UNIVERSITI PUTRA MALAYSIA

ESSAYS ON STOCK VALUATION, PRICE EARNING RATIOS, AND FIRMS PERFORMANCE

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DOCTOR OF PHILOSOPHY
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2010

STOCK VALUATION, PRICE EARNING RATIOS, AND FIRM PERFORMANCE

By

SUZANA IDAYU WATI OSMAN

Thesis Submitted to the Graduate School of Management, Universiti Putra Malaysia, in Fulfilment of the Requirement for the Degree of Doctor of Philosophy

January 2010

DEDICATION

To my parents for their love, sacrifices, prayers, guidance and encouragement.

To my husband, Dr Sazali - who taught me the value of common sense.

To my darling daughter, Syahirah - for being graceful, independent and smart.

To my beautiful baby, Sophia Arissa - for all the joy and happiness you brought into my life.

ABSTRACT

Abstract of thesis presented to the Senate of University Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

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Chairman: **Assoc. Professor Mohd. Azhar Abdul Karim, PhD**

Faculty: **Graduate School of Management**

The primary objective of this thesis is to reassess the functional form of one of the most popular capital market ratios i.e. the Price Earnings Ratio (PER). The PER is a tool which is widely used by the investors and financial analysts as a stock valuation guide. Inferences made from PER usually affect the investment decision-making process when valuing stock returns. Thus, the key limitations of the PER must be addressed in order to avoid ambiguous interpretation and generalizations of empirical findings.

Within a geometric framework, using the criteria of symmetry and proportionality, this thesis illustrates a fundamental characteristic feature of *PER* being heavy on its denominator (Earnings) as compared to the numerator (Price). The identification of the underlying functional relationship between the numerator and denominator

reveals the non-proportionality and non-symmetrical issues which in turn distorts the measurement of stock performance that contributes to inaccurate measure of the estimated value of the firms.

Using PER as a representative example, this thesis introduces new measures to stock valuation, namely the Geometric Boundary Indicator (GBI), the Benchmark Geometric Boundary Indicator (BGBI), and the Geometric Share Approach (GSA). Within the GSA framework, a new complimentary measure of stock valuation; the value ratio index (PER_S), is then proposed. This PER_S is free from the asymmetric and non-proportionality characteristics of PER.

This thesis adopts some recent and significant contributions made to the international trade literature in using 'geometrical approach' to address the weaknesses of ratios; where compatible stock valuation frameworks were developed and constructed from which complementary measures of stock performance are derived and their performances are numerically illustrated.

The applicability and usefulness of the newly proposed approaches were then subsequently tested on the data. A comparative performance analysis of the traditional PER and the new proposed measures were empirically tested. Among the significant contributions of this thesis are 1) Comparatively, the results have successfully demonstrated that the new approaches performed better, 2) the findings of this research bring new and strong implications to the use of PER as indicators of stock valuation and 3) this thesis has significantly introduced new stock valuation techniques to the existing literature.

ABSTRAK

Abstrak tesis ini dibentangkan kepada Senat Universiti Putra Malaysia sebagai memenuhi syarat-syarat kelayakan bagi Ijazah Doktor Falsafah

PENILAIAN SAHAM, NISBAH HARGA PEROLEHAN, DAN PRESTASI SYARIKAT

Oleh

SUZANA IDAYU WATI OSMAN

January 2010

Pengerusi: **Assoc. Professor Mohd. Azhar Abdul Karim, PhD**

Fakulti: *Graduate School of Management*

Objektif utama thesis adalah bagi menilai semula ciri-ciri fungsi salah satu nisbah pasaran saham iaitu Nisbah Perolehan Harga (*Price Earnings Ratio*) yang kerap digunakan oleh pelabur dan penganalisis kewangan sebagai panduan bagi menilai prestasi saham. Nisbah harga perolehan ini biasanya memberi kesan kepada proses membuat keputusan di dalam penilaian pulangan saham. Justeru, kelemahan utama nisbah harga perolehan perlu diperbetulkan bagi mengelakkan interpretasi yang meragukan serta penerimaan penemuan empirikal yang samar.

Dalam kaedah geometrik dengan penggunaan kriteria simetri dan keseimbangan, thesis ini menunjukkan ciri-ciri PER yang tidak seimbang iaitu berat di bahagian bawah (pendapatan) berbanding dengan bahagian atas (harga). Dalam mengenalpasti ciri-ciri fungsi jalinan di antara pembahagi atas dan bawah, isu ketidakseimbangan dan ketidak-simetri telah dikenalpasti dan jika digunakan dalam menilai prestasi syarikat, ianya akan memberi penilaian yang tidak tepat. Dengan menggunakan PER

sebagai contoh, kajian ini memperkenalkan beberapa kaedah baru dalam penilaian saham iaitu *the Geometric Boundary Indicator (GBI), the Benchmark Geometric Boundary Indicator (BGBI), and the Geometric Share Approach (GSA).* Dalam lingkungan Geometric Share Approach, satu penilaian baru iaitu indek nisbah nilai diperkenalkan. *PERs* ini adalah bebas daripada isu ciri-ciri ketidak-simetri dan ketidakseimbangan.

Dengan mengambilkira kaedah penilaian saham secara tradisi, kajian ini cuba mengetengahkan penyelesaian kepada isu-isu di atas dalam penggunaan nisbah harga perolehan. Dengan menggunakan beberapa sumbangan kajian yang menggunakan kaedah geometri bagi menyelesaikan kelemahan ciri-ciri nisbah di dalam bidang perdagangan antarabangsa, rangka kerja penilaian saham yang sesuai telah dibangunkan di mana, ukuran prestasi saham yang komprehensif telah diperolehi dan prestasi syarikat telah diilustrasikan menggunakan perangkaan.

Penerapan dan kegunaan kaedah-kaedah yang dicadangkan ini diuji menggunakan data. Analisa perbandingan prestasi di antara kaedah lama nisbah harga perolehan dan cadangan kaedah baru ini telah diuji secara empirikal. Hasil daripada ujikaji ini membuktikan bahawa cadangan kaedah baru telah menunjukkan prestasi penialain yang lebih baik. Penemuan dalam penyelidikan ini telah membawa kepada implikasi baru dalam penggunaan nisbah harga perolehan sebagai indikator penilaian saham dan dalam masa yang sama telah memperkenalkan beberapa teknik baru dalam penyelidikan penilaian saham.

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APPROVAL

I certify that an Examination Committee met on **14th January 2010** to conduct the final examination of **Suzana Idayu Wati Osman** on his **Doctor of Philosophy** thesis entitled **"Stock Valuation, Price Earnings Ratios, And Firm Performance"** in accordance with the University Colleges Act 1971 and the Constitution of Universiti Putera Malaysia [P.U.(A) 106] 15 March 1998. The Committee recommends that the student be awarded the Doctor of Philosophy degree.

Members of the Thesis Examination Committee are as follows:

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This thesis submitted to the Senate of Universiti Putra Malaysia has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee are as follows:

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Date:

DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations, which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UPM or any other institutions.

SUZANA IDAYU WATI OSMAN

Date:

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