UPH Universitas Pelita Harapan
FACULTY OF ECONOMICS & BUSINESS

WINNING THE RIGHT GAME

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THE INTRODUCTION TO

THE FIRST EDITION

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In this edition of Research with Impact series in the Winning the Right Game, we introduce our three alumni from our doctoral program in Management who wrote on the topics in High Finance.
Their respective research highlighted the most important issues in **Indonesia's insurance industry**, **Bond Market** and **Capital market**.

The first research involves Insurance research stems from the phenome gaps between providing life insurance products to the investment portfolio linked to the insurance market. The background is the period during health crisis of Covid –19 that transmitted into ensuing financial crisis in the capital market. The performance of life insurance product that was expected to provide an assurance during an economic or health crisis downturn became ineffective due to the performance of financial investment which are linked to the life insurance product.

During a good economic times, this investment linked insurance product is well accepted by investors due to its attractiveness in providing an upside extra income to the investor aside from providing protection. However, when the crisis hits, the capital market also usually takes the hit.

The research of Dr Agus Setiawan who is an applied mathematician by training underlines this relationship between the investment linked insurance product to the nature of protection of the insurance products. His research offered a deeper look into how authority such as Indonesia's Otoritas Jasa Keuangan (OJK/ Indonesia Financial Authority) should incorporate this relationship into it monitoring roles in the insurance industry. Insurance industry's model for competition which is driven very much by high cost of insurance sales agents has driven the policy holders with not much portion of their contribution to provide the proper cost of insurance in the first year of their plans.

This internal practice has been exacerbated by the link to the return of the investment portfolio in the high volatility period in the capital market.

In summary, the research highlighted the importance of prudential rules and clear understanding about the functionality of the market to the products that supposed to guarantee a long-term return of an insurance products. The research is important for Government authority, investors, policy holders and also the insurance companies in Indonesia who should see Indonesian's market not only as buoyant market for insurance products to tap and to benefit from, but also as the market place where they can practice good governance and building their brand trustworthiness.

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Dr. Agus Setiawan, S.Si., M.Sc.

"Summary of Fair Pricing Research In Unit Linked Insurance"

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Dr. Agus Setiawan, S.Si., M.Sc.

"Summary of Fair Pricing Research In Unit Linked Insurance"

This research aims to fill the gap in sustainable insurance product study. The central research question of this research is how to develop a fair pricing framework in order to design a sustainable financial product. Current profit testing method is arguably lack of policyholder considerations. The profitability decision under current method only considers profit margin for company. There is no profitability measurement for policyholder. To improve fairness under current pricing, study proposes a concept of equity in risk between company and policyholder. In order to establish equity in risk, profitability for policyholder needs to be defined. and risk measure Conditional Tail Expectation (CTE) for company and policyholder is proposed as a solution. Fairness is achieved if CTE between company and policyholder falls within certain range.

CTE generated under new framework could be used as a reference point to all stakeholders to assess the fairness of Unit Linked price. The target population for the study was any regular premium Unit Link product. This research used simple random sampling. From the population consisting of 34 companies 20 samples were drawn. Data is taken from the Indonesian Financial Service Authority. The data used is from the time period between 1 January 2015 – 31 October 2019. Using the CTE this study finds that most of the Unit Linked pricing are far from fair. It is recommended that companies could be more efficient in their operating and distribution cost in order to be fairer to policyholder and therefore will make the product more sustainable.

Dr. Ikin Solihin, ST, MBA

“Volatility, Return, and Winning Rate Model of Stock Option Investments in the Indonesia Stock Exchange”

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Dr. Ikin Solihin, ST, MBA

"Volatility Model, Returns, and Winning Rate of Stock Option Investments on the Indonesia Stock Exchange"

Options represent one of the most significant instruments in the capital market. Based on practical experience, volatility constitutes a critical factor in option pricing. The greater the volatility, the higher the probability of either profit or loss. In Indonesia, the equity options market has been inactive since 2010. This study seeks to examine whether, if reintroduced, Indonesian options could generate profitability. Option prices are calculated using the Black-Scholes-Merton model, incorporating several determinants such as Weighted Moving Average (WMA), strike price, interest rate, dividends, and volatility.

Four different volatility models are subsequently employed to estimate option values. Based on the computed option prices, returns and winning rates are derived for each sample option. The findings indicate that Indonesian options have the potential to yield profits. However, profitability varies across positions, with the majority of results demonstrating that option writers possess a higher winning rate than takers, in both put and call options.

The third Research in this series involves the yield curve modelling for benchmark curve of Indonesian Government Bonds. Indonesia has been active bond issuers in period after the Asian Financial Crisis. Development of Local Bond Market has been seen as an answer to the need for borrowing locally to finance the fiscal expenditures.

In the effort to the development of a credible local bond market, establishing a benchmark yield curve or term structure of interest is becoming critical. The yield curve modeling started about 30 years ago when the ability to do computational finance started improving. The objective of this research is to provide an alternative modelling to the existing IBPA (Indonesia Bond Pricing Agency) yield curve modelling for government bonds to improve the fair price of the bonds.

Research by Dr Randi Prathama, who was a former professional bond trader at one of the largest multinational bank in Indonesia, has led to the reinvention of the fair pricing model of government bond by using a modified Svenson model (1994). The result of the study shows that the alternative model performs much better in promoting the fair pricing in the Indonesia Government Bond Market, which has been growing to be a huge and burgeoning bond market attracting both foreign and local investors.

Dr. Randi Bayu Prathama, ST., MM.

“Pricing Model for Indonesia Government Bond”

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Dr. Randi Bayu Prathama, ST., MM.

"Pricing Model for Indonesia Government Bond"

The yield curve is the building block of fair value in pricing bonds. It has been used by market participants for their asset valuations, Central Bank and Government's Treasury for monetary, interest rate and borrowing decisions. The official yield curve construction in Indonesia government bond is based on Svensson (1994) model which is widely accepted and used by several countries. The objective is to find more accurate fair price from yield curve as the alternative of IBPA government bond curve as the baseline. This research takes observation on three alternative yield curve models in comparison with the baseline Svensson Model to price several series of benchmark and non-benchmark bonds. The main contribution of this research is the dynamic lambda that applies in the third model.

With the dynamic lambda, the yield curve would have different curvature that will affect the fair price performance of Indonesia government bonds. The fair price is further tested with One-Way ANOVA and Post Hoc in order to find the significance between models. The results show that alternative models are performing better in determining the fair value prices of the government bonds compared to the baseline model.

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