

A note on value investing in the UAE stock market

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Received: 17 June 2019; revised: 25 June 2019; accepted: 25 June 2019; published: 26 June 2019.

ABSTRACT

Value investing is one of the most popular stock-picking strategies employed in financial markets. We investigate its effectiveness in the United Arab Emirates. We examine the performance of 124 firms in the period from January 2004 to March 2019. We analyze portfolios from one-way sorts on several well-known valuation ratios: earnings-to-price, book-to-market, EBITDA-to-EV, and dividend yield. Our results demonstrate a powerful value effect in the UAE stock markets. The long-short strategies based on valuation ratios display high raw and risk-adjusted returns. Our results are robust to many considerations.

Keywords: stock market, equity anomalies, value investing, asset pricing, return predictability, value effect, United Arab Emirates, emerging markets, UAE.

JEL codes: G11, G12, G14

1. INTRODUCTION

Value investing is one of the most popular investment strategies with seminal studies published almost a century ago (Graham 2006; 2008). Value investing assumes buying stocks, at a price below their intrinsic value. One of the main ways of implementing the strategy is to use valuation multiples, which fall into one of two categories: equity multiples (metrics that compare various accounting items to the market value of company's equity, e.g. E/P or B/M) or enterprise values (metrics that compare various accounting items to the sum of market value of a company's equity and its debt e.g. EBITDA/EV). Finally, another, but not that popular proxy of value, is the dividend yield.

The value investing strategy has been investigated in numerous countries: in the USA e.g. by Nicholson (1960), Basu (1975, 1977, 1983), Fama and French (1992); in Bangladesh or Lebanon by De Groot et al. (2012); in France, Germany, Netherlands, and the United Kingdom by Brouwer et al. (1996); in Peru by Da Silva, (2001), in Pakistan by Soomro and Haroon (2015), in Japan by Chan et al. (1991), or in Poland by Zaremba and Szyszka (2016) and Zaremba, Czapkiewicz, Szczygielski, and Kaganov (2019).

The aim of this study is to examine the effectiveness of the value investing approach in the United Arab Emirates stock market. Since its launch in 2000, the UAE stock market has hardened its connection with global markets and year by year is getting more attention from global investors (Maghyreh & Awartani, 2012). The goal of this article is to verify the effectiveness of the value investing strategy in the United Arab Emirates equity market. This study contributes to the literature on asset pricing and equity anomalies in the UAE equity market and in the Middle East (Alshebli 2019; Al-Kahazali, 2008; Al-Hajieh et al., 2011; Al-Tamimi et al., 2011; Bedier & Abdel-Azim, 2019; Chiang & Zheng, 2010; Kouzez & Lecointre-Erickson, 2019; Medhioub & Chaffai, 2018; Moustafa, 2004;).

We demonstrate a clear value effect on the UAE stock market. The long-short portfolios formed on different valuation measures – e.g., earnings-to-price, book-to-market, and EBITDA-to-EV – produce robust mean raw and risk-adjusted returns. The value investing strategy performs very well when implemented using equal-weighted portfolios in a diversified and large sample of companies. For value-weighted portfolios and large companies, the phenomenon is markedly weaker.

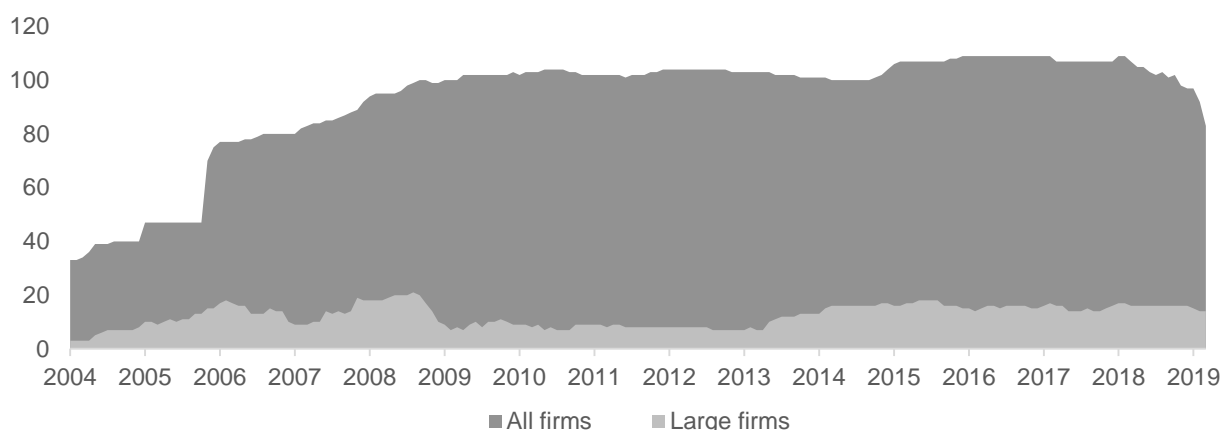
<http://dx.doi.org/10.30585/jrems.v1i2.339>

The remainder of the article proceeds as follows. Section 2 describes our dataset. Section 3 outline the methods of our study. Section 4 examines the value investment strategy in the UAE stock market with the use of portfolios sorts. Finally, Section 5 concludes the study.

2. DATA

In our research, we use all the companies listed in the UAE's (two markets: the Dubai Financial Market and the Abu Dhabi Stock Exchange). We analyze primary securities only and use monthly returns during in the period from January 2004 through to March 2019 (all data is available in Bloomberg). In addition divide the sample into two subsamples: "all listed companies" and "large companies" (market capitalization more than AED 10 bln). The dataset consists of 124 companies in total. The number of companies in the dataset varies in time from 33 to 109. Figure 1 shows the number of companies in the sample over the analysis period. :

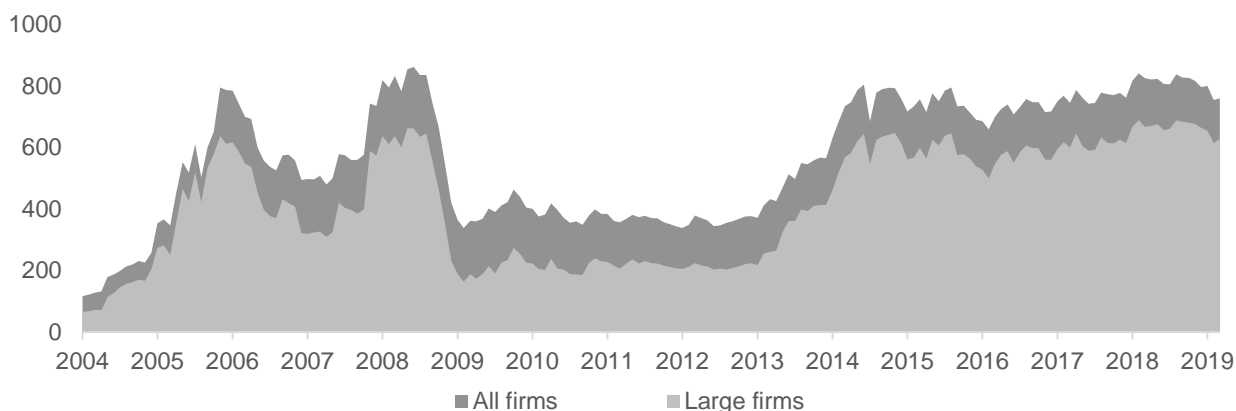
Figure 1. Number of firms in the sample



Note: The Figure presents the number of companies in the analyzed sample. Source: Bloomberg.

The summarized value of companies in the dataset varies from AED 65.17 bln to AED 688.81 bln. The valuation of companies in the UAE stock markets in stagnation after a vast decline of the market value in 2008 has grown rapidly in the period between 2013 - 2015. In the last period of our research, (March 2019,) the UAE stock markets were evaluated at AED 758.89 bln and 82.6% of their its value was created by 14 out of 83 listed companies. In earlier periods, large companies had participated at a minimum of 48.2% and a maximum of 88.9% of the entire market capitalization. Figure 2 shows the value of companies in the sample:

Figure 2. Value of firms in the sample (in AED bln)



Note: The Figure presents the value of companies in the analyzed sample. Source: Bloomberg.

3. METHODS

We perform all the tests in the full sample of all the companies and within a subsample of thee large firms only. We use four different return predictive variables representing firm value: a) earnings-to-price ratio (Graham & Dodd, 1940; Basu, 1975; 1977; 1983), i.e., the 12-month earnings over the current market price; b) book-to-market ratio (e.g. Rosenberg, Reid, and Lanstein in 1985; Chan et al. 1991; Fama & French, 1998; Asness et al. 2013); c) dividend yield (e.g. Fama & French, 1988; Goetzmann & Jorion, 1995; Campbell & Yogo, 2006;

Zaremba & Konieczka, 2015); and d) EBITDA-to-EV ratio (Loughran & Wellman, 2011; Gray & Vogel, 2012) – in the study we base on 12-month EBITDA and current EV.

Each month, we rank all the stocks in the sample on each of the predictive variables mentioned above and form equal- and value-weighted tercile portfolios. We also construct the long-short portfolios that are long in the tercile of stocks with the highest value indicator and simultaneously short the tercile of the stocks with the lowest value indicators.

For each portfolio, we calculate Sharpe ratios (annualized) (Sharpe, 1966) and CAPM alphas (Sharpe, 1964). The *t*-statistics are computed using the bootstrap method for mean returns and Newey-West (1987) for alphas.

All stocks prices are in UAE dirhams (AED). We use the 3-month US T-bill rate from the Kenneth French website for a risk-free rate. (the currency in UAE is pegged to the US dollar). All the accounting values are lagged by 6 months to avoid look-ahead bias.

4. ANALYSIS AND RESULTS

4.1 Portfolio sorts

4.1.1. Strategies in all companies

The table demonstrates the performance of portfolios from one-way sorts on different valuation measures. In the case of equal-weighted portfolios, almost all of the strategies produce significant and economically large profits and alphas. The remarkable winner of the horserace is the single-sorts on the B/M ratio, with the mean monthly return (alpha) on the long-short portfolio amounting to 1.66% (1.66%).

Table 1. Strategies in All Companies

	Equal-weighted portfolios				Value-weighted portfolios			
	Low	Medium	High	High-Low	Low	Medium	High	High-Low
<i>Panel A: Portfolios from sorts on the earnings-to-price ratio</i>								
R	0.62 (1.17)	1.46*** (2.73)	1.99*** (3.90)	1.37*** (3.55)	0.70 (1.12)	1.18** (2.21)	1.38** (2.23)	0.67 (1.38)
Vol	7.17	7.02	7.25	4.75	9.38	7.18	9.33	7.08
SR	0.30	0.72	0.95	1.00	0.26	0.57	0.51	0.33
α	-0.15 (-0.47)	0.73*** (2.83)	1.21*** (4.22)	1.36*** (3.64)	-0.31 (-0.77)	0.39 (1.58)	0.33 (1.33)	0.64 (1.38)
<i>Panel B: Portfolios from sorts on the book-to-market ratio</i>								
R	0.22 (0.57)	0.94* (1.84)	1.88*** (3.57)	1.66*** (3.73)	0.81 (1.51)	1.17* (1.86)	1.57** (2.43)	0.75 (1.46)
Vol	6.37	6.44	7.11	5.46	7.69	8.62	8.55	6.64
SR	0.12	0.51	0.92	1.05	0.36	0.47	0.64	0.39
α	-0.49 (-1.54)	0.25 (1.49)	1.18*** (3.33)	1.66*** (3.57)	-0.09 (-0.43)	0.22 (0.88)	0.70** (2.06)	0.79 (1.60)
<i>Panel C: Portfolios from sorts on dividend yield</i>								
R	1.15** (2.13)	0.79* (1.83)	1.42*** (3.60)	0.26 (0.79)	1.30* (1.85)	0.85 (1.63)	1.19** (2.13)	-0.11 (-0.31)
Vol	7.41	5.84	5.67	4.47	10.18	7.66	8.27	8.06
SR	0.54	0.47	0.87	0.20	0.44	0.38	0.50	-0.05
α	0.32 (0.92)	0.11 (0.54)	0.76** (2.32)	0.45 (1.15)	0.18 (0.53)	-0.11 (-0.83)	0.18 (0.97)	0.00 (0.00)
<i>Panel D: Portfolios from sorts on EBITDA-to-EV ratio</i>								
R	0.30 (0.62)	1.59*** (2.68)	1.78*** (2.94)	1.47*** (4.08)	0.72 (0.98)	1.34** (2.08)	1.58** (2.04)	0.86 (1.23)
Vol	7.36	8.23	7.69	4.79	9.95	9.24	9.93	9.37
SR	0.14	0.67	0.80	1.06	0.25	0.50	0.55	0.32
α	-0.53** (-2.18)	0.73** (2.03)	0.98*** (3.61)	1.51*** (6.21)	-0.33 (-1.19)	0.31 (1.09)	0.62* (1.89)	0.95*** (2.61)

Note. The table discloses the performance of equal- and value-weighted tercile portfolios from sorts on the earnings-to-price ratio (*Panel A*), book-to-market ratio (*Panel B*), dividend yield (*Panel C*), EBITDA-to-EV ratio (*Panel D*). *High (Low)* represents the portfolio of stocks with the 1/3 highest (lowest) values of predictive variables representing firm value, *Medium*

represents the portfolio of stocks with predictors values between the group of 1/3 highest and 1/3 lowest. *High-Low* is the zero-investment portfolio going long (short) the *High (Low)* tercile. *R* is the mean monthly return, *Vol* represents the standard deviation, *SR* is the annualized Sharpe ratio and the symbol α represents the average monthly abnormal return intercepted from the CAPM model. Average returns, volatilities, and alphas are expressed in percentages terms. The numbers in parentheses are bootstrap and Newey-West (1987) adjusted *t*-statistics for the means of returns and alphas, respectively. The asterisks *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

Interestingly, the performance of the value-weighted portfolios is visibly less impressive, suggesting that the value effect may be concentrated mostly in small firms. To dig this effect further, we continue with the analysis of the subsample of large companies only.

4.1.2. Strategies in large firms

Next, we perform portfolio sorts within the subsample of large firms to make our analysis more realistic in market view. The strategies in large firms appear to be less effective than in all companies sample. Again, the most impressive strategy is the one based on B/M – in this case, the long-short equal-weighted portfolios produce a mean monthly return (alpha) amounting to 1.19 (1.04) percent in an equal-weighted portfolio. Any of the proxies work out significantly as a negative predictor in the large firm's dataset.

Table 2. Strategies in large firms

	Equal-weighted portfolios				Value-weighted portfolios			
	Low	Medium	High	High-Low	Low	Medium	High	High-Low
<i>Panel A: Portfolios from sorts on the earnings-to-price ratio</i>								
R	0.80 (1.01)	1.77** (2.23)	1.37** (2.18)	0.56 (0.93)	0.99 (1.30)	1.59** (2.06)	1.33** (2.08)	0.35 (0.54)
Vol	10.95	10.24	9.22	8.20	10.33	9.92	9.59	8.40
SR	0.25	0.60	0.51	0.24	0.33	0.56	0.48	0.14
α	-0.32 (-0.88)	0.74* (1.81)	0.34 (1.14)	0.66 (1.22)	-0.10 (-0.31)	0.63 (1.64)	0.29 (0.95)	0.39 (0.78)
<i>Panel B: Portfolios from sorts on the book-to-market ratio</i>								
R	0.47 (0.73)	1.43** (2.08)	1.66** (2.21)	1.19** (2.09)	0.58 (0.92)	1.49** (2.18)	1.51** (2.02)	0.93* (1.69)
Vol	9.45	9.48	10.48	8.09	8.85	9.51	10.77	8.44
SR	0.17	0.52	0.55	0.51	0.23	0.54	0.49	0.38
α	-0.52*** (-3.75)	0.46 (1.53)	0.51** (2.45)	1.04*** (3.71)	-0.35 (-1.23)	0.54** (2.11)	0.35 (1.35)	0.69 (1.46)
<i>Panel C: Portfolios from sorts on the dividend yield</i>								
R	0.86 (1.28)	1.35** (2.09)	1.52** (2.39)	0.65 (1.02)	0.67 (1.05)	1.37** (2.12)	1.30** (2.12)	0.63 (0.88)
Vol	10.25	9.06	9.25	7.92	9.62	9.24	9.22	8.53
SR	0.29	0.52	0.57	0.28	0.24	0.51	0.49	0.26
α	-0.29 (-1.01)	0.28 (0.88)	0.40 (1.28)	0.69 (1.36)	-0.41 (-1.22)	0.30 (0.92)	0.21 (0.83)	0.62 (1.20)
<i>Panel D: Portfolios from sorts on the EBITDA-to-EV ratio</i>								
R	0.91 (0.95)	1.35* (1.76)	1.31* (1.74)	0.40 (0.64)	0.89 (1.07)	1.36* (1.80)	1.24 (1.60)	0.35 (0.57)
Vol	11.69	10.26	10.78	10.33	10.88	10.10	11.16	11.39
SR	0.27	0.46	0.42	0.13	0.28	0.47	0.38	0.11
α	-0.27 (-1.09)	0.30 (0.90)	0.21 (0.46)	0.48 (1.14)	-0.18 (-0.61)	0.34 (1.13)	0.15 (0.28)	0.34 (0.41)

Note. The table presents the performance of equal- and value-weighted tercile portfolios from sorts on the earnings-to-price ratio (*Panel A*), book-to-market ratio (*Panel B*), dividend yield (*Panel C*), EBITDA-to-EV ratio (*Panel D*). *High (Low)* represents the portfolio of stocks with the 1/3 highest (lowest) values of predictive variables representing firm value, *Medium* represents the portfolio of stocks with predictors values between groups of 1/3 highest and 1/3 lowest. *High-Low* is the zero-investment portfolio going long (short) the *High (Low)* tercile. *R* is the mean monthly return, *Vol* represents the standard deviation, *SR* is annualized Sharpe ratio and the symbol α represent the average monthly abnormal return intercepted from the CAPM model. Average returns, volatilities, alphas are expressed in percentage terms. The numbers in parentheses are Newey-West (1987) adjusted *t*-statistics for the means of returns and alphas, respectively. The asterisks *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

In the case of long-only portfolios, the EP ratio produces a mean raw return of 1.37 (1.33) percent for the equal-weighted (value-weighted) portfolio with no significant alphas. The equal-weighted (value-weighted) dividend yield portfolio demonstrates the mean raw return of 1.52 (1.30) percent with no significant alphas. Only on the equal-weighted portfolio the based on the EBITDA-to-EV ratio has statistically significant mean profits of 1.31 percent per month and non-significant alphas amounting to 0.21 percent. In Figure 3 we show cumulative returns for all analyzed proxies for large-firms strategy:

Figure 3. Cumulative returns for large firms strategy.



Note: The Figure presents the cumulative returns for each of the analyzed strategies and market capitalization of analyzed firms. Source: Own study.

5. CONCLUSIONS

The study analyses the effectiveness of the value investment strategy in the UAE stock markets. In our research, we use all listed companies in the UAE stock markets in the period from January 2004 through to March 2019. The dataset consists of 124 firms in total.

We perform portfolio sorts based on company's value proxies. We find that this strategy is effective with robust raw returns and alphas. Overall, the value investing strategy performs very well when implemented using equal-weighted portfolios in a diversified and large sample of companies. For value-weighted portfolios and large companies, the phenomenon is markedly weaker.

FUNDING

This paper is a part of the project No. 2016/23/B/HS4/00731 of the National Science Centre of Poland.

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