Real Estate Investment Newsletter – November 2003

Maximizing Returns on Equity – Why and How

In this newsletter I will explain some financial management concepts that provide a framework for maximizing your wealth accumulation over time. Proper application of these is the key to early retirement. I will do my best to simplify these complex concepts, but it is up to you to put in the effort to make them work for you. Mastering complexity is what sets apart the wealthy from the average: if you can learn and apply these ideas, you will find yourself on a path to wealth that few can follow (even though they know it exists!).

Terminology

We measure real estate returns on an annual basis and express them as a percentage of the invested amount. In real estate, yield usually refers only to the cash flow portion of returns. The amount invested is usually less than the total cost of the property because we mortgage the property. Equity is the net value of real estate owned after subtracting mortgage debt. Borrowing money to hold assets (leveraging), allows us to own assets worth several times our investment.

When we speak of returns, we generally mean percentage returns on our equity in the asset (as of the beginning of the year). We can, however, also calculate return on asset (ROA) by ignoring leverage; we add the asset's cash flow before debt payments to its appreciation in value and divide by the beginning asset value. The cash flow before debt service, expressed as a percentage of asset value, is the gross yield of the asset. Subtracting debt service form gross cash flow provides the investor the cash flow portion of returns. Investors' returns also include increases in equity in the property. Such increases come from two sources: repayment of the debt owed on the property and appreciation of the property. The total return (cash flow and equity buildup) divided by beginning equity is called return on equity (ROE).

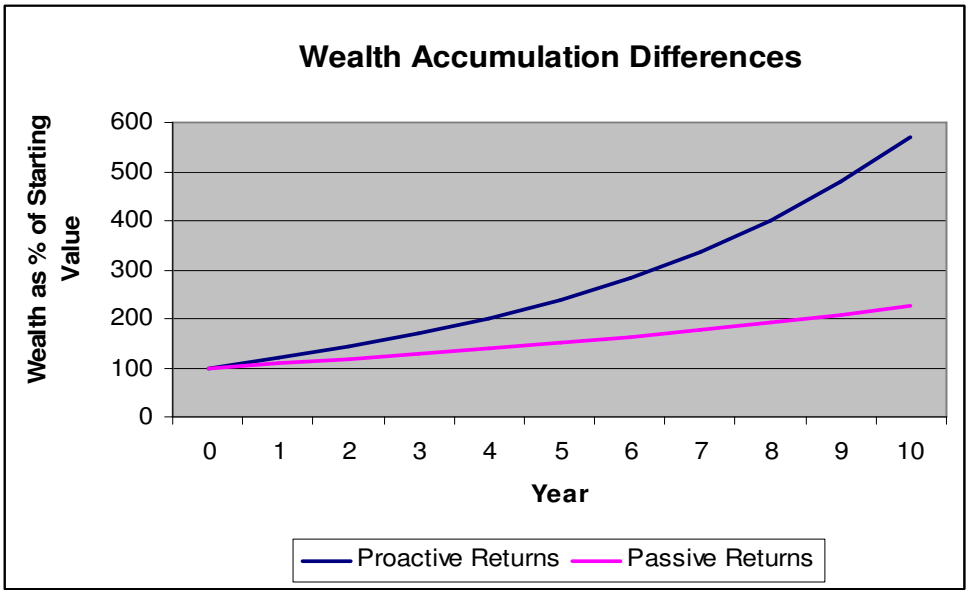
Equity buildup is my term for the equity increase that comes from loan pay-down and property appreciation. This buildup changes the denominator of the ROE calculation. This is in contrast to return on investment (ROI)

calculations where return is always calculated by dividing by the original amount invested. Some people may use ROE and ROI interchangeably. The way I use the terms they are only interchangeable if current year beginning equity is the same as the original amount invested. It is also important to distinguish between pre-tax returns, where we haven't taken into account taxes on the returns, and after-tax returns that we keep after paying income taxes.

Earlier I mentioned that returns are measured per year. In calculating returns over time we must consider that once we have earned a return, it becomes part of our capital and we should expect to earn a return on it in the next period. This is called compounding of returns – additional returns are earned on reinvested past returns. Compounded returns are a powerful way to build wealth over time – your capital expands and works ever harder for you.

Why maximize returns on equity?

Proactive management of capital (to maximize returns on equity) can result in dramatically better returns compared to myopic and passive investing. It is easy to find examples where investors could more than double their returns by investing in the best property available instead of the ones their local broker shows them. Active monitoring of potential returns, and capital redeployment, further contribute to return differentials. Based on my observations, a proactive investor can earn average annual returns of 19% after-tax while less sophisticated "passive" investors are earning 8.5% after-tax. Compounding these returns over time causes wealth to grow as shown in the graph below:



While 8.5% after-tax is a pretty good return, 19% is much better. When this difference is magnified by the power of compounding, it adds up to big money. An investor starting with $352,000 would accumulate $2 million by the

end of 10 years if they earned 19% returns compounded annually. The same investment would grow to just $798,000 if the average compounded return were only 8.5%. The bottom line is that the proactive investor will have accumulated 150% more wealth than the passive investor by the end of a 10-year investment period. That means a higher living standard, or an earlier retirement, or both.

How do you maximize returns on equity?

You must make realistic projections of individual properties' future after-tax returns, buy the property with the highest return, use as much leverage as you can, grow your holdings by actively reinvesting returns, and monitor the real estate market continuously to insure that your capital continues to be invested where it will earn the highest possible return *going forward.* Easy for me to say but let's explore the details.

The first and most important step is to make sure you are looking at the best opportunities. If you have confined yourself to properties within an hour's drive, then you are focusing too narrowly. Keep in mind that local economies are constantly changing and that returns can be driven down rapidly if too many buyers are chasing too few properties. If you don't want to do the homework yourself, work with a buyer's broker (like Berkeley Investment Advisors) that is willing to scour the whole country looking for the best deals. In evaluating opportunities, keep in mind that gross cash flow yield on a property is worth more than an equivalent amount of expected appreciation for two reasons. First of all, you need cash flow to support mortgage borrowing; if the gross yield is too low, the bank will require too much equity. Second, cash flow is much more certain than appreciation and thus it means the return is lower risk.

When projecting future cash flows, take off those rose colored glasses; don't believe the numbers the listing broker throws out. They will almost always understate property taxes and insurance. Management costs are also frequently ignored if the owner is managing the property. But is management time really free? Of course not! Comparing properties' economic returns means measuring every cost as accurately as you can. Don't assume huge rent increases when you're looking at a rent controlled market. Be prudent: assume you will achieve the same occupancy as the overall market average. If you project rents climbing faster than inflation, make sure you can back that up with projections of demand outpacing supply. If the economy is weak and people are moving away, rents may not increase even if there is no new supply at all. There are also interest rates and other market forces to account for in projecting future appreciation. Don't count on the future looking like the past. With interest rates at a 40 year low, it's impossible for them to continue to move down as much as they have in the recent past.

Once you've found the good deals out there, buy as many of these as you can. If you've done your homework properly, you've found properties such that the expected return on asset (ROA), before taxes and before accounting for leverage, is 10% or so. Let's suppose that 7% of the return comes in the form of cash flow (net operating income) and the other 3% is expected appreciation. As I've explained in prior newsletters, you need not ever pay taxes on your appreciation returns if you don't want to. Therefore, we'll consider these returns tax-free. Cash flows are taxable but first we get to deduct depreciation - roughly 2.9% of asset value. Therefore only 4.1% of the 10% asset return would be taxable – even without leverage. Assuming a 40% tax rate, the after-tax un-leveraged ROA here is 8.4%. Compare this with the after-tax cost of a 6% mortgage – 3.6%[1], and you see that every dollar you borrow contributes 4.8 cents[2] to your return on equity while freeing up equity to acquire even more assets and boost returns further. The following table, based on a $1,000 property and the above mentioned returns, illustrates the magnifying effect of leverage on 1st year ROE.

Mortgage as a % of Value:	0%	50%	75%	80%	90%
Beginning Equity	1,000	500	250	200	100
Gross Yield (net operating income)	70	70	70	70	70
Less: Mortgage Payments	0	36	54	58	65
Less: Income Tax[3]	16	4	0	0	0
After-Tax Cash Flow	54	30	16	12	5
Equity Build Up (Appreciation and Loan Repayments)	30	36	39	40	41
Total Return on Equity (ROE)[4]	8.4%	13.1%	22.1%	26.1%	46.3%

This shows that if you have $1,000 and a bank lends you 90% on property, you can buy 10 times as much property as without borrowing, and your returns will be more than 5 times greater than with no leverage. The more leverage you can get to increase your holdings, the better. Leverage is crucial to maximizing ROE, not just in the 1st year of owning a property but over your entire investing career. You must always manage your real estate to maintain high leverage.

This brings us to the final and most difficult thing you must do to maximize ROE: shake off complacency to continuously look for ways to boost

[1] Calculated as 6% - (40%* 6%) = 3.6%
[2] Calculated as $1 * (8.4% - 3.6%) = $.048
[3] Once the mortgage is large enough relative to net operating income, interest deductions completely eliminate taxable income and then start producing tax losses. Although, in this example I've assumed tax losses don't result in refunds, in some situations you will be able to use these to reduce taxes elsewhere in your portfolio.
[4] Calculated as (after-tax cash flows + equity build-up)/ beginning equity.

your ROE going forward. Even with a good property, ROE is usually highest in the first year (when leverage is highest) and then declines as excess equity builds up in the property. In order to illustrate, I want to highlight the difference between Return on Investment (ROI) and Return on Equity (ROE). By doing so, I will show you the principal source of investor complacency. ROI will almost always look good and it will continually increase through time – thus giving the illusion that all is well. This is because it doesn't account for returns on returns, i.e. compounding, which, is key to building wealth.

For example, let's assume that ROA holds steady over time while the asset appreciates at 3%. If we start with a $100 asset with 75% leverage, the path of returns is calculated as shown in the table below:

Year:	1	2	3	4	5	6	7	8	9	10
Asset Value	103	106	109	113	116	119	123	127	131	134
Equity	29	33	37	42	46	51	56	61	66	72
ROI as a %	22	24	25	26	27	28	29	30	32	22
ROE as a %	22	20	19	17	16	15	14	14	13	13

As can be seen here, ROI looks pretty good. Most people tend to think in terms of ROI. They look at what they invested and what they've earned so far and they feel pretty good about it. This focus on ROI generates complacency so that they don't realize what's going on with ROE. What's going on is that the benefits of leverage are slowly ebbing away as more and more equity builds up in the property. There are two possible solutions: borrow more money on the property (refinance) to get equity back down to 25% of asset value, or sell the property and use the equity to buy a larger one where you will again borrow 75% (or more) of the purchase price. When you sell one property and buy a new one with the equity, you must follow the tax rules to make sure it qualifies as an "exchange" so as to avoid paying any tax on your capital gains.

Refinancing and Exchanging (under section 1031 of the internal revenue code) are your two tools for maximizing ROE. Either of these will cost money. Refinancing is much cheaper, costing roughly 2% of the loan amount.[5] If ROA on the property (at its current value) is still high enough to compete with other opportunities in the market, then refinancing will maximize ROE. Because of the transaction costs it makes sense to wait until year 5 or 6 to refinance. At that point ROE will go back up to match the first year number and then it will start declining again as equity builds up. In our example, the average ROE, taking into account the refinancing strategy, will be about 19% - roughly 2

[5] Plus another 2% on the loan you get to buy a new property with the equity you pulled out.

points less than the first year ROE. In practice you must also be able to take the proceeds of the refinancing and use it as your equity to buy a new property.

Exchanging can cost as much as 8% of asset value. Because of these high costs, you should only use this when you can raise ROE enough to cover these costs over a reasonable holding period (i.e. 10 years). The gains can however, far exceed the transaction costs. Keep a watch on the gross yields and expected appreciation in the market where you own property and always compare this to what you could earn if you sold and bought elsewhere. If your projection of ROA drops more than 1% below opportunity costs (returns available elsewhere), it probably makes sense to do the exchange. This is likely to happen when capital pours into a local market and drives down capitalization rates (gross yields) by driving up prices. Don't guess at anything, always project out your future expected ROE and compare to what you would get if you spend the money to do an exchange. Keep in mind that not only will you be able to trade into a higher yielding asset but at the same time you can boost leverage. The combination of these two can dramatically increase ROE and keep you on track for that early retirement.

While I've tried to simplify things to make this readable, in practice it is complicated to properly evaluate your options and keep your eye on the markets to know when to make a move. That's where Berkeley Investment Advisors comes in handy. This type of analysis is at the core of what we do for investors. We keep our eyes on the markets and can advise you of the steps you need to take to keep your ROE high and stay on the path to early retirement.

Featured Investment Opportunity

East Cambridge apartments is priced at $720,000. It has 16 two-bedroom units rented at slightly below market rates. This is located in a decent neighborhood in north Phoenix. Assuming a loan for 75% of the purchase price, the required investment is $209,000 - including closing costs and working capital. I estimate NOI at $46,700 after deducting $5,200 in reserves for capital expenditures. If rents are raised to market, NOI would rise to $53,600. Market rents would produce cash on cash of about 5% and long run returns in the neighborhood of 15% (1st year projected return is 18%).

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