# Investigating Growth Indicators for Insurance Companies in UAE before recession (Comparative Study)

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***Abstract***

***Insurance Companies provide coverage in the form of compensation resulting from loss, damages, injury, treatment or hardship in exchange for premium payments.***

***Insurance as an industry involves pooling funds from many insured entities (known as exposures) to pay for the losses that some may incur. Insurance as a financial intermediary is a commercial enterprise and a major part of the financial services industry.***

***The Growth of insurance companies usually measured through certain Indicators such as the increment percentage in: net profit, total premium written, shareholders equity, total assets, net underwriting income, and net investment.***

***Insurance industry established in UAE at early 70th of the last century (the first insurance company was El Sharjah Company which established at 1970). Now (after almost 40 years) there are more than sixty insurance companies playing a crucial role in both the UAE financial market and society.***

***In this article the net profit, and total premium written growth indicators will be investigated for a selected group of insurance companies in UAE. Using the descriptive statistical tools, the graphical presentations and the control chart, a comparative study is performed among the selected group of insurance company based on the discussed indicators to evaluate their financial performance during the period of study.***

***Keywords***

***Insurance companies, Growth indicators, financial intermediary, premium payments, performance analysis, financial performance.***

## 1. INTRODUCTION

UAE has emerged as a global country of the Gulf region and it is increasingly developing as a business hub for service industries such as IT, Finance and insurance. The Emirate's Western-style model of business drives its economy, and more than 90% of the main revenues currently coming from various aspects rather than financial services [22].

**Insurance** is the equitable transfer of the risk of a loss, from one entity to another in exchange for payment. It provides coverage in the form of compensation resulting from loss, damages, injury, treatment or hardship in exchange for premium payments. [13]. Insurance as an industry involves pooling funds from many insured entities (known as exposures) to pay for the losses that some may incur. Insurance as a financial intermediary is a commercial enterprise and a major part of the financial services industry. It is a form of risk management primarily used to hedge against the risk of a contingent, uncertain loss. An insurer, or insurance carrier, is selling the insurance; the insured, or policyholder, is the person or entity buying the insurance policy. The amount of money to be charged for a certain amount of insurance coverage is called the premium. Risk management, the practice of appraising and controlling risk, has evolved as a discrete field of study and practice [11].

**Methods of insurance:** In accordance with study books of The Chartered Insurance Institute, there are four main types of insurance: The Co-insurance – risks shared between insurers & the Dual insurance – risks having two or more policies with same coverage & the Self-insurance – situations where risk is not transferred to insurance companies and solely retained by the entities or individuals themselves & the Reinsurance – situations when Insurer passes some part of or all risks to another Insurer called Reinsure.[12, 20].

**Types of insurance:** Insurance can have various effects on society through the way that it changes who bears the cost of losses and damage. On one hand it can increase fraud; on

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the other it can help societies and individuals prepare for catastrophes and mitigate the effects of catastrophes on both households and societies [13, 22, 19]. In the literature there are different types of insurance like the **Auto insurance** that protects the policyholder against financial loss in the event of an incident involving a vehicle they own, the **Gap insurance** which covers the excess amount an auto loan, and the **Health insurance** to cover the cost of medical treatments. Also the **Income protection insurance** to cover the Workers' compensation, or employers' liability insurance, **Casualty** insurance insures against accidents, not necessarily tied to any specific property, the **Life** insurance provides a monetary benefit to a decedent's family or other designated beneficiary, the **Property** insurance provides protection against risks to property, and the **Liability** insurance is a very broad superset that covers legal claims against the insured. [7, 9, 10]

## 2. Insurance Industry in UAE

Insurance industry established in UAE at early 70th of the last century (the first insurance company was El Sharjah Company which established at 1970). Now there are sixty one insurance competitors in the insurance field playing an important role in both the UAE financial market and society. The insurance industry, which grew 9.5% in 2012, is forecasted to expand up to 10.5 % during the year 2014 in the wake of strong recovery on economic front [3, 13].

It is mentioned in the Insurance authority report (**IAR**) that: "The insurance sector contributes to 1% of the gross domestic product during the issued year 2014, is targeted to contribute more than 3% in 2020, and the Emiratisation in the insurance industry, which stands at 8% is expected to be almost doubled to reach 15% by the end of year 2015.

A released report, by the AUE insurance authority, asserts the significance of this sector and its substantial role in the national economy due to the considerable funds invested amounted to Dh28.7 billion in 2012 that increased by 30% during 2013 to reach almost the Dh 38 billion, while the underwritten premiums amounted to Dh26.3 billion that increased by only 12% during 2013 (almost 75 % for property & liability insurance and 25% for life insurance & operations fund formation). Also the report includes the following classification (table 1) for the insurance types [21]. It is clear from figure 1 that around forty percent related to the accidents and liability while almost 30 percent related to the medical insurance. [8, 10]

Table 1: Percentage of Insurance Types according to the IAR

| Type of Insurance | Share |
|---|---|
| Accidents and Liability | 39.3 % |
| Medical | 32.1 % |
| Sea and Air transport | 11.9 % |
| Fire | 11.4 % |
| Other Risks | 5.3 % |

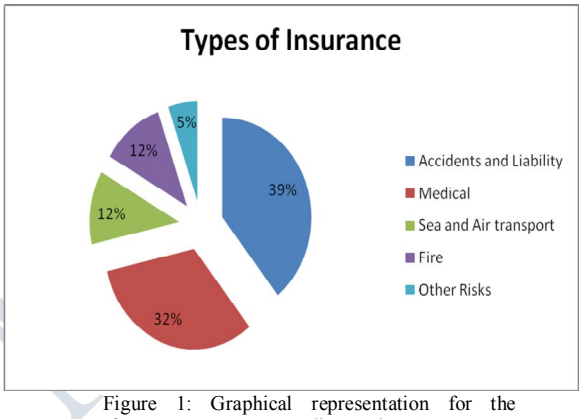



Figure 1: Graphical representation for the Percentage of Insurance Types according to the IAR

Table 2a: Classification of Insurance Types according to the IAR

| Insurance Company Name | Number of Companies |
|---|---|
| National | 34 |
| Foreign | 17 |
| Islamic | 10 |

Table 2b: Classification of Insurance Activities according to the IAR

| Insurance Company Name | Insurance Activities | | | |
|---|---|---|---|---|
| | All | life insurance and operations of fund formation | property and liability | extending credit export insurance in the country |
| National | 11 | 20 | 2 | 1 |
| Foreign | 0 | 17 | 0 | 0 |
| Islamic | 2 | 0 | 8 | 0 |

The IAR report classify the existing 61 insurance companies into three main categories, National, Foreign, and Islamic (see table 2), and the classification distributed among the different insurance activities [21, 22].

According to the IRA, the UAE will continue to be the largest insurance market in the GCC in 2015 comprising 50 % of the total premium in the region, according to a latest research report. Overall the UAE insurance sector is expected to grow at a CAGR of 19 % reaching US$18.3 billion by 2015 with balanced contribution from both Life and Non-Life segment and to grow at a CAGR 20 % over the next four years to reach US$37 billion from US$17.8 billion estimates for 2011 in the region [5,7].

## 3. INSURERS' BUSINESS MODEL

Insurance companies may be classified into two groups Life insurance companies, which sell life insurance, annuities and pensions products and Non-life or property/casualty insurance companies, which sell other types of insurance [22]. In most countries, life and non-life insurers are subject to different regulatory regimes and different tax and accounting rules. The main reason for the distinction between the two types of company is that life, annuity, and pension business is very long-term in nature – coverage for life assurance or a pension can cover risks over many decades. By contrast, non-life insurance cover usually covers a shorter period, such as one year.

The business model is to collect more in premium and investment income than is paid out in losses, and to also offer a competitive price which consumers will accept. Profit can be reduced to the following simple equation [1]:

Profit = earned premium + investment income – incurred loss – underwriting expenses.

It is known that any Insurers company can make its profits in the following two ways:

- Through underwriting, the process by which insurers select the risks to insure and decide how much in premiums to charge for accepting those risks
- By investing the premiums they collect from insured parties**.**

## 4. CONTROL CHARTS

A **control chart** is a statistical tool used to distinguish between variation in a process resulting from common causes and variation resulting from special causes. It presents a graphic display of process stability or instability over time. Every process has variation. Some variation may be the result of causes which are not normally present in the process. This could be special cause variation. Some variation is simply the result of numerous, ever-present differences in the process. This is common cause variation. Control Charts differentiate between these two types of variation. One goal of using a Control Chart is to achieve and maintain process stability. Process stability is defined as a state in which a process has displayed a certain degree of consistency in the past and is expected to continue to do so in the future. This consistency is characterized by a stream of data falling within control limits based on plus or minus 3 standard deviations (3sigma) of the centerline.

There are two main **categories of Control Charts**, those that display attribute data, and those that display variables data. Attribute Data: This category of Control Chart displays data that result from counting the number of occurrences or items in a single category of similar items or occurrences. These "count" data may be expressed as pass/fail, yes/no, or presence/absence of a defect. Variables Data: This category of Control Chart displays values resulting from the measurement of a continuous variable. Examples of variables data are elapsed time, temperature, and radiation dose. While these two categories encompass a number of different types of Control Chart [3, 5]

The **types of control charts** are often classified according to the type of quality characteristic that they are supposed to monitor: there are quality control charts for variables and control charts for attributes. Specifically, the following six main charts are commonly constructed for controlling variables: $\bar{X}$ **Chart**. The sample means are plotted in order to control the mean value of a variable. **R Chart**. The sample ranges are plotted in order to control the variability of a variable. **S-Chart**. The sample standard deviations are plotted in order to control the variability of a variable. **C- Chart**. The numbers of defectives are plotted. This chart assumes that defects of the quality attribute are rare, and the control limits in this chart are computed based on the Poisson distribution. **U- Chart**. The rate of defectives are plotted, that is, the number of defectives divided by the number of units inspected. Unlike the C chart, this chart does not require a constant number of units, and it can be used, for example, when the batches (samples)

are of different sizes. **P Chart**. The percent of defectives are plotted as in the U chart. However, the control limits in this chart are not based on the distribution of rare events but rather on the binomial distribution [1, 6].

## 5. Data Analysis

In this article we study the case of eleven insurance companies established before 1985 according to the domestic capital markets group report posted on 2008. The data related to the investigated period (2003 to 2007) were extracted from the mention catalogue and tables 1a &1b showed the summaries of the Growth in the Net Profit and the Growth in the Total Premium Written.

By applying the following formulas in the calculations of the upper and the lower limits of the control charts

$$UCL_{\bar{X}} = \bar{\bar{X}} + A2 * \bar{R} \qquad LCL_{\bar{X}} = \bar{\bar{X}} - A2 * \bar{R}$$

The obtained results are summarized as follows:

| | Net Profit | Total Premium Written |
|---|---|---|
| UCL | 179.61 | 29.55 |
| CL | 80.13 | 21.98 |
| LCL | -19.35 | 14.41 |

Where $A_2$ is a tabulated constant that equals to 5.28 (for n = 11) and the results included in tables 2a&2b that showed the statistical summaries of the Growth in the Net Profit and the Growth in the Total Premium Written.

Table 1a: Growth in Net Profit Data

| Insurance Company | Establishment Year | Growth in Net Profit | | | | |
|---|---|---|---|---|---|---|
| | | 2003 | 2004 | 2005 | 2006 | 2007 |
| Sharjah | 1970 | 191.26 | 44.72 | 88.21 | (151.85) | (258.05) |
| Abu Dhabi | 1972 | 9.03 | 18.69 | 75.27 | (10.01) | 10.04 |
| Ras Al Khaima | 1974 | 0.00 | 13.65 | 53.12 | (8.76) | 73.01 |
| Al Ain | 1975 | 72.27 | 64.81 | 164.58 | (34.17) | 13.64 |
| Alliance | 1975 | 44.17 | 54.08 | 38.71 | (39.51) | 52.79 |
| Al Saqr | 1975 | 88.00 | 129.19 | 105.78 | (93.01) | 934.71 |
| Oman | 1976 | 152.52 | 90.20 | 272.46 | (73.16) | 211.27 |
| United | 1976 | 283.76 | 110.03 | 182.76 | (88.50) | 521.50 |
| Al Buhairah | 1978 | 88.19 | 82.44 | 156.96 | (49.18) | 33.92 |
| Al Dhafra | 1979 | 5.97 | 12.38 | 235.61 | (52.59) | 41.99 |
| Emirates | 1982 | 59.12 | 16.67 | 379.20 | (73.95) | 63.37 |

Figures 1a - 1e illustrate the graphical representation for the growth ratio in the net profit, and Figures 2a - 2e illustrate the graphical representation for the growth ratio in the total premium written during the period under investigation for each year (2003 – 2006). Finally Figures 3a - 3b discusses the control charts for the growth ratios in both the net profit and the total premium.

TABLE 1b: Growth in Total Premium Written Data

| Insurance Company | Establishment Year | Growth in Total Premium Written | | | | |
|---|---|---|---|---|---|---|
| | | 2003 | 2004 | 2005 | 2006 | 2007 |
| Sharjah | 1970 | (11.49) | 30.33 | 34.42 | 14.36 | 18.57 |
| Abu Dhabi | 1972 | 14.94 | 15.93 | 16.19 | 18.22 | 17.99 |
| Ras Al Khaima | 1974 | 0.00 | 18.66 | 29.06 | 28.12 | 27.07 |
| Al Ain | 1975 | 27.08 | 38.17 | 25.46 | 13.05 | 15.81 |
| Alliance | 1975 | 7.11 | 5.81 | 11.07 | 18.41 | 8.51 |
| Al Saqr | 1975 | 19.79 | (15.43) | 42.59 | 51.65 | 43.70 |
| Oman | 1976 | 47.05 | 41.22 | 51.32 | 30.65 | 31.21 |
| United | 1976 | 17.09 | 22.33 | 22.11 | 28.03 | 26.23 |
| Al Buhairah | 1978 | 38.01 | 39.96 | 18.53 | 21.83 | 26.66 |
| Al Dhafra | 1979 | 9.89 | 4.84 | 8.68 | 24.31 | 13.02 |
| Emirates | 1982 | 35.60 | 7.27 | 6.49 | 8.64 | 43.01 |

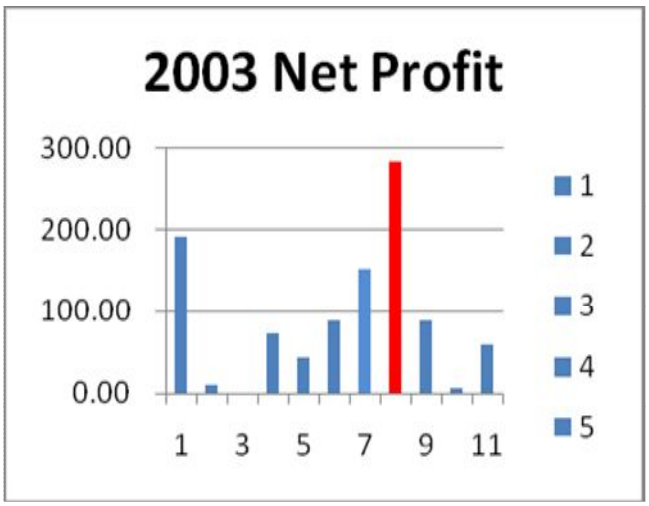



Fig 1a: Growth ratio Net Profit for year 2003

TABLE 2a: Growth in Net Profit Statistics

| Insurance Company | Establishment Year | Growth in Net Profit | |
|---|---|---|---|
| | | average | Range |
| Sharjah | 1970 | (17.14) | 449.31 |
| Abu Dhabi | 1972 | 20.60 | 85.28 |
| Ras Al Khaima | 1974 | 26.20 | 81.77 |
| Al Ain | 1975 | 56.23 | 198.75 |
| Alliance | 1975 | 30.05 | 93.59 |
| Al Saqr | 1975 | 232.93 | 1027.72 |
| Oman | 1976 | 130.66 | 345.62 |
| United | 1976 | 201.91 | 610.00 |
| Al Buhairah | 1978 | 62.47 | 206.14 |
| Al Dhafra | 1979 | 48.67 | 288.20 |
| Emirates | 1982 | 88.88 | 453.15 |

The grand average = 80.13 and the average range = 349.05

TABLE 2b: Growth in Total Premium Written Data

| Insurance Company | EstablishedYear | Growth in Total Premium Written | |
|---|---|---|---|
| | | average | Range |
| Sharjah | 1970 | 17.24 | 45.91 |
| Abu Dhabi | 1972 | 16.65 | 3.28 |
| Ras Al Khaima | 1974 | 20.58 | 29.06 |
| Al Ain | 1975 | 23.91 | 25.12 |
| Alliance | 1975 | 10.18 | 12.60 |
| Al Saqr | 1975 | 28.46 | 67.08 |
| Oman | 1976 | 40.29 | 20.67 |
| United | 1976 | 23.16 | 10.94 |
| Al Buhairah | 1978 | 29.00 | 21.43 |
| Al Dhafra | 1979 | 12.15 | 19.47 |
| Emirates | 1982 | 20.20 | 36.52 |

The grand average = 21.98 and the average range = 26.55

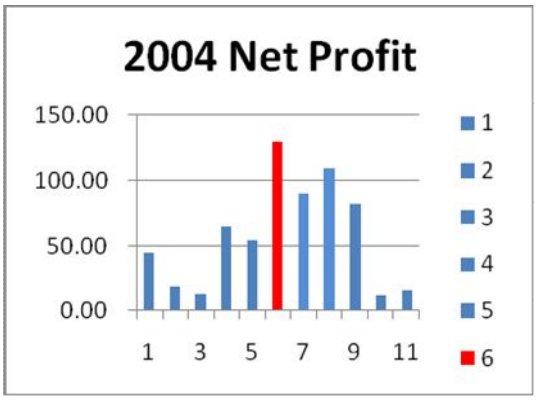



Fig 1b: Growth ratio Net Profit for year 2004

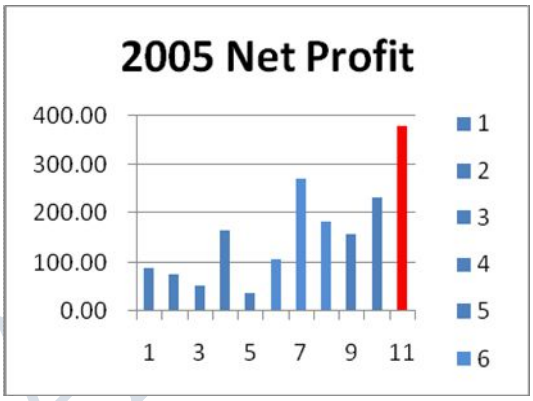



Fig 1c: Growth ratio Net Profit for year 2005

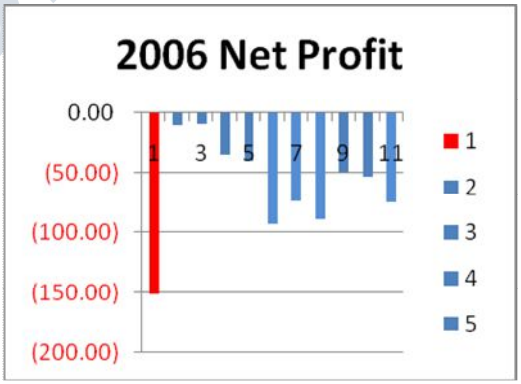



Fig 1d: Growth ratio Net Profit for year 2006

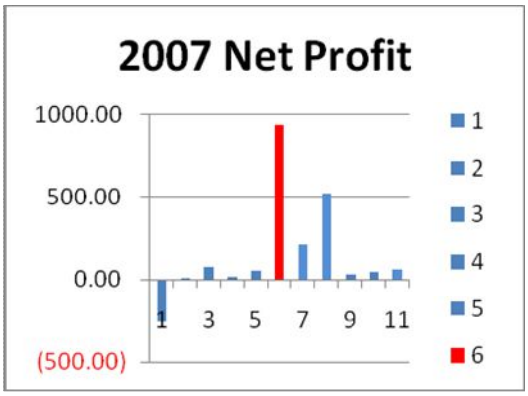



Fig 1e: Growth ratio Net Profit for year 2007

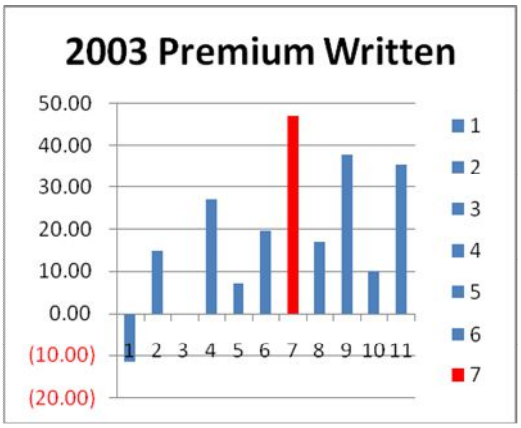



Fig 2a: Growth ratio in Total Premium Written year 2003

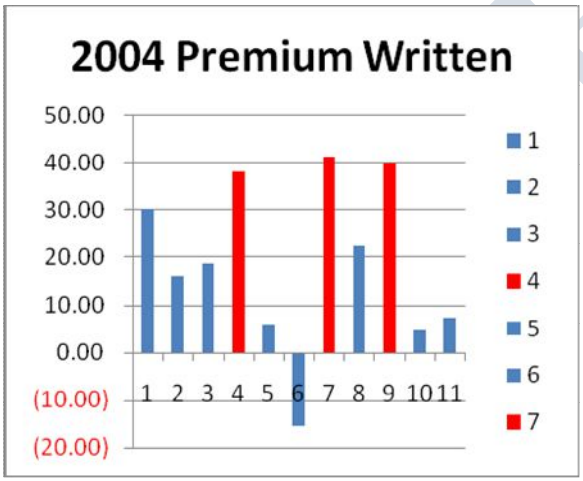



Fig 2b: Growth ratio in Total Premium Written year 2004

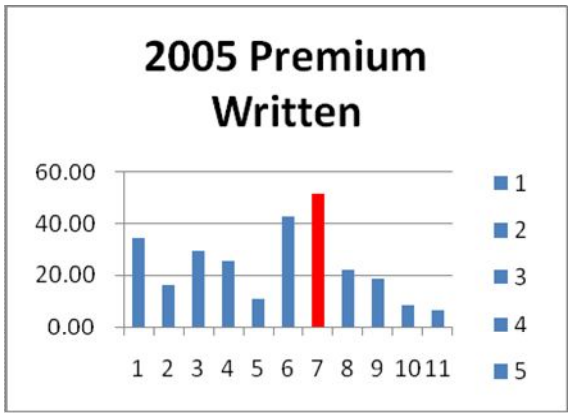



Fig 2c: Growth ratio in Total Premium Written year 2005

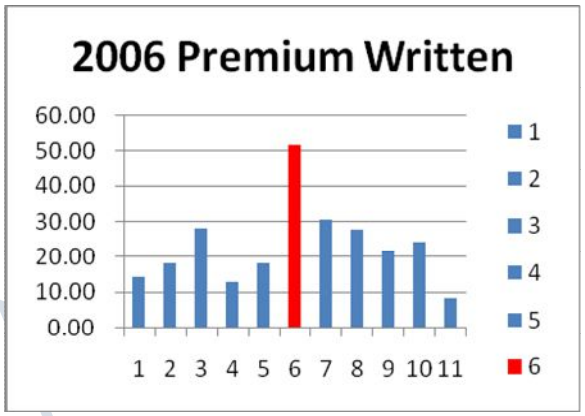



Fig 2d: Growth ratio in Total Premium Written year 2006

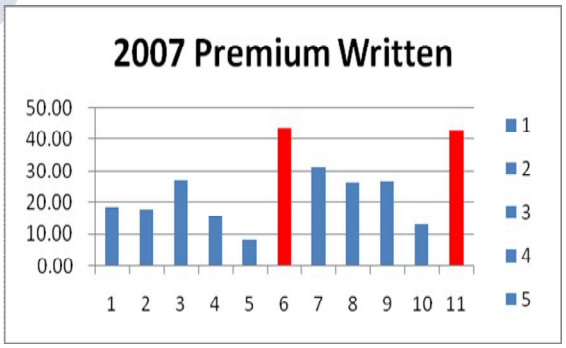



Fig 2e: Growth ratio in Total Premium Written year 2007

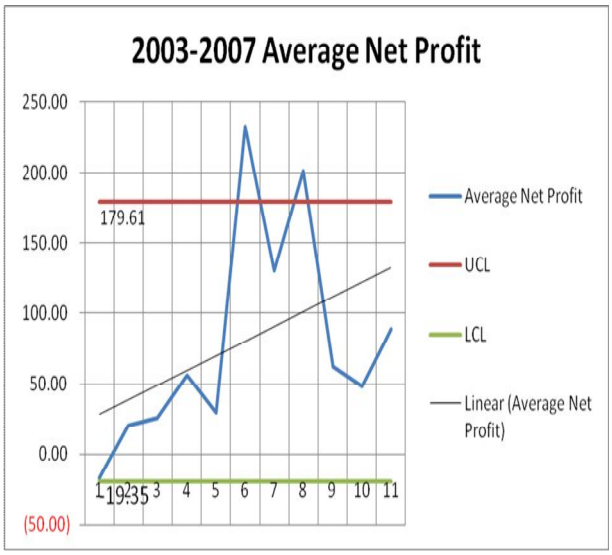



Figure 3a: Average Growth ratio in Net Profit with the trend line

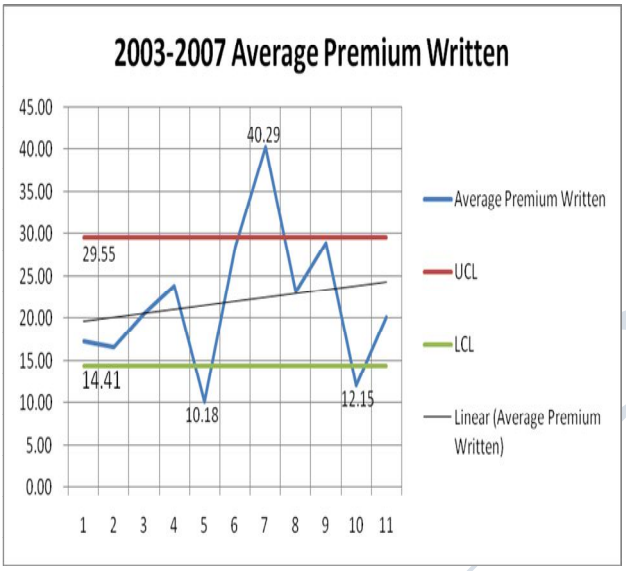



Figure 3b: Average Growth ratio in Total Premium Written with the trend line

## 6. Discussion

It is noticed in figures 1a to 1e (that explains the growth in the net profit for the selected companies) that: The united insurance company achieve the highest growth in its net profit, but in 2004 it achieved the second highest growth after Al Saqer company. In 2005 both of united and Al Saqer decline while the highest profit taken by the Emirates Company, and Oman Company came in the second lace. In 2006 it was a dramatic loss for all insurance Companies and the worst situation happened for the Sharjah Company which was dropped more than 250%. In 2007 once more Al Saqer and United Companies take the lead of the growth ratio among the other companies, Al Saqer got the highest growth ratio and the second position left for United while Sharjah Company increased its loss by 75% more and all the other companies return back to the profit case.

The average Growth in the net profit represented in figure 3a and it is clear from the figure that the upper control limit UCL (179.61) lies below the growth ratios of Al Saqer, and United Companies, so it reflects that Al Saqer and United are extreme Companies comparing with the others. There is no company below the lower LCL (-19-35), and almost 70% of the companies below the central line (grand average 80.13) and this fact according to control charts rules represents an irregularity in the performance (special cause variation).

It is noticed in figures 2a to 2e (that explains the growth in the total premium written for the selected companies) that: The Oman Company achieved the highest growth ratio during the first three years 2003,2004 and 2005 with a tuff competition from Al Ain and Al Buhari Companies , but in 2006, and 2007 Al Saqer Company got the highest ratio and Oman moved backward to the second position. 2007 AL Saqer keep its position with a tuff competition from Emirates insurance Company.

The average Growth in the total premium witten represented in figure 3b and it is clear from the figure that the upper control limit UCL (29.55) is far from Oman Company and there are two companies Al Zafra, Alliance companies below the lower LCL (14.41), also almost 50% of the companies below the central line (grand average 21.98) and this fact according to control charts rules represents regular performance (common cause variation)

To justify the dramatic drop hat happened in 2006, it is mentioned in jul 23,2007 Susanne Sclafanethat: In 2006, U.S. property-casualty insurers did something that seemed next to impossible nearly a decade ago, collectively posting a combined ratio almost 7.5 points under breakeven. An NU analysis found that a combination of factors converged in 2006 to produce a combined ratio that experts say was the best since the 1930s.

Removing roughly eight points of catastrophe-related losses in 2005, or four points from 2004, and adding back a more normal catastrophe load of three points would put the industry combined ratio at 95.9 in 2005 and at 97.6 in 2004--still more than 3.5 points worse than the result for 2006 (which had a comparable three points of catastrophe losses).

Based on the annual ranking of insurance groups and insurance companies the analysis of the surprising result had been done, and found that no single trend or event explains how the industry managed to achieve a

92.4 combined ratio (CR simply results by adding the Loss Ratio to the Expense Ratio, a CR of less than 100% indicates underwriting profitability, while anything over 100 indicates an underwriting loss.

Among the factors cited by industry experts: Loss reserve takedowns for prior years, The absence of mega-storm losses, The impact of exposure management and loss mitigation activities, Favorable loss-cost trends in most lines of business, The residual impact of price increases from a recent hard market [20,21,22].

## 7. Conclusion

Insurance industry established in UAE at early 70th of the last century (the first insurance company was El Sharjah Company which established at 1970). Now (after almost 40 years) there are more than sixty insurance companies playing a crucial role in both the UAE financial market and society.

In this article the net profit, and total premium written growth indicators will be investigated for a selected group of insurance companies in UAE. Using the descriptive statistical tools, the graphical presentations and the control chart, a comparative study is performed among the selected group of insurance company based on the discussed indicators to evaluate their financial performance during the period of study.

Concerning the average Growth in the NP it is concluded that the UCL lies below the growth ratios of Al Saqer, and United Companies, so it reflects that Al Saqer and United are extreme Companies comparing with the others. There is no company below the lower LCL, and almost 70% of the companies below the CL and this fact according to control charts rules represents a special cause variation.

Concerning the average Growth in the TPW it is noticed that the UCL is far from Oman Company and there are two companies Al Zafra, Alliance companies below the LCL, also almost 50% of the companies below the CL and this fact reflects a common cause variation.

In 2006, U.S. property-casualty insurers did something that seemed next to impossible nearly a decade ago, collectively posting a combined ratio almost 7.5 points under breakeven.

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