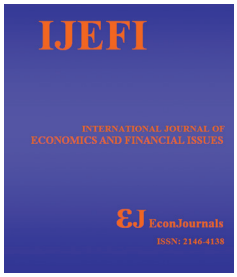

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Preferred Valuation Techniques in the UAE: A Comparative Study of Financial and Non-financial Sectors

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ABSTRACT

This study examines empirically the preferred valuation techniques used by UAE investment analysts in the financial and non-financial sectors. The study uses a questionnaire and interviews to address its ten research questions. Descriptive and nonparametric statistics were employed in this study. The results reveal that discounted cash flow (DCF) and price earnings are the most preferred valuation techniques used by the analysts in the financial sector. On the other hand, the results show that the analysts in the non-financial sector prefer using EV/EBITDA and DCF techniques. The study concludes that the analysts in the two sectors use both sophisticated valuation techniques and unsophisticated valuations techniques, with a preference for cash flow techniques in the financial sector and a preference for accrual-based techniques in the non-financial sector.

Keywords: Financial Analysts, Valuation Techniques, Cash Flow Techniques
JEL Classifications: E22, G2

1. INTRODUCTION

A number of studies have focused on evaluating the efficacy of different valuation techniques (Francis et al., 2000; Peek, 2005). The literature has provided mixed results which conclude that financial analysts have used valuation techniques that depend on accrual-based valuation techniques and cash-based valuation techniques. Some studies have documented that the discounted cash flow model (DCF) is the most popular in practice, followed by residual income valuation (RIV) (Penman and Sougiannis, 1998; Francis et al., 2000; Courteau et al., 2001; Lundholm and O'Keefe, 2001; Demirakos at al., 2004; Imam et al., 2008). The DCF valuation technique considers to be more complicated compared to the accrual-based valuation technique. These two techniques can be applied in financial and non-financial firms because of their relevance and efficacy which produce almost the same results (Copeland et al., 2000; Palepu et al., 2004; Penman, 2001; Demirakos at al., 2004). Other studies, however, (Pike et al., 1993; Barker, 1999a, 1999b; Block, 1999) have suggested that analysts and fund managers use unsophisticated valuation techniques such as the price/earnings ratio (PE) and dividend yield (DY) in preference to more sophisticated techniques (e.g., DCF and residual income techniques). However, these studies have not focused on the evaluation techniques preferred by different sectors. In this paper, we document the various valuation techniques used by UAE investment analysts in the financial sector and the non-financial sector. The comparison between the two sectors is important since financial analysts face unique challenges in the valuation of financial sector (Damodaran, 2013). These challenges are a result of the specific nature of this sector that makes estimating cash flows difficult; in addition, it has specific regulatory requirements, including accounting rules, which are different from those of non-financial sector.

The list of valuation techniques used in this study is determined on the basis of the study of Imam et al. (2008). This study includes both sophisticated and unsophisticated valuation techniques in its list. The study replicates, with modifications, the study of Imam et al. (2008), to which it provides additional insights. The research methods of this study focus on surveys (questionnaire and

semi-structured interviews). To generate a broader understanding of financial statement analysis than that given only by valuation techniques, the questionnaire includes two sections related to accounting ratios and accounting variables (Breton and Taffler, 1995). Foster (1986) stated that investment analysts depend heavily on accounting ratios in their valuations. The current study, unlike all previous ones, provides the results from an emerging economy in the Middle East which has been ranked as one of the most developed in the world and is in top three most attractive countries for infrastructure investment. Omran (2003) studied the equity valuation in the context of the UAE, focusing on the determinants of three valuation multiples (i.e., price earnings [PE]; price book value [PBV]; the price sales [PS]). However, to the best of the authors' knowledge, no study in this region has addressed analysts' choices of valuation techniques in the financial and non-financial sectors. The major findings of this study are remarkably consistent with those of Imam et al. (2008), considering that the current study did not examine the equity research reports of the sample, because it was difficult to collect them and also because the sample of this study contained more buy-side analysts; this is one of the limitations of this study. This study contributes to the literature as follows: First, it provides evidence of the valuation techniques used by analysts in an emerging economy (that of the UAE, which has become one of the most attractive countries for investment in the world). The study suggests that the analysts in the UAE prefer to use sophisticated valuation techniques (their first choice being DCF) in the financial sector; on the other hand, the analysts prefer unsophisticated techniques in the non-financial sector (their first choice being EV/EBITDA). The second contribution, it provides evidence of the accounting variables and accounting ratios used by the UAE's analysts in the two sectors. The results provide evidence that analysts in the two sectors prefer variables related to cash flows and ratios related to solvency and liquidity.

The study of this particular developing country presents an interesting case study for understanding its analysts' choice of valuation techniques. Although this study has specific relevance to the UAE business environment, it is believed that many other developing countries, especially those countries in the Middle East that face similar problems and needs, could benefit from its findings.

The remainder of the paper is structured as follows. Section 2 provides a literature review followed by a description of the research methodology in section 3. Section 4 reports and discusses the results. Section 5 presents a summary and conclusions.

2. LITERATURE REVIEW

Comparing various valuation techniques used by analysts and investors has been a focus of attention for academics and researchers. From the financial theory perspective, the DCF model is used as a base model for equity valuation. The model can be used either in the form of dividend discount model (DDM) or free cash flow model. Researchers have compared residual income-based valuation techniques to DCF techniques (Penman and Sougiannis, 1998; Francis et al., 2000; Courteau et al., 2001). They conclude that the accruals based RIV model provides better valuations than do DCF techniques. The RIV model has also been studied as a tool for company valuation in other studies such as Frankel and Lee (1998) and Biddle et al. (1997). Lundholm and O'Keefe (2001) comment that cash flow and RIV techniques should produce the same valuation since the techniques are theoretically equivalent. Penman (2001) argues that such empirical comparison is an important test for the relevance of accrual accounting for equity valuation even if predicted assumption inconsistencies can explain valuation differences.

The theoretical work of Miller and Modigliani (1961), Ohlson (1995), Penman (1997), and Ohlson and Juettner-Nauroth (2005) underlie the usefulness of P/E, price-to-book value, and PE/Growth ratios as valuation tools. However, due to the development of closer links between financial statement analysis and equity valuation (Palepu et al., 2004; Copeland et al., 2000; Penman, 2007), analysts have had recourse to alternative and more sophisticated valuation Techniques. Recently, Imam et al., (2008) observed that analysts perceive the DCF to have become significantly more important than other previous studies suggested. These authors also observe, however, that contextual factors, notably the analysts' need for their research to be credible to buy-side clients, cause the subjective unsophisticated valuation to be used instead.

Analysts' preferences among valuation techniques are well covered in the academic research. According to Barker (1999b) and Demirakos et al. (2004), who suggested industry related factors behind this preference, it is also possible that analysts covering similar industries use different techniques (Liu et al., 2002; Lee, 2003; Palepu et al., 2004). Now, some academics and analysts agree that valuation techniques have to be consistent with the purpose and perspective of the analysts' valuation (Stowe et al., 2002; Cowen et al., 2005). Damodaran (2013) identified two main measurement issues that analysts face in evaluating financial service firms. The first issue is related to the difficulties of estimating cash flow because some relevant items such as capital expenditures and working capital are not clearly identified in the financial sector. The second issue is the restriction of regulations that control the financial sector in how it is capitalized and areas of investment.

In their recent study, Trejo et al. (2015) examined the relationship between financial ratios and leading stock returns. They found that these are related and that financial ratios can predict 1-year stock returns. According to these authors, profitability and leverage are the most popular ratios; in addition, free cash flow yield and DY ratios are important to analysts in Mexico. Wang and Lee (2010) used the categories of financial ratios (leverage, solvency, turnover, and profitability) to get an estimate of a firm within the shipping industry. Katchova and Enlow (2013) used the Du Pont ratios to compare the return on equity component of agribusiness firms and found that asset turnover was the most predictive ratio, leading to better financial performance. From a practical standpoint, financial ratios have been used to predict aspects of business such as bankruptcy, credit ratings, risk, future cash flow, etc. (Beaver, 1966; Call, 2008). Chen and Shimerda (1981) used principal component analysis of 34 financial ratios that were useful in predicting bankruptcy. Since financial ratios help predict the future rates of returns (Barnes, 1987; Delen et al., 2013), the statistical relationship between financial ratios and stock returns has become a popular area of research.

Researchers have also surveyed security analysts about their opinion of the usefulness of financial ratios. Matsumoto et al. (1995) carried out such a survey on security analysts and reported that the most important ratios were growth in earnings per share and sales growth, followed by valuation ratios (price to earnings and market to book), profitability ratios and leverage ratios. Inventory turnover, receivables turnover, cash flow and dividend ratios were found to be moderately important, while capital turnover and cash position ratios were found to be the least important ratios. Gibson (1987) conducted a survey among CFA charter-holders and found that analysts assigned the highest significance rating to profitability ratios, then the price to earnings ratio, debt ratio, and liquidity ratio; all the rest ratios were rated to be the less important ratios.

We find only one study discussing the equity valuation in the context of the UAE, that of Omran (2003), who tested the determinants of three valuation multiples for 46 UAE companies listed in local share directories. The three valuation multiples are PS, PBV and PE. He used a regression analysis of panel data for the years 1996-2001 and found that PS, PBV, and PE are significantly linked to the net profit margin, return on equity, and the payout ratios.

The above literature indicates that understanding analysts' choices of valuation methods in a country such as the UAE is crucial for practitioners and academics. As mentioned in the introduction, this study will complement the previous studies by examining the most popular valuation techniques in a country that has rapid economic development and is considered one of the world's major business centers.

3. RESEARCH METHODOLOGY

This section presents the empirical methods used to examine the research questions of this study, describes the questionnaire design, presents a detailed description of the sample, and discusses the sample selection. It is structured as follows: Section 3.1 describes the questionnaire design, Section 3.2 presents the research questions and statistical analyses, and Section 3.3 discusses the sample characteristics and selection procedures.

3.1. The Questionnaire Design

In this study, a questionnaire and semi-structured interviews were conducted with the study sample in the UAE. The questionnaire employed in this paper was structured on the basis of certain previous studies (Arnold and Moizer, 1984; Pike et al., 1993; Barker, 1999a, 1999b; Block, 1999). A five-point Likert-like scale (ranging from 1= not important to 5 = extremely important) was used and the respondents were asked to express their views and levels of agreement with the statements.

3.2. Research Questions and Statistical Analysis

In this study, descriptive and nonparametric statistics (Mann-Whitney test) were used to test the following main research questions:

The study addresses the following research questions:

1. What are the valuation techniques choices that analysts select in the financial sector in UAE?
2. What are the valuation techniques choices that analysts select in the non-financial sector in UAE?
3. Are there significant differences between the two sectors in selecting valuation techniques?
4. What accounting variables do these analysts employ in the financial sector?
5. What accounting variables do these analysts employ in the non-financial sector?
6. Are there significant differences between the two sectors in selecting accounting variables?
7. What types of financial ratios used by the analysts in the Financial sector?
8. What types of financial ratios used by the analysts in the Non-financial sector?
9. Are there any significant differences between the two sectors in using financial ratios?
10. Why do financial analysts use these techniques in the two sectors?

3.3. Sample and Data Collection

The sample of this study includes a total of 35 analysts of different nationalities in the two sectors (financial and non-financial) with an average of 8 years work experience in the relevant sectors. The analysts have professional qualifications such as CFA and CAIA (coupled with an academic degree such as the MBA) and have an average of more than 8 years of experience in the relevant sectors. Data were collected by a questionnaire and semi-structured interviews. The questionnaire was distributed to 35 analysts and fourteen semi-structured interviews were conducted with the analysts to get more insight into the participants' answers and improve the level of reliability in the results (Harris and Brown, 2010). 35 investment analysts, in cooperation with the CFA Society Emirates, participated in the questionnaire. Table 1 presents that 86% of the sample who completed the questionnaire came from the financial sector and 14% of the sample came from the non-financial sector. The table reveals that 85% of the buy-side analysts who completed the questionnaire came from the financial sector and the remaining percentage (15%) of the buy-side analysts came from the non-financial sector. The table also shows that 87.5% of the sell-side analysts came from the financial sector and 12.5% of the sell-side analysts came from the non-financial sector. For the sample used in the semi-structured interviews, Table 2 shows

Table 1: Descriptions of the sample used in the questionnaire

Participants	Sectors (%)		Total participants in the questionnaire
	Financial	Non-financial	
Buy-side analysts	23 (85)	4 (15)	27 (77)
Sell-side analysts	7 (87.5)	1 (12.5)	8 (23)
Total	30 (86)	5 (14)	35 (100)

Table 2: Descriptions of the sample used in the interviews

Participants	Sectors (%)		Total participants in the interviews
	Financial	Non-financial	
Buy-side analysts	13 (93)	-	13 (93)
Sell-side analysts	1 (7)	-	1 (7)
Total	14 (100)	-	14 (100)

that 100% of the analysts came from the financial sector and 93% were buy-side and 7% were sell-side analysts.

4. RESULTS AND DISCUSSION

This section discusses the results of the questionnaire and semi-structured interviews. The section employs descriptive and nonparametric statistics to examine the research questions of this study.

4.1. What are the Valuation Techniques Choices that Analysts Select in the Financial Sector in UAE?

Table 3 highlights the responses of the analysts using the 5-point Likert scale (ranging from 1= not important to 5 = extremely important). The table shows that the respondents agreed that DCF is the most important valuation model, followed by the P/E ratio, and PBV. The table adds that the mean of DCF is 4.19 with standard deviation of 1.27. The mean of the P/E ratio is 3.92 with a standard deviation of 1.02 while the mean of PBV is 3.77 with a standard deviation of 1.11. The table reveals that the respondents agreed that EV to BV (mean = 2.42 and standard deviation = 1.36), EV to sales (mean = 2.54 and standard deviation = 1.30) and PE to growth (mean = 2.58 and standard deviation = 1.33) are the least important valuation techniques. These results are consistent with the study of Imam et al. (2008), which found that UK financial analysts consider DCF the most important valuation model; however, they still consider the importance of earnings based techniques. Ionascu and Ionascu (2012) found that the Romanian analysts prefer to use earning-based techniques (e.g., P/E and EV/EBITDA) because these techniques are not complicated but easy to use. Lundholm and O'Keefe (2001) argued that both cash flow and RIV techniques have the same practical implementation and should produce the same valuation. The results of this study indicate that the financial sector in UAE depends on both cash-based techniques and earnings based techniques; in other words, the sector uses both sophisticated techniques (e.g., DCF) and unsophisticated techniques (e.g., P/E). The table reveals that only six valuation techniques were rated above "moderately important" (scale "3") while seven valuation techniques including "Others" were rated below "Moderately Important." The six techniques include three sophisticated techniques (i.e., DCF, DDM, and CFRI), and three unsophisticated techniques (i.e., P/E, and P/BV, EV/EBITDA). The results suggest that the financial sector in UAE seems to have a balance between sophisticated and unsophisticated valuation techniques and uses both cash flow and accrual-based techniques with the preference going to cash flow techniques. The results also reveal that analysts in UAE have no difficulties in estimating cash flows which considers to be one of the challenges that analysts usually face in their evaluation for the financial sector. This is an interesting result for a developing country that adopts sophisticated evaluation techniques for the financial sector which is the cornerstone in developing an advanced financial system and securing the country's sustainable growth. This is supported by the fact that the banking sector, for example, in UAE is strong and has shown itself well prepared to face all "economic headwinds" (Augustine, 2016).

Table 3: The valuation techniques used by the analysts in the financial sector

Description	N	Minimum	Maximum	Mean	SD
DCF	26	0.00	5.00	4.19	1.27
PE	26	2.00	5.00	3.92	1.02
PBV	26	1.00	5.00	3.77	1.11
EV/EBITDA	26	0.00	5.00	3.46	1.61
DDM	26	0.00	5.00	3.42	1.24
CF return on investment	26	0.00	5.00	3.12	1.21
Price to cash flow	26	0.00	5.00	2.88	1.28
Economic value added	26	1.00	5.00	2.77	1.14
Price to sales	26	0.00	5.00	2.58	1.45
PE to growth	26	0.00	5.00	2.58	1.33
EV/sales	26	0.00	5.00	2.54	1.30
EV/BV	26	0.00	5.00	2.42	1.36

PE: Price earnings, PBV: Price to book value

4.2. What are the Valuation Techniques Choices that Analysts Select in the Non-financial Sector in UAE?

Table 4 shows that the respondents agreed that EV/EBITDA is the most important valuation model, followed by DCF, and CF Return on Investment. The table adds that the mean of EV/EBITDA is 3.67 with standard deviation of 2.12. The mean of DCF is 3.56 with a standard deviation of 2.13 while mean of CF Return on Investment is 2.89 with a standard deviation of 1.90. The table reveals that the respondents agreed that EV/BV (mean = 1.44 and standard deviation = 1.24), price to sales (mean = 1.67 and standard deviation = 1.50) and economic value added (mean = 1.78 and standard deviation = 1.20) are the least important valuation techniques. These results are consistent with the study of Ionascu and Ionascu (2012) which found that the Romanian analysts prefer using earning-based Techniques (e.g., P/E and EV/EBITDA). The results are also consistent with the study of Imam et al. (2008) in that it considers the importance of earnings based techniques even though it found DCF techniques to be the most important valuation model. A number of studies that compare residual income-based valuation techniques with DCF techniques documented that accrual-based RIV techniques perform better than DCF techniques (Penman and Sougiannis, 1998; Francis et al., 2000; Courteau et al., 2001). Table 4 reveals that the non-financial sector relies upon both earnings based techniques (EV/EBITDA) and cash-based techniques (e.g., DCF). The table reveals that only two valuation techniques (i.e., EV/EBITDA and DCF) were rated above "Moderately Important" (scale "3") which suggest that the

Table 4: The valuation techniques used by the analysts in the non-financial sector

Description	N	Minimum	Maximum	Mean	SD
EV/EBITDA	9	0.00	5.00	3.67	2.12
DCF	9	0.00	5.00	3.56	2.13
CF return on investment	9	0.00	5.00	2.89	1.90
Price to cash flow	9	0.00	5.00	2.78	1.86
DDM	9	0.00	5.00	2.56	1.67
PE	9	0.00	5.00	2.33	1.58
PE to growth	9	0.00	5.00	2.33	1.58
PBV	9	0.00	5.00	2.11	1.54
EV/sales	9	0.00	5.00	2.11	1.69
Economic value added	9	0.00	3.00	1.78	1.20
Price to sales	9	0.00	5.00	1.67	1.50
EV/BV	9	0.00	3.00	1.44	1.24
PE					

PE: Price earnings, PBV: Price to book value

non-financial sector in UAE seems to have a balance between sophisticated and unsophisticated valuation techniques.

4.3. Are there Significant Differences between the Two Sectors in Selecting Valuation Techniques?

Table 5 shows, using the MW test, that there are significant differences between the financial sector and non-financial sector in the following two valuation techniques: PE ($\rho < 0.01$) and PBV ($\rho < 0.01$). The results reveal that the mean rank of the two techniques is highly significant in the financial sector compared to the non-financial sector. However, the results show no significant results between the two sectors in DCF, EV/EBITDA, DDM, CFRI, price to cash flow, PE to growth, EVA, EV/sales, price to sales, and, EV/book value, and others.

4.4. What Accounting Variables do the Analysts Employ in the Financial Sector?

Table 6 presents the ranking of the analysts regarding the importance of accounting variables. The table shows that analysts perceive free cash flow (4.50), operating cash flow (4.08), and net income (3.88) to be the most important variables to consider in their valuation. It also shows that the book value of equity (3.42), operating earnings (3.81), and revenues (3.88) are the least important variables. The results are consistent with those presented in Table 3. This indicates that analysts in the financial sector in UAE give more priority to cash-based valuation techniques than accrual-based valuation techniques. Another insight from this result is that the financial system in the UAE provides a wide range of information from which analysts can select more complicated valuation techniques.

4.5. What Accounting Variables do the Analysts Employ in the Non-financial Sector?

Table 7 presents the ranking of the analysts regarding the importance of accounting variables. The table shows that analysts perceive free cash flow (3.78), operating cash flow (3.44), and operating earnings (3.11) to be the most important variables to consider in their valuation. It also shows that the book value of equity (2.00), revenues (2.11), and net income (2.22) are the least important variables. This indicates that analysts in the UAE give more priority to cash-based accounting variables and accrual-based accounting variables. The results are supported, to some extent, by those presented in Table 4 which shows that analysts use both sophisticated and unsophisticated valuation techniques in the non-financial sector.

4.6. Are there Significant Differences between the Two Sectors in Selecting Accounting Variables?

Table 8 shows, using the MW test, that there are significant differences between the two sectors in selecting the following accounting variables: Revenues ($\rho < 0.01$), net income ($\rho < 0.01$), and book value of equity ($\rho < 0.05$). The mean rank of the three accounting variables is highly significant in the financial sector compared to the non-financial sector. The results, on the other hand, present no significant differences between the two sectors in selecting free cash flows, operating cash flows, operating earnings, and others.

4.7. What Types of Financial Ratios used by the Analysts in the Financial Sector?

Financial ratios were selected for this study according to those of Barker (1999a). Table 9 shows that gearing (3.96), interest coverage (3.81), and return on capital employed (3.80) are the most important ratios that analysts in the financial sector consider in valuation. Nonetheless, the ratios of dividend cover (2.61), credit turnover (2.77), and capital expenditure to depreciation ratio (2.77) are found to be the least important for these analysts to consider in valuation. These results are consistent with the study of Trejo et al. (2015) who found that leverage and liquidity ratios are two of the most popular ratios employed by research analysts in Mexico. They also found that the analysts in Mexico perceive profitability ratios to be among the most important ratios. Another study by Gibson (1987) also found, through a survey among CFA charter-holders, that profitability ratios are among the most effective ratios. However, the findings of this study are not consistent with

Table 5: Differences between the two sectors in selecting valuation techniques

Description	PE ratio	PBV
Mann-Whitney U	47.000	41.500
Wilcoxon W	92.000	86.500
Z	−2.750	−2.953
Asymp. Sig. (two-tailed)	0.006*	0.003*

*The probability value of ρ is statistically significant (ρ<.01). PE: Price earnings, PBV: Price to book value

Table 6: Accounting variables used by the analysts in the financial sector

Description	n	Minimum	Maximum	Mean	SD
Free cash flow	26	1.00	5.00	4.50	0.99
Operating cash flow	26	1.00	5.00	4.08	1.20
Net income	26	2.00	5.00	3.88	0.91
Revenues	26	2.00	5.00	3.88	0.86
Operating earnings	26	0.00	5.00	3.81	1.17
Book value of equity	26	0.00	5.00	3.42	1.33
Others	26	0.00	1.00	0.04	0.20

Table 7: Accounting variables used by the analysts in non-financial sector

Description	n	Minimum	Maximum	Mean	SD
Free cash flow	9	0.00	5.00	3.78	2.17
Operating cash flow	9	0.00	5.00	3.44	2.01
Operating earnings	9	0.00	5.00	3.11	1.83
Net income	9	0.00	4.00	2.22	1.39
Revenues	9	0.00	3.00	2.11	1.27
Book value of equity	9	0.00	4.00	2.00	1.41
Others	9	0.00	0.00	0.00	0.00

Table 8: Differences between the two sectors in selecting accounting variables

Description	Revenues	Net income	Book value of equity
Mann-Whitney U	26.000	37.00	53.500
Wilcoxon W	71.000	82.00	98.500
Z	−3.586	−3.15	−2.451
Asymp. Sig. (two-tailed)	0.000*	0.002*	0.014**

*The probability value of ρ is statistically significant ($\rho < 0.01$).

**The probability value of ρ is statistically significant ($\rho < 0.05$)

the results of Katchova and Enlow (2013) which found that that asset turnover was the most effective ratio.

The analysts in the financial sector ranked the gearing, interest coverage, and liquidity ratios highly because of their important role in securing the UAE business environment. The gearing ratio and coverage ratio are the effective ratios in measuring company solvency, which has a direct effect on liquidity. This argument is supported by the following quotations extracted from the responses in the semi-structured interviews:

I mean sustainability and growth in the margins are important with regard to debt and all. I think the interest coverage ratio is one of the important factors which show whether the company has enough cash to interest coverage. The days payable and receivable are also important from the perspective of how often a company rotates the cash flow.

(Financial Analysts)

It is important to assess the ability of the company to pay back its loan and debts. So it is important to look at the capital structure of the company and check whether it is sustainable or not. In this context, Debt/Equity and Debt/EBITA ratios are also important.

(Financial Analysts)

Gearing is as important as trading margins. More debt will impact on the discount rates of the business and adds risk.

(Financial Analysts)

The analysts ranked the dividend cover ratio and the capital expenditure to depreciation ratio as the least important ratios for the purpose of business valuation. A reasonable justification for these results is provided in the following excerpts:

I normally never look at the dividend coverage ratio. Coverage ratios are important where there is a mandatory payment required. A dividend is not mandatory and you really have no need to look at the coverage ratio, but interest is mandatory ... a company has to make the payments otherwise it will default. In this region, investors look at it this way: "I give you money, and you give me something every year, whether it is in the form of a dividend or interest - they don't care which."

(Financial Analysts)

Capital Expenditures to Depreciation ratio basically defines what your investment cycle is. It tells you about your assets (short or long term). It is an important ratio if you are looking in terms of DCF analysis. For short-term investors or those who are using the P/E & P/B ratio, this is not important. It is an important ratio for a long-term growth oriented stock and if it is a capital intensive business.

(Financial Analysts)

4.8. What Types of Financial Ratios used by the Analysts in the Non-financial Sector?

Table 10 shows that liquidity (3.00), interest coverage (3.00), and gearing (2.89) are the most important ratios that analysts in the non-financial sector consider in their valuation. Nonetheless, the

Table 9: Financial ratios used by the analysts in the financial sector

Description	N	Minimum	Maximum	Mean	SD
Gearing	26	2.00	5.00	3.96	0.96
Interest coverage	26	1.00	5.00	3.81	1.06
Return on capital employed	26	1.00	5.00	3.80	1.05
Liquidity	26	0.00	5.00	3.77	1.18
Asset turnover	26	1.00	5.00	3.42	1.17
Trading margins	26	0.00	5.00	3.23	1.48
Stock turnover	26	0.00	5.00	3.04	1.25
Debt turnover	26	0.00	5.00	2.88	1.21
Capital expenditure to depreciation ratio	26	0.00	5.00	2.77	1.27
Credit turnover	26	0.00	5.00	2.77	1.21
Dividend cover	26	0.00	5.00	2.61	1.17
Others	26	0.00	1.00	0.08	0.27

Table 10: Financial ratios used by the analysts in the non-financial sector

Description	N	Minimum	Maximum	Mean	SD
Liquidity	9	0.00	5.00	3.00	1.80
Interest coverage	9	0.00	5.00	3.00	1.80
Gearing	9	0.00	5.00	2.89	2.03
Trading margins	9	0.00	5.00	2.89	1.76
Dividend cover	9	0.00	5.00	2.78	1.72
Return on capital employed	9	0.00	5.00	2.67	1.94
Asset turnover	9	0.00	4.00	2.56	1.59
Debt turnover	9	0.00	4.00	2.33	1.50
Capital expenditure to depreciation ratio	9	0.00	4.00	2.33	1.50
Stock turnover	9	0.00	5.00	2.33	1.66
Credit turnover	9	0.00	4.00	2.00	1.66

ratios of credit turnover (2.00), stock turnover (2.33), and capital expenditure to depreciation ratio (2.33) are found to be the least important for these analysts to consider in valuation. These results are consistent with the study of Trejo et al. (2015) as explained in subsection 4.7. However, the findings of this study are not consistent with those of Katchova and Enlow (2013) and Gibson (1987) who found that profitability and assets turnover ratios to be among the most important ratios.

4.9. Are There any Significant Differences between the Two Sectors in Using Financial Ratios?

The result shows, using the MW test, that there are no significant differences between the two sectors in selecting the financial ratios presented in Table 10. This suggests that the two sectors utilize almost a number of financial ratios with the same extent. These results are consistent with those presented in Tables 5 and 8 which show that there are no significant differences in most of the valuation techniques and accounting variables used by analysts in the two sectors.

4.10. Why do Financial Analysts use these Techniques in the Two Sectors?

This study provides evidence that the analysts in the two sectors make the cash flow techniques their first choice; this was evident in the ranking of the top two of evaluation techniques and accounting variables selected by the analysts. Therefore, the interviewees were asked why the analysts prefer this type of valuation technique. They pointed out the importance of the cash basis over the accrual basis, reasoning that the latter is vulnerable to subjectivity and earnings management. The analysts reveal that the free cash flow is the most relevant variable and they depend on it when they make their valuation. Three excerpts from the analysts' answers are given below:

In investment, everything is cash. I put myself in the investor's shoes and then only I feel the pain of losing money. Cash is king here, and we have to keep an eye on cash. Accounting base provisions may give some credit to the business, but that is not real credit. And, even in valuation, we look at the cash. If you look at any private equity firm, they consider the cash on cash yield, how much we are paying and how much we are getting. The concept of cash is applied to developed and emerging markets alike.

(Financial Analysts)

Cash flow based estimates give a better picture of a company, so cash flow and cash flow yields are better indicators than accrual-based estimates because of earning management, receivable, working capital requirements, etc. So cash flow would not be distorted by these things.

(Financial Analysts)

When we value a company using the DCF model, we use Free Cash Flows (FCF) instead of net profit which is very prone to accounting treatment (IFRS & US GAAP). FCF is more relevant as any business is worth only the money it is bringing in.

(Financial Analysts)

According to the results of this study, the analysts in the two sectors ranked both cash-based and accrual-based techniques as the most popular valuation techniques, which indicates they used both cash and accrual techniques. The analysts justified the importance of the two techniques and the following are quoted from their interview answers:

I specifically use P/E more for the banking industry. In general, it is an important matrix for the banking industry because it gives a slightly better picture. Even in the banking sector, only the model will tell you how much provision is required, how much they can grow the loan book. So, multiples come at the second level.

(Financial Analysts)

In the stock market, P/E ratio matters. Perhaps P/E ratio is the standardized benchmark for analyzing a company.

(Financial Analysts)

The transactions we have done, till today, are only listed companies, and we focus on the P/E ratio. So we look at what the global peers are and what their variables for valuation are. As per my experience, DDM & CF techniques are prone to manipulation because of management sales projections for 3 and 4 years which might happen or might not happen. Every management wants to give a better picture of the future, and we don't know what will be because of macroeconomic parameters.

(Financial Analysts)

The study provides evidence in the questionnaire (Tables 3 and 4) and the semi-structured interviews that the analysts in the UAE depend mainly on sophisticated techniques (cash flow techniques). The analysts reiterated that cash is king, and it is not prone to judgment and earnings manipulation. The study also discovered that the analysts also rely on unsophisticated techniques (accrual-based techniques) which were highly ranked.

5. SUMMARY AND CONCLUSIONS

Prior studies have provided mixed results on the most popular and dominant valuation techniques used in practice. Some show that unsophisticated valuations techniques (e.g., P/E) dominate sophisticated techniques (e.g., DCF), while other studies show the opposite. This study examines the valuation techniques, accounting variables, and financial ratios preferred by the analysts in the financial and non-financial sectors in UAE, using the survey research method of questionnaires and interviews. The survey covers analysts in the financial and non-financial sectors. The study concludes that the analysts in the two sectors use both sophisticated valuation techniques and unsophisticated valuations techniques, with a preference for cash flow techniques in the financial sector and a preference for accrual-based techniques in the non-financial sector. The study finds that analysts in the financial sector prefer DCF technique as a first choice and PE technique as a second choice. It also ranked free cash flow as the most important accounting variable and gearing (followed

by interest coverage) as the most important financial ratio. On the other hand, the results show that analysts in the non-financial sector ranked EV/EBITDA technique as a first choice and DCF technique as a second choice. For accounting variables and financial ratios, they ranked free cash flow and liquidity (followed by interest coverage) as the most important accounting variable and ratio respectively. These results are expected for a good equity valuation model that strikes a balance between using cash flow based techniques and accrual-based techniques. Furthermore, DCF depends on earnings which enhance forecasts of future free cash flows. The analysts explained that the main reason for their preference for cash flow techniques to accrual-based techniques is the subjectivity and earnings management which could easily affect accrual-based techniques, unlike cash flow techniques. The findings also reveal that the analysts consider the solvency accounting ratios, in addition to liquidity, to be the most important accounting ratios. This is not a surprising result since DCF and EV/EBITDA are adequate to credit risk analysis.

A limitation of this study is that it did not include the content analysis of the equity research reports because of the difficulty of collecting these reports and because of more participation from buy-side analysts in our survey and interview. Another limitation is that most of the participants are from the financial sector.

Further research should include, in addition to the survey, the content analysis of equity research reports. In other words, it should include questionnaires, interviews, and content analysis. This study could be extended by increasing the sample size, considering all the GCC countries and including more analysts from other sectors.

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