LIGHTHOUSE FINANCES

Illuminating your path through chaos

INVESTMENT STRATEGY

REGION 2-36267

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1. FINANCIAL PLANNING

1.1 CLIENT ANALYSIS ; RISK PROFILING AND GOAL PLANNING

Strong **relationships** are critical to the success of a company-client experience. We understand that for her to trust WGAM with her wealth, Reshma Sohoni requires fostering this very relationship through an adherence to her values and financial position. Therefore, as an inevitable first step, we dissected Reshma's profile to determine a proper investment asset allocation of her portfolio, and to mitigate potential risks and threats.

FACTOR	INFLUENCE ON RISK APPETITE
Family Information	
Earning Members	Since both Phillip Stoeckl (Client's Spouse) and Reshma are employed, Reshma can afford to take higher risk in her equity investments.
Dependent Members	Two children (ages 2 and 7) which allows a moderate risk appetite.
Life Expectancy (UK)	80; Since the client is currently in her early forties, the time horizon supports the established risk appetite.
Personal Information	
Age	42 (Source: Forbes) which gives her at least 18-23 years before retirement. This time horizon favours well framed risks.
Employability	Self employed; Well qualified and multi-skilled professionals can afford to take higher risks.
Nature of Job	Risky; Moderate to High Risk preferred
Knowledge about markets	Well versed with the market and is in a better position to analyse different situations. She is therefore in a better position to take risks.
Psyche	Daring and Adventurous- mentally positioned to accept the downsides that come with the risk.
Financial Information	
Capital Base	Not Known
Regularity of Income	Fluctuating; well-considered modest risks preferable.

Established Risk Appetite after considering the influence of each factor: **Moderate to High**

1. GOAL 1: RETIREMENT

According to The Motley Fool, Aegon (Multinational life insurance, pensions and asset management company) calculated that the retirement corpus needed by a citizen living in the

United Kingdom is relatively higher. It calculated recently that a person on an average UK salary now needs to build up a pension pot of £300,000 to be able to maintain their lifestyle. With the assumed inflation rate of about 2.8%, this amount will add up to £566,190 after twenty three years.

2. GOAL 2: EDUCATION

(in Pounds)

YEAR CHILD'S AGE	2029 17	2030 18	2031 19	2032 20	2033 21	2034 17	2035 18	2036 19	2037 20	2038 21
YEARLY COST AS PER TODAY	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000
YEARLY COST WITH 3.4% INFLATION	39,116	40,446	41,821	43,243	44,714	46,234	47,806	49,431	51,112	52,850

Child 1(7 years)
Child 2 (2 years)

Source for current price: Sanlam Wealthsmiths

Note: Calculations done using Capitalisation Calculator

3. GOAL 3: CONTRIBUTIONS TO THE SOCIETY

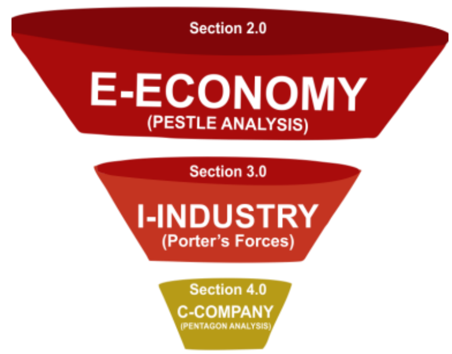
With a minimum estimation of 12% return per annum on the client's portfolio, the 80% of the fund that was kept aside for long term investment is expected to yield an amount of £841,329.7181. Hence, the amount remaining after taking out the retirement corpus will be used towards our client's philanthropic goals.

1.2 INVESTMENT STRATEGY

Our investment strategy followed a systematic procedure centered around our interpretation of our client's risk profile and goals. Based on the factors studied above, it was concluded that a younger investor, like Reshma, with a longer time horizon and a higher tolerance for risk is well positioned to reap the benefits of a heavily weighted growth stock portfolio, which can provide appreciation over the years. This **growth strategy**, provided room for diversification of our portfolio, mixed in with **dividend paying** and **international stocks**. This licensed investment in both hitherto established, fundamentally strong firms, as well as other businesses which anticipate to yield a better growth in the future.

We propose investing 95% of the inceptive holdings in equities and keep only the remaining 5% as cash equivalents, as cash-in-hand is a decaying asset which yields no returns. In cases of any withdrawals required in the future to fulfill our client's short term goals , the amount will be drawn from the stocks in proportion to the amount invested in them.

1.3 INVESTMENT PROCESS



We followed the **Economy-Industry-Company** approach Under this, after comparing a company's fundamental ratios to that of the industry average, and understanding them in the ad hoc context (For instance: studying the company's debt on the basis of whether it's a growth or value stock; evaluating **ROE in relation to D/E ratio**), we used the **fundamental indicators** discussed below to provide us an insight into the valuation of a specific company:

- **Price / Earnings(PE) with relevance to Price/Earnings to Growth (PEG)**- A company's P/E gives us an appropriate valuation. However, the same value may take on a different meaning when factoring its growth. Hence, we used the PEG ratio to determine whether its valuation corresponded to its growth.
- **Operating Cash Flow with relevance to the Revenue Line and Return on Assets (ROA)-** OCF is the measure of the amount of cash generated by a company's normal business operations while ROA shows how efficiently a company can convert the money used to purchase assets into net income or profits. Hence, choosing asset light companies was found to be favourable.

- **Compounded Annual Growth Rate (CAGR)-** A company's compounded profit and revenue growth over the last 10 years and the past few quarters helped us to analyze its performance, and anticipate its future growth.
- **Beta Value and Relative Strength Index (RSI)-** Beta Value of a stock was seen to relatively avoid stocks that are more volatile than the wider market. The RSI score was then looked to ensure that the stock is neither overbought nor oversold.

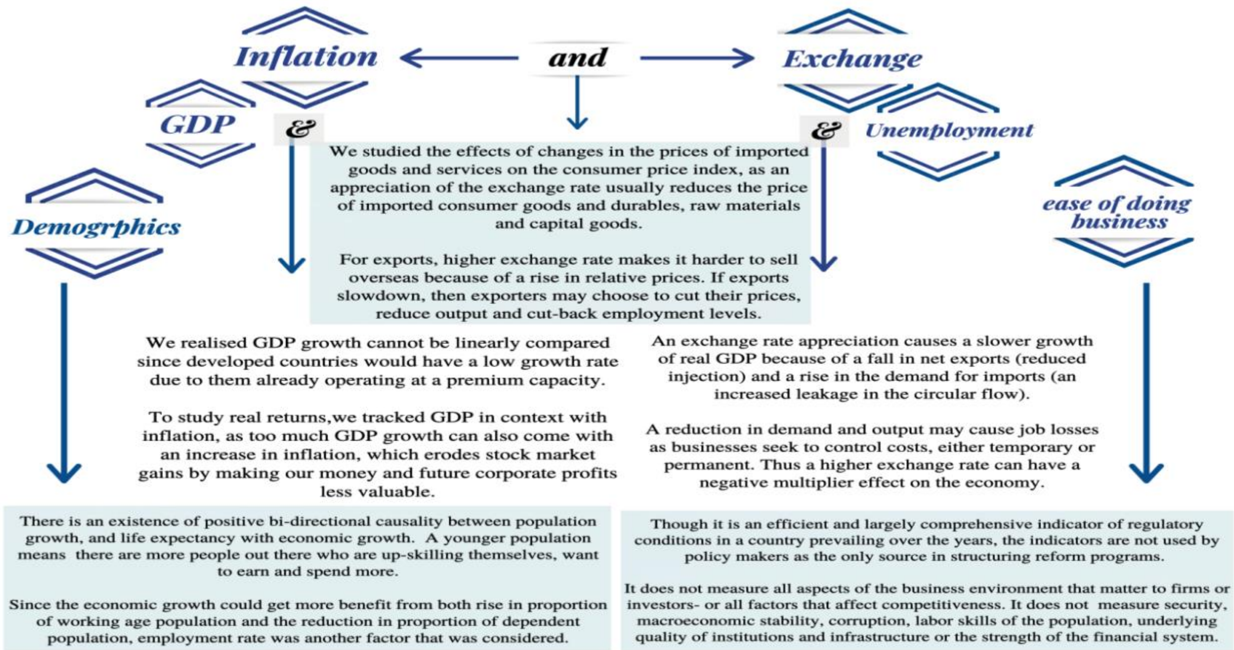
While we focused on fundamental analysis, in conjunction with the quantitative approach, to ascertain the true intrinsic value of the stock; **technical analysis** was employed to identify the right entry and exit points.

The aforementioned technical techniques comprise of **Moving Average Convergence Divergence** (MACD) that shows the relationship between two moving averages of a security's price; **Chaikin Money Flow** which is a measure of momentum and is a money flow oscillator similar to the MACD indicator; Lastly, **Momentum Indicators** were used to able to identify momentum stocks. These show the rate of change in price movement over a period of time to help us determine the strength of a trend.

For shaping the structure of our portfolio and ensuring that affordable risk is being taken, we worked upon our **Position Sizing** and used our unique **Maximum Exposure Per Stock Allowed** (MEPSA) method for calculations. We also established a **moving stop loss** for our trades. On the other hand, for our investments, we came up with a **stop loss** that would be enforced only in cases of fundamental changes in the business. For instance, in the case of a corporate governance issue or change in demand due to a structural issue or disruption, it would be favourable to exit.

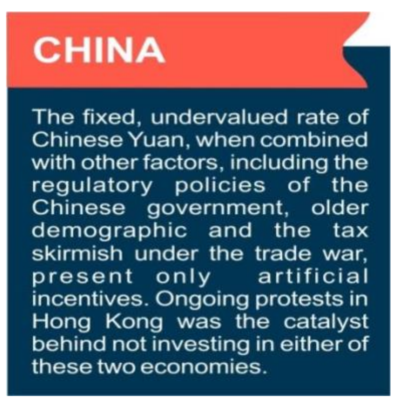
2. ECONOMY ANALYSIS

2.1 MACROECONOMIC FACTORS



2.2 ECONOMY

Based on the factors considered above, we analysed and discarded the following economies:



***NOTE**: For economies that had only one/two stocks (Italy, Switzerland, Canada, Mexico, Luxembourg, Austria), we studied the stocks, rather than the economy as a whole.*

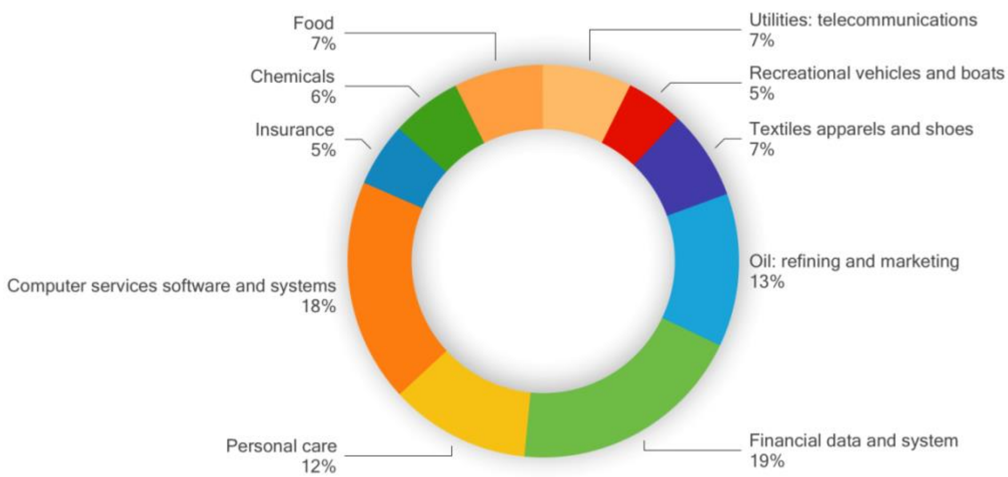
The following are the economies that we suggest to invest in:

3. INDUSTRY & SECTOR ANALYSIS

Porter's Five Forces-

We examined each sector and further, every industry using the porter's analysis and finally narrowed down to the seven which promised high returns.

Deriving from this analysis, we looked for companies with the most potential in the respective industries. The recommended amount invested in these sectors is largely dependent on the specific stocks we have selected, and did not set aside any particular amount to be invested in them. We believe that the following industries have the most potential for yielding greater returns in the future, and are therefore some of our top holdings:



1. Financial data and system in the financial services sector-

We believe the financial services sector is an important component of a well-diversified portfolio. The financial sector generates a good portion of its revenue from loans and mortgages. When rates are low, the economic conditions open up doors for more capital projects and investment. When this happens, the financial sector benefits, meaning more economic growth. As digital platforms are becoming increasingly central to everyday life, countries would have to accelerate their digital growth to remain globally competitive. Total digital transactions are expected to hit **$726 billion**

by 2020. As a result of the aftermath of the financial crisis, many financial services companies are evolving their business models to meet new regulatory and capital requirements.

2. Oil: refining and marketing, in the Energy Sector-

In the quest for diversifying the industrial sector, the oil & gas downstream industry has become one of the major focus areas among developed and developing nations, globally.

India's projected oil demand is going to grow at a CAGR of 4% during 2016 - 2030 against the world average of 1%.

We invested a proportional amount in these 2 industries, namely, IT and oil. Being inversely related, as the IT sector notices an increase in its profit if the US dollar gets stronger (it gets its income in US$) whereas oil sector sees a fall in profit (has to make payments of oil imports in US$). In this scenario, the stock rising will cover the losses of stock falling and

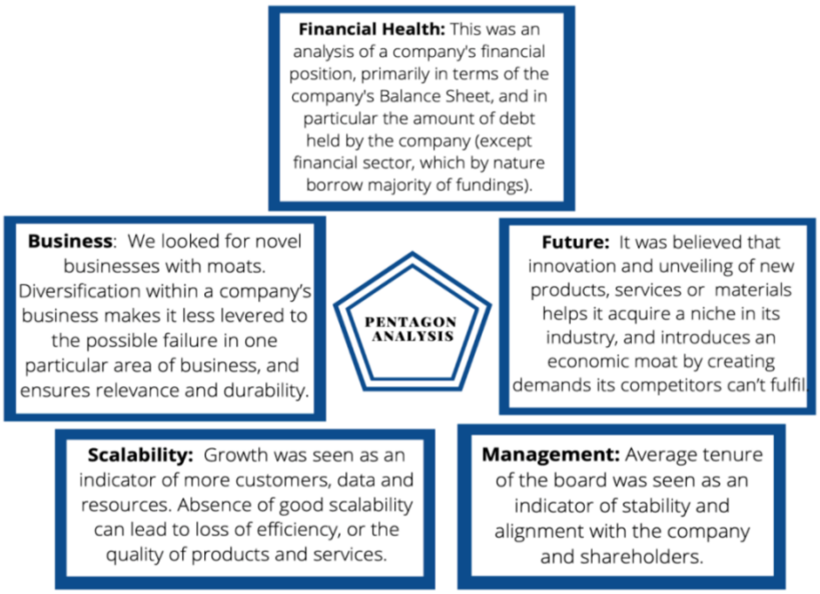
still gives you an opportunity to average out the falling stock with the cash reserves ensuring **moderate risks.**

3. Computer services software and system, in the Technology sector-

Being the largest single segment of the market, eclipsing all others, we decided to invest in this sector. The industry is expected to be the fastest growing industry in the IT sector, with expected growth of 7.1%. **Indian** IT's core competencies and strengths have attracted significant investments from major countries, in particular, the computer software and hardware industry attracted cumulative Foreign Direct Investment (FDI) inflows worth US$ 37.23 billion between April 2000 and March 2019. The **US** computer software industry includes about 10,200 establishments (single-location companies and units of multi-location companies) with combined annual revenue of about $240 billion. Moreover, the US software industry is concentrated as 75% of the revenue was generated by the 50 largest companies.

4. COMPANY ANALYSIS

The companies were analysed based on our **unique** Pentagonal Analysis.



MasterCard Inc. ($ 11,500 Recommended)

Business- MasterCard Inc, the world's second largest payment-processor, receives revenue for both the amount travelling over its cards & the number of transactions IT facilitates. It doesn't directly lend money to consumers thereby escaping the risk of consumers defaulting loans.

Financial Health-MA's short term assets ($14.8B) exceed its long term liabilities ($10.2B) MA's debt is well covered by operating cash flow (84.5%).

FUNDAMENTALS	P/E	PEG	ROA	OPERATING MARGIN	CURRENT RATIO	OCF(CURRENT	EV/EBITDA
INDUSTRY	23.48	1.8	9.17%	31.08%	1.62	4.7B	25.32
MASTERCARD	42.89	2.48	27.92%	52.22%	1.39	2.82B	30.13
VISA	34.38	2.18	16.99%	65.29%	1.56	6.2B	24.77

Scalability and Management- Operationally,volume growth is expanding, with no signs of fatigue. It partnered with rivals Visa, American Express, and Discover Financial Services to compete with PayPal and Apple Pay by introducing an online "click to pay" option. MA's management team is considered experienced (3.5 years average tenure).

Future- It aims on **geographical** by venturing in **new markets** (Middle East and Africa). It will also be a preferred partner for e-commerce businesses, in the wake of **cybersecurity breaches as MasterCard partners with blockchain provider R3** .It has also begun to take control of both the multihoming and apathy towards credit card networks by offering direct digital solutions like **Masterpass**.

We have high conviction in the digital payments industry and recommend investing in both **Visa and Mastercard** to fully capture the industry tailwinds and mitigate against idiosyncratic risks, following the concept of basket buying.

IRB Brasil Resseguros SA($ 5000 Recommended)

Business-It is among the world's **10 largest reinsurers** in the market capitalization. It offers coverage for risks in all reinsurance market business lines and is attentive to the need for sustainable development.

Financial Health- It exceeded the BR Insurance industry which returned 36.4% last year.

FUNDAMENTALS	P/E	Payout Ratio	ROA	OPERATING MARGIN	OCF(CURRENT-5)	DIVIDEND YIELI	EV/EBITDA
INDUSTRY	13.04	79.84%	41.33%	90.42%	28.64%	6.12%	7.71
IRBR3	22.71	20.91%	9.25%	22.32%	33.01%	2.40%	13.44

Scalability and Management-It managed to grow in written premium, operating results and net income compared.The company created a Strategy and Innovation department. A program whose goal is to force the development of new products, services and processes based on technology trends such as the Internet of Things, Blockchain and other technologies was set up. Its Board of Directors is a decision-making body composed of eight statutory members and their alternate deputies.

Future- An improvement in their operations in the **oil and gas sector** has already been recorded. Large **construction works** are expected to be resumed, along with the **privatizations** and approval of the new regulatory framework in Brazil. Which guarantees public works and the momentum of the larger risk portfolio. A new opportunity has just opened with a new **Private Insurance Superintendence, SUSEP,** a standard that determines annual policies are no longer mandatory, making room for innovative/ alternative product offerings that can last for a long time.

Reliance Ind($ 12,000 Recommended)

Business- Reliance, being a significant global player in the integrated energy value chain, has operations ranging from hydrocarbon exploration and production, petroleum refining and marketing, petrochemicals, retail and textile to digital service businesses worldwide.

Financial Health- Reliance's debt to equity ratio has reduced from 62.4% to 60.9% over the past 5 years. Reliance's debt is well covered by operating cash flow (22.5%).

FUNDAMENTALS	P/E	PEG	ROA	OPERATING MARGIN	CURRENT RATIO	EV/EBITDA	DIVIDEND YIELD
INDUSTRY	55.03	0.89	3.25%	3.46%	1.12	4.59	1.98%
RELIANCE	22.33	1.36	4.35%	10.52%	0.62	15.15	0.42%
ONGC	6.58	0.51	8.83%	53.10%	0.61	3.36	5.47%

Scalability and Management- It has set up selective innovation programmes like Beyonders, D4 etc. RIL aims at vertical integration through Refining & Petrochemicals , leadership across businesses, best-in-class efficiency driving through high margins. They tend to make better margins out of their own brands than third-party brands. Its management team is seasoned and experienced (11.7 years average tenure).

Future- The company plans to transform the Jamnagar refinery from a primary producer of fuels to chemicals, and aims to upgrade existing refinery margins, while maximising asset utilisation for a sustainable competitive cost of chemicals. RIL aims to double sales in about seven years, and is placing outsized bets on new consumer businesses to drive growth.

Alphabet Inc($10,700 Recommended)

Business- Alphabet Inc. is one of the most valuable conglomerates of the world, enjoying monopoly in many industries, such as web search (**Google**) and video-streaming platform

(**Youtube**) in the technology sector. Alphabet becomes a glamorous option due to its strong core business- **advertisement revenues**.

<u>Financial Health</u>- Its short term assets ($148.4B) exceed its long term liabilities ($28.9B).GOOG.L's debt is well covered by operating cash flow (1341.8%).

FUNDAMENTALS	P/E	PEG	ROA	OPERATING MARGIN	CURRENT RATIO	OCF(CURRENT	EV/EBITDA
INDUSTRY	42.16	2.25	10.30%	21.23%	5.76	8.01B	19.11
ALPHABET	28.83	1.59	13.07%	20.63%	3.78	25.59B	18.66
MICROSOFT	28.5	2.55	15.11%	35.20%	2.85	0.16B	19.22

<u>Scalability and Management</u>- Its new structure that includes separate focus on its businesses allows Alphabet to keep tremendous focus on the extraordinary opportunities inside each business, but at the same time, the capital allocation for the businesses will be looked by Alphabet itself. Alphabet's components have different levels of employees ranging from L1 to L10, based on experience and the level of the project they are working on. Its management team is considered experienced (4.2 years average tenure).

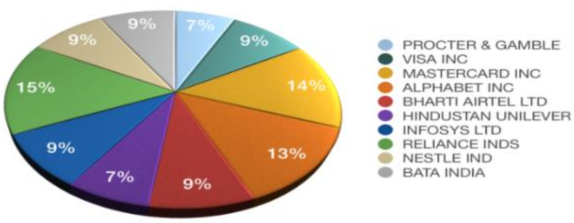
<u>Future</u>-With internet penetration expected to grow over **80%** by the **late-2020s,** regions such as Africa & Asia will represent the biggest growth opportunities for Alphabet o due to its services like **Google Maps**, **Google Assistant** and its phenomenal **search system.** Alphabet has also presented its ability to be at the forefront with its 53 qubit quantum computer, **Sycamore**. Willingness to invest in bold new projects **outside its core competency**, such as Calico (Medical Research Lab), Loon (Balloon-Flying Internet-Delivery Project) & Waymo (Self Driving Technology Company) allows it to continue as a **growth stock** despite hundreds of billions in annual revenue.

Through the aforementioned modes of analyses, we invested in several businesses over the course of ten weeks. This is an outline of our decisions and performance:

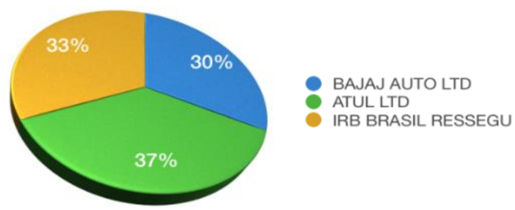
Asset Class	Direction	Security	Ticker	Quantity	Book Value	Market Value	P&L	% Return		
Equity	Long	PROCTER & GAMBLE CO	PG	45.00	$5,627.05	$5,646.15	$19.10	0.34%	Buy	Sell
Equity	Long	TESLA INC	TSLA	8.00	$2,878.67	$2,867.12	($11.55)	-0.40%	Buy	Sell
Equity	Long	VISA INC	V	40.00	$7,119.00	$7,405.60	$286.60	4.03%	Buy	Sell
Equity	Long	MASTERCARD INC	MA	40.00	$10,500.00	$11,843.60	$1,343.60	12.80%	Buy	Sell
Equity	Long	ALPHABET INC	GOOG	10.00	$12,713.40	$13,478.30	$764.90	6.02%	Buy	Sell
International Equity	Long	BHARTI AIRTEL LTD	INT10933	1,265.00	$6,997.81	$7,640.85	$643.05	9.19%	Buy	Sell
International Equity	Long	HINDUSTAN UNILEVER	INT10944	200.00	$5,692.68	$5,665.24	($27.44)	-0.48%	Buy	Sell
International Equity	Long	INFOSYS LTD	INT10948	710.00	$6,865.07	$7,130.60	$265.53	3.87%	Buy	Sell
International Equity	Long	RELIANCE INDS	INT10960	644.00	$13,361.34	$14,393.08	$1,031.74	7.72%	Buy	Sell
International Equity	Long	BAJAJ AUTO LTD	INT21402	55.00	$2,497.40	$2,510.55	$13.14	0.53%	Buy	Sell
International Equity	Long	BATA INDIA	INT21505	287.00	$7,004.58	$6,979.58	($25.00)	-0.36%	Buy	Sell
International Equity	Long	NESTLE INDIA	INT21506	35.00	$7,279.73	$7,067.50	($212.23)	-2.92%	Buy	Sell
International Equity	Long	ATUL LTD	INT28998	101.00	$5,724.27	$5,763.17	$38.90	0.68%	Buy	Sell
International Equity	Long	IRB BRASIL RESSEGU	INT46412	570.00	$5,003.84	$5,091.47	$87.63	1.75%	Buy	Sell
					$99,264.84	$103,482.81	$4,217.97	4.25%		

Finally, we recommend investments in the following businesses:

Long Term



Short Term



5. TEAM DYNAMICS

Challenges: Given the different schedules of different members, efficient communication was the primary challenge. For this, we maintained **logs of tasks** and made a spreadsheet containing a queue of short-term tasks with details including their deadline dates, the member primarily responsible for ensuring its completion, the priority of the task. We'd like to focus on our handling of human factors; particularly, how we addressed mental health and burnout. We began the season with a **fatigue study** with the same purpose. The key aim was to increase efficiency, by determining the amount and frequency of rest intervals to boost the level of efficiency of the team members thereby increasing productivity, by altering task schedules.

Decision-Making: Work was divided amongst the team members, who took up sectors according to their personal interests and inclinations. Based on the urgency of a decision, we developed a system, and called it **DEFCON** (Defense Condition Readiness System). The system is divided into 3 levels depending on the urgency of the situation.

LEVEL	TEAM MEMBERS REQUIRED	DESCRIPTION
Defcon 1	Team Leader, Available member(s)	Immediate action required towards a specific trade (suitable entry/ exit points)
Defcon 2	Team Leader, Sector head, Voluntary member(s)	Special case scenarios: Reactions to certain anomalies observed
Defcon 3	All members	Complete analysis required during initial selection process

wo subgroups:

to the financial area, and conducted the fundamental and technical analysis of stocks. The latter included those who had knowledge of international relations and researched macro factors and companies, based on the current affairs. Additionally, skills like graphic designing, management skills, among others, of individual members used.

6. Takeaways

Experiential Learnings: We realised that in hindsight, we would **avoid overanalyzing** decisions. Furthermore, we realised that we can't be one-dimensional in judging markets and that, working **ethically** is as important as fulfilling the needs of our client. Additionally, we also came across concepts like **Loss Booking** (if we can't maximize our profits, we must minimize our losses.) Since every member analyzed stocks in their respective sectors, it was easy to get attached to them and almost difficult to maintain objectivity in our decisions. There were many variables involved and initially, we were apprehensive due to the lack of practical experience in the stock market. No stocks were dropped solely on the basis of short-term fluctuations and we remembered to stagger our investments. Investing installments at different times to prevent buying only at short-term maxima.

Experience: Needless to say, the competition was more difficult and holistic than we thought, but this made the experience more fulfilling. This opportunity of gaining financial knowledge allowed us to share it with others. We launched the **Financial Club** at our school, and under this initiative, invited investment bankers, started a comic series for financial literacy on our social media accounts, and conducted competitions to engage our audience. Pit booths were set up in our school on the days of Parent-Teacher Meetings, sports meets,etc. To ensure a wider reach and contacts with those in wealth management sector.

7. Ethics: We started the competition by reviewing the CFA Institute's Asset Manager Code, and drawing a set of ethics for our team. A portfolio must reflect the client's investment objectives, time frame and risk appetite. Thus, during the recent whistle-blower case of Infosys, rather than immediately selling the stock based on petty accusations, we decided to keep the stock based on due diligence , that is the basic code of conduct for a portfolio manager. We later enjoyed optimistic returns on our conviction.