

## Bullshit Buster: Basics in Easy English

Future Value, Present Value, NPV \& IRR

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David is the founder of the now world-famous website and Youtube channel MBAbullshit.com with 1 MILLION+ FREE tutorial video views worldwide on YouTube (as of May 2012)

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This book aims to explain some the most "seemingly complicated" topics in these fields in a conceptual way, rather than explaining the common "how to calculate" way, which is much, much better explained and more easily understood in my step-by-step easy and quick tutorial videos (basic videos are FREE!) on my website www.MBAbullshit.com. *Please see Disclaimer, Terms and Conditions on the last page.

Hey wadup!
What do they TRY to teach you in business school but HARDLY explain well?

Whenever we read our textbooks in business school, we often get very confused about all these different concepts which look scary and complicated. More often than not, these scary concepts are found in the fields of Accounting, Financial Management, and Quantitative Analysis.

Here you will learn to lose that fear, and realize that the "scaryness" was only in the way it was presented to you in the past; and that there's really nothing to be afraid of!

## David




After you understand these concepts, you'll be surprised at how much easier the calculation part will become, whether you learn it from your professor or from my many FREE and easy tutorial videos on MBAbullshit.com.

## My Promise



I promise that this book will explain more about concepts, and as little as possible on calculation... so it will be much easier to understand.

After you understand the concept, you'll be surprised at how much easier the calculation part will become,whether you learn it from your professor or from my many FREE and easy tutorial videos at MBAbullshit.com.

Note that I earlier said "seemingly" complicated topics because I dare say that a lot of these topics are actually VERY SIMPLE when explained in a simple way with simple words.

These first 5 concepts are extremely important to business school, especially in the fields of finance and quantitative analysis. Why? Because so many of the other concepts depend on these five! It's amazing the way people try to "jump" to more complicated concepts which depend on these first five, without first learning these first five. Sorry... that just won't work! You must learn these first five concepts first, and you must master them. Only then should you move onto more complicated concepts like perpetuities, annuities, stock and bond valuation, cost of capital, and many more!

So okay then... let's have fun with our first concept!

> Welcome
> Back to SCHOOL

## Future Value

## Translation of the Bullshit

This is actually a very simple concept. Let's say you put $\$ 100$ in the bank and it earns interest. Next year, because it earns interest, your money will grow to (for example) \$105.


So now, what is the "Future Value" of your \$100? Simple! \$105. That's it, that's how simple it is. In the "future" (1 year from now), your \$100 will be $\$ 105$. How do you compute how much the $\$ 100$ (or any other amount) will be exactly 1 year (or any number of years) from now? Simple! You use the Future Value Formula; which is best explained in a step-by-step tutorial video instead of a book.

To see the Future Value formula in action, I highly recommend you check out my FREE video on this topic at MBAbullshit.com.

## FUTURE VALUE COMPOUNDING

One of the amazing things about future value is the concept of "compounding". Think about it this way. Imagine you deposit $\$ 100$ in the bank today at $5 \%$ interest rate. One year later, you will have earned $\$ 5$ in interest $(\$ 100 \times 5 \%=\$ 5)$. So then you will have $\$ 105$.

Let's say you put your $\$ 105$ back into the bank for another year. Will you earn \$5 interest again?

No! Why not? You will now earn bigger interest equivalent to $5 \%$ of $\$ 105$ (equal to $\$ 5.25$ ), not anymore $5 \%$ of $\$ 100$ (equal to $\$ 5$ ) which was what you earned in the first year.

What this tells us is that the interest earned grows and grows, creating some kind of snowball effect so the total amount grows faster and faster.

## THE POWER OF FUTURE VALUE "COMPOUNDING"

Just to demonstrate how powerful this compounding concept of future value is, look at this. Imagine you bought \$700 worth of "penny
stocks" (small stock costing less than a dollar) in the stock market costing $\$ 0.33$ cents each.

Let's say that after 1 year, each stock goes up in value by just another tiny $\$ 0.66$ cents to $\$ 0.99$ cents, which is 3 X the value of the original $\$ 0.33$ cents (with penny stocks, it's amazing the way a tiny $\$ 0.66$ cents increase can already triple your money!). This means that your initial $\$ 700$ will now be worth $\$ 700 \times 3=\$ 2,100$. What if you could do that even just once a year for only 7 years? How much will you have? \$10,000? $\$ 20,000$ ? Maybe even (super lucky long shot!?) of $\$ 100,000$ ?

Nope... your $\$ 700$ would have turned into (more than) \$1.5 MILLION DOLLARS!

See the power of future value compounding? And that's even if you could be this successful, on average, even just once a year.
*By the way, although not the focus of this (basic) book, if you're interested in trying out "penny" stocks, my affiliate Matt Morris is giving away three (3) FREE stock microcap stock picks as well as a FREE instantly downloadable PDF report on "How To Get Started With Penny Stocks In a Few Days" if you click here. Of course, remember that
penny stock and microcap stock investing can be very risky, and conservative investors simply can't stomach it.

It's extremely easy to open a stock brokerage account online with very low investment nowadays using well-known companies like TDameritrade.com and ScotTrade.com, who's minimum deposit is only around $\$ 500$ (I'm not affiliated with them in any way). However, investing in penny stocks and microcaps stocks is for a very special type of "aggressive investor" who's willing to "tough it out" with the risk and is not for everyone.

While it's possible that your $\$ 700$ could quickly turn into the $\$ 1.5$ million dollars and change your life forever, you could also lose the entire $\$ 700$.

Only you can decide whether you'd be willing to risk your $\$ 700$ to possibly earn $\$ 1.5$ million dollars really quickly using penny stocks and/or microcap stocks.

In any case, it doesn't hurt to just have a look and download the FREE PDF report on penny stocks and 3 FREE stock picks here.

## Before we move on...

I know maybe you feel bad that you missed the REAL time-limited opportunity to get my e-Book set at a super discount.
*You probably thought it was just a marketing trick, and that you could simply refresh the page and restart your computer... but then you found out it was real.


Anyway, since you're loyal enough to actually read this eBook right now, I'm giving you another free gift somewhere in this e-book you're reading now. So read on! ;)

## Present Value

Now that we know the concept of Future Value, let's go to the next concept of Present Value. What is the "Present Value" of today's $\$ 100$ ? It is also \$100! Why? Because "present" means "today". So it is \$100 today (present value), and it will be \$105 next year (future value).

Now, what if you have $\$ 100$ in the bank today. However, this money in the bank has been earning interest already for 1 year. Let's say (for example) that 1 year ago, this money was only a bit more than $\$ 95$ (let's just use $\$ 95$ to simplify), and then it earned interest throughout the year, and so now it's worth $\$ 100$. What is the "Past Value" of your $\$ 100$ ? Again, simple! It is $\$ 95$

So... for your $\$ 100$ today, the Present Value is $\$ 100$, the Past Value is $\$ 95$, and the Future Value is $\$ 105$.


However, this was just a very simple example to demonstrate the concept. The main challenge in business school or in actual business is finding out the exact numbers of your Future Value, Present Value, and Past Value, using scary looking but very simple formulas.

The best way to learn how to use formulas and do calculation is not from a book. You should see it in action on a tutorial video. Luckily, I have FREE tutorial videos on these topics on my website MBAbullshit.com. (If you want to see my FREE videos on how to use these formulas, just go to MBAbullshit.com)

The most confusing are very different! Why thing about the Present the confusion? Value and Past Value Because they use the concepts is that in same formula. many business schools However, the result of and also with many the formula will let you books, Present Value compute either the and Past Value are present value or the explained as though past value, they're "the same depending on how the thing". However, they story is told. are not the same. They


To illustrate:

1) In one example, let's say that today you have $\$ 100$. How much was it last year before it earned interest? Use the present/past value formula (don't worry
about it for now), and you'll come up with the past value of a bit more than $\$ 95$.
2) In another separate example, let's say that next year you will have $\$ 105$ after earning interest for 1 year. How much is it worth today? Use the same present/past value formula in number 1) and you will come up with the present value of $\$ 100$.

To see this formula in action, I highly recommend you check out my FREE video on this topic at MBAbullshit.com.

Unfortunately, many professors and textbooks use the terms "Present Value" and "Past Value" interchangeably just because they have the same formula, and this "interchanging" adds to the confusion.

Therefore, I recommend using these 2 different terms separately, to avoid going nuts!

## Net Present Value (NPV)

i.e. "Combination of Many Present Values"

After you've learned Present Value, Net Present Value is actually a very simple concept. It's nothing more than many "present values put together".

So, to illustrate:
Your grandma promises to give you a gift of $\$ 110$ exactly 2 years from now. Let's say that using the present/past value formula (don't worry about that for
 now), you find out that the present value (today's value) of $\$ 110$ two years from now is $\$ 100$ today.


Let's also say your boss will give you a bonus of \$200 1 year from now. And then, using the present value formula, you find out that the present value (today's value) of that bonus is \$190.

What is the Present Value of both your grandma's gift and your bonus combined?

Simple! It is $\$ 100$ (today's value of $\$ 110$ gift) plus $\$ 190$ (today's value of $\$ 200$ bonus). This comes up to a combined present value of $\$ 290$. This combined present value is formally known as Net Present Value. How simple was that!!


Notice that the 2 different "cash flows " (gift and bonus) do not have to come at the same times in the future. The gift will come 2 years from now, and the bonus will come 1 year from now. Nevertheless, you can still combine the present value of both of them into just one "net present value" today.

Another point: The cashflows can be either positive or negative. In our simple example above, both cashflows were positive (getting a gift is positive for you, and getting a bonus is also
positive). What if one was negative? What if, instead of getting a gift from your grandma 2 years from now, you instead promised her that you would pay her $\$ 110$ to help her out with her retirement?
Using the same present/past value formula, you will find that $\$ 110$ two years from now is equal to \$100 today (exactly like in the first example above). However, this time you should consider it a negative cash out flow on yourself, because you are paying it rather than receiving it. Therefore, the Present Value of your negative -\$110 two years from now is a negative $-\$ 100$ today.


So in this case, how would we get your today's Net Present Value of both your bonus next year and your payment to your grandmother two years from now?

Simple!

Combine present value of payment to grandma (negative -\$100) plus present value of bonus from boss (positive $+\$ 190$ ) to get a Net Present Value of $\$ 90$. See? Not so complicated after all. So that's it for the concept. There's a shortcut formula for calculating the Net Present Value, and you can watch the formula in action on my FREE video at MBAbullshit.com.

## Accumulated Value

## i.e. Net "Future" Value

Okay, so now we that we know the concept of Net Present Value, it's time to go to something similar.

Remember, Net Present Value is the combination of many present values today, at this same point in time.

What if we were to get the combination of many future values at one point in the future?

We should call that the "Net Future Value" or "NFV", right? Actually, although it is, in essence, a "net future value", the "official" name is Accumulated Value.

So let's look at a similar example to the one earlier.


1) Let's say that your boss gives you a bonus of \$200 today, and then you put it in the bank earning 5\% interest per year. You plan to keep it there for 2 years. Using the Future Value formula, this will become $\$ 220.50$ (don't worry about the calculation for now. Let me explain the concept first).
2) And then one year from now, your grandma will give you a gift of $\$ 100$. And then you plan to put it
 in the bank at 5\% interest per year. You plan to withdraw the money after one year in the bank. Using the Future Value Formula (don't worry about that for now), your $\$ 100$ will become \$105 after that one year. However, how
long from today will you withdraw it? Two (2) years! Why? Because your grandma will give it to you 1 year from now; plus, you'll leave it in the bank for another 1 year. So that's a total of 2 years.

Remember: in number 1) above, you decided that you'll keep your $\$ 200$ bonus also for 2 years. Therefore... you'll withdraw your bonus and your grandma's gift at the same time: exactly 2 years from today. So, how much will you have exactly 2 years from now? Simple! Future value of the bonus of $\$ 220.50$ plus future value of grandma's gift of $\$ 105 . .$. equals a total of $\$ 325.50$. This $\$ 325.50$ is now your Accumulated Value (or Net Future Value, if you prefer to call it that... but don't say that in an exam; you'll fail!)


Of course, there's also a shortcut formula for calculating the Accumulated Value, and you can watch the formula in action on my FREE video at MBAbullshit.com.

## Internal Rate of Return (IRR)

i.e. "Hidden Speed of Money Gotten Back"

First of all, let's look at the speed of your car. It goes around 60 miles/hour or " 60 mph " (100mph when there are no cops around!). What does 60 miles/hour mean? It means that in 1 hour's time, your car will travel 60 miles long. So how is that related to the internal rate of return?

First, we need to look at "Rate of Return" (with no "internal" yet).

## Rate of Return

Rate of Return is the "speed" of how much money you gonna get back in a year forever, and compared to the (bigger) amount you invest. So instead of number of miles, it's number of dollars; and instead of an hour, it's a year.


And then... so that it can be compared to the invested bigger amount, it's written as a percentage (\%). For example, if you invest 100 dollars, and you earn back 3 dollars per year forever, then the "rate of return" is $3 \%$.
*Go ahead and read this section again slowly, 2 times or more. I would've done so myself... Make sure you understand it before going to the next part below.

## Internal Rate of Return

Okay, so what if, on the same 100 dollars investment above, you will earn money for a few years... and not all the same amount in each year? And, what if, the money coming in might stop after a certain number of years?

You will get \$5 on the first year, maybe \$8 on the second year, \$3 on the third year, and \$95 on the fourth year (which might also be the last year... so it's not forever). What is the percentage rate of return now?
In this latest case, it's not so easy to get the percentage rate, yeah? Because it's not as simple as in the first example above... it's not just one amount (like in the $\$ 3$ above), and it's not forever.

This percentage in this latest case is now called the Internal Rate of Return. Since it's not easy to get the percentage in this case, we can say it's like a "hidden" percentage... So I guess that's why it's called "internal"... because "internal" is like "hidden".


But of course, it wouldn't sound as intelligent on MBA books if they used the name "Hidden Speed of Money Gotten Back" now, would it? So maybe
that's why it now has the bullshit name "Internal Rate of Return" (Wow...).

Formula in computing the "Speed of Hidden Money Gotten Back" (Internal Rate of Return).

What types of IRR questions might my professor ask?

1) He may give the information, and then ask you to compute the IRR, and that's it; nothing else... or
2) He may give the information for an investment, and then ask you to compute the IRR of this investment/project, and then compare it to another interest rate (see below), and then ask you if it's a good investment or not.


In this case, if your IRR is lower than the amount of interest rate you would pay to the bank (because you borrow money from the bank to do the investment/project), then it is not a good investment. Why? Of course! Because if you pay $3 \%$ to the bank to do the investment/project, and then the project earns only an IRR of $2 \% \ldots$ then you've lost 1\%! (Go ahead and re-read this section more times if needed... no worries.)

On the other hand, if your IRR is higher than the amount you would borrow from the bank to pay for this investment, then it is a good investment. If the IRR is the same as the amount you would pay to the bank, then you are break-even.


In another case, it may be compared not to the amount of interest you would pay on a loan, but
instead compare it to the amount of interest you would earn if you deposited your money elsewhere... such as a bank, or if you were to instead put your money in a low risk investment, like a government bond.

So there you have it! 5 of the most important and most fundamental topics of business school EASILY EXPLAINED in SIMPLE, PLAIN English and in a "minimally-mathematical" way. Sometimes we focus only on the calculations, without understanding what they're for or how to use them!

However, you need to know what these calculations mean, and you need to know how to use the results of these calculations so you CAN SCORE HIGH IN ESSAY PORTIONS OF YOUR TESTS, and/or so you can apply them to real business. (By the way, if you just wana apply them to business and don't need to take exams, you can just learn the concept and then just look for a free online calculator to do the math.

So anyway, was it difficult? Not at all! It just had to be put into a simple perspective. Anyway, since you've shown enough loyalty to me by reading this book until the end, I have another FREE eBook gift for you! Check it out: (next page)


Presenting to you... "The 90-10 Financial Secret" which I'm sure you'll find interesting whether you're a finance student or just a common Joe. To download it, scroll to the bottom after clicking to go to this page here.

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