

# Value Stocks Like a Pro. The Absolute PE Model.

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## How to value stocks series

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It's been a long time coming but I'm finally getting around to reverse engineering the [absolute PE model valuation](#) that Vitaliy Katsenelson created and explains in his book [Active Value Investing](#).

If you haven't read the book, check out my review of [Active Value Investing](#). If you want to [value stocks](#) the way Katsenelson does, it certainly is worth the read.

From this point onward, you may need to slow down your reading as you process the methodology and think through how it all comes together. Nothing is new here. All of the information is directly from the book.

## Who is Katsenelson and what is his absolute PE model about?

### Vitaliy Katsenelson's Absolute PE Model

This model derives the intrinsic value of the stock based on the following five conditions.

1. Earnings growth rate
2. Dividend yield
3. Business risk
4. Financial risk
5. and earnings visibility

Like all valuation models, there is some subjectivity involved. In this case, you are required to grasp an understanding of the business to identify the level of risk involved.

## Core Principles of the Absolute P/E Model

### No Growth PE

Part of the reason why I created the [no growth PE screen backtest](#) was for the purpose of this valuation method. I needed to know whether my conservative nature of using a PE of 7 for no growth was factually correct. My results show that a PE range of 7 to 8.5 is perfectly acceptable so you are free to use whatever suits you.

Graham used 8.5 in his [Ben Graham formula](#), and Katsenelson uses a PE of 8 in the book. I'm going to stick with my PE of 7 because if you flip the PE over, I get an earnings yield of 14.2% compared to 11.8% and 12.5% for Graham and Katsenelson respectively.

With the small caps I analyze, demanding an earnings yield of 14.2% is better than 11.8% wouldn't you say?

However, if I were to analyze large blue chips such as MSFT, I would be content to adjust the PE to 8.5.

## Earnings Growth and PE Relationship

Logically, higher growth rates leads to a higher PE. However, this model does not have a linear relationship. The absolute PE model is set up so that for every percentage of earnings growth from 0% to 16%, the PE increases by 0.65 points instead of 1 point.

If the growth rate reaches a certain level, in this case 17%, the PE value is increased by 0.5 points. You have witnessed many times that the higher the growth rate, the greater the fall from the top.

Earnings growth projections are made for five years or longer and with higher earnings visibility, a higher PE factor is assigned.

Think of it this way, the earnings visibility of Coca Cola (NYSE:KO) or even Microsoft

Factors Determining Basic P/E				
Expected EPS Growth Rate	P/E	Original P/E	Dividend Yield	Add'l P/E Points
0%	7.00	8	0.0%	0.0
1%	7.65	8.65	0.1%	0.5
2%	8.30	9.3	0.5%	0.5
3%	8.95	9.95	1.0%	1.0
4%	9.60	10.6	1.5%	1.5
5%	10.25	11.25	2.0%	2.0
6%	10.90	11.9	2.5%	2.5
7%	11.55	12.55	3.0%	3.0
8%	12.20	13.2	3.5%	3.5
9%	12.85	13.85	4.0%	4.0
10%	13.50	14.5	4.5%	4.5
11%	14.15	15.15	5.0%	5.0
12%	14.80	15.8	5.5%	5.5
13%	15.45	16.45	6.0%	6.0
14%	16.10	17.1	6.5%	6.5
15%	16.75	17.75	10.0%	10.0
16%	17.40	18.4		
17%	17.9	18.9		
18%	18.4	19.4		
19%	18.9	19.9		
20%	19.4	20.4		
21%	19.9	20.9		
22%	20.4	21.4		
23%	20.9	21.9		
24%	21.4	22.4		
25%	21.9	22.9		

$\Delta 0.65$

$\Delta 0.50$

*Absolute PE Model Basics*

(NASDAQ:MSFT) is clearer than Salesforce (NYSE:CRM) or a cyclical company such as Caterpillar (NYSE:CAT).

## Value of Dividends

Dividends are tangible to the investor whereas earnings is not. Dividends provide you with a hard return whereas you may never get to see earnings. So in contrast to the non linear relationship between earnings growth and PE as shown in the table above, dividend yield and PE will have a linear relationship as shown in the table on the right side.

Every dividend yield percentage receives an equivalent PE point. If the dividend yield is below 1%, use a PE factor of 0.5.

## PE Factors for Business & Financial Risk and Earnings Visibility

This part is the most subjective of the valuation model as it requires you to come up with a single number to summarize the risks and earnings visibility.

For business risk, you may want to consider the industry the company is in, the products, the life cycle, concentration of products and customers, environmental risks and anything else related to the operations of the business.

The level of financial risk can be determined by examining the capital structure of the business as well as the strength of the cash flow in relation to debt and interest payments.

Earnings visibility is analyzed in much the same way.

Below are the risk points to use in the model.

- For an **average company**, you will want to assign a **value of 1**.
- For a **market leader**, select a number **less than 1**. If you believe a market leader deserves a 10% premium, then use a value of 0.9. If a 15% premium is deserved, then 0.85 is the number to use.
- For a **market lagger**, select a number **greater than 1**. Poor companies should be discounted. A 20% discount requirement means a value of 1.2 will be used.

## Qualitative Aspects of the Absolute PE Value Model

Before moving onto examples of how this model is used, a couple of points made in the book should be considered.

### Put a ceiling on growth

Based on the business risk, financial risk and earnings visibility, additional PE points are added to the basic PE.

For example if a company is expected to have 10% earnings growth with 0% dividend yield, according to the table above, I would assign it a PE of 13.5.

Now, depending on how good the company is, additional PE points are added based on business risk, financial risk and earnings visibility.

Katsenelson writes that he limits the premium to the basic PE to be no more than 30%. In other words, if

the basic PE is 13.5, despite how good the company is, the final adjusted PE won't be more than 17.55 (13.5 x 1.3=17.55). If the basic PE is 10, then the ceiling will be limited to PE 13.

## Inflation and interest rates

The model assumes that inflation and interest rates are average and not expected to increase or decrease to dramatic new levels.

In the current environment, interest rates are low with possibility of inflation. If inflation and interest rates are expected to rise, then the zero growth PE should be adjusted down and vice versa. There is a caution against using current interest rates without considering the long term direction.

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## This is the PE Model Formula

You now have the PE table to determine the basic PE as well as the understanding of the risk points for business, financial risk and earnings visibility.

Now let's put it to use.

The formula to calculate the intrinsic value PE is the following:

$$\text{Fair Value PE} = \text{Basic PE} \times [1 + (1 - \text{Business Risk})] \times [1 + (1 - \text{Financial Risk})] \times [1 + (1 - \text{Earnings Visibility})]$$

## Testing out the Valuation on 3 Stocks: WMT, TGT & SVU

Let's use **Wal-Mart (NYSE:WMT)** as an example.

Wal-Mart is the industry leader in retailing. Strong balance sheet, huge competitive advantage capable of swallowing any small competitor. Consistent dividend payouts, FCF cow, stable margins, CROIC of 8% with ROE of 20% makes this one of the best retailers in the world. Debt isn't an issue as FCF can cover all interest payments. It also makes earnings growth and visibility easier to determine.

Based on the past 5 year median EPS growth, WMT achieved 11% earnings growth which sounds about right. Although WMT is the best of breed, I've only given it a 5% premium for the business as retail is still a tough competitive industry to be in.

- Expected Earnings Growth: 5%

- Dividend Yield: 2.75%
- Business Risk: 0.95
- Financial Risk: 0.95
- Earnings Visibility: 1.0

As you can see, for a great business such as WMT, the fair value PE is 18.63. Make a note to apply a maximum premium of 30% to the basic PE which means that the final fair value PE should be capped at 21.97. However, since WMT is in the retailing business, I could have put the business risk as just 1.00 not giving it any premium due to the nature of the industry.

According to this calculation WMT is priced attractively with its current PE of 12.33.

How about **Target (NYSE:TGT)**?

Definitely number two behind Wal-Mart. Margins are solid and consistent, with a sub par CROIC of 3.6% over the past five years. ROE of 17% and no issues with debt of financial risks. Earnings growth however has been a lackluster 5% and likely will be the same.

- Expected Earnings Growth: 5%
- Dividend Yield: 2.56%
- Business Risk: 1.00
- Financial Risk: 0.95
- Earnings Visibility: 1.0

Looks to be fairly valued at the moment with TGT trading at a PE of 11.42.

On the other side of the Spectrum is **SuperValu (NYSE:SVU)**.

A company in a turnaround process with fluctuating returns, margins and earnings. Definitely the lagger of this group.

- Expected Earnings Growth: 8%
- Dividend Yield: 3.95%
- Business Risk: 1.10
- Financial Risk: 1.00
- Earnings Visibility: 1.10

SVU is much harder to analyze with PE because of the negative EPS. However, if I

Fair Value P/E Model	Wal-Mart (NYSE:WMT)	
	Given P/E Adjustments	
Earnings Growth	11%	14.15
		+
Dividend Yield	2.75%	2.75
		=
<b>Basic P/E</b>		<b>16.9</b>
		x
Business Risk Factor	0.95	[1 + (1 - 0.95)]
		x
Financial Risk Factor	0.95	[1 + (1 - 0.95)]
		x
Earnings Predictability Factor	1.00	[1 + (1 - 1.00)]
		=
<b>Fair Value P/E</b>		<b>18.63</b>

Fair Value P/E Model	Target (NYSE:TGT)	
	Given P/E Adjustments	
Earnings Growth	5%	10.25
		+
Dividend Yield	2.56%	2.56
		=
<b>Basic P/E</b>		<b>12.81</b>
		x
Business Risk Factor	1.00	[1 + (1 - 1.00)]
		x
Financial Risk Factor	0.95	[1 + (1 - 0.95)]
		x
Earnings Predictability Factor	1.00	[1 + (1 - 1.00)]
		=
<b>Fair Value P/E</b>		<b>12.17</b>

use the 2011 FCF figure and divide it by shares outstanding to apply Buffett's "owner earnings" concept, owner earnings comes to \$2.67. Multiple this by 13.09 to get a fair value of \$35 share price.

Quite a difference to the \$8.84 it is trading at now, and I'm sure I made mistakes by just grabbing the FCF figure so I'll leave it up to you to check.

## Summing Up

I don't focus much on multiples but after using this valuation method a few times, I'm beginning to like it. It's quick and easy method to value stocks without having to know the current price of the stock.

The model does have subjectivity and the results will end up being only as good as the inputs, but it's a technique that anyone can learn and apply.

Disclosure: None.

Fair Value P/E Model	SuperValu (NYSE:SVU)	
	Given	P/E Adjustments
Earnings Growth	8%	12.2
		+
Dividend Yield	3.95%	3.95
		=
<b><i>Basic P/E</i></b>		<b><i>16.15</i></b>
		x
Business Risk Factor	1.10	[1 + (1 - 1.10)]
		x
Financial Risk Factor	1.00	[1 + (1 - 1.00)]
		x
Earnings Predictability Factor	1.10	[1 + (1 - 1.10)]
		=
<b><i>Fair Value P/E</i></b>		<b><i>13.08</i></b>