Dear Friend,

I know that you are skeptical about refinancing your mortgage, especially considering the $3,000 penalty if you do decide to refinance. Here is my personal analysis of your situation.

Right now, you’re paying back a loan of $207,000 to pay your mortgage of $230,000 with monthly payments of $1,433 (Appendix 1) over the course of 30 years (25 years remain). Overall, according to these original terms (with interest being compounded monthly at 7.4%), you’d be paying back a whopping $515,962 in total (Appendix 2) – that’s $285,962 in interest alone (Appendix 3)!

So, you’re currently five years into this payment plan. However, electing to refinance in an account that offers an interest rate of 3.75% a month would grant you the opportunity to greatly reduce your monthly payments.

Five years into this payment plan, you currently have an unpaid balance of $195,663 in your account (Appendix 4). Refinancing this balance to a 25-year payment plan with the 3.75% monthly interest would bring your monthly payments down significantly to $1,005 a month for the next 25 years (Appendix 5). With this decision, over the course of your 30 years of repaying the loan, you’d be paying $390,784 in total – with the inclusion of the $3,000 penalty as well as what has already been paid (Appendix 6) – which is $160,784 in interest only (Appendix 7). That’s crazy! That decision would save you about $131,178 in interest (Appendix 8) – and it would save you $427 a month, which you could easily invest for future ambitions or emergencies (Appendix 9).

When you reach the age of retirement at 65, this decision to refinance could greatly impact your financial situation.

If you continue to put out the $1,433 every month for the next 25 years, paying back the loan with $1,005 of that, you have $427 a month you can invest into a separate account. Let’s say, for example, you invest the $427 a month into an account that earns interest at a rate of 7.5% compounded monthly for the remaining 25 years on the mortgage. With these conditions, at the age of 58 (when you finish paying off the mortgage loan), you’ll have saved up $374,818 (Appendix 10). Suppose you cap the investments at age 58, but still allow the value of the account to continue earning interest until you retire in 7 years at the age of 65. By retirement at the age of 65, you’ll have saved up an impressive $632,580 (Appendix 11), with which you can use at your discretion during your golden years of retirement. Think of how many cruises you can go on with that money!

Now, I know you’re still worried about that $3,000 penalty fee if you refinance. If you were going to invest that $3,000 into an account to earn compound interest on the same terms (7.5% compounded monthly) until retirement at age 65, you would have accumulated $32,832 in savings (Appendix 12). That is a $600,000 loss if you elect NOT to refinance! Half a million dollars! There is definitely a right decision and definitely a wrong decision, my friend.

With $427 in savings a month, you may want to use some of that money immediately and in life before retirement – which is completely your decision, and if you have it, why not use it? Let’s suppose that you divide that $427 in half; you get to keep $213 to blow or put towards bettering your current life, and you get to invest the other $213 into an account that earns interest at a rate of 7.5% compounded monthly. At the age of 58, when you finish paying off your mortgage loan, you will have accumulated approximately $187,409 in savings (Appendix 13). For the remaining 7 years of your working life, that value still earns interest at the given rate; at the age of 65 when you retire, you will have approximately $316,290 in savings (Appendix 14) to use at your discretion. While that essentially splits your potential maximum savings in half (Appendix 11), you are still left in a considerably comfortable financial situation at the age of retirement.

Overall, it would be in your best interest to refinance your mortgage – you would be missing out on the opportunity to potentially save up to half a million dollars for retirement – and who wouldn’t want that? I sincerely hope that you consider my analysis and advice.

Best wishes,

Morgan Armiger

Appendix

1. $PMT=\frac{207,000}{(1-\left(1+\frac{0.074}{12}\right)^{-12\left(30\right)})}=\$1,433.23 a month for 30 years$
2. $\$1,433.23 a month\*12 months in a year\*30 years=\$515,962.80 paid in total over 30 years$
3. $\$515,962.80-\$230,000=\$285,962.80 paid in interest alone$
4. $PV=\frac{1,433.23(1-(1+\frac{0.074}{12})^{-12(25)}}{(\frac{0.074}{12})}=\$195,663.10 unpaid after 5 years$
5. $PMT=\frac{195,663.10}{\left(1-\left(1+\frac{0.0375}{12}\right)^{-12\left(25\right)}\right)}=\$1,005.97 a month for 25 years$
6. $\left(\$1,005.97 a month\*12 months in a year\*25 years\right)+\left(\$1,433.23 a month\*12 months in a year\* 5 years\right)+\left(\$3,000 penalty\right)=\$390,784 paid in total if the couple elects to refinance$
7. $\$387,784.80-\$230,000+\$3,000=\$160,784.80 paid in interest in total if the couple elects to refinance$
8. $\$285,962.80-\$157,784.80+\$3,000=\$131,178 saved in interest if the couple refinances$
9. $\$1,433.23-\$1,005.97=\$427.26 saved monthly if the couple refinances$
10. $FV= \frac{427.26\left(\left(1+\frac{0.075}{12}\right)^{12\left(25\right)}-1\right)}{\left(\frac{0.075}{12}\right)}=\$374,818.48 at the age of 58$
11. $A=374,818.48(1+\frac{0.075}{12})^{12(7)}=\$632,580.85 at the age of 65$
12. $A=3000\left(1+\frac{0.075}{12}\right)^{12\left(32\right)}=\$32,823.46 at the age of 65$
13. $FV= \frac{213.63\left(\left(1+\frac{0.075}{12}\right)^{12\left(25\right)}-1\right)}{\left(\frac{0.075}{12}\right)}=\$187,409.24 at the age of 58$
14. $A=187,409.24(1+\frac{0.075}{12})^{12(7)}=\$316,290.42 at the age of 65$