Portfolio Analysis for Making Lucrative Ventures

Group Assignment

MFM1132: Financial Management

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Certification

We hereby certify that the material presented in this report is original and no other persons' work or ideas have been used without acknowledgement.

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1. Introduction

Although Sri Lanka is not an economically strong country, there is a habit of very high savings among the people. But it is questionable whether the people of this country are aware of the investment opportunities currently available in the world. The best example of this is the vast majority of people in this country who only try to keep their money in banks and finance companies. We look forward to focusing on the high returns that can be derived from investing in the stock market, one of the most important financing opportunities available in the country and choosing a more productive investment in the stock market institutions.

We select investment opportunities by considering the fluctuations in the stock price indices of companies in the stock market. (Table 1)

Month	Closing share value (Rs.)
2019 Jan	85.00
2019 Feb	81.00
2019 Mar	75.00
2019 Apr	72.00
2019 May	68.00
2019 Jun	62.00
2019 Jul	77.50
2019 Aug	75.00
2019 Sep	73.50
2019 Oct	80.10
2019 Nov	82.80
2019 Dec	80.00

(Table 1 - Closing share prices of Hemas Holdings PLC,2019 Jan-Dec)

We look forward to considering the return-on-investment opportunities and risk appraisal of selected ventures, as well as the optimal return on risk management by selectively selecting several opportunities instead of investing solely in one property.

2. Returns & Risks

Out of the companies listed on the Colombo Stock Exchange Index, nine companies that are considered most suitable for investment were selected for our study. They are,

1. The Colombo Fort Land & Building PLC
2. Janashakthi Insurance Company PLC
3. John Keells Hotels PLC
4. Hemas Holdings PLC
5. Namunukula Plantations PLC
6. Abans Electricals PLC
7. Sri Lanka Telecom PLC
8. Tangerine Beach Hotels PLC
9. Kelani Tyres PLC

2.1. Return

Following are the annual returns of the relevant institutions for the year 2019 using the Colombo Stock Exchange Indicators.

Company	Annual Average Return %
The Colombo Fort Land & Building PLC	(1.048)
Janashakthi Insurance Company PLC	1.468
John Keells Hotels PLC	4.338
Hemas Holdings PLC	(0.159)
Namunukula Plantations PLC	2.466
Abans Electricals PLC	5.365
Sri Lanka Telecom PLC	3.410
Tangerine Beach Hotels PLC	(0.257)
Kelani Tyres PLC	3.451

(Table 2 - annual returns of the relevant institutions for the year 2019)

2.2. Risk

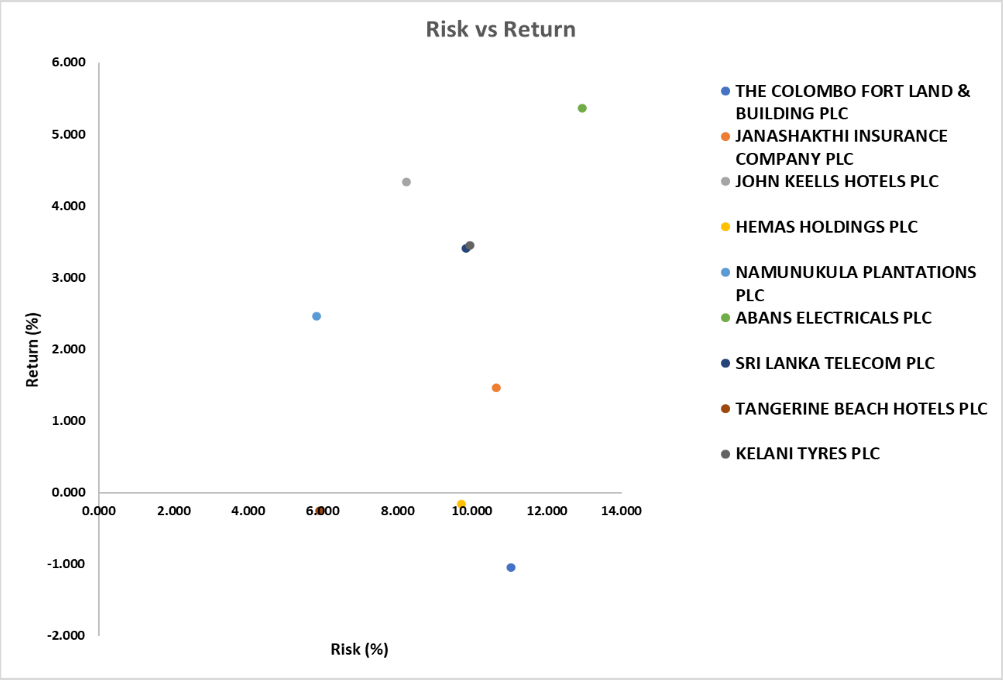
Following are the annual Risks of the relevant institutions for the year 2019 using the Colombo Stock Exchange Indicators.

Company	Annual Risk%
The Colombo Fort Land & Building PLC	11.048
Janashakthi Insurance Company PLC	10.646
John Keells Hotels PLC	8.235
Hemas Holdings PLC	9.717
Namunukula Plantations PLC	5.838
Abans Electricals PLC	12.959
Sri Lanka Telecom PLC	9.843
Tangerine Beach Hotels PLC	5.917
Kelani Tyres PLC	9.940

(Table 3 - the annual risk of the relevant institutions for the year 2019

2.3. Relative Description

Let us compare the returns and risks calculated above with each other relative.



(Figure 1)

Abans Electricals PLC has the highest return among the above-calculated returns and risks, it is 5.365%. And also has the highest risk, and it is 12.959%. In addition, John Keells Hotels PLC (4.338%), Sri Lanka Telecom PLC (3.410%), and Kelani Tyres PLC (3.451%) reported higher returns. There are significant high-risk factors such as The Colombo Fort Land & Building PLC (11.048%), Janashakthi Insurance Company PLC (10.646%), and Kelani Tyres PLC (9.940%). Out of these, Namunukula Plantations PLC has the lowest risk, with a significant return of 2.466%. Meanwhile, stocks such as The Colombo Fort Land & Building PLC (-1.048%), Hemas Holdings PLC (-0.159%), and Tangerine Beach Hotels PLC (-0.257%) declined due to the impact of the trading environment. It is observed that. Hemas Holdings PLC, Sri Lanka Telecom PLC, Kelani Tyres PLC exhibit almost the same risk, but only Sri Lanka Telecom PLC and Kelani Tyres PLC report optimal returns.

2.3.1. John Keells Hotels PLC VS Tangerine beach hotels PLC

The tourism sector was arguably the most affected sector in 2019. The reason for this is the Easter attack that took place in April 2019.

Company	Return (%)	Risk (%)
John keells Hotels PLC	4.338	8.235
Tangerine beach hotels PLC	(0.257)	5.917

(Table 4 - John Keells Hotels PLC VS Tangerine beach hotels PLC for the year 2019)

While the share price of large businesses (John Keells Hotels PLC) did not fall significantly in the face of this unfavorable situation in the tourism sector, the price indices of small and medium enterprises (Tangerine beach hotels PLC) fell drastically. As a result, returns from small and medium-sized businesses such as Tangerine beach hotels PLC fell crucially over the year. (Table 4)

2.3.2. Abans Electricals PLC VS Sri Lanka Telecom PLC

With the advancement of technology, we can see rapid advancement in businesses in the field of technology.

Company	Return (%)	Risk (%)
Abans Electricals PLC	5.365	12.959
Sri Lanka Telecom PLC	3.410	9.843

(Table 5 - Abans Electricals PLC VS Sri Lanka Telecom PLC for the year 2019)

Leading areas such as education, health, as well as daily work at home are advancing with technology, resulting in higher return rates for companies in the technology sector. As a result, higher rates such as 5.365 (Abans Electricals PLC) and 3.410 (Sri Lanka Telecom PLC) in both companies listed above can be seen.

2.3.3. In considering all institutions in general

Company	**Return (%)**	**Risk (%)**
Abans Electricals PLC	5.365	12.959
John Keells Hotels PLC	4.338	8.235
Kelani Tyres PLC	3.451	9.940
Sri Lanka Telecom PLC	3.410	9.843
Tangerine Beach Hotels PLC	(0.257)	5.917

(Table 6 – Relationship between Risk&Return in general)

In general, stock market investments should choose businesses with high risk for high returns. Accordingly, Abans Electricals PLC, John Keells Hotels PLC, Kelani Tires PLC & Sri Lanka Telecom PLC are considered to have high returns commensurate with their high risk. (Table 6) Companies such as Tangerine Beach Hotels PLC have lower risk returns. Considering all these factors, it is clear that there is a correlation between risk and return.

From the companies we have selected above, we can identify the businesses that are suitable for investment, considering their returns and risks, with higher returns and lower risk compared to other companies.

The Principle of Dominance, a leading application in the field of finance, can be used for this. In this case, if there are two assets with equal risk, the deviation from the two assets to the asset with higher return. That is, ascending the y axis according to Figure 1 Similarly, if there are two assets with the same return, it deviates to a less risky asset. That is, moving to the left of the x axis in Figure 1.

Accordingly, considering all the above factors, the following institutions can be identified as minimizing the risk and maximizing the return.

1. John Keells Hotels PLC
2. Namunukula Plantations PLC
3. Abans Electricals PLC

3. Correlation Matrix

Considering the return and risk of all the above institutions, the correlation between them can be illustrated as follows.

If,

Correlation < 0 – Negative Correlation (relationship between two variables in which, an increase in one variable is associated with a decrease in the other)

Correlation = 0 – No Correlation

Correlation > 0 – Positive Correlation (relationship between two variables in which both variables move in the same direction)

	THE COLOMBO FORT LAND & BUILDING PLC	JANASHAKTHI INSURANCE COMPANY PLC	JOHN KEELLS HOTELS PLC	HEMAS HOLDINGS PLC	NAMUNUKULA PLANTATIONS PLC	ABANS ELECTRICALS PLC	SRI LANKA TELECOM PLC	TANGERINE BEACH HOTELS PLC	KELANI TYRES PLC
THE COLOMBO FORT LAND & BUILDING PLC	1	0.798	0.176	0.732	0.678	0.583	0.765	0.236	0.743
JANASHAKTHI INSURANCE COMPANY PLC	0.798	1	0.201	0.709	0.780	0.465	0.696	0.552	0.561
JOHN KEELLS HOTELS PLC	0.176	0.201	1	0.739	0.651	0.773	0.576	0.443	0.459
HEMAS HOLDINGS PLC	0.732	0.709	0.739	1	0.871	0.769	0.920	0.487	0.757
NAMUNUKULA PLANTATIONS PLC	0.678	0.780	0.651	0.871	1	0.662	0.764	0.550	0.510
ABANS ELECTRICALS PLC	0.583	0.465	0.773	0.769	0.662	1	0.714	0.326	0.799
SRI LANKA TELECOM PLC	0.765	0.696	0.576	0.920	0.764	0.714	1	0.333	0.788
TANGERINE BEACH HOTELS PLC	0.236	0.552	0.443	0.487	0.550	0.326	0.333	1	0.051
KELANI TYRES PLC	0.743	0.561	0.459	0.757	0.510	0.799	0.788	0.051	1

(Table 7 – Correlation Matrix)

Company 01	**Company 02**	**Correlation**
John Keells Hotels PLC	Namunukula Plantations PLC	0.651
John Keells Hotels PLC	Abans Electricals PLC	0.773
Namunukula Plantations PLC	Abans Electricals PLC	0.662

(Table 8-Correlations of institutions with minimum risk and maximum return)

In these 3 cases, there is a minimum correlation or an inverse relationship between the two relevant assets,

John Keells Hotels PLC - Namunukula Plantations PLC

4. Portfolio Management

4.1. Portfolio Risk and Return

Selected minimum correlation Namunukula Plantations PLC and John Keells Hotels PLC are among the returns, and risks are as follows.

		Return (%)	Risk (%)
Company 1	John Keells Hotels PLC	4.338	8.235
Company 2	Namunukula Plantations PLC	2.466	5.838

(Table 9 – Selected institutions)

It is risky to invest in only one asset when making investments. As a result, it's more effective to invest in various assets.

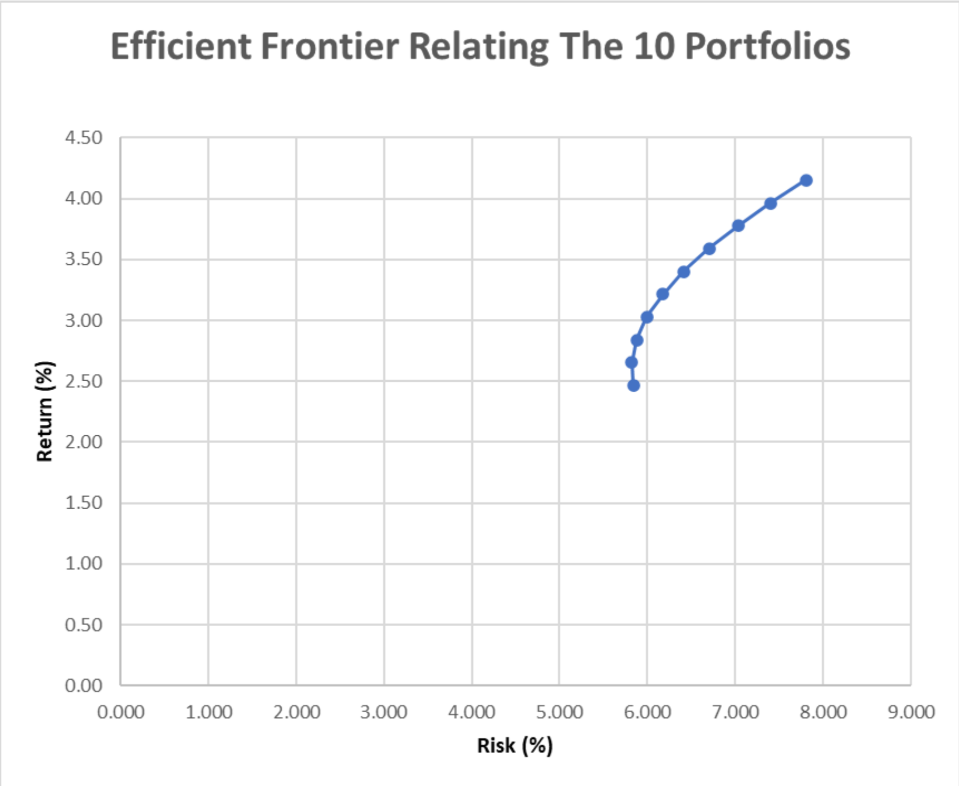
Accordingly, we have selected the two most suitable investment opportunities for the above, and the suitable portfolios for that can be illustrated. The risk and return for each of those opportunities are as follows.

	Company 1	Company 2	Portfolio Return (%)	Portfolio Risk (%)
	JOHN KEELLS	**NAMUNUKULA**		
1	0.90	0.10	4.15	7.804
2	0.80	0.20	3.96	7.401
3	0.70	0.30	3.78	7.031
4	0.60	0.40	3.59	6.699
5	0.50	0.50	3.40	6.412
6	0.40	0.60	3.21	6.175
7	0.30	0.70	3.03	5.995
8	0.20	0.80	2.84	5.877
9	0.10	0.90	2.65	5.824
10	0.00	1.00	2.47	5.838

(Table 10 - Portfolios)

4.2. Efficient Frontier

The efficient frontier is the geometric diagram that is created considering the returns and risks associated with the prepared portfolios.



(Figure 2)

Out of the above portfolio, the lowest risk is 5.824%. Accordingly, the portfolio relevant to the occasion will be, (Table 11 & 12)

Company	Proportion
John Keells Hotels PLC	10%
Namunukula Plantations PLC	90%

(Table 11 – The ideal portfolio)

Minimum Portfolio Risk	5.824%
According to the risk, Portfolio Return	2.65%

(Table 12 – Risk&Return of the total investment)

5. Summery

Out of the group of companies registered in the Colombo Stock Exchange Price Index, we selected 9 companies considering their monthly returns over the past one-year period. The annual average return and risk were calculated by considering the monthly returns of those institutions. From those calculated values, suitable assets were identified using the risk versus returns graph (Figure 1). Relevant institutions were also selected using the Principle of Dominance to ensure a relatively high return and low risk among the relevant assets.

The two institutions with the lowest correlation were then selected on the basis of the correlation between the annual return and risk of the respective institutions. Observes the variance in returns and risk on 10 different proportions of portfolio on those two selected assets.
It treats the return on investment as our last investment opportunity when the risk is minimal**.**

Minimum risk in 9 companies	5.838%	Average Return in 9 companies	2.115%
Portfolio Risk	5.824%	Portfolio Return	2.65%
Percentage of Risk reduction	0.24%	Percentage of Return increment	25.29%

(Table 13 - Portfolio and the nine other institutions)

portfolio obtained by 0.24% from the minimum risk of the first 9 institutions The portfolio has a 25.29% higher return than the average return of the first 9 institutions. (Table 13)

Thus, in conclusion, whichever of the above 9 companies invested, a portfolio investment with a lower risk and higher return was identified.