Up All Night Capital

Where your money grows...

Arnon | Thanadol | Nattapong | Wasita

FN452 Asset Management and Portfolio Analysis

Arnon
Ariyawatkul

Thanadol
Rattanakosonsri

Nattapong
Vongchankit

Wasita
Jirasakulpeeti

Up All Night Capital

Up All Night Fund

Up all night Fund aims to seek **attractive financial returns** for investors

Up All Night Fund

- The fund is organized as to be an active open-ended fund with **0.2% management fee**
- **100%** investment in equity

Aims to maximize investors who…

1. Have long-term **investment horizon**
2. Mid-to-low **risk averse** investors

GOAL

To seek **attractive financial returns** for investors through an effective investment policy and ethics

Investment Theme

The fund targets investors

seeking abnormal return

with moderate risk tolerance.

Investment Market

US stock market is selected as it has proven to be more efficient

US stock market

NYSE

Nasdaq

Cboe

St
ma

- **Wide range of stocks**
- **Comprehensive stock information**
- **More efficient stock market**

Investment Universe

Mid-cap value stock is the our main investment focus

Market capitalization

1 Large capitalization

Greater than $10 billions in market capitalization

Low risks, low return

2 Mid capitalization

S&P 400

Between $2 billion to $10billion in market capitalization

Moderate risks, moderate return

3 Small capitalization

Between $300 million to $2billion in market capitalization

High risk, high return

Value/Growth stock

COVID-19 pandemic

High uncertainty with projected economic downturn

Stocks with a high margin of safety to be of optimal alternative

Post-pandemic situation

A demand-pull inflation will presumably be on a rise

Interest rate will be raised to slow down the economy

Expensive stocks will encounter a major drawdown

Value stocks

Stock Selection

Selected stocks must be well-performing sold at good price

High performance

EPS growth

Stocks with a positive and growing EPS implies the likelihood of rising in stock price

5-y

Past performance of the stocks to ensure their relevance

- There must be at least 4 years whose EPS of the latter year is higher than that of its prior year
- EPS of the most recent year (2019) must be higher than that of its previous (2018)

Year		**EPS (the latter) > EPS (the prior)**		
The prior year	The latter year	Stock A	Stock B	Stock C
2014	2015	Y	Y	Y
2015	2016	Y	N	Y
2016	2017	Y	N	Y
2017	2018	Y	Y	N
2018	2019	Y	Y	Y
Result		**Passed**	**Excluded**	**Passed**

Reasonable selling price

High book-to-market ratio

If the book value is higher than the market value, analysts consider the company to be undervalued, vice versa.

Ranking

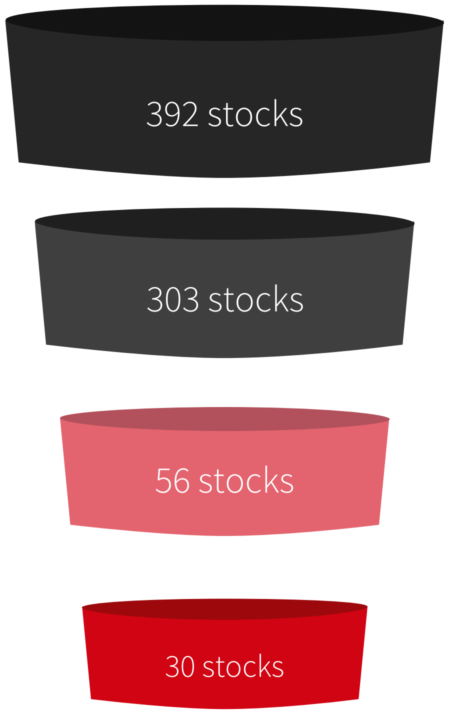
Select 30 top highest book-to-market ratios

The stocks with accumulated loss or negative amount of equity are eliminated

Screening process and Sector Breakdown

Effective screening process results in 6 investment sectors

Screening process



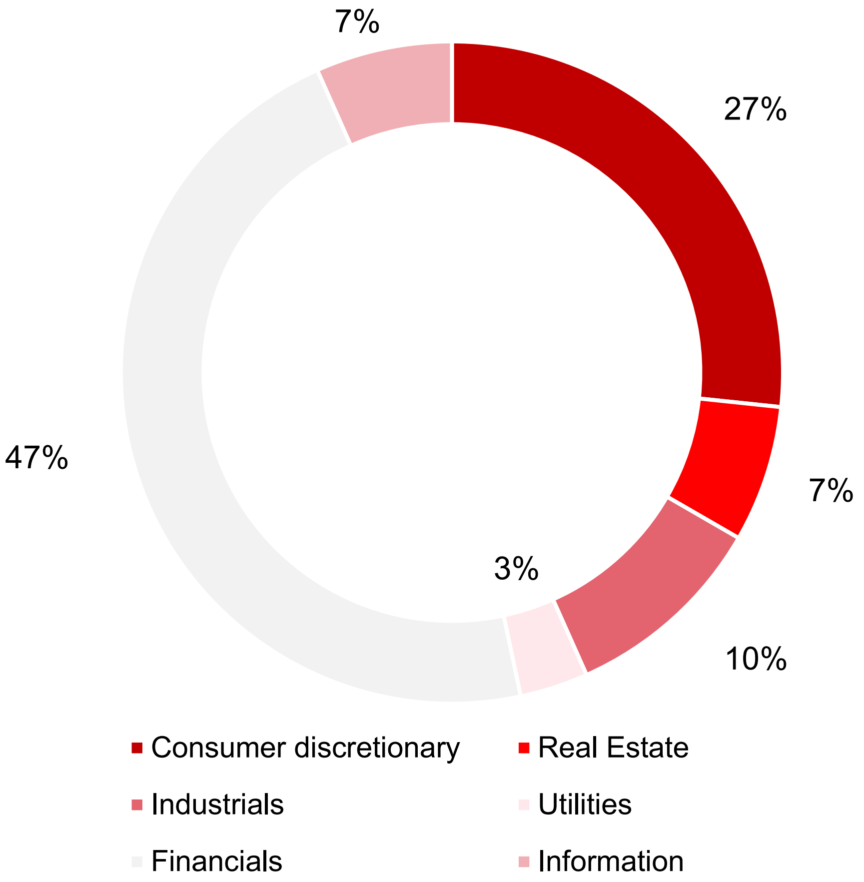
01 **Investment market**
The US stock market

02 **Investment universe (1)**
S&P 400 Mid-cap stocks

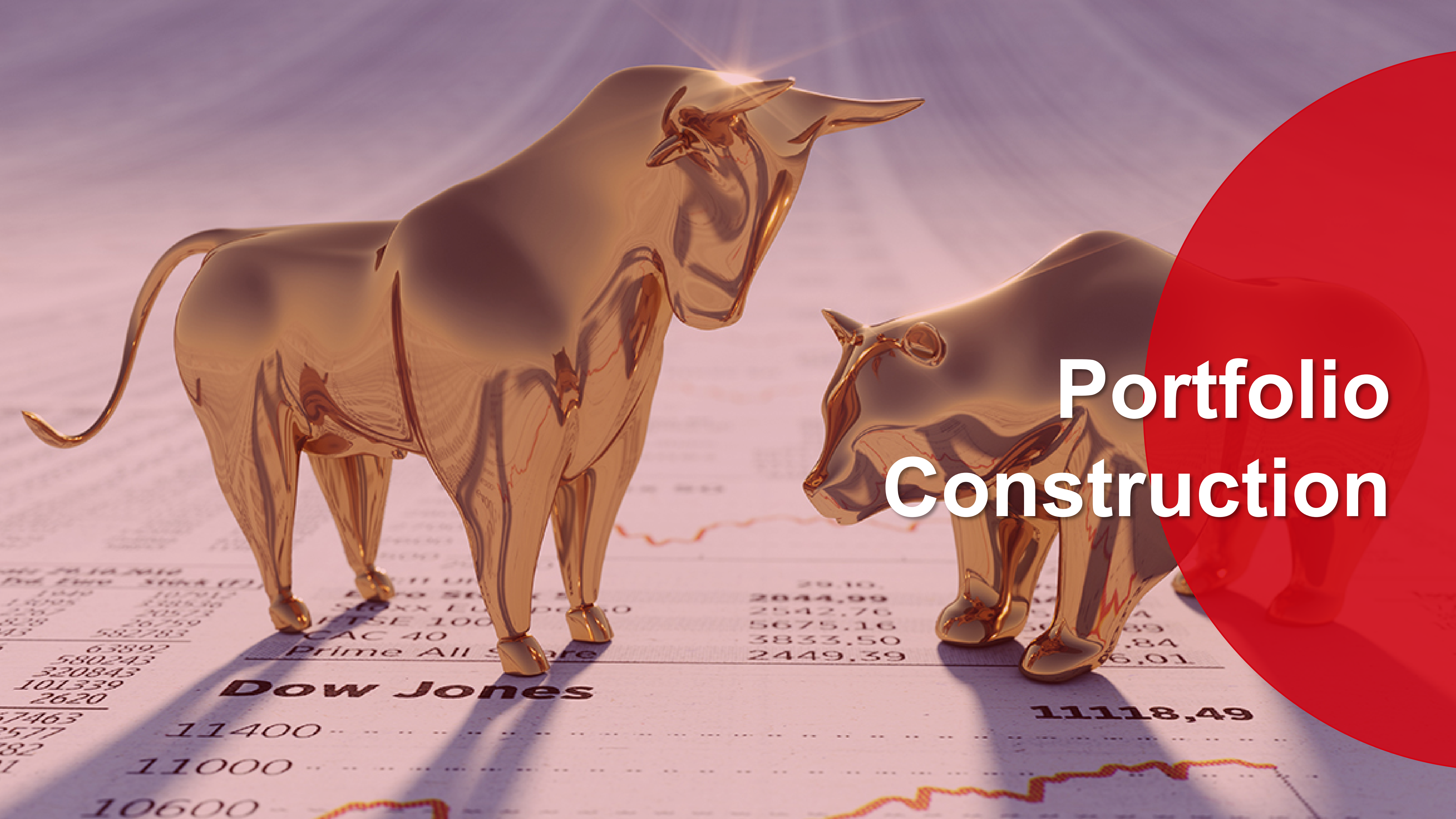
03 **Investment universe (2)**
Value stocks

04 **Stock selection**
Stable positive EPS growth
High book-to-market ratio

Sector breakdown

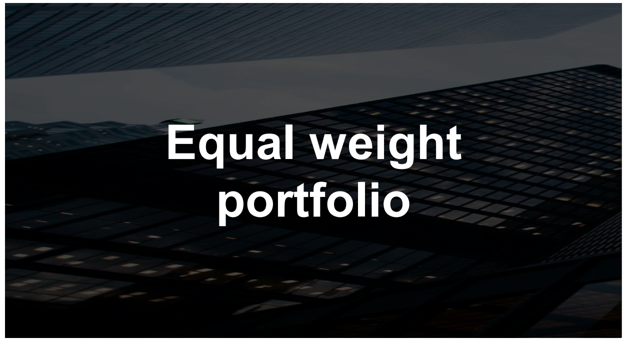


Portfolio Construction



Portfolio Construction

Each construction approach results in different portfolio allocation



Concepts

Equal weight portfolio: The equal-weighted portfolio is allocated with **equal proportion** in investment

Mean-variance optimization portfolio: The minimum variance portfolio is constructed by means of the **optimization of Sharpe's ratio**

Market-capitalization weight portfolio: Proportion of each asset based on its **Market Capitalization** compared to the total group

Stock Allocation

As of 27 March 2020

Equal weight portfolio

STOR	3.33%	FULT	3.33%
COLM	3.33%	CRI	3.33%
LOPE	3.33%	HOMB	3.33%
KAR	3.33%	FFIN	3.33%
SRC	3.33%	CBSH	3.33%
SIX	3.33%	SNX	3.33%
CBRL	3.33%	PACW	3.33%
OGS	3.33%	SBNY	3.33%
STL	3.33%	TNL	3.33%
EVR	3.33%	OSK	3.33%
VAC	3.33%	SKX	3.33%
FNB	3.33%	GBCI	3.33%
TCBI	3.33%	CATY	3.33%
FAF	3.33%	MSM	3.33%
PNFP	3.33%	ACIW	3.33%

Mean-variance optimization portfolio

STOR	9.37%	FULT	0.00%
COLM	4.40%	CRI	0.00%
LOPE	15.36%	HOMB	0.00%
KAR	9.90%	FFIN	0.00%
SRC	0.00%	CBSH	1.13%
SIX	0.00%	SNX	8.31%
CBRL	1.40%	PACW	0.00%
OGS	29.52%	SBNY	0.00%
STL	0.00%	TNL	0.00%
EVR	0.00%	OSK	0.00%
VAC	0.00%	SKX	1.94%
FNB	0.00%	GBCI	0.00%
TCBI	0.00%	CATY	0.00%
FAF	15.91%	MSM	0.00%
PNFP	0.00%	ACIW	2.78%

Market-capitalization weight portfolio

STOR	5.70%	FULT	2.10%
COLM	5.16%	CRI	3.60%
LOPE	3.80%	HOMB	2.19%
KAR	1.71%	FFIN	4.10%
SRC	3.15%	CBSH	6.30%
SIX	1.43%	SNX	4.34%
CBRL	2.22%	PACW	2.49%
OGS	4.47%	SBNY	5.33%
STL	2.50%	TNL	2.34%
EVR	2.06%	OSK	4.62%
VAC	2.77%	SKX	3.92%
FNB	2.67%	GBCI	3.49%
TCBI	1.30%	CATY	1.97%
FAF	5.49%	MSM	2.54%
PNFP	3.10%	ACIW	3.16%

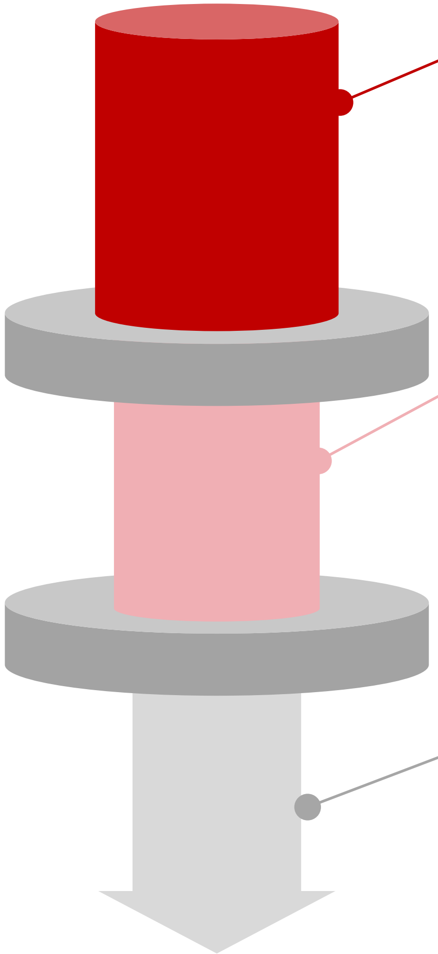
Portfolio Construction

For BL Portfolio, our team incorporate opinion toward expected return **based on sector categorized**

Black-Litterman portfolio

The Black-Litterman portfolio **allows investors to incorporate their opinion** into the expected return of the benchmark portfolio components, **producing an optimal portfolio**

Funneling with Up All Night's Analysis



Benchmark Portfolio

Opinion-adjusted

+
- Information Technology
- Industrial (MSM)

~
- Utilities
- Industrial (OSK.N)

-
- Consumer Discretionary
- Financial
- Real Estate
- Industrial (KAR.N)

Opinion-adjusted portfolio

STOR	1.77%	FULT	0.42%
COLM	4.69%	CRI	1.36%
LOPE	4.86%	HOMB	4.12%
KAR	0.34%	FFIN	0.82%
SRC	0.98%	CBSH	1.26%
SIX	0.90%	SNX	10.62%
CBRL	3.37%	PACW	0.50%
OGS	3.55%	SBNY	1.07%
STL	0.50%	TNL	0.47%
EVR	0.41%	OSK	0.96%
VAC	1.53%	SKX	0.99%
FNB	4.12%	GBCI	0.70%
TCBI	4.86%	CATY	5.75%
FAF	3.02%	MSM	18.92%
PNFP	0.62%	ACIW	16.52%

Portfolio Construction

Also, aims to **rebalance the fund quarterly** to maintain optimal portfolio and investment policy

Equal weight portfolio

Allocated with **equal proportion** in investment

No rebalance needed

Mean-variance optimization portfolio

Constructed by means of the **optimization of Sharpe's ratio**

Adjust the proportion of investment to **maximize Sharpe's ratio**

Market-capitalization weight portfolio

Proportion of each asset based on its **Market Capitalization** compared to the total group

Adjust the proportion based on **changes in Market-capitalization**

Black-Litterman portfolio

Incorporate team's opinion to produce optimal portfolio

Adjust the proportion based on **changes in Benchmark Portfolio**

Portfolio Evaluation

Performance Comparison

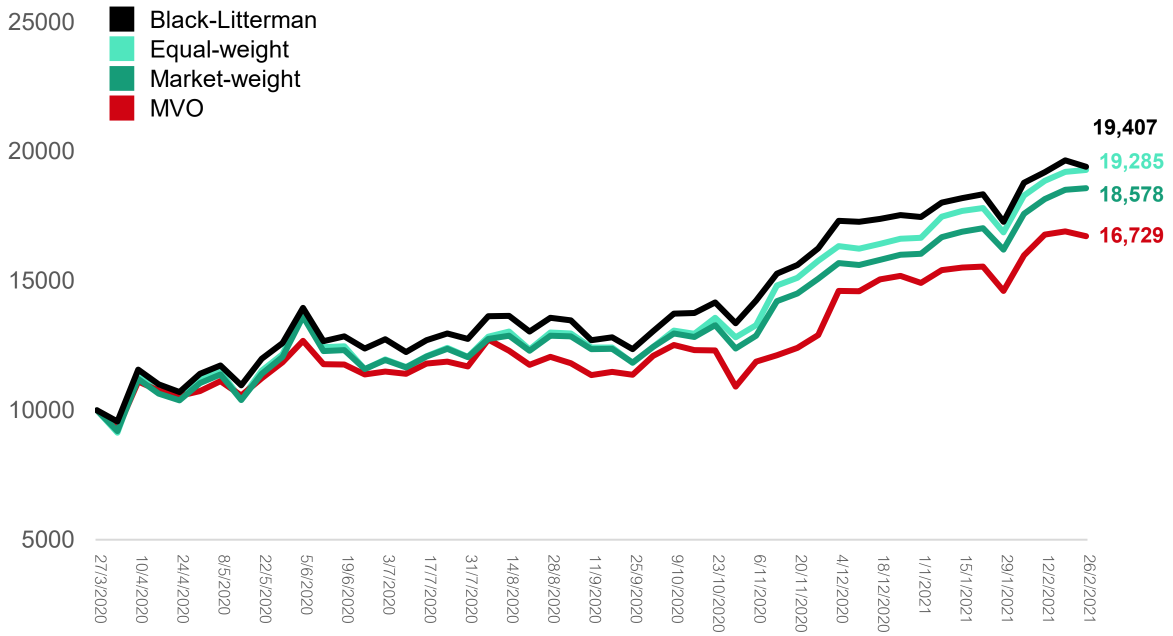
Evaluate fund performance of each portfolio, which BL portfolio performed the best

Performance Comparison

Portfolio	Mean-Variance	Equal-Weighted	Market-Weighted	Black-Litterman
Arithmetic return (Weekly)	1.22%	1.56%	1.46%	1.53%
Geometric return (Weekly)	1.06%	1.35%	1.27%	1.36%
Standard deviation (Weekly)	5.49%	6.21%	5.78%	5.39%
Sharpe ratio	1.64	1.85	1.86	2.09
Jensen's Alpha (Weekly)	-0.22%	-0.15%	-0.15%	0.03%
Beta	1.11	1.32	1.23	1.15
Active Share	52.59%	46.50%	46.50%	46.50%
Active Risk	0.06%	0.07%	0.05%	0.04%
ROI	67.29%	92.85%	85.78%	94.07%

…with a visualization graph

Assume USD 10,000 initial investment, before fee adjustment



Performance Comparison

Also, consider the regression analysis with 3 Factors model including MRP , SMB and HML premium

Regression Analysis

Portfolio	Mean-Variance	Equal-Weighted	Market-Weighted	Black-Litterman
Alpha (Weekly)	-0.48%	0.02%	-0.01%	0.02%
t-stat	-115.86%	12.15%	-6.38%	9.37%
MKT-rf	120.44%	113.07%	108.96%	107.95%
t-stat	9.32	19.33	19.21	13.10
SMB	64.27%	54.51%	50.35%	56.00%
t-stat	2.63	4.92	4.69	3.59
HML	33.77%	95.28%	85.18%	64.93%
t-stat	316.21%	1971.04%	1817.34%	953.47%
R2	78.88%	96.62%	96.33%	91.11%

…With Key Implication

Equal-weighted and Black-Litterman could offer 0.02% of'alpha per week, however the alpha or abnormal return from skills is **not statistically significant**

All funds have slightly more investment in cyclical companies to the market portfolio as all funds' coefficients on market factor are above 1, with a strong significant level

All funds are investing more in small-cap companies as the positive coefficient suggested and all results are significant level.

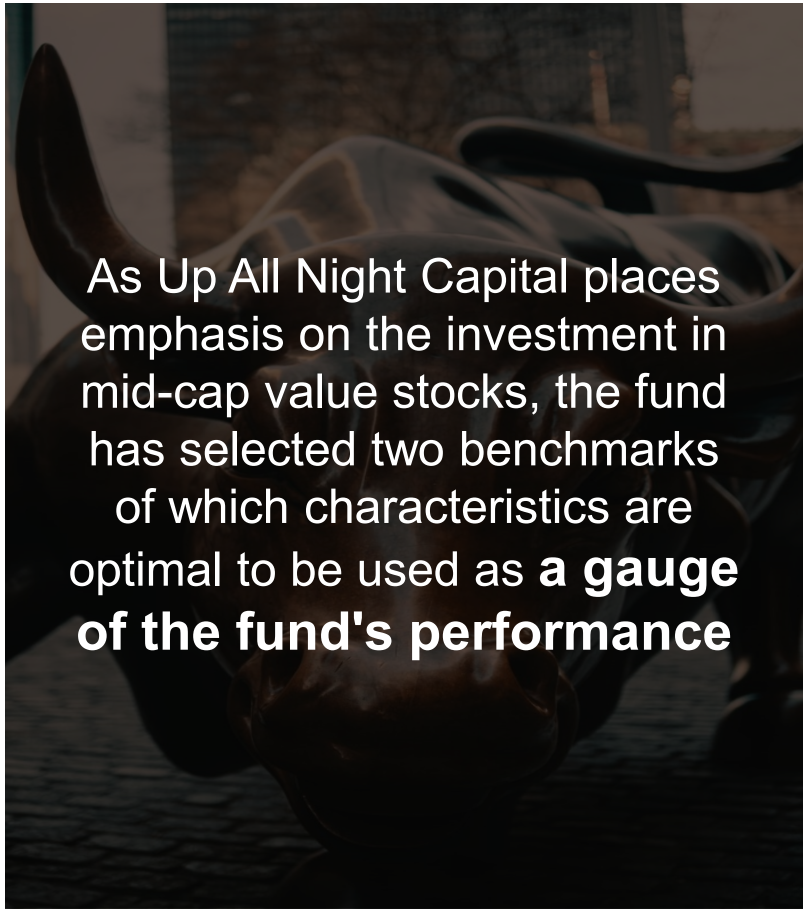
The equal-weighted, market-weighted, and Black-Litterman are explained by high coefficient in the value stocks implying they are investing in a stock with high book-to-market ratio

All of funds' returns **could be explained with 3 Factors Model with most result with R2 above 90%.** All of the alpha are insignificant implying that all of the results could be justified with the risk-factors

Portfolio Evaluation

To meet the key objective of beating the benchmark, we first define the target benchmark

Benchmarking concept



…our benchmark

S&P400

The index that tracks the performance of 400 U.S. mid-cap stocks in the market

Total return: 77.92%
Sharpe ratio: 2.35
Alpha: -0.03%

Vanguard U.S. Value Factor ETF

VFVA is offered by Vanguard, it is actively investing in U.S. undervalued stocks at all sizes

Total return: 73.59%
Sharpe ratio: 1.9
Alpha: -0.21%

Evaluation with Benchmark

Which our portfolio is outperformed the benchmark based on a risk-adjusted return.

Portfolio	Equal-Weighted	Mean-Variance	Market-Weighted	Black-Litterman	Market	S&P400	VFVA
ROI after Fee	92.49%	66.98%	85.43%	93.71%	62.14%	77.92%	73.59%
ROI Before Fee	92.85%	67.29%	85.78%	94.07%	NA	NA	NA
Geometric Return (Weekly)	1.35%	1.06%	1.27%	1.36%	0.99%	1.18%	1.13%
Arithmetic Return (Weekly)	1.56%	1.22%	1.46%	1.53%	1.25%	1.54%	1.51%
Standard Deviation (Weekly)	6.21%	5.49%	5.78%	5.39%	3.41%	4.69%	5.68%
Sharpe	1.85	1.64	1.86	2.09	2.62	2.35	1.90
Beta	1.32	1.11	1.23	1.15	1.00	1.26	1.37
Jensen's Alpha	-0.15%	-0.22%	-0.15%	0.03%	0.00%	-0.03%	-0.21%
Alpha	0.02%	-0.48%	-0.01%	0.02%	NA	-0.37%	-0.23%
MKT-rf	1.13	1.20	1.09	1.08	NA	1.06	1.13
SMB	0.55	0.64	0.50	0.56	NA	0.53	0.45
HML	0.95	0.34	0.85	0.65	NA	0.36	0.78

Outperforming the benchmarks

- Equal-weighted, Market-Weighted, and Black-Litterman **can outperform** both benchmarks, S&P400 and VFVA.
- The use of Mean-Variance may **exclude some high-return stocks** as they might display some high volatility.

Slightly lower Sharpe ratio

- All our portfolios are investing **with lower Sharpe ratio** when comparing to the S&P400. Our investment may not largely diversify as the portfolio is consisting of 30 stocks.
- Only Black-Litterman could beat the VFVA.

Insignificant Alpha values

- Our alpha is statistically **insignificant,** but other coefficients are strongly significant.
- Our portfolios that beat the S&P400 could be mainly explained by the **higher degree in value stocks**.
- For VFVA, our portfolio has higher proportion in **small-cap**, therefore our funds yield higher return.

Risk Factors

There are some risk factors which investors should be awared of

Risk Types	Potential outcomes

1 Market risks

Have played an important role for equity investing

Resulted from external factors such as economic situation, political unrest, international dispute, etc

2 Mid-cap stock risks

Bear high risks when compared to that of the large-cap as these companies have not fully secured the market

3 Sector concentration risks

Exposing to only 6 from 11 sectors, and the majority are in the financial sectors, which provides high risks when specific, unexpected events occur.

High price volatility

Potential loss on initial investment amount

Conclusion

The higher return could be obtained from **focusing investment on value and mid-cap stocks**

To summarize…

1 **Our portfolios share similar characteristics**
cyclical companies, highly focused on high book-to-market, toward small-cap

2 **All portfolios yield higher ROI than the market's portfolio**
while only three portfolios (Equal-weighted, Market-weighted, and Black-Litterman) could provide higher return than the S&P400.

3 **The extra return obtained is not the abnormal return**
It is contributed mainly from more proportions investing in value stocks and more small-cap stocks as explained by coefficients in HML and SMB

4 Our performances could ensure that our strategy in value investing and mid-cap firms that have stability could **yield higher return comparing to the benchmark**

Best Portfolio:
Black-Litterman
93.71% ROI

Up All Night Capital

Where your money grows...

Arnon | Thanadol | Nattapong | Wasita

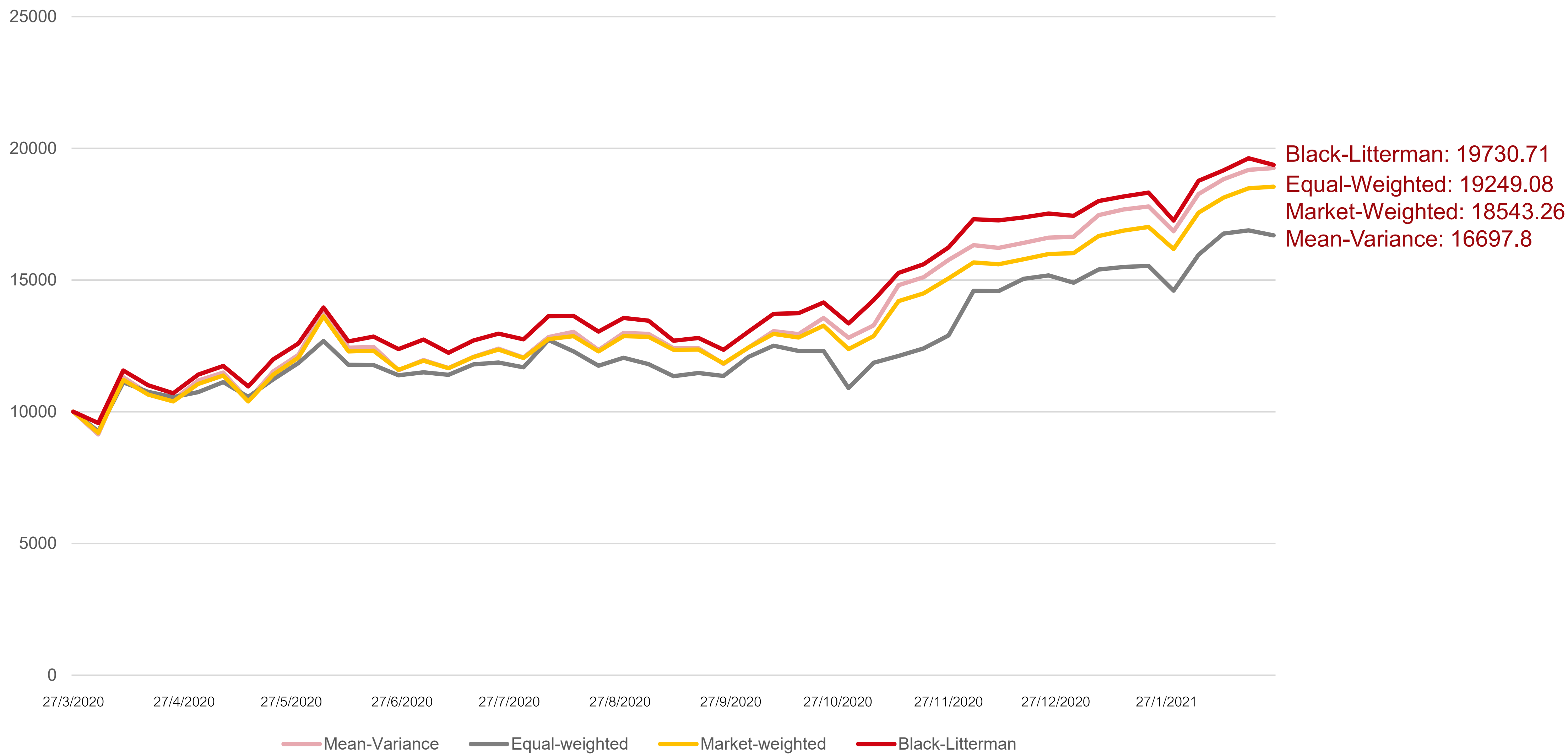
FN452 Asset Management and Portfolio Analysis

Company's List & Investment Proportion

Portfolio	Mean-Variance	Equal-weighted	Market-weighted	Black-Litterman
STOR	9.37%	3.33%	5.70%	1.77%
COLM	4.40%	3.33%	5.16%	4.69%
LOPE	15.36%	3.33%	3.80%	4.86%
KAR	9.90%	3.33%	1.71%	0.34%
SRC	0.00%	3.33%	3.15%	0.98%
SIX	0.00%	3.33%	1.43%	0.90%
CBRL	1.40%	3.33%	2.22%	3.37%
OGS	29.52%	3.33%	4.47%	3.55%
STL	0.00%	3.33%	2.50%	0.50%
EVR	0.00%	3.33%	2.06%	0.41%
VAC	0.00%	3.33%	2.77%	1.53%
FNB	0.00%	3.33%	2.67%	4.12%
TCBI	0.00%	3.33%	1.30%	4.86%
FAF	15.91%	3.33%	5.49%	3.02%
PNFP	0.00%	3.33%	3.10%	0.62%
FULT	0.00%	3.33%	2.10%	0.42%
CRI	0.00%	3.33%	3.60%	1.36%
HOMB	0.00%	3.33%	2.19%	4.12%
FFIN	0.00%	3.33%	4.10%	0.82%
CBSH	1.13%	3.33%	6.30%	1.26%
SNX	8.31%	3.33%	4.34%	10.62%
PACW	0.00%	3.33%	2.49%	0.50%
SBNY	0.00%	3.33%	5.33%	1.07%
TNL	0.00%	3.33%	2.34%	0.47%
OSK	0.00%	3.33%	4.62%	0.96%
SKX	1.94%	3.33%	3.92%	0.99%
GBCI	0.00%	3.33%	3.49%	0.70%
CATY	0.00%	3.33%	1.97%	5.75%
MSM	0.00%	3.33%	2.54%	18.92%
ACIW	2.78%	3.33%	3.16%	16.52%

Holding Period Return Chart

Including management fees & 10,000 USD initial investment



Black-Litterman's Opinion Adjusted

Our rationales are based on the industry's outlook in 2020 and impact from COVID-19

Consumer Discretionary -1%

- Move with the overall economy
- Trend of inflation and increase in interest rate

Financial -2%

- Linked to overall market's activity
- Negative expectation on consumer spending and future economy

Information Technology +2%

- Synnex Corp. – leading IT distributors and solution providers
- ACIW – offers software and platform in online payment and omnichannel merchants

Real Estate -2%

- CNBC expects 35% decrease in sales due to stricter immigration regulation and restriction on foreign movement

Utilities 0%

- One Gas Inc – Natural gas distributors in Oklahoma, Kansas, and Texas
- Decline usage from industrial demand
- Raise in demand from personal uses

Industrial

- KAR.N -2% - Earning shows downtrend. Operating in auction car business directly impacted by the pandemic
- OSK.N 0% - Strong fundamentals and stable cashflow
- MSM +3% - market-implied at 17% but the industry is projected to grow 30%.