tons waste diverted from landfill,
  - 83% increase in wildlife habitat sites,
  - 87% increase in wildlife habitat acreage,
  - 45% reduction in VOC (Volatile Organic Compounds) Emissions.
- GM plans to reduce scope 1 and 2 greenhouse gas emissions by 3035 compared with the base year 2018.
- Between 2020 and 2025, GM plans to invest $27 billion in the capital and engineering sector that develops electric vehicles and autonomous vehicles.
- In 2020, GM signed a partnership with Honda to develop two automobile platforms based on its new all electric vehicle architecture, Ultium.
- In 2020, GM's subsidiary Cruise has unveiled an electric autonomous shared vehicle called Origin.

Source General Motors

Governance

- GM has a very inclusive and diverse Board comprised of 5 male and 7 female members. In terms of race, the Board has 9 white and 3 diverse members. In 2020, the company also announced aspiration to become the most inclusive company in the world, appointed an inclusion Advisory Board, and committed $10 million to support organizations that promote inclusion and social justice.
- 30% of top managers at the company are women, and 20% of women are in leadership roles.
- The company regularly holds a separate session to discuss the company's ESG management strategy and implementation.
- GM has continued to support public policies which are responsible to the long-term and sustainable development of the company.
- GM is a signatory of the United Nations Global Compact.

Hybe Co Ltd

KRX: 352820

Hyeogdu Choi

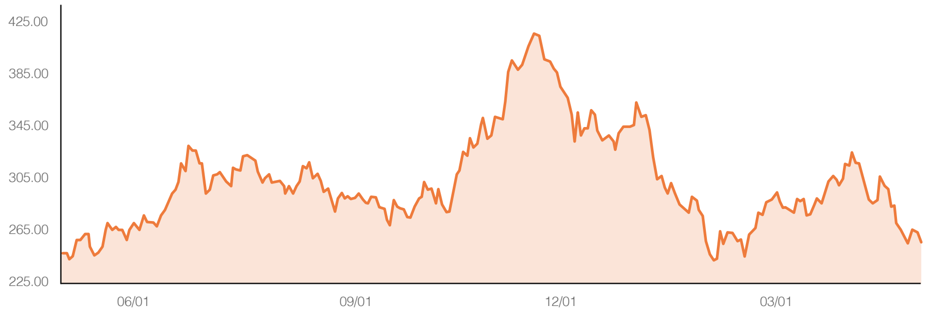
Hybe Co., Ltd. (HYBE corporation) is a South Korean entertainment company established in 2005 by Bang Si-hyuk as Big Hit Entertainment Co., Ltd. The company operates as a record label, talent agency, music production company, event management, concert production company, and music publishing house.

Hybe HQ is Hybe Corporation's wholly owned subsidiary, and Hybe Labels, Hybe Solutions, and Hybe Platforms make up the company's three divisions. Each division comprises totally or partially owned subsidiaries of the parent company.

Hybe Labels is the entertainment and music production division. It used to be known as Big Hit Labels before the renaming. Under Hybe Labels, the company operates multiple subsidiaries, including Big Hit Music, Source Music, Pledis Entertainment, Belift Lab, and KOZ Entertainment.

Hybe Solutions makes up the business units that specialize in video content, IP, learning, and games. Secondary and tertiary enterprises are born from each label's creative output. In response to the growing demand for Korean-language instruction in other countries, BTS IP will be used to generate various online and offline products and content.

Lastly, Hybe Platforms is the division within Hybe Corporation that oversees the technological aspects of the business. It is in charge of Weverse, social networking and entertainment platform that connects and expands Hybe's content and services. As part of its expansion strategy, Weverse invested in U.S. company Fave, an F2F platform for fandoms, in May 2021.



Valuation Measures	
Market Cap (intraday)	12.30T
Enterprise Value	11.88T
Trailing P/E	82.46
Forward P/E	N/A
PEG Ratio (5 yr expected)	N/A
Price/Sales (ttm)	8.98
Price/Book (mrq)	4.38
Enterprise Value/Revenue	9.46
Enterprise Value/EBITDA	38.70
Profitability	
Profit Margin	10.89%
Operating Margin (ttm)	15.10%
Management Effectiveness	
Return on Assets (ttm)	3.56%
Return on Equity (ttm)	6.89%
Income Statement	
Revenue (ttm)	1.26T
Revenue Per Share (ttm)	33,280.62
Quarterly Revenue Growth (yoy)	47.40%
Gross Profit (ttm)	623B
EBITDA	272.94B
Net Income Avi to Common (ttm)	136.8B
Diluted EPS (ttm)	N/A
Quarterly Earnings Growth (yoy)	83.20%
Balance Sheet	
Total Cash (mrq)	1.65T
Total Cash Per Share (mrq)	39,853.39
Total Debt (mrq)	1.23T
Total Debt/Equity (mrq)	42.47
Current Ratio (mrq)	3.41
Book Value Per Share (mrq)	N/A
Cash Flow Statement	
Operating Cash Flow (ttm)	177.26B
Levered Free Cash Flow (ttm)	100.68B

Stock Price History	
Beta (5Y Monthly)	N/A
52-Week Change	28.79%
S&P500 52-Week Change	14.40%
52 Week High	421,500.00
52 Week Low	224,821.92
50-Day Moving Average	272,790.00
200-Day Moving Average	306,145.00
Share Statistics	
Avg Vol (3 month)	222.64k
Avg Vol (10 day)	128.59k
Shares Outstanding	41.35M
Implied Shares Outstanding	N/A
Float	14.98M
% Held by Insiders	59.97%
% Held by Institutions	15.38%
Shares Short	N/A
Short Ratio	N/A
Short % of Float	N/A
Short % of Shares Outstanding	N/A
Shares Short	N/A
Dividends & Splits	
Forward Annual Dividend Rate	N/A
Forward Annual Dividend Yield	N/A
Trailing Annual Dividend Rate	N/A
Trailing Annual Dividend Yield	N/A
5 Year Average Dividend Yield	N/A
Payout Ratio	N/A
Dividend Date	N/A
Ex-Dividend Date	N/A
Last Split Factor	N/A
Last Split Date	N/A

Business Review

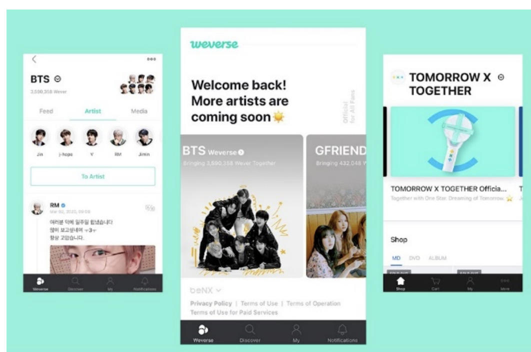
Recording record profits in 2021, Hybe has accelerated growth and expansion into new businesses by using its musicians as a source of promotion.

- Revenue increased by 58 percent YoY to 1.257 trillion KRW (USD $1.098 billion), marking the first time the company surpassed the billion mark in annual income.
  - The $1 billion acquisition of Scooter Braun's Ithaca Holdings by HYBE in April of last year was a key contributor in the company's 58 percent growth in 2021.
  - This partnership strengthened HYBE's position in the U.S. market and brought Scooter Braun Projects (Ariana Grande, Justin Bieber, Dan & Shay) under the HYBE umbrella.
  - The smallest of the 'Big Three' big music firms, Warner Music Group, recorded over USD $5.58 billion in revenue in FY2021. Hybe still has a long way to go before it catches up to the industry leaders, but the company is growing at a much faster pace.
  - However, Hybe is quickly catching up to the mini majors in terms of revenue. The company has closed the distance between itself and its competitors, such as Concord and BMG, to just a few hundreds of millions of dollars in annual revenue.
  - In 2021, HYBE's album sales revenues increased 41% YoY to 524 billion KRW ($456 million), according to the company's financial data.
  - The release of HYBE's financial figures comes on the heels after BTS held their first in-person concert in the Olympic Stadium. The boy group will perform its BTS Permission to Dance on Stage event in front of a live audience at Allegiant Stadium in Las Vegas in April.
  - With the predicted reopening of the economy this year, HYBE artists with large global followings have a lot of offline concerts planned.
  - We anticipate inorganic growth, which will be fueled by the continuous expansion of core companies as well as new business endeavors (e.g., non-fungible tokens). Analysts expect consolidated revenue of KRW402.4 billion (+28.9% YoY, +18.0 percent QoQ) and OP of KRW72.3 billion (+30.1 percent YoY, +10.2 percent QoQ; 18.0 percent OPM) in 4Q21, which will be 9.5 percent lower than the market consensus (KRW79.9 billion) but higher than the previous quarterly record high. Annual income is expected to be approximately KRW1 trillion.

Source Reuters

Weverse

- Weverse is determined to stay true to its purpose of connecting fans with their stars, despite changing trends in the fast-paced industry.
- As part of its merger with prominent K-pop live streaming and fan community platform VLIVE, a new version of Weverse will be introduced in 2022 that includes a livestream capability. The app aspires to improve the fan experience and become the premier community platform due to this merger.



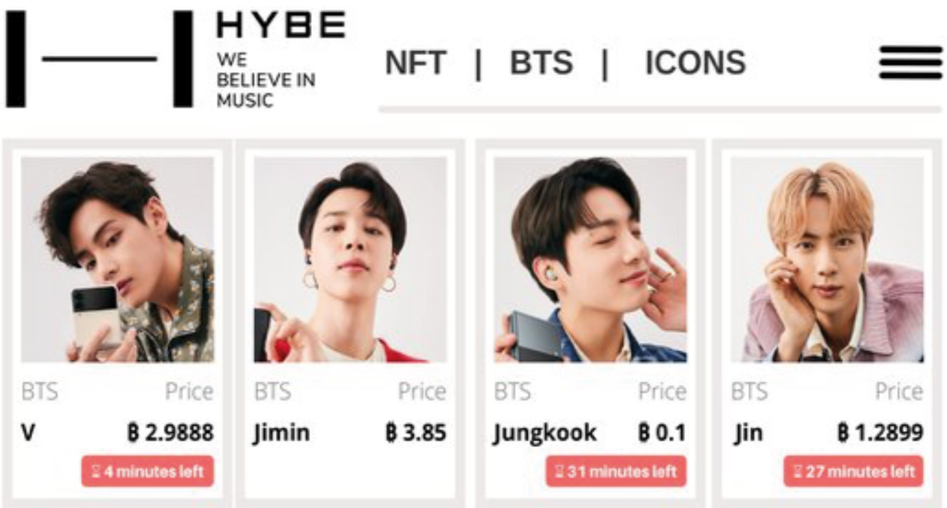
Source Koreaboo

NFT

- Hybe’s interest in NFTs (non-fungible tokens) is a more recent change and business aspiration growing within the company. Hybe will enter the blockchain market next year with a new crypto branch created in collaboration with Dunamu, one of South Korea's largest fintech companies.
- One of the many contents that Hybe intends to turn into NFTs is photo cards, which will be converted into exchangeable digital photo cards that fans may trade via Weverse.

Hybe America

- Bye America is searching for its new "unprecedented girl group." This comes as part of Hybe's partnership with Universal Music Group (UMG), as part of which the two companies announced a grand plan to hold a global audition program. They are also implementing a new system to help artists develop their artistry using Hybe's "long-standing expertise."



Source Quora

Source Bandwagon Asia

JPMorgan Chase & Co

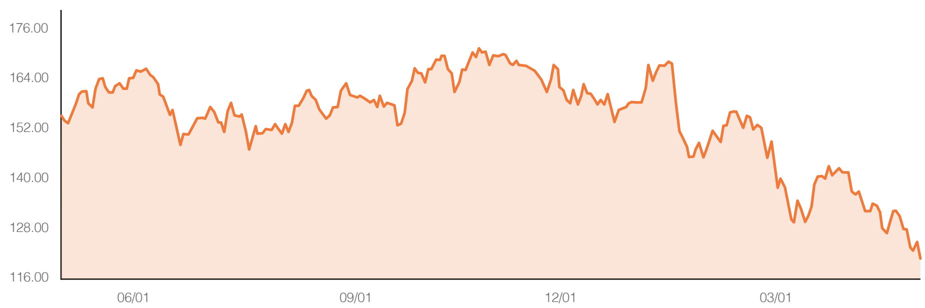
NYSE: JPM

Junseo (Royce) Lee

Formed in 2,000 as a result of a merger between Chase Manhattan Corporation and J.P. Morgan & Co., JPMorgan Chase is the largest bank in the United States, the world's largest bank by market capitalization, and the world's fifth-largest in terms of total assets. It is a financial holding company headquartered in New York City and incorporated in Delaware. Its total assets sum up to a total of $3.758 trillion, making it the fifth-largest bank in the world regarding total assets.

JPMorgan Chase is the result of the combination of several large banking companies since 1996, including Chase Manhattan Bank, J.P. Morgan & Co., Bank One, Bear Stearns, and Washington Mutual. Even before, its predecessors were leading banks at the time, such as Chemical Bank. The company was initially known as Chemical Bank which acquired Chase Manhattan, then changed its name accordingly. In 1955, the Chase Manhattan Bank was formed after the purchase of the Chase National Bank by The Bank of the Manhattan Company, founded by Aaron Burr.

JPMorgan Chase operates in multiple divisions such as Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. The Consumer & Community Banking provides services to consumers and businesses through bank branches, automatic teller machines, online, mobile, and telephone banking. The Corporate & Investment Bank segment, comprising Banking and Markets and Investor Services, offers investment banking, market-making, prime brokerage, and treasury and securities products and services to corporations, investors, financial institutions, and government and municipal entities. The Commercial Banking segment provides financial solutions, including lending, treasury services, investment banking and asset management. The Asset Management segment comprises investment and wealth management.



Valuation Measures	
Market Cap (intraday)	447.92B
Enterprise Value	N/A
Trailing P/E	9.90
Forward P/E	13.42
PEG Ratio (5 yr expected)	1.38
Price/Sales (ttm)	3.79
Price/Book (mrq)	1.73
Enterprise Value/Revenue	N/A
Enterprise Value/EBITDA	N/A
Profitability	
Profit Margin	36.92%
Operating Margin (ttm)	45.83%
Management Effectiveness	
Return on Assets (ttm)	1.36%
Return on Equity (ttm)	16.86%
Income Statement	
Revenue (ttm)	130.9B
Revenue Per Share (ttm)	43.32
Quarterly Revenue Growth (yoy)	-2.20%
Gross Profit (ttm)	130.9B
EBITDA	N/A
Net Income Avi to Common (ttm)	46.5B
Diluted EPS (ttm)	15.36
Quarterly Earnings Growth (yoy)	-14.30%
Balance Sheet	
Total Cash (mrq)	1.42T
Total Cash Per Share (mrq)	479.68
Total Debt (mrq)	623.73B
Total Debt/Equity (mrq)	N/A
Current Ratio (mrq)	N/A
Book Value Per Share (mrq)	88.07
Cash Flow Statement	
Operating Cash Flow (ttm)	78.08B
Levered Free Cash Flow (ttm)	N/A

Stock Price History	
Beta (5Y Monthly)	1.12
52-Week Change	1.03%
S&P500 52-Week Change	10.87%
52 Week High	172.96
52 Week Low	139.57
50-Day Moving Average	155.61
200-Day Moving Average	159.28
Share Statistics	
Avg Vol (3 month)	14.49M
Avg Vol (10 day)	12.42M
Shares Outstanding	2.95B
Implied Shares Outstanding	N/A
Float	2.92B
% Held by Insiders	0.91%
% Held by Institutions	71.87%
Shares Short	16.72M
Short Ratio	0.92
Short % of Float	0.57%
Short % of Shares Outstanding	0.57%
Shares Short	14.71M
Dividends & Splits	
Forward Annual Dividend Rate	4
Forward Annual Dividend Yield	2.77%
Trailing Annual Dividend Rate	3.80
Trailing Annual Dividend Yield	2.56%
5 Year Average Dividend Yield	2.52
Payout Ratio	24.74%
Dividend Date	Jan 30, 2022
Ex-Dividend Date	Jan 04, 2022
Last Split Factor	3:2
Last Split Date	Jun 11, 2000

Business Review

JP Morgan Chase has a history of being a consistent and stable stock, even during the difficult times of a financial crisis. Even during the COVID-19 pandemic, the company reported solid results across its businesses benefiting from elevated capital markets activity and a pick up in lending activity as corporate loans were up.

- Despite the economic downturns in the past decade, JPMorgan's revenue has consistently increased and has consistently topped its competitors. In 4Q 2021, the company reported:
  - Revenue of $29.3 billion
  - 65.92% increase in net income YoY with a 64.25% increase in income from unusual items and a 20.64% increase in other non-interest income.
  - 6% increase in average loans.
  - 17% increase in average deposits.
  - 22% increase in client investment assets.
  - 26% increase in debit and credit card sales volume.
  - 50% increase in gross Investment Banking revenue to $1.5 billion.
  - 15% increase in assets under management (AUM) to $3.1 trillion.
  - 8% increase in book value per share to $88.07.
- Jamie Dimon, Chairman and CEO of JPMorgan Chase, announced that global IB fees were up 37%, driven by both the Corporate & Investment Bank and Commercial Banking, due to unprecedented M&A activity, an active acquisition financing market, and strong performance in IPOs.
- The company also announced in its 4Q 2021 report that the company would distribute common dividend of $3.0 billion, or $1.00 per share, and buy back $1.9 billion of its common stock.
- JP Morgan has paid outstanding quarterly dividends with a consistent increase over the past 11 years, exceeding the expectations of analysts. It has gone from $0.25 each quarter to $1.00.
- The Federal Reserve is expected to end its extraordinary bond purchases and start increasing interest rates in March, which will help financial stocks benefit from higher rates through increased profit margins and improved growth in net interest income. JPMorgan generates approximately 47% of its income from interest-bearing activities, which suggests that there may be a perfect tradeoff. Although the company's costs may increase in the short-run with rate hikes, long-run spreads on loans that JPMorgan will invest in or will originate will increase, which could result in a higher bottom line for the company. Investors expect the Federal Reserve to increase short-term rates seven times this year.

- JPMorgan passed its previous stress test with no problem. Its stress test projection for2023 is intact, with its equity Tear 1 RWA projected at 11.2%, which is much higher than the required 4.5%. Its general Tier 1 equity ratio projection of 12.9% also exceeds the required benchmark of 6%.
- JPMorgan Chase is reportedly in advance talks with Global Shares for a potential takeover. Global Shares is a fintech company that creates solutions for employee share ownership in public and private companies.
- However, high rates of inflation have added significant upward pressure on already-rising input costs due to the short supply of goods and labor. The company's wage expenses have grown by 21.35% during the past quarter. Wages as an input cost is almost always positively skewed because of the high supply of talent and the inability of highly-skilled workers to accept pay cuts, making it difficult for the company the trim down wages in the future.
- JPMorgan Chase announced its intention to actively unwind its Russian business and stop pursuing any new business in the country. According to CNN, JPMorgan said its current activities in Russia are limited and include helping global clients address and close out pre-existing obligations, helping clients manage Russian-related risks, acting as a custodian to clients and taking care of employees.

ESG Review

JPMorgan Chase has made commitments to develop and use sustainable solutions for its clients and business. The company utilizes its resources such as capital, data, expertise, and other resources to address climate change and promote a sustainable future.

Climate

In 2020, JPMorgan Chase announced the company's commitment to align its financing portfolio with the goals of the Paris-Agreement.

- The Paris-Aligned Financing Commitment has the overarching goal of accelerating low-carbon energy transition and achieving net-zero emissions by 2050.
- By working closely with its clients, JPMorgan will finance their transition strategies to help them face the challenges of decarbonization and energy transition, making opportunities for them as well.

  JPMorgan Chase has made a list of goals to reduce carbon intensity in their Oil & Gas, Electric Power and Auto Manufacturing portfolios by 2030. The company plans to reduce 35% in the Oil & Gas sector, from the 2019 baseline by 2030. The company also plans to reduce its investments in the Electric Power sector and Auto Manufacturing sector by 69% and 41% respectively by 2030 based on their 2019 baseline.

- To reach these goals, JPMorgan Chase has developed Carbon Compass, a methodology used to integrate approaches to science-based metrics and targets.
- In 2020, JPMorgan Chase had made goals to facilitate $200 billion for climate change and sustainability, but exceeded this goal, facilitating over $220 billion, with $55 billion for green initiatives.
- JPMorgan Chase has made goals to facilitate over $2.5 trillion for climate change and sustainability over the next 10 years, with $1trillion aimed towards green initiatives.
- Other than promoting sustainability and climate change, JPMorgan Chase has made initiatives to reduce the use of office paper and global water-consumption. They will also focus on renewable energy and the diverting of e-waste.

Social

At JP Morgan Chase, human capital is held with high regard, creating a high-performing, diverse and global workforce, providing its clients with a positive environment.

- As of 2020, the overall global and U.S. overview of JP Morgan's workforce was almost evenly distributed in gender and ethnicity.
- 43% of the company's employees participate in the Business Resource Groups (BRG, which provides support to many social issues such as employees with disabilities, LGBT+, VETS, and ethnicity.
- The company invests $200 million each year into employee training and development.
- JPMorgan Chase is committed to providing compensation and rewards to its employees through various methods. In January 2021, the company raised the minimum wage from $16 to $20, in addition to the benefits package, which costs around $13,700 per employee.
- The company also provides wellness packages to the employees and their families, which include healthcare coverage, retirement benefits, insurance, assistance programs, etc.
- JPMorgan Chase considers its clients a priority, building relationships with its clients and creating internal policies for the wellbeing of its clients.
- In order to promote an environment with inclusion and transparency, the company focuses greatly on the education of its employees towards customers.

Governance

Aiming to promote transparency, accountability, and ethical behavior, JPMorgan Chase continuously strives to create structures to help operate business at exceptional levels.

- Following the standards of the New York Stock Exchange and the company's governance principles, all board members other than the CEO are independent.
- The five main committees that supervise the firm consist of the Compensation & Management Development Committee, Corporate Governance & Nominating Committee, Risk Committee, Audit Committee, and Public Responsibility Committee. Each of these committees play an essential role in the company regarding the ESG goals of the company.
- The corporate and operational sustainability teams and the Risk Management organization handle climate-related issues for the company.
- JPMorgan Chase strongly promotes an ethical culture within the company through various methods such as the establishment of business principles, codes of conduct, and training.
- To develop inclusive economic growth, the company has established the JPMorgan Policy Center in 2019. Since then, the company has provided economic relief to those affected by the COVID-19 pandemic.

Source ESG Today

Microsoft Corporation

NASDAQ: MSFT

Yoonseo Kim

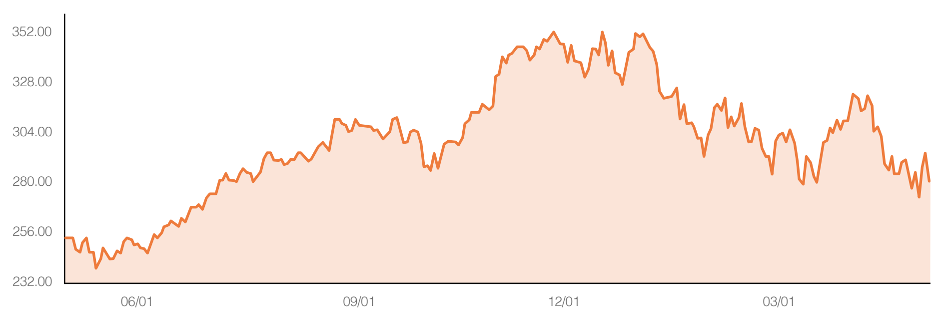
On April 4, 1975, two childhood friends Bill Gates and Paul Allen founded Microsoft, a company that specializes in computer software. They ventured into converting BASIC, a mainframe computer programming language, for use on the personal computer or PC, the Altair 8800. They grew their business by refining BASIC and developing other programming languages and by the end of 1978, their sales topped more than $1 million.

In 1980, IBM requested that Microsoft produce the operating system for its personal computer and Microsoft came up with the MS-DOS, licensing it to IBM's first personal computer that debuted in 1981. In 1985, Microsoft released its most famous operating system, Windows, with a graphical user interface like the scroll bar, drop-down menus and other features that are still widely used today. And the following year, the company moved its headquarters to Redmond, Washington and went public at $21 a share.

By the late 1980s, Microsoft had become the biggest personal-computer software company based on its sales. In 1995, Windows 95 made its debut including innovations such as the start menu, and its purchases skyrocketed and sold a total of 7 million copies in the first five weeks. Amidst the exponential growth in sales, Microsoft introduced its first web browser, Internet Explorer, in 1995 and soon came to dominate the browser market in the late 1990s.ent.

In 2001, Microsoft released the Xbox and jumped in the video gaming market. By 2006, it sold a total of 24 million units, solidifying its dominance in the video game market. In 2000, Bill Gates relinquished his role as CEO of Microsoft to Steve Ballmer, and in 2008, he left the day-to-day running of the company, though he remained as chairman of the board. And in 2014, Microsoft executive Satya Nadella succeeded Steve Ballmer as CEO.

Even with the constant change in leadership, Microsoft showed a constant increase in its annual gross profit expanding and improving as a corporation. And by introducing Surface, the line of hybrid tablet computers in 2012, and acquiring Activision Blizzard, an American video game holding company, in 2022, Microsoft truly established itself as a leader in the market of information technology, applications and online gaming services.



Business Review

Microsoft's core software business remains as the largest source of income investors have relied on from the beginning of the company. Its core software business has been and is likely to continue to be successful in the future. This success in their prospective markets have allowed them to expand in other key businesses and expand their market. Microsoft also significantly expanded towards the gaming industry by acquiring video game company Blizzard with $68.7 billion, becoming the third largest gaming company by revenue. Also, with the development of online office platforms like Microsoft Teams, Microsoft dived into the online communication platform that will allow staff to share files, organize meetings from their calendar, and sync with other Office apps like OneNote, OneDrive, and Skype for Business. With the presence of the metaverse rising, Microsoft, too, has developed and produced a product called the HoloLens, a $3,500 headset that shows digital holograms, with a focus on augmented reality and applications for government agencies and businesses.

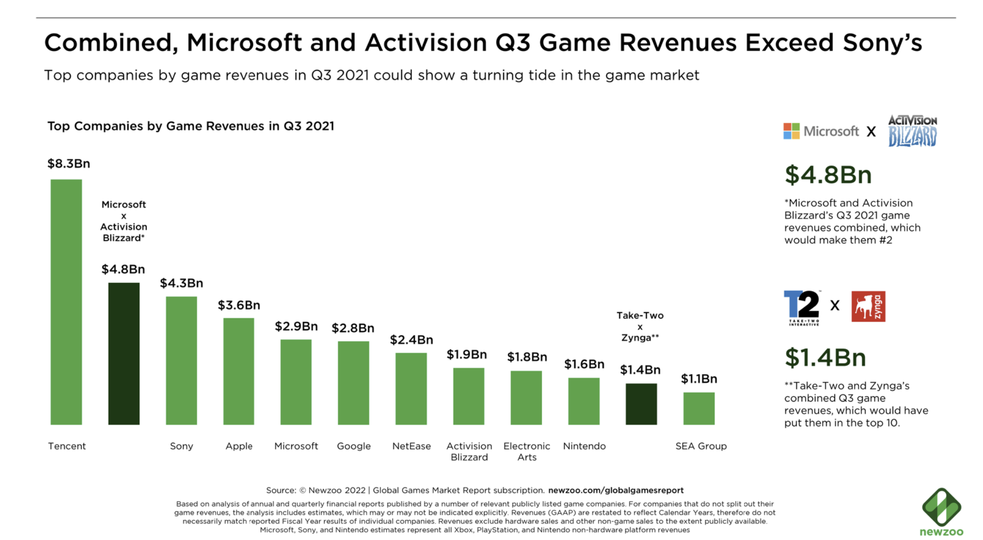
- The windows software has more than 1.3 billion users worldwide, but recent attention within the company's management and Wall Street has shifted to the gaming and computing segments. These two segments are the two fastest growing among the company's core businesses and have been successful due to Microsoft's resilience, and ability to respond to market demands, changing technologies and business opportunities.
- After being launched in 2017, Microsoft's communication platform "Microsoft Teams" had reported a revenue of a mere $0.01 billion in 2017. However, the platform's revenue jumped to $6.8 billion in 2020 with more 115 million users as a result of COVID-19 spreading, which then led business meetings and interactions to occur through online platforms.
- Microsoft has 16.9% market share in the IAAS (infrastructure as a service) cloud service. Through the early 2000s, Microsoft suffered through a decade of product delays and lacking stock performance, but with the development of cloud computing it found a source of rebound. With the invention of Microsoft Azure in 2008, cloud computing became one of Microsoft's main sources of income through the operating system of Linux, Windows, IOS and Android. Now, in the recently announced Q1 FY 2022 (ended Sep 2021) the company beat consensus estimates for revenue and earnings. Revenue was $45.3 billion, up 22% year over year with the Intelligent Cloud segment leading the growth. Intelligent Cloud segment revenue was $17 billion, up 31% YoY.

- Microsoft released Windows 11 in 2021 with a free upgrade from Windows 10. The Windows 11 includes numerous upgrades from the Windows 10 like the lovely new rounded window corners and Fluent translucent design touches, Snap Layouts, Widgets, Android App capability, Focus Sessions in the Clock app, and PC gaming improvements.

- Microsoft announced a deal to acquire Activision Blizzard for $68.7 billion dollars in January this year, increasing the availability of Activision Blizzard content across more platforms including mobile. This acquisition seems to implant the control that Microsoft has of the gaming industry and to allow more users that use the Microsoft gaming system to experience high quality games exclusively. This alerts PlayStation and its users as the games previously owned by Blizzard may only be available to Microsoft users in the future. Moreover, the recent popularity of the metaverse and movement to shift the gaming industry into the virtual world seem to have motivated Microsoft to acquire Blizzard, which was plagued by its own troubles in the recent months.

- Microsoft has a monopoly in the Personal Computer and Operating System industry taking up 87.56% of the market share. The company owns the operating system for mobile phones, gaming consoles (Xbox), and software development tools and constantly strive to better their products, which makes it difficult for other competitors to enter the market.

- Microsoft's annual gross profit for 2020 was $96.937B, a 16.89% increase from 2019, while its annual gross profit for 2021 was $115.856B, a 19.52% increase from 2020. This shows a constant growth in the company's profits. This is due to the digitalization of games in XBox, increasing use of online work platforms due to COVID-19, among the many reasons that attract new and more users to its products and services.



ESG Review

Microsoft is famous not only for its profitable numbers, but also for its commitment to become a global leader and a moral corporate citizen with efforts to address its ESG risks. The company is adding 3 million square feet of offices and facilities, and the entire project is being designed to be powered by a vast geothermal system and produce zero carbon emissions. A big part of getting there was eliminating fossil fuels from its energy portfolio. During Microsoft's most recent fiscal year, it grew business revenue by 20 percent while continuing to reduce its operational emissions with a decrease of approximately 17 percent through purchasing renewable energy. Through its first annual sustainability report, released in January 2021, Microsoft showed early progress on its commitments in becoming a carbon negative, water positive, zero waste company by 2030 and to protect ecosystems by building a Planetary Computer.

- In FY21 and FY22, Microsoft successfully contracted to remove 2.5 million mtCO2, meeting the company's cumulative two-year goal.
- Microsoft has made available 24 petabytes of data with more than 30 key environmental and Earth observation datasets to Azure in consistent, analysis-ready format that is freely available for use by anyone.
- Since its inception in 2017, Microsoft's AI for Earth program has provided more than 850 grants to organizations working in 110 countries around the world, granting more than $20 million in Azure credits.
- In 2021, Microsoft was awarded the U.S. Water Prize for Outstanding Private Sector Organization for adopting its water positive program and committing to being water positive by 2030.
- Through Microsoft's partnership with Water.org, it provided more than 95,00010 people with access to safe water or sanitation.
- In FY21, Microsoft signed new power purchase agreements (PPAs) for approximately 5.8 gigawatts (GW) of renewable energy across 10 countries around the globe.
- In April 2021, to celebrate the 51st anniversary of Earth Day, the Microsoft Sustainability Community organized three days of learning sessions to educate, inspire, and activate employees on the importance of sustainability. Volunteers coordinated more than 40 sessions and generated 30 hours of evergreen learning content covering topics from green software engineering to how to live a zero-waste lifestyle at home.

- Microsoft announced its $1 billion investment for the Climate Innovation Fund, as an initiative to accelerate technology development and deployment of new climate innovations through equity and debt capital.
- Within the company, one of the biggest users of fossil fuels were the

  company's kitchens, so Microsoft developed brand new all-electric kitchens in its headquarters outside Seattle where nearly 50,000 employees are based in order to reduce the amount of waste produced.

Source Microsoft

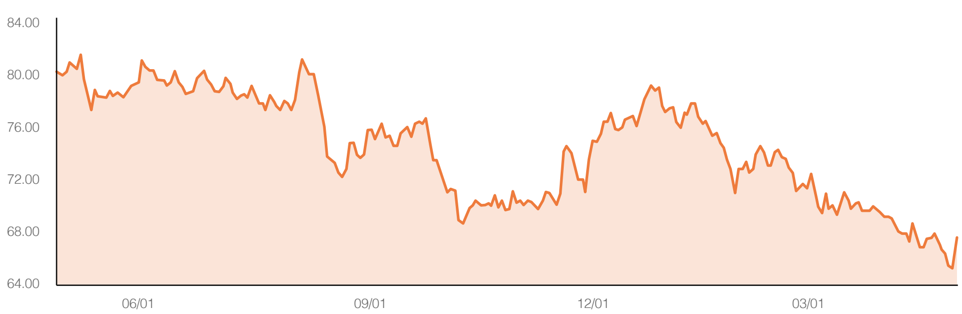
Samsung Electronics Co Ltd

KRX: 005930

David Koo

Founded on January 13, 1969, by Lee Byung Cheol, Samsung Electronics is the principal company among the Samsung group, accounting for 70% of the conglomerate's sales. The company employs more than 287,000 employees in 74 countries. With a market capitalization of $437.44B, Samsung Electronics is ranked the 15th most valuable company in the world.

Samsung is a leading supplier of electronic components such as lithium-ion batteries, semiconductors, and camera modules. Moreover, it provides displays to companies like Apple, Sony, HTC, and Nokia. It is the world's largest maker of mobile phones and smartphones, owing to the success of the original Samsung Solstice and, later, the Samsung Galaxy line of devices. Additionally, the company is one of the leading manufacturers of tablet computers, most notably its Android-powered Samsung Galaxy Tab line, and is widely credited with pioneering the phablet (phone-tablet) market with the Samsung Galaxy Note series of devices. Additionally, it has created 5G-capable smartphones, like the Galaxy S21, as well as foldable phones, such as the Galaxy Z Fold 3. Samsung has been the world's largest television maker since 2006, and the world's top mobile phone manufacturer since 2011, when it surpassed Apple. It is also the leading semiconductor manufacturer, notably defeating Intel in 2017.



Valuation Measures	
Market Cap (intraday)	499.02T
Enterprise Value	393.38T
Trailing P/E	12.86
Forward P/E	10.75
PEG Ratio (5 yr expected)	1.44
Price/Sales (ttm)	1.81
Price/Book (mrq)	1.70
Enterprise Value/Revenue	1.42
Enterprise Value/EBITDA	4.47
Profitability	
Profit Margin	14.03%
Operating Margin (ttm)	18.47%
Management Effectiveness	
Return on Assets (ttm)	8.02%
Return on Equity (ttm)	13.74%
Income Statement	
Revenue (ttm)	279.6T
Revenue Per Share (ttm)	41,162.72
Quarterly Revenue Growth (yoy)	24.40%
Gross Profit (ttm)	113.19T
EBITDA	84.83T
Net Income Avi to Common (ttm)	39.24T
Diluted EPS (ttm)	N/A
Quarterly Earnings Growth (yoy)	65.30%
Balance Sheet	
Total Cash (mrq)	124.15T
Total Cash Per Share (mrq)	18,277.09
Total Debt (mrq)	18.39T
Total Debt/Equity (mrq)	6.03
Current Ratio (mrq)	2.48
Book Value Per Share (mrq)	N/A
Cash Flow Statement	
Operating Cash Flow (ttm)	65.11T
Levered Free Cash Flow (ttm)	10.74T

Stock Price History	
Beta (5Y Monthly)	0.92
52-Week Change	-13.33%
S&P500 52-Week Change	10.87%
52 Week High	89,200.00
52 Week Low	68,300.00
50-Day Moving Average	76,232.00
200-Day Moving Average	76,419.50
Share Statistics	
Avg Vol (3 month)	13.43M
Avg Vol (10 day)	8.58M
Shares Outstanding	5.97B
Implied Shares Outstanding	N/A
Float	5.29B
% Held by Insiders	19.65%
% Held by Institutions	40.62%
Shares Short (Jun 14, 2021)	N/A
Short Ratio (Jun 14, 2021)	N/A
Short % of Float	N/A
Short % of Shares Outstanding	N/A
Shares Short	N/A
Dividends & Splits	
Forward Annual Dividend Rate	1444
Forward Annual Dividend Yield	2.02%
Trailing Annual Dividend Rate	N/A
Trailing Annual Dividend Yield	N/A
5 Year Average Dividend Yield	2.76
Payout Ratio	25.00%
Dividend Date	N/A
Ex-Dividend Date	Dec 29, 2021
Last Split Factor	50:1
Last Split Date	May 16, 2018

Business Review

Samsung Electronics, with a relatively low PE ratio of 12.20 (Mar 26, 2022), notable continuous development, and reliable dividend of 2.07%, continues to be an attractive and safe investment for investors.

- In 2020, Samsung Electronics ranked first in five items: smartphones, DRAMs, OLED panels, NAND flash semiconductors, and ultra-thin TVs.
  - TV, the key product in the CE business field, has maintained its No. 1 market share in the world for 15 consecutive years until 2020.
- As of the end of 2020, Samsung Electronics had 267,937 global executives and employees, 2,122 partner companies, 74 countries entering the market, and 21.2 trillion won in research and development costs.
- Since the late 2000s, Samsung Electronics has been focusing on future businesses such as artificial intelligence (AI) platforms and the Internet of Things (IoT), 5G, bio, autonomous driving and connected car industries.
  - Acquiring 100% stake in “Zhilabs”, for the purpose of expanding infrastructure through 5G network technology, Samsung Electronics continues to make smart investments for future growth and business.

The company has recorded quarterly revenue of KRW 76.57 trillion, operating profit at KRW 13.87 trillion in Q4 FY2021. For the full year, it reported KRW 279.6 trillion in revenue, a new historic high and KRW 51.63 trillion in operating profit.

- A large portion of the revenue is generated mainly from the finished product businesses, with expanded sales of premium smartphones, TVs, and home appliances.
- Operating profit rose from a year earlier, driven by the semiconductor businesses.
- In 2021, the Company's capital expenditures totaled KRW 48.2 trillion, which included KRW 43.6 trillion for semiconductors and KRW 2.6 trillion for screens. Memory spending has been focused on capacity expansions and process migrations at fabs in Pyeongtaek and Xi'an to meet demand for advanced nodes such as EUV-based 15-nanometer DRAM and 6th generation V-NAND. Foundry spending was concentrated on capacity expansions for 5-nanometer EUV nodes. Investments in displays were focused on mobile modules and QD displays.
- Moreover, earnings for mobile panels continued to rise in the Display Panel Business. So did the Mobile eXperience (MX) Business, slightly increasing its revenue by sales of premium items including foldable phones and Device Ecosystem products.

- The strength of the US dollar versus the Korean won countered the depreciation of major developing currencies, resulting in an approximately KRW 300 billion increase in operating profit over the previous quarter.

Samsung electronics also has ambitious plans for 2022 to attract investors:

- In the first quarter, although lingering concerns are anticipated to persist, the Memory Business will focus on enhancing the quality of the business portfolio through increased sales of advanced node products to support the server and PC demand recovery. The System LSI Business will attempt to offer critical SoCs and CISs for major clients' flagship products, whilst the Foundry Business will seek to increase supply by boosting production and yield at advanced processes.
- In 2022, as global IT demand is expected to recover, the Company's component companies will boost production of innovative processes and strengthen their leadership in next-generation products and technology. In the completed product industries, the Company will enhance connection and synergy amongst devices to improve the premium segment range and offer new user experiences.

ESG Review

Samsung Electronics operates its ESG and sustainability strategies through the company’s three divisions: Consumer Electronics (CE) Division, IT & Mobile Communication (IM) Division, and Device Solutions (DS) Division.

Guided by their vision "Screens Everywhere, Screens for All", Samsung Electronics Consumer Electronics (CE) division developed solutions for a sustainable future via visual display business. Products that are durable, eco-conscious, and accessible have been proposed as following:

- Samsung Eco-Package: An upcycling initiative that allows consumers to use the TV and home appliance packaging to create small, multipurpose household objects.
    - Piloted on Lifestyle TV product packing in 2020
    - Planned for application on all TV and soundbars products in 2021
    - Planned for application on small home appliances including vacuum cleaners and air purifiers, etc. in 2021
- Renewable · Recycled Materials
    - In 2020, the CE division used a total of 25,000 tonnes of recycled plastic, and will continue to expand usage.
    - 100% of the paper used for product packaging are made from either recycled papers or papers certified by the Forest Stewardship Council for sustainable sourcing.

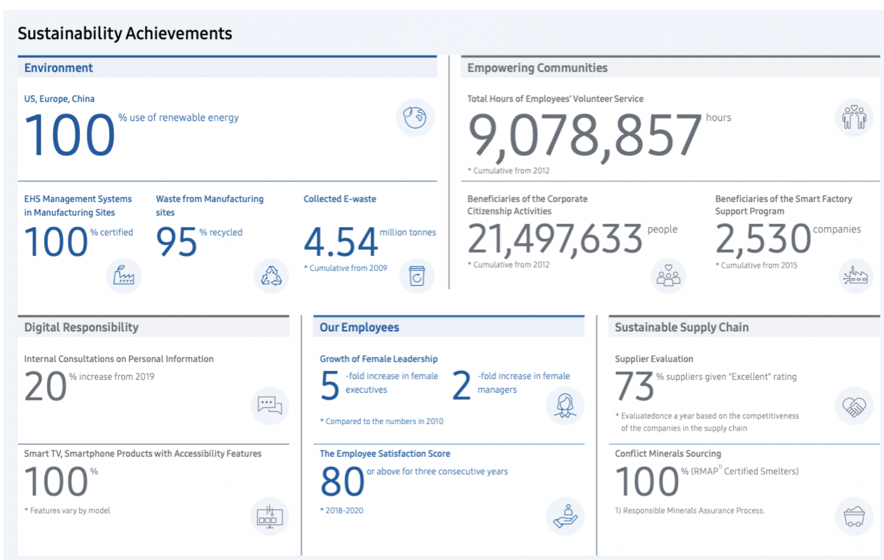
- Solar Cell Remote Control: a solar cell-powered remote control that charges itself through sunlight or indoor lighting using the embedded solar cell panels, rather than requiring single-use batteries
    - Designed to use minimal energy – at 86% reduction compared to other remote controls, while receiving additionally needed power from solar cells.
    - Power consumption reduction is equivalent to the effect of reducing 6,000 tonnes of greenhouse gas emissions (based on seven years, an average life cycle of TV products)
    - Solar Cell Remote Control will be expanded to home appliance products, including air conditioners.

With the Galaxy products and services, Samsung Electronics IT & Mobile Communication (IM) division has offered unrivaled innovation in mobile technology over the last three decades. As a major worldwide corporation, IM division is dedicated to tackling difficult global issues and contributing to a more sustainable world through the following methods:

- Galaxy Upcycling
    - The program takes used Galaxy phones and creates new value by allowing transformative uses for the device.
    - Digital Fundus Camera (EYELIKE™): Galaxy smartphones that are no longer of use are transformed into a specialized medical device used for screening eye diseases through upcycling (provided 90 devices to Vietnam, 200 devices to India, 60 devices to Morocco, and 40 devices to Papua New Guinea).
    - Galaxy Upcycling at Home: a smart home solution can be created using an old smartphone. Using the "SmartThings" app on the current device, the user can control sound detection and alerting, light level measurement, and light control by connecting to the old, used smartphone.
    - More than 1,500 used Galaxy smartphones are used at manufacturing sites in both Korea and Vietnam for monitoring the production status, barcode scanning for inventory management, on-site training, and as hand-held CB radios.
- Samsung Global Goals
    - The "Samsung Global Goals" app: a mobile application that introduces the 17 UN "Sustainable Development Goals" and allows users to give a donation for a goal of their interest.
    - Generated $1.5 million in donations (as of December 2020)

With its cutting-edge technology, Device Solutions (DS) division seeks to enhance technological competitiveness and expand its presence in the global market by focusing on developing next-generation products in the fabless (a firm that specializes in semiconductor design) industry. The following are approaches it has made to achieve such a goal:

- Product Energy Consumption Reduction
  - Improved the products' energy efficiency by applying EUV lithography, which was the first for the DRAM industry.
  - Have developed low-power processing and low-power circuits for the System LSI Business's flagship products, including the mobile AP, 5G SoC (System on Chip), CIS (CMOS Image Sensor), and DDI (Display Driver IC) products.
- Carbon Reduction in the Manufacturing Process
  - Reduction of carbon emissions from the memory manufacturing process.
  - Improving processing technologies: process gasses that generate carbon emissions during the memory manufacturing process have been reduced.
  - Reducing the power consumption: the amount of power consumption has been reduced by adopting high-efficiency and low-power equipment and parts and by strengthening the power control of equipment and facilities.
- Eco-conscious Products
  - Nine products in the memory product lineup acquired the certification for reduction of CO2 from Carbon Trust.
  - The LED Business has developed smart lighting products fit for growing plants and maximizing the convenience of human users.



Source Samsung Electronics

Valuation Measures	
Market Cap (intraday)	499.02T
Enterprise Value	393.38T
Trailing P/E	12.86
Forward P/E	10.75
PEG Ratio (5 yr expected)	1.44
Price/Sales (ttm)	1.81
Price/Book (mrq)	1.70
Enterprise Value/Revenue	1.41
Enterprise Value/EBITDA	4.47

Profitability	
Profit Margin	14.03%
Operating Margin (ttm)	18.47%

Management Effectiveness	
Return on Assets (ttm)	8.02%
Return on Equity (ttm)	13.74%

Income Statement	
Revenue (ttm)	279.6T
Revenue Per Share (ttm)	41,162.72
Quarterly Revenue Growth (yoy)	24.40%
Gross Profit (ttm)	113.19T
EBITDA	84.83T
Net Income Avi to Common (ttm)	39.24T
Diluted EPS (ttm)	N/A
Quarterly Earnings Growth (yoy)	65.30%

Balance Sheet	
Total Cash (mrq)	124.15T
Total Cash Per Share (mrq)	18,277.09
Total Debt (mrq)	18.39T
Total Debt/Equity (mrq)	6.03
Current Ratio (mrq)	2.48
Book Value Per Share (mrq)	N/A

Cash Flow Statement	
Operating Cash Flow (ttm)	65.11T
Levered Free Cash Flow (ttm)	10.74T

Stock Price History	
Beta (5Y Monthly)	0.92
52-Week Change	-13.33%
S&P500 52-Week Change	10.87%
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Payout Ratio	25.00%
Dividend Date	N/A
Ex-Dividend Date	Dec 29, 2021
Last Split Factor	50:1
Last Split Date	May 16, 2018

SM Entertainment Co. Ltd

KOSDAQ: 041510

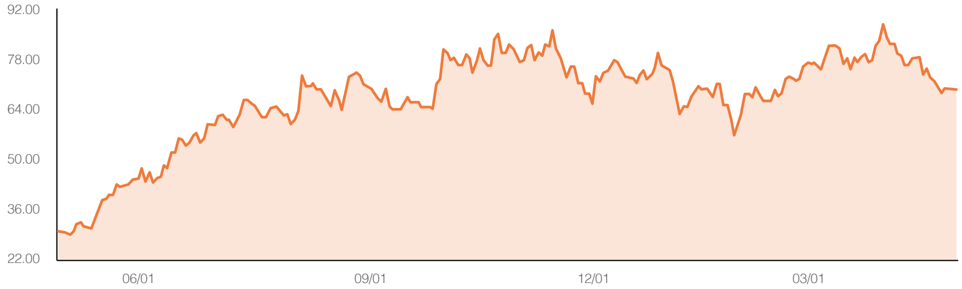
Donghwan (Ryan) Kim

SM Entertainment, also known as Sooman Entertainment, was founded in 1995 by Lee Sooman. It is located in Seoul Seongdong-gu. SM entertainment has created some of the most famous K-pop idol groups we know today, including EXO, Red Velvet, Super Junior, and BOA. As a result of the company's success in producing the most successful artists and stars, SM is considered one of the three highest rated entertainment companies in Korea, along with JYP and YG Entertainment.

In 2005, Kim Young Min was appointed CEO of the company. Under Kim, SM's focus shifted from the domestic market to international markets. As a result, many SM artists, including Shinee, f(x), Girl's generation, Super Junior, were targeted at the Chinese and Japanese markets; legendary idol BOA debuted in the United States. Soon after, Lee SooMan resigned from the Board of Directors to focus on building new initiatives and ventures abroad.

Domestically, KMP Holdings was established as a joint venture among SM Entertainment, JYP, YG Entertainment, and other major players in the industry. They jointly released Super Junior's fifth album Mr. Simple, which contributed to a 471% increase in earnings from the previous year and a 58% increase in revenue. JYP, YG, SM, AMENT, KeyEast, Star J entertainment joined hands to form United Asia Entertainment, whose goal was to advance Asian music worldwide. In 2012, SM debuted EXO, a large-scale boy group, which was subsequently split into two groups to promote in Korea and China at the same time.

In 2013, SM C&C acquired Hoom Media and Woolim Entertainment. In January 2014, SM and the other 6 agencies in KMP Holdings made a partnership and together bought a 13.48% stake in KT Music. In 2015, SM aggressively formed deals with sports athletes and continued to expand its influence in the Korean entertainment market, while investing heavily in creating a global presence.



Covid 19 has impacted the K-pop industry in numerous ways. It not only affected SM Entertainment, but the entertainment industry as a whole. Despite having to postpone all face-to-face offline concerts and shows, the company's earnings showed strong resilience as a result of the online shows and concerts held by its world star K-pop idols.

- The company debuted a new girl group, Aespa, during the pandemic. Aespa proved to be a huge success, quickly climbing to the top of Korean music charts.
- Many SM artists, including members of EXO and Red Velvet, tested positive for COVID-19. SM's stocks felt the brunt of the COVID impact, when all the members of the girl group Red Velvet tested positive and had to cancel their schedules. Despite this, the company's virtual concerts with Naver, Beyond Live, have reaped so far around 13.2 billion won in ticket sales and over 400,000 viewers.
- Kakao Corporation is said to be close to being the largest shareholder of SM entertainment through the purchase of shares from the founder, Lee SooMan. Kakao was able to reach an agreement with Lee SooMan to buy his entire stake in SM entertainment, which makes up 18.72% of the company's outstanding shares. Kakao has agreed to pay two or three times the current value of holdings, which is about 1 trillion won. If Kakao succeeds in acquiring SM, it is projected to become the second largest player in the industry, after HYBE
- The Chinese government trying to regulate its entertainment sector has affected Korean entertainment agencies including YG, SM, and JYP. China is considered the top source of revenue for Korea's leading entertainment agencies. Therefore, China imposing restrictions to music streaming services, such as allowing each customer to purchase only one album, has had a negative impact on the company's stocks.
- In November last year, Lee Soo Man joined the blockchain conference Breakpoint 2021, which was held by the blockchain platform Solana. There, Lee made announced SM's ambition to take advantage of metaverse and NFT technologies to expand the breadth and scope of its artist storylines and core business.
- As K-pop's global popularity continues to rise, South Korean entertainment contents producers have become bolder in global foray as they find themselves on equal footing as some of the major Western artists on the international stage. Prime examples of the K-pop industry expanding its scope and reach are CJ E&M's acquisition of Bon Factory, Endeavor Content, and Skydance as well as HYBE's purchase of Ithaca Holdings.

- Naver has invested 100 billion won into SM entertainment. This money will go into SMEJ Plus, Mystic Story, and fund jointly created between the two companies. This investment between Naver and SM is aimed at expanding cooperation between the two major players in the K-pop video contents space.
- SM Entertainment announced that it will be paying out dividends starting from this quarter.
- In February, SM Entertainment announced a partnership with Sandbox to build the first metaverse platform using Play2Create ecosystem. The company announced that SMTOWN LAND, a theme space dedicated to SM Entertainment Group, will be created in K-Verse, a specialized space for K-content in The Sandbox, to hold events such as concerts and fan meetings. In SMTOWN LAND users will be able to trade SM Entertainment Group's IP contents and NFT items.

Source SM Entertainment

Walt Disney Co

NYSE: DIS

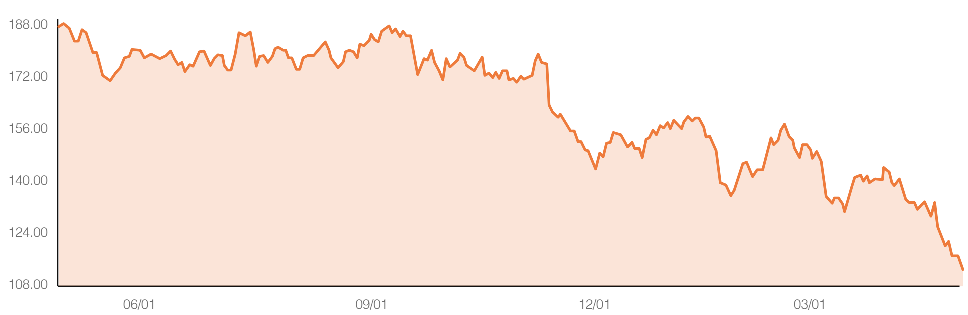
Jihu Park

The Walt Disney Company, or simply Disney, is an American multinational entertainment and media company based in Burbank, California at the Walt Disney Studios complex.

The Walt Disney Company was started on October 16, 1923, by brothers Walt and Roy O. Disney as the "Disney Brothers Cartoon Studio." It then went by the titles "The Walt Disney Studio" and "Walt Disney Productions" until becoming The Walt Disney Company in 1986. Before extending into live-action film production, television, and theme parks, the firm established itself as a pioneer in the American animation sector.

Disney has been forming and acquiring business divisions since the 1980s in order to offer more mature material than is generally associated with its iconic family-oriented brands. The Walt Disney Studios, which encompasses Walt Disney Pictures, Walt Disney Animation Studios, Pixar, Marvel Studios, Lucasfilm, 20th Century Studios, 20th Century Animation, and Searchlight Pictures, is the company's film studio sector. Television, broadcasting, streaming media, theme park resorts, consumer items, publishing, and overseas operations are among Disney's other major business segments. Disney owns and operates the ABC broadcast network, as well as cable television networks like Disney Channel, ESPN, Freeform, FX, and National Geographic; publishing, merchandising, music, and theater divisions; direct-to-consumer streaming services like Disney+, Star+, ESPN+, Hulu, and Hotstar; and Disney Parks, Experiences, and Products, which includes 14 theme parks, resort hotels, and cruise lines around the world. The company's mascot is Mickey Mouse, a cartoon character developed by Walt Disney and Ub Iwerks in 1928.

Since 1991, the firm has been a component of the Dow Jones Industrial Average, trading on the New York Stock Exchange (NYSE) under the ticker code DIS. Large financial institutions held little under two-thirds of the shares in August 2020.



Valuation Measures	
Market Cap (intraday)	259.22B
Enterprise Value	298.91B
Trailing P/E	82.78
Forward P/E	33.33
PEG Ratio (5 yr expected)	1.12
Price/Sales (ttm)	3.57
Price/Book (mrq)	2.88
Enterprise Value/Revenue	4.10
Enterprise Value/EBITDA	27.71

Profitability	
Profit Margin	4.22%
Operating Margin (ttm)	7.51%

Management Effectiveness	
Return on Assets (ttm)	1.69%
Return on Equity (ttm)	3.68%

Income Statement	
Revenue (ttm)	72.99B
Revenue Per Share (ttm)	40.15
Quarterly Revenue Growth (yoy)	34.30%
Gross Profit (ttm)	22.29B
EBITDA	10.56B
Net Income Avi to Common (ttm)	3.15B
Diluted EPS (ttm)	1.68
Quarterly Earnings Growth (yoy)	6,394.10%

Balance Sheet	
Total Cash (mrq)	14.44B
Total Cash Per Share (mrq)	7.93
Total Debt (mrq)	54.13B
Total Debt/Equity (mrq)	52.25
Current Ratio (mrq)	1.10
Book Value Per Share (mrq)	49.87

Cash Flow Statement	
Operating Cash Flow (ttm)	5.28B
Levered Free Cash Flow (ttm)	5.87B

Stock Price History	
Beta (5Y Monthly)	1.17
52-Week Change	24.65%
S&P500 52-Week Change	15.22%
52 Week High	191.67
52 Week Low	128.38
50-Day Moving Average	142.46
200-Day Moving Average	162.66

Share Statistics	
Avg Vol (3 month)	12.11M
Avg Vol (10 day)	8.66M
Shares Outstanding	1.82B
Implied Shares Outstanding	N/A
Float	1.82B
% Held by Insiders	0.13%
% Held by Institutions	65.90%
Shares Short	17.36M
Short Ratio	1.61
Short % of Float	0.95%
Short % of Shares Outstanding	0.95%
Shares Short	21.43M

Dividends & Splits	
Forward Annual Dividend Rate	N/A
Forward Annual Dividend Yield	N/A
Trailing Annual Dividend Rate	0.00
Trailing Annual Dividend Yield	0.00%
5 Year Average Dividend Yield	N/A
Payout Ratio	0.00%
Dividend Date	Jan 15, 2020
Ex-Dividend Date	Dec 12, 2019
Last Split Factor	10000:9865
Last Split Date	Jun 12, 2007

Business Review

The Walt Disney Corporation's objective is to amuse, inform, and inspire people all over the world through the power of incomparable storytelling, which reflects the iconic brands, creative minds, and cutting-edge technology that have made them the world's leading entertainment company. Disney Parks, Experiences, and Products; Disney Media & Entertainment Distribution; and three content groups—Studios, General Entertainment, and Sports—comprise the company's diverse worldwide family entertainment and media organization in FY21. The worldwide center that brings Disney's tales and characters to life through theme parks and resorts, cruise and holiday experiences, and consumer items is Disney Parks, Experiences, and Products. Disney Media & Entertainment Distribution is in charge of providing The Walt Disney Company's unrivaled storytelling to fans and families all around the world in the formats they choose. Disney's Studios, General Entertainment, and Sports Content Groups also create world-class entertainment, news, and sports content throughout the world.

- Disney has started to strategically reorganize its media and entertainment businesses, making it a more efficient and lasting business model.
- The company's Creative Engines Will Focus on Producing Content for DTC as well as Legacy Platforms, while Newly Centralized Distribution Group Will Oversee Commercialization and Distribution of All Content Globally.
- Considered as a business that is developing characters, making memories, and providing so many different entertainment outlets on and off-screen, new structure is designed to further accelerate the company's direct-to-consumer strategy, in light of the rapid success of Disney+.

The company is in a position to benefit from both the remote work and play trends of COVID-19 and the reopening of the economy post-Covid.

- Disney+ has a far richer legacy content portfolio than newer pure-play streaming services, and it could provide the first touchpoints for lifelong Disney customers. Disney+ boasts 129.8 million subscribers as of the company's most recent quarterly update.
  - Disney+ is worth investing in because it could provide the first touchpoints for lifelong Disney customers. It hosts decades of high-quality content, and is home to new content that adds value to the worlds that Disney characters live in, thus integrates into Disney's overall content portfolio and could very well boost engagement at its parks and movies over time as consumers become more involved in various Disney universes.
  - Disney+ will introduce an ad-supported subscription offering in late 2022 beginning in the U.S. with plans to expand internationally in 2023. This is great for both the business and the consumer. Consumers will be given more choice and control, and as for Disney, it is a way of attracting new subscribers and advertisers.

- In Q1 FY22 earnings report, Disney reported a good fiscal first quarter with an adjusted EPS of $1.06, an increase of 231% year-over-year and beat Wall Street estimates by more than 40 cents. Disney's revenue during the three-month period also grew annually by 34.3% and totaled $21.38 billion for the quarter.
    - Revenue from Disney's theme parks and venues rose by 101% to $7.234 billion while the segment's operating income improved to $2.45 million.
    - The company noted that per capita spending at domestic parks increased by 40% in Q1 of fiscal 2022 compared to Q1 of fiscal 2019 -- a sign that customers are shrugging off Disney's price hikes.
    - Disney's stock price is getting better - it is much more sustainable and diversified than other companies and shows robust growth in revenue. The stock was trending upward until COVID-19 hit in the first quarter of 2020. Despite the damage to its parks, studio, and cruise ship businesses, Disney shares erupted off the Covid lows, rallying from $81 to more than $200 in less than a year. However, Disney stocks are now trading down more than 36% down from its highest point last year.

ESG Review

Environmental

In terms of emissions, Disney is a market leader. While many corporations focus on reducing the intensity of greenhouse gas (GHG) emissions, Disney has been able to reduce its absolute Scope 1 and 2 emissions as well as overall energy use from 2018 to 2020. Disney fulfilled its aim of reducing GHG emissions by 50% from 2012 levels by 2020. Customers visiting Disney's parks and experiences have access to a choice of eateries, which create food waste. Recognizing a need to send less total trash to landfill, the corporation established substantial initiatives centered on food waste capture, material sorting, and the elimination of plastics and superfluous waste. Disney diverted 60% of its garbage from landfills and incineration in 2020, sending less total waste to disposal than in 2015. Disney also lowered its potable water use from 6.46 billion gallons in 2018 to 4.99 billion in 2020.

Social

Disney is the world's leading licensing company, with a global supply network. As a result, Disney is vulnerable to a number of supply chain issues, particularly labor rights. Over the last decade, Disney has been involved in a number of labor-related scandals and has been accused of a variety of breaches, including hazardous working conditions, excessive overtime, insufficient safety training and protective equipment, and paying salaries below the legal minimum. These claims have come from all across the world. Although it is unknown whether Disney's supply chain regulations were implemented in response to its unethical behavior or whether they were already in place, Disney has systems in place to undertake due diligence on its supply chain activities to avoid labor rights breaches.

Disney's Manufacturers Code of Conduct is in accordance with the International Labor Organization (ILO) and is implemented by the company's International Labor Standards (ILS) program. This initiative requires licensees and vendors to undertake on-site compliance audits in high-risk nations and report their findings to Disney for evaluation and approval. Notably, following the 2013 Rana Plaza Building collapse, Disney cancelled its manufacturing contracts in Bangladesh due to violation with its policies.

Governance

Governance is the ESG pillar that must be robust for a firm to achieve in its sustainable goals, and we find that, despite certain positives, Disney poses governance concerns. The board of directors of the corporation is usually diverse, with four out of ten directors being women and three out of ten being racially/ethnically diverse. Disney's executive staff is 42% female and 22% racially/ethnically diverse, both of which might be improved. Disney's sustainability report adheres to a number of standards, including the Global Reporting Initiative (GRI), the Sustainability Accounting Standards Board (SASB), the Climate Disclosure Project (CDP), and the Task Force on Climate-related Financial Disclosure (TCFD). ESG rating providers typically consider the corporation to be extremely open in its disclosure; nonetheless, the report provides no level of third-party verification of the data.

FY21 Highlights

World of Belonging | **Diversity, Equity & Inclusion**

Through authentic stories, experiences, and products, and our new Reimagine Tomorrow digital destination, we champion representation in media and entertainment, advance opportunities for diverse communities, and embrace a diverse and inclusive workplace.

DEI Transparency	**46% of Employees**	**50% of Employees**	**7 of 11 Board Directors**	**HBCU Engagement**	**Inclusion Standards**
Enhanced through our new Diversity Dashboard	Self-identify as people of color in the U.S.[1]	Self-identify as women globally[1]	Represent gender, racial, or ethnic diversity, including Chairman & committee chairs	Deepened through Disney on the Yard launch	Introduced to drive representation in front of and behind the camera

World in Balance | **Environmental Sustainability**

Through our 2030 Environmental Goals, we are working to reduce emissions, use and waste less, lower the impact of our products, build sustainably, and inspire communities to protect the magic of nature together.

Solar Arrays Installed	**New Solar Announced**	**Plastic-free Packaging**	**61% or 80,000+ Tons**	**Sustainable Seafood**	**$120M+ Invested**
On Castaway Cay and at Hong Kong Disneyland	Including two new 75MW facilities in Florida, expected in 2023	Introduced for our line of classic dolls	Of total Company operational waste diverted from landfill	Made up 95% of seafood served in our U.S. parks, resorts, and cruise line[2]	In community conservation efforts since 1995

World of Hope | **Community**

We support communities around the world in ways only Disney can, leveraging the power of our stories and beloved characters, reach of our platforms, and employee and cast member talents.

$290M+ Charitable Giving	**400,000+**	**5 Hospital Installations**	**320+ Tons Food Donated**	**340,000+ Service Hours**	**Nearly $95M Matched**
Total in FY21, including $150M+ directed to underrepresented communities[3]	Disney-themed products delivered to 500+ children's hospitals in the U.S. & Canada	Brought Disney experiences to 4 children's hospitals in the U.S. and 1 in Singapore	By Disney Parks to support communities impacted by COVID-19 (≈540,000 meals)	Contributed by employees and cast members through Disney VoluntEARS	In employee giving through Matching Gifts & VoluntEARS grants in the past decade

Source Walt Disney

Yum! Brands, Inc.

NYSE: YUM

Thomas Lee

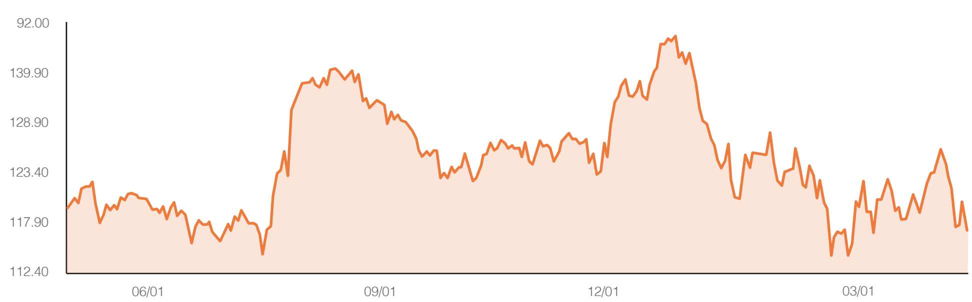
Yum! Brands is an American fast-food corporation based in Louisville, Kentucky, United States. It was founded by Andrall. E. Pearson in 1997, May 30. Under Yum! Brands are many famous fast-food chains such as KFC, Taco Bell, Pizza Hut, and more.

Yum! Brands' history began in 1977 when Pepsico entered the restaurant business by acquiring Pizza Hut. A year later, Pepsico purchased Taco Bell, and subsequently, KFC, from R.J Reynolds in July of 1986. In the following decade, Pepsico acquired other smaller fast-food chains such as California Pizza Kitchen, Chevys Fresh Mex, and D'Angelo's Grilled Sandwiches. With Pepsico's rise, the corporation decided to split and had a separate corporation that would lead the fast-food division, this being Yum! Brands.

In the early 2000s, Yum! Brands looked for a more global outlook, especially focusing on expanding their business in China. After initially opening a California Style restaurant in Shanghai, Yum! Brands approached the Chinese consumer market with a KFC business model, merged with Chinese food as a fusion chain, which found much more success. This fusion restaurant was called "East Dawning" and managed to have as many as 7 restaurants open by 2007.

As the menus of Yum! Brands fast-food chains were changed to match the Chinese consumer market, in 2016, Pepsico decided to instead begin a new corporation in Yum China, which would work independently over the Chinese domain. Yum China expanded rapidly, opening more than 7600 restaurants and becoming one of China's largest restaurant companies.

As both Yum corporations operated in the food-service business, they were affected heavily by the COVID-19 pandemic. With the suspension of non-essential activities across the globe, many restaurants were forced to close down, impacting the sector negatively to a large extent. However, with the increase in usage of online shopping and ordering, Yum! Brands and Yum China made a sizeable comeback even during times of quarantine.



Valuation Measures	
Market Cap (intraday)	36.36B
Enterprise Value	47.12B
Trailing P/E	24.15
Forward P/E	25.64
PEG Ratio (5 yr expected)	2.36
Price/Sales (ttm)	5.77
Price/Book (mrq)	N/A
Enterprise Value/Revenue	7.16
Enterprise Value/EBITDA	19.78

Profitability	
Profit Margin	23.92%
Operating Margin (ttm)	32.47%

Management Effectiveness	
Return on Assets (ttm)	22.61%
Return on Equity (ttm)	N/A

Income Statement	
Revenue (ttm)	6.58B
Revenue Per Share (ttm)	22.17
Quarterly Revenue Growth (yoy)	8.40%
Gross Profit (ttm)	3.17B
EBITDA	2.3B
Net Income Avi to Common (ttm)	1.58B
Diluted EPS (ttm)	5.21
Quarterly Earnings Growth (yoy)	-0.60%

Balance Sheet	
Total Cash (mrq)	486M
Total Cash Per Share (mrq)	1.68
Total Debt (mrq)	11.25B
Total Debt/Equity (mrq)	N/A
Current Ratio (mrq)	1.08
Book Value Per Share (mrq)	-28.97

Cash Flow Statement	
Operating Cash Flow (ttm)	1.71B
Levered Free Cash Flow (ttm)	1.17B

Stock Price History	
Beta (5Y Monthly)	1.11
52-Week Change	17.44%
S&P500 52-Week Change	10.87%
52 Week High	139.85
52 Week Low	101.94
50-Day Moving Average	128.80
200-Day Moving Average	125.58

Share Statistics	
Avg Vol (3 month)	1.82M
Avg Vol (10 day)	2.7M
Shares Outstanding	288.98M
Implied Shares Outstanding	N/A
Float	287.73M
% Held by Insiders	0.16%
% Held by Institutions	80.16%
Shares Short (Jun 14, 2021)	2.85M
Short Ratio (Jun 14, 2021)	1.5
Short % of Float	1.09%
Short % of Shares Outstanding	0.97%
Shares Short	5.01M

Dividends & Splits	
Forward Annual Dividend Rate	2.28
Forward Annual Dividend Yield	1.88%
Trailing Annual Dividend Rate	2.07
Trailing Annual Dividend Yield	1.70%
5 Year Average Dividend Yield	1.73
Payout Ratio	38.39%
Dividend Date	Mar 10, 2022
Ex-Dividend Date	Feb 16, 2022
Last Split Factor	1391:1000
Last Split Date	Oct 31, 2016

Emerging from the Covid-19 pandemic, Yum! Brands along with other foods and service-related were expected to make a sizeable return. However, in the final quarter of 2021, the company recorded $1.02 per share, falling short of the $1.09 per share expected by analysts.

- This is likely due to the marginal shrink in Taco Bell, Pizza Hut, and KFC, the three leading chains under Yum! Brands. Across the restaurant industry, operators have been dealing with higher food, freight, and labor costs, as well as dealing with the struggles of labor shortage.
- Yum reported fourth-quarter net income of $330 million, or $1.11 per share, down from $332 million, or $1.08 per share, a year earlier.
- Still, Yum! Brands beat revenue expectations and reported same-store sales growth of 5% compared with the year-ago period and 4% on a two-year basis. Net sales rose 8% to $1.89 billion, topping expectations of $1.88 billion.

	Actual	Expected
Revenue	$1.89 billion	$1.88 billion
Earnings per share	$1.02	$1.09

- Taco Bell reported the highest jump in same-store sales growth of Yum's portfolio. The chain saw same-store sales climb 8%.
- KFC's same-store sales rose 5% in the quarter. Demand for its revamped chicken sandwich accounted for 9% of the chain's product mix, up from 1% before the reformulation. However, shrinking systemwide sales in China, its largest market, weighed on the chain's overall same-store sales growth.
- Pizza Hut reported same-store sales growth of 3%. The chain benefited from soaring demand for its pizza during lockdowns, but the Covid omicron variant put pressure on pizza delivery because of a shortage of drivers.
- In 2022, Yum expects to return to its long-term goal of same-store sales growth in a range of 2% to 3% and unit growth of 4% to 5%.

Yum! Brands has changed its marketing model to drive strategic growth. Catering towards the customers' digital needs, the company has begun deploying technologically advanced solutions to enhance the guest experience.

- The most notable of these is the purchase of Dragontail Systems, which offers AI-based integrated kitchen order management and delivery technologies. Yum! Brands has since been able to achieve positive results in delivery services by streamlining the end-to-end food preparation process targeting markets across the globe.

- Nearly 20% of Taco Bell transactions in the U.S. are digital orders.

The company is focused on revamping its financial profile while improving the efficiency of the organization and cost structure globally.

- In the first nine months of 2021, the company opened 1,798 gross new restaurants, and in the previous year, the company opened 2,423 gross new restaurants even amid the global pandemic.
- Yum Brands has guided for systemwide sales growth of 7% to 8% through international expansions to locations where cheap labor and less saturated markets are available.
- The management of the company is focused on expanding the global reach by strategically opening new stores in regions that are expected to see robust economic growth.

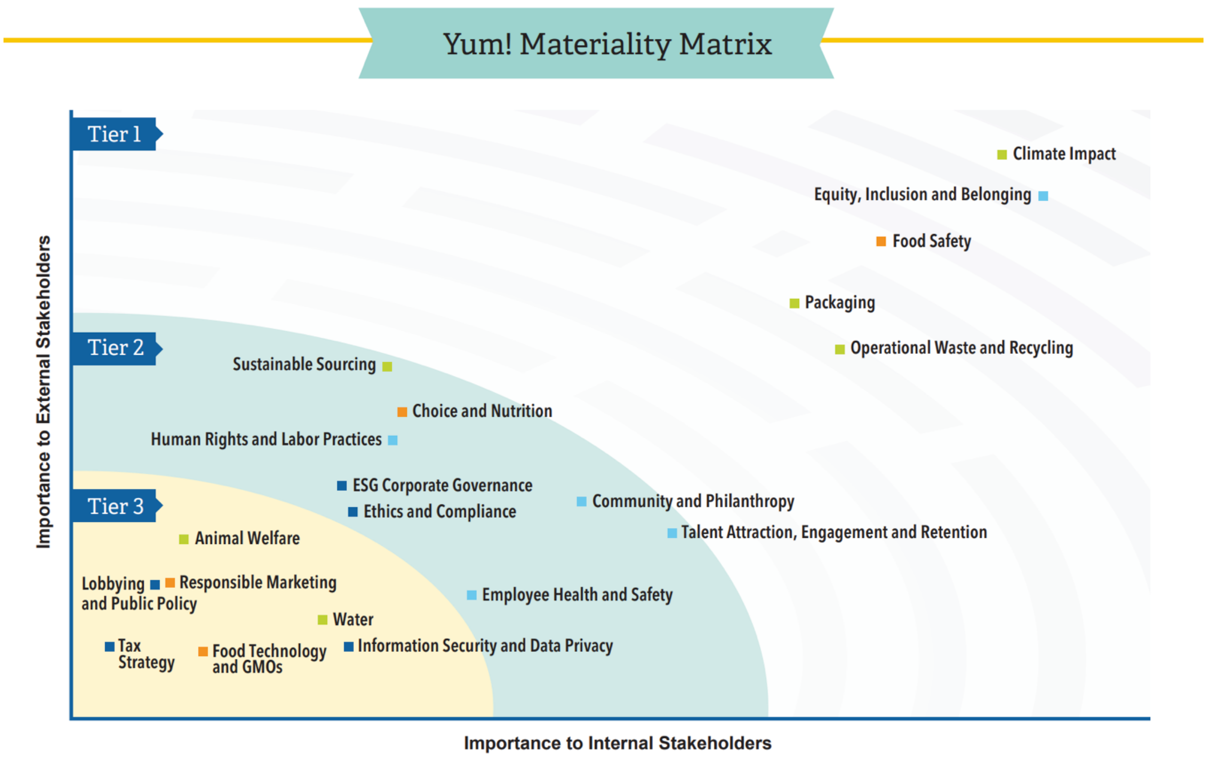
ESG Review

Yum Brands as a company has been showing its commitment to ESG through the company's Recipe for Growth campaign, which reflects the company's priorities for social responsibility, risk management, and sustainable stewardship of its people, food, and planet.

- As of May 2021, the Yum! board of directors consisted of 12 directors, 11 of whom were independent. In 2020, the board was led by an independent, nonexecutive chairman. Only independent directors serve on the Audit, Management Planning & Development and Nominating & Governance Committees in accordance with the company's Corporate Governance Principles. The Board has instituted an annual self-evaluation process, led by the Nominating & Governance Committee, through which directors assess how the board can better contribute to the company.
- When recruiting new directors, the company looks for leaders from different backgrounds who combine a broad spectrum of experience and expertise with a reputation for integrity. The company's selection criteria and policies are outlined in its Corporate Governance Principles. Currently, five of twelve directors are women, and three are people of color.
- The board of directors is responsible for oversight of ESG issues, is briefed at least annually on current issues and focus areas through its Audit Committee, and is updated on a weekly basis through broader business updates. The ESG Council consists of the majority of C-level executives and plays a key role in championing and governing the company's overall citizenship and sustainable strategy and priorities. There are also cross-functional working groups that meet regularly throughout the year.
- The Yum! Materiality Matrix is designed to identify and prioritize the company's most significant ESG impacts, risks, and opportunities for its business and stakeholders.
- As provided in the company's performance summary for "people," Yum

  Brands has pursued goals such as creating a culture of engagement that attracts, retains, and grows the best people and creates high performance in its restaurants, and building an inclusive culture among its employees, franchises, suppliers, and partners to reflect the diversity of its customers and communities.
- For "food," Yum Brands has established and succeeded in fulfilling goals, one such being food safety. In 2020, Yum Brands announced its aim to maintain the safest, highest quality food supply and preparation in the industry, and since has conducted more than 467,500 restaurant food safety audits, to

- Yum Brands has also shown significant efforts in its “planet” approach within the Recipe for Growth campaign. For example, Yum Brands has aimed to design, build, and operate restaurants to be measurably more sustainable using green building standards to drive reductions in energy consumption, water use, greenhouse gas (GHG) emissions, and waste. In its 2020 status check, the company was noted that its restaurants across the globe avoided the release of 1,286,183 MTCO, the equivalent of the annual emissions of nearly 280,000 passenger vehicles driven for a year. Yum Brands hopes on expanding its Recipe for Growth campaign, likely further reducing Yum Brands’ footprint in the future.



Source Yum! Brands

V.Farm

Sustainable farming on a new level

2021 Half-Year Report

Youth Impact

V.Farm

2021 Half-Year Report

About This Report

This report is intended to share V.Farm's activities and outcomes for the first half (January – June) of the year 2021.

Team

Joongwon (Joshua) Ahn, Project Manager
Yeseung Lee, Project Manager

About V.Farm

V.Farm combines the advantages of an aquaponics system with the advantages of a vertical farming system to raise vegetables and aquatic animals in a more efficient and sustainable method. Located in the beautiful rural city of Seosan, V.Farm produces 100% organic salad vegetables that are sold online directly to individual customers.

About Youth Impact

Youth Impact is a social venture dedicated to inspiring, empowering, and connecting the world's youths to take concrete actions to solve real-world problems.

Website www.youthimpact.com
E-mail contact@youthimpact.co
Instagram youthimpact.co

Content

Problem

Yeseung Lee

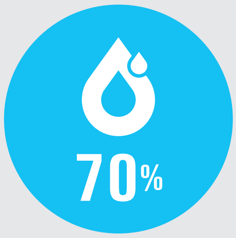
Agriculture—including how we grow, raise, transport, process, and even store food and nonfood crops and agriculture products—has a profound effect on the planet. Global food cultivation is responsible for about one-fifth of all greenhouse gas emissions; and this is not including transportation involved producing, marketing, and selling the crops.

Agricultural pollution is the contamination we release into the environment as a by-product of growing and raising livestock, food crops, animal feed, and biofuel crops. Agricultural pollution has many different sources. Nitrogen-based fertilizers produce potent greenhouse gases and can overload waterways with dangerous pollutants; chemical pesticides with varying toxicological effects can contaminate our air and water or reside directly on our food. Today, the global market in pesticides is worth more than USD 35 billion per year. Some countries – such as Argentina, Malaysia, South Africa and Pakistan – have experienced double-digit growth in the intensity of pesticide use.

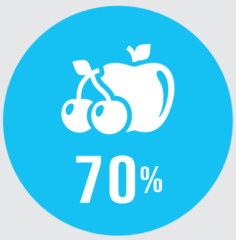
What is even more problematic is the fact that approximately 70% of the world's drinking water is used for agriculture, despite half the world's population facing serious water shortages for at least a month of the year.

According to Eduardo Mansur, Director of FAO's Land and Water Division, "in most high-income countries and many emerging economies, agricultural pollution has overtaken contamination from settlements and industries as the main factor in the degradation of inland and coastal waters… and acknowledging we have a problem is the first step to finding solutions."

Irrigated agriculture represents 20% of total cultivated land



Agriculture accounts for 70% of all freshwater withdrawals globally



Agricultural production will need to expand by approximately 70% by 2050 to feed a global population of 10 billion people

Agricultural pollution is the main factor in the degradation of inland and coastal waters

Problems with today's food production system

1 **Environmental pollution:**

Pesticides, fertilizers, carbon dioxide from plants and nitrogen from soil cause various environmental problems such as air pollution, soil pollution, water pollution, and biodiversity loss. Tractors are also frequently used to make farming more convenient, but carbon dioxide emissions from tractors affect air pollution. Pesticides are continuously sprayed on crops, which eventually causes chemicals to build up in our bodies.

2 **Inefficiency:**

There is a disadvantage that the same amount of crop is harvested slowly, because it has to farmed for about a year generally. Climate is one of the biggest factors affecting agriculture and food production, and crops are ruined all the time due to the sudden changes in the weather and climate. Moreover, large plots of land are needed to raise crops, so natural ecosystems are constantly being destroyed for agricultural purposes.

3 **Water waste:**

Farming on large lands consumes about 69% of the earth's fresh water. This leads to excessive water consumption and degrades water quality, negatively impacting freshwater systems around the world.

Solution

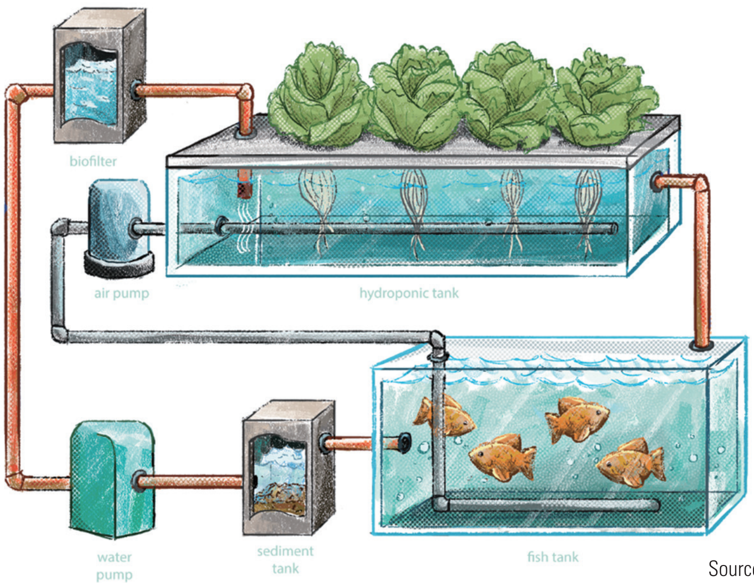
Yeseung Lee

Aquaponics is a combination of aquaculture, which is growing fish and other aquatic animals, and hydroponics, which is growing plants without soil. Ammonia and nitrites generated during the fish farming process are decomposed by microorganisms in the biofilter and used as nutrients for plants. Plants absorb nitrogen to purify water, and the remaining clean water returns to the tank.

Along with the fish and their waste, microbes play an important role to the nutrition of the plants. These beneficial bacteria gather in the spaces between the roots of the plant and converts the fish waste and the solids into substances the plants can use to grow.

Aquaponics is intended to be a highly sustainable production system that incorporates principles of water conservation, sustainable vegetable production, and organic plant and animal agriculture. Fish waste is recycled and used for plant growth instead of throwing it in the ocean or river. The water is recirculated in a closed system that uses 90% less water than conventional farming. In aquaponics, water is only lost when it evaporates or is absorbed by the plants. It also requires little or no extra fertilizer and does not need pesticides.

Furthermore, yields are also significantly higher compared to conventional agriculture and aquaculture. The highly controlled environment allows for a more efficient food production system that is little or not at all affected by the surrounding environment.



Source: Earth.Org

Aquaponics Advantages

Yeseung Lee

Ideally, an aquaponics system is installed and operates indoors. There are several advantages to operating an indoor food production system.

- It uses approximately 10% of the land area and 5% of the water volume required by conventional vegetable crops.
- Aquaponics reduces soil pollution by not using pesticides and fertilizers.
- Due to less water and land use, aquaponics is perfect for highly efficient use of existing space or for special applications like intensive urban gardening.
- Crop production time can be accelerated. For example, butterhead lettuce varieties can be produced in about 30 days, instead of the typical 60-day growing period needed for conventional production.
- Crops can be grown regardless of the weather, resulting in increased production and stable supply.
- All conditions affecting agriculture (temperature, humidity, light, agricultural water, pests, etc.) can be artificially controlled, so production is possible all year round.
- These systems allow agriculture to take large innovative steps toward environmental sustainability. Because these are mostly-closed-loop systems, nutrient effluent leaving the facility is virtually nonexistent. Additionally, fish, plant, and other waste solids may be captured and converted into value-added fertilizer products for wholesale or retail sale.
- Using Internet of Things (IOT) and artificial intelligence (AI) technologies, it automatically controls the growing environment and growth status of crops such as light, humidity, and temperature.

Source:
The Aquaponic Source

Market

Yeseung Lee

Korea's agriculture has recently been experiencing stagnation in productivity and farm income, such as a decrease in the farm household population and an aging population. As the spread of COVID-19 has been accelerating, foreign workers could not enter the country, leading to a labor shortage.

Smart farms are being spotlighted as a solution for the problems that are happening in rural cities.

- According to the ‘Smart Farm Technology and Market Trend Report’ published by the Institute for Science and Technology Jobs in November last year, Korea is expected to grow at an average annual rate of 5% from KRW 4.44 trillion in 2017 to reach KRW 5.96 trillion in 2022.
- Smart farms focused on low-end tech are being distributed to farms. However, if R&D is continuously carried out based on the convergence of Korea's IT technology and agriculture, the size of the domestic smart farm market is expected to continue to grow.

Smart farms and indoor agriculture is growing at a much faster rate in the United States.

- In the United States, $929 million were invested in indoor agriculture this year
- Vertical agriculture in the United States is projected to grow at a CAGR of more than 24% through 2024.
- The United States provides indoor agricultural businesses with subsidies and tax incentives at the national, state, and local levels. In addition, it is expected that the distribution of indoor cultivated agricultural products will be active, and regulations and institutional supplementation will occur at the same time.

Source: Farm 8

Trends

Joongwon Ahn

Source: Satean

> We believe that data, coupled with the farmer's knowledge and intuition about his or her farm, can help increase farm productivity, and also help reduce costs
>
> - Ranveer Chandra, CTO of Agri-Food at Microsoft

Microsoft Cloud Farming: Azure FarmBeats

A global leader in software and cloud services, Microsoft provides a cloud service called FarmBeats to local farms and agricultural communities. Its goal is to enable data-driven farming that is more efficient. However, getting data from farms are extremely difficult since there is often no power in the field.

Creatively, Microsoft's Azure FarmBeats takes advantage of the company's main products and services to digitalize farming. FarmBeats uses low-cost sensors, drones, and vision and machine learning algorithms to provide unique solutions to the agricultural industry's problems.

Youth Impact's V.Farm project was inspired by Microsoft's FarmBeats project.

Cloud Farming

Cloud Farming is a farming process that combines different IoT technologies to one big data platform. Farmers can effectively utilize this technology to improve the productivity of their farming methods and the quality of their farming products.
In today's world where technology is drastically changing, advanced technologies are also being applied to agriculture. There are overflowing amounts of information related to agriculture as well. With this information, IoT (Internet of Things) technology is used to control the right temperature, moisture, harvest timing, sunlight exposure, etc. and to raise crops more sustainably.

Our Model

Joongwon Ahn

Our model combines the advantages of an aquaponics system with the advantages of vertical farming to create a more efficient system for raising both aquatic animals and vegetables in the same space.

Aquaponics

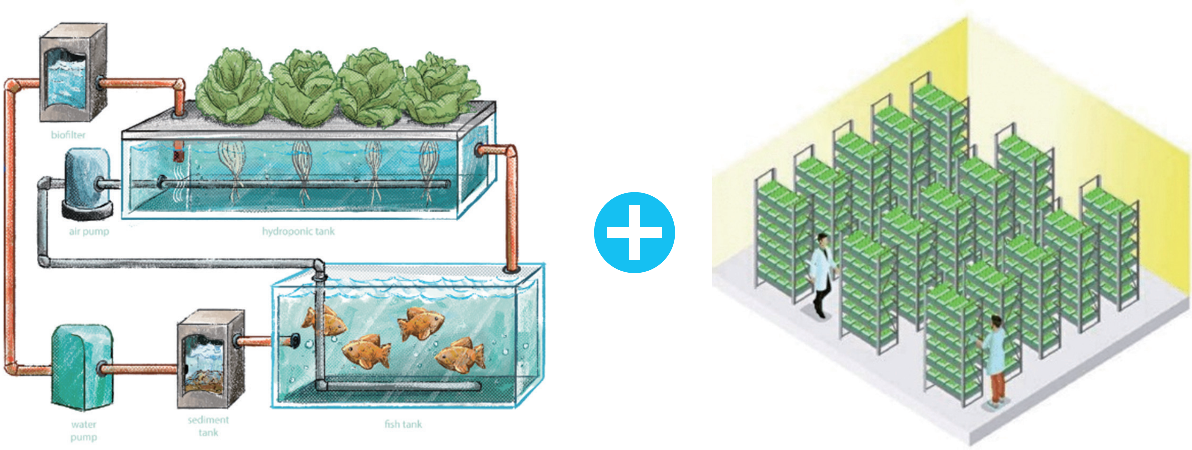
Aquaponics integrates aquaculture and hydroponics into one production system. Aquaponics relies on the food introduced for fish, which works as the system's input. As fish eat this food and process it, they transform it into urine and fecal matter, both rich in ammonia. Ammonia-rich water then flows to the vegetables, which absorbs the nutrients and cleans the water, which again flows to the fish in a circular system.

Vertical Farming

Vertical farming is a system where plants are stacked vertically. It increases productivity when raising crops in a limited land. There are several benefits of stacking layers of plants: sunlight will evenly be distributed to those plants and water use will be significantly reduced. Thus, many farms are implementing this vertical system to produce more efficiently.

Our Model

In our model, we combined the aquaponics system with the vertical farming model to create a small greenhouse farm in the city of Seosan, South Korea, which is just 90 minutes driving distance from Seoul. The first level of our aquaponics system is used to raise catfish, which can survive sudden changes in the temperature and in polluted waters. The upper levels are used to raise salad vegetables, including lettuce, romaine, and kale.



Best Plants for Aquaponics System

Yeseung Lee

Plant	Nutrient	pH	Temperature	Note
Lettuce	Low	6.0 - 6.2	15° - 21°C	Lettuce is one of the best plants for aquaponics because it is one of the easiest to grow in any aquaponics method. They require little maintenance and have low nutrient requirements. With a short growing cycle and a high market demand, lettuce is the most popular aquaponics plant. Lettuce requires at least 5 hours of sun every day.
Basil	Low	5.5 - 6.5	18° - 30°C	Basil is naturally tolerant of heat and moisture, making it one of the best plants for aquaponics. This plant grows fast, can germinate within five days, and can be harvested within 25 days. To ensure that the basil keeps growing, it is best not to remove more than a third of the plant when harvesting. Basil requires at least 6 to 8 hours of sun every day.
Kale	Low	6 - 7.5	12° - 21°C	Kale is easy to grow and has low nutrient requirements, making them one of the best plants for aquaponics. Kale prefers a cooler temperature and can be harvested within 5 to 6 weeks. Kale can be planted directly to sunlight but must provide partial shade when the climate gets too hot.
Cabbage	High	6.2 - 6.6	7° - 24°C	Cabbage is one of the easiest plants to grow in aquaponics. Cabbage needs very little maintenance and requires at least 6 hours of sunlight every day.
Swiss Chard	Low	6.0 - 7.5	15° - 24°C	Swiss Chard is a frost-resistant plant, so it is an ideal plant to grow during winter. It's a perfect starter plant for aquaponics because it has low nutrient requirements. Chard can be harvested fully or partially after 4 to 5 weeks from seed.
Bok Choy	Low	6.0 - 7.5	12° - 21°C	Bok choy is a popular Chinese cabbage that is an excellent choice for the raft system. Although bok choy is a little heavier, it's still one of the best plants to grow in a raft system. Therefore, it is important not to overload the raft with too many bok choy plants. Grow time for bok choy is 8 to 11 weeks from seed.
Mint	Low	6.5 - 7.0	18° - 21°C	Mint has more than a dozen varieties to choose from, and all of them grow well in aquaponics. Mints like partial shading from the sun. In planting mint, it is advisable to put 18 to 24 inches of space between each herb to ensure ease of access and to avoid the roots from competing for water and light nutrients.
Watercress	Low	6.5 - 7.5	10° - 15°C	Watercress loves water and grows very quickly, making it one of the best plants for aquaponics. It is a popular plant among aquaponics growers because, aside from being nutrient-packed, it is also fast growing.
Strawberry	Medium to High	5.5 - 6.5	15° - 27°C	Strawberry is one of the best plants for NFT or vertical aquaponics systems. They grow and multiply quickly, and their delicious fruits are a joy to have in the aquaponics system. Strawberries are a fruiting crop, and they require more potassium than leafy greens, so it is better to add them to a mature or more established aquaponics system.
Tomato	High	5.5 - 6.5	18° - 30°C	Tomatoes are a popular choice for aquaponics growers, but they are high nutrients plants, so they are better suited for larger and established systems. There are many varieties of tomatoes, and all of them have similar characteristics. Tomatoes like lots of sunshine and can grow up to 6 feet, so it is important to support their structure to ensure they grow upwards.
Eggplant	Medium to High	5.5 - 7	21° - 27°C	Eggplants can have extensive root systems, so they are suited for media bed systems that can support their root structure. These plants like full sun and growing them in a spot where they can enjoy 14 hours of sun will help them produce bigger fruits. Eggplants can be harvested after 3 to 4 months from seeds.
Cucumber	High	5.5 - 6.5	24° - 30°C	Cucumber comes in several sizes and varieties and are an excellent choice for aquaponics plants. Cucumber loves humidity, sunshine, and warm weather, so it is best to grow them in a spot where they have access to direct sunlight. Cucumbers grow fast and can be harvested after 55 to 65 days from seeds.
Carrots	High	7.0	15° - 18°C	Carrots are easily grown in aquaponics and can be harvested in 2 to 3 months from seeds. Carrots require at least 6 to 8 hours of sun to thrive.

Best Fish for Aquaponics System

Joongwon Ahn

Fish	pH	Temperature	Time to harvest	Note
Catfish	7 – 8.5	24° - 30°C	18 months	Catfish are great for the aquaponics system, because they grow fairly quickly and can survive in harsh environments like polluted water. They are not territorial, so they can be bred with other fishes of similar size. They also taste good and are very easy to get in local fish markets.
Goldfish	6 - 8	25° - 27°C	12 months	Goldfish are a very tough species and can live in a high level of water pollution. Goldfish is not harvested for food. They are easy to get in local fish markets.
Guppy	7 - 8	23° - 28°C	-	Guppy is very colorful and will make an attractive addition to your tank. Due to their small size, it is not suitable for combining them with other fish in the same tank. They are also not edible.
Prawn and Shrimps	6.5 – 8	14° - 29°C	3 – 6 months	Prawn and shrimp may not be the first choice when establishing an aquaponics system, but they are an excellent choice as they provide nutrition for your plants and food for you. Having a shrimp aquaponics system is a good idea in raising profit out of fish. They are easy to manage, but are susceptible to diseases and will die quickly if the water temperature changes suddenly.
Trout	6.5 - 8	7° - 18°C	4 years	Trout prefer colder water, so it's important to make sure the vegetables prefer colder water as well. Trout is easy to manage, since they feed on a wide variety of options, including fish, insects, and soft-bodied invertebrates. However, they grow very slowly, require a lot of space, and require high dissolved oxygen levels in the water.
Tilapia	6.5 - 9	28° - 30°C	6 - 8 months	Tilapia is one of the best fish for aquaponics, simply because it is so hardy. They have a reputation for being almost impossible to kill, and can survive outside of their preferred pH and temperature ranges. However, tilapia is not an available breed in Korea.

Construction

Joongwon Ahn

- **Location:** Seosan-si, South Chungcheong Province, South Korea
- **Dimension:** 33.06m_2 (575cm x 575 cm)
- **Construction period:** March 8 - June 30
- **Total expenses:** approximately 5,000,000 KRW ($4,335)

Construction of the farm took place over the span of four months, from early March to late June.

Before setting up the aquaponics system, our team needed to build a greenhouse to shelter the tanks from the changing seasons. V.Farm was going to be an all-year project, so a greenhouse was necessary to protect the plants and the fish from large fluctuations in the temperature, which can go down to as low as -15°C during the winter season and up to 38°C during the summer season.

Our team had several options for the greenhouse: a glass greenhouse, a PVC vinyl greenhouse, and a container greenhouse. Each had its own pros and cons, and the nature of the farm was going to change drastically depending on which type of greenhouse we went with.

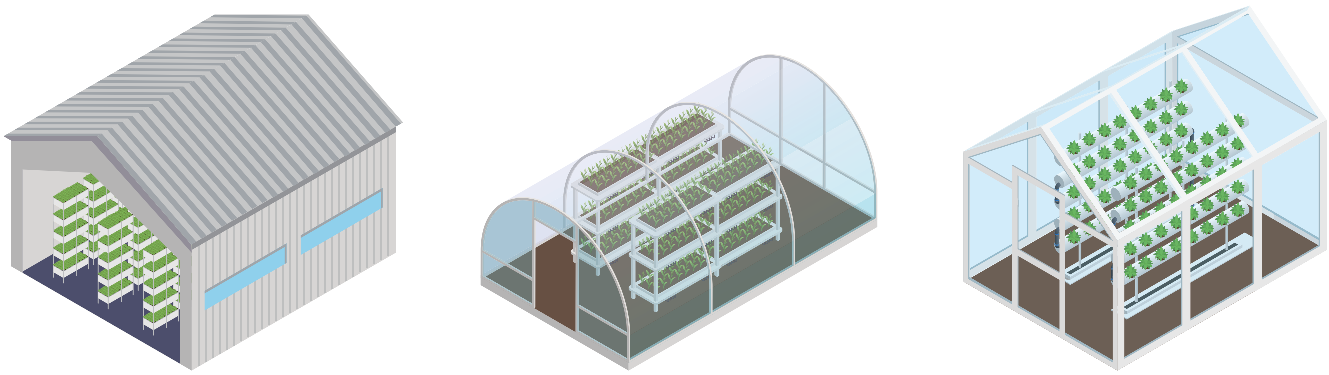
- **Glass greenhouse**: best type of greenhouse in terms of growing the vegetables with natural sunlight instead of artificial LED lights and making the space available for a variety of uses and purposes. However, one major downside is that it requires more time, money, and care to build and manage the structure.

- **PVC vinyl greenhouse**: most economical type of greenhouse requiring minimal care. However, it is most prone to rainy storms during the summer typhoon season; is not very efficient in terms of space usage due to the curved sidewalls; and is the least visually attractive.

- **Bulk container greenhouse**: easiest to construct and manage, but the only problem was that it was extremely difficult to purchase a newly made bulk container in the midst of a global shortage of bulk containers; it was also difficult to transport a bulk container to the site of the farm due to narrow roads.

After considering these factors, the only two feasible options our team was left with were the glass and PVC vinyl greenhouses. Cost was one of the most important factors we considered in our decision-making process. In terms of cost, the two options, surprisingly, were almost identical. In fact, some of the places we called told us that a PVC vinyl greenhouse can cost more to build than a glass greenhouse, because a multi-layered, sturdy greenhouse that can withstand a typhoon requires more materials and manpower to build than one for just seasonal uses.

A glass greenhouse also made more sense, because it was also true that natural light is better for the plants than is light emitted from LED bulbs. Since the aquaponics system was going to be more than 1.5 meters tall, it was also difficult to use space efficiently in a PVC vinyl greenhouse, which had curved sidewalls that were going to interfere with the elevated tanks. Most importantly, we wanted to use the space for other purposes, such as inviting the other Youth Impact members and people interested in sustainable farming systems to our farm to educate them about the aquaponics system, which is still neither very common nor well-known in Korea.



Glass Greenhouse

Joongwon Ahn

Steel bars were used to build the main frames of the greenhouse. Cutting and welding the steel bars were the most difficult and time-consuming part of the construction process. Because the ground on which we were building the greenhouse was not completely flat, these tasks required a professional to exactly measure, cut, and weld together the steel bars. It took approximately an entire month for Professor Ju and Jay to level the ground around the farm and set up the steel frames.

Installing steel frames for the main structure

Leveling the ground and installing steel frame support for the deck

After setting up the frames for the main structure and the deck, we nailed a layer of wooden panels onto the lower external parts of the steel frames, another layer of wooden panels on the inside, and foam board insulation in between the internal and external wooden panels. Above the wooden panels, custom-made glass sheets and windows were glued onto the external parts of the frames.

Nailing wooden panels and foam board insulation to the steel frames

Gluing glass sheets and windows onto the steel frames

Aquaponics System

Joongwon Ahn

Aquaponics is divided into mainly three systems:

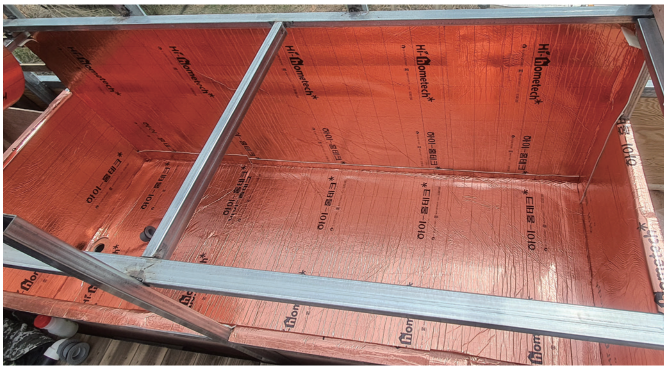
- The raft system involves growing plants on polystyrene rafts which float on water in a tank separate from the fish tank. This allows the roots of the plants to drop into the water and draw nutrients directly from the channel that the water is running through. The benefit of this system is that it uses a closed-circuit system to circulate water from the fish tank into the raft tank and back, and therefore minimizes water waste. Also, beneficial bacteria develop throughout the entire system and help with water filtration.

- The Nutrient Film Technique involves growing plants in narrow and long channels down which a thin film of water flows, feeding the plant roots with nutrients and oxygen. Water is sourced from fish tanks and cleaned through filtration units, it flows down the NFT channels and returns to the fish tank. However, because of the thin film of water, a separate filter is required as the conditions don’t allow beneficial bacteria to survive.

- The Media-Filled Bed method involves using a container or tank filled with perlite, gravel or other material to create the plant bed which is regularly flooded with water sourced from the fish tanks. The substrate breaks down waste and other solids and sometimes worms are added to aid in waste disposal. Although this method involves the fewest components, the production capacity is low.

We decided to go with the raft system to make the best use of the space available. It was also easier to install and manage long tanks laid out along the walls, because the lower level, which houses the fish tank, needs to receive minimal sunlight to prevent algae from growing. Moreover, instead of using different spaces for the fish tanks and the grow beds, we decided to install the grow beds on top of the fish tanks.

Installing fish tanks on the lower level



Inner part of the fish tank covered with foam board insulation

The inner parts of the fish tanks and grow beds were layered with foam board insulation to prevent the water from freezing during the winter season. On top of the foam board insulation, we covered the entire tank with PVC sheets, which are waterproof.

We constructed five tanks in total: 2 fish tanks, 2 grow beds, and a small tank for purifying the water from the fish tanks before pumping them up to the grow beds. The fish tanks and grow beds were all connected by pipes to the purification tank, which was placed in between the fish tanks on the lower level.

Pipes connecting the fish tanks to the purification tank

PVC sheets covering the inside of the tanks

Once we filled the fish tanks and grow beds with water, we used a motor pump to pump water from the purification tank, which got its water from the fish tank, on the lower level to the grow beds on the upper level. A sponge block was placed at the end of the pipe leading to the grow bed to filter residue that may have gotten through the purification tank. We also connected the opposite side of the grow bed and fish tank with a pipe, so that water from the grow bed can flow down to the fish tank.

Motor pump pumping water from purification tank to grow bed

Pipe connecting grow bed to fish tank

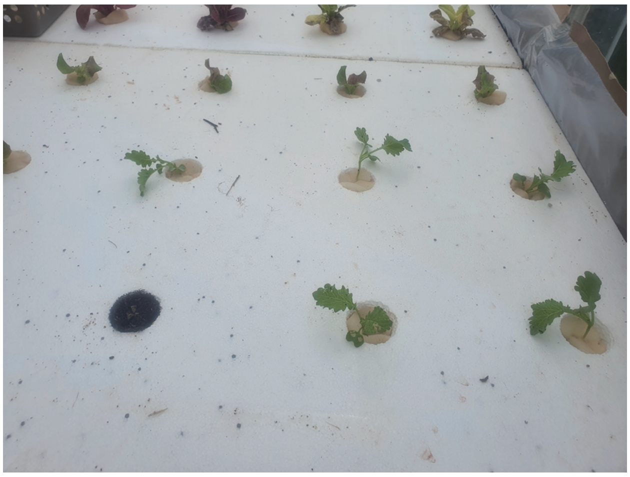
Sponge filtering residue from purification tank

In theory, a well-tuned aquaponics system can support one pound of fish per gallon of water. We initially purchased 100 baby catfish from the local fish market and released them into our smaller fish tank. Every two or three days, we kept track of the weight of the catfish to measure how fast they were growing. The baby catfish, which weighed just a 1 gram when we first brought them to our tank, quickly grew to weigh 20 grams in just two weeks.


Catfish inside the fish tank

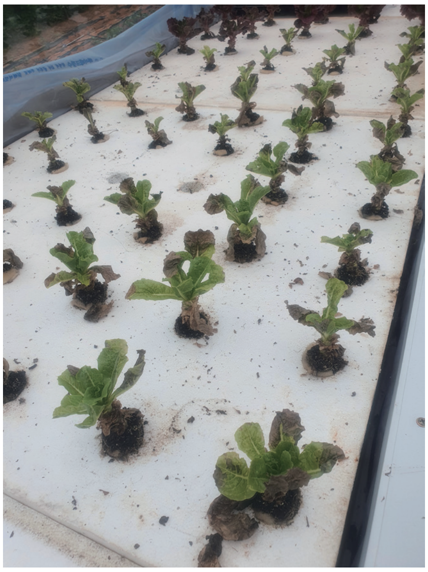

Measuring the weight of the catfish (2 weeks old)

We purchased large styrofoam blocks and drilled rows and columns of 3cm x 3cm holes in them. The holes were intended for the sponges that would hold the lettuce sprouts in them. For the lettuce sprouts, we purchased and planted lettuce seeds inside wet sponges. The seeds grew to produce sprouts, which we then relocated to the styrofoam blocks floating on the water beds.


Lettuce sprout planted inside sponges on the grow bed


A close-up of one of the lettuce sprouts

After a few days, the lettuce sprouts grew to the size of an apple. They were not yet big enough for consumption, but the rapid pace at which they were growing was a positive sign that our aquaponics system was working. When we lifted the styrofoams to check on the roots, we saw that they had already taken root in the nutrient-rich water flowing underneath the styrofoam blocks.



Lettuce sprouts after 1 week

Lettuce roots developing underneath the styrofoam blocks.

Setback

Joongwon Ahn

Our team encountered a major setback while growing the first batch of lettuces. We noticed that all of the lettuces grew to the size of a fist but then dried out and eventually died.

Our initial thought was that the temperature was too high inside the greenhouse, because the same type of lettuce planted in the soil just outside of the greenhouse had no issues. The glass greenhouse received sunlight from all sides, but did not have enough windows to allow wind to blow through and let out the heat. Therefore, the temperature went up to as high as 50°C during the day in July.

To test out our hypothesis, we decided to plant a batch of seeds in the soil inside the greenhouse. If the lettuce had no issue growing in soil inside the greenhouse, then we knew that we could be certain the temperature was not the problem. In contrast, if it dried out and died, then it was most likely that the temperature was too high for the lettuce to grow.

After two weeks, we found that the lettuce planted in soil inside the greenhouse grew just as big as the lettuce planted outside the greenhouse. This meant that the temperature was not the issue.

We had also measured and controlled the pH and ammonia levels of the grow bed and fish tanks, so there was no issue with the pH and ammonia levels.

When we lifted the styrofoams to check on the roots of the lettuces, we noticed that there was a bunch of, what seemed to be, black mud attached to the roots. What was strange was that we had never deposited any mud or dirt inside our grow beds.

We were able to find out that the black substances attached to the roots were actually detritus, or debris and waste, from the fish. Our aquaponics system only used a basic filtering tank and a sponge to prevent fish waste from entering the grow beds. This was not enough to filter out the waste, which is supposed to provide beneficial nutrients to the plants but can actually harm them when there is too much. Our team is currently building a filtering system that we can install onto the pipes.

Marketing Strategy

Yeseung Lee

V.Farm's priority for this year is to develop a small but reliable channel for marketing and selling our products. Since we do not yet have the capacity to raise and sell our crops in bulks, we believe that the best option for us at this point is to sell our products B2C online to individuals who would like to purchase high-quality, organic vegetables in small quantities; and once we scale our business to produce crops on a commercial scale, we can then develop B2B channels to secure long-term business customers.

In order to reach individual customers, we intend to use the following online channels and platforms:

KakaoTalk Channel

KakaoTalk Channel provides open group chat rooms where people can freely join to interact with others sharing the same interest. There are multiple group chat rooms for people interested in buying and selling locally produced vegetables and fruits, and V.Farm can potentially use these group chat rooms to find interested customers.

Naver Blog

Naver Blog basically operates the same way as the KakaoTalk Channel - except that people post comments rather than communicating via instant messaging – and can similarly be used to find and interact with potential customers looking for locally produced organic vegetables.

idus

idus is an e-commerce company selling hand-made and local products made by individuals and micro-enterprises. Being able to register V.Farm on idus would mean securing a stable online channel for marketing and selling our products to online shoppers.

wadiz

wadiz is a great crowdfunding channel for securing both funding and customers at the same time. Individuals provide funding to projects and are usually the first ones to receive the product when it's made. V.Farm can potentially use the wadiz platform to receive funding for expanding our project, marketing our products to the public, and finding customers.

Business Model Canvas

Key Partners

- Professor Taekwan Joo
- Seosan City, which provides funding for Seosan “rural life experience village”
- People living in Seosan “rural life experience village”

Key Activities

- Construction of greenhouse and aquaponics system
- Maintenance of fish and vegetable tanks
- Expansion of aquaponics system
- Delivery service
- Maintenance of sales channels
- Administrative work

Key Resources

- Assistance from industry experts
- Access to free labor from people living in Seosan’s “rural life experience village”
- Creativity and passion of Youth Impact members
- Location (proximity to Seoul and great surrounding environment)

Value Propositions

- Enjoy sustainably produced, 100% organic salad vegetables at a reasonable price.

Customer Relationships

- Direct communication with individual customers via online communication and sale platforms.
- Offer customers the chance to visit V.Farm and learn about and experience aquaponics and vertical farming.

Channels

- KakaoTalk Channel
- Naver Blog
- Idus
- Crowdfunding

Customer Segments

- Individuals looking for 100% organic salad vegetables.

Cost Structure

- Greenhouse and aquaponics construction ($5,000)
- Website production and maintenance cost ($300)
- Delivery fee ($2.5 per delivery)
- Transportation ($50 per month)
- Lettuce seed and baby fish purchases ($30 per month)

Revenue Streams

- Vegetable sales ($300 per month)
- Fish sales ($200 per month)
- Crowdfunding sales (target: $1,000 per quarter)
- V.Farm experience program

Youth Impact

Youth Impact

Make Your Impact!

Covering fiscal year 2021

THE GLOBAL COMPACT

WE SUPPORT