

Politecnico di Milano

Computational Finance

Portfolio Composition

Asset Allocation
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Ambrosini Fabio
Corti Camilla
Corti Veronica
Fiumi Simone



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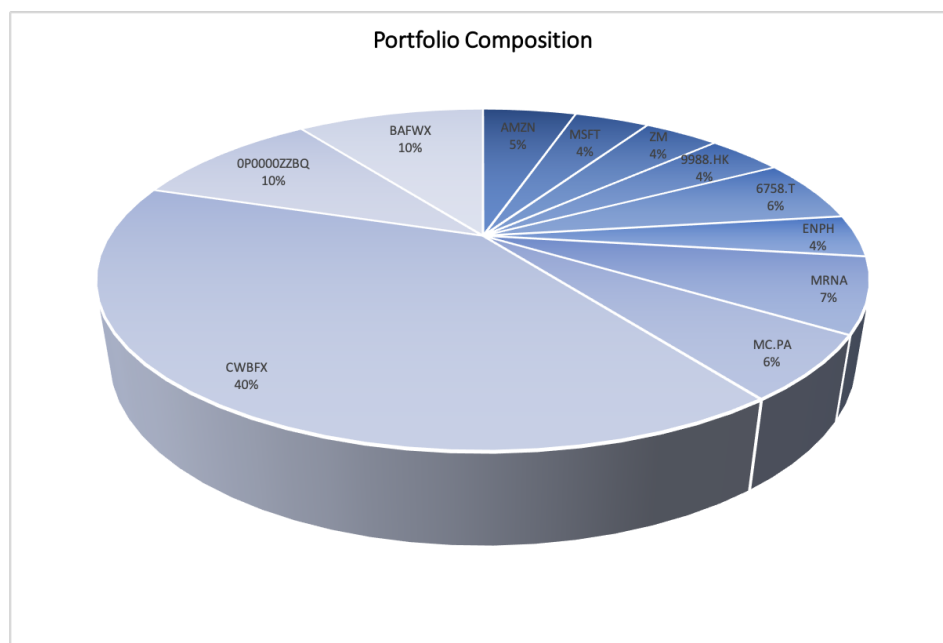
1 Introduction

In a matter of months, the coronavirus pandemic has transformed the modern workplace, the way students approach education and more. Millions of people are telecommuting to the virtual office and many schools and universities continue to operate remotely to mitigate the spread of COVID-19 this fall. At the same time some companies have made long-term commitments to remote work in the years ahead.

2 Portfolio Composition

Ticker	Description	Sector	Exchange	Investment
AMZN	Amazon com Inc	Consumer Discretionary	Nasdaq	250000 Euro
MSFT	Microsoft Corporation	Technology	Nasdaq	200000 Euro
ZM	Zoom video communications Inc	Communication Services	Nasdaq	200000 Euro
9988.HK	Alibaba Group Holding Limited	Consumer Cyclical	HKSE	200000 Euro
6758.T	Sony Corporation	Technology	TYO	300000 Euro
ENPH	Enphase Energy Inc	Energy	Nasdaq	200000 Euro
MRNA	Moderna Inc	Health Care	Nasdaq	350000 Euro
MC.PA	LVMH Moët Hennessy - Louis Vuitton Société Européenne	Luxury Goods	EPA	300000 Euro

Ticker	Description	Exchange	Investment
CWBFX	American Funds Capital World Bond Fund Class A	Nasdaq	2000000 Euro
0P0000ZZBQ	Blackrock European Dynamic Fund Fd Accumulation	LSE	500000 Euro
BAFWX	Brown Advisory Sustainable Growth Fund Institutional Shares	Nasdaq	500000 Euro



2.1 Details

2.1.1 Video call platforms

To enhance collaboration from afar a number of organizations are using video conferencing tools such as **Zoom (ZM)** and many others. These services offer all-in-one team communication in place of the traditional in-person office environment.

As said by Zoom founder and CEO Eric Yuan: "Organisations are shifting from addressing their immediate business continuity needs to supporting a future of working anywhere, learning anywhere, and connecting anywhere on Zoom's video-first platform".

Right now, with the constant increase in infections from COVID-19, the government could introduce new restrictions that could lead to a new rise in Zoom shares.

2.1.2 Technology

Bill Gates announced that his tech giant, **Microsoft (MSFT)**, had revenues of no less than \$37.2 billion in the third quarter of 2020. An increase of 12% over the same period of 2019 that has to do with the changes that companies and people had to make because of the virus. The change imposed by the pandemic and subsequent closures, that have affected a large part of the world's population, has proved extremely beneficial to the finance of the technology giant. The increase in home work and online learning, has led to quarterly results that are well beyond the goals of Microsoft investors. The big movement observed this year was the shift to cloud computing, which led Microsoft's technology platform, Azure, to accelerate. This is part of a general trend, as cloud storage systems from other companies such as Amazon.com Inc have also grown.

2.1.3 Politics - US Election

The American Election Day is Tuesday 3 November, regardless of the outcome of the vote, the US presidential elections have always had a high impact on the financial market and the global economy. If predicting who will win the elections is impossible, it is easier to draw the picture of the scenarios of reaction of the financial markets to the outcome of the vote.

On one side Biden's victory could lead to greater regulation in the energy, telecommunications and technology sectors, increasing business costs. While investments in the health, green economy and infrastructure and healthcare sectors could increase, the securities of the financial sector could be among the most exposed.

On the other hand, some experts believe that the reconfirmation of Trump to the White House would increase the S&P 500 index by 5%, having been the current president a "Good Friend" of the American financial system.

Given the current political situation we decide to diversify our portfolio by investing in companies listed in S&P 500 (**AMZN**, **MSFT**) and in the green and health sector (**ENPH**, **MRNA**).

2.1.4 Healthcare

Due to the COVID-19 pandemic, right now, nearly everyone in the healthcare investment world is talking about **Moderna (MRNA)**. The biotech company, thanks to \$1.1 billion received from governments all over the world, is actively preparing for launch of COVID-19 vaccine. Lately Moderna Inc. said it is on track to report early data from a late-stage trial of its experimental COVID-19 vaccine, offering the clearest timeline yet for when the world will know whether it is effective.

Moderna's CEO Stéphane Bancel said "I believe that if we launch our Covid-19 vaccine, 2021 could be the most important inflection year in Moderna's history. We will".

Moderna CEO Bancel expects interim results from its COVID-19 vaccine trial in November and said the US government could give an emergency use node in December - as reported in the Wall Street Journal.

2.1.5 Green Economy

During the sanitary emergency the green enterprises have used more the digital one, have innovated more, have made formation, have invested in research and development. They have more positive expectations about the recovery, they are more optimistic than the others and believe to recover within 1-2 years the levels of activity preceding the crisis. Who has invested in the green has been strengthened thus we try to invest in **Enphase Energy Inc (ENPH)** company. Moreover, confident in the development of sustainability business, we also choose **Brown Advisory Sustainable Growth Fund** which implements environmentally sustainable strategies to drive earnings growth.

2.1.6 European and Asian markets

To reduce risk and exposure to the American market, we add to our portfolio shares and funds from European and Asian markets.

Following the same reasoning as above, we expect the e-commerce to grow and thus the choice of **Alibaba Group (9988.HK)**. **Sony Corporation (6758.T)** is set to launch new products in November which can increase its value in a short-term period. We think that for the European market **LVMH (MC.PA)** can be a good choice since it obtained very good results in the past years and most of the largest European funds have in their portfolios shares of the company; moreover in these days the company has found a deal for the purchase of Tiffany & Co. enhancing the brand. For what concerns the funds, we invest in **Blackrock European Dynamic Fund** which has in its total assets a majority of equity securities of companies listed in Europe with good growth potential.

2.1.7 Fixed Income - Bonds

Until now we have in our portfolio only equities and funds which invest mainly in equities so we add a fund related to the bond market in order to have riskless assets. **American Funds Capital World Bond Fund Class A** carries out the task by investing primarily in sovereign and corporate bonds in more than 60 developed markets.

2.2 Funds Composition

2.2.1 American Funds Capital World Bond Fund Class A (Nasdaq: CWBFX)







Sectors	Fund %
 Government	58.93
 Municipal	0.13
 Corporate	30.21
 Securitized	4.05
 Cash & Equivalents	6.68
 Other	0.00

Figure 1: Sector Weightings (%)

Holdings	% Portfolio Weight
China (People's Republic Of) 3.86%	1.60
Japan (Government Of) 0.1%	1.58
United States Treasury Notes 0.62%	1.24
Japan (Government Of) 1.2%	1.14
Japan (Government Of) 0.1%	1.09
Mexico (United Mexican States) 7.5%	1.08
Greece (Republic Of) 1.5%	0.94
Canada (Government of) 2.25%	0.87
Nykredit Realkredit A/S 0.5%	0.85
Serbia (Republic Of) 3.12%	0.83

Figure 2: Top Holdings

2.2.2 Blackrock European Dynamic Fund (LSE: 0P0000ZZBQ)

	Sectors	Fund %
Cyclical	 Basic Materials	7.93
	 Consumer Cyclical	18.86
	 Financial Services	9.01
	 Real Estate	2.72
Sensitive	 Communication Services	1.19
	 Energy	1.32
	 Industrials	18.54
	 Technology	22.00
Defensive	 Consumer Defensive	0.97
	 Healthcare	14.37
	 Utilities	3.09

Figure 3: Sector Weightings (%)

Holdings	% Portfolio Weight
LVMH Moet Hennessy Louis Vuitton SE	5.32
ASML Holding NV	4.99
Lonza Group Ltd	4.85
Sika AG Registered Shares	4.34
DSV Panalpina AS	4.15
SAP SE	4.11
Novo Nordisk A/S B	3.92
Volvo AB B	3.49
Safran SA	2.96
Worldline SA	2.88

Figure 4: Top Holdings

2.2.3 Brown Advisory Sustainable Growth Fund Institutional Shares (Nasdaq: BAFWX)



	Sectors	Fund %
Cyclical	 Basic Materials	2.29
	 Consumer Cyclical	18.04
	 Financial Services	4.19
	 Real Estate	4.11
Sensitive	 Communication Services	3.71
	 Energy	0.00
	 Industrials	5.79
	 Technology	37.34
Defensive	 Consumer Defensive	0.00
	 Healthcare	24.54
	 Utilities	0.00

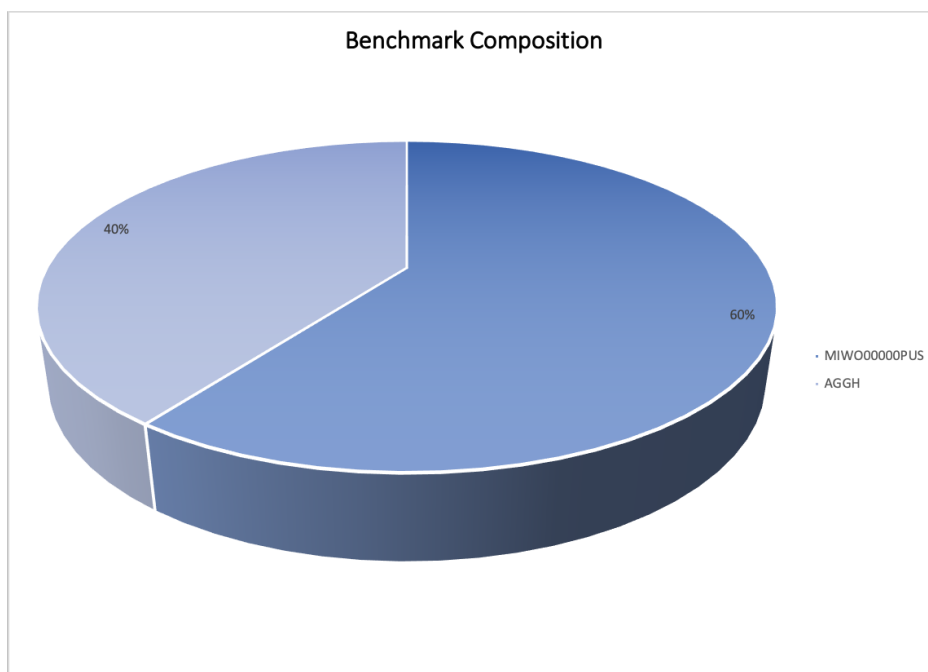
Figure 5: Sector Weightings (%)

Holdings	% Portfolio Weight
Microsoft Corp	4.88
Danaher Corp	4.85
Amazon.com Inc	4.75
Thermo Fisher Scientific Inc	4.20
Visa Inc Class A	4.10
American Tower Corp	4.02
Intuit Inc	3.86
UnitedHealth Group Inc	3.84
Alphabet Inc A	3.64
Verisk Analytics Inc	3.55

Figure 6: Top Holdings

3 Benchmark

Ticker	Description	Investment
MIWO000000PUS	MSCI World	3000000 Euro
AGGH	iShares Core Global Aggregate Bond UCITS ETF	2000000 Euro



Regarding the benchmark, we opted for a mix of two indeces; a broad equity index and an aggregate bond index since our portfolio is mainly composed by these kind of instruments.

The **MSCI world** index is commonly used as benchmark as it includes a collection of stocks of all the developed markets in the world.

The **iShares Global Aggregate Bond UCITS ETF** seeks to track the results of **Bloomberg Barclays Global Aggregate Bond Index**. To reply the results the iShares ETF performs a direct investment in government, government-related, corporate and securitized bonds with an exposure to investment grade bonds. We decide to use the ETF as benchmark since the historical data of the index are not available.