1. Introduction

The development in the business world will result in high competition between companies. This situation requires every company to constantly improve and develop its business to meet its objectives and ensure its survival. According to Hendrawan et al. (2020), a company will attract or retain its investors by realizing the company’s value that will cause investors to expect a high return on their investment or the value of their stocks in accordance with risk compensation that considers the time value of money invested in the company’s stock so that stock performance drop will affect the value of the stock that has been purchased.

Damodaran(1995) states valuation is a fundamental analysis by discounting cash flows or using predetermined ratios to analyze the intrinsic value of stocks. Fundamental analysis with valuation consists of four methods, which are Discounted Cash Flow (DCF), Relative Valuation (RV), Contingent Valuation, and Assets Based. In addition, DCF consists of Free Cash Flow to Equity (FCFE), Free Cash Flow to Firm (FCFF), and Dividend Discounted Model.

This study employs Discounted Cash Flow and Relative Valuation. FCFF method was also adopted to project future growth potential. FCFF will be accurate if the assumption and the projection are conducted properly. Therefore, three scenarios of assumptions and projections were adopted, which are optimistic, moderate, and pessimistic (Miala & Kristanti, 2019).

The retail industry in Indonesia is growing, proven by the opening of retail stores in various places. Retail is a popular industrial sector and has influenced many Indonesians for generations. For example, grocery stores have been spread widely nearly in every region in Indonesia, including in remote villages and major cities. With the population growth, this industry develops at a rapid pace. Since the introduction of modern retail in Indonesia, such as Indomaret, Alfamart, Carrefour, and Hypermart, this industry has grown in popularity (Nurviani, 2013).

There are currently 26 companies listed in the Indonesia Stock Exchange (IDX) retail sub-sector, which is in the trade, services, and investment sector. Three of them have the greatest capitalization value, which are PT Sumber Alfaria Trijaya (Persero) Tbk (AMRT), PT Ace Hardware Indonesia (Persero) Tbk (ACES), and PT MitraAdiperkasa (Persero) Tbk (MAPI). The following chart shows the stock price movements of retail companies in 2016-2020.
Based on the previous background, this study aims to examine the intrinsic value of three companies with the greatest market capitalization listed in the trade, services, and investment sector of the Indonesia Stock Exchange in 2021. Data from 2016 to 2020 was used to calculate each company's historical performance. Then it was projected from 2021 to 2025 based on three scenarios: optimistic, moderate, and pessimistic. To determine the intrinsic value of these companies, this study employed Discounted Cash Flow (DCF) method with Free Cash Flow to Firm (FCFF) approach, as well as the Relative Valuation method with the Price to Book Value (PBV) and Price to Earnings Ratio (PER) approaches.

2. Literature Review

Fischer et al. (2020), explain how to incorporate stochastic interdependence into tax pricing and WACC using the WACC approach and achieve price equations for VTS and WACC, combining interest priority and average loss distributions.

On the other hand, Hendrawan, Rijikan, et al. (2020) analyzed INTP, SMCB, and SMBR (cement companies) stocks fair value using 2013-2017 data and employing DCF and RV (PER and PBV). It was found that the stocks were overvalued and the study recommended selling INTP, SMCB, and SMBR stocks.

Cahyono & Hendrawan (2020) assessed the fair value of several coal mining company stocks listed on IDX in 2019. The study employed discounted cash flow, FCFF, and relative valuation PER and PBV approach to validate the result. The samples of the study were ADRO, BYAN, and PTBA, the three large coal mining companies. This study concludes that the three stocks were recommended to be invested in.

Satomiawa & Hendrawan (2019) studied the fair value textile companies (TRIS, PBRX, and SRIL) stocks using DCF and RV methods. The result shows that the stocks were overvalued and it is recommended that the stocks be sold.

Hendrawan & Himawan (2020) analyzed the fair value agriculture plantation stocks using 2018 data using DCF and RV methods. Referring to the calculation results, this study recommended selling AALI and LSIP and buy SIMP.

Moreover, Hendrawan et al. (2020) also assessed the fair value property and real estate company stocks, including CTRA, LPKR, and BSDE, using the DCF and RV methods. In conclusion, this study recommended selling LPKR and buy BSDE and CTRA.

Kurnia & Sitorus (2020) analyzed the fair value of AAPL, GOOG, and MSFT stocks using FCFF, PER, and PBV approaches. As a result, the study recommended selling AAPL, GOOG, and MSFT stocks.

Liu (2019) employed the data from 2014 to 2018 to determine the intrinsic value of Ford, Ferrari, and Tesla stocks. It was found that Ford stock was undervalued while Tesla and Ferrari were overvalued.

On the other hand, Carolina (2021) evaluates the intrinsic value of stocks using the PER and PBV approaches. It was found that if the fair price assessment of the stocks of PT PaninSekuritas (Persero) Tbk employed its 2011-2013 PER analysis, the price was considered to be undervalued. However, if the 2014-2016 PER value was used instead, the stock was overvalued. In the same study, it was found that PT PaninSekuritas (Persero) Tbk stocks price was undervalued if the company's 2011-2016 PBV was adopted for analysis.

In the study, Dong (2018) employed 2012-2015 data concerning FCFF implementation on Beixinyuan company. It was found that the company was undervalued where its stock intrinsic price was below its market price.

A study by Lilford et al. (2018) found that at a certain point, the investors’ expected return on equity allows the discount price to approach a risk-free rate of return.

Sim & Wright (2017) evaluate a stock intrinsic value using the DDM approach. It was revealed that a multi-scenario version of the dividend discount model evaluated over a finite period.

Kramadibrata & Damayanti (2016) discussed the intrinsic stock value using DuPont Method, FCFF, and PER approaches. It was recommended that the company should focus on zircon mining and increasing its mining assets.

Brilliand et al. (2016), discusses the intrinsic value of multinational cement sub-sector companies’ stock prices using DDM and PER approaches. Adopting the company historical data from 2013-2015, the study recommended buying SMGR, INTP, and SMCB stocks.

Gajek & Kuciński (2017) analyzed the intrinsic value of the stock using the DCF approach. It was found that without capital outflows and inflows, the company’s surplus grows according to the spectrally negative Lévy process.
3. Methodology
This study employs a purposive sampling technique. Purposive sampling is a non-random sampling approach in which the researcher selects the sampling by identifying certain features that are in line with the research objectives so it can address the problems. The purposive sampling criteria are:
- Retail companies listed on the Indonesia Stock Exchange
- Available financial statements for the last five years
- Included in the top three market capitalization.

Based on the criteria, the objects of the study are PT SumberAlfaria Trijaya (Persero) Tbk (AMRT), PT Ace Hardware Indonesia (Persero) Tbk (ACES), and PT MitraAdiperkasa Tbk (MAPI).

3.1. Data Source
The data source collected from the study object is secondary data, which consists of:
- Financial statements of each company published on the official website
- Daily IDX Composite stock price of PT SumberAlfaria Trijaya (Persero) Tbk (AMRT), PT Ace Hardware Indonesia (Persero) Tbk (ACES), and PT MitraAdiperkasa (Persero) Tbk (MAPI) taken from Yahoo! Finance (2020)

4. Result and Discussion
4.1. PT Ace Hardware Indonesia (Persero) Tbk (ACES)
Ace Hardware Indonesia (ACES) financial behavior as the basic assumption model for the company's FCFF projections is presented in Table 1. ACES FCFF projections for the next five years is presented in Table 2. Valuation analysis of the company is presented in Table 3.

| Year | 2016  | 2017    | 2018  | 2019  | 2020  | Average |
|------|-------|---------|-------|-------|-------|---------|
| Revenue | 4,935,902 | 5,938,576 | 7,239,754 | 8,142,717 | 7,412,766 | Revenue growth |
| Growth | 4.08% | 20.31% | 21.91% | 12.47% | -8.96% | 9.96% |

| Expense | % of Revenues |
|---------|---------------|
| Total Operating Expenses | 33.87% |
| Depreciation | 1.28% |
| Operating Income (EBIT) | 50% |
| EBIT(1-Tax) | 1.28% |
| Total Capex | 0.25% |
| Total Current Asset | 24,973,221 |
| Cash and Equivalent | 30,208,632 |
| Net Current liabilities | 844,928 |
| Working Capital | 4,189,809 |
| ΔWC | 50% |

Table 1: ACES Financial Behavior Based on 2016-2020 Financial Statements (In Million of Rp)
Source: PT Ace Hardware Indonesia (Persero) Tbk(ACES) Financial Statements, Reprocessed

| Scenario | 2021 | 2022 | 2023 | 2024 | Terminal Value | Enterprise Value | Equity Value |
|----------|------|------|------|------|---------------|-----------------|-------------|
| Pessimist (growth=3.39%) | 5,030,401 | 5,200,731 | 5,376,827 | 5,558,887 | 5,747,111 | 24,973,221 | 26,057,985 |
| Moderate (growth=9.96%) | 5,350,365 | 5,883,366 | 6,469,465 | 7,113,951 | 7,822,640 | 30,208,632 | 31,293,395 |
| Optimist (growth=6.67%) | 5,190,287 | 5,536,584 | 5,905,986 | 6,300,035 | 6,720,374 | 27,479,020 | 28,563,784 |

Table 2: ACES Projected 2021-2025 FCFF in Every Scenarios with WACC = 2.67% (In Million of Rp)
Source: PT Ace Hardware Indonesia (Persero) Tbk(ACES) Financial Statements, Reprocessed
The market price for ACES as of 4 January 2021 was Rp1,700 while the intrinsic value after the analysis process using an optimistic scenario was Rp1,665.53. The result implies that the current market price was overvalued. The case is similar to the pessimistic and moderate scenarios because the produced intrinsic is lower than the market value.

It was also found that the lowest PER of ACES was during the pessimistic scenario, which was 3.51. It means that the stock price was 3.51 times its earning per share (EPS). For investors, a low PER value can be used as a reference to reinforce an investment decision because a higher EPS also increases the possibility of receiving a greater return. On the other hand, ACES' PBV in a pessimistic scenario was 5.9. It means that its stock value was 5.9 its book value.

### 4.2. PT MitraAdi Perkasa (Persero) Tbk (MAPI)

| Scenario     | PER Company | Industry Average PER Q4-2020 (1.55) | Lowest | Highest | Condition |
|--------------|-------------|-------------------------------------|--------|---------|-----------|
| Pessimistic  | 3.51        | -830                                | 145    |          | Overvalued|
| Moderate     | 3.50        | -30                                 | 150    |          | Overvalued|
| Optimistic   | 3.98        | -95                                 | 7.91   |          | Overvalued|

Table 3: Aces Valuation Analysis Result  
Source: Processed Data

| Scenario     | PBV Company | Industry Average PBV Q4-2020 (2.20) | Lowest | Highest | Condition |
|--------------|-------------|-------------------------------------|--------|---------|-----------|
| Pessimistic  | 5.90        | -2.95                               | 7.91   |          | Overvalued|
| Moderate     | 6.27        | -2.95                               | 7.91   |          | Overvalued|
| Optimistic   | 6.90        | -2.95                               | 7.91   |          | Overvalued|

Table 4: MAPI Financial Behavior Based on 2016-2020 Financial Statements (In Million of Rp)  
Source: PT MitraAdi Perkasa (Persero) Tbk (MAPI) Financial Statements, Reprocessed
Table 5: MAPI Projected 2021-2025 FCFF in Every Scenario With WACC = 5.95% (In Million of Rp)

| Scenario   | 2021       | 2022       | 2023       | 2024       | Terminal Value | Enterprise Value | Equity Value |
|------------|------------|------------|------------|------------|----------------|------------------|--------------|
| Pessimist  | 3,986,731  | 4,305,670  | 4,650,124  | 5,115,136  | 212,710,586    | 184,398,031     | 184,929,386  |
| Moderate   | 3,836,761  | 4,023,922  | 4,220,213  | 4,426,079  | 181,594,459    | 158,400,098     | 158,931,454  |
| Optimist   | 3,809,538  | 3,967,022  | 4,131,017  | 4,301,791  | 175,242,867    | 153,108,784     | 153,640,139  |

Table 6: MAPI Valuation Analysis Result

Source: Processed Data

The market price for MAPI as of 4 January 2021 was Rp830 while the intrinsic value after the analysis process using an optimistic scenario was Rp9,255,43. The result implies that the current market price was undervalued.

From the calculation, it can be inferred that the company's highest PER is 10.42. It means that the intrinsic value of the company stocks was 10.42 times compared to its earnings per share.

Price Book Value (PBV) analysis shows that the company value was higher than the industry average PBV (2.20) in every scenario. It can be concluded that the stock market value was greater than its book value. Therefore, AdiMitra Perkasa stock was recommended.

4.3. PT Sumber Alfaria Trijaya (Persero) Tbk (AMRT)

| Year | 2016 | 2017 | 2018 | 2019 | 2020 | Average |
|------|------|------|------|------|------|---------|
| Revenue | 56,107,056 | 61,464,903 | 66,817,305 | 72,944,988 | 75,826,880 | Revenue growth 9.53% |
| Growth | 16.25% | 9.55% | 8.71% | 9.17% | 3.95% | 9.53% % of Revenues 18.71% |
| Total Operating Expenses | 10,061,975 | 11,554,924 | 12,572,236 | 13,633,599 | 14,648,625 | 18.71% |
| Depreciation | 1,110,766 | 1,250,931 | 1,306,077 | 1,216,819 | 1,251,774 | 7.28% |
| Operating Income (EBIT) | 1,272,180 | 1,036,957 | 1,403,360 | 1,790,402 | 1,688,417 | 0.58% |
| EBIT(1-Tax) | 553,835 | 257,735 | 668,426 | 1,138,888 | 1,088,477 | 0.58% |
| Total Capex | 1,242,499 | 439,301 | -490,518 | -133,269 | 673,062 | 0.58% |
| Total Current Asset | 10,232,917 | 11,544,190 | 12,791,052 | 14,782,817 | 13,558,536 | 18.71% |
| Cash and Equivalent | 936,614 | 946,700 | 2,070,429 | 3,898,050 | 3,877,560 | 18.71% |
| Net Current liabilities | 11,420,080 | 13,055,903 | 11,126,956 | 13,167,601 | 15,326,139 | 18.71% |
| Working Capital | -1,187,163 | -1,511,713 | 1,664,096 | 1,615,216 | -1,767,603 | -0.44% |

Table 7: AMRT Financial Behavior Based on 2016-2020 Financial Statements (In Million of Rp)

Source: PT Alfarian Trijaya (Persero) Tbk(AMRT) Financial Statement, Reprocessed
5. Conclusion

The following results were obtained after studying three Indonesian retail companies’ stocks valuation using discounted cash flow, free cash flow, the relative valuation method, PER, and PBV analysis.

5.1. In the Optimistic Scenario

Using discounted cash flow, the intrinsic values of MAPI and AMRT were found to be undervalued because their market prices as of 4 January 2021 were lower than their intrinsic values. On the other hand, ACES was found to be overvalued because its market price as of 4 January 2020 was higher than its intrinsic value. On the other hand, relative valuation analysis found the PER of ACES, MAPI, and AMRT to be 3.98, 8.6, and 4.96 respectively. Using the price to book value approach, it was found that the PBV of ACES, MAPI, and AMRT be 6.9, 28.06, and 56.6 respectively. The PER and PBV values are higher than the retail sector industry average, which is based on IDX financial data and the ratio of 2020.

5.2. In the Moderate Scenario

Using discounted cash flow, the intrinsic values of MAPI and AMRT were found to be undervalued because their market prices as of 4 January 2021 were lower than their intrinsic values. On the other hand, ACES was found to be overvalued because its market price as of 4 January 2020 was higher than its intrinsic value. Moreover, relative valuation analysis found the PER of ACES, MAPI, and AMRT to be 3.5, 8.83, and 5.53 respectively while its PBV was 6.27, 29.03, and 64.9 respectively. Their PER and PBV values were higher than the retail sector industry average, which is based on IDX financial data and the ratio of 2020.
5.3. In the Pessimistic Scenario

Using discounted cash flow, the intrinsic values of ACES were found to be overvalued because its market price as of 4 January 2021 was higher than its intrinsic value. Meanwhile, AMRT and MAPI were found to be undervalued because their market prices as of 4 January 2021 were lower than their intrinsic values. Relative valuation analysis found the PER of ACES is 3.51 while MAPI and AMRT are 10.42 and 5.47 respectively. Using the price to book value approach, it was found that the PBV of ACES is 5.9 while MAPI and AMRT are 33.77, and 60.65 respectively. Their PER and PBV values were higher than the retail sector industry average, which is based on IDX financial data and the ratio of 2020.

After the intrinsic valuation analysis in pessimistic, moderate, and optimistic conditions were conducted, investors are recommended to sell their PT Ace Hardware Indonesia (ACES) stocks and purchase or hold their PT MitraAdiperkasa (MAPI) and PT SumberAlfariaTrijaya (AMRT) stocks.

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