Analysis of UAE Bank Stocks

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ABSTRACT

Listing of stocks on the stock exchange offers business firms several advantages such as diversification, liquidity, establishing a value for the firm etc. The present paper analyses stocks of six commercial banks (viz., Dubai Commercial Bank, Emirates Bank International, National Bank of Dubai, Mashreq Bank, National Bank of Abu Dhabi, and Abu Dhabi Commercial Bank) which constitutes 72% of the capitalisation of the banking sector in UAE.

These bank stock prices are analysed for the trend and riskiness. Capital Asset Pricing Model (CAPM) a market equilibrium model is applied to these seven bank's stocks. The betas of these banks were derived. Stock prices of all banks are found to be under-priced. It was considered that more general models like multi-factor CAPM and arbitrage pricing theory (APT) models could be more appropriate models for analysing the bank stocks due to imperfections in UAE market.

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Background

Listing of stocks on the exchange offers business firms several advantages such as diversification, liquidity, establishing a value for the firm etc. The decision to go public is truly a milestone in a company's life facilitating listing on the exchange. In order to have its stock listed on the exchange, a company must apply to an exchange, pay a relatively small fee, and meet the exchange's minimum requirements. These requirements relate to the size of the company's fundamentals viz., net income, the number of shares outstanding, price per share, earning per share etc. Also, the company must agree to disclose certain information to the exchange. This information is designed to help the exchange track trading patterns and thus to try to ensure that no one individual is attempting to manipulate the size and operation of the stock.

Assuming a company qualifies for listing, many people believe that listing is beneficial both to the company and to its stockholders. Listed companies receive a certain amount of free advertising and publicity, and their status as a listed company may enhance their prestige and reputation. This may have a beneficial effect on the sale of products of the firm. Investors respond favourably to increased information, increased liquidity and confidence, that the quoted price is not being manipulated. By providing investors with these benefits in the form of listing of their stocks, it would be possible to increase the value of the firms' stocks.

Objectives

The present study applies the above listing process to the stocks of banks in UAE to ascertain whether the listing process is in conformity with the norms stipulated in the developed economies. The objectives of the research study are to:

(1) Examine as to how various bank stocks have faired over time amongst themselves (Section I).
(2) Examine the risk aspects of the stocks (Section II).
(3) Compute betas for each of the bank stocks, interpret the betas and examine the relation of the price movement of the stocks in relation to the market as a whole over time (Section III).

Literature review

There appears to be no comprehensive research and analysis based on market forces, on bank stocks in UAE. Whatever research has been done is in the form of weekly trend analysis in the financial sections of local/regional news papers viz., Khaleej Times, Gulf News, Gulf To-day, and regional magazines viz., Meed-Money, Gulf Business, etc., which tend to give weekly and/or monthly variations and trends in the prices of various stocks.

The present study focuses on select UAE banks whose stocks are actively traded in UAE Stock Market which is an informal market. This study therefore sets a starting point for comprehensive analysis.

SECTION. I

Profile of UAE Bank Stocks Listed on Informal Stock Exchange

There are 18 banks in UAE which have listed their stocks on the informal stock market, whose trading are monitored by National Bank of Abu Dhabi (NBAD). These banks are:

#	Banks	# of Shares (Million) (1)	Price per share as on 31st Dec' 1998 (Dhs) (2)	Market Capitalisation (1*2) (Million Dhs)
1.	Abu Dhabi Commercial Bank	12.500	540.0	6750 (11.6%)
2.	Commercial Bank of Dubai	37.268	92.0	3429 (5.9%)
3.	Dubai Islamic Bank	100.00	15.0	1500 (2.6%)[1]
4.	Emirates Bank International	235.11	43.0	10110 (17.3%)
5.	Invest Bank	25.000	36.0	900 (1.5%)
6.	Mashreq Bank	5.9700	1250.0	7463 (12.8%)
7.	National Bank of Abu Dhabi	9.4160	720.0	6780 (11.6%)
8.	National Bank of Dubai	8.6177	880.0	7584 (13.0%)
9.	National Bank of Fujaira	3.0000	360.0	1080 (1.8%)
10.	National Bank of Ras-al-Khaima	25.000	29.0	725 (1.2%)
11.	National Bank of Sharjah	56.000	24.0	840 (1.4%)
12.	National Bank of Umm-al-Qaiwain	2.5000	340.0	850 (1.5%)
13.	Union National Bank	56.152	45.0	2527 (4.4%)
14.	United Arab Bank	2.0668	375.0	776 (1.3%)
15.	Abu Dhabi Islamic Bank	100.00	27.0	2700 (4.6%)
16.	First Gulf Bank	360.00	7.0	2520 (4.3%)
17.	Bank of Sharjah	1.8000	380.0	684 (1.2%)
18.	Commercial International Bank.	129.27	9.0	1163 (2.0%)

[1] As per the journal referee's comments on the article, market capitalisation of Dubai Islamic Bank (DIB) was Dhs 1500 million (100 million number of shares with price of Dhs 15 for each share). This official change in the price of DIB shares took place during the last quarter of 1998. Some news papers continued to publish wrong figures of Dhs 7500 million as capitalisation by mistake.

Total 58380 (100%)

(The figures in brackets in the last column indicate percentage of capiatalisation to total capitalisation of stocks of banking sector).

Thus, the market capitalisation as at the end of December 1998 was Dhs 5.84 Billion which increased to around Dhs 51 Billion by end-June 1999. The market capitalisation as at end-June 1999 including all the other companies (insurance and private companies) amounted to Dhs 110 Billion.

Although the above stated 18 banks are listed on the stock exchange, the current analysis is restricted to top six banks with capitalisation rate of 5% and above. These six banks together amount to about 72% of total capitalisation in UAE, while the rest of 12 banks account for the remainder i.e., 28% as on 31st December 1998. Capital Intelligence an agency based in Cyprus has credit rated these six banks as under:

Top-7 banks in terms of Market Capitalisation	Capital Intelligence Rating Long-term	Capital Intelligence Rating Short-term	S&P Rating Long-term
Dubai Commercial Bank (DCB)	A	$A\text{-}1^{+}$	NA
Emirates Bank International (EBI)	A^{+}	$A\text{-}1^{+}$	NA
National Bank of Dubai(NBD)	A^{+}	$A\text{-}1^{+}$	AP_{i}
Mashreq Bank (MB)	BBB	A-1	$BBBP_{i}$
National Bank of Abu Dhabi (NBAD)	A^{+}	$A\text{-}1^{+}$	$BBBP_{i}$
Abu Dhabi Commercial Bank (ADCB)	A	$A\text{-}1^{+}$	$BBBP_{i}$

(Source: MEED, 5th March 1999)
(NA: Not available)

The rating by the international rating agency i.e, Standard & Poor reflect the financial strength of National Bank of Dubai (NBD) which is relatively stronger than that of Mashreq Bank (MB), National Bank of Abu Dhabi (NBAD), and Abu Dhabi Commercial Bank (ADCB).

Methodology

Data

The weekly price data (from April 1995 to 31st December 1998) of all the banks' stocks listed on NBAD market, in addition to NBAD index were collected from MEED (Middle East Economic Digest) based at London UK. The additional weekly data were further constructed from financial press releases (Gulf News Financial Section on UAE markets) periodically. The NBAD index is a broad market performance indicator containing 48 traded stocks comprising; 18 banks under the Banking Sector; 19 companies under the Services Sector; 11 insurance companies under the Insurance Sector. This is in contrast to the 36 traded stocks index computed by Emirates National Exchange (Emnex index).

The trend of UAE Bank Stocks and NBAD market index from April 1995 to May 1999 is displayed in Figure.1. Both the stock prices and the index data are contained in the same figure to show a comparative picture of movement of individual stock prices and the market. While the left-hand side of the Y-axis depict price (in Dhs) per stock. The right-hand side of the Y-axis depict NBAD index.

As can be seen the prices of stocks of Mashreq Bank (MB), National Bank of Dubai (NBD), National Bank of Abu Dhabi (NBAD), Abu Dhabi Commercial Bank (ADCB) increased over time consistently, peaked in September 1998 and then declined rapidly. The individual stock price movements closely correspond with the market index movements.

The decrease in the prices is explained to a volatile mix of low oil prices, ill winds from the Asian Contagion and a general downturn in economic activity and corporate profits which inflicted heavy casualties in the regional stocks. The year-wise performance of the bank stocks is presented in Table.1.

Table.1 Year-wise Performance of the Bank Stocks

	1995		1996		1997		1998		1999*	
	MP	CV	MP	CV	MP	CV	MP	CV	MP	CV
NBAD IDX	1930	.07	2303	.04	2772	.12	3861	.12	3644	.08
ADCB	139	.16	237	.18	381	.10	590	.21	574	.12
DCB	34	.07	47	.10	70	.15	104	.18	92	.12
EBI	15	.10	18	.05	28	.22	44	.18	40	.21
MB	636	.01	717	.02	873	.11	1273	.11	1172	.13
NBAD	322	.07	394	.07	585	.18	802	.10	676	.10
NBD	536	.06	659	.02	728	.10	960	.08	970	.04

(*Figures up to 30th May 1999)
Index: MP=Mean Price; CV= Coefficient of Variation (ie., Standrard deviation÷Mean)

Some observations on the data in Table.1 reveal the following:

Abu Dhabi Commercial Bank (ADCB) Stocks: The average price of these stocks continued to increase from Dhs 139 per stock in 1995 to Dhs 590 in May 1998 and fell to Dhs 574 in May 1999. However, the variability of these prices were relatively high in 1998 almost twice that in 1997.

Dubai Commercial Bank (DCB) Stocks: The average price of these stocks continued to increase from Dhs 34 per stock in 1995 to Dhs 104 per stock in 1998 and declined to Dhs 92 per stock in 1999. The variability also kept the same trend as that of market price with the peak variability in 1998.

Emirates Bank International (EBI) Stocks: The average price steadily increased from Dhs 15 per stock in 1995 to Dhs 44 per stock in 1998 before falling to Dhs 40 in 1999. The price variability of these stocks was higher during 1997-1999.

Mashreq Bank (MB) Stocks: The average price of these stocks steadily increased from Dhs 636 per stock in 1995 to a peak of Dhs 1273 in 1998 before falling to Dhs 1172 per stock in 1999. The variability of these stocks was higher during 1997-1999.

National Bank of Abu Dhabi (NBAD) Stocks: These stocks also followed the pattern of Mashreq Bank but prices were relatively lower at Dhs 322 per stock in 1995, peaking to Dhs 802 in 1998 before falling to Dhs 676 per stock in 1999. The variability of these stocks was highest during 1997 than in other years.

National Bank of Dubai (NBD) Stocks: The average price of these stocks consistently increased from Dhs 536 in 1995 to Dhs 970 per stock in 1999. The variability of these stocks were relatively lowest of all the bank stocks which is noteworthy.

The above interpretations and the trend in Figure.1 indicate the following:

- The market climbed steadily from the outset and reached speculative heights around August 1998 where prices of some of the stocks rose up to 100%.

- The NBAD index peaked on 6th September 1998 which was up 51% in 1998.

- Gains in 1998 were short-lived and price nose dived when investors realised shares had reached unrealistic valuations.

- The bigger investors booked profits and exited leaving smaller players with heavy losses.

- The NBAD index lost 19% between 10th Sep to 22nd Oct'1998 before stabilising in November 1998. This fall eroded investor confidence and left local banks with approximately $817.2 Million in bad debts.

- News of the long awaited launch of an official bourse boosted confidence in early 1999, with NBAD index up 4% in the first quarter of 1999 (Gulf News 3rd May 1999).

All these reflect the key point that the liquidity in the banking system was under pressure affecting the stock prices.

Table.2 provides the details of face value, starting and ending price of the six bank stocks along with the average annual growth rate during the study period.

Table.2 Analysis of Selected UAE Bank Stocks from April 1995 to May 1999.

Bank Stocks	Face Value (Dhs/Share)	Market Price Apr'95	May 99	Peak price Sep'1998	Annual growth (%)	Price slope relative to market index

MB	100	630	920	1550	9.3	0.33
NBD	100	500	890	1100	11.8	0.21
NBAD	100	315	550	1000	13.7	0.24
ADCB	100	115	435	940	33.0	0.23
DCB	10	33	79	175	21.6	0.03
EBI	2.5	14	27	66	16.2	0.02
NBAD Index	-	1800	3150	4964	13.8	

The annual compound growth rate was highest for ADCB stock (33%) and least for MB (9.3%). The market price index on average showed an annual compound growth rate of 13.8% between April 1995 and May 1999.

The price slope (i.e., the coefficient obtained by regressing weekly prices of stocks on NBAD weekly market index) of stocks of MB, NBAD, ADCB, and NBD were 0.33, 0.24, 0.23, and 0.21 respectively indicating moderate sensitiveness of the bank stock prices with NBAD market index. On the other hand, the DCB and EBI stocks were least sensitive to market index.

SECTION.II RISK ANALYSIS

Table.3 depicts the mean prices and price variability measured in terms of standard deviation and stand alone risk measure ie., coefficient of variation of the bank stocks:

Table.3 Mean Price and Standard Deviation of Bank Stocks

	Mean Prices (Dhs) (1)	Standard Deviation (σ)(2)	Coefficient of Variation (CV) ($2 \div 1$)%	Ranking based on CV	Ranking based on σ
NBAD Index	2831.12	772.42	27	-	-
ADCB	366.94	183.46	50	6	4
DCB	67.62	27.58	41	4	2
EBI	27.77	12.40	45	5	1
MB	909.50	259.98	29	2	6
NBAD	546.98	189.98	35	3	5
NBD	751.61	167.16	22	1	3

Coefficient of variation (CV) expresses the risk per unit of price. Stock of NBD has less risk per unit of stock price (CV is 22%) than other stocks. Thus, using CV as a measure of standalone risk of the bank stock, the risk per unit of stock of NBD < MB (29%) < NBAD (35%) < DCB (41%) < EBI (45%) < ADCB (50%). Thus, NBD is low risk stock relative to market risk (27%). Stocks of MB, NBAD, DCB, EBI and ADCB were of high risk relative to market index.

The aforesaid ranking is in contrast to the rankings based on standard deviation alone in which case standard deviation of stock of EBI < DCB < NBD < ADCB < NBAD < MB. Rational risk averse investors prefer to invest in stocks with less risk. Thus CV is a better measure of stand alone risk which provides the attributable price per unit of risk, than standard deviation alone.

Correlation Coefficient Across Bank Stocks

Table.4 provides the correlation coefficient across bank stocks. Due to the symmetry, the correlation coefficients are provided on the left hand side of the correlation matrix.

Table.4 Correlation Coefficient across Bank Stocks

	ADCB	DCB	EBI	MB	NBAD
DCB	0.965				
EBI	0.949	0.960			
MB	0.955	0.955	0.960		
NBAD	0.952	0.966	0.960	0.950	
NBD	0.959	0.947	0.935	0.955	0.940

The table reveals a substantially higher correlation across the stocks with values almost always higher than 0.90. The high degree of correlation across bank stocks is quite common, because stocks of banks in the banking industry tend to have stronger return co-variation. That is, the returns vary together even when the common market influence is removed.

Inherent Risks in the Informal UAE Stock Market

Because the stock market in UAE is informal, the regulation process is weak. Shares are traded by brokers licensed by the Central Bank, and a handful of local banks which search out buyers and sellers. Once a sale is agreed, a contract is drawn up and the newly-transacted shares are then re-issued by the company in the name of the new shareholder.

This over the counter (OTC) set up is a speculator's paradise. In the absence of a regulatory authority, there is no way of finding out actual prices. "It is hearsay and mob psychology that drives the market. Different brokers are quoting different prices for the same stocks. There is no mechanism available to determine fair prices" (MEED 9, October 1998). An additional weakness is the shortage of available stock in the market which results in share prices being highly vulnerable to sudden demand. There is also a marked lack of disclosure on the part of companies.

SECTION III

Calculating Beta Coefficients - Interpretation for measuring risk of UAE Bank Stocks relative to Market risk

When Professor Sharpe developed the CAPM (Capital Asset Pricing Model), he noted that the market risk of a given stock can be measured by its tendency to move with the general market. His analysis is based on historical returns on individual stocks as well as the market index. Using the security characteristic line (SCL) equation which is of the form:

$$S_j = \alpha + \beta K_M + \varepsilon,$$

where, the rate of return on Stock j during a given time period depends on what happens to the general stock market as measured by K_M, plus random events ε which affect stock S_j. In general, the regression equation is obtained by OLS regression analysis. The plot of the regression equation is called the regression line. In his 1964 article (which developed the CAPM), Sharpe called the regression line the stock's characteristic line. Thus, a stock's beta β is the slope of its (i.e., particular security) characteristic line. Using the above framework for determining the beta β, the returns on individual bank stocks were calculated as: $(P_t-P_{t-1})\div P_{t-1}$, these are Y_ts (left hand side variable series) of individual bank stocks. These are regressed on NBAD index return computed as:

$$(\text{NBAD index}_t - \text{NBAD index}_{t-1}) \div \text{NBAD index}_{t-1}$$

These are the X_ts (right hand side variable series) in the SCL model. The resultant average and standard deviation of returns along with CV of returns of the bank stocks are given in Table.4.

Table.4 Mean Returns & Variations of the UAE Bank Stocks-Apr'95to May'99

	Mean annual returns (%) on Stocks S_j (1)	Standard Deviation (%) (σ)(2)	Coefficient of Variation (CV) (2 ÷ 1)
NBAD Index	16.06	1.94	6.76
ADCB	42.66	3.07	4.48
DCB	28.16	3.40	7.12
EBI	23.81	4.39	10.66
MB	11.30	2.20	10.69
NBAD	15.94	1.88	6.62
NBD	16.38	1.78	6.10

Mean returns of EBI and MB stocks varied much compared to NBAD index while the returns of NBAD, NBD and DCB were more or less in line with the NBAD index. The stock returns of ADCB were less variable than NBAD index. The betas (β) which are the risk coefficients of the of the bank stocks are given in Table.5

Table.5 Betas of Bank Stocks (From Apr'95 to May'99)

	Betas	T-statistics	Ranking based Betas (β)	Ranking based on CV (from Table.3)
ADCB	0.79	8.27*	5	6
DCB	0.55	4.72*	3	4

EBI	0.78	5.25*	4	5
MB	0.40	5.43*	2	2
NBAD	0.55	10.06*	3	3
NBD	0.35	5.95*	1	1

(* coefficients are highly significant at P=0.001)

Lower beta implies lower risk of holding the stocks and thus investors require lower risk premium on such stocks. While higher beta implies higher risk of holding these stocks and thus investors require higher risk premium for holding such risky stocks. According to the above betas, stocks of National Bank of Dubai were least risky with beta of 0.35. This substantiates the financial strength (sound fundamentals) of the bank as rated by Standard & Poor which rated NBD as AP_I in the long-term.

This low beta is followed by Mashreq Bank Stock (beta = 0.40). The betas of National Bank of Abu Dhabi (NBAD) and Dubai Commercial Bank (DCB) stocks were almost of same risk class with beta = 0.55. However, the stocks of Emirates Bank International (EBI) and Abu Dhabi Commercial Bank (ADCB) were relatively of high risk with beta of 0.78 and 0.79 respectively. This ranking of bank stocks based on betas almost matches with the ranking of the stocks depicted in Table.3.

The Security Market Line (SML)

We can view the expected return-beta relationship as a reward-risk equation. The SML equation is:

$$E(R_j) = R_f + \beta(K_M - R_f)$$

where, R_j is the return on stock j, K_M is expected market return (in our study this is the return derived from NBAD index which is equivalent to market portfolio), R_f is the risk free rate (in our study this is the 12 month interest rate of UAE Central Bank), β is the beta coefficient derived from security characteristic line (ie., SCL equation) of stock j.

As discussed extensively by Sharpe, the beta of a bank stock (i.e., security) is the appropriate measure of its risk because beta is proportional to the risk the security/stock contributes to the optimal portfolio.

Risk-averse investors measure the risk of the optimal risky portfolio by its standard deviation as discussed earlier. In this world we would expect the reward or the risk premium on individual assets to depend on the risk an individual asset contributes to the overall portfolio. Because the beta of a stock measures the stock's contribution to the standard deviation of the market portfolio, we expect the required risk premium to be a function of beta. The Capital asset Pricing Model (CAPM) confirms this intuition, stating further that the stock's risk premium is directly proportional to both the beta and the risk premium of the market portfolio; that is, **the risk premium equals $\beta[E(K_M - R_f)]$.**

The expected return-beta relationship can be graphed as the security market line (SML) in Figure 2. Its slope is the risk premium of the market portfolio. At the point where β=1 (which is the beta of the market portfolio) on the horizontal axis we can read off the vertical axis the expected return on the market portfolio. The SML is valid for both portfolios and individual assets (Zvi Bodie et al). The SML provides a bench mark for evaluation of investment performance. Given the risk of a bank stock as measured by the stock's beta, the SML provides the required rate of return that will compensate investors for the risk of that investment, as well as the time value of money.

Because the security market line is the graphical representation of the expected return-beta relationship, "fairly-priced" assets plot exactly on the SML. The expected returns of such assets are commensurate with their risk. Whenever the CAPM holds, all securities/stocks must lie on the SML in market equilibrium. Under-priced (in $) or excess return (in %) stocks plot above the SML. Given their betas, their expected returns are greater than is indicated by the CAPM. Over-priced stocks plot below the SML. The difference between the fair or expected return and actual return on a stock is called the stocks **Alpha α.**

Table.4 provides a summary of fair returns and actual annual returns. Expected returns are computed using 1 year UAE treasury interest rate as risk free rate which is 5.56% per annum in the SML equation.

Table 4. Actual Average Annualised returns versus Expected annual returns

Bank Stocks	Raw β	Actual Average annual return (%) (1)	Fair/Expected annual returns (2)	Excess return* or α (1-2)
ADCB	0.79	42.66	13.86	+ve
DCB	0.55	28.16	11.31	+ve
EBI	0.78	23.81	13.70	+ve
MB	0.40	11.30	9.77	+ve
NBAD	0.55	15.94	11.37	+ve
NBD	0.35	16.38	9.25	+ve
NBAD index	1.00	16.06	16.06	

[* Excess return equals (actual average annual return) – (expected annual return.)]

If this excess return is positive, it implies that the stocks are yielding higher returns than expected and hence they are under-priced. These stocks have higher demand due to the higher returns they offer to investors by holding for a period of time and the prices are lower for "buy" decision. In this group falls the stocks of all the six banks ie., ADCB, DCB, EBI, MB, NBAD and NBD. The prices of these stocks are lower than the market equilibrium prices determined through SML model (hence under priced) and are above the SML (Figure.2).

Alternative form of data analysis

Since the stocks are growth oriented, some researchers have recommended natural log transformation of returns. This is done by the following pattern $Ln(P_t \div P_{t-1})$. The interpretation of results remain the same although the beta coefficients vary a little. This transformation process lead to a continuous form of return distribution and more robust Beta. Table.5 provides the mean annual return, expected return, and betas of the bank stocks using natural log transformation .

Table 5. Beta, fair return and actual return using natural log transformation

Bank stocks	Raw β	Actual Average annual return (%)	Fair/Expected annual returns (%)	Excess return* or α
		(1)	(2)	(1-2)
ADCB	0.3147	39.09	8.50	+ve
DCB	0.1698	24.20	7.15	+ve
EBI	0.1485	17.72	6.95	+ve
MB	0.2955	9.87	8.32	+ve
NBAD	0.5841	14.85	11.02	+ve
NBD	0.4166	15.40	9.46	+ve
NBAD index	1.00	14.91	14.91	

The interpretation remains the same as discussed earlier (i.e., without natural log transformation). But only thing is that the magnitude of coefficients are different and when using it for computation of expected returns one should be careful in that they have to convert their actual numbers to natural log form and then use the beta coefficients. While this mode helps in giving a uniform normal distribution of returns, the previous method adopted in the paper is more convenient and simple to use.

Limitations of the study

1. The general equilibrium market model i.e., capital asset pricing model (CAPM) adopted in deriving betas and expected returns are valuable only under the following assumptions:

    a. Investors cannot affect stock prices by their individual trades. This means that there are many investors each with their own endowment. This assumption is analogous to the perfect competition assumption of microeconomics.

    b. All investors plan for one identical holding period.

    c. Investors form portfolios from a universe of traded financial assets, such as stocks and bonds, and have access to unlimited risk-free borrowing or lending opportunities.

d. Investors pay neither taxes nor returns nor transaction costs (commission and service charges) on trades in stocks/securities. In such a simple world, investors will not care about differences between returns from capital gains and those from dividends.

e. All investors attempt to construct efficient frontier portfolios, i.e., they are rational mean-variance optimizers.

f. All investors analyse securities in the same way and share the same economic view of the world. Hence, they all end with identical estimates of the probability distribution of future cash flows from investing in the available securities. This means given a set of security/stock prices and the risk free interest rate, all investors use the same expected returns, standard deviations, correlations and Coefficient of variations (CVs) to generate the efficient frontier and the unique optimal risky portfolio. This assumption is called "Homogenous expectations."

2. It should be noted that much of UAE bank stocks are held by few investors. These investors are related to each other through family relationship. Thus there is a tendency for the rate of returns to be higher than the equilibrium rate of returns. The family control on bank stocks in UAE is evident by the high holding pattern of the stocks with few investors.

3. When considering the CAPM assumptions to UAE bank stocks market, these assumptions do not hold (except taxes). Because:

   a. there is less transparency in reporting of information in the annual reports by the banks for the use of investors,
   b. transaction costs are high between buying and selling,
   c. information asymmetry exists due to lack of information,
   d. market portfolios are not efficient as evidenced by the excess returns on stocks for the same level of riskiness.

Conclusion

1. The bank stock prices in UAE do not follow market forces i.e., demand and supply factors for these stocks. The general equilibrium model may not be appropriate for analysis of UAE bank stocks.

2. Disclosure of information on stock returns, and variability for both short term and long term nature, and bank fundamental information such as ownership status, percentage of holding are not forth coming. To that extent UAE stock market existing at present is not efficient.

3. Probably, the much awaited formal stock market in UAE with trading floors in Abu Dhabi and Dubai may bring in more transparency to stock listing process and more

accurate pricing of stocks without allowing for manipulations by any one individual or groups of individuals/institutions.

4. Future holds a silver lining in the cloud for the potential investors in UAE.

Potential for Future Research:

The present paper has researched the ground realities of stock market specifically that of UAE bank stocks. In view of the limitations stated in the paper, future research may use multi-factor CAPM framework by incorporating other factors in the analysis such as; family holding pattern, EPS, profitability of the banks in relation to the foreign banks, nature of the business being done, oil prices prevailing over years, macro factors etc.

We could also go one step further by comparing the multi-factor CAPM model with arbitrage pricing theory (APT) which is more general in nature and has less stringent assumptions than that of CAPM. Such research work would help the investors to decide on what stocks are "good to buy" and what stocks are "good to sell."

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FIGURE.2. SECURITY MARKET LINE