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Mountain Plains Journal of Business and Technology

Volume 3 Article 5

Date Published: 10-1-2002

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Recommended Citation

Fritzsch, R. B., & VanZante, N. R. (2002). Private Mortgage Insurance-Analyzing a Major Cost of Home Ownership. *Mountain Plains Journal of Business and Technology, 3*(1). Retrieved from https://openspaces.unk.edu/mpjbt/vol3/iss1/5

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PRIVATE MORTGAGE INSURANCE- ANALYZING A MAJOR COST OF HOME OWNERSHIP

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ABSTRACT

Private Mortgage Insurance (PMI) allows homebuyers to qualify for real estate financing with a minimal down payment. PMI transfers default risk from the lender to the insurer at a cost to the borrower of .5% to 1.0% per year. This type of coverage has greatly increased the number of individuals who can own homes. However, if allowed to continue after the risk of default has decreased due to loan principal reduction or property value appreciation, PMI constitutes an unwarranted additional cost of home ownership. This paper examines the current state of the PMI market and legislation governing this type of coverage. It evaluates the use of home equity financing to avoid PMI costs.

I. THE PRIVATE MORTGAGE INSURANCE MARKET

Private Mortgage Insurance (PMI) allows borrowers to qualify for mortgage financing with smaller cash down payments than normally required by most lenders. Traditionally, first time homebuyers had to accumulate as much as 20% of the value of a home before they could qualify for financing – usually by renting or by purchasing a small “starter” home until they could save the required cash payment. Since property values usually increased during this period with a resulting increase in required cash down payments, in many cases potential buyers never could qualify for financing. PMI allows purchasers to qualify for mortgage financing with no cash down by guaranteeing 30% of the value of the property in the event of default. Since the lender also has a mortgage on the property, the value of the property plus the mortgage insurance reduces potential default risk to almost zero. The cost of the insurance to the borrower is .5% to 1% of the value of the mortgage, depending on the size of the down payment, size of the mortgage, and property location. Availability of PMI has greatly expanded the pool of potential homebuyers. According to the Mortgage Insurance Companies of America, over two million new homebuyers used PMI in 2001, a 63% increase over 2000. The Mortgage Bankers Association estimates that this constitutes about half of all mortgage loans. Total insurance-in-

force increased to $698.3 billion in December 2001. PMI is an extremely profitable product for insurers-current margins average about 42% (*American Banker*, 2002). Since the requirement for PMI is a contractual obligation included in the mortgage, if property values subsequently fall to levels which reduce the owner's equity to less than 20% of value there is no obligation to begin PMI payments. However, any subsequent refinancing would include the requirement.

II. ELIMINATING UNNECESSARY PMI COVERAGE

While PMI has undoubtedly placed homeownership within the reach of many new buyers, it should only be used to insure default risk that still exists. While it may be justified initially, most property owners typically build equity through a combination of property appreciation and loan principal retirement that ultimately eliminates the need for PMI. Too frequently, PMI costs tend to be viewed as a "built-in" cost of a mortgage that is too infrequently reviewed or questioned by the borrower. U.S. homeowners pay over $1.3 billion in unnecessary premiums each year (*Accounting Technology,* 2001). To prevent the most extreme cases of charging for unnecessary PMI, Congress in July 1999 passed the Homeowners Protection Act. The legislation was sponsored by Representative Jim Hansen (R-Utah) after he had difficulty canceling PMI on a Washington townhouse Collins, 1999). The Act provides that borrowers must be informed annually of the status of their loan and be allowed to cancel PMI when owner's equity reaches 20% of the original purchase price if the borrower has a good payment history. Cancellation becomes automatic when equity reaches 22% and is also automatic when half of the term of the mortgage is complete. The Act applies only to mortgages originating after the date the law became effective (Sherman, 1999).

While it provides some relief from unnecessary PMI charges, the Homeowners Protection Act in actuality fails to eliminate most cases of this type. Since the Act is based on initial purchase price as the basis for calculating percentage of home equity, the only way to meet the 80% test provided in the Act is by paying down loan principal. Since most of the initial payments on a 30-year mortgage go to interest, and since the average mortgage has a life of less than seven years because of home sales or refinancing, very few homeowners will ever meet the conditions provided in the Act. Rather than principal retirement, most increases in homeowner equity result from property value appreciation. For example, assume a homebuyer purchases a $100,000 home financed by a $95,000 mortgage. Since 95% of the purchase is financed, the lender would require PMI to make the loan. If the value of the property subsequently appreciates to $120,000, the homeowner will have more than 20% equity in the property even if none of the loan principal has been repaid. As an indication of how quickly this can occur in some real estate markets, consider the

average appreciations which occurred in the three-year period from June 1997 to June 2000 (Source: *homegain.com*):

San Francisco	42%
San Diego	37
Denver	36
Orange Co	34
Seattle	34
Austin	33
Minneapolis-St Paul	33
New York City	32
Newark	32
Detroit	32

In almost every major real estate market in the country, appreciation over the past 5 years has been enough to eliminate the need for PMI on existing mortgages. While the Homeowners Protection Act does not provide for PMI elimination based on property value appreciation, both major secondary market mortgage purchasers, Fannie Mae and Ginnie Mae, require that mortgage lenders doing business with them drop PMI on loans where equity exceeds 20% based on the fair market value of the property (Kaldec, 1999). The homeowner must apply for cancellation, however, and must pay the cost of a new appraisal to substantiate the increase in fair market value. Even this cost could be eliminated if lenders were willing to accept tax appraisals for this purpose. Tax appraisals are usually more conservative than commercial appraisals, and tend to lag changes in valuation, but are of course free.

III. SECONDARY MORTGAGE LOANS TO ELIMINATE PMI

Even if equity based on fair market value is insufficient to justify eliminating PMI, under some conditions it is desirable to borrow the additional cash in the form of a second mortgage to reduce the balance on the primary loan to the required 80%. During the 1990's a financing product known as a "90-10-10" loan was developed to avoid PMI. In this arrangement, an 80% first mortgage is coupled with a 10% second mortgage and 10% cash down payment. Since PMI applies only to the first mortgage, none is required under this arrangement, although financing charges on the second mortgage will be higher. Two other factors make this an attractive arrangement: 1) A non-tax-deductible PMI premium applying to the entire loan balance is replaced by a higher interest rate that applies only to the second mortgage. The interest on the second mortgage is tax deductible. 2) The borrower has the flexibility to pay down the higher-cost secondary mortgage at a faster rate than the primary, thus reducing the higher interest costs (*Origination News,* 2001).

In spite of these advantages, a study by Mortgage Guaranty Insurance Company (MGIC) quoted in the above source found that recent trends indicate that 5% of refinancing transactions involving borrowers with no PMI included PMI as part of the refinancing. The study examined refinancing transactions completed since September 2000. The reason PMI was included was that the borrowers consolidated other debt as part of their mortgage loans or engaged in "cash out" financing that reduced their equity to less than 20%. While seemingly a cheap source of money because of the low interest rates available on first mortgage loans, the requirement for PMI as part of these transactions makes this type of financing an expensive source of cash. To find out just how expensive, the authors calculated the maximum interest rate an individual should be willing to pay on a second mortgage loan rather than refinance a first mortgage to include PMI. In the three tables below, we calculated these amounts for second mortgages of 5%, 10% and 15% of property value, assuming a first mortgage of 80%. For each of these loan amounts we considered possible PMI rates of .5%, .75% and 1%. The calculations shown assume a first mortgage rate of 7%- approximately the rate for current 30-year fixed mortgage loans. Since the choice between non-deductible PMI payments and tax-deductible second mortgage interest is influenced by marginal tax rates, we calculated the maximum amounts for a second mortgage on a pre-tax basis for the marginal individual income tax rates effective in 2001. The total cost of PMI is the PMI rate times the entire amount borrowed and it is always a non-deductible expense. As an illustration of the results shown below, consider the amount shown in Table 1 for a tax rate of 15% and a PMI rate of .5% as they apply to the purchase of a $100,000 home. With $15,000 (15%) equity, the purchaser will need to borrow $85,000 (85%). Since this is above the 80% maximum for conventional financing, the lender will require PMI, which adds an additional .5% non-tax-deductible charge to the entire amount borrowed. The cost of the $5,000 amount above 80% equity thus becomes the after-tax cost of the 7% mortgage interest ($5,000 X .07 X .85 = $297.50) plus the cost of PMI ($85,000 X .005 = $425.) for a total after-tax cost of $722.50. The borrower would therefore prefer to borrow $80,000 on a 7% first mortgage (thus avoiding PMI) and finance the additional $5,000 on a second mortgage if the interest on the second mortgage was $722.50 or less after tax. The interest on a second mortgage would be tax-deductible, so $722.50 after-tax would convert to $850 before tax (after-tax amount/(1-tax rate) = before-tax equivalent). Stating $850 as a percentage of $5,000 results in the 17% maximum rate for a second mortgage shown in the table. This is the maximum interest rate a borrower in this situation should be willing to pay for a 5% second mortgage to eliminate the requirement for PMI on this loan. Since the marginal tax rate used in these calculations refers to the tax effect of an additional deduction for interest expense, the 0% rate applies to individuals who do not itemize deductions as well as those who have no taxable income. The results for different tax and PMI rates on 85%, 90% and 95% mortgages are shown below:

Table 1-Maximum Rates for Second Mortgages
Primary Mortgage: 80%; Second Mortgage: 5%; Equity: 15%

	PMI RATE		
TAX RATE	0.5%	0.75%	1%
0%	15.5%	19.8%	24.0%
15%	17.0%	22.0%	27.0%
27.5%	18.7%	24.6%	30.4%
30.5%	19.2%	25.3%	31.5%
35.5%	20.2%	26.8%	33.4%
39.1%	21.0%	27.9%	34.9%

Table 2-Maximum Rates for Second Mortgages
Primary Mortgage: 80%; Second Mortgage: 10%; Equity: 10%

	PMI RATE		
TAX RATE	0.5%	0.75%	1%
0%	11.5%	13.8%	16.0%
15%	12.3%	14.9%	17.6%
27.5%	13.2%	16.3%	19.4%
30.5%	13.5%	16.7%	19.9%
35.5%	14.0%	17.5%	21.0%
39.1%	14.4%	18.1%	21.8%

Table 3-Maximum Rates for Second Mortgages
Primary Mortgage: 80%; Second Mortgage: 15%; Equity: 5%

	PMI RATE		
TAX RATE	0.5%	0.75%	1%
0%	10.2%	11.8%	13.3%
15%	10.7%	12.6%	14.5%
27.5%	11.4%	13.6%	15.7%
30.5%	11.6%	13.8%	16.1%
35.5%	11.9%	14.4%	16.8%
39.1%	12.2%	14.8%	17.4%

IV. RESULTS

The results shown above indicate that individuals who have equity in their homes that approaches 20%, a high marginal tax rate, and a high PMI rate are most likely to benefit from secondary mortgage financing as opposed to financing that involves PMI. However, since rates for second mortgages are currently about 12%, even when an individual's tax rate and/or PMI rate is low, using secondary mortgage financing to eliminate the need for PMI coverage appears to be an attractive alternative for anyone with at least 5-10% equity in their home. Property price appreciation alone should produce this result within a short time of purchase. Anyone with an existing mortgage covered by PMI that has been in effect for more than 2-3 years should accordingly analyze secondary financing.

V. CONCLUSION

Private Mortgage Insurance has placed homeownership within the reach of a large number of families who otherwise would not qualify. However, as this paper has demonstrated, it should only be used appropriately. Before committing to a PMI policy other alternative such as secondary financing should be considered. Once in place, PMI coverage should be periodically reevaluated.

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