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Nurainun Bangun dan Hartanto Susilo

Dari Redaksi

Pertama-tama kami dari Redaksi mengucapkan terima kasih atas batuan dari teman-teman yang telah mengirimkan tulisan untuk dimuat pada Jurnal ini. Kami terus menghimbau dan meminta bantuan untuk teman-teman pengajar, peneliti dan praktisi untuk mengirimkan tulisannya untuk dimuat pada Jurnal ini.

Jurnal yang sedang anda baca ini memuat 5 tulisan yang dianggap cukup baik untuk para peminat Pasar Modal dan Perbankan. Tulisan pertama ditulis oleh Pardomuan Sihombing dan Deasy Amalia dari Universitas Trisakti dengan judul "Analisis Kemampuan Stock Selection dan Market Timing pada Reksa Dana Saham di Indonesia periode Januari 2008 – Juli 2013." Data yang dipergunakan mulai tahun 2008 sampai dengan 2013 untuk melihat kemampuan stock selection dan market timing pada Reksa Dana Saham di Indonesia. Penelitian ini memberikan hasil bahwa Reksa Dana saham di Indonesia mempunyai kinerja yang lebih baik dari kinerja pasar sebagai pesaingnya. Fund Manager tidak memiliki kemampuan dalam stock selection tetapi memiliki kemampuan market timing dalam memilih saham.

Tulisan kedua ditulis oleh David Saputra dari Sampoerna School of Business dan Adler Haymans Manurung dari PT Finansial Bisnis Informasi, dengan judul "Valuation of PT Astra Agro Lestari Share Price Using Discounted Cash-Flow Method." Penelitian ini melakukan peramalan harga saham PT Astra Agro Lestari Tbk (AALI) dengan meggunakan metode Diskonto Arus Kas perusahaan. Paper ini melakukan proyeksi keuangan perusahaan untuk lima tahun ke depan. Ketika melakukan proyeksi digunakan beberapa asumsi yang akhirnya paper ini memperkirakan harga AALI senilai Rp. 29.404. Harga saham di Bursa sekitar Rp. 25.800,- sehingga harga sahaam tersebut undervalue dibandingkan dengan proyeksi yang dilakukan.

Tulisan ketiga berjudul "Fundamental Valuation of PT Indofood Sukses Makmur Tbk Using Discounted Cash Flow and Residual Earnings Model" ditulis oleh Stefanie Wijaya dari Sampoerna School of Business dan Adler Haymans Manurung dari PT Finansial Bisnis Informasi. Paper ini mencoba membahas harga saham fundamental dari PT Indofood Sukses Makmur Tbk (INDF) dengan menggunakan metode Diskonto Arus Kas dan Model sisa Pendapatan. Paper ini menemukan harga saham INDF undervalue dimana harga estimasi dengan menggunakan kedua pendekatan yang disebutkan terlihat jelas jauh lebih tinggi dari harga fundamentalnya. Rekomendasinya, investor dapat membeli saham INDF ini.

Tulisan keempat berjudul "Measuring Intrinsic Value of PT Bank Mandiri Tbk. using Residual Income Approach and Dividend Discount Model And Price To Book Value." ditulis oleh Teuku Rusydi Khairi dari Sampoerna School of Business dan Adler Haymans Manurung sebagai Presiden Direktur PT Finansial Bisnis Informasi. Paper ini sangat jelas dengan judul yang diberikan yaitu memprediksi harga saham Bank Mandiri yang diperdagangkan di Bursa Efek Indonesia degan menggunakan pendekatan Pendapatan Residual dan model diskonto dividen. Paper ini melakukan proyeksi lima tahun kedepan tentang pendapatan perusahaan sekaligus menghitung harga saham tersebut. Hasil yang diperoleh dari proyeksi tersebut bahwa harga saham Bank Mandiri (BMRI) di Bursa senilai Rp. 11.200,- menggunakan metode Pendapatan Residual; senilai Rp. 10.100,- menggunakan model diskonto dividend an Rp. 9.800,- menggunakan rasio harga terhadap nilai buku. Harga yang diperoleh dengan proyeksi tersebut

sangat jauh lebih tinggi dari harga saham di pasar sekitar Rp. 8.700,- dan harga tersebut dinyatakan undervalue. Oleh karenanya, investor sangat layak membeli saham ini.

Tulisan kelima berjudul "Analisis Pengaruh Size, Business Risk, Profitability, Liquidity dan Asset Structure terhadap struktur Modal pada Perusahaan Manufaktur yang terdaftar di Bursa Efek Indonesia periode 2011 - 2013" yang ditulis oleh Nurainun Bangun saat ini sebagai Dosen Fakultas Ekonomi Universitas Tarumanagara dan Hartanto Susilo, Alumni Fakultas Ekonomi Universitas Tarumanagara. Penelitian ini menggunakan data perusahaan manufaktur sebanyak 192 perusahaan untuk periode 2011 sampai 2013 yang terdaftar di Bursa Efek Indonesia. Penelitian ini menggunakan regressi berganda untuk menganalisa pengaruh Size, Business Risk, Profitabilitas, Liquidity dan struktur aset terhadap struktur modal perusahaan. Penelitian ini memberikan hasil yaitu peubah risiko bisnis (business risk); profitabilitas dan liquiditas secara statistik signifikan mempengruhi struktur modal. Size dan Struktur aset tidak signifikan mempengaruhi struktur modal, dimana struktur modal diukur dengan rasio hutang terhadap ekuitas.

Hadirnya Jurnal ini menjadi tambahan jurnal yang berisikan hasil penelitian yang akan dibaca oleh para akademisi dan Peneliti serta Praktisi yang sangat berminat dalam bidang Pasar Modal dan Perbankan. Pada edisi berikutnya kami akan hadir lagi dengan tulisan yang lebih menarik pada para pembaca jurnal ini. Selamat membaca !!!

Hormat kami,

Prof. Dr.Adler Haymans Manurung
Chief in Editor

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ANALISIS KEMAMPUAN *STOCK SELECTION* DAN *MARKET TIMING* PADA REKSA DANA SAHAM DI INDONESIA PERIODE JANUARI 2008-JULI 2013

Deasy Amalia
Universitas Trisakti

Pardomuan Sihombing
Universitas Trisakti

ABSTRACT

This research attempt to evaluate the performance of the Equity Mutual Fund in Indonesia and analyze the ability of the Investment Manager in the stock selection and market timing on Equity Mutual Fund in Indonesia. To answer the target, the data used in this research are Net Asset Value (NAV) Monthly of Equity Mutual Fund, Jakarta Composite Index (JCI), and the interest rate of Bank Indonesia from January 2008 to July 2013. Performance of the Equity Mutual Fund in Indonesia in this research were measured using a model that has been developed by Jensen (1968). While the Investment Manager's ability to see in terms of stock selection and market timing models used have been developed by Henriksson and Merton (1981). The sample of this study using the winners of Mutual Fund Award by Investor magazine in March 2013 edition. The results of this research indicate that in the Equity Mutual Fund in Indonesia during the study period had a better performance than the performance of the market as its comparator. While in terms of stock selection and market timing ability during the study period in the Investment Manager of Equity Mutual Fund in Indonesia is considered to not have the ability to choose the right stock (stock selection ability), but on the other hand are considered to have the ability to sell/buy stock at the right time (market timing ability).

Keywords: equity mutual fund, performance of mutual fund, market timing, stock selection.

PENDAHULUAN

Kegiatan investasi mempunyai peranan strategis dalam pertumbuhan perekonomian suatu negara, sebab tanpa adanya investasi maka laju perekonomian suatu negara akan *stagnan* atau jalan di tempat. Pasar modal merupakan alternatif tempat investasi bagi investor yang akan menanamkan dananya untuk memperoleh *return* berupa dividen maupun *capital gain* serta mendapatkan hak kepemilikan atas perusahaan.

Reksa Dana merupakan salah satu bentuk instrumen investasi yang dirancang guna menghimpun dana dari masyarakat yang hanya memiliki waktu dan pengetahuan yang terbatas, namun memiliki kecukupan modal serta keinginan untuk melakukan investasi. Industri Reksa Dana berkembang dengan pesat di Indonesia. Hal ini dapat dilihat dari peningkatan jumlah Reksa Dana di Indonesia setiap tahunnya.

Reksa Dana Saham dapat memberikan potensi pertumbuhan nilai investasi yang lebih tinggi, jika dibandingkan dengan ketiga jenis instrumen Reksa Dana lainnya, yaitu Reksa Dana Pasar Uang, Reksa Dana Pendapatan Tetap, maupun Reksa Dana Campuran. Namun demikian, hal itu sebanding dengan tingkat risiko yang akan didapat.

Hal penting yang perlu diketahui oleh investor dalam berinvestasi di Reksa Dana adalah manajemen portofolio yang dilakukan oleh Manajer Investasi dalam mengelola produknya. Terdapat dua strategi yang dapat dilakukan oleh Manajer Investasi dalam mengelola portofolionya, yaitu strategi portofolio aktif dan strategi portofolio pasif. Portofolio yang dikelola secara aktif memiliki tingkat risiko dan tingkat harapan pengembalian yang selalu berubah. Cara pendekatan terhadap strategi aktif adalah melalui pengukuran kemampuan pemilihan sekuritas *(stock selection ability)* untuk pembentukan portofolio yang optimal, dan kemampuan *market timing* (Tandelilin 2010).

Kemampuan pemilihan sekuritas *(stock selection ability)* adalah kemampuan Manajer Investasi dalam memilih efek sekuritas yang tepat untuk dimasukkan atau dikeluarkan dari portofolio Reksa Dana dengan tujuan memberikan tingkat pengembalian yang lebih baik daripada tingkat pengembalian normal. Sedangkan kemampuan *market timing* adalah kemampuan Manajer Investasi dalam memilih waktu kapan untuk membeli efek sekuritas, kapan untuk menukar atau menjual efek sekuritas yang dikelolanya (Manurung, 2008).

Penelitian akan kemampuan Manajer Investasi dalam memilih saham yang tepat *(stock selection ability)* dan kemampuan dalam menentukan saat yang tepat *(market timing ability)* penting bagi investor guna mengukur kemampuan dari masing-masing Manajer Investasi dalam mengelola portofolionya. Jensen (1968) melakukan penelitian dan menyimpulkan bahwa Reksa Dana Saham yang diteliti pada umumnya tidak menunjukkan kinerja yang baik dengan melihat lebih rendahnya tingkat pengembalian Reksa Dana dibandingkan dengan tingkat pengembalian pasar. Kinerja Reksa Dana yang kurang memuaskan tersebut disebabkan oleh ketidakmampuan Manajer Investasi dalam memilih saham yang dapat meningkatkan kinerja Reksa Dana. Treynor dan Mazuy (1966) dan Henriksson dan Merton (1981) mengembangkan model untuk menguji *stock selection ability* dan *market timing ability* yang merupakan ukuran kemampuan dari Manajer Investasi dalam mengelola Reksa Dana. Hasil penelitian ini menunjukkan bahwa Manajer Investasi dari Reksa Dana tidak berhasil mengalahkan kinerja pasar. Sebaliknya penelitian yang dilakukan oleh Grinblatt dan Titman (1992), Hendricks *et al*. (1993), serta Goetzmann dan Ibbotson (1994) justru menunjukkan keadaan sebaliknya, yaitu adanya kinerja yang baik pada Reksa Dana yang ditelitinya.

Di Indonesia beberapa penelitian mengenai kinerja Reksa Dana sudah dilakukan. Wardhani (2003) dengan data bulanan pada periode 1998-2001 melakukan pengujian dengan model Henriksson Merton dikombinasikan dengan model *Carhart* menemukan dari 18 Reksa Dana saham yang diobservasi memiliki kinerja yang lebih buruk daripada kinerja pasar dan tidak ditemukan satu pun yang memiliki *positive significant stock selection ability* dan hanya satu saja yang memiliki *significant market timing ability*.

Dennis *et al*. (2004) dalam penelitiannya pada 15 Reksa Dana pendapatan tetap menunjukkan kemampuan Manajer Investasi dalam mengelola portofolionya justru memberikan kontribusi negatif tehadap pengembalian portofolionya, karena ketidakmampuan dari *stock selection ability* dan *market timing ability* dari masing-masing Reksa Dana.

Pardomuan (2005) dengan menggunakan model *Henriksson Merton* pada Reksa Dana pendapatan tetap periode 2001-2004 menemukan 6 dari 12 Reksa Dana yang memiliki *bond selection ability*, sedangkan untuk *market timing ability* terdapat 6 Reksa Dana yang positif.

Rezkyka (2009) meneliti tentang analisis kinerja Reksa Dana tahun 2005-2008 dengan menggunakan 19 Reksa Dana Saham, menyimpulkan bahwa terdapat korelasi antara kemampuan *stock selection* dan *market timing* pada Manajer Investasi di Indonesia. Gunawan (2010) melakukan penelitian tentang evaluasi kinerja Reksa Dana tahun 2006-2009 dengan menggunakan sampel 24 Reksa Dana saham, yang menyimpulkan manajer investasi di Indonesia memiliki kinerja yang baik, namun dapat dipengaruhi oleh kondisi pasar dan volatilitas harga saham. Rachmadini (2012) meneliti tentang kinerja Reksa Dana Saham periode Januari 2006-Juni 2011, menyimpulkan bahwa berdasarkan model *Henriksson Merton* terdapat tiga dari enam belas Reksa Dana Saham yang memiliki kemampuan *market timing*.

Dengan menggunakan model yang telah dikembangkan oleh Jensen (1968) dan Henriksson dan Merton (1981), penelitian ini ingin menjawab beberapa pertanyaan berkaitan dengan kinerja Reksa Dana Saham di Indonesia dan kemampuan Manajer Investasi dalam melakukan *stock selection* dan *market timing*. Pertama, apakah kinerja Reksa Dana Saham di Indonesia periode Januari 2008-Juli 2013 dapat memberikan pengembalian yang lebih besar daripada pengembalian pasar sebagai pembandingnya? Kedua, adakah kemampuan Manajer Investasi dalam memilih saham yang tepat *(stock selection ability)* pada Reksa Dana Saham di Indonesia periode Januari 2008 hingga Juli 2013? Ketiga, adakah kemampuan Manajer Investasi dalam menentukan saat yang tepat *(market timing ability)* pada Reksa Dana Saham di Indonesia periode Januari 2008 hingga Juli 2013?

KAJIAN TEORITIS

Reksa Dana merupakan salah satu bentuk instrumen investasi yang dirancang guna menghimpun dana dari masyarakat yang hanya memiliki waktu dan pengetahuan yang terbatas, namun memiliki kecukupan modal serta keinginan untuk melakukan investasi. Reksa Dana berdasarkan jenis investasinya dibagi menjadi empat katagori, yaitu: Reksa Dana Pasar Uang, Reksa Dana Pendapatan Tetap, Reksa Dana Saham, dan Reksa Dana Campuran. Kemudian, Bapepam dan LK melalui peraturan No.IV.C.4, menambah jenis Reksa Dana dengan Reksa Dana Terproteksi, Reksa Dana Indeks, dan Reksa Dana dengan penjamin.

Model yang telah dikembangkan oleh Jensen (1968) akan digunakan untuk mengukur kinerja Reksa Dana Saham di Indonesia. Dimana bila nilai α positif maka dapat dikatakan bahwa Reksa Dana Saham tersebut memiliki kinerja yang lebih baik dari *benchmark* atau kinerja pasar.

Sedangkan apabila nilai koefisien alfa negatif berarti Reksa Dana Saham tersebut tidak memiliki nilai yang lebih baik dari kinerja pasar sebagai pembandingnya. Model Alfa Jensen adalah sebagai berikut :

$$\mathbf{R_{pt} - R_{ft} = \alpha_p + \beta_p (R_{mt} - R_{ft}) + \varepsilon_{pt}}$$

dimana :

α_p = ukuran kinerja Reksa Dana *Jensen*

R_{pt} = pengembalian Reksa Dana pada periode t

R_{ft} = pengembalian sekuritas bebas risiko pada periode t

R_{mt} = pengembalian pasar pada periode t

ε_{pt} = *error term* Reksa Dana pada periode t

Model yang telah dikembangkan oleh Henriksson dan Merton (1981) digunakan untuk mengukur kemampuan Manajer Investasi dalam memilih saham yang tepat (menguntungkan) atau *stock selection ability* dan dalam merubah-ubah portofolionya sehingga memberikan pengembalian yang lebih baik dibandingkan dengan pengembalian pasar sebagai pembandingnya tanpa mempertimbangkan biaya transaksi atau *market timing ability*, dengan mengasumsikan variabel lain konstan. Adapun model *Henriksson Merton* adalah sebagai berikut :

$$\mathbf{R_p - R_f = \alpha + \beta(R_m - R_f) + \delta(R_m - R_f)\, D + \varepsilon_p}$$

dimana :

R_{pt} = pengembalian Reksa Dana pada periode t

R_{ft} = pengembalian sekuritas bebas risiko pada periode t

R_{mt} = pengembalian pasar pada periode t

D = variabel *dummy* dengan nilai 1 untuk *Rm* > *Rf* dan nilai 0 untuk lainnya

ε_{pt} = *error term* Reksa Dana periode t

Dalam model Henriksson Merton kemampuan Manajer Investasi dalam memilih saham yang tepat *(stock selection ability)* ditunjukkan oleh *konstanta* $\boldsymbol{\alpha}$ yang bernilai positif. Sedangkan untuk menilai kemampuan Manajer Investasi dalam mengubah-ubah portofolionya pada saat yang tepat (*market timing ability)* dapat ditunjukkan oleh nilai $\boldsymbol{\delta}$ positif, begitu pula sebaliknya bila nilai $\boldsymbol{\delta}$ bertanda negatif, dapat diartikan bahwa Manajer Investasi tidak memiliki kemampuan dalam mengubah-ubah portofolionya pada saat yang tepat (*market timing ability).*

METODE PENELITIAN

Populasi yang digunakan dalam penelitian ini adalah seluruh Reksa Dana saham yang terdaftar di Bapepam-LK selama periode penelitian Januari 2008 hingga Juli 2013 yang berjumlah 117 Reksa Dana Saham. Sampel yang digunakan dalam penelitian ini adalah Reksa Dana saham Terbaik 2013 Periode 5 tahun versi majalah Investor edisi Maret 2013 yang telah terbagi menjadi tiga klasifikasi berdasarkan jumlah *Asset Under Management* (AUM) yaitu untuk kelas aset > 1 tiliun rupiah, kelas aset > 100 miliar rupiah - 1 triliun rupiah, serta kelas aset

> 25 miliar – 100 miliar rupiah. Adapun dalam penelitian ini dipilih lima Reksa Dana saham peringkat teratas untuk setiap kelas asetnya.

Data yang digunakan dalam menunjang penelitian ini adalah data sekunder yang berupa Nilai Aktiva Bersih (NAB) bulanan Reksa Dana yang terdiri dari 15 Reksa Dana saham dan telah terdaftar di Bapepam-LK, yang telah efektif sebelum 1 Januari 2008 dan aktif diperdagangkan sampai dengan 31 Juli 2013. Data sekunder tersebut diperoleh dari Infovesta, dengan terlebih dahulu melihat pemeringkatan Reksa Dana saham terbaik 2013 Periode 5 Tahun versi Majalah Investor edisi Maret dengan kriteria tertentu. Daftar Reksa Dana saham yang menjadi *sample* penelitian dapat dilihat pada Tabel 1.

Data sekunder lainnya yang dikumpulkan untuk membantu memecahkan permasalahan dalam penelitian ini antara lain data tingkat Indeks Harga Saham Gabungan (IHSG) dan data suku bunga Bank Indonesia.

Tabel 1. Daftar Reksa Dana Saham yang menjadi *sample* penelitian

No.	Reksa Dana Saham	NAB per unit penyertaan	
		Des-2007	Juli-2013
KELAS ASET > 1 TRILIUN RUPIAH			
1	Panin Dana Maksima	16995.46	65814.93
2	Syailendra Equity Opportunity Fund	1613.81	3395.79
3	Schroder Dana Istimewa	2956.46	5944.43
4	BNP Paribas Pesona	12995.72	22343.97
5	Schroder Dana Prestasi Plus	13379.55	23319.35
KELAS ASET > 100 MILIAR – 1 TRILIUN RUPIAH			
6	Panin Dana Prima	1001.24	3163.41
7	Dana Ekuitas Prima	2564.52	4109.29
8	Rencana Cerdas	7203.42	10900.51
9	Batavia Dana Saham	24314.24	46087.15
10	Pratama Saham	2528.87	4621.34
KELAS ASET > 25 MILIAR – 100 MILIAR RUPIAH			
11	Grow-2-Prosper	1087.53	2261.6
12	GMT Dana Ekuitas	1471.4	3086.45
13	NISP Indeks Saham Progresif	1000.79	1653.34
14	AXA Citradinamis	3245.19	4210.62
15	Emco Mantap	4525.37	6878.95

Sumber : Majalah Investor Edisi Maret 2013 (data diolah)

PEMBAHASAN

I. Hasil Regresi Model Kinerja Reksa Dana Saham di Indonesia

Pada penelitian ini, kinerja Reksa Dana Saham di Indonesia dianalisis dengan menggunakan model Jensen yang akan meregresikan antara kelebihan pengembalian portofolio (EP) sebagai variabel tidak bebas dengan kelebihan pengembalian pasar (EM) sebagai variabel bebas. Kinerja Reksa Dana dalam penelitian ini akan dianalisis dengan meregresikan kinerja Reksa Dana per Individu dan kinerja Reksa Dana keseluruhan

Tabel 2. Hasil Regresi Kinerja Per Reksa Dana dengan Model Jensen dan Model Henriksson Merton

Reksa Dana Saham	Model Jensen				Model Henriksson Merton					
	Intercept		*Rm – Rf*		*Intercept*		*Rm – Rf*		*(Rm-Rf)D*	
	Coeff.	*p-value*	*Coeff.*	*p-value*	*Coeff.*	*p-value*	*Coeff.*	*p-value*	*Coeff.*	*p-value*
Panin Dana Maksima	1.300473	0.0001	1.044882	0.0000	0.792217	0.1012	0.965905	0.0000	0.188755	0.1537
Syailendra Equity Opportunity Fund	0.391348	0.2419	1.172812	0.0000	-0.212873	0.6595	1.078923	0.0000	0.224395	0.0899
Schroder Dana Istimewa	0.280710	0.4011	0.987532	0.0000	0.129283	0.7890	0.964002	0.0000	0.056237	0.6706
BNP Paribas Pesona	0.041537	0.9011	1.034071	0.0000	-0.115191	0.8115	1.009718	0.0000	0.058206	0.6598

menggunakan model *fixed effect* pada data panel.

I.1. Kinerja Reksa Dana Saham di Indonesia Model Jensen Per Individu

Kinerja Reksa Dana Saham di Indonesia akan diregresikan untuk masing-masing Reksa Dana Saham secara individu untuk melihat Reksa Dana saham yang mampu memberikan kinerja yang lebih baik daripada kinerja pasar *(outperform the market)* dan Reksa Dana Saham yang memberikan kinerja yang tidak lebih baik dari kinerja pasar *(underperform the market).* Model Jensen akan meregresikan antara kelebihan pengembalian portofolio *(Rp–Rf)* sebagai variabel tidak bebas dengan kelebihan pengembalian pasar *(Rm-Rf)* sebagai variabel bebas. Ringkasan hasil regresi untuk masing-masing Kinerja Reksa Dana di Indonesia model Jensen dapat dilihat pada Tabel 2.

Hasil regresi kinerja per Reksa Dana Saham dengan model Jensen pada Tabel 2 menunjukkan bahwa terdapat 2 Reksa Dana yang memilliki kinerja lebih baik daripada kinerja pasar *(Rm-Rf)* yang terlihat dari nilai koefisien atau *alfa* yang positif signifikan pada tingkat kepercayaan 5%, yaitu Panin Dana Maksima (1.300473) dan Panin Dana Prima (1.002936). Dengan nilai *alfa* positif signifikan yang berarti tingkat pengembalian kinerja Reksa Dana tersebut memberikan pengembalian 130.05 basis poin sampai dengan 100.29 basis poin per bulan yang lebih tinggi daripada pengembalian pasar atau dapat dikatakan *outperform the market,* dengan asumsi tidak ada variabel yang mempengaruhinya.

Schroder Dana Prestasi Plus	0.057283	0.8639	0.962583	0.0000	-0.234719	0.6271	0.917209	0.0000	0.108443	0.4122
Panin Dana Prima	1.002936	0.0028	1.095679	0.0000	0.633948	0.1896	1.038343	0.0000	0.137034	0.3002
Dana Ekuitas Prima	-0.035163	0.9162	1.142563	0.0000	0.025275	0.9583	1.151954	0.0000	-0.022445	0.8652
Rencana Cerdas	-0.137568	0.6807	1.042867	0.0000	-0.245365	0.6115	1.026116	0.0000	0.040034	0.7621
Batavia Dana Saham	0.198440	0.5528	1.076483	0.0000	-0.838350	0.0829	0.915377	0.0000	0.385043	0.0037
Pratama Saham	0.260368	0.4361	1.387391	0.0000	-0.613129	0.2045	1.251660	0.0000	0.324398	0.0143
Grow-2-Prosper	0.360401	0.2811	1.014413	0.0000	-1.286553	0.0078	0.758496	0.0000	0.611643	0.0000
GMT Dana Ekuitas	0.357366	0.2852	1.075627	0.0000	-0.497603	0.3031	0.942775	0.0000	0.317517	0.0165
NISP Indeks Saham Progresif	-0.017364	0.9586	0.983561	0.0000	-0.408915	0.3974	0.922718	0.0000	0.145413	0.2716
AXA Citradinamis	-0.367626	0.2716	1.042092	0.0000	-0.514748	0.2867	1.019231	0.0000	0.054638	0.6795
Emco Mantap	-0.020283	0.9516	1.233470	0.0000	-1.259988	0.0092	1.040836	0.0000	0.460399	0.0005

Sedangkan variabel kelebihan pengembalian pasar secara konsisten mempengaruhi kelebihan pengembalian portofolio secara positif signifikan. Variabel kelebihan pengembalian pasar memberikan kontribusi peningkatan kelebihan pengembalian portofolio dengan kisaran 96.25 basis poin (Schroder Dana Prestasi Plus) sampai dengan 138.74 basis poin (Pratama Saham) per bulan untuk setiap 100 basis poin peningkatan kelebihan pengembalian pasar dengan asumsi tidak ada variabel lain yang mempengaruhi.

I.2. Kinerja Reksa Dana Saham di Indonesia Model Jensen Keseluruhan dengan Panel Data

Dalam menilai kinerja Reksa Dana saham di Indonesia pada model Jensen secara keseluruhan ini akan diregresikan antara kelebihan portofolio *(Rp-Rf)* sebagai variabel dependen dengan kelebihan pengembalian pasar *(Rm-Rf)* sebagai variabel independen. Ringkasan hasil regresi ini dapat dilihat pada Tabel 3.

Tabel 3. Hasil Regresi Kinerja Reksa Dana dengan Panel Data

Model Jensen				Model Henriksson Merton					
Alpha		Beta		Alpha		Beta		Chi	
Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value	Coeff.	p-value
0.244857	0.0064	1.086402	0.0000	-0.309781	0.0178	1.000218	0.0000	0.205981	0.0000

Pada Tabel 3 di atas dapat dilihat bahwa nilai *alfa* atau koefisien intersep mencerminkan kinerja Reksa Dana saham di Indonesia periode Januari 2008 hingga Juli 2013, dimana dalam periode keseluruhan *(pool section)* mempunyai korelasi positif signifikan pada tingkat 5%. Hasil ini menunjukkan bahwa Manajer Investasi memiliki kinerja yang lebih baik daripada kinerja pasar. Dari hasil tersebut dapat disimpulkan bahwa Manajer Investasi untuk Reksa Dana saham di Indonesia selama periode penelitian memiliki kinerja yang lebih baik daripada kinerja pasar sebagai pembandingnya.

Sedangkan untuk variabel pengembalian pasar *(Rm-Rf)* mempunyai korelasi positif signifikan dengan tingkat pengembalian kinerja Reksa Dana saham di Indonesia selama periode penelitian, yang berarti tingkat pengembalian kinerja Reksa Dana saham meningkat bila pengambalian pasar meningkat. Hasil tersebut menunjukkan bahwa semakin tinggi pengembalian pasar akan semakin tinggi pula kelebihan pengembalian portofolio. Nilai koefisien pada penelian Reksa Dana saham di Indonesia ini memiliki nilai sebesar 1.086402, yang berarti tingkat kinerja Reksa Dana meningkat sebesar nilai tersebut bila terjadi perubahan pengembalian pasar sebesar satu poin.

II. Hasil Regresi Model *Stock Selection Ability* dan *Market Timing Ability*

Salah satu faktor yang sangat menentukan kinerja suatu Reksa Dana adalah kemampuan Manajer Investasi dalam mengelola portofolionya. Kemampuan pengelolaan portofolio ini berkaitan dengan pemilihan saham yang tepat *(stock selection ability)* dan melakukan jual beli pada saat yang tepat *(market timing ability)*. Untuk menguji ada tidaknya *stock selection ability* dan *market timing ability* dari manajer portofolio suatu Reksa Dana maka diregresikan antara kelebihan pengembalian portofolio sebagai variabel tidak bebas dengan kelebihan pengembalian pasar dan variabel *dummy* (1 apabila EM > 0, dan 0 apabila lainnya) yang dikalikan dengan kelebihan pasar sebagai variabel bebas. Untuk mendapatkan analisis secara menyeluruh maka akan dilihat *stock selection* dan *market timing ability* baik untuk setiap Reksa Dana saham di Indonesia maupun secara keseluruhan.

II.1. *Stock Selection* dan *Market Timing Ability* Reksa Dana Saham per Individu

Untuk mengetahui kemampuan Manajer Investasi dalam melakukan *stock selection* dan *market timing* pada masing-masing Reksa Dana Saham di Indonesia maka dilakukan regresi antara kelebihan pengembalian portofolio sebagai variabel dependen dengan kelebihan pengembalian pasar dan variabel *dummy* (1 apabila *Rm-Rf* > 0, dan 0 apabila lainnya) yang dikalikan dengan kelebihan pasar sebagai variabel independen. Ringkasan hasil regresi model *stock selection* dan *market timing ability* pada masing-masing Reksa Dana saham di Indonesia dapat dilihat pada Tabel 2.

Tabel 2 di atas menunjukkan kemampuan *stock selection* untuk masing-masing Reksa Dana Saham selama periode penelitian. Dari lima belas Reksa Dana Saham yang dijadikan sampel, hanya terdapat 4 Reksa Dana Saham yang memiliki nilai positif pada intersepnya (walaupun nilai positif tersebut tidak signifikan pada tingkat 5%). Adapun keempat Reksa Dana saham tersebut adalah Panin Dana Maksima, Schroder Dana Istimewa, Panin Dana Prima dan Dana Ekuitas Prima. Hal ini menunjukkan bahwa 4 Reksa Dana saham tersebut memiliki kemampuan *stock selection* dari Manajer Investasi yang mengelola portofolionya, walaupun hal tersebut tidak dapat dibuktikan secara statistik. Nilai α positif yang menunjukkan adanya kemampuan Manajer Investasi dalam melakukan *stock selection* ini berkisar antara 0,025275 (Dana Ekuitas Prima) sampai dengan 0,792217 (Panin Dana Maksima). Dengan nilai tersebut, maka dapat dikatakan bahwa *stock selection ability* memberikan kontribusi peningkatan tingkat pengembalian portofolio dengan kisaran 2,52 basis poin sampai dengan 79,22 basis poin per bulan untuk keempat Reksa Dana Saham tersebut, dengan asumsi tidak ada variabel lain yang mempengaruhinya.

Sebelas Reksa Dana Saham lainnya, yaitu Syailendra Equity Opportunity Fund, BNP Paribas Pesona, Schroder Dana Prestasi Plus, Rencana Cerdas, Batavia Dana Saham, Pratama Saham, Grow-2-Prosper, GMT Dana Ekuitas, NISP Indeks Saham Progresif, Axa Citradinamis dan Emco Mantap, menunjukkan nilai α yang negatif (ada dua Reksa Dana Saham yang menunjukkan nilai negatif signifikan pada tingkat 5%, yaitu Grow-2-Prosper dan Emco Mantap, sedangkan lainnya tidak signifikan pada tingkat 5%). Nilai α negatif yang tidak menunjukkan adanya kemampuan Manajer Investasi dalam melakukan *stock selection* ini berkisar antara -0,11519 (BNP Paribas Pesona) sampai dengan -1,286553 (Grow-2-Prosper). Dengan nilai tersebut, maka dapat dikatakan bahwa *stock selection ability* memberikan kontribusi penurunan tingkat pengembalian portofolio dengan kisaran -11.51 basis poin sampai dengan -128.65 basis poin per bulan untuk kesebelas Reksa Dana Saham tersebut, dengan asumsi tidak ada variabel lain yang mempengaruhinya.

Untuk variabel pengembalian pasar *(Rm-Rf)* mempunyai korelasi positif signifikan dengan tingkat pengembalian kinerja Reksa Dana Saham *(Rp-Rf)* pada ke lima belas Reksa Dana yang diteliti, yang berarti tingkat pengembalian kinerja Reksa Dana meningkat bila

pengembalian pasar meningkat. Hasil ini menunjukkan semakin tinggi kelebihan pengembalian pasar akan semakin tinggi pula pengembalian portofolio. Nilai koefisien pada penelitian Reksa Dana Saham di Indonesia berkisar antara 0,915377 sampai 1,251660, yang berarti tingkat pengembalian kinerja Reksa Dana Saham meningkat sebesar nilai tersebut bila terjadi perubahan pengembalian pasar sebesar satu poin.

Sedangkan untuk melihat kemampuan Manajer Investasi dalam menentukan waktu yang tepat dalam membeli dan menjual Reksa Dana Saham *(market timing ability)* ditunjukkan dengan nilai koefisien *(Rm-Rf)*D* yang positif. Dari lima belas Reksa Dana Saham yang diteliti, terdapat 5 Reksa Dana Saham yang memiliki nilai koefisien bertanda positif signifikan, yaitu Batavia Dana Saham, Pratama Saham, Grow-2-Prosper, GMT Dana Ekuitas, dan Emco Mantap. Hal ini menjelaskan bahwa kelima Reksa Dana tersebut menunjukkan dimilikinya *market timing ability* dari Manajer Investasi, sehingga dapat dikatakan bahwa Manajer Investasi dari 5 Reksa Dana Saham tersebut memiliki kemampuan dalam menentukan saat yang tepat ketika membeli atau menjual saham yang dimilikinya sehingga keuntungan yang didapat maksimal. Nilai koefisien positif yang menunjukkan adanya kemampuan Manajer Investasi dalam melakukan *market timing* ini berkisar antara 0,040034 (Rencana Cerdas) sampai dengan 0,611643 (Grow-2-Prosper). Dengan nilai tersebut, maka dapat dikatakan bahwa *market timing ability* memberikan kontribusi peningkatan tingkat pengembalian portofolio dengan kisaran 4,01 basis poin sampai dengan 61,16 basis poin per bulan untuk kelima Reksa Dana Saham tersebut, dengan asumsi tidak ada variabel lain yang mempengaruhinya.

II.2. *Stock Selection* dan *Market Timing Ability* Reksa Dana Saham Dengan Data Panel

Dalam menilai kemampuan *stock selection* dan *market timing* pada Reksa Dana saham di Indonesia secara keseluruhan ini akan diregresikan antara kelebihan pengembalian portofolio sebagai variabel dependen dengan kelebihan pengembalian pasar dan variabel *dummy* (1 apabila *Rm-Rf* > 0, dan 0 apabila lainnya) yang dikalikan dengan kelebihan pasar sebagai variabel independen. Ringkasan hasil regresi ini dapat dilihat pada Tabel 3.

Model ini bertujuan untuk menilai kemampuan *stock selection* dan *market timing* dari Manajer Investasi Reksa Dana Saham di Indonesia. Dimana bila nilai intersep positif signifikan maka dapat dikatakan Manajer Investasi memiliki *stock selection ability.* Sedangkan bila koefisien regresi *dummy* variabel pada model ini signifikan positif maka dapat dikatakan bahwa Manajer Investasi memiliki *market timing ability.*

Dari hasil regresi pada Tabel dapat dilihat bahwa nilai *alfa* atau koefisien intersep untuk periode keseluruhan *(pool section)* adalah negatif signifikan yaitu sebesar -0,309781 atau dapat dikatakan *stock selection ability* memberikan kontribusi penurunan tingkat pengembalian portofolio sebesar 30.97 basis poin per bulan. Hasil ini menunjukkan bahwa Manajer Investasi pada Reksa Dana saham di Indonesia selama periode penelitian tidak memiliki kemampuan dalam memilih saham yang tepat *(stock selection ability).*

Sedangkan koefisien regresi untuk variabel *dummy* dari hasil tersebut diatas adalah positif signifikan dalam periode keseluruhan *(pool section)* dengan nilai koefisien 0.205981 yang berarti bahwa *market timing ability* pada Reksa Dana Saham dapat memberikan kontribusi tingkat pengembalian portofolio sebesar 20,59 basis poin per bulan, dengan asumsi tidak ada variabel lain yang mempengaruhinya. Hasil regresi ini menjelaskan bahwa Manajer Investasi pada Reksa Dana saham di Indonesia memiliki kemampuan yang baik dalam membeli atau menjual saham pada saat yang tepat *(market timing ability).*

KESIMPULAN

Hasil penelitian kinerja Reksa Dana Saham di Indonesia periode Januari 2008-Juli 2013 dengan menggunakan model yang telah dikembangkan oleh Jensen (1968) dan Henriksson dan Merton (1981), menemukan Reksa Dana Saham di Indonesia selama periode penelitian memiliki kinerja yang lebih baik daripada kinerja pasar. Hal ini dapat dilihat dari nilai koefisien *alfa* yang positif signifikan. Terdapat 10 Reksa Dana Saham yang memiliki nilai *alfa* positif (2 diantaranya memiliki nilai positif signifikan). Tingkat pengembalian portofolio Reksa Dana saham di Indonesia dipengaruhi oleh kinerja pasar.

Manajer Investasi pada Reksa Dana Saham di Indonesia tidak memiliki kemampuan dalam memilih saham yang tepat *(stock selection ability).* Terdapat hanya 4 dari 15 Reksa Dana saham selama periode penelitian yang memiliki *stock selection ability* (walaupun tidak signifikan).

Manajer Investasi pada Reksa Dana Saham di Indonesia memiliki kemampuan dalam menjual/membeli saham pada saat yang tepat *(market timing ability).* Terdapat 14 Reksa Dana saham selama periode penelitian yang memiliki *market timing ability* (5 diantaranya memiliki nilai signifikan).

IMPLIKASI MANAJERIAL

Bagi Investor yang ingin melakukan investasi di Reksa Dana hendaknya mempertimbangkan terlebih dahulu kemampuan dari Manajer Investasi dalam mengelola portofolionya. Karena sekalipun Manajer Investasi melakukan investasi yang mengikuti indeks pasar (seperti Reksa Dana Indeks) yang menerapkan strategi portofolio pasif, tetap diperlukan *skill* atau kemampuan dalam memilih saham yang tepat *(stock selection ability)* dan menentukan saat yang tepat dalam mengeksekusi saham yang akan dibeli atau dijualnya *(market timing ability).*

Bagi Manajer Investasi, untuk dapat lebih meningkatkan kemampuan saat menentukan saham-saham dalam portofolio investasinya agar dapat meningkatkan kinerja Reksa Dana. Saat dilakukan pemilihan terhadap saham-saham yang akan dimasukkan ke dalam portofolio investasinya, sebaiknya Manajer Investasi melakukan analisis lebih mendalam mengenai kinerja saham yang bersangkutan, tidak hanya menggunakan strategi momentum sederhana atau hanya berdasarkan intuisi Manajer Investasi.

Peran regulator dalam hal ini Otoritas Jasa Keuangan (OJK) adalah dengan menyelenggarakan pelatihan secara rutin bagi para Manajer Investasi, maupun dengan menerbitkan sertifikasi baru khusus untuk para Manajer Investasi dengan meningkatkan standar kompetensi dibanding sebelumnya. Dengan hal tersebut, diharapkan Manajer Investasi dapat meningkatkan kemampuan dalan melakukan *stock selection* dan *market timing* dalam mengelola Reksa Dana di Indonesia.

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VALUATION OF PT. ASTRA AGRO LESTARI SHARE PRICE USING *DISCOUNTED CASH FLOW* METHOD

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ABSTRACT

This study was conducted to determine the intrinsic value of PT. Astra Agro Lestari (AALI) share price by using Discounted Cash Flow Method. This study uses a top-down analysis approach where the method starts with the macroeconomics analysis and proceed with the analysis of the company, analysis of financial projections for the next five years and finally analyzes the determination of the intrinsic value of company share price with different basic assumptions. The results of calculations with the Discounted Earnings Approach valuation indicates that the intrinsic value of stock AALI today is Rp. 29,404 in which by comparing these results with the closing price of Rp 25,800 implies the current stock is undervalued.

Keywords*: Stock Valuation, Fundamental Analysis, Discounted Cash Flow Approach.*

Introduction

According to Reuters during the past decade Indonesian economy shows a tremendous performance with its robust and resilient GDP growth of more than 5 percent per annum. As the economy consistently growing, this leads to massive improvement in every sector in the country and finally provides businesses and enterprises to grow in the foreseeable future. The economic progress is reflected with the positive trend in Indonesian Stock Exchange (IDX) performance in the earlier January 2014. In accordance to Bloomberg, Indonesian Stock Indices or Indeks Harga Saham Gabungan (IHSG) grows significantly to 4,454 from around 4,274 at the end of December 2013. This trend is expected to progress as many analysts believe that Indonesia's economy still move in the positive direction as a result of election year in 2014 and the positive sign of global economy drivers such as Japan and United States. Massive capital inflow to the country as a result of improvement in Indonesian Bond Rating into Investment Grade from several credit rating agencies such as Moody's and Fitch boosted investors' confidence to invest in the country. Going forward, this phenomenon continues to drive the increasing shares prices being listed in Indonesia Stock Exchange (Reuters, 2013).

The bullish trend in the market surely makes investors difficult to recognize whether some shares are still suitable to complements investors portfolio due to the fact that Indonesia stock market is still considered inefficient. Therefore, it is highly required to determine whether the intrinsic value of share is correctly priced or mispriced in order to identify which stocks are worth buying. The enterprise value can be reflected from its intrinsic share price which essential for both shareholders and stakeholders in deciding strategic corporate actions in the long term. It is an obligation for all stakeholders who have been given trust by shareholders to give the optimal return and finally maximize the shareholders wealth through the increasing share value.Information regarding the share price of a company is truly required by the investors as guidance in giving investment recommendation on stocks or even in deciding the potential merger and acquisition.

In fact that Indonesian stock market is still considered inefficient where the current market price of shares is not reflecting the true fair value of a company. Thus, a comprehensive fundamental analysis and appropriate valuation method is essentially required in calculating the true intrinsic value of a company share. One of the most widely-known as accurate and reliable method in predicting the share value is fundamental analysis in which a

comprehensive analysis is done on the company performance, industry outlook, competitive positioning and the macro economy conditions. In addition, an appropriate method of valuation is also needed in identifying the true intrinsic value of a company share. Discounted Cash Flow (DCF) approach is one of reliable method in valuing the share price through the projections of company Free Cash Flow (FCF) in the long term.

In accordance to Indonesia Statistic Agency or BPS data in 2013 shows that agribusiness and plantation industry is one of the most important sectors to Indonesian economy which contribute 24 percent of the total GDP. Indonesia is the largest palm oil producer in the world, in which making it as vital sector to country and finally the stocks from plantation sectors is preferable among investors in the market. Several company shares from plantation sectors are among top performing and preferred stocks by investors which include in LQ 45 (the market indices for top 45 largest market capitalization and most traded stocks in IDX) such as PT. Astra Agro Lestari Tbk (AALI), PP. London Sumatera Indonesia, Tbk (LSIP) and PT. BW Plantation, Tbk (BWPT).

In studying the valuation method for agribusiness sectors, this research selects the case study on PT. Astra Agro Lestari Tbk (AALI.JK). PT. Astra Agro Lestari Tbk is the largest agribusiness company listed in Indonesia Stock Exchange (IDX) measured by market capitalization .Based on Reuters data, in 2013 AALI occupies the first position when it passed through PT.London Sumatera Tbk (LSIP.JK) and PT. BW Plantation Tbk (BWPT) with a total capitalization of Rp 37 trillion. As the largest plantation company in terms of market value followed with strong fundamental as well as higher liquidity, the company become the top stock list of investor portfolio and the hottest equity research object by almost analysts in the capital market. Therefore, a reliable and valid valuation method is required in order to determine the target price of AALI share.

Research Objective

The research aim to give AALI stock valuation and price target as well as recommendation to investor based on its fundamental analysis.The overall purpose of this thesis is to determine the fair value of the AALI stock through a strategic and financial analysis of the corporation. This leads to the following problem statement:What is the fair value of the AALI stock on January 16th 2015 (Target Price in next 12 months)

Literature Review

According to Fama (1970), the intrinsic value of company shares is the reflection of all the information in the company. Share price can be estimated through several valuation methods. Myer (1977) asserts that the share price can be forecasted from the present value of its predictable cash flows plus the value of rights or options embedded in the company. In addition, valuation's methods vary in regards to the complexity of approach and the nature of business models. According to Samsul (2006), there are several common methods in which widely used in equity valuation such as Discounted Earnings Method, Relative Valuation Method and Factor Model Approach. Discounted earnings method is classified into two model such as earning approach and dividend approach. Relative approach is divided into Price Earnings Ratio (PER), Price to Book Value Ratio (PBR) and Price Dividend Ratio. Factor model is categorized into single factor, single index model and multifactor model. According to Manurung (2011), there are several types of approach can be utilized in conducting valuation such as discounted earnings method which can be calculated from earnings and dividend. Earnings approach is the first approach being introduced as it believes that the company will be going concern means that the company always strives to get earnings. One of the basic foundations in earnings approach is present value principle in which the value of earnings is the present value from the expected future earnings of the company.In addition, the earnings approach has four types of method such as discounted earnings, EBITDA approach, Price Earnings Ratio (PER) approach and free cash flow approach.

DCF is a simple and widely known method of discounting the value of expected future cash flows back to present value as a function of the time value of money and risk reflected in the discount rate. Essentially, the DCF equation answers the question: What is the value of future cash flows expressed in terms of today's present value? Evaluating two or more assets after adjusting each for the impact of both time and risk enables the decision maker to compare the assets on equal grounds in terms of present value and was widely considered to be one of the most important contributions to modern finance throughout history. Still to this day, various DCF techniques are considered to be an integral component of modern day finance evidenced by Higgins (1998) stating that "Indeed, it is not an exaggeration to say that discounted cash flow analysis is the backbone of modern finance and even modern business". The discounted cash flows method according to Siegel (1985) was first developed by

Williams (1938) and later refined in the context of corporate finance by Gordon (1962). The DCF method of valuation popularized by Gordon (1962) has remained the single most popular method of valuation among finance professionals for the past four decades (Siegel 1985; Higgins 1998).

Following the work of Gordon (1962), a host of modifications to the traditional DCF model evolved. To illustrate, Fernandez (2002) compiled a list of ten versions of cash flow discounting models that can be used to value investments including, free cash flow, equity cash flow, capital cash flow, adjusted present value, risk adjusted cash flow, risk-free adjusted, economic profit and economic value added. Applying each model to one specific company for the purpose of valuation, Fernandez (2002) demonstrates that each model performs similarly since each method analyzes the same basic reality under the same circumstances with the only difference being the starting point of the cash flows.

This valuation method is applied to estimate the value of a firm or an asset. It uses future cash flows projections and discounts them with a suitable rate in order to calculate the present value of the target. In a simple illustration, a company‘s value is equal to all the cash they have that could make future investment and generate more money. However, cash in the future always worth less than cash today due to the inflation. As the result, the net present value should be multiplied with a discounted factor.There are three pathways to carrying on DCF valuation approach: classic DCF valuation, adjusted present value approach and excess returns approach. The classic DCF valuation is considered to be the most popular one due to its ease. Analysts simply discount cash flows (to firm or equity) at the appropriate discount rate (cost of capital or cost of equity). The sum of net present value of the cash flows is the value of equity or firm. The effects of debt financing are built either into the cash flows in equity valuation or into the cost of capital in firm valuation.

Refer to Manurung (2011) research on valuation in Valuasi Wajar Perusahaan, Discounted Cash Flow model based on the discounted earnings approach is done by analyzing the free cash flow of a company. Free cash flow is the summation of the cash flow from operations and cash flow from investing activities. To understand the essence of cash flow in the company is very important in determining the company expected cash flow. Cash flow itself is categorized into cash inflow and cash outflow. Cash inflow said to be positive indicator as it is cash coming from company revenue streams as a result of effective business operations. Meanwhile, the cash outflow accounted as negative as it is cash paid out by a company to sustain its operation in the future for example investment and expenditure. The statement of

cash flow from the company financial report is an obligation from the regulator to make sure that investors recognize the cash flow of a company from its operation, financing and investing activities.

There are several activities affecting the company cash inflow such as income streams from company business operations, additional financing to company business operations, issuance of company new shares, and income from asset's sale activities such as property, factory, land, inventories and other type of assets. The cash inflow and cash outflow in the company can be categorized into three characteristics of cash flow activities such as cash flow from operations, cash flow from investing activities and cash flow from financing activities. According to Anthony, et al (2007) asserts that the cash flow calculation can be performed through direct method and indirect method or reconciliation method. Direct method is done by directly calculated the total of cash inflow and cash outflow in the company. Currently, the regulators expect the company to provide this direct method of cash flow calculation in the financial report. However, the company should also provide the reconciliation from net income and cash flow from operations in the separate financial report.

Meanwhile, indirect method is done through the indirect calculation in which very distinctive and difficult to understand compare to direct method. The indirect method started with the net income calculation to be added with non-cash expenses such as depreciation/amortization and additional working capital. As the free cash flow is the difference of the cash flow from operations and cash flow from investing, thus when there is a surplus in free cash flow or positive free cash flow, it can be used to other investments such as financial instruments. If the free cash flow is negative or deficit, the company should finance it through the bond issuance or new shares issuance in order to net off the deficit. The calculation on company value with free cash flow approach states that the value of company is the cash flow into the company as long as it operates. The future net cash flows of company are defined as the true value of the company. According to Damodaran (2002), the calculation on company value with discounted cash flow approach can be done by two form of model, first is free cash flow and second is free cash flow to equity of FCFE.Finally, due to its comprehensiveness in valuing the company future cash flows and appropriate approach to AALI business model, hence the author focuses the AALI stock price valuation with Discounted Cash Flow (DCF) model valuation.

Manurung (2011) asserts that the valuation method with discounted earnings approach lay on the principle of "going concern". Going concern principle believes that the company is

assumed to operate its business in the foreseeable future and will always make earnings. In other words, the true value of a company share is measured by the capability of company to create earnings in the future. This obliges investors to conduct appropriate valuations in determining the present value of company future earnings.The calculation of earnings approach model as follows:

$$P0 = (E1 / (1 + r)1) + (E2 / (1 + r)2) + (E3 / (1 + r)3) + \ldots + (En / (1 + r)n) \ldots\ldots\ldots(1)$$

Description:
$P0$ = Share price in period 0
En = Company earnings in period n, n = 1, 2, 3...
r = Cost of Capital / WACC

In Discounted Earnings Method, the analysis focuses mainly on the company financial evaluation. This financial analysis is conducted by evaluating the company financial statement since it provides the company information in quantitative basis. According to White et.al (2003) asserts that there are three type of company financial report such as Balance Sheet, Income Statements and Statement of Cash Flows.

Another approach in conducting equity valuation is relative valuation in which this approach compares the assets value or the relative assets value of a company against its peers in similar industry or sector. The relative valuation approach focus on the numbers of factors from the financial statement of the company in which several ratios and financial indicators are used as the multiples such as earning per share (EPS), book value of equity, sales, etc. one of the most widely used model in relative valuation approach is price-to book value ratio (PBV). This model utilizes book value as multiples in which by distribute equity value with the number of outstanding shares. PBV ratio is commonly used by analysts in valuing banking industry as a relative valuation method. Book value of a bank is an appropriate indicator in determining the intrinsic value of enterprise since mostly bank’s assets are in form of bonds or commercial loans and securitized assets where the values similar to its book value (Reilly and Brown, 2006).

This is the formula used in the calculation of PBV:

$$PBV = \frac{P0}{BV} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots(2)$$

Description:

P0 = Share Price
BV = Book Value of Equity

In this thesis, the author intend to test AALI stock price with Discounted Earnings approach specifically with Discounted Cash Flow (DCF) model. The reason why choosing DCF model due to its alignment with AALI business model which suits to valuate in cash basis method. Most tests of DCF models have been done byusing dividend discount models.However, in this research, DCF method chosen as the ideal method for analysis since it is more appropriate to the nature of plantation business where it relies on the long term investment which is plantation as the future generating cash flow investment. On top of that, in agribusiness sectors where AALI operate, not all the companies distribute the dividend payment consistently to its investors which make it difficult to analyze with dividend model. In addition, the literature review actually seeks to provide an overview of the DCF valuationmethodused for the purpose of cash flow projections and value estimator.

In investments, it is impossible to get rid of all the risk. As investors, it deserves a rate of return that compensates for taking on risk. The capital asset pricing model (CAPM) helps to calculate investment risk and what return on investment should expect. The capital asset pricing model was the work of financial economist William Sharpe, set out in his 1970 book "Portfolio Theory and Capital Markets." His model starts with the idea that individual investment contains two types of risk: First, Systematic Risk, these are market risks that cannot be diversified away. Interest rates, recessions and wars are examples of systematic risks. Second, Unsystematic Risk, also known as "specific risk," this risk is specific to individual stocks and can be diversified away as the investor increases the number of stocks in his or her portfolio. In more technical terms, it represents the component of a stock's return that is not correlated with general market moves.

Modern portfolio theory shows that specific risk can be removed through diversification. The trouble is that diversification still doesn't solve the problem of systematic risk; even a portfolio of all the shares in the stock market can't eliminate that risk. Therefore, when calculating a deserved return, systematic risk is what plagues investors most. CAPM, therefore, evolved as a way to measure this systematic risk.

Sharpe found that the return on an individual stock, or a portfolio of stocks, should equal its cost of capital. The standard formula remains the CAPM, which describes the relationship between risk and expected return. Here is the formula:

$r_a = rf + \beta a\ (r_m - rf)$.....(3)

Description:

(rm-rf) = Equity market premium

rf =Risk free rate

βa= Beta of stock

rm = Expected market return

Discount Rate Estimation

In conducting valuationwith discounted earnings approach, the discount rate is required to calculate the present value of future expected cash flow from the company operations. Discount rate used in this discounted earnings approach is Weighted Average Cost of Capital (WACC).

Cost of Fund

Cost of Fund (Kd) is the cost which company should pay from its liabilities or debts.Generally, the cost is paid in the form of interest's fee and interest rate is determined by the creditors. The interest rate is charged in accordance to several factors such as interest rate in the market and default risk factor. Due to the difference of total debt and interest, therefore the cost of fund is proportionately measured by its weighted average cost of fund.

Cost of Equity

Cost of Equity (Ke) is the expected rate of return from the company share. Investors usually expect the return from the investment being made in the company shares.One of the most common ways in calculating cost of equity is by using Capital Asset Pricing Model (CAPM). This is the formula used in the calculation of cost of equity (Ke) with CAPM:

$Ke = Rf + \beta \times (Rm - Rf)$ ..... (4)

In accordance to formula above, there are three data required as the input in CAPM calculation, such as:

1. Risk free rate (Rf)

   Risk free rate is the rate of return from the risk-free investing instrument.Risk free investment is the government financial assets such as treasury bills or Sertifikat Bank Indonesia (SBI), government bonds or SuratUtang Negara (SUN) which have low probability of default.

2. Beta (β)

   Beta measures the sensitivity of share to the systematic risk. In CAPM, the systematic risk is defined as the market risk as a whole. In line with the concept of "higher risk

higher return", therefore beta also can measure the relationship between the company stock return and the market return.

3. Risk Premium *(*Rm-Rf*)*

   Risk Premium is the difference of the average return of market and the average return of risk free asset. According to Damodaran (2002), the rate ofrisk premiumof each country is not similar as a result of different macro economy conditions, political risk, and market structure.In calculating CAPM, the difference in each country risk can be accommodated by addingthe country riskpremium, where the additionalpremiumto offset the unique risk from each country.

4. Weighted Average Cost of Capital

   Weighted Average Cost of Capital (WACC) is the average weighted of the whole capital injected in the companyincludes cost of debt and cost of equity.

The formula used to calculate WACC as follows:

$$\text{WACC} = Ke\ x\ \frac{E}{(D+E)} + Kd\ x\ (1-T)\ \frac{D}{(D+E)} \quad \text{.....(5)}$$

Description:
Ke = Cost of Equity
Kd = Cost of Debt
T = Tax rate
$\frac{E}{(D+E)}$ = Equity Proportion
$\frac{D}{(D+E)}$ =Debt Proportion

Data Collection Method

The thesis is written from an investor's point of view and this implies that only publicly available information will be applied in the thesis. As the valuation of AALI consists of both financial and strategic aspects the data applied will be both quantitative and qualitative. The primary sources of information are the annual reports of AALI and its competitors, which are supplemented with the company web sites, statistical data, articles from journals and newspapers as well as professional market reports create the foundation for a solid knowledge on AALI and the plantation industry in general. The study trails the previous five years financial performance and focuses on the five years duration of financial projections starting from 2014 to 2018.The source of data used in this study is secondary data as it is

obtained indirectly from data source center such as Thomson Reuters and other medias as follows:

a) Financial Report and Annual Report of PT. Astra Agro Lestari, Tbk in period of 2009-2013.
b) Share price quote ofPT. Astra Agro Lestari, Tbk with tickers AALI for five years period (2009-2013).
c) Indonesian Stock Indices or Indeks Harga Saham Gabungan (IHSG) data in the same period of year (2009-2013) in order to compare the share performance of AALI with market performance.
d) Variable data such as Macro economy indicators (interest rate, GDP growth, inflation, SBI rate and exchange rate) and industry productivity.

Method of Analysis

In this research, the selection method of a company is by purposive sampling method/non-probability sampling which means that selecting PT. Astra Agro Lestari, Tbk. do not take into account the principle of probability, and only seeing the factors from the data with the purpose of research. The reason to choose AALI as the sample on this study because AALI share include in LQ45 indices where the company shares is categorized as liquid shares, mostly traded in large volume as well as one of the largest company in terms of market capitalization. Thus, the result on this study is not the reflection to other companies in same sectors or even across industry.

Phase of Fundamental Analysis

There are several steps in conducting the fundamental analysis and valuation on this study:

a. First, cconducting global macro economy analysis which affects the industry and company performance in this case is AALI.
b. Second, doing industry analysis in which AALI include in the agribusiness and plantation industry. Industry analysis is conducted with Michael Porter theory, five forces model of competition, plantation industry analysis, and several financial indicators analysis.
c. Third, conducting company analysis such as financial performance analysis, key ratios analysisand financial projections analysis in which to be assumed based on the macro economy and industry conditions.
d. Fourth, conducting cost of capital/WACC calculation.
e. Fifth, determining the share price target with valuation calculation by conducting Discounted Earnings Approach (DCF).

RESULT ANALYSIS AND DISCUSSION

Global and Indonesia's Macro Economy Analysis

The global economy is on the rising trend in 2013 and continues to move forward as the macro economy indicators show a positive sign. According to International Monetary Fund (IMF) in World Economic Outlook (WEO) 2014, global economy growth is projected to strengthen to 3.6 percent in 2014 and then to increase further to 3.9 percent in 2015 (See table 1IMF World Economic Outlook 2014).A major impulse to global growth has come from the United States, whose economy grew at 3¼ percent in the second half of 2013, stronger than expected in the October 2013.Growth in other advanced economies is also projected to strengthen moderately in 2014–2015, as a result of inclining momentum in 2013. GDP growth in the global key drivers such as Japan, Emerging Asia and Advanced Europe remain on the rising trend. Growth in Japan is expected to moderate, mostly as the result of a modest fiscal drag. Among emerging market economies, growth is projected to remain robust in emerging and Developing Asia and economy to recover in Eurozone drive by the Germany and France as the main contributor.

Many analysts believe that Indonesia economic growth is bouncing back in 2014 as a result of the election year in 2014 and declining in the current trade deficits. Bank Indonesia forecasts that Indonesia GDP growth may increase to 5.86 percent in 2014 from 5.71 percent in 2013 (Bank Indonesia). Getting election boost in 2014, though trending down, due to subsidized fuel price hike and efforts to curb current account deficits in 2013-2014 via monetary tightening. Non-food spending may still provide support, albeit investments may grow slower. Headline inflation returning to normal after temporary pick up in 2013, following administered and food prices hike. The ex-gold core inflation is seen rising lately indicating pressure coming from Foreign Exchange (FX) depreciation. Policy rate has been raised by 175 bps in 2013 in response to the higher inflation rate due to energy subsidy reforms and efforts to close the perception gap. Current Account deficits expected to shrink, as exports rises slowly with commodity prices stabilizing and slightly up. Balance of Payment may still be in surplus despite some temporary outflows of capital. BI balancing FX intervention and keeping FX reserves.

AALI Overview and Business Description

PT. Astra Agro Lestari Tbk is Indonesia's largest agribusiness company by market value. AALI is a leading palm oil producer in Indonesia, established since 33 years ago and headquartered in Jakarta. AALI deliver high quality palm oil products (CPO) to fulfill the domestic and export markets. AALI, majority-owned by diversified conglomerate Astra International, the largest diversified conglomerates in Indonesia. Astra Agro Lestari is financially sound and has a strong presence in domestic market as well as benefit from Indonesia's economic growth, natural resources and infrastructure development. After the long journey through acquisitions, mergers, and development, AALI has assets of Rp 14.96 trillion by the end of 2013. Currently, AALI manages the total of 281,378 ha of oil palm plantations, which consist of 220,021 ha of nucleus estates and 61,357 ha of plasma estates. In order to operate, AALI employs 29,766 permanent employees in Jakarta, Sumatra, Kalimantan and Sulawesi. AALI has been public listed in Indonesia Stock Exchange (IDX) since 1997. Currently public investors holding are 20.32% of the shares. Since the Initial Public Offering (IPO) in 1997, AALI shares prices have been steadily increasing from Rp 1,550 per share to Rp 25,100 per share at the end of IDX trading in December 2013 (Company Annual Reports).

The outlook for 2014 remains positive, despite heightened competition in the agribusiness market and weak rupiah concerns about possible increases in interest rates as well as inflation remain.AALI's CPO production increase 4.1%, reaching 1.39 million tonnes. The increase of AALI's CPO production until November 2013, is driven by the increase of November 2013 production amounting 155,321 tonnes. Thus, AALI's CPO production until November 2013 reaches 1.39 million tonnes or increase by 4.1% compared to the same period last year. Rising production trend in November 2013 also occurs in AALI's kernel production which reaches 296,886 tonnes or increase by 1.3% from 293,155 tonnes in 2012.

The challenging year of 2013 have inevitably affected the performance of PT Astra Agro Lestari Tbk. Slow recovery from the global economic crisis has contributed to the price volatility of various commodities, including the Crude Palm Oil (CPO) price. On the other hand, US government policies to reduce the injection of fresh funds to support the recovery of their real sectors have led to the depreciation of most Asian currencies, including the Indonesian Rupiah. In addition, unfavorable weather condition also impacted to the decline of operational performance in most palm plantations.As shown in figure 4.8, the production of the Company's Fresh Fruit Bunches (FFB) from nucleus plantations declined by 9.5%, from

4.13 million tons in 2012 to 3.74 million tons in 2013. This has brought down the average crop productivity (yield) in 2013 to 20.7 tons/ha, compared to 23.5 tons/ha in the previous year. Nevertheless, the company was still able to manage total CPO production of 1.54 million tons, an increase of 4.2% compared to last year. This increase was attributed to a 41.5% increase of FFB purchased from third party, from 1.26 million tons in 2012 to 1.78 million tons in 2013. CPO production in 2013 was the highest production level in the Company's history. With an average CPO selling price of Rp 7,277/kg, 0.6% lower compared to 2012 price, coupled with a foreign exchange loss due to the Company's US Dollars debt, the Company still managed to record a profit attributable to Shareholders of Rp 1.80 trillion in 2013, lower than the Rp 2.41 trillion earned from the previous year.

Facing the challenging business climate of 2013, AALI strived to strengthen its business model and focused on four key areas, namely: First, the company strived to achieve cost leadership by improving internal processes, so that operational efficiency can be improved through intensification and mechanization programs. Second, the company has been expanding its business lines, both upstream by developing own seedling area, and downstream by building a refinery and establishing a joint venture marketing company in Singapore to market CPO derivative products. Third, the company expanded into rubber plantations, as a part of its diversification strategy. Fourth, the company continued its efforts to acquire new landbank followed by implementing a new planting and replanting program, in order to ensure production sustainability.Capital expenditure of Rp 2.87 trillion was spent throughout 2013 to support company growth strategy in the long term. Most of this investment was allocated for intensification and mechanization activities, adding the capacity of the CPO mills and storage, construction of refinery plants, as well as new planting of oil palm crops and rubber, and replanting of oil palm crops. In 2013, the company increased its CPO storage capacity by 10,000 tons to 225,450 tons. In the same year, the company completed construction of one refinery in West Sulawesi. This plant has now begun operating commercially, with a production capacity of 2,000 tons CPO/day. First shipment from this refinery to customers was done in February 2014. Throughout 2013, the company carried out new planting and replanting of 10,720 hectares.

Financial Analysis of AALI

As shown from table 1, AALI posted impressive financial results during the last five years with the inclining revenue growth of more than 15 percent CAGR. The revenues grow from

Rp 7,424.3 billion in 2009, Rp8,843.7 billion in 2010, Rp10,772.6 billion in 2011, Rp11,564.3billionin 2012 and Rp13,392.8 billion in 2013. This means that AALI sales revenue turnover almost double from the last five years. AALI Earnings Before Interest Taxes and Depreciation/Amortization (EBITDA) also grow significantly except in the year of 2013. AALI EBITDA in 2009 is Rp,2,894.6 billion rise to Rp3,253.4 billion in 2010, Rp3,531.7 billion in 2011, Rp3,960.5 billion in 2012 and lower to Rp3,162.0 billion in 2013. Declining EBITDA in 2013 due to the significant rising of Operational Expenses (Opex) to 5 percent. Selling expenses in increasing from Rp 11,564.3 billion in 2012 to 13,392.8 billion in 2013. The incline cost of selling due to higher inflation rate in 2013while the CPO price remains moderate. AALI Net Profit also doubles in the last five years, except in 2013. In 2009, AALI booked net profit Rp2,894.6 billion, Rp3,253.4 billion in 2010, Rp3,531.7 billion in 2011, Rp3,960.5 billionin 2012 and Rp3,162.0 billionin 2013. AALI Earning per Share (EPS) moves in the positive direction in the last four years, in 2009 AALI EPS is Rp 1,055, Rp1,281 in 2010, Rp1,528 in 2011, Rp1,531 in 2012 and Rp1,021 in 2013.

Table 1 Financial Summary of AALI

FINANCIAL SUMMARY

Based on Current Price of Rp25,800

Year to 31-Dec	Turnover (Rpbn)	EBITDA (Rpbn)	Net Profit (Rpbn)	EPS (Rp)	EPS Growth (%)	PE (x)	EV/ EBITDA (x)	DPS (Rp)
2009	7,424.3	2,894.6	1,660.6	1,055	(36.9)	24.5	13.7	422
2010	8,843.7	3,253.4	2,016.8	1,281	21.4	20.1	12.2	640
2011	10,772.6	3,531.7	2,405.6	1,528	19.3	16.9	11.2	764
2012	11,564.3	3,960.5	2,410.3	1,531	0.2	16.9	10.0	765
2013	13,392.8	3,162.0	1,607.7	1,021	(33.3)	26.9	13.4	510
2014F	15,581.4	4,423.5	2,655.1	1,686	65.2	16.3	9.6	843
2015F	16,685.8	4,851.3	2,874.8	1,826	8.3	15.1	8.7	913
2016F	17,478.0	4,370.4	2,861.4	1,575	(0.1)	16.4	9.7	787
2017F	18,767.6	4,700.3	3,105.3	1,716	0.1	15.0	9.0	986
2018F	19,522.6	4,872.4	3,496.7	2,221	0.3	11.6	9.0	1,110

Source: Company Release

Table 2 AALI Production in 2006-2013

Year	FFB Harvested	CPO	Kernel
2013	5,753,233	1,738,658	348,141
2012	5,498,020	1,476,358	323,051
2011	4,798,470	1,268,196	269,299
2010	4,235,052	1,113,277	239,385
2009	4,295,022	1,082,953	232,243

Source: Company Release

As reflected from table 2 and table 3, the inclining revenues of AALI mainly contributed by increasing CPO production due to its expanding total plantation area and matured plantations in the last five years. In 2009, AALI has a total of 189,342 Ha matured area, rise to 192,754.9 Ha in 2010, 217,420.4 in 2011,252,003.7 Ha in 2012, 261,510.6 Ha in 2013. This reflects almost 38 percent of growth in the last five years. The increasing total matured area followed by increasing productivity rate of AALI Fresh Fruit Bunches (FFB) and CPO production.

Table 3 AALI Total Planted Area in 2009-2013

Year	2009	2010	2011	2012	2013
Matured Area (Ha)	189,342.00	192,754.90	217,420.39	252,003.70	261,510.60
Growth (%)	2.79	1.80	12.80	15.91	3.77
Immatured Area (Ha)	67,430.00	58,276.00	46,238.00	19,749.00	18,436.00
Total Planted Area (Ha)	256,772	251,031	263,658	271,753	279,947
Growth (%)	5.37	(2.24)	5.03	3.07	3.02

Source: Company Release

As we can see from table 4, in the next five years (2014-2018), it is forecasted that AALI total matured area will grow at 2.5 percent CAGR. This has come to effect as AALI allocates its Capex for additional plantation area in the next five years. The total Rp 3.3 trillion Capex will allocated for plantations expansion.

Table 4 AALI Expected Total Planted Area in 2014-2018

Year	2014E	2015E	2016E	2017E	2018E
Matured Area (Ha)	269,877.40	277,677.40	285,477.40	293,277.40	301,077.40
Growth (%)	3.20	2.89	2.81	2.73	2.66
Immatured Area (Ha)	18,000.00	18,000.00	15,000.00	12,000.00	9,000.00
Total Planted Area (Ha)	287,877	295,677	300,477	305,277	310,077
Growth (%)	2.83	2.71	1.62	1.60	1.57

Source: Company Release

It is shown from table 5, AALI financial position rise significantly in the last five years (2009-2013). As shown at table below, AALI total assets is increasing from Rp7,571.4 billion in 2009, Rp8,791.8 billion in 2010, Rp10,204.5 billion in 2011, Rp12,419.8 billion in 2012 and become Rp13,574.4billion in 2013.

Table 5 AALI Financial Position 2009-2013

Balance Sheet

Year to 31 Dec (Rpb)	2009	2010	2011	2012	2013
Current Assets					
Cash and Cash Equivalents	788.5	1,240.8	838.2	227.8	1,200.7
Account Receivables	156.7	98.8	16.4	50.1	154.1
Inventories, Net	610.0	624.7	769.9	1,249.1	995.2
Other Current Assets	159.1	86.9	261.9	253.5	193.6
Non-current Assets					
Fixed Assets	2,445.0	2,686.9	3,424.2	4,918.7	5,711.9
Goodwill	61.6	53.3	56.0	56.0	14.4
Other LT Assets	3,350.5	4,000.4	4,838.0	5,664.8	5,665.8
Total Assets	**7,571.4**	**8,791.8**	**10,204.5**	**12,419.8**	**13,574.4**
Current Liabilities					
ST Debt	0.0	0.0	0.0	972.0	1,600.0
Other Current Liabilities	939.0	1,061.9	1,440.4	1,590.4	1,473.0
Non-current Liabilities					
LT Debt	0.0	0.0	0.0	0.0	500.0
Other LT Liabilities	205.8	272.7	338.0	492.1	158.1
Minority Interests	200.3	245.6	286.5	336.2	311.9
Shareholders' Equity	6,226.4	7,211.7	8,139.6	9,029.2	9,833.0
Total Equity & Liabilities	**7,571.4**	**8,791.8**	**10,204.5**	**12,419.8**	**13,574.4**

Source: Company Release

AALI revenues also move drastically in the last five years with sales turnover almost double from Rp 7,424.3 billion in 2009 to Rp 13,392.8 billion in 2013 (see table 6). Its Cost of Goods Sold (COGS) climbed proportionately, in 2009 the total COGS was Rp 4,322.5

billion and in 2013 become Rp 9,081.5 billion. AALI Gross Profit increased from Rp 3,101.8 billion in 2009 to Rp 4,311.3 billion in 2013. This translates to substantial incline in AALI Operating Profit in 2009-2012 from Rp2,610.2 billionin 2009, Rp2,998.7 billion in 2010, Rp 3,195.7 billion in 2011,Rp3,453.7 billion in 2012 but decline to Rp2,558.7 billion in 2013 due to considerable climbed in Operating Expenses as a result of higher inflation in 2013. Finally, its Net Income surged immensely from Rp1,660.6 billion in 2009, Rp2,016.8 billion in 2010, Rp2,405.6 billion in 2011, to Rp2,410.3 billion in 2012, but decline to Rp1,607.7 billion in 2013 as the effect of higher Opex and loss in foreign exchange transactions. Overall, AALI demonstrated hefty income in the last five years.

Table 6 AALI Income Statement 2009-2013

Income Statement

Year to 31 Dec (Rpb)	2009	2010	2011	2012	2013
Turnover	7,424.3	8,843.7	10,772.6	11,564.3	13,392.8
COGS	(4,322.5)	(5,234.4)	(6,837.7)	(7,206.8)	(9,081.5)
Gross Profit	3,101.8	3,609.3	3,934.9	4,357.5	4,311.3
Operating Expenses	(491.6)	(610.6)	(739.2)	(903.8)	(974.8)
Operating Profit	2,610.2	2,998.7	3,195.7	3,453.7	2,558.7
Other Income	(109.8)	(34.7)	137.3	71.2	(189.2)
Interest Expenses	(30.6)	(8.3)	(5.8)	(29.2)	0.0
Interest Income	58.0	39.3	93.4	22.0	84.0
Gain/Loss on forex	(111.2)	(28.0)	0.4	(0.8)	(273.2)
Others	(26.0)	(37.7)	49.2	79.2	0.0
Associates	0.0	0.0	0.0	0.0	0.0
Pre-tax Profit	**2,500.4**	**2,964.0**	**3,332.9**	**3,524.9**	**2,369.5**
Tax	(770.8)	(860.4)	(834.4)	(1,004.6)	(675.3)
Minority Interest	(69.0)	(86.9)	(93.0)	(110.0)	(103.1)
Extraordinary Items	0.0	0.0	0.0	0.0	0.0
Net Profit	**1,660.6**	**2,016.8**	**2,405.6**	**2,410.3**	**1,607.7**

Source: Company Release

As illustrated from table 7, in the last five years, AALI retained bulk of net cash flows as consequence of profitable business operations. Its cash flow from operations upsurge from Rp 1,954.8 billion in 2009 to Rp 2,583.8 in billion 2012 caused by escalation in net profit. However, its cash flow from operations deteriorated in 2013 caused by drop in net income. In addition, its Capital expenditure (Capex) rised moderately as the company expanded its business operations. AALI Capex in 2009 was Rp 1,322.6 billion, Rp 1,538.0 billion in 2010,

Rp 1,855.7 billion in 2011, Rp 2,591.6 billion in 2012 and Rp 1,628.4 billion in 2013. This capex was used to expand its current plantation area and to build CPO refinery factories and manufacturing facilities. Cash flow from financing activities indicated that AALI only add its net debt in 2012 to Rp972.0 billion and Rp1,128.1 billion in 2013. The additional debt was offered from bank loans.AALI ending cash displayed a decent improvement from Rp788.5 billion in 2009, Rp1,240.8 billion in 2010, Rp838.2billionin 2011, Rp227.8 billion in 2012 and Rp1,200.7 in 2013. A weaken cash balance in 2012 was due outsized number of capex which total Rp 2,591.6 billion.

Table 7 AALI Cash Flow Statement 2009-2013

Cash Flow

Year to 31 Dec (Rpb)	2009	2010	2011	2012	2013
Net Profit	1,660.6	2,016.8	2,405.6	2,410.3	1,607.7
Depreciation and amortization	284.4	254.7	336.1	506.8	603.3
Change in Working Capital	104.9	238.4	140.7	(354.4)	92.3
Others Non-Cash	(95.2)	154.3	58.4	21.1	(545.6)
Cash Flow from Operations	**1,954.8**	**2,664.1**	**2,940.7**	**2,583.8**	**1,819.6**
Capex	(1,322.6)	(1,538.0)	(1,855.7)	(2,591.6)	(1,628.4)
Investment	0.0	0.0	0.0	0.0	0.0
Others Investing Activities	(140.7)	408.5	(56.1)	(104.0)	408.8
Cash Flow from Investments	**(1,463.3)**	**(1,129.6)**	**(1,911.8)**	**(2,695.6)**	**(1,219.6)**
Net Change in Debt	0.0	0.0	0.0	972.0	1,128.1
New Capital	0.0	0.0	2.6	(64.1)	0.0
Dividend	(590.5)	(1,031.5)	(1,480.3)	(1,456.6)	(803.9)
Others Financing Activities	19.9	(50.9)	46.1	50.2	51.0
Cash Flow from Financing	**(570.6)**	**(1,082.4)**	**(1,431.6)**	**(498.6)**	**327.4**
Change in Cash	**(79.1)**	**452.2**	**(402.6)**	**(610.4)**	**972.9**
Begin Cash & Cash Equiv.	**867.7**	**788.5**	**1,240.8**	**838.2**	**227.8**
Ending Cash & Cash Equiv.	**788.5**	**1,240.8**	**838.2**	**227.8**	**1,200.7**

Source: Company Release

Financial Ratios of AALI

As seen on the table 8 below, AALI financial ratios are showing good signs. Its sales turnover growth is at 11 percent CAGR in the last five years. In addition, its profitability is indicating a robust trend from 2009 to 2013. On average company gross margin was 37.8 percent, EBITDA margin at 34.18 percent, Operating margin was 30.3 percent, Net margin

was 20.52 percent, Return on Asset (ROA) was 31.5 percent and Return on Equity was 27.12 percent. AALI financial leverage ratios such as Total Debt/Total Asset was at 7.8 percent in 2012 and to be 15.5 percent in 2013 due to increasing portion of debt. Its Total Debt/Total Equity was at 10.8 percent in 2012 and become 21.4 percent in 2013. Its Net Debt (Cash)/Equity was at 8.2 percent in 2012 and to be 9.1 percent in 2013. Overall, its liquidity was remained in vigorous drift. On average current ration was at 131.68, quick ratio was 80.5 and its inventory turnover was 29.68 days.

Table 8 AALI Key Financial Ratios2009-2013

Ratio

Year to 31 Dec (%)	2009	2010	2011	2012	2013
Growth					
Turnover	(9.0)	19.1	21.8	7.3	15.8
EBITDA	(17.9)	12.4	8.6	12.1	(20.2)
Pre-tax Profit	(36.7)	18.5	12.4	5.8	(32.8)
Net Profit	(36.9)	21.4	19.3	0.2	(33.3)
EPS (fully diluted)	(36.9)	21.4	19.3	0.2	(33.3)
EPS (weighted average)	(36.9)	21.4	19.3	0.2	(33.3)
Profitability					
Gross Margin	41.8	40.8	36.5	37.7	32.2
EBITDA Margin	39.0	36.8	32.8	34.2	28.1
Operating Margin	35.2	33.9	29.7	29.9	22.8
Net Margin	22.4	22.8	22.3	20.8	14.3
ROA	37.0	36.7	33.6	30.5	19.7
ROE	29.2	30.0	31.3	28.1	17.0
Leverage					
Total Debt/Total Assets	0.0	0.0	0.0	7.8	15.5
Total Debt/Equity	0.0	0.0	0.0	10.8	21.4
Net Debt (Cash) /Equity	(12.7)	(17.2)	(10.3)	8.2	9.1
Liquidity					
Current Ratio	182.6	193.2	131.0	69.5	82.1
Quick Ratio	117.6	134.3	77.5	20.7	52.4
Debtor turnover (day)	7.7	4.1	0.6	1.6	4.2
Creditor turnover (day)	12.3	15.9	18.8	18.8	14.9
Inventory turnover (day)	30.0	25.8	26.1	39.4	27.1
P/E ratio (fully diluted)	24.5	20.1	16.9	16.9	26.9
P/E ratio (weighted avg)	24.5	20.1	16.9	16.9	26.9

Source: Company Release

AALI Share Performance Analysis

As we can see from figure 1, AALI shares showed better performance compare to IHSG. In the last two years, AALI share's return upbeat IHSG return with 43.97 percent compare to IHSG 21.73 percent. This drift indicates that AALI shares is not moving in the same direction with market indices means that AALI shares is defensive stocks. It is also proven by its low beta which is 0.36, confirmed a low relationship and less esposed from the market or systematic risks.

Figure 1 AALI versus JKSE (IHSG) performance in 2012-2014

Source:Thomson Reuters

In addition, AALI shares performance also better compare to market indices such as LQ 45 where AALI yield is 43.84 percent versus LQ 45 return is 21.56 percent (see figure 2). AALI shares include in LQ 45 indices where the top 45 companies based on market capitalization and most liquid stocks in the market. In comparison to its peers in LQ 45 index, AALI shares performance and return was absolutely better off with almost 21 percent premium. Going forward, this impressive stock performance is expected to realize as the industry in the upward trend and AALI able to gain the momentum. It is believed that the company cash-generating values will incline the company profit and finally boost the company shares return when the market realized. Thus, AALI shares still possess a good prospect in the future as the complementary of investors' portfolios.

Figure 2 AALI versus JKLQ45 (LQ-45 Indices) performance in 2012-2014

Source:Thomson Reuters

Basic Assumptions

In accordance to macro economy, industry, competitive positioning analysis as well as company financial analysis, this part will discuss the main assumptions made in the valuation in determining the intrinsic value of company.This basic assumption relies on the analysis of previous financial performance started from 2009-2013 and macro analysis in creating the financial projections for the period 2014-2018.The detail of basic assumptions on the valuation calculation as follows:

1. Long term growth (LTG) is expected at 5.6 percent based on five year average turnover growth CAGR and GDP growth assumption (author assumption).
2. Sales Revenues/Turnover growth is forecasted at 5.6 percent CAGR in the next five years (2014-2018).
3. EBIT growth is forecasted at 11.0 percent CAGR in the next five years (2014-2018).
4. Net income growth is forecasted at 18.8 percent CAGR in the next five years (2014-2018).
5. GDP growth is assumed at moderate rate of 5.78 percent in the next five years (2014-2018).
6. Inflation rate is assumed at moderate and manageable rate of 5.5 percent in the next five years (2014-2018)
7. Matured plantation area growth rate is forecasted at 3 percent CAGRin the next five years (2014-2018).
8. Exchange rate of IDR/USD is assumed at modest and manageable rate at 11,500 in 2014, 11,500 in 2015, 11,000 in 2016, 11,000 in 2017 and 10,500 in 2018.

9. CPO price is forecasted at $961.5 per tonnes in 2014, $994 per tonnes in 2015-2016 and $1025.6 per tonnes in 2017-2018.
10. FFB yield productivity is assumed at 22.50 tonnes/Ha in the next five years (2014-2018).
11. CPO extraction rate (%) is assumed at 22.75 percent in the next five years (2014-2018).

WACC Calculation

Assumption		
Risk free rate of interest (SUN rate 10 years)	8.02	%
Market Risk premium	5.73	%
Beta	0.46	
Cost of equity	13.88	%
Cost of debt	10.80	%
WACC	**12.63**	**%**
LTG	5.60	%

1. Risk free rate is based on SuratUtang Negara (SUN) 10 years in 2014 at 8.02 percent (Pefindo, 2014)
2. Market risk premium is based on IHSG annual return in 2012-2013 at 13.8 percent subtracts risk free rate at 8.02 percent which is 5.73 percent premium (IDX).
3. Beta at 0.46 is based on the regression calculation result and Thomson Reuters Data.
4. Cost of equity is calculated at 13.88 percent
5. Cost of debt is based on corporate bond AA rating at 10.8 percent
6. Tax rate is assumed at 25 percent.
7. Thus, The Weighted Average Cost of Capital (WACC) of AALI is calculated 12.63 percent.

Intrinsic Value Calculation with DCF

Using discounted cash flow method, as it incorporates the long-term growth opportunity of this company resulted from the additional of plantations.

Table 9 AALI FCF Calculation 2014-2018

Free cash flow forecast (Rpb)	**2014F**	**2015F**	**2016F**	**2017F**	**2018F**
EBIT	3,762.4	4,139.3	3,607.4	3,886.1	4,007.3
Depreciation and Amortization	661.1	712.1	763.1	814.1	865.1
Adjusted Tax	(962.2)	(1,178.9)	(915.0)	(1,063.1)	(865.2)
Change in Working Capital	130.2	125.8	79.4	294.2	18.1
Capex	(1,650.0)	(1,456.0)	(1,456.0)	(1,228.0)	(1,228.0)
Free Cash Flow	**1,941.4**	**2,342.2**	**2,078.8**	**2,703.4**	**2,797.3**

Table 9 shows the company EBIT is forecasted to expand from Rp 3,762.4 billion in 2014, Rp 4,139.3 billion in 2015, Rp 3,607.4 billion in 2016, Rp 3,886.1 billion in 2017 and Rp

4,007.3 in 2018. This translate to moderate level of company forecasted free cash flow in the next five years, Rp 1,941.4 billion in 2014, Rp 2,342.2 billion in 2015, Rp 2,078.8 billion in 2016, Rp 2,703.4 billion in 2017 and Rp 2,797.3 billion in 2018.

Table 10 AALI DCF Valuation Calculation Result

Discounted Free Cash flow Valuation:

FCF	=	8,225.1
Terminal Value	=	38,978.1
Enterprise value	=	**47,203.2**
Net debt	=	899.3
Value of equity	=	**46,303.9**
No of shares (billion)	=	1.6
Price per share	**=**	**29,404**

Based on Table 10, the valuation for AALI on a 5year valuation by using the FCFE model or discounted cash flow model. It is believed that discounted FCFE can reflect free cash flow value of company and account for future growth in a long term prospective. The intrinsic price from this model is IDR 29,404 as shown in the figure beside. EBIT is expected to grow on 5.6 percent annually as a result of increasing CPO prices and declining capital expenditure. Inflation rate remain stable at 5.5 percentwith an annual GDP growth of 5.8 percent.

Table 11 Sensitivity Analysis of DCF

	Perpetual Growth Rate					
WACC (%)		**4.0%**	**5.0%**	**5.6%**	**6.0%**	**7.0%**
	11.0%	28,633	30,523	31,345	37,867	43,717
	12.0%	26,045	28,038	30,139	32,814	36,576
	12.6%	25,468	27,114	**29,404**	30,472	34,466
	13.0%	23,949	25,904	28,276	29,117	32,998
	14.0%	21,325	23,598	25,649	26,274	28,683

Based on sensitivity analysis using discounted cash flow method, it is concluded that the estimate price of AALI will range from the lowest of Rp 21,325 to the highest Rp 43,717

(see table 11). The lowest price which is Rp 21,325 is based on the most pessimistic assumption such as 4 percent of perpetual growth and 14 percent of WACC. While, the maximum price of Rp 43,717 is based on the assumptions of 7 percent of perpetual growth rate and 11 percent of WACC. In regards to current calculation which refer to 5.6 percent in long term growth or perpetual growth and 12.6 percent WACC, thus the final forecasted price of AALI in the next twelve months is at Rp 29,404.

Conclusion

Based on valuation, it is concluded that AALI intrinsic value is Rp29,404 per share. In comparison to current AALI price being traded in the market only Rp25,800 indicates that the company share is being undervalued, potential upside gains of 15.7 percent for investors. Astra Agro Lestari is a palm oil giant with brighter growth prospect in the future. A better CPO price prospect is the main catalyst for company revenues growth. It is believed that the market has not yet recognized the fair cash-generating potential of the firm from the new operated factory and additional matured planted area. With IDR 3,773 Billion EBITDA at the end of 2013 and it is expected to grow at 8 percent annually as a result of increasing revenue through increasing CPO price in the spot market, stability of cash flow, strong financial position enable company to expand additional plantations and declining capital expenditure in the next five years.

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Fundamental Valuation of PT. Indofood Sukses Makmur, Tbk Using Discounted Cash Flow and Residual Earning Model

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Abstract

Investment has been said to be a commitment to finance one or more firm(s) and hold it for a period of time, for the purpose of capital gain. Investors can get capital gain by investing in firm that is mispriced in the market; ie. buying stock that is undervalued by the market. The quest that is left for investors is to find the right company to put their money in. Top-down approach will be used in this paper; it is done by analyzing macroeconomic condition, finding the best performing industry given macro condition, picking the desired sector, and finally gather the justification to pick a targeted company. Finding the true value for stocks can be done by doing fundamental valuation. There are various method that can be used for determining the intrinsic value of stocks, two of which are the Discounted Cash Flow Method and Residual Earning Model. This paper will elaborate the application of DCF method and RE model in order to find the true value of a firm. In this research, PT. Indofood Sukses Makmur, Tbk is found to be undervalue and provide potential upside gain for the coming 12 months. Hence, a buy recommendation is iterated for PT. Indofood Sukses Makmur, Tbk.

Keywords : Fundamental Valuation, Discounted Cash Flow, Residual Earning Model, Intrinsic Valuation, Financial Modelling.

1. Introduction

Indonesia is the 4th most populous nation in the world and is now undergoing a major structural shift in terms of demographics. More than half of the roughly 240 million people in 2012 were between 5 and 34 years of age. The emerging middle class and consumers from the Indonesian middle class broadly support domestic industry and imported goods, particularly for retail and consumer products, processed foods, and the automotive industry. In 2013, consumption accounted for 44% of the GDP.

In the world of consumer products, all eyes are on Indonesia. Indonesia's population of 245 million is Asia's third largest after China and India, while its economy is among the world's fastest growing. Indonesia's middle class, already almost four times the UK's entire population, is also gong richer with stronger purchasing power. Faced with such a potentially huge market, no multinational corporation (MNC) consumer products firms with global ambitions can afford to ignore Indonesia.

Household income in Indonesia has also been growing: in 2007, one-third of Indonesia's 60 million households had incomes above $5,000, up from fewer than 3 million households in 2000 (Euromonitor, 2009). Between 2000 and 2007, the proportion of households with disposable income under US$2,500 declined from two-thirds of the population to one quarter (Euromonitor, 2009). Broken into sectors, the most rapid growth of consumer spending is for the financial services sector as for investment and savings. Spending on food and beverage grows with a 5.2% CAGR, in line with the average Indonesian GDP growth. Referring to Indonesia's Central Bureau of Statistics, by 2030 the food and beverage spending is projected to be as large as $ 194 billion, the second largest spending after financial services.

The attractiveness of Indonesian consumer sector may not only benefit big firms who has been in the market and who are going into the market, but also particularly for investors too. Looking for the long term growth prospects, consumer sector is one of the most promising pick up. Looking closer into firms within the sector, PT. Indofood Sukses Makmur, Tbk (INDF) is the largest Indonesian consumer product producers with diversified products including instant noodles, flour, CPO edible oil (including

plantations), sugar, milk, seasoning, baby food, snacks and distribution. Holding the top 3 ranks[1] among its peers for each division has positioned INDF as the market leader.

2. Background

2.1 INDONESIAN CONSUMER PRODUCT CONSUMPTION

The 2008-2009 credit crises did not do much to dent household spending and Indonesia battered the global downturn better than many of its more export-reliant neighbors. This consumer attitude adds to Indonesia's attraction as a market for FMCGs. It is expected that Indonesian real GDP gains to average 5.7% in 2014-15. A global survey[2] published in July 2013 showed that Indonesia came out on top in terms of consumer confidence and spending intentions. Optimism about future employment and income, relatively low indebtedness and political stability are keeping Indonesians happy to spend.

While Indonesian economy grew more than 6% since 2010, consumers spending also grew along rapidly. Major catalysts for the growth in consumer products sector are; 1) Rapid GDP growth that translates to higher disposable income per capita, 2) Higher purchasing power, and 3) government regulation.

Based on the research from Euromonitor, the largest portion of household spending in Indonesia is for food and non-alcoholic beverages consumption, which constitutes 41.7% of total spending. Regmi et al. (2008) presented evidence that food consumption patterns around the globe were moving toward more meats, dairy products, sugar, and caffeinated beverages. This phenomenon also happened in Indonesia as there were increased mobility and more modern lifestyle emerged. As starch-based food consumption have declined, meat, dairy, and egg consumption has grown strongly (Rada and Regmi, 2010). The prepared food and miscellaneous food categories have also grown very quickly; much of this consists of packaged foods. Both the decline in starch consumption and increase in packaged food consumption are consistent with global trends.

[1] Based on Euromonitor Research, 2014

[2] Global Consumer Confidence Survey, Nielson

Figure 1 below indicates the rising packaged food sales in Indonesia, measured in index compared to 1998 figures. The increase in packaged-food purchases likely responds in part to urban consumers' need for time-saving convenience and desire for variety (Rada and Regmi, 2010).

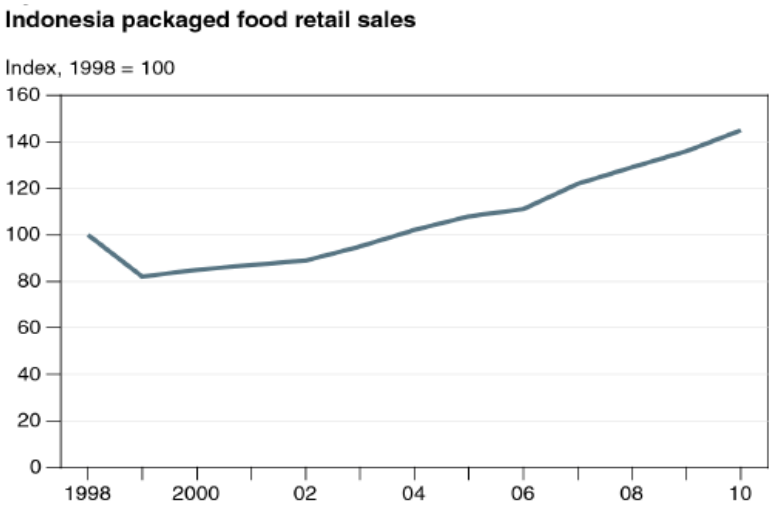


Figure 1. **Packaged Retail Sales. Source: Euromonitor, USFDA**

INDF should benefit from the shift in consumers' food purchasing behavior. The percentage of consumption on packaged food increased by 0.81% yoy in 2013. The portion of expenditure spent on packaged food was 12.46% in 2013, compared to only 10.5% in 2007. Considering that GDP per capita rise by 85% during the same year span and the fact that INDF leads the market share for almost all of its product line, the increment in sales is big.

2.2 ACADEMIC LITERATURE

2.2.1 Fundamental Valuation

Investors are commonly put careful attention in their investment return and risk, but some are not; investors cope in different ways. According to Pennman (2013), some investors who rely on their own instinct can be classified as intuitive investors. Others are called passive investors as they trust in the 'market efficiency'; assuming market price is fairly quoted and market forces will drive the price to the appropriate point. Some investors are classified as fundamental investor if they buy investment only after thoroughly examining information about a firm and reaching conclusions about the underlying value that the information implies.

Through fundamental valuation, investors can know the intrinsic value of a firm; it is what an investment is worth based on forecasted payoff from the investment. The payoff of the investment itself is forecasted with available information, so that intrinsic value is said to be the value of investment justified by the information (Pennman, 2013).

2.2.2 Discounted Cash Flow Method

There are many ways to assess the present value of a firm, such as using the Discounted Earnings method, Relative Valuation Method and Factor Model Approach. Discounted earnings method is classified into two model such as earning approach and dividend approach. Nevertheless, Manurung (2011) asserts that the valuation method with discounted earnings approach lay on the principle of "going concern". Going concern principle believes that the company is assumed to operate its business in the foreseeable future and will always make earnings.

According to Damodaran (2006), the value of a firm's stock is the present value of its free cash flow to equity, discounted at the cost of equity. This approach for equity valuation is commonly known as Discounted Cash Flow (DCF) valuation. In this method, future free cash flow that will be discounted is what will be available for shareholders after all expense has been taken out, including operational expenses, investing expenses, and financing expenses.

2.2.3 Cost of Capital

To find the present value of a firm, cost of capital is required. For firm can acquired capital from issuing stock and issuing debt, the cost of capital calculated takes into account the cost of equity and the cost of debt. The weighted average cost of capital model takes into account the weight of debt and the cost of debt, and also the weight of capital with the cost of capital.

$$\textbf{Cost of Capital} = Weighted\ average\ cost\ of\ equity\ and\ cost\ of\ net\ debt$$

$$= \left(\frac{Value\ of\ equity}{Value\ of\ operation} \times Equity\ cost\ of\ capital\right) + \left(\frac{Value\ of\ debt}{Value\ of\ operation} \times Debt\ cost\ of\ capital \times (1 - tax)\right)$$

When capital is raised by issuing letter of debt or making loans, the cost is measured by the cost of debt. On the other hand, when capital is raised by issuing

shares, cost of equity is used to measure the cost. Combination of these two using the WACC calculation gives the present value of the forecasted valuation model, and therefore the fundamental value of the firm.

2.2.4 Capital Asset Pricing Model (CAPM)

In the step of converting forecast to a valuation, by discounting source of revenue with a required return, and some valuation model is used. The model required a specification of the required return. Residual earning is the earning for equity holders and so is calculated and discounted using the cost of capital for equity, ρE. The cost of capital is the same as the required return for the shareholder, and it has two components:

$$Required\,return = Risk\,free\,rate + Risk\,premium$$

For risky investment in stock, additional risk premium is required by the investor to consequence their risk. The charge of risk for the investor varies, and the Capital Asset Pricing Model (CAPM) is used to determine it. According to CAPM model, the risk premium is dogged by the stock's beta and a market risk premium:

$$Required\ return = Risk\,free\,rate + (Beta\ \times\ Market\,risk\,premium)$$

The beta measures how a stock return reacts as the market moves, or in the other words, it measures the sensitivity of a stock to the market movement. The market risk premium is the amount that the market expected to yield to consequence market wide risk. This model gives the required return of an asset, which then will be used as a discount to determine the asset value. Valuation model that is used will show how required return derived from this asset pricing model will complete the asset pricing or the firm's value.

3. Data & Methodology

This research is a descriptive research of PT. Indofood Sukses Makmur, Tbk as the research object, conducted in the beginning of 2014. The study takes place in the beginning of 2014, with the object of PT. Indofood Sukses Makmur, Tbk. Historical data of financial performance of the firm is required, from the beginning of the firm

went public. Forecasting will be made until approximately 10 years ahead, as it will best reflect the business cycle of the firm. Data that is used in the report are: Financial reports & annual reports of PT. Indofood Sukses Makmur for 7 years since it was publicly listed in 2007 as they will be used to measure historical performance of INDF since it went public, Industrial report & economic report in Indonesia; current and historical, financial variables data, such as risk free rate, BI rate, overnight loan rate, and macroeconomics variable data, such as GDP growth, inflation rate, and some other variables.

According to Pennman (2013), the process of fundamental analysis comes with several steps. The first one is to understand the business. An important element is to understand the firm's strategy to add value. Once a strategy has been selected, the strategy becomes the one under which the business is valued as a going concern. The second step is then to analyze information presented in the firm's financial statement, and other source of valuable related information. This information is then built into forecasting model of valuation. There are some financial ratios that can be inferred and used in comparing firms.

The next step is to develop forecast. The first thing to be specified is how payoff can be measured, whether cash flow, earnings, book value, dividend, EBIT, or Return on Equity that is needed to be measured. Fourth step is to convert the forecast into valuation. As future payoff on a firm's share is uncertain, it must be discounted for the time value of money and risk consequence. Expected payoff is discounted by the required return or cost of capital. The final step is to make an investment decision and do trading based on the valuation.

The core basis used in this valuation is the Discounted Cash Flow (DCF) approach that is combined with a other valuation method, such as the Abnormal Earning Growth and Residual Earnings model as a comparation.

3.1 DISCOUNTED CASH FLOW

The DCF valuation is based on forecasting cash flows to firm, or the dividend.FCFF is forecasted then discounted to a present value. Under this valuation technique value of the firm is equal to present value of expected free cash flows.

$$Value\ of\ firm = \frac{FCFF_1}{\rho_1} + \frac{FCFF_2}{\rho_2} + \cdots + \frac{FCFF_T}{\rho_T} + \left(\frac{FCFF_{T+1}}{\rho - g}\right)/\rho^T$$

Where g is 1 plus forecasted perpetual growth rate of the firm. The last part of the formula implies the continuing value of the firm. Free Cash Flow of the firm can be measured by:

$$Free\ Cash\ Flow\ to\ Firm\ (FCFF) = EBIT(1 - tax) - (Capex - Depreciation) - (Change\ in\ non - cash\ working\ capital)$$

3.1 RESIDUAL EARNING MODEL

Residual earning is a measure that captures the value added to book value. The Residual Earning model measures value added from forecast of residual earnings.

$$Value\ of\ firm = Book\ value + Present\ value\ of\ expected\ residual\ earnings$$

$$Residual\ Earnings = Comprehensive\ earnings - (Req.return\ for\ equity \times beginning\ of\ period\ Book\ Value)$$

$$Value\ of\ firm = Book\ Value_0 + \frac{RE_1}{\rho_E} + \frac{RE_2}{\rho_E^2} + \cdots + \frac{RE_T}{\rho_E^T} + \frac{V_T^E - B_T}{\rho_T^E}$$

Residual earnings measures the earning in excess of those required if the book value were to earn at the required rate of return. This method is not affected by dividends, or by share issues and share repurchases at fair value. The calculation uses accrual accounting, hence captures value over cash flows.

4. Analysis

4.1 BUSINESS DESCRIPTION

PT. Indofood Sukses Makmur, Tbk is a major Indonesian company that provides Total Food Solutions with operations in all stages of food manufacturing from the production of raw materials and their processing through to consumer products in the market. It operates with 5 business subsidiaries: Indofood Consumer Branded Product, Bogasari, Agribusiness Group, Distribution Group, and Cultivation& Processed Vegetable Group. In each business group, INDF gains the top

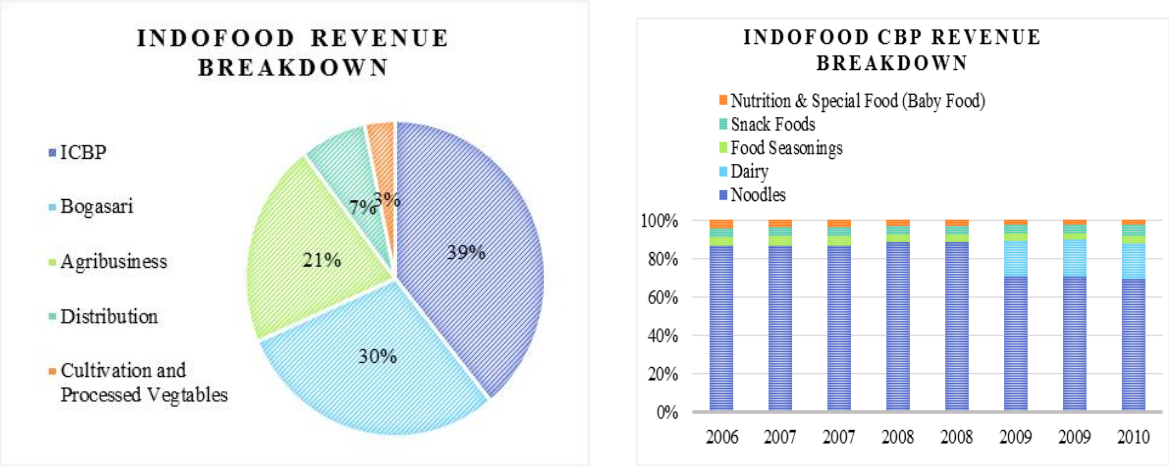


Figure 2 Indofood and ICBP Revenue Breakdown. Source: Company Update

position in market share. The company was founded in 1968 and went public in 2007.

INDF operates through four complementary divisions, including: (1) Consumer Branded Products (CBP), under listed company Indofood CBP (ICBP), (2) flour, under non-listed Bogasari, (3) agribusiness, under Singapore-listed company IFAR, (4) Cultivation and processed vegetables group , and (5) distribution, under non-listed Indomarco. Current size of INDF business is Rp 61,902 billion. ICBP is the major contributor for INDF business, with 39% share of revenue generated, and followed by Bogasari, Agribusiness, Distribution, and Cultivation business respectively. By 2013, the company records a 15% YoY revenue growth driven by all these business units.

PT. Indofood CBP Sukses Makmur, Tbk involves in all stages of food manufacturing; from raw material production and processing through to sale of a wide range of food products on the retailer's shelf. Product range of ICBP

includes Noodles, Dairy products, Snack Foods, Food Seasonings, Nutrition& Special Foods, and Beverages. Many of these brands are well-established, enjoying the most significant mindshare in Indonesia for consumer food brands. Bogasari is primarily a producer of wheat flour as well as pasta, with business operations supported by its own shipping and packaging units. Cultivation and processed vegetables group activities are conducted by China Minzhong Food Corporation Limited ("CMFC") which is listed on the SGX and is an integrated vegetable processing company in the People's Republic of China ("PRC").

4.2 COMPETITOR ANALYSIS

Indofood has shown superior performance in terms of profitability and growth. Indofood revenue grew by 25.7% which is higher than the industry median of 15%. In terms of profitability, INDF give outstanding EPS of 77%, where its peers only can perform an average of 12% median EPS. From the stock pricing perspective, INDF trading at relatively cheap level of 2.2x book value and 5.8x EV/EBITDA; other peers and industry median trades at relatively higher prices. It indicates that currently INDF is not overpriced despite of its superb growth and profitability.

Table 1 Peer Comparison

	Revenue Growth	**EPS (This Q, YoY)**	**EV/EBITDA**	**Price/ Book**	**Dividend Yield**	**ROE**	**ROA**	**Inventory Turnover**
Peer Median	*15%*	*12%*	*14.2*	*4*	*1.50%*	*25%*	*11.4%*	*3.30%*
INDF	**25.7%**	**77%**	**5.8**	**2.2**	**2.10%**	**11.2%**	**5%**	**6.10%**
UNVR	N/A	N/A	26.7	45.8	2.20%	130%	42%	7.20%
KLBF	16%	20%	20.7	7.5	1.20%	28%	19%	7.40%
GGRM	15%	10%	11.6	3	1.50%	16%	10%	1.70%
MAPI	-4%	-47%	8.6	3.1	0.80%	14%	5%	2%
ASII	N/A	6%	11.2	3	2.90%	25%	11%	11.40%

Nevertheless, INDF gave low ROA & ROE last year compared to its peers. Pressures in margin and commodity import cost has driven a 6% drop YoY on INDF net profit margin, thus bring lower ROA and ROE compared to its peers. However,

solid fundamental position and promising performance in operations may bring INDF to healthier return level this year.

4.3 Investment Summary

Looking at its fundamental position and its major competitive point as the most integrated food producers in Indonesia, along with the positive sentiment from macro-economic condition and commodity prices, we target INDF prices to be at Rp 8,400 for the time span by the end of 2014. By the time the calculation is made (April 2014), INDF stock price was Rp 7,050/share. The estimate implies a 19% upside game, thus a strong buy recommendation is given.

Positive catalyst for revenue: Stable demand growth for ICBP, Stronger Bogasari, Weak Wheat Prices, and Excess Demand in CPO.

As an impact of stable consumption growth, we expect Indofood CBP to continue to bring stable revenue growth. Bogasari is expected to gain more net margin as weaker wheat price persists. Weather factor and biodiesel policy implementation will lead to excess demand that will pushes CPO prices up and become a positive driver for IFAR revenue. All these factors in to a 77% EPS growth in 2014, compared to -23% EPS growth in 2013.

Sustainable food products demand to support ICBP revenue:

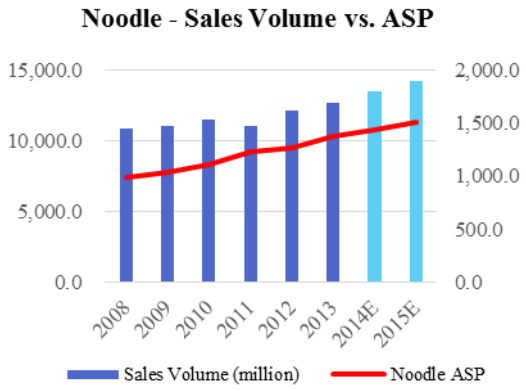


Figure 3 Noodles Sales Volume. Source: Company

As Indonesian GDP per capita rises, and consumer spending for packaged foods keeps rising, ICBP products revenue will have sustainable growth. It is estimated that revenue from consumer brand product will grow above GDP growth by 10.2% CAGR for the year 2013-2020. The growth is mainly driven by noodles and snacks product where consumer spends the most.

Weak Wheat Prices Supports Bogasari Margins:

It can be seen from the chart below that Wheat price is estimated to be lower in 2014. Excess supply from 4Q2013 will continue to take effect in 2014, and slowly recover in 2015. This will contribute to higher margin that Bogasari can gain as COGS fall down along with the low wheat price. It is expected that Bogasari EBIT will grow by 13% CAGR for 2014-2020 period.

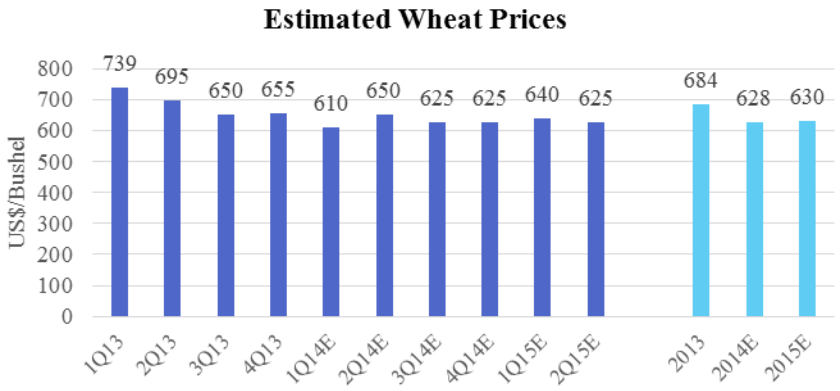
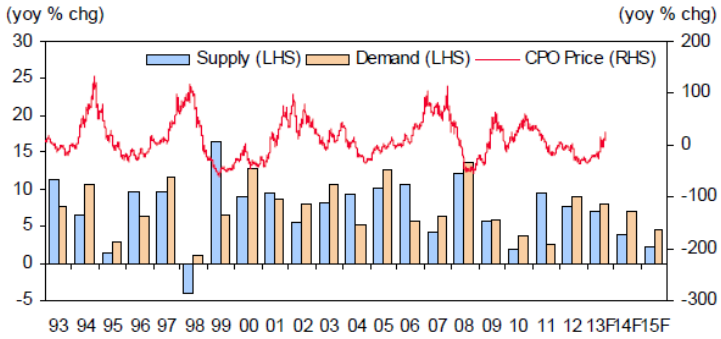


Figure 4 Estimated Wheat Price. Source: Company

Supply shortfall, weather disruption and rising demand for biodiesel will cater up CPO price:

New demand for biodiesel in Indonesia and Malaysia is able to absorb the bulk of new supplies. In addition, 2-3% demand growth is expected, fuelled by the global economic recovery and continuing growth in consumption per capita in developing countries. Palm oil demand is expected to grow 7.0% in 2014, slightly lower than 9.2% in 2013. Having said that, demand for CPO still remains robust.

From the supply side, supply growth is expected to be 4% for 2014 vs 7.1% for 2013. Lower 2014 supply growth will be mainly due to: a) low opening inventory – expecting a sharp 30% decline in opening inventory in Malaysia and Indonesia vs. 2013, and b) slight improvement in CPO production growth of 6.4% after revising down 2013 production growth to 4.3% (from 5.5% previously). The graph below explains how CPO price usually hikes up when demand surpass supply over the time.



CPO PRICES MOVE HIGHER WHEN DEMAND GROWTH OUTPACES SUPPLY

Figure 5 CPO Price. Source:CPO Spot Index

4.4 Valuation

4.4.1 Discounted Cash Flow Method

Using DCF method, iterated target price of INDF is Rp 8,500 with 21% potential upside and buy recommendation.

Absolute Return	
Today's price	7,050
Target Price	8,500
DPS 2013	185
Upside	**21%**

Market capitalisation	
Total no. of issued shares	8,780,426,500
Today's market value of equity (Rp b)	61,902
equity portion of capital	*71.0%*
Market value of debt per 12/31/00 (Rp b)	25,276
debt portion of capital	*29.0%*
Tax rate	25.0%
Exchange rate	11,525

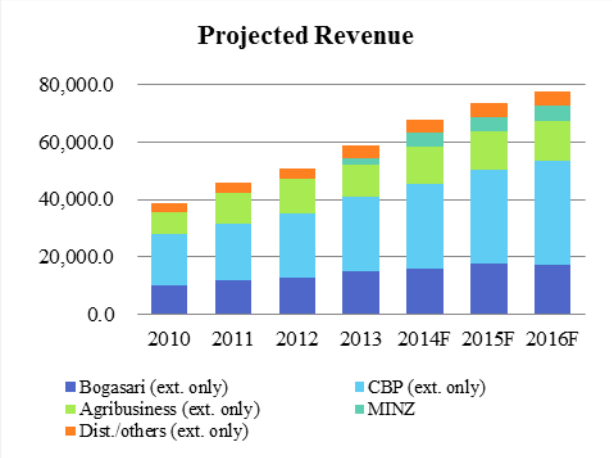
Figure 6 Indofood Market Caps & Potential Upside

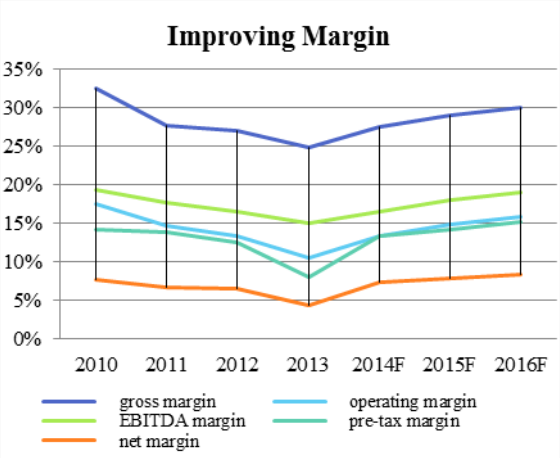
INDF valuation stems from discounted free cash flow

The first method on INDF valuation is using Discounted Cash Flow method. DCF can well value the ample cash flow that the company has and account for the future growth of the company in a long-term perspective.

10 Years Revenue Forecast

The projected cash flow is based on the assumption of stable revenue growth for each INDF business division.





Indofood Figure 7 Projected Indofood Revenue & Margin

CBP is expected to grow at 10% CAGR for 2013-20 periods. Meanwhile Bogasari, Agribusiness, China Minzhong, and distribution is expected to grow by 3.25%, 3%, 15%, and 3% respectively. The projected revenue is based on historical cycle and limited by current factory capacity. Indofood CBP and MINZ is expected to be the engine of growth.

In 2013, there was margin pressure mostly caused by increment in COGS. Despite a 15% increase in revenue, COGS increase by 18%, hence giving pressure on gross margin until bottom line. For the coming years, as commodity price is expected to recover, especially on palm oil, revenue growth will outpaced the growth in COGS, hence margins will improve.

Cost of Fund

Below is the assumption for INDF cost of fund using the Weighted Average Cost of Capital:

Cost of equity	
Risk free rate (Rf)	10%
Market return rate (Rm) Rf + JCI CAGR 10y	13%
Beta (ß)	110%
Risk premium (Rm-Rf)	3%
Ke = Rf + ß(Rm-Rf)	13%

Table 2 Indofood Cost of Fund (WACC)

WACC (%)	
Equity portion of capital	71.0%
Ke	12.9%
Debt portion of capital	29.0%
Kd	7.2%
WACC	**11.26%**

WACC uses the proportion of debt and equity multiplied by cost of debt and cost of equity. Looking at INDF 2013 balance sheet, proportion of debt and equity is 29% and 71% respectively. Hence, the weighted average cost of capital that INDF has to bear is 11.26%.

The main component of DCF's assumption: 10-Year Projected Cash Flow, Free Cash Flow, Discount Rate, and Continuing Value or Terminal Value. Free cash flow projection is shown by the table below. Discount factor used is the WACC, and perpetual growth rate is 3%.

Table 3 Indofood DCF Valuation

Net present value (Rp b)	2013	2014F	2015F	2016F	2017F	2018F	2019F	2020F	2021F	2022F	2023F	2024F
Net present value estimate												
Cash flow multiple	1	2	3	4	5	6	7	8	9	10	11	12
Discount factor @ WACC 11.2%	0.899	0.808	0.726	0.653	0.587	0.527	0.474	0.426	0.383	0.344	0.309	0.278
Free cash flow												
Operating profit	6,089	9,064	10,954	12,314	9,489	10,220	11,179	12,385	14,093	15,859	17,970	19,592.4
Tax	(1,252)	(2,264)	(2,601)	(2,957)	(2,317)	(2,533)	(2,785)	(3,092)	(3,526)	(3,967)	(4,490)	(4,894.2)
Operating profit after tax	**4,837**	**6,800**	**8,353**	**9,356**	**7,172**	**7,687**	**8,394**	**9,292**	**10,566**	**11,891**	**13,480**	**14,698.1**
% growth	*-7.4%*	*40.6%*	*22.8%*	*12.0%*	*-23.3%*	*7.2%*	*9.2%*	*10.7%*	*13.7%*	*12.5%*	*13.4%*	*9.0%*
Amort & depreciation	1,838	1,445	1,579	1,679	1,762	1,836	1,910	1,928	2,052	2,189	2,207	2,264.8
Gross cash flow	**6,675**	**8,245.**	**9,933**	**11,036**	**8,934**	**9,523**	**10,304**	**11,220**	**12,618**	**14,080**	**15,687**	**16,963.0**
% growth	*-0.1%*	*23.5%*	*20.5%*	*11.1%*	*-19.0%*	*6.6%*	*8.2%*	*8.9%*	*12.5%*	*11.6%*	*11.4%*	*8.1%*
Capital expenditures	(9,872)	(3,496)	(3,006)	(3,011)	(2,675)	(2,406)	(2,180)	(2,179)	(2,000)	(1,841)	(1,700.5)	(1,574.8)
Incremental working capital	(552)	(3,337)	(821)	(547)	(1,280)	(735)	(853)	(618)	(864)	(939)	(1,016.2)	(572.3)
Free cash flow	**(3,749)**	**1,411**	**6,104**	**7,477**	**4,978**	**6,381**	**7,270**	**8,422**	**9,753**	**11,300**	**12,970**	**14,815.9**
% growth	*NM*	*NM*	*332.%*	*22.5%*	*-33.4%*	*28.2%*	*13.9%*	*15.8%*	*15.8%*	*15.9%*	*14.8%*	*14.2%*

Corporate value is calculated by summing the total present value of free cash flow along the projected period and the present value of terminal cashflow (perpetual). The shareholder value is obtained by subtracting ending cash 2013 to the corporate value. Hence, intrinsic value per share that can be

Net present value (Rp b)	2013
Total PV of free cash flow @ WACC 11.2%	36,151
PV of residual value @ WACC 11.2%	49,862
Corporate value @ WACC 11.2% (Rp b)	86,013
Ending cash	14,359
Shareholder value (Rp b) @ WACC 11.2%	75,096
Intrinsic value/share (Rp) @ WACC 11.2%	**8,553**
Implied 2014F PE	15

obtained is Rp8,500.

4.4.2 Residual Earning Method

Aside from the discounted cash flow model, as a comparison the residual earning valuation will be used. While discounted cash flow valuation is a cash basis valuation, the residual earning valuation is accrual basis.

Using accrual basis, the firm value that can be obtained is higher as under cash basis all accrual figures have been taken out. This hypothesis can be proven using the RE valuation below. The assumption of valuation that is used is the same with the assumptions in DCF. The result of valuation indicates that INDF target price is Rp 8,900 with 26% upside potential.

Absolute Return	
Today's price	7,050
Target Price	8,900
DPS 2013	185
Upside	**26%**

Figure 8 Potential Upside using RE Model

Table 4 Residual Earning Model

Residual Earning Model	2012	2013F	2014F	2015F	2016F	2017F	2018F	2019F	2020F	2021F	2022F	2023F	2024F
Net Income	3,261	2,504	5,021	5,770	6,560	6,352	6,970	7,694	8,585	9,852	11,138	12,668	13,839
Dividend	(1,537)	(1,624)	(985)	(1,975)	(2,270)	(1,968)	(1,906)	(2,091)	(2,308)	(2,575)	(2,955)	(3,341)	(3,800)
Book Value	21,206	25,334	31,341	39,086	47,915	56,235	65,110	74,895	85,788	98,215	112,308	128,318	145,957
WACC * Book Value t-1		2,388	2,852	3,529	4,401	5,395	6,332	7,331	8,432	9,659	11,058	12,645	14,447
Residual Earnings	-	116	2,169	2,241	2,159	957	638	363	152	193	80	23	(608)
Discount Rate (WACC)	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%	11.26%
Projection Year	-	1	2	3	4	5	6	7	8	9	10	11	12
Discount Factor 1/((1+WACC)^Projection Year)	100%	90%	81%	73%	65%	59%	53%	47%	43%	38%	34%	31%	28%
Present Value of Residual Earning	-	104	1,752	1,627	1,409	561	337	172	65	74	27	7	(169)

Using residual earning model, the present value of residual earning is taken into account and then to be used to value the company. As residual earning is used, the model is not measuring the firm value based on future cash flow, but rather on future earnings.

Below is the calculation of intrinsic firm value per share based on Residual Earning model:

Terminal Value	
Sum of PV of RE (10 years)	6,129
WACC	11.3%
Long term growth rate in EBIT	3.0%
Present value of terminal Value	58,093
Terminal Value as % of Total Value	*90.5%*

PBR (Intrinsic Value) Calculation	
Book Value	**89,556,301,038,379**
- Debt	25,275,579,427,845
+ Cash	13,666,194,000,000
Net Debt	**11,609,385,427,845**
Equity Value (Market Capitalization)	**77,946,915,610,535**
Diluted Shares O/S	**8,780,426,500**
Fair Value Per Share	**8,877**

Table 5 Fair Value Per Share using Residual Earning Model

4.5 Financial Analysis

Income Statement: Diversified Earnings with steady growth

Revenue of INDF is projected to have steady growth with 10% CAGR between 2013-2016. Revenue of INDF is well diversified through its division and not

all divisions have the same sensitivity towards macro conditions. For instance, ICBP will be resilient towards macro disruptions as it produces basic foods and consumer needs, with noodle products as the backbone.

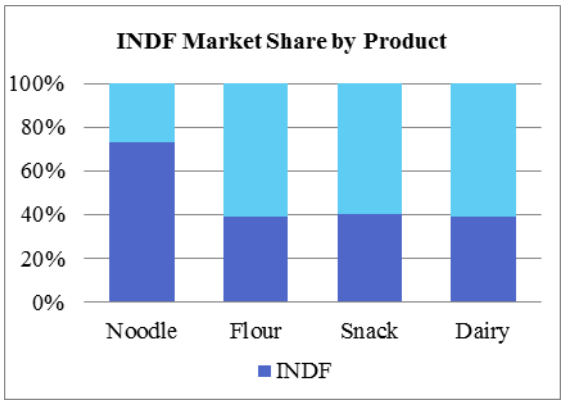


Figure 9 Indofood Market Share by Products

Bogasari is expected to have steady volume growth of 4% annually with the assumption that there is no additional milling capacity added. Bogasari margin will heavily depend on international wheat price and exchange rate. However, as the flour end products are majorly exported, any loss in foreign exchange when Rupiah weakened will be set off by revenue from flour export.

CPO and plantation business is also foreign exchange sensitive and dependent on global CPO price. Looking at the trade balance deficit that Indonesia have on May and the weaker Rupiah takes effect, CPO companies will benefit as the export revenue comes in US dollar meanwhile the cost is majorly in Rupiah. So far, from all division, operating expenses can be hold steady and efficient.

INDF also have good capacity to pay off its debt, shown its good interest coverage ratio. In 2013 proportion of debt hikes, as indicated by the net gearing ratio. INDF borrowed long term debt for the acquisition of China Minzhong and other expansion needs. Net Gearing is the Total Debt net of cash & equivalents as a percentage of the Total of Shareholders' funds and Debt funds. As debt proportion reduced in the future, the interest coverage ratio will improve.

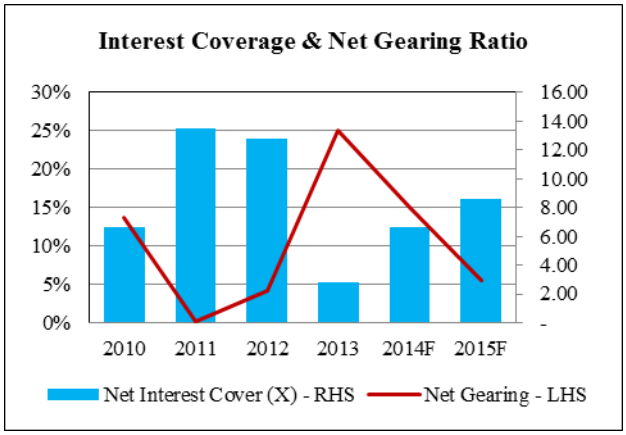


Figure 10 Indofood Interest Coverage & Net Gearing Ratio

Indofood is known for its ample cash condition, reflected historically in its BS, and it is expected to continue in the coming years. For a company as big as INDF, its

inventory maintenance is considered good, with average of 9-10 weeks of inventory. Collection of receivables is averaged 3 weeks indicating fast receivable turnover. Asset size is expected to grow by 5% annually.

INDF's bonds rating reiterated at AA+, and one of its bond series will mature in 2014; these support smooth fund raising for the company. Return on equity and assets declined in 2013 due to the weak bottom line. However, this condition is expected to recover in 2014 going forward as there will be margin and bottom line improvement. ROE is considered superior compared to its industry peers.

Table 6 Profitability Ratios

	Peer Median	2012	2013	2014F	2015F	2016F
ROE (%)		16%	11%	20%	20%	20%
ROA (%)		6%	4%	6%	7%	8%
Current ratio (x)		2.05x	1.67x	1.80x	1.74x	1.78x
DER		0.72	1.16	0.92	0.71	0.51

Cash Flow – Healthy Dividend Policy

Cash from operation is expected to rise from time to time align with the increasing net profit that is projected. Capex in 2013 rise significantly due to the acquisition of new land rights (carrying value increased by 34% yoy), buildings (carrying value increased by 44% yoy) and transportation equipment for the distribution business (carrying value increased by 51% yoy). In total, carrying value of fixed assets increase by 35% yoy. As there were huge investment in 2013, for the coming year capex is expected to be at stable level. This investment and expansion is expected to generate more future cash flow for the company.

Historically, dividend payment in INDF is healthy, with average DPR of 39.3% annually. For the coming years, DPR is expected to remains paid out, especially as the business is expected to recover.

4.6 Investment Risk

Strategic Risks:

Intense pricing competition

Consumer product pricing competes very tightly to one another. Therefore, predatory pricing and new entrants pricing can be a threat to push down the volume sold for ICBP products.

Financial Risk:

Swing in commodity price

Bogasari margin and CPO products are dependent on commodity prices. When wheat price started to spike up, there will be margin pressure in Bogasari. Considering that its competitor paying close attention to pricing between each other, it does not necessarily implies that Bogasari can rise up selling price. Commodities producers like Bogasari and IFAR has weak power to set the price due to the uniformity of the final product.

The price of palm oil may be affected by a wide variety of factors, including weather, trade policy, currency movement, consumer preference, lobbying by environmental NGOs, the price of substitute vegetable oils and crude oil. Agri businesses and plantation companies may also be affected by regulatory changes.

Foreign Exchange Risk

INDF is exposed to foreign exchange risk as its raw materials are imported; wheat, seasoned oil, packaging materials, etc. Weakened rupiah may be a threat for INDF as its raw material cost will spiked up. The forex gain from ICBP products export may not surpass the forex loss in importing raw materials. In 2013, almost 10% of outstanding Long term debt is denoted is foreign currency. Therefore, the business is very sensitive to foreign exchange movement. Dairy products that has skimmed milk as its raw materials is also a threat, as the skimmed milk is imported and paid in US $.

Operation Risk:

Weather threat to CPO crop

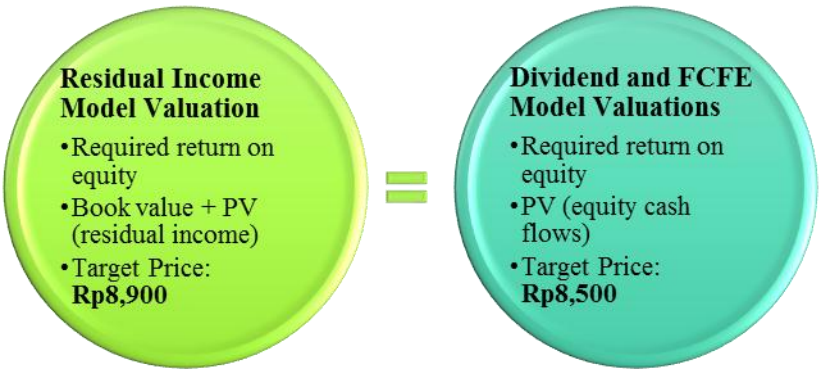
In 2013, INDF business is pushed up to a good shape in support by its CPO division. However, the CPO production is also very prone to weather

disruption. When the weather condition is not good, production and revenue will be at risk.

5. Conclusion

Based on the valuation above, INDF fair value per share is Rp8,500 using DCF valuation, and Rp 8,900 using residual earning valuation. Both approach is used in fundamental valuation, however the RE valuation is accrual basis and non-cash basis. These two results indicates that at the current price of Rp7,100, investor may gain 21% to 26% potential upside gain as within 12 months stock price will recorrect to its true firm value.

Residual earnings and discounted cash flow valuation are two different methods that are commonly used. However, in the market most analyst use DCF as it takes out accrual accounts and reflect the true liquid value of the firm.



Residual income, dividend discount, and free cash flow to equity models all use the required return on equity to value common stock. The residual income model starts with book value and then discounts the income leftover (residual) for the equity holders. The dividend discount and free cash flow to equity models discount cash flows. In theory, the three approaches should result in the same valuation

However, the application in real company valuation, the target price result is rarely the same. The reason is that the residual income model places more weight on the current book value and less on later flows. In contrast, the dividend and free cash flow models typically discount the first few flows and then assume a large later terminal value. These models place more weight on later flows. In real-world applications, it is difficult

to estimate later flows as there are so many assumptions variables that have to be plugged in, and thus model valuations will diverge.

Residual Income Model Valuation	Discounted Cash Flow Valuation
• Value = Book value + PV (residual income)	• Value = PV (Early cash flows + Terminal value)
• Large weight on current book value	• Large weight on later cash flows

Recommendation

After assessing the fundamental position of INDF, it can be concluded that its fundamental position mostly superior compared to its peers, as can be seen from the ratios comparison to its peers. The current price of INDF indicates that it is currently underpriced compared to its fair value.

Current market perspective is positive towards INDF as it is the largest food & consumer staples company in Indonesia. Nevertheless, full year 2013 result of ICBP is a little below expectation due to the margin pressures. Therefore revenue growth for coming forecasted years is not over pessimistic.

Considering the risks that are faced by the management, there are several mitigation actions that firm can takes. The first one to mitigate currency risk, the firm can use future contracts to secure commodity import purchase price. Secondly, for operational issue management can improve productivity and enhance its economics of scale in order to keep operating expense in track. For CPO end products selling price, the firm can also engage in forward contract of selling just in case the CPO selling price dropped.

In a package, the investment recommendation is buy with 21-26% upside gain for these major factors: 1) promising growth supported by diversified source of revenue, 2) Strong financial position backed by ample cash, and 3) established position amid the windfall.

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MEASURING INTRINSIC VALUE OF PT. BANK MANDIRI TBK. USING RESIDUAL INCOME APPROACH, DIVIDEND DISCOUNT MODEL AND PRICE TO BOOK VALUE

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Abstract

This paper empirically studies the valuation of PT. Bank Mandiri TBK (BMRI) using residual income, dividend discounted model and price to book value method. It adopts top down analysis approach whereas begin with the macroeconomic analysis, industry and then proceed to company analysis which include financial projection for upcoming years with various growth assumption gained from company visit. The result from study showed that the intrinsic value of BMRI worth at Rp11,200 using residual income method while it worth at Rp10,100 and Rp9,800 based on dividend discounted model and price to book value ratio approach respectively. This study indicated that the stock is undervalued comparing to its closed price at Rp8,7100 per October 25, 2013.

Keywords: Valuation, Banking, Residual Income, Price to Book Value, Dividend Discount Model

Introduction

Indonesia capital market has been showing an impressive stretch during the last three years in which Jakarta Composite Index (JCI) and foreign direct investment (FDI) kept hitting new record. JCI, country's equity benchmark, has shot up from 3,409 at the beginning of 2011 to hit 5,068 on May 31, 2013, a surge of 49%**.** While FDI recorded its high in the first three month of 2013 reaching IDR65.5 trillion (US$6.5 billion) and made up a total IDR93 trillion of FDI in the first quarter of 2013. As stated by Indonesia Stock Exchange (2013) that the impressive bounce of Indonesian capital market was largely due to nation's robust economic growth (gross domestic product expanded at average of 6.2% since the last three years) backed up by strong domestic consumption, rising middle class income, healthy fiscal policy and political stability.

International investors have been keen to get more exposure in to Indonesia as the country's outlook became more appealing. Bond and equity prospect are racing on positive track whereas in 2013 the country had raised total Rp 383 trillion from both instruments. International investors as a result now dominate major portion of country's equity and bond transaction. According to latest figures from Indonesia Stock Exchange (IDX), foreign investors owned nearly 63% of Indonesian stock in term of market capitalization as of 2013 and the rest 37% owned by domestic institution and retail investors (IDX, 2013).

As far as the capital market is concerned, stock exchange rigorously managed to develop large based of investor from domestic institution, foreigners, to retail investors. IDX has in cooperation with Association of Indonesia Securities Companies (APEI), BAPEPAM LK and securities companies been organizing free education program to introduce capital market to the public in order to develop larger base of retail investors. IDX (2013) stated that registered investors account rose rapidly from 370,786 in March 2013 to 422,324 as February 2014, a surge of 14%.

Nevertheless, one of the greatest challenges facing for every investor in dealing with capital market is assessing the intrinsic value of the security. Understanding company valuation and fundamental aspects is essential for every capital market investors to give them the objective measure of their investing decision (Damodaran, 2009). Valuation is playing important part since it is grounded on fundamental factors that largely influence the company performance. This is however under assumption that the market is rational and any arbitrage opportunity will be eliminated by market mechanism eventually the value of company should be returned to its intrinsic value.

The approach of company valuation may result in different methods. These methods are consistent with the purposes and company business structure so that it will expectedly reach the intrinsic value of the targeted company. The banking and property sector for example have different business model due to the facts they both operate in different industry and business environment. The use of inappropriate valuation methods for these two different sectors may produce bias value and led to losses due to the facts that valuations approach are all based on different principles. Understanding the valuation principles is critical for the analyst to choose the appropriate valuation approach.

This paper aims to evaluate the intrinsic value one of the financial service in Indonesia namely PT. Bank Mandiri Tbk. It is widely realized that banking industry is the life blood and key driving force of economy since the real sector heavily determined on banking industry soundness. Indeed, it has been challenging to value financial service rather than real sector because of several factors. Firstly, its industry is heavily regulated whereas the change in regulation could lead to large shift in value. The accounting rule is also varied with general firms due to the assets are being marked to market. Lastly, its earning is largely depending on the payment of third party for its credit whereas its ability to pay also determined on business profitability.

Having said that, Damodaran (2009) argued that financial services are best valued using equity valuation model rather than enterprise valuation model and with actual or potential dividend rather than free cash flow to equity (Damodaran, 2009). However, this paper will review how residual income, multiple valuations (i.e. price to book value) and dividend discounted model to value financial service. As its known that the bank's business characteristic is generating income from its liabilities which mainly compose financial assets those are marked to market and thus the valuation should pay more concern on its book value and thus residual income is chosen to address this issue. However, the author adds dividend discounted model and P/BV relative valuation as complementary model which will be described in the following section.

PT Bank Mandiri Tbk (BMRI) is chosen as target analysis due to the bank has managed to be one of the largest and valuable banking in Indonesia during the recent years. This is shown by the stock price surge which has been rising significantly in less than two

years from Rp5,696 in the beginning of 2011 to Rp7,650 in November 1, 2013, a sour of 34%. Furthermore, BMRI is ranked as top five largest market capitalization in Indonesia whooping at Rp245 trillion and the bank is also highly active traded stock with average daily trading volume of 46 million shares. Apart from that, the author likes the company's fundamental that has demonstrated decent growth since its second crisis in 2005 as indicated by stronger liquidity (84.5% LDR), better asset quality (1.9% NPL) and improved profitability (5.57% NIM) in 2013.

1. Literature Review

Hamonangan and Sulistyawati (2012) in the journal of capital market and banking analyzed the intrinsic value of PT. Bank Central Asia (BBCA) using two valuation approaches: discounted earning and price to book value. Using these two methods, they found that BBCA should be valued at Rp10, 820 per share and it was undervalued by 35.3% compared to its closing price of Rp8, 000 per December 30, 2012. The valuation determined in this analysis is proceeded through difference assumptions includes: 24% of credit growth, 18% growth third party fund, interest income growth at 11%, net interest margin stood at 5%, NPL, fee based income and inflation grew only by 0.5%, 25% and 6.75% respectively for three years ahead.

Following this research, Simorangkir and Panubut (2012) determined intrinsic value of PT. Bank Negara Indonesia (BBNI) using similar approach. The result indicated that BBNI per share worth at Rp4,589 using discounted earning approach while PBV calculation gained result of Rp4,508. These two valuation approach indicated BBNI is undervalued compared to its closing price of Rp3,825 per October 21, 2011. The researchers proceed the analysis using top down approach whereby began by macro analysis, industry, and proceed to company analysis which include financial projection and examining intrinsic value determinant. The assumptions used for valuation were also varied based on the historical performance of the company.

Unlike above mentioned Indonesian researches who used discounted earnings and PBV as valuation methodology, Sinkovic (2013) on his master thesis examined the intrinsic value range of Gorensjka Banka -non public Slovenian retail banking- for its minority shareholders using income and market approach. He argued that it is better to express

value in the range estimate rather than a single input due to the fact of different assumption and subjective inputs in the model. The income approach utilized in the thesis includes residual income model and discounted cash flow to equity while in the market approach or comparable companies method utilized price to book value model. He found that value of the bank as June 30, 2012 range between €700 to €749

Likewise Sinkovic (2013), Mata (2012) utilized the same valuation model to value Banco Esperanto Santo (BES), a second largest Portuguese Bank listed in PS120 index. The writer used the residual income and discounted cash flow model and relative valuation. However, the thesis stress out to stick at excess return framework (i.e residual income model) to determine BES intrinsic value since the model catches the growth opportunity in emerging market and account the bank ability to capture value in domestic market. The valuation suggests BES value at €1.26 per share as opposed to its closing price of €1.13.

In the light of 2009's financial crisis, Luca (2009) examined the value of Danske Bank Group, Denmark largest financial institution, using related valuation framework similarly to Sinkovic (2009), Mata (2012) which include free cash flow to equity (FCFE), dividend discount model (DDM), Residual Income model (RIM), and justified price to book value. Luca (2009) argued that all these models are well appropriate to value bank. The bank was valued at 131 DKK based on FCFE and dividend discount model (DDM) while the company value increases to 144 DKK using residual income model and declined to 113 DKK using justified PBV. That said, three out of four valuation model indicated that Danske Bank Group was undervalued with an average upside potential of 5.1% based on the closing price of 129 DKK per November 3, 2009.

2. Methodology

The aim of this chapter is to define the methodological approach used in this thesis. The analysis of company valuation will be built on top down approach which starts by examining macroeconomic environment and industry influences and finally performing individual company analysis that include financial analysis and intrinsic value estimate. The company analysis is the main core analysis in determining intrinsic value. It reviews historical and presents performance of company's financial condition and future prospect through qualitative and quantitative analysis.

Before proceeding to valuation, the future financial forecast is performed using the inputs from previous analysis to build realistic forecast assumption. The valuation is finally proceeding with different appropriate model namely residual earning method, dividend discounted model and justified price to book value. The result of this valuation model will be compared to the market value of the stock. Conclusion and recommendation are taken by comparing the calculated intrinsic value to market value and could be used by future investors as benchmark of investing decision.

2.1 Data Collection

The empirical data used for this thesis is entirely secondary data which the sources consists of variety of databases such as DataStream, company reports, government institution, and country report. The following is specific data and its sources:

a. Annual report of PT. Bank Mandiri Tbk (BMRI) from period 2008-2013 extracted from company website
b. Historical price of PT. Bank Mandiri Tbk from period 2008-2013 obtained from Datastream
c. Historical value of Jakarta Composite Index (JCI) from period 2008-2013 obtained from Datastream.
d. Macroeconomic data such as Certificate of Bank Indonesia (SBI), inflation, GDP growth and exchange rate obtained from Datastream and Bank Indonesia website.

3.2 Valuation Method

The most widely used valuation method for valuing companies is discounted free cash flow model in which analysts project the value of operation measured by free cash flow and subtracting with an estimated of net debt value. However, this model is primarily used to value non-financial companies and rarely used for non-financial service due the fact that they are different in characteristic as discussed at the previous section.

The choice of appropriate model is critical to reach a trustworthy analysis and rationale output or value. There are three types of model used to value PT. Bank Mandiri Tbk (BMRI) in this thesis, they are: 1) residual income model 2) discounted dividend model and 3) justified price to book value. These three models are widely used to value financial services as described earlier in the

previous section. Residual income put heavy concerns on book value of equity which recorded in the balance sheet side and this aligns to characteristic of the bank which generates value from its financial assets.

Dividend discounted model is further chosen as the second model because the company pays consistent dividend over the period of time. While relative valuation is added to compare the value of BMRI to its industry peers as described earlier. However, the implementation of these models involves different assumption and thus yield different value estimate as consequences.

Residual Income Model

This model is built on the premise that the value of the company equals to the invested capital and the excess present value of residual income generated by the company. The capital invested for the firm is measured by its book value of equity where residual income is the earning in excess of cost of equity. The residual income model takes the following equation:

$$\text{Value of Equity}_0 = \text{BV of Equity}_0 + \frac{\sum_t^n (\text{NI} - \text{k}_\text{e} * \text{BV of Equity}_{t-1})}{(1 + \text{k}_\text{e})^t}$$

Where: BV of equity = book value of equity

NI = net income

Ke = cost of equity

The model presents that the value measure for the investors is return on equity (ROE) and the risk of the company is shown by cost of equity which calculated through capital asset pricing model (CAPM) as described earlier. The model shows that the higher the difference between ROE and cost of equity implies the higher value of the company.

Residual income model is somehow mostly preferred to dividend discounted model or other equity model for several reasons. At first, the model put emphases on earning that is a measure of value creation rather than dividend which largely viewed as value distribution. Secondly, it captures large portion of equity value due to the model utilized current book values and residual earnings during the explicit forecast period. The model hence does not weigh heavily on terminal value unlike

discounted cash flow model. At last, this model framework relays accounting numbers and to the cost of equity which advantages forecasting and terminal value modeling.

Dividend Discount Model

The most straight forward valuation model and the oldest one to measures the value of the bank is dividend discount model as shown below:

$$\text{Value of Equity}_0 = \sum_{t=\infty}^{t=n} \frac{\text{Dividend}}{(1 + \text{K}_e)^t} + \frac{\text{Dividend} * (1 + g)}{(\text{K}_e - g)(1 + \text{K}_e)^n}$$

The basic premise of this valuation model is that the value of the company should align with the cash flow that the shareholders are expected to receive in the foreseeable future. That said, dividend discounted model is particularly appropriate to value bank since the company has long history of dividend payment policy with relatively stable payout ratio. Additionally, the long term growth rate of dividend payment is also modest and falling based on GDP growth rate as the bank acts as backbone of domestic economic growth.

The valuation estimate under DDM framework requires three basic assumptions: 1) dividend growth rate 2) and perpetuity growth rate 3) discount rate. Dividend growth rate among banks will be varied due to different of management and business strategy and thus it is determined by company historical performance. Perpetuity growth rate assumption is the rate of dividend growth after year end of forecasting. It is based on economic growth rate which is roughly at 6% given inherent uncertainty of long term forecast. The company is clearly will grow above or even at 6%, however, following economic growth rate as perpetuity rate is conservative assumption. Meanwhile, the discount rate is calculated using CAPM model as mentioned earlier.

Relative Price to Book Value

The last valuation model used is P/BV multiple which defined as market price of equity divided by the book value of equity. The following is the model of justified P/BV:

$$\text{PBV} = \frac{\text{P}_0}{\text{BV}_0} = \frac{\text{ROE} * \text{Payout Ratio} * (1 + \text{g}_n)}{(\text{k}_e - \text{g}_n)}$$

Where: P_0 = market price of equity

BV_0 = book value of equity

K_e = cost of equity

ROE = return on equity

g_n = growth rate

The model is justified to value financial service like bank looking that the bank owns major financial assets that are marked to market. The intangible assets of financial services are also relatively small. This model is highly grounded on Gordon's growth model and aimed to find the fair P/BV ratio that the bank should be traded. The model above implies four inputs: 1) ROE calculated by net income divided by book value of equity 2) dividend payout ratio measured by historical company historical policy 3) perpetuity growth rate assumption and 4) discount rate are based on domestic economic growth rate and CAPM model respectively as mentioned at previous section.

Method of Analysis

The analysis method of this thesis takes several steps as the following:

a. Performing macroeconomic analysis which could influence the banking sectors and the company performance. This type of analysis will review global economy, country's GDP performance, and inflation rate, monetary and fiscal policy which expected to have impact to the performance of company.

b. Examining banking industry through five forces of Michael Porter approach such as competitive pressure, barrier to entry and exit, industry threats and also measuring specific banking ratios.

c. Reviewing historical financial condition of the company through financial ratios and forecasting future earning and assets through specific rationale assumption. The forecasting method requires extensive analysis of company's income and expense drivers and this consists of three stages, they are:

    - ..... Examining the earning and expense drivers
    - ..... Making assumption growth of earning and expense drivers.
    - ..... Estimating the earning and expense based on growth assumption.

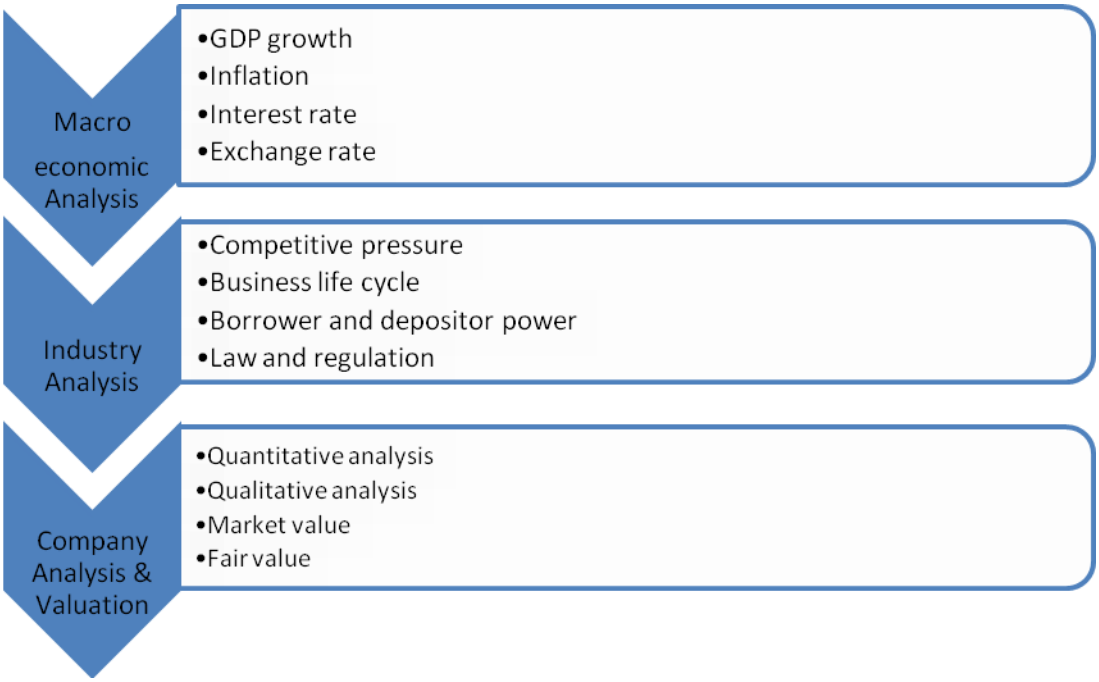
d. Measuring discount rate is critical point in valuation process. As defined earlier that the discount rate is the rate used to discount the future value in to the present

value. It is calculated through Capital Asset Pricing Model (CAPM) which measures the relationship between risk and return of the securities.

e. Calculating intrinsic value of the company with residual income, dividend discount model and justified priced to book value (P/BV) in which the valuation models had been described earlier in this chapter and also presented at the appendices.

Generally, the research process of this thesis used "top down approach" as shown as in the following figure.

Figure 3.1 Top Down Approach



Referring to the above figure, the analysis approach of this study is thus built on qualitative and quantitative basis due to the conclusion are constructed on valuation model while the inputs are constructed on qualitative insight. Having said all, it is aimed to apply widely accepted methodology of valuation and not to build new theory or new valuation model

3. Analysis

PT Bank Mandiri Tbk (BMRI) is the first largest bank in Indonesia with total assets reaching IDR 733.11 trillion as FY2013. The bank went IPO in July 2003 divested 20% of its share equivalent to 4 billion shares to public. As noted in its annual report the company currently operates 2,050

branches spread across different time zone, about 11,541 automatic teller machines (ATMs) with total loan and deposit accounted IDR 472.4 trillion and IDR 556.3 trillion.

Its core banking sector business mainly comprises four strategic business units: corporate, commercial, micro and retail, consumer finance, and treasury. Corporate business units account the biggest loan composition of BMRI, roughly 60% of total loan generating Rp5.67 trillion net interest incomes in 2013. Tough positioned as biggest corporate lenders, Its micro lending growth has increased sharply over couple years more than its corporate loan segment, a growth of 49% CAGR from 2009-2013. Yet its net interest income in micro and retail segment constituted 40% of total net interest income. In other word, Bank Mandiri should be placed as the second largest micro finance provider after Bank Rakyat Indonesia yet its position is seen to stand still as the company expected to expand its retail mix loan to 40% of total loan by 2014.

The author believes that Bank Mandiri strategy is on track to search for cost advantage in operation and funding while also being aggressive in high yield segment and fee income business in wholesale banking arena. Further, the author credits Bank Mandiri for its aggressive penetration in noncore business segment such as acquiring insurance company, inHealth, the largest health insurance provider in Indonesia. Given all these strategy and its position in funding franchise, subsidiaries synergies, and transaction capability is seen able to maintain the bank's current position in the banking industry.

4.1 Macroeconomic Analysis

Indonesia economic growth has been mostly above 5 % within the last decade even starting 2006 the economy grew by more than 6% excluding crisis period in 2009 and 2010. However, Indonesia's GDP growth never fell below 4% even during these crisis periods. This is an exceptional growth considering that many countries recorded GDP contraction during these periods. Indonesian economy grew by 5.8% for year 2013, slower than 2012 and 2011 which respectively grew by 6.2% and 6.5%. The slowdown was largely attributed to the slowdown of and export and investment growth.

Table 4.1 Macroeoconomic Indicators

Line Item	2012	2013	2014F	2015F	2016F	2017F
GDP (USD$ bn)	876.4	872	242.3	244.5	246.6	248.6
Real GDP Growth (% pa)	6.2	5.8	5.4	5.9	5.6	5.4
GDP per capita (US$ current prices)	3,687.5	3,631.5	3,572.9	4,059.5	4,495.7	4,872.7
CPI Inflation (%pa)	4.3	7.0	6.3	5.0	4.7	4.5
Current Account Balance (% of GDP)	-2.8	-1.9	-1.5	-1.1	-0.7	-0.6
Short term Interest rate (%)	4.7	5.9	7.7	7.8	7.8	7.8
Exchange rate per US $ (year average)	9,403.2	10,504.5	11,825.0	11,460.9	11,343.0	11,438.6

Source: Oxford Economies

Nonetheless, Indonesia real GDP growth based on its regional standard remains firm through 2015. While the country's output advanced by 5.8% yoy in 2013, ASEAN-5 and emerging market only grew by 5%. Looking forward, IMF (2014) foresees that the economic growths in 2014 are seen to be limited due to higher interest rate, weaker external demand for export and sluggish investment environment. IMF (2014) estimated that the global economy could grow by 3.6% for 2014 following tighter financial condition implied by many developing countries. For Indonesia alone, IMF (2014) predicted that the economy growth might be ranged of 5%-5.5% this year while oxford economics forecast to advance at 5.4% FY2014. However, Indonesia is not alone experiencing a slowing growth but most of developing countries are also facing economic challenges. Economic recovery in the US, China and Japan are still affecting Indonesia's economic performance.

During 2013, weakening global economy, inflation and interest rate hike has steered to put strong pressure on current account deficit. The current account has started to record deficit since the fourth quarter of 2011 following commodity price volatility. While in 2013, CAD recorded USD$28.4 billion (3.3% of GDP) largely increase from period 2012 which recorded USD$24.4 billion (2.8% of GDP). As a result, Indonesian rupiah has suffered a loss of more than 20% against USD dollar. The swelling in CAD was largely attributed by a rapid decline in export beside the deficit in service and income account. Country's heavy reliance on natural resource based exports which comprises 64% of total export unfavorably put the country during the downward movement of global commodity prices.

Looking ahead, we foresee that Indonesia economy is on the way to recover as the current data suggest a robust outlook. Amidst global economic headwind, Indonesia base economic fundamentals are solid to face the challenges ranging from US tapering to china's potential slowed down. Given the bank loan growth has high correlation to GDP so thus economic recovery should bode positive catalyst for bank's growth. It is expected that loan growth to accelerate at 19% in 2014 considering 5.4% GDP growth rate.

4.2 Industry Analysis

Entering 2014, Indonesian banking encounters headwinds from several directions ranging from interest rate hike, depreciating currency, weak rule of law and U.S. Fed monetary stimulus in which could increase capital outflow. These economic factors don't divine well for Indonesia companies and thus could weigh on the assets quality, profitability and other financial profiles of Indonesian banks.

Table 4.2 Important indicators for Indonesia banking industry

Line Items (in %)	2008	2009	2010	2011	2012	2013
LDR	74.58	72.88	75.21	78.77	83.58	89.70
ROA	2.33	2.60	2.86	3.03	3.11	3.08
NPL	3.20	3.31	2.56	2.17	2.15	2.21
Op. Expense/Op. Income	88.59	86.63	86.14	85.42	74.10	74.08
CAR	16.76	17.42	17.18	16.05	17.43	18.72

Source: OJK

Banking sector in Indonesia has delivered positive contribution as country economic engine in which bank loan to GDP ratio stood at 36% in 2013, up from 32% in 2012. However, the credit growth in 2013 contracted to 21.4% from an expansion of 23.1% from previous year. This slowdown in lending growth was mainly attributed from consumer segment in particular vehicle and housing loan as a result of loan to value (LTV) regulation imposed by Bank Indonesia at June 2012. Furthermore, corporate segments also slowed since the banks halted credit for those are deemed sensitive to economic contraction in 2013. Having survived from windy business period in 2013, the author foresees that the banking credit might not increase significantly from previous year factoring hike interest rate environment.

In regard of profitability, Indonesian banks have recorded positive earnings growth and noteworthy ROA hovering at 3% as suggested at table 4.5. The average net profit of

banking industry rose to Rp8.9 trillion in 2013 from Rp7.74 trillion in previous year. NIM slightly declined for 2013 as it registered 4.9% lower than 5.5% level in 2012. However, Indonesian's bank NIM was still far wider than other ASEAN banks which just registered within range of 2.6% even it outstrip those of their peers in other large economies.

The financial soundness of the banking industry has been well maintained during recent years. The asset quality of the banks which measured by NPL has been drastically reduced as gross NPL ratio slightly declined from 1.87% in 2012 to 1.77% for 2013. This improvement was as a result of banks' credit risk mitigation approach and its prudential policy for lending especially for those sectors which were deemed sensitive to currency depreciation and economic downturn. Tight banking regulation which currently imposed by BI also had played a role in mitigating banking credit risk. Currently, BI had issued i) minimum LTV (loan to value) ratio for housing loan (at least 70% of collateralized assets) and ii) increase minimum down payment for as vehicle financing. This macro prudential policy is response to high housing lending to household in recent years and thus to avoid property bubble.

In term of capital aspect, Indonesian banks have been resilience improved during 2013 whereby CAR (Capital Adequacy Ratio) rose to 18.4% in 2013, up from 17.3% than previous year. The increase in capital is highly attributed to the tight policies enacted by Bank Indonesia. This high capital ratio wherein far well above 8% minimum required level provided Indonesian banks wide opportunity to for business expansion in 2014. Meanwhile, liquidity risk has also been carefully maintained in which LDR remained stable at 89.9% in 2013. This is as a result of newly issued policy mix whereas Bank Indonesia reduced the upper limit of Secondary Reserve Requirement and LDR-based Reserve Requirements. Going forward, the author foresee the liquidity and banking capital will remain stable following economic recovery and rupiah stability.

4.3 Financial Analysis

Bank Mandiri has exhibited a consistent growing net profit over the last five years. Closing year 2013, the company recorded net profit of Rp18,204 with earning per share (EPS) amounted Rp780, an increase of 17.4% from 2012 and 154.4% from 2009. Firm's strong income growth is largely driven by stable loan growth over the year and followed by reduction of interest expense. Initially there are six major sources of interest income for the bank: loan, government bond,

securities, bank placement, consumer financing, and sharia income. The loan acts as the largest contributor of bank's income which constituted 76.1% of income FY2013.

Table 4.3 Income Statement

P&L Summary (IDRbn)					
FYE Dec	**2009**	**2010**	**2011**	**2012**	**2013**
Total Interest Income	32,599	33,932	37,730	42,550	50,209
Total Interest Expenses	(15,241)	(13,762)	(15,954)	(15,020)	(17,432)
Net Interest Income	**17,358**	**20,170**	**21,776**	**27,531**	**32,777**
Total Other Operating Income	5,308	8,829	14,595	14,123	17,313
Net Provision	2,321	3,338	3,710	3,454	4,856
Net Gain (Loss) of Government Bond	355	420	187	339	(180)
Total Other Operating Expense	**(10,269)**	**(12,344)**	**(16,312)**	**(18,913)**	**(21,501)**
Net Other Operating Income/Expense	(6,927)	(6,433)	(5,240)	(7,905)	(9,225)
PPOP	12,752.1	17,074.5	20,245.8	23,079.4	28,408.0
Core PPOP	12,397.0	16,654.5	20,058.8	22,740.2	28,588.3
Operating Income	**10,431.2**	**13,736.5**	**16,535.9**	**19,625.4**	**23,551.7**
Net Non Op. Inc. (Loss)	393	236	163	879	510
Pre-tax Income	10,824	13,972	16,699	20,504	24,062
Taxation	(3,626)	(4,603)	(3,816)	(4,461)	(5,232)
Minorities	(43)	(151)	(450)	(540)	(626)
Net Profit	**7,155**	**9,218**	**12,433**	**15,504**	**18,204**

Source: Company Report

However, the company's income growth of 17.4% FY2013 is slower than previous year which grew by 24.7%. This is due to a relatively slower loan growth which only booked Rp43,255 billion while the interest expense grew by 15.9% particularly time deposit interest expense. Nevertheless, the operating income and core PPOP (pre provision operating income) has significantly increased FY2013, a rise of 25.7% and 20% respectively from previous year. This suggests that the core operational growth basically rises positively.

Unlike the net interest income, the firm's other operating income is experiencing volatile uptrend growth over the past five years. Other net operating income refers to fees, commission and securities gain in which FY 2013 recorded Rp17,313 billion, an increase of 23% from previous year while FY2012 declined by 3% and +65%,+66% in 2011 and 2010 respectively. Normally, this volatile income is highly driven by gain and losses in financial assets.

Company's other operating expense refers to general administrative, salaries and employee benefits and forex loss which all recorded Rp21,501 billion FY2013 in which general administrative such as rent and professional fees constitute roughly 46% of total expense in this account. The expense is however increasing in line with total income growth. Net provision for impairment losses

expenses is slightly volatile over the past five years. Allowance provision initially comprises three accounts: provision for increase or decrease in earning assets, commitment and contingencies, and other assets. Net provision FY2013 increased by 41% than previous year which recorded Rp4,856 billion. Additionally, while the increase of net income in 2013 coupled with dividend rise, all led to higher retained earning and equity.

The company's total assets are increasing since the last five years with compound annual growth rate (CAGR) of 16.7% from 2009-2013. In 2009, total assets amounted at Rp395 trillion and increased to Rp733 trillion FY2013, an increase of 85.8% from 2009 and 16.8% from 2012. This substantial increase in total assets is largely driven by loan growth which FY2013 composed 62% of the assets. Basically there are three major compositions of total assets: loans, government bond, and financial assets. As December 2009, total loan only amounted Rp18 trillion and increased to Rp455 trillion FY2013 with annual compound annual growth rate (CAGR) of 25% within the year.

Table 4.4 Balance Sheet

Balance Sheets (IDRbn)					
FY Dec (IDRbn)	**2009**	**2010**	**2011**	**2012**	**2013**
Cash	8,868	9,522	11,358	15,286	19,052
Government Bonds	89,133	78,093	78,459	78,936	82,227
Placement with Other Banks	29,707	21,311	38,652	20,869	24,554
Placement with BI	48,805	59,796	58,840	75,326	78,656
Loans	186,095	234,678	302,174	374,399	455,146
Fixed Asset	9,833	10,827	10,395	11,941	13,258
Other Asset	22,176	35,547	52,014	58,862	60,206
Total Assets	**394,617**	**449,775**	**551,892**	**635,619**	**733,100**
Customer Deposits	319,550	362,212	422,250	482,914	556,342
Inter Bank Deposit	10,922	7,657	12,654	14,321	12,672
Fund Borrowings	3,810	5,608	11,703	11,609	15,997
Other Liabilities	25,036	32,228	42,630	50,242	59,299
Total Liabilities	**359,318**	**407,705**	**489,237**	**559,086**	**644,309**
Minority Interest	189	527	861	1,953	1,371
Equities	**35,109**	**41,543**	**61,793**	**74,580**	**87,419**
Total Liabilities and Equities	**394,617**	**449,775**	**551,892**	**635,619**	**733,100**

Source: Company Report

Referring to above balance sheet table, it is clearly seen that the bank has robust loan portfolio and strong deposit growth. The total portfolio raised by 22.7% yoy in 2013 while it grew by 23.4% CAGR from 2009 to 2013. This robust loan portfolio growth was led by superior performance of micro loan and corporate credit which increase by 42.3% and 28.9% yoy respectively. The

corporate loan is still dominating the loan portfolio of the bank which comprises of 40.7% of the total loan whooping at Rp169.7 trillion and it is suggesting that bank Mandiri is fundamentally a corporate lending focused player.

Financial Ratio

BMRI has demonstrated solid profitability shown by strong net interest margin (NIM), resilient growth of ROAA and ROAE which averaging at 5.54%, 2.37%, and 23.2% respectively. According to the author's estimate, the bank's NIM steadily grew by 24 bps in 2013 to 5.89% from 5.68% in the previous year. This steady increase is buoyed by higher yield in government bonds placement to 4.24% in 2013 (+35% from 3.89% in 2012) as a result of interest rate surge. Large proportion of CASA ratio of 64.7% which just yielded 1%-1.5% interest rate was however on the back of bank's strong margin.

Commercial bank's loan to deposit ratio (LDR) which measured liquidity inched up to 90.5% as in 2013 from 83.6% in the previous year while Bank Mandiri still able to maintain its LDR at 84.5%. This is considerably highly liquid and aligned to the limit set by Bank Indonesia at 78%-92% which measure the financial health of the bank. Noted that the bank liquidity is depending on the structure of funding and asset liquidity. Once the banks tried to increase its loan growth performance while the deposit declined thereby reduce its liquidity risk as loan move faster than deposit.

Bank Mandiri liquidity remains healthy since 2009 to 2013 as the bank successfully managed to increase more deposit growth as well as loan growth. Deposit growth increased by 14.5% CAGR in 2009-2013 from Rp 320 trillion FY2009 to Rp556 trillion in 2013 with CASA proportion maintained at 58%-65% in respective year. Moving forward, Bank Mandiri is expected to grab 2 million retail depositors each year with its e-cash channel which has been launched in first quarter 2014 and the company will further add more 50 branches, 1.9 ATM and increase customer loyalty through fiestapoin and thereby deposit could grow at average 14% in coming next five years.

Asset quality which measured by NPL significantly improved on the light of its business transformation. Bank Mandiri (2014) reported that its NPL is still well maintained in 2013 which just stood at 1.90% (Rp9.02 trillion) though it increased from 1.88% (Rp7.302 trillion) compared to the previous year. No worsening asset quality should be worried as it was below 5% of BI red line level. Even corporate loan which made up of 39% of total NPL declined to 1.53% in 2013 amidst global economic contraction. However, the author puts more concern in micro and small credit segment as their NPL were above 3% level even it was still in industry level. The positive part is that the NPL was still maintainable at 3% in micro and retail segment even this business segment grew 42% in 2013.

The author foresees that BMRI could further maintain its NPL while also increase loan growth quality through better credit identification process, accurate underwriting process, and well maintained credit monitoring.

4.4 Valuation

Based on the above macroeconomic, industry and company specific analysis stated at the previous section. Then the author proceeds to forecasting financial statement in order to derive to company's value. Variety of assumption s is required for financial forecasting as part of valuation purposes. These assumptions are made based on historical data and author's observation with investor relation of PT Bank Mandiri Tbk. The followings are basic assumptions made in forecasting financial statement of the bank:

Table 4.5 Valuation Assumption

Assumption	2014	2015	2016	2017	2018
Loan	20.50	21.45	21.45	15.00	15.00
Third Party Fund	20.89	13.39	15.03	13.41	14.35
Net Interest Margin	5.63	6.10	6.21	6.39	6.28
NPL	1.80	2.10	2.10	2.30	2.45
Fee Based Income	2.15	2.15	2.15	2.15	2.15
Interest rate	7.5%	7.5%	7.5%	7.5%	7.5%
Inflation	8.5%	7.5%	7.5%	7.5%	7.5%

One key factor needed to take high consideration in Dividend Discount Model and Residual Income is the cost of equity which represents the rate of return that the investors expected for the investment. The cost of equity is utilized as the discount rate to determine the present value of the cash flow.

Table 4.6 Cost of Equity

Risk Free rate	8%
Market Risk Premium	3.5%
Beta (β)	1.26
Cost of equity	**12.4%**

The above cost of equity calculation assumes SBI interest rate at 7.5% as risk free rate (Rf) due to the government bond is considered as risk free security. While the beta value (β) is obtained from regression of Jakarta Composite Index (JCI) and BMRI stock return from 2009-2013. While market risk premium is found from market risk deducted to risk free rate. The market risk is obtained from average rate of return of JCI at 12% from 2009-2013. Having these all numbers, the author found the cost of equity of the bank is at 12.4%.

Residual Income Valuation

The author estimated that bank's book value will grow at CAGR 19% from 2014-2019. Given loan growth and third party fund at 20.50% and 28.9 % respectively FY2014, Book value per share is expected to inch up to Rp4,391. The residual income valuation is as follows:

Table 4.5 Residual Income Valuation

RI Build Up	2013	2014E	2015E	2016E	2017E	2018E
BVPS	3,747	4,391	5,219	6,213	7,462	8,859
Net Income	18,204	20,308	26,128	31,337	39,372	44,068
EPS	780	870	1,120	1,343	1,687	1,889
DPS	199	226	291	349	506	567
Cost of Equity	0.124	0.124	0.124	0.124	0.124	0.124
Residual Income		405	575	695	916	963
Discount factor		0.89	0.79	0.70	0.63	0.56
PV of RI		360.6	455.0	489.5	573.9	536.3

RI Calculation			
Terminal Value		**Valuation**	
Sum of PV Residual Income	2,415.4	BMRI price	8,775
Long term growth rate	4.50%	BVPS	3,747
Cost of equity	12.41%	Implied P/BV	2.3x
Terminal value (TV)	12,170	**BMRI value / share**	**12,943**
PV of TV	6,781	Implied P/TBV	2.9x

Based on residual income valuation, it could be seen that BMRI is fairly valued at Rp12,943 per share implying 2.9x PBV. Given current price of BMRI at Rp,8775, the stock is undervalued with 47% potential upside return. Cost of equity plays important impact on valuation and thereby author conduct value sensitivity based on ROE and cost of equity determinant.

Dividend Discounted Model

Bank Mandiri (BMRI) strives to maintain its stable dividend policy over the years with dividend payout ratio ranges from 16%-32% from the last five years. The company's policy is to give dividend payout at minimum 16% while FY2013 BMRI delivers 26% of its earning to shareholders. Its dividend payout policy tough is subject to the business performance. By projecting stable earning growth of 19.7% on average, the author appreciates the company to deliver 26% -30% payout ratios in coming next five years.

Table 4.6 Dividend Discount Model

DDM Build Up	2013	2014E	2015E	2016E	2017E	2018E
Net Income	18,204	20,308	26,128	31,337	39,372	44,068
Dividends	4,651	5,280	6,793	8,148	11,812	13,220
% growth	89.91	13.52	28.66	19.94	25.64	11.93
% payout	25.55	26.00	0.26	0.26	0.30	0.30
DPS	199.3	226.3	291.1	349.2	506.2	566.6
Discount factor		0.89	0.79	0.70	0.63	0.56
PV of dividends		201	230	246	317	316

DDM Calculation			
Terminal Value		**Valuation**	
Sum of PV Dividend	677.56	BMRI price	8,775
Long term growth rate	8.50%	BVPS	3,747
Cost of equity	12.41%	Implied P/BV	2.3x
Terminal value (TV)	15,723	**BMRI value / share**	**9,438**
PV of TV	8,760	Implied P/TBV	2.5x

The dividend payout is discounted at 12.5% while terminal growth rate of dividend payment is estimated at 8.5% based on earning growth estimate and stable dividend payout policy. The model shows that BMRI worth at Rp9,438 per share implying 2.5x PBV. That said, based on this calculation BMRI is undervalued and there is 7.6% upside return based on current market value of Rp8,775 as March 2014.

Price to Book Value Model

Companies used for comparison in the relative valuation are in the same industry and relatively at the same size as Bank Mandiri. Based on these criteria, the companies used as comparison are PT Bank Central Asia Tbk (BBCA), PT Bank Rakyat Indonesia Tbk (BBRI), PT Bank Negara Indonesia Tbk (BBNI), and PT Bank Danamon Tbk (BDMN). Here are the results of BMRI peer comparison for year end 2013.

Table 4.6 Dividend Discount Model

PBV Valuation	Market Price	BVPS	Profitability			PB Multiple
			ROE	ROA	NIM	
Bank Central Asia (BBCA)	10,600	2,590	28.2	3.8	6.2	4.09
Bank Rakyat Indonesia (BBRI)	9,575	3,209	34.11	5.03	8.55	2.98
Bank Negara Indonesia (BBNI)	4,950	2,552	22.5	3.4	6.1	1.94
Bank Danamon (BDMN)	4,565	3,261	14.5	2.5	9.6	1.40
Bank Mandiri (BMRI)	8,775	3,747	22.5	2.5	5.89	2.34
Median						2.34
Average						2.55
Max						4.09
Min						1.40

Based on the above table, it can bee seen that BBCA has the highest PB multiple at 4.09x followed by BBRI at 2.98 while BDMN stood the lowest PB multiple. The author foresees that BMRI current PBV ratio which stood at 2.34 is still undervalued given average PBV at 2.55 times and company's healthy business performance. Given forecasted BMRI's book value per share at Rp4,391 FY2014 and industry fair PBV ratio of 2.55 x thereby the value of Bank Mandiri should fairly stood at Rp11,202. This value estimated implies 27.7% upside potential for BMRI as current market price (March 3, 2014) of Rp8,775 per share.

Having calculated the intrinsic value of BMRI with different valuation approach, the value of BMRI are Rp12,943, Rp9,438 and Rp11,203 based on residual income, dividend discount model and price to book value respectively. As the result shows that the different valuation approaches yield different valued estimate due to the fact that they have different subjective assumption. However, the value estimate points to the same direction in which the intrinsic value of BMRI is above current market price.

Table 4.7 The Consensus Estimate of BMRI's Value

Valuation Model	Value Estimate
Residual Income (RI)	12,943
Dividend Discount Model (DDM)	9,438
Price to Book Value (PBV)	11,203
Average	**11,194**

The stress of this result is not in the inconsistency of value generated from the valuation method but rather on the catching the relevant information in to the valuation. As it is known that each valuation technique has its own advantages and disadvantages as it is also has potential risk for each valuation method. Cost of equity for example remains the major risk potential for value estimate as a slight increase in interest rate benchmark will have significant impact to the value.

Most of the securities houses analysts issued different intrinsic values for BMRI depending on theirs own assumption and estimates. However, the consensus points to the same result that BMRI is currently undervalued as shown at the following table:

Table 4.8 The Consensus Estimate of BMRI's Value

Securities	Target Price	Rating
Indopremier	12,150	BUY
Credit Suisse	11,700	BUY
UOB Kayhian	11,500	BUY
Kim Eng	11,000	BUY
Daewoo	11,510	BUY
AAA Securities	10,500	BUY
RHB OSK	11,000	BUY
Lauthadana Securindo	10,500	BUY

Source: Respective Companies

As shown above that Indopremier and Credit Suisse generated higher value for BMRI relative to other securities companies. These different results are the products of different assumption and valuation methods employed by the analysts. Indopremier, for example, forecast the earning of the bank to grow at 15% and 19% FY2014-205 respectively while the Credit Suisse, UOB Kayhian and other securities might find that the earning to decelerate below that target point. Thereby, the

values generated by those securities are different. Nonetheless, the consensus indicated that BMRI is undervalued and worth buying with average target price at Rp11,200.

5. Conclusion

As the main goal of this study is to determine the intrinsic value of the company and thereby from strategic analysis above revealed that BMRI is significantly undervalued as calculated through three different valuation methods. This finding, however, is subject to company strategic growth, industry and macroeconomic profile that have been evaluated as part of valuation analysis.

In the company analysis part shows that there are three key main points for Bank Mandiri to regain its value going forward. Firstly, robust CASA position which provides the company with relatively low cost of fund. As FY2013, CASA comprises of 65% of total deposits and it is expected to slightly increase cushioned by an increased of deposit growth from its transactional banking capability. Furthermore, BMRI strong liquidity which measured by 85% LDR (loan to deposit ratio) should further ease the company in funding competition for its strong capital and liquidity.

Secondly, its aggressive strategy in micro lending which provides high yield should further strengthen its NIM position. Compared to other banks, BMRI has strong lending capacity to penetrate micro lending segment given strong capital and liquidity position. Thirdly, BMRI's buffer against weak asset quality is among other peers even BMRI has proved that taking higher exposure into commodity sector did not translate into higher NPL. Yet, amidst global weakness in 2013, the NPL in corporate loan segment was still in healthy position of 1.5% NPL.

Meanwhile, in the banking industry has been in tight competition during the last three years given as the economy being more open yet MEA 2015 should further increase competition level of banking industry as well as increasing market range. In the macroeconomic perspective, tightening monetary policy, improved current account deficit underpinned by declining import, export recovery should back the growth of economy in the country. The author expects that economic reformation to gain traction following upcoming presidential election in July 9, 2014.

Lastly, three different valuation approaches namely residual income (RI) method, dividend discount model (DDM) and price to book value (PBV) all indicated that BMRI is undervalued. The average intrinsic value of BMRI from three valuation approach points at Rp11,194 per share which implies 27% upside potential from current market price of Rp8,775. This estimate, however, is period sensitive and subject to industry and macro economic profile and thus might be translated as there is more upside potential return for long term investor.

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ANALISIS PENGARUH *SIZE, BUSINESS RISK, PROFITABILITY, LIQUIDITY,* DAN *ASSET STRUCTURE* TERHADAP STRUKTUR MODAL PADA PERUSAHAAN MANUFAKTUR YANG TERDAFTAR DI BURSA EFEK INDONESIA PERIODE 2011-2013

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Abstract: The purpose of this research is to examine the effect of size, business risk, profitability, liquidity, asset structure on company's capital structure which is measured by debt to equity ratio in manufacturing companies listed in Indonesia Stock Exchange. This research used 192 data from manufacturing companies listed in Indonesia Stock Exchange, selected using purposive sampling method, during the research period 2011 until 2013. Data were analyzed using multiple regression method. The result of this research indicates that business risk, profitability, and liquidity have significant effect on company's capital structure which is measured by debt to equity ratio. Meanwhile, size and asset structure have no significant effect on company's capital structure which is measured by debt to equity ratio.
Key words: Capital Structure, Size, Business Risk, Profitability, Liquidity, Asset Structure

ANALISIS PENGARUH *SIZE, BUSINESS RISK, PROFITABILITY, LIQUIDITY,* DAN *ASSET STRUCTURE* TERHADAP STRUKTUR MODAL PADA PERUSAHAAN MANUFAKTUR YANG TERDAFTAR DI BURSA EFEK INDONESIA PERIODE 2011-2013

PENDAHULUAN

Perusahaan merupakan suatu kegiatan bisnis yang sangat penting di dalam suatu perekonomian. Perusahaan dibangun dengan tujuan untuk memperoleh keuntungan yang juga dapat dimanfaatkan juga di masa yang akan datang serta digunakan untuk meningkatkan kesejahteraan pemegang kepentingan perusahaan tersebut (*stakeholders*). Dalam tujuannya memperoleh keuntungan ini, perusahaan memerlukan berbagai faktor-faktor pendukung yang kuat, salah satunya mempunyai pengelolaan pembiayaan atau pendanaan yang sangat baik. Dengan demikian, perusahaan diharapkan dapat bersaing dengan perusahaan lain yang telah memberikan citra positif di dalam laporan keuangannya.

Salah satu keputusan pengelolaan pembiayaan atau pendanaan yang baik dapat dilihat dari struktur modal, yaitu keputusan keuangan yang berkaitan dengan komposisi hutang, baik hutang jangka panjang dan hutang jangka pendek, saham preferen, dan saham biasa yang akan digunakan oleh perusahaan. Bagi banyak perusahaan, sumber pendanaan yang hanya berupa modal sendiri seringkali dirasa kurang. Hutang yang dikarenakan sifatnya tidak permanen dan lebih mudah untuk diadakan, seringkali menjadi bagian penting dalam struktur permodalan. Keputusan pengelolaan pembiayaan merupakan keputusan mengenai seberapa tingkat penggunaan hutang dibanding dengan ekuitas dalam membiayai investasi perusahaan. Tujuan keputusan pengelolaan pembiayaan adalah untuk menentukan tingkat struktur modal uang optimal, yaitu tingkat bauran utang dan ekuitas yang dapat memaksimumkan nilai perusahaan. Dana yang tersedia pada struktur permodalan akan digunakan untuk mendanai investasi yang tersedia. Dalam melakukan investasi, perusahaan berusaha menciptakan nilai. Keputusan pengelolaan pembiayaan yang berhubungan dengan penentuan proporsi hutang menjadi penting karena berkaitan dengan kepentingan pemegang saham dan perbandingan antara total hutang jangka panjang terhadap ekuitas yang biasa diukur melalui *debt to equity ratio* (DER) yang dapat menyatakan struktur modal.

Penelitian ini menganalisis variabel *size, business risk, profitability, liquidity,* dan *asset structure.* Peneliti terdahulu atas variabel-variabel tersebut menunjukkan hasil yang berbeda.

Ukuran perusahaan menggambarkan besar kecilnya suatu perusahaan. Besar kecilnya perusahaan dapat ditinjau dari lapangan usaha yang dijalankan. Hasil penelitian Nuswandari (2013), Verena Sari dan Haryanto (2013), Indrajaya, Herlina dan Setiadi (2011), Seftianne dan Handayani (2011), Ratna Sari dan Saifudin (2012) serta Akinyomi dan Olagunju (2013) menyatakan bahwa *size* berpengaruh terhadap struktur perusahaan. Hasil penelitian ini konsisten terhadap *Pecking Order Theory,* yang menyatakan bahwa perusahaan cenderung memilih pendanaan internal daripada pendanaan eksternal. Perusahaan besar cenderung memiliki tingkat penjualan serta keuntungan yang lebih besar sehingga mereka memiliki dana cadangan yang lebih besar pula untuk memenuhi kebutuhan dana mereka. Sedangkan hasil penelitian yang dilakukan oleh Joni dan Lina (2010) menunjukkan bahwa *size* tidak berpengaruh terhadap struktur modal.

Menurut Gitman (2009) dalam penelitiaan Seftianne dan Handayani (2011), risiko bisnis merupakan risiko dari perusahaan saat tidak mampu menutupi biaya operasionalnya dan dipengaruhi oleh stabilitas pendapatan dan biaya. Hasil penelitian Ratna Sari dan Saifudin (2012) dan Nuswandari (2013) menemukan bahwa risiko bisnis memiliki pengaruh terhadap struktur modal. Sedangkan hasil penelitian Joni dan Lina (2010), Indrajaya, Herlina

dan Setiadi (2011), dan Seftianne dan Handayani (2011) menunjukkan bukti bahwa risiko bisnis tidak berpengaruh terhadap struktur modal.

Verena Sari dan Haryanto (2013) menyatakan bahwa profitabilitas adalah tingkat keuntungan bersih yang mampu diraih oleh perusahaan pada saat menjalankan operasinya. Profitabilitas mencerminkan kemampuan perusahaan dalam menghasilkan laba atas pengelolaan aset perusahaan yang merupakan perbandingan antara *earning after tax* dengan *total asset.* Hasil penelitian Joni dan Lina (2010), Indrajaya, Herlina dan Setiadi (2011), Akinyomi dan Olagunju (2013), dan Nuswandari (2013) menemukan bahwa profitabilitas memiliki pengaruh terhadap struktur modal. Hasil penelitian Seftianne dan Handayani (2011) dan Ratna Sari dan Saifudin (2012) menunjukkan bahwa profitabilitas tidak memiliki pengaruh terhadap struktur modal.

Likuiditas perusahaan adalah kekuatan perusahaan dalam melunasi kewajibannya yang jatuh tempo dalam jangka waktu pendek. Hasil pernelitian Verena Sari dan Haryanto (2013) menunjukkan bahwa likuiditas memiliki pengaruh terhadap struktur modal. Sedangkan hasil penelitian Seftianne dan Handayani (2011) dan Ratna Sari dan Saifudiin (2012) menunjukkan bahwa likuiditas tidak memiliki pengaruh terhadap struktur modal.

Struktur aktiva mencerminkan dua komponen aktiva secara garis besar dalam komposisinya yaitu aktiva lancar dan aktiva tetap. Aktiva lancar adalah uang kas dan aktiva-aktiva lain yang dapat direalisasikan menjadi uang kas atau dijual atau dikonsumsi dalam suatu periode akuntansi yang normal. Sedangkan aktiva tetap adalah aktiva berwujud yang diperoleh dalam bentuk siap pakai atau dibangun lebih dahulu yang digunakan dalam operasi perusahaan, tidak dimasukkan untuk dijual dalam rangka kegiatan normal perusahaan dan mempunyai masa. Menurut penelitian Seftianne dan Handayani (2011) dan Verena Sari dan Haryanto (2013), struktur aktiva tidak memiliki pengaruh terhadap struktur modal. Menurut hasil penelitian Joni dan Lina (2010), Indrajaya, Herlina dan Setiadi (2011), Akinyomi dan Olagunju (2013) dan Ratna Sari dan Saifudin (2012) menyatakan bahwa struktur aktiva memiliki pengaruh terhadap struktur modal.

Struktur modal adalah perimbangan atau perbandingan antara pendanaan jangka panjang perusahaan dengan modal sendiri. Terdapat beberapa teori yang mengungkapkan struktur modal, diantaranya adalah *Pecking Order Theory* dan *Trade Off Theory.*

Pecking Order Theory pertama kali dikenalkan oleh Donaldson pada tahun 1961. Brealey, Myers, Allen (2011) menjelaskan *Pecking Order Theory* dengan menyatakan bahwa perusahaan menyukai *internal financing* (pendanaan dari hasil operasi perusahaan berwujud laba ditahan). Apabila pendanaan dari luar (*external financing*) diperlukan, maka perusahaan akan menerbitkan sekuritas yang paling aman terlebih dulu, yaitu dimulai dengan penerbitan obligasi, kemudian diikuti oleh sekuritas yang berkarakteristik opsi (seperti obligasi konversi), baru akhirnya apabila masih belum mencukupi, saham baru diterbitkan.

Trade Off Theory merupakan model struktur modal yang mempunyai asumsi bahwa struktur modal perusahaan merupakan keseimbangan antara keuntungan penggunaan hutang dengan biaya *financial distress* (kesulitan keuangan) dan *agency cost* (biaya keagenan). *Trade Off Theory* merupakan model yang didasarkan pada pertukaran antara keuntungan dan kerugian penggunaan hutang.

Permasalahan yang dianalisis dapat dirumuskan sebagai berikut: (1) Apakah *size* memiliki pengaruh yang signifikan terhadap struktur modal?; (2) Apakah *business risk* memiliki pengaruh yang signifikan terhadap struktur modal?; (3) Apakah *profitability* memiliki pengaruh yang signifikan terhadap struktur modal?; (4) Apakah *liquidity* memiliki pengaruh yang signifikan terhadap struktur modal?; (5) Apakah *asset structure* memiliki pengaruh yang signifikan terhadap struktur modal?; (6) Apakah *size, business risk,*

profitability, liquidity, dan *asset structure* secara bersama-sama memiliki pengaruh yang signifikan terhadap struktur modal?

Berdasarkan perumusan masalah diatas, dapat dirumuskan hipotesis yang akan diuji kebenarannya dalam penelitian ini adalah:

a. H1: *Size* mempunyai pengaruh yang signifikan terhadap struktur modal
b. H2: *Business Risk* mempunyai pengaruh yang signifikan terhadap struktur modal
c. H3: *Profitability* memiliki pengaruh yang signifikan terhadap struktur modal
d. H4: *Liquidity* mempunyai pengaruh yang signifikan terhadap struktur modal
e. H5: *Asset Structure* mempunyai pengaruh yang signifikan terhadap struktur modal
f. H6: *Size, business risk, profitability, liquidity,* dan *asset structure* secara simultan memiliki pengaruh terhadap struktur modal.

METODE

Pemilihan Sampel

Populasi penelitian ini adalah perusahaan yang terdaftar pada Bursa Efek Indonesia pada periode 2011-2013. Penentuan anggota sampel dalam penelitian ini dilakukan dengan metode *purposive sampling.* Adapun perusahaanyang menjadi sampel telah memenuhi kriteria sebagai berikut: (1) Perusahaan telah mendaftarkan sahamnya pada Bursa Efek Indonesia sejak tahun 2009; (2) Perusahaan mendapatkan laba selama 5 tahun berturut-turut; (3) Perusahaan yang laporan keuangannya dilaporkan dalam rupiah; (4) Semua data yang dibutuhkan dalam penelitian lengkap.

Dari populasi perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia sebesar 136 perusahaan, terpilih sebagai sampel sebanyak 64 perusahaan yang memenuhi kriteria yang telah ditentukan. Teknik analisis data yang digunakan dalam penelitian ini adalah regresi berganda yang dilakukan dengan bantuan program pengolahan dat statistik, yaitu *Statical Package for Social Science* (SPSS).

Sebelum pengujian hipotesis, terlebih dahulu dilakukan penguijan asumsi klasik untuk mengetahui apakah model regresi layak dipakai untuk memprediksi pengaruh variabel bebas terhadap variabel terikat, dimana meliputi:

1. Uji Normalitas
2. Uji Autokorelasi
3. Uji Multikolinearitas
4. Uji Heteroskedastisitas

Definisi Operasional dan Pengukuran Variabel

1. Variabel Dependen

Variabel *capital structure* yang digunakan dalam penelitian ini adalah struktur modal. Struktur modal diproksikan dengan debt to equity ratio (DER). DER diukur dengan membandingkan antara hutang jangka panjang dengan ekuitas.

$$Debt\ \ Equity\ \ \ Ratio = \frac{Long\ Term\ Debt}{Equity}$$

2. Variabel Independen

a. Size

Variabel *Size* yang dimaksudkan di sini yaitu ukuran perusahaan. Ukuran perusahaan merupakan ukuran atau besarnya aset yang dimiliki perusahaan. Variabel ini dilambangkan dengan $X_{1.}$ Menurut Paramu (2006) dalam Indrajaya, Herlina dan Setiadi (2011) diukur dengan logaritma natural dari *total assets*.

$$Size = Ln\ (Total\ Assets)$$

b. *Business Risk*

Menurut Harjanti dan Tandelilin (2007) dalam Joni dan Lina (2010) ,variabel *Business Risk* diproksikan dengan menghitung logaritma dari standar deviasi laba bersih perusahaan. Namun atas rekomendasi dari mereka risiko bisnis dalam penelitian ini diproksikan dengan natural logaritma dari standar deviasi laba operasional perusahaan. Proxy ini diukur selama 3 tahun terakhir mulai periode (t-2) hingga periode (t). Variabel *Business Risk* dilambangkan dengan X_2 dan diukur dengan

$$Business\ Risk = ln\ (\ \sigma_{EBIT}\ )$$

c. *Profitability*

Variabel *Profitability* dilambangkan dengan X_3 yang diukur dengan cara membandingkan antara *Earning after tax* dengan *total asset.* Mengacu pada Hartono (2004) dalam Joni dan Lina (2010), rumus *Profitability* diproksikan dengan membandingkan antara pendapatan setelah pajak dengan total aktiva.

$$Return\ on\ Asset = \frac{Earning\ After\ Tax}{Total\ Asset}$$

d. *Liquidity*

Variabel *Liquidity* dilambangkan dengan X_4 dan diukur dengan cara membandingkan antara total aktiva lancar dengan total kewajiban lancar perusahaan. (Ratna Furi dan Saifudin, 2012)

$$Liquidity = \frac{Current\ Assets}{Current\ Liabilities}$$

e. *Asset Structure*

Variabel *asset structure* dilambangkan dengan X_5. Struktur aktiva dihitung dengan membandingkan antara aktiva tetap dengan total aktiva. Mengacu pada penelitian Verena Sari dan Haryanto (2013), rumus *Asset Structure* sebagai berikut:

$$Asset\ Structure = \frac{Fixed\ \ Assets}{Total\ \ Assets}$$

HASIL DAN PEMBAHASAN

Tabel 1 Statistik Deskriptif

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Size	192	25,30840	32,99700	28,2029786	1,64827892
Business Risk	192	20,41130	29,57920	24,4283797	1,79061317
ROA	192	,00090	,41720	,1085458	,09114262
Liquidities	192	,14660	247,44410	3,6174094	17,75601995
Assets Structure	192	,08930	,99920	,4359245	,19234877
DER	192	,02670	5,06310	,8738984	,71796476
Valid N (listwise)	192				

Metode untuk menguji normalitas dalam penelitian ini adalah uji *One Sample* Kolmogorov Smirnov (1-*sample* K-S). Data dinyatakan berdistribusi normal jika signifikansi lebih besar dari 0,05 (tingkat keyakinan 95%). Berdasarkan hasil uji normalitas tersebut dapat diketahui bahwa nilai signifikansi sebesar 0,605. Oleh karena nilai signifikansi tersebut lebih besar dari 0,05, maka dapat disimpulkan bahwa data variabel terdistribusi secara normal.

Nilai *VIF* dan *tolerance* pada model regresi ini tidak lebih besar dari 5 atau nilai *tolerance* lebih besar dari 0,10, sehingga dinyatakan bebas dari multikolinearitas

Nilai *D-W* yang dihasilkan dari model regresi adalah 1,910. Oleh karena nilai *D-W* yang tidak lebih besar dari 2,1826 dan tidak lebih kecil dari 1,8174, maka dapat disimpulkan bahwa pada penelitian ini tidak terdapat autokorelasi

Nilai signifikansi untuk masing-masing variabel independen dalam uji heteroskedastisitas lebih dari 0,05, maka dapat disimpulkan bahwa pada model regresi tidak terdapat masalah heteroskedastisitas pada masing-masing variabel.

Hasil pengujian hipotesis dapat dilihat pada tabel 2 berikut ini:

Tabel 2 Hasil Pengujian Hipotesis

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-2,333	,935		-2,496	,013
	Size	-,038	,066	-,075	-,580	,563
	Business Risk	,153	,065	,324	2,348	,020
	ROA	-4,810	,709	-,518	-6,788	,000
	Liquidities	-,015	,003	-,310	-4,945	,000
	Assets Structure	-,459	,294	-,104	1,562	94 ,0

a. Dependent Variable: LGDER

Berdasarkan hasil tersebut, maka persamaan regresinya adalah sebagai berikut :

$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4 + b_5 X_5 + \varepsilon$

$Y = -2{,}333 - 0{,}38X_1 + 0{,}153X_2 - 4{,}810X_3 - 0{,}15X_4 - 0{,}459X_5 + \varepsilon$

Keterangan:

Y = Struktur modal
a = konstanta
b_1-b_5 = koefisien regresi variabel bebas
X_1 = *Size*
X_2 = *Business Risk*
X_3 = *Profitability*
X_4 = *Liquidity*

X_5 = *Assets Structure*

ε = *error*

Pengujian Hipotesis

a. Pengujian hipotesis pertama (H1)

Dari tabel 2 tersebut dapat dilihat bahwa variabel *size* menghasilkan angka signifikan 0,563. Angka yang terbentuk lebih besar dari tingkat signifikansi yang digunakan dalam penelitian ini yaitu 0,05. Hal ini berarti H01 diterima dan H1 ditolak, yaitu secara parsial *Size* tidak memiliki pengaruh yang signifikan terhadap struktur modal pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia dengan tingkat keyakinan 95%. Hasil penelitian ini konsisten terhadap *Pecking Order Theory*, yang menyatakan bahwa perusahaan cenderung memilih pendanaan internal daripada pendanaan eksternal. Perusahaan besar cenderung memiliki tingkat penjualan serta keuntungan yang lebih besar sehingga mereka memiliki dana cadangan yang lebih besar pula untuk memenuhi kebutuhan dana mereka. Akan tetapi, dari hasil penelitian menunjukkan bahwa *Size* tidak memiliki pengaruh yang signifikan terhadap struktur modal.

Berdasarkan hasil penelitian yang dilakukan oleh peneliti, penelitian menyatakan bahwa *size* tidak berpengaruh terhadap struktur modal dengan nilai signifikan 0,563. Penelitian ini konsisten dengan penelitian yang dilakukan oleh Joni dan Lina (2010). Penelitian ini menyatakan bahwa variabel *size* tidak mempunyai pengaruh signifikan terhadap struktur modal. Di lain sisi penelitian ini berlawanan dengan penelitian yang dilakukan oleh Nuswandari (2013) Verena Sari dan Haryanto (2013), Indrajaya, Herlina dan Setiadi (2011), Seftianne dan Handayani (2011), Ratna Sari dan Saifudin (2012) serta Akinyomi dan Olagunju (2013) yang menyatakan bahwa *size* berpengaruh terhadap struktur modal

b. Pengujian Hipotesis kedua (H2)

Variabel *Business risk* menghasilkan angka signifikan 0,020. Angka yang terbentuk lebih kecil dari tingkat signifikansi yang digunakan dalam penelitian ini yaitu 0,05. Hal ini berarti H02 ditolak dan H2 diterima, yaitu secara parsial *Business Risk* memiliki pengaruh yang signifikan terhadap struktur modal pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia dengan tingkat keyakinan 95%. Hasil penelitian ini inkonsisten dengan *Trade-off theory* yang menyatakan bahwa semakin tinggi risiko bisnis maka probabilitas terjadinya *financial distress* akan semakin tinggi sehingga tingkat penggunaan hutang akan lebih rendah. Menurut Seftianne dan Handayani (2011), Investor yang memiliki sifat *risk seeker* akan lebih tertarik akan lebih tertarik kepada perusahaan dengan risiko yang tinggi karena perusahaan dengan risiko yang tinggi akan menghasilkan *return* yang tinggi pula.

Hasil penelitian juga menunjukan bahwa *business risk* berpengaruh terhadap struktur modal dengan nilai signifikan 0,020. Penelitian ini konsisten dengan penelitian yang dilakukan oleh Ratna Sari dan Saifudin (2012). Penelitian ini menyatakan bahwa variabel *business risk* mempunyai pengaruh signifikan terhadap struktur modal. Nuswandari (2013) dalam penelitiannya juga mengungkapkan bahwa variabel *business risk* berpengaruh signifikan terhadap struktur modal. Di lain sisi penelitian ini berlawanan dengan penelitian yang dilakukan oleh Joni dan Lina (2010), Indrajaya, Herlina dan Setiadi (2011), Seftianne dan Handayani (2011) yang menyatakan bahwa *business risk* tidak berpengaruh terhadap struktur modal.

c. Pengujian hipotesis ketiga (H3)

Variabel *Profitability* menghasilkan angka signifikan 0,000. Angka yang terbentuk lebih kecil dari tingkat signifikansi yang digunakan dalam penelitian ini yaitu 0,05. Hal ini berarti H03 ditolak dan H3 diterima, yaitu secara parsial *Profitability* memiliki pengaruh yang signifikan terhadap struktur modal pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia dengan tingkat keyakinan 95%. Menurut Nuswandari (2013), Perusahaan yang mempunyai profitabilitas tinggi akan mengurangi hutang. Perusahaan cenderung mengalokasikan sebagian besar keuntungannya pada laba ditahan sehingga mengandalkan pendanaan internal dan relatif lebih rendah menggunakan hutang, Hal ini sesuai dengan *Pecking Order Theory*.

Hasil penelitian juga menunjukan bahwa *Profitability* mempunyai pengaruh signifikan terhadap struktur modal dengan nilai signifikan 0,000. Penelitian ini konsisten dengan penelitian yang dilakukan oleh Joni dan Lina (2010), Indrajaya, Herlina dan Setiadi (2011), Akinyomi dan Olagunju (2013), serta Nuswandari (2013) yang juga menyatakan bahwa *profitability* berpengaruh terhadap struktur modal. Di lain sisi Seftianne dan Handayani (2011) dan Ratna Sari dan Saifudin (2012) mengungkapkan bahwa *profitability* tidak berpengaruh signifikan terhadap struktur modal.

d. Pengujian hipotesis keempat (H4)

Variabel *liquidity* menghasilkan angka signifikan 0,000. Angka yang terbentuk lebih kecil dari tingkat signifikansi yang digunakan dalam penelitian ini yaitu 0,05. Hal ini berarti H04 ditolak dan H4 diterima, yaitu secara parsial *liquidity* memiliki pengaruh yang signifikan terhadap struktur modal pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia dengan tingkat keyakinan 95%. Menurut *Pecking Order Theory*, perusahaan yang memiliki likuiditas yang tinggi akan cenderung tidak menggunakan pembiayaan dari hutang. Hal ini disebabkan perusahaan dengan tingkat likuiditas yang tinggi mempunyai dana internal yang lebih besar, sehingga perusahaan menggunakan dana internal dahulu untuk membiayai investasinya sebelum menggunakan pembiayaan eksternal melalui hutang.

Hasil penelitian juga menunjukan bahwa *liquidity* mempunyai pengaruh signifikan terhadap struktur modal dengan nilai signifikan 0,000. Penelitian ini konsisten dengan penelitian yang dilakukan oleh Verena Sari dan Haryanto (2013) yang juga menyatakan bahwa *liquidity* berpengaruh terhadap struktur modal. Di lain sisi penelitian ini berlawanan dengan penelitian yang dilakukan oleh Seftianne dan Handayani (2011) serta Ratna Sari dan Saifudin (2012) yang menyatakan bahwa variabel *liquidity* tidak mempunyai pengaruh signifikan terhadap struktur modal.

e. Pengujian hipotesis kelima (H5)

Variabel *assets structure* menghasilkan angka signifikan 0,120. Angka yang terbentuk lebih besar dari tingkat signifikansi yang digunakan dalam penelitian ini yaitu 0,05. Hal ini berarti H05 diterima dan Ha5 ditolak, yaitu secara parsial *asset structure* tidak memiliki pengaruh yang signifikan terhadap struktur modal pada perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia dengan tingkat keyakinan 95%. Menurut Verena Sari dan Haryanto (2013), pada umumnya perusahaan yang memiliki jaminan terhadap hutang akan lebih mudah mendapatkan hutang dikarenakan memiliki risiko yang lebih kecil sedangkan menurut hasil penelitian, struktur aktiva tidak dapat memprediksi nilai struktur modal karena perusahaan lebih cenderung menggunakan aktivanya untuk operasional perusahaan dan bukan untuk mengurangi risiko hutang.

Hasil penelitian juga menunjukan bahwa *assets structure* tidak mempunyai pengaruh signifikan terhadap struktur modal dengan nilai signifikan 0,120. Penelitian ini konsisten

dengan penelitian yang dilakukan oleh Seftianne dan Handayani (2011) dan Verena Sari dan Haryanto (2013) yang juga menyatakan bahwa *asset structure* tidak berpengaruh terhadap struktur modal. Di lain sisi Ratna Sari dan Saifudin (2012). juga mengungkapkan bahwa profitabilitas dan ukuran perusahaan juga berpengaruh signifikan terhadap struktur modal, tetapi variabel pertumbuhan aset dan struktur aktiva tidak berpengaruh terhadap struktur modal. Di lain sisi penelitian ini berlawanan dengan penelitian yang dilakukan oleh Joni dan Lina (2010), Indrajaya, Herlina dan Setiadi (2011), Akinyomi dan Olagunju (2013), dan Ratna Furi dan Saifudin (2012) yang menyatakan bahwa variabel *asset structure* mempunyai pengaruh signifikan terhadap struktur modal.

f. Pengujian hipotesis keenam (Uji H6)

Uji ini digunakan untuk mengetahui apakah dalam model regresi, variabel independen berpengaruh signifikan terhadap variabel independen. Berdasarkan hasil pengujian, nilai signifikansi 0,000 di mana kurang dari tingkat signifikansi 0,05 artinya Ho ditolak, sehingga paling sedikit ada satu variabel independen yang mempengaruhi variabel dependen secara signifikan. Hal ini juga berarti model regresi dapat dipakai untuk memprediksi pengaruh *size, business risk, profitability, liquidity,* dan *assets structure* terhadap struktur modal perusahaan.

g. Uji Koefisien Determinasi (R^2)

Berdasarkan hasil penelitian, nilai *adjusted* R^2 yaitu sebesar 0,26 yang berarti variasi variabel independen yang digunakan dalam model mampu menjelaskan sebesar 26% variasi variabel dependen, sedangkan sisanya sebesar 74% dipengaruhi atau dijelaskan oleh variabel lain yang tidak dimasukkan dalam model penelitian ini.

PENUTUP

Kesimpulan

Berdasarkan hasil yang diperoleh dari ketiga tahun tersebut, maka dapat ditarik kesimpulan bahwa *size* dan *asset structure* tidak mempengaruhi struktur modal yang terdaftar di Bursa Efek Indonesia periode 2011-2013 sedangkan *business risk, profitability,* dan *liquidity* mempengaruhi struktur modal pada perusahaan yang terdaftar di Bursa Efek Indonesia periode 2011-2013.

Saran dan Keterbatasan

Penelitian mempunyai keterbatasan seperti variabel independen yang digunakan dalam penelitian ini hanya terdiri dari lima variabel, yaitu *size, business risk, profitability, liquidity,* dan *assets structure*. Selain itu, pengukuran variabel independen dan dependen yang digunakan dalam penelitian hanya terbatas pada satu pengukuran. Keterbatasan lain yaitu karena perusahaan yang dijadikan sebagai subjek penelitian hanya terbatas pada perusahaan yang listing di BEI dari tahun 2011 sampai dengan 2013. Selain itu, perusahaan yang dijadikan subjek penelitian hanya terbatas pada perusahaan yang memiliki profit atau keuntungan saja yang disebabkan karena salah satu variabel independen yaitu profitabilitas.

Berdasarkan hasil penelitian dan kelemahan yang ada, maka peneliti ingin memberikan beberapa saran seperti:

1. Pada penelitian selanjutnya dapat menambahkan variabel independen lain seperti: *non-debt tax shield, volality/risk, effective tax rates, free cash flow, dividends payout ratio, product uniqueness,* dan lain-lain.

2. Penelitian selanjutnya juga dapat mengukur variabel independen dan dependen dalam beberapa tipe. Variabel *profitability* dapat diukur berdasarkan NPM (*net profit margin*), ROE (*return on equity*). Variabel *size* dapat diukur berdasarkan *log of sales.* Variabel struktur modal dapat diukur berdasarkan *debt to total assets ratio*.
3. Sebaiknya jumlah sampel dan tahun penelitian lebih diperluas lagi dengan cara memperpanjang periode penelitian.
4. Sebaiknya sampel penelitian tidak hanya mencakup perusahaan manufaktur tetapi mencakup seluruh jenis perusahaan yang terdaftar di Bursa Efek Indonesia, seperti perusahaan jasa, perusahaan perbankan, dan perusahaan non keuangan.

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