POPULAR IBC TOPICS

Notes on Lecture 4: Paying Cash vs. IBC

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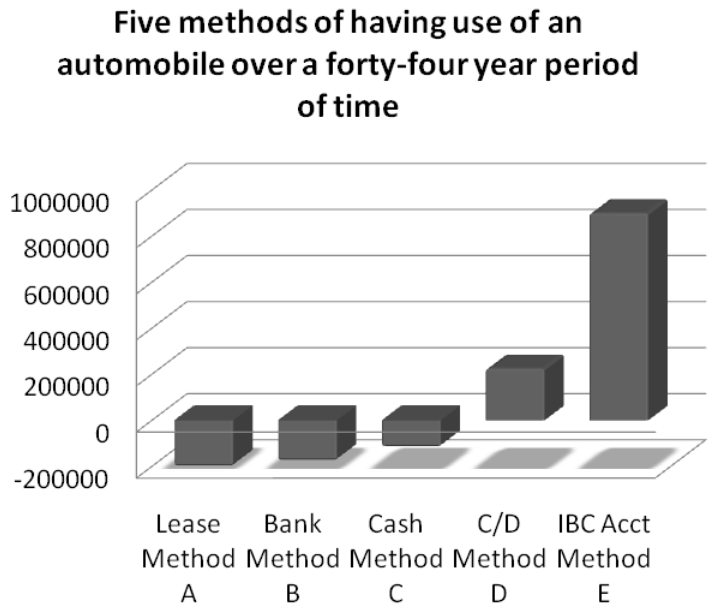
July, 2015

REVIEW FROM MANUAL:

(Taken from SOL-II in the Course Manual.)

Figure 1



Here we can be brief, because I reviewed Nelson's diagram above back in the first review lecture in this webinar series ("Popular IBC Topics 1: Car Financing"). Let me just reiterate the big picture of what Nelson was doing by going through Methods A

through E: He wanted to show *precisely* the mechanisms by which doing IBC was so much better than the conventional approaches.

This is great because it puts Dave Ramsey and other "pay cash" approaches on a spectrum. Yes, we can see that "paying cash" is better (in the properly understood sense) than borrowing money from a conventional car finance company, but you see how IBC is even better still.

Just a reminder, be careful about the apples to apples comparisons if you go through the *BYOB* car financing example with prospects or clients. It is true that Nelson has the hypothetical car buyer save ("capitalize") longer on the front end for the IBC scenario versus the (literal) cash scenario Method C. However, this is just to point out the benefits of extra capitalization. Nelson kept the capitalization period *identical* for Methods D and E, in order to isolate the pure difference from using IBC as opposed to commercial bank CDs.

Possible Pitfall #1: In order to drive home to the client the benefits of using IBC *even* for people who have liquid assets, financial professionals sometimes try a thought experiment that seems to demonstrate that it is profitable to "borrow high, lend low." They might say something like this: "Suppose you have $20,000 in cash and you want to buy a $20,000 car. You *could* just pay cash to the dealer. But what if instead, you bought a $20,000 CD from your local banker, yielding 3%. Then you borrowed $20,000 right back from your local banker, at 5%, so that you could still buy the new car. Sounds crazy, right? You think you're losing 2% on the deal? But actually, amortized over five years, you end up making money from your local banker. (You earn more than $3,000 in interest on your CD account, while you pay a total of less than $2,000 in interest on your auto loan.) If you had paid cash, in five years you'd just have a five-year-old car. But if you do it the banking way, in five years you end up with the same used car and more than $1,000 extra in net interest earnings. Is this magic? Nope, it relies on the fact that the 3% is applied to a *growing*

principal, while the higher 5% APR applies to a *shrinking* base as you make payments on the car loan."

The Problem: In the form stated above, such demonstrations overlook a crucial feature: In order to knock out the car loan, the client must provide an *additional* cashflow over the years, on top of the original $20,000 earmarked to buy the car. So it's totally apples to oranges to contrast "paying cash" with "lend low and borrow high" as strategies for car financing.

The following table shows the specifics of the above narrative, where BOY="Beginning of Year" and EOY="End of Year":

	Year					
	1	**2**	**3**	**4**	**5**	**Total Interest**
Balance on CDs (BOY)	$20,000	$20,600	$21,218	$21,855	$22,510	
CDs Interest @3%	$600	$618	$637	$656	$675	$3,185
Balance on CDs (EOY)	$20,600	$21,218	$21,855	$22,510	$23,185	
Bank Loan Balance (BOY)	$20,000	$16,381	$12,580	$8,590	$4,400	
Pmt on Bank Loan (BOY)	$4,400	$4,400	$4,400	$4,400	$4,400	
Intrst Accrued Bank @5%	$780	$599	$409	$210	$0	$1,998
Bank Loan Balance (EOY)	$16,381	$12,580	$8,590	$4,400	$0	
Balance on CDs (BOY)	$0	$4,531	$9,199	$14,006	$18,958	
Purchase Addtl CDs (BOY)	$4,400	$4,400	$4,400	$4,400	$4,400	
Interest on CDs @3%	$132	$268	$408	$552	$701	
Balance on CDs (EOY)	$4,531	$9,199	$14,006	$18,958	$24,058	

At first blush, the table above seems to confirm the original narrative, if we focus just on the red and blue sections. By lending the $20,000 to the banker via the purchase of CDs, over the course of five years the person earns total interest of

$3,185. In contrast, by borrowing $20,000 from the banker at 5% interest, and then taking five years to knock out the loan, the person only pays a cumulative $1,998 in interest. Over the five-year period, then, it seems—paradoxically—that a person can earn net income by lending low and borrowing high.

But this is a fallacy; the common man's intuition is right—you *don't* make yourself richer by lending low and borrowing high. That's why a commercial banker would never do that, and it's why the concept of Economic Value Added (EVA) would rule out any company investing in a project that doesn't earn at least the "cost of capital." When a company is doing an EVA analysis, it doesn't matter how long the amortization period is, if the two interest rates are the same throughout. For example, if the cost of capital is (say) 5% over the lifetime of the project, while the internal rate of return on the project is only 3%, then it wouldn't make sense to embark on the project—even though the amortization process involve shrinking and expanding bases.

The way to unpack the fallacy in the above demonstration is to realize that the only *way* the principal on the bank car loan shrinks, is through the input of more cashflow from the borrower. If all that the customer had to work with were the original $20,000, then the bank loan would grow over time. Specifically, in Year 1 the bank loan would accrue $780 in interest expense, while the CDs would only generate $600 in interest earnings. So the customer would have to kick in $180 per year *just to tread water*, keeping the respective bases at a constant $20,000. The only way to get ahead of the curve, and start knocking down the principal on the bank car loan while allowing the CDs to begin growing, would be to kick in *more* than $180 per year.

As the table shows, if the person wants the bank car loan to be extinguished by the end of Year 5, he will have to kick in (at the start of each year) $4,400. (The exact figure is closer to $4,399.50.) If we assume the customer has the ability to make such payments, then he doesn't need to draw on the earnings in the CD account, and

can let that grow exponentially (at 3% annually). At the end of five years, the person will have $23,185 worth of bank CDs, plus a five-year-old car.

However, that does *not* prove the superiority of the "lend low, borrow high" strategy versus "pay cash for the car." To repeat, the only way the "lend low, borrow high" could work was to assume an additional influx of $4,400 per year, for five years. If we are assuming the client has (a) $20,000 cash in the beginning, and (b) $4,400 that can be devoted to a financial system at the start of each year, for five years, then there is a superior method to "lend low, borrow high." Specifically, the green section above shows what happens if the person pays $20,000 in cash for the car, and then devotes the stream of $4,400 annual payments into buying bank CDs rolling over at 3%. As the table shows, with the green strategy the person ends up with the five-year-old car, plus a pile of CDs worth $24,058—more than what happened in the red section.

IT *CAN* MAKE SENSE TO USE SUCH A STRATEGY, BUT FOR A DIFFERENT REASON. In the above discussion, just because I'm saying "lend low, borrow high" is a bad idea by itself, that doesn't mean clients should always "pay cash." For example, I agree that it *does* make sense to fund a given policy up to the MEC limit, even if this will necessitate policy loans soon thereafter, because of the arbitrary time constraints imposed by the tax treatment. For example, if someone has a policy that has one year left of a window allowing up to $20,000 in PUA contributions, and the person has to buy a $20,000 car, then I would think it makes great sense to first put the $20,000 into the policy via a PUA, then take out a $20,000 policy loan to buy the car. But the *reason* I think it makes sense is that the person can chip away at that outstanding policy loan for the rest of his life, as cashflow permits. Once this year passes, the MEC window closes and he can no longer make that $20,000 PUA contribution. The increment to the dividend growth (and jump in death benefit, etc.) coming from the $20,000 PUA partially offset the increased interest expense on the $20,000 policy loan, but if it turned out to be—all things considered—a slightly smaller IRR than the policy loan rate, this would indeed be a net cost of the move.

It's just that this slight differential (if it exists) is worth paying, in my book, for having a bigger policy down the road.

To avoid confusion, let me summarize the above paragraph in different words: I agree that in many cases, it makes perfect sense for a client to put money into an IBC-structured policy, only to borrow it right back out and make a purchase, rather than simply "paying cash" upfront. But what I'm saying is that if I were going to try to explain *why* that is a good idea, I would not try to get the client to agree that he makes money over time by lending low and borrowing high. No, he doesn't. There are other reasons to justify putting money into a policy and borrowing it back for a known purchase, but relying on the "shrinking and expanding principal bases" isn't a good one.