Why do stock prices change on the Dubai Financial Market?

An exploration of Fundamental Analysis

This complex question has many answers. Some factors may be obvious while others operate without us seeing them. Compared to other marketplaces (New York's Dow Jones or London's FTSE 100) the Dubai Financial Market (DFM) is very young. Therefore, apart from the usual factors that move prices we have to factor in the relative immaturity in investment terms of the DFM participants. However, despite the seemingly random nature of the price changes there are some strategies an investor can adopt to make sense of the price changes and select stocks that will appreciate in price over time.

A brief list of the more obvious factors that change prices of stocks on the DFM include:

- Company earnings
- Growth rates (demographic and economic)
- Interest rates
- Oil price
- Market transparency
- Inflation
- Regional instability

As you can see all of these factors above affect the market in a general sense. They will impact on each stock differently depending on what extent each stock is affected by the factor. For example, Shuaa Capital being an investment bank may be more affected by market transparency and company earnings than Arab Technical Construction which would be more affected by growth and interest rates.

Having considered some general factors that affect stock prices it is now time to concentrate on the more specific factors. To help decide whether a price of a stock is over valued or under valued most market participants use two main methods: Fundamental Analysis and Technical Analysis. Both will be discussed below.

Fundamental Analysis

This is a method of analyzing the value of a company's stock price by studying the financial data of the company. It considers the company's earnings and expenses, profit, assets and liabilities, management experience and industry dynamics. In other words it focuses on the business and tries to work out what the stock price should be.

An investor using Fundamental Analysis to make investment decisions will rely heavily on the following sources of information:

- Company Balance Sheet

- Income (Profit and Loss) Statement
- Annual report
- Newspapers
- Company announcements
- Industry news.

Technical Analysis

This method analyses a company's stock price by using market data such as stock price, volume of stock traded, stock price volatility and market trends. A person using technical analysis to value a stock does not look at company data at all. Instead they rely upon market trends to determine how a stock price may change in the future.

Using technical analysis to value a stock will require the use of market data, financial charts and tables. By analyzing the data you will form an opinion about the stock price and market trend and make your decision accordingly.

As you can see technical and fundamental analysis are two very different ways of deciding whether a stock is under valued or over valued. Which one is better depends on many factors but the most important one is the person doing the investing.

Fundamental or Technical Analysis?

Fundamental and technical analysts have been arguing which is better since modern stock markets emerged. There is no clear answer as to who is right. It seems that investors following either one can point to periods of investment success but over the longer term neither side can point to a definitive answer. Some of the issues to consider are:

- If you are a long term investor looking for solid companies with good growth and income potential and a good track record then fundamental analysis may be of interest.
- If you are a short-term investor looking for exciting growth stocks that are undervalued then a fundamental approach to analysis would be useful.
- If you are a short-term investor who thinks the market is undervalued and is looking for investor sentiment to change then technical analysis may be useful to you.

In practice the two techniques can be combined. In many cases experienced market investors may use fundamental analysis to identify undervalued companies and then use technical analysis to time their entry into the market place. A serious investor will familiarize themselves with both techniques and combine them to maximize their chances of success in the market.

Set out over then next few pages is an introduction to **Fundamental** analysis, a discussion of what figures to look for and an example of how they can be used to inform your investment decisions.

Introduction to Fundamental Analysis

All fundamental analysis starts at a company's Financial Statement. While it is true that this statement contains a vast array of figures for our purposes we can narrow down the important numbers and in a relatively short time frame have an idea of how a company is traveling. At the very least we will have to look at a company's Income Statement (Profit and Loss Statement) and Balance Sheet. These can be found in the company's annual report, company website under investor information, or at the market they are listed on.

Before we get started on the data a few words of caution about fundamental analysis.

Using fundamental analysis your basic objective is to come up with a fair value for a company's stock. If the current stock price is under your valuation then it is a buy signal, if the price is over then it is a sell signal. In other words you have arrived at what you think is the intrinsic value of a company's stock. Sounds straight forward right?

However, the market price may bear no relation to the intrinsic value you have arrived at. The market price is made up of your intrinsic value but it also considers extrinsic factors like political and economic factors, market sentiment, future conditions and many other hard to quantify factors. Therefore, even though your fundamental analysis may indicate a stock is under valued the market may not agree and continue to mark down the value of the stock. In this case the extrinsic factors outweigh the intrinsic factors and you may be better to delay purchase of the stock until the market better appreciates the value of the stock you consider undervalued. Often in these circumstances the analyst is tempted to blame the market for getting "it wrong" however, it pays to remember that the market price is always right as it reflects the price that buyer and sellers can agree on.

The Annual Report

Usually a Fundamental Analyst starts the research by looking at the annual report of a company. The Annual Report is a document that companies must produce as a part of the requirement to list those stocks for sale on the DFM. The following information is generally presented in most annual reports:

- Introduction by the Chairman of the Board indicating major milestones and future directions.
- Introduces senior management with a summary of the previous year.
- Information about the company.
- Detailed information regarding results and major issues confronting the business.
- Complete set of financial statements (Income Statement, Balance Sheet and Statement of Cash Flows).

- Appendix with comprehensive notes to the financial statements, and Auditor's Report

Annual reports do vary in content and style but every annual report should at least contain the information listed above. Now we are ready to start analyzing our company. For the purposes of this exercise we will conduct a Fundamental Analysis of Arab Technical Construction (ARTC), also known as Arabtec Holding.

ARTC - A safe buy with growth opportunities for the future

ARTC is a holding company listed on the DFM and is the sole owner of Arabtec a 30-year-old UAE construction company. Right away knowing this company is in the construction business we can make some broad observations.

- Dubai, and the UAE, is in the middle of a construction boom.
- New projects seem to be starting every day.
- You would expect company revenues and profit to be increasing.
- Construction cost and the price of raw materials are rising.
- Property market could move into over supply and construction could slow.

These points are not supposed to be exhaustive and we may not know all the answers however, they are a starting point for us to start considering what sort of company ARTC is and what sort of market place it is operating in. We can now turn to the first part of the Annual Report.

Management Discussion

Analysts often overlook this part of the Annual Report because they either do not believe what is written on the page, or, because it is not numbers, it cannot be quantified and therefore is not much use in valuing the company. However, noting our list of points above it is worth considering the following:

- Is the report written in a clear and concise manner easily understood by the average reader? Jargon and clichés might point to something not right in the business
- Does the manager discuss any of the above points you thought of as potentially affecting the business currently or in the future? A lack of this type of discussion may indicate a lack of fore sight and strategic planning.
- Are the financial results over time clearly discussed and the implications for the company spelt out? This discussion would indicate a confidence in the company and the strategy that management is pursuing.
- Are potential risks going forward considered?

Overall, the more information the better. Confident managers will have no problem canvassing these issues and more in the Annual Report. This would indicate that management is honest and upfront about the results and their ability to drive the company forward. A lack of information indicates that management is not confident and alerts you to taking more care when deciding whether to buy the company stock.

Balance Sheet

This document is often overlooked but provides a great deal of insight into how a company is traveling. It will not reveal cash flow or profitability but it will tell you what assets the company owns and more importantly how they paid for those assets. The Balance sheet is divided into three sections.

- Assets: What the company owns
- Liabilities: What the company owes
- Shareholders Equity: The net worth of the company

Assets = Liabilities + Shareholders Equity (hence the Balance Sheet)

The three sections of the Balance Sheet are usually displayed as in the example below:

Arabtec Holding
Dubai - United Arab Emirates
Interim Condensed Consolidated Balance Sheet
As of June 30, 2006
(In Arab Emirates Dirhams)

	June 30, 2006 (reviewed)	December 31, 2005 (audited)
Assets		
Current assets		
Cash and cash equivalents	**298,230,069**	93,907,569
Other financial assets	**22,885,463**	27,825,420
Trade and other receivables	**951,210,363**	936,194,657
Due from related parties	**33,637,621**	29,576,492
Inventories	**73,544,875**	95,405,616
Other current assets	**44,930,280**	32,012,789
Total current assets	**1,424,438,671**	1,214,922,543
Non-current assets		
Available for sale investments	**4,785,858**	11,659,723
Intangible assets	**95,434,097**	101,040,097
Goodwill	**88,896,366**	88,896,366
Retentions receivable – non-current portion	**53,606,461**	128,629,676
Loan to a related party	**1,306,050**	-
Other non-current assets	**13,696,381**	13,140,145
Property, plant and equipment	**371,052,338**	331,484,165
Total non-current assets	**628,777,551**	674,850,172
Total Assets	**2,053,216,222**	1,889,772,715
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Liabilities and Shareholders' Equity

Current liabilities		
Bank borrowings	**3,984,623**	-
Trade and other payables	**1,258,466,207**	1,217,627,383
Due to related parties	**3,211,968**	9,066,453
Total current liabilities	**1,265,662,798**	1,226,693,836
Non-current liabilities		
Provision for employees' end of service indemnity	**40,932,687**	32,041,556
Retentions payable – non-current portion	**60,099,890**	57,080,473
Total non-current liabilities	**101,032,577**	89,122,029
Total Liabilities	**1,366,695,375**	1,315,815,865
Capital and reserves		
Share capital	**520,000,000**	400,000,000
Statutory reserve	**27,946,846**	16,585,671
Fair value adjustment reserve	**2,514,874**	8,100,140
Retained earnings	**131,521,613**	149,271,039
Equity attributable to equity holders of the parent	**681,983,333**	573,956,850
Minority interest	**4,537,514**	-
Total Equity	**686,520,847**	573,956,850
Total Liabilities and Shareholders' Equity	**2,053,216,222**	1,889,772,715
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Assets are usually listed in descending order of how fast they can be turned into cash. The same goes for liabilities, those due first are at the top with longer term borrowing at the end. Assets and liabilities are divided into current (collectible within one year) and non-current (collectible over a longer term). Liabilities are also divided into current and non-current.

Your first task is to look at the assets of ARTC to see whether they fit the business. We note that ARTC has approx 2 billion dhs of assets and that 1.4 billion dhs of those assets are considered current. This indicates the company can draw on a fair amount of cash in a relatively short amount of time. Furthermore, a larger proportion of the current assets are made up of trade and other receivables (950 million dhs approx). Therefore we hope they are collected as soon as possible and that they will be paid. Another point to note is that property, plant and equipment makes up a relatively small part of total assets (371 million dhs approx). We could surmise from this that the company relies on contract labour and equipment rental to complete its construction projects.

Next we should check how the assets are paid for. For this we have to check the liabilities and shareholders equity. In ARTC's case the total assets of 2 billion dhs are paid for by approx 1.3 billion dhs in debt and 700 million dhs in shareholders equity. Most of the debt is owed to trade creditors in the short-term (1.26 billion dhs approx) and there is a relatively small bank loan. This high amount of debt owed in the short term is our first red flag. However we do have a way of seeing whether this will be a problem.

Working Capital and the Current Ratio

The current ratio measures a company's ability to pay its current liabilities when they fall due. The difference between the current assets of a company and its current liabilities is called the net working capital. The amount of net working capital determines a company's ability to pay its bills, finance its operations and take advantage of opportunities in the short term. The accepted practice is to express this as a ratio:

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current liabilities}} = \frac{1{,}424{,}438{,}671}{1{,}265{,}662{,}798} = 1.12 : 1$$

In other words ARTC has 1.12dhs in current assets for every one dirham in current liabilities. Most analysts will expect that figure to be closer to 2:1. Companies that are in high growth phases usually need more of a cushion, as their cash requirements will be large and sometimes unexpected. This ratio is a definite red flag as we move towards our investment decision. Despite the rather thin cushion we could note that bank borrowings are quite small and the company could easily borrow in the short term to meet any liabilities that fall due. To assist you in gaining a more of a sense of how the company manages its short-term liabilities you could take a look at the current ratio over time. If the ratio were stable over time it would indicate the company is managing ok.

Price to Book Value

Assets are generally recorded in the balance sheet at cost or book value less depreciation over time. Book value is used to indicate how much a company is worth if all the assets were sold off and all the debt paid. The remaining amount would be the book value of the company. Generally when you take the total liabilities away for the total assets you are left the shareholders equity. Therefore we can find the book value of a company at the bottom of the Balance Sheet. For ARTC the book value equals 686,520,847 dhs. Next we find the total number of share outstanding 520,000,000. We then divide ARTC book value by the number of shares outstanding.

$$\text{Book Value per share} = \frac{\text{Book Value}}{\text{No. Shares}} \quad \frac{686{,}520{,}847}{520{,}000{,}000} = 1.32 \text{ dhs per share}$$

Further more we divide the market price of the ARTC (5.25 dhs as at 12 December 2006) by the book value per share.

$$\text{Price to Book Value} = \frac{\text{Share Price}}{\text{Book Value per share}} \quad \frac{5.25}{1.32} \text{ the share price is 3.9x the book value.}$$

A lower share price to book value is better. A lower figure indicates the potential for share price growth if the company can utilize its assets more efficiently to generate more profit. The best way to determine what this outcome indicates above is to compare it with other price to book values of company's that are in a similar business. At the moment it seems to indicate that the share price when compared to book value is fairly priced. Therefore, so far we have a red flag based on the current ratio and a yellow flag based the price to book value.

Debt to Equity Ratio

This ratio gives the investor an idea of how the ARTC has paid for its assets. Generally, less long-term debt to equity is better. However, debt is not all bad, especially when it has allowed management to make astute purchases to increase the profitability of the company. Too much debt can reduce the flexibility of the company in the market place and ultimately can lead to bankruptcy. Usually analysts will compare this ratio to the company's competitors or market averages.

The Debt to Equity ratio is found by dividing the amount of long-term debt (101,032,577) dhs by ARTC's shareholders equity (686,520,847) dhs.

$$\text{Debt to Equity Ratio} = \frac{\text{Long-term debt}}{\text{Shareholders equity}} \quad \frac{101{,}032{,}577}{686{,}520{,}847} = 0.14{:}1$$

This ratio above tells us that for every 14 fils of debt, ARTC has 1 dhs of equity. This is an excellent result and provides us with our first green flag regarding ARTC. This indicates that ARTC has lots of room to borrow more money to cover its cash requirements in running the business and to take advantage of investment opportunities if they arise. This also mitigates our concerns over the red flag ARTC received for its current ratio above.

Summary

Using the information from the balance sheet above a picture is starting to emerge regarding whether ARTC is a good buy.

The questions and answers we have posed include:

1. **Management discussion in the Annual Report:** Is it open and candid? Do management express themselves clearly about current market conditions and the company's future prospects?

2. **Current Ratio:** Over two and stable over time gets a positive response. Our result of 1.12 is on the low side and cause for concern.

3. **Price to book value:** In line with industry averages but with a lower figure indicating more chance of growth in the stock price. Our figure of 3.9x is a little high but is probably neutral.

4. **Debt to Equity Ratio:** Lower is better and should not be over one. Our figure of 0.14 indicates ARTC has very low debt and could borrow more to chase investment opportunities.

Overall the analysis of the ARTC Balance Sheet has not given us a clear idea of whether to buy the stock or not. To help us reach a conclusion we will consider the Profit and Loss statement in the next section.

The Income (Profit and loss) Statement

The Income Statement is probably the most well known financial document. The reason is because it contains figures such as the company's sales, expenses and profits. All these items are linked directly to the day-to-day performance of the company. The Income Statement provides management with an indication of how successful they are at running the company. More importantly it tells management what sort of profit they are making. Companies can function for a short time without profits however; in the end they must make a profit to survive. Below is an Income Statement for ARTC.

Arabtec Holding
Dubai - United Arab Emirates
Interim Condensed Consolidated Income Statement
For the period from January 1, 2006 to June 30, 2006
(In Arab Emirates Dirhams)

	Half year ended June 30,	
	2006	2005
	(Reviewed)	(Un-audited)
Revenue	**1,413,539,920**	1,147,695,686
Direct costs	**(1,239,370,574**)	(1,040,175,172)
Gross profit	**174,169,346**	107,520,514
Other operating income	**17,925,322**	2,583,702
General and administrative expenses	**(81,572,469)**	(50,595,050)
Changes in fair value of non-current retentions	**2,899,028**	38,388
Profit from operations	**113,421,227**	59,547,554
Finance income/(costs)	**74,336**	(3,450,743)
Net profit for the period	**113,495,563**	56,096,811
	==========	==========
Attributable to:		
Equity holders of parent	**113,611,749**	56,096,811
Minority interest	**(116,186)**	-
	113,495,563	56,096,811
	==========	==========
Basic earnings per share(AED)	**0.22**	0.11
(Based on profit for the period and 520 million Shares in issue throughout the period – including 120 million-bonus shares approved on May 29, 2006)	==========	==========

The first item to note is that the two columns represent six months of operation ending in June 2006 and June 2005 respectively. The figures are presented like this to allow the analyst to compare the same period of operation for each year.

The income statement starts with the revenue for the period, deducts the expenses and arrives at the net profit for the period. After net profit the Income Statement usually distributes the profit across all the shares outstanding to come up with a net profit figure per share or Earnings Per Share (EPS).

Profit Margin

The Profit Margin is calculated by dividing Net Profit by Revenue. From above the Net Profit for 2006 is 113,495,563. The Revenue for 2006 is 1,413,539,920.

$$\text{Profit Margin} = \frac{\text{Net Profit}}{\text{Revenue}} \quad \frac{113{,}495{,}563}{1{,}413{,}539{,}920} = 8\%$$

In other words, for every dirham of revenue ARTC receives, it kept 8 fils as profit. A higher Profit Margin is better. This result looks ok but is not spectacular. Given the scale of the construction boom in Dubai we might have expected a larger profit margin. The 8% figure could indicate the ARTC is facing rising competition restricting its ability to raise prices or expenses are increasing as labour and materials are in short supply. However, what we can say is that the profit margin in the same period last year was 4% or 4 fils for every dirham received in revenue. This indicates that profit margins are rising and is considered a positive signal. As a result we will consider the Profit Margin as a green flag.

Interest Coverage Ratio

This measure indicates how many times over the interest payments could be made with the current net profit and level of debt. As noted previously ARTC has a low level of debt so we would expect this figure to be high. To find the Interest Coverage Ratio the analyst takes the net profit and divides it by the interest expense. For ARTC we will use the bank borrowings for June 2006 from the Balance Sheet of 3,984,623 dhs. However, as the profit figure is only for 6 months we will halve this borrowing figure when doing the calculation. If we assume an interest rate of 7% on borrowings of 1,999,311 then our interest bill would be 139,000 dirhams.

$$\text{Interest Coverage ratio} = \frac{\text{Net Profit}}{\text{Interest expense}} \quad \frac{113{,}495{,}563}{139{,}000} = 816\text{x interest expense}$$

This figure demonstrates that ARTC has a net profit that could pay 816 times current interest payments. For the investor this demonstrates that ARTC has the capacity to borrow significantly larger amounts of cash before they would have trouble making the interest payments. Usually a figure of 3 to 4 is considered on the low side. Anything above is considered good. This ratio provides our first unambiguous green flag for ARTC.

Earnings Per Share Growth

At the end of the Income Statement is the Earnings Per Share (EPS). This figure is the Net Profit divided by the number of shares outstanding. The EPS growth for ARTC from June 2005 to June 2006 has been 100% from 11 fils per share to 22 fils per share. This is a spectacular achievement by management and seems to have been made possible by increasing revenue and by holding down costs. While one year figures are not the basis to make a long-term decision they do indicate the company is on a high growth trajectory. This could result in significant increase in the share price if the growth in EPS is sustained. With the qualification of only one year's figures this provides another green flag for ARTC.

Share price to Earnings per share Ratio or (P/E) Ratio

The PE as it is commonly known is calculated by dividing the market price of the stock by its current EPS. The figure is used to compare the price of stock on a relative basis. A 25dhs stock with a P/E of 10 is cheaper on a EPS basis than a 10 dhs stock with a P/E of 20. The first stock would have EPS of 2.5 dhs and the other stock would have an EPS of 50 fils hence, the first stock is cheaper. A lower P/E is better. However, it should always be seen within the context of the company, the industry and the wider market. A low P/E indicating a stock is cheap may also point to problems within the company. Further research may be warranted. A P/E ratio uses historical figures and may not indicate what will happen in the future. Companies in high growth industries will tend to have higher P/E ratios that ones in low growth industries. With those caveats it is an extremely useful way of measuring the value of a stock compared to its peers and the broader market place.

The current stock price of ARTC is 5.25 dhs. Usually analysts work out the P/E of a stock based on full year earnings. In our Income Statement we only have 6 months of earning 22 fils up to June 2006. For the purposes of this exercise we will assume full year earnings of 44 fils.

$$\text{P/E Ratio} \qquad \frac{\text{Share price}}{\text{EPS}} \qquad \frac{5.25}{0.44} \qquad \text{P/E Ratio} = 11.93$$

In other words the share price is 11.93 times the assumed full years earnings per share for 2006. To determine what this figure tells us we should compare it to companies in the same industry or sector, and to the market average P/E for all companies. Currently it seems to fall into the average category when compared to the market and to other companies. However, given the EPS growth and the continuing building boom in Dubai we would expect this figure to fall in the coming years. Therefore it may indicate that the current share price is under valued compared to the growth that may lie ahead for this company.

Unfortunately we cannot be clearer than that. A relatively low P/E indicates you are not paying too much for your share of the company. Any earnings on the upside will be quickly reflected in the share price. However it may indicate that the company has problems or is stuck in a low growth industry or market. For ARTC it is clearly in a growth industry and its EPS growth indicates it is taking advantage of that growth. For these reasons we will consider the P/E ratio of 11.93 a positive number and give it a green flag.

Income Statement Summary

Above we have outlined a basic approach to analyzing the Income Statement on a Fundamental basis.

- **Profit Margin:** Higher is better. Look for increasing Profit Margins over time.
- **Interest Coverage Ratio:** Anything above 5 is excellent.
- **EPS Growth**: Earnings should steadily increase over time. This will underpin an increasing share price.
- **P/E ratio**: No simple answer. Generally lower is better. Compare to peers and the market average.

In the final section we will put our analyses of the Balance Sheet and Income Statement of ARTC together and try and figure out if the stock is a buy at the current price.

Should we buy ARTC?

You have now been through the basics of Fundamental Analysis. You have considered the Annual Report, the Balance Sheet and the Income Statement. You now have a framework by which to consider those documents and form an opinion about the health of the company you are considering. However, we should remember that all the data is based on past performance and may not be continued in the future. In addition the performance of a company's stock price is based on both extrinsic as well as intrinsic factors. The point is, which factors will be in the ascendancy in the future?

Conclusions

First all let's summarize our fundamental indicators for both the Balance Sheet and Income Statement.

Balance Sheet	**Result**	**Signal**
Current Ratio	1.12:1	Red Flag
Price to book value	3.9x	Yellow Flag
Debt to Equity ratio	0.14:1	Green Flag

Income Statement		
Profit Margin	8%	Green Flag
Interest Coverage ratio	816x	Green Flag
EPS Growth	100%	Green Flag
P/E Ratio	11.93	Green Flag

Overall the table above indicates that ARTC is a buy at the current share price. Most of the indicators are positive with a green flag signal. The current ratio is the only signal that is red. The company has a high amount of short-term liabilities and not much cash to pay them. However on further inspection we note ARTC has a tremendous ability to increase debt. This could be utilized if the company faced a short-term cash shortage.

The price to book value is slightly on the high side indicating you will not get much back if the company has to be liquidated in the short term. However, we are not anticipating this eventuality. The higher figure could be a result of the company preferring to use contractors and rental equipment over owning a great deal of fixed assets.

All the other indicators are green and point to a company that has solid fundamentals and all the ingredients to take advantage of the growth opportunities in the Dubai construction market. While Fundamental Analysis will rarely give you a clear cut buy signal it can point to a company that has the strength to take part in future growth and a stock price that is yet to reflect those fundamentals. ARTC seems to have those characteristics.

Our conclusion is:

A safe buy with growth opportunities for the future.