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## Memo To: Tax Clients

## RE: Good Interest vs Bad Interest Home Mortgage Interest Examples - $\mathbf{3 0}$ \& $\mathbf{1 5}$ Year Loan Comparisons

Every once in a while I mention to my clients the need to review their overall financial plan, which includes Pension Plans, Life Insurance, Estate Planning and good overall diversified investments.

Another financial planning tool to safeguard your future, is to simply reduce your overall debt. Obviously, the best situation to strive for is a "zero" debt position, rather than having any debt at all. But if you must incur debt, it is better to ensure that the interest rates are low and that the interest paid is at least tax deductible. You should always try to consolidate your "high interest rate" credit card debt ("bad" interest) with a home equity loan ("good" interest). Using a home equity line will lower your overall interest payments, and provide you with an interest deduction that is tax deductible.

I have enclosed an example of a typical home owner with a $\$ 100,000$ loan, 30 -year mortgage, at an $8 \%$ interest rate. The monthly mortgage payment is $\$ 733.76$ (before escrowed taxes and insurance). You will note that the total loan payments add up to more than $\$ 264,000$ over the full life of the loan. This is more than 2.5 times the original loan amount of $\$ 100,000$. In other words, a dollar of principal paid today could save you around $\$ 2.50$ in overall mortgage payments, as well as to shorten your loan term. A solution to this problem is to make a " $13^{\text {th }}$ " principal payment each year, or to make bi-weekly payments throughout the year.

Another possibility is to re-finance with a shorter term, such as a 20-year or 15-year loan whenever possible. A shorter mortgage term will result in larger monthly mortgage payments, but the rapid equity build-up during the shorter loan period along with the additional cash savings when the loan is finally paid off, are substantial. Please refer to the 30 -year and 15 -year mortgage examples and compare the monthly cash needs versus the long term cash and equity benefits.

The sooner you pay off your initial home mortgage, sometimes called "acquisition debt" the sooner you will be able to establish useful equity lines (or equity loans), or become debt free. This is a great tax and financial planning tool, as well as an important part of your overall estate \& retirement planning. Please call me if you have any further questions.

Sincerely,


William E. Bryant, CPA, CVA

Example of the Principal \& Interest paid on a Home Mortgage Loan over full Loan Term
In this example a $\$ 100,000$ loan over a 30 year period at $8 . \%$ amounts to a total of $\$ 264,155$ paid during the full life of this loan. In other words, there is a multiplier paid of 2.64 times the original mortgage if this loan is paid over a full 30 year term.


## Yearly Amortization of Principal \& Interest Payments

## ASSUMPTIONS:



| No of Full <br> Years | Annual <br> Beg Bal | Annual <br> Paynents | Annual <br> Principal | End of Year <br> Balance |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | $\$ 100,000$ | $\$ 8,805$ | $\$ 7,970$ | $\$ 835$ | $\$ 99,165$ |
| 1 | $\$ 99,165$ | $\$ 8,805$ | $\$ 7,900$ | $\$ 905$ | $\$ 98,260$ |
| 2 | $\$ 98,260$ | $\$ 8,805$ | $\$ 7,825$ | $\$ 980$ | $\$ 97,280$ |
| 3 | $\$ 97,280$ | $\$ 8,805$ | $\$ 7,744$ | $\$ 1,061$ | $\$ 96,219$ |
| 4 | $\$ 96,219$ | $\$ 8,805$ | $\$ 7,656$ | $\$ 1,149$ | $\$ 95,070$ |
| 5 | $\$ 95,070$ | $\$ 8,805$ | $\$ 7,561$ | $\$ 1,245$ | $\$ 93,825$ |
| 6 | $\$ 93,825$ | $\$ 8,805$ | $\$ 7,457$ | $\$ 1,348$ | $\$ 92,477$ |
| 7 | $\$ 92,477$ | $\$ 8,805$ | $\$ 7,345$ | $\$ 1,460$ | $\$ 91,018$ |
| 8 | $\$ 91,018$ | $\$ 8,805$ | $\$ 7,224$ | $\$ 1,581$ | $\$ 89,437$ |
| 9 | $\$ 89,437$ | $\$ 8,805$ | $\$ 7,093$ | $\$ 1,712$ | $\$ 87,725$ |
| 10 | $\$ 87,725$ | $\$ 8,805$ | $\$ 6,951$ | $\$ 1,854$ | $\$ 85,870$ |
| 11 | $\$ 85,870$ | $\$ 8,805$ | $\$ 6,797$ | $\$ 2,008$ | $\$ 83,862$ |
| 12 | $\$ 83,862$ | $\$ 8,805$ | $\$ 6,630$ | $\$ 2,175$ | $\$ 81,688$ |
| 13 | $\$ 81,688$ | $\$ 8,805$ | $\$ 6,450$ | $\$ 2,355$ | $\$ 79,332$ |
| 14 | $\$ 79,332$ | $\$ 8,805$ | $\$ 6,254$ | $\$ 2,551$ | $\$ 76,782$ |
| 15 | $\$ 76,782$ | $\$ 8,805$ | $\$ 6,043$ | $\$ 2,762$ | $\$ 74,019$ |
| 16 | $\$ 74,019$ | $\$ 8,805$ | $\$ 5,813$ | $\$ 2,992$ | $\$ 71,027$ |
| 17 | $\$ 71,027$ | $\$ 8,805$ | $\$ 5,565$ | $\$ 3,240$ | $\$ 67,787$ |
| 18 | $\$ 67,787$ | $\$ 8,805$ | $\$ 5,296$ | $\$ 3,509$ | $\$ 64,278$ |
| 19 | $\$ 64,278$ | $\$ 8,805$ | $\$ 5,005$ | $\$ 3,800$ | $\$ 60,478$ |
| 20 | $\$ 60,478$ | $\$ 8,805$ | $\$ 4,690$ | $\$ 4,116$ | $\$ 56,362$ |
| 21 | $\$ 56,362$ | $\$ 8,805$ | $\$ 4,348$ | $\$ 4,457$ | $\$ 51,905$ |
| 22 | $\$ 51,905$ | $\$ 8,805$ | $\$ 3,978$ | $\$ 4,827$ | $\$ 47,078$ |
| 23 | $\$ 47,078$ | $\$ 8,805$ | $\$ 3,577$ | $\$ 5,228$ | $\$ 41,850$ |
| 24 | $\$ 41,850$ | $\$ 8,805$ | $\$ 3,143$ | $\$ 5,662$ | $\$ 36,188$ |
| 25 | $\$ 36,188$ | $\$ 8,805$ | $\$ 2,673$ | $\$ 6,132$ | $\$ 30,056$ |
| 26 | $\$ 30,056$ | $\$ 8,805$ | $\$ 2,165$ | $\$ 6,641$ | $\$ 23,416$ |
| 27 | $\$ 23,416$ | $\$ 8,805$ | $\$ 1,613$ | $\$ 7,192$ | $\$ 16,224$ |
| 28 | $\$ 16,224$ | $\$ 8,805$ | $\$ 1,016$ | $\$ 7,789$ | $\$ 8,435$ |
| 29 | $\$ 8,435$ | $\$ 8,805$ | $\$ 370$ | $\$ 8,435$ | $\$ 0$ |
| Totals | $\$ 264,155$ | $\$ 164,155$ | $\$ 100,000$ |  |  |

There is a multiplier paid of 2.64 times the original mortgage if this loan is paid over a full term.
See Attached Graph

## Example of same Home Mortgage Loan with payments over a 15 year Loan Term

In this example a $\$ 100,000$ loan over a 15 year period at $8 . \%$ amounts to a total of $\$ 172,017$ paid during the full life of this loan.
The monthly mortgage is greater by $\$ 222$ compared to the 30 year term, but the loan is paid off 15 years sooner with an overall cash flow savings of $\$ 92,138$.


## Yearly Amortization of Principal \& Interest Payments

## ASSUMPTIONS:

| Principal | \$ | 100,000 | Term/Yrs | 15 |
| :---: | :---: | :---: | :---: | :---: |
| Rate |  | 8.00\% | Monthly Payment | \$955.65 |


| No of Full <br> Years | Annual <br> Beg Bal | Annual <br> Interest | Annual <br> Principal | End of Year <br> Balance |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 0 | $\$ 100,000$ | $\$ 11,468$ | $\$ 7,870$ | $\$ 3,598$ | $\$ 96,402$ |
| 1 | $\$ 96,402$ | $\$ 11,468$ | $\$ 7,571$ | $\$ 3,896$ | $\$ 92,506$ |
| 2 | $\$ 92,506$ | $\$ 11,468$ | $\$ 7,248$ | $\$ 4,220$ | $\$ 88,286$ |
| 3 | $\$ 88,286$ | $\$ 11,468$ | $\$ 6,898$ | $\$ 4,570$ | $\$ 83,716$ |
| 4 | $\$ 83,716$ | $\$ 11,468$ | $\$ 6,518$ | $\$ 4,949$ | $\$ 78,766$ |
| 5 | $\$ 78,766$ | $\$ 11,468$ | $\$ 6,108$ | $\$ 5,360$ | $\$ 73,406$ |
| 6 | $\$ 73,406$ | $\$ 11,468$ | $\$ 5,663$ | $\$ 5,805$ | $\$ 67,601$ |
| 7 | $\$ 67,601$ | $\$ 11,468$ | $\$ 5,181$ | $\$ 6,287$ | $\$ 61,314$ |
| 8 | $\$ 61,314$ | $\$ 11,468$ | $\$ 4,659$ | $\$ 6,809$ | $\$ 54,505$ |
| 9 | $\$ 54,505$ | $\$ 11,468$ | $\$ 4,094$ | $\$ 7,374$ | $\$ 47,131$ |
| 10 | $\$ 47,131$ | $\$ 11,468$ | $\$ 3,482$ | $\$ 7,986$ | $\$ 39,145$ |
| 11 | $\$ 39,145$ | $\$ 11,468$ | $\$ 2,819$ | $\$ 8,649$ | $\$ 30,497$ |
| 12 | $\$ 30,497$ | $\$ 11,468$ | $\$ 2,101$ | $\$ 9,367$ | $\$ 21,130$ |
| 13 | $\$ 21,130$ | $\$ 11,468$ | $\$ 1,324$ | $\$ 10,144$ | $\$ 10,986$ |
| 14 | $\$ 10,986$ | $\$ 11,468$ | $\$ 482$ | $\$ 10,986$ | $\$ 0$ |
| 15 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 16 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 17 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 18 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 19 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 20 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 21 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 22 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 23 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 24 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 25 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 26 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 27 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 28 | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ | $\$ 0$ |
| 20 | $\$ 0$ | $\$ 0$ | $\$ 0$ |  |  |
| Totals | $\$ 172,017$ | $\$ 72,017$ | $\$ 100,000$ | $\$ 0$ |  |
|  |  |  |  |  | $\$ 0$ |

There is a multiplier paid of 1.72 times the original mortgage if this loan is paid over a full term.
See Attached Graph

