Abbie Bingham

Brian Wilson

Math 1030

4/24/2015

Savings plan for my future Bookstore

I have always wanted to open my own bookstore. I love reading, I love recommending books to people who express their desire to lose themselves in words, to educate themselves by the written word. I would absolutely love to have a place to call my own where I can sell all sorts of books, for children and adults, old books, new books.

I will demonstrate mathematically how I can make this dream a reality by presenting a savings plan. This plan will illustrate what I would need to save to make my dream come true, demonstrate different loans that I could get and what would be the most beneficial for a new business owner, and compare leasing a building vs purchasing a building (having a mortgage) and how much I would save in the long run.

The first step to making a savings plan is knowing the budget. I need to know what I make and what my expenses are so that I can determine my cash flow and save accordingly. I have overestimated on my expenses and underestimated my income; that way I don’t overspend and ruin my budget. Other than daily/monthly necessities, these numbers are prorated annually. For example, I go on vacation once or twice a year. I’ll put $50.00 away each month to save for those vacations, rather than spending the $50.00 each month.

4-step budget:

1. Monthly income: $1200. I live at home right now so items like food or utilities are not included.
2. Monthly expenses:

* Phone bill: $60. ( $50/month for the plan and $120/year for a new phone)
* Car Insurance: $100
* Rent: $160
* School and text books: $125/month (this could vary depending on how many credits I take or if I transfer schools.)
* Vacation: save $50/month
* Misc. Spending: $60.00/month
* Gas: $100.00/month

1. The total amount of my expenses equaled out to $655.00. If I take my original budget and subtracted my expenses, I would be left with $545.00.
2. Looking at how much I am able to save I would want to put about $545.00 into a specified account for my future bookstore. My goal is to open this bookstore in five years or less. $545.00 times 60 months (5 years) is $32,700 in total savings. (See Excel attachment below).

As with all budgets, I will continually look this over and make sure that it is still a realistic budget and that no areas are being overspent. With the remaining $545.00 I have many options that I can pursue. For example, I could purchase a CD (Certificate of Deposit) each month, place money into a money market account, purchase stocks or bonds, or an IRA account.

**Certificate of Deposit:** I have checked the rates at Mountain America Credit Union (<https://www.macu.com/rates#MoneyMarket-Tab>) and Granite Credit Union (https://www.granite.org/rates/). These are two credit unions that I trust and have worked with before. The interest rate for MACU 2% and the rate at Granite Credit Union was 2.11%, both at 5 years. I chose to go with Granite’s interest rate because it had the better rate. From the calculations I have made from the spreadsheet I would have a grand total of $33,401.30 after 5 years.

Future Value equation where n is the number of years. See attached excel excerpt.

**Money Market:** I went with the Mountain America Credit Union rates to showcase the benefits of using a money market account. The rate was at a .15%. Again, the spreadsheet showed that I would make $33935.48.



This excerpt is from the Excel Spreadsheet. All calculations are from the respective cells.

**Stocks or Bonds:** Researching stocks I have found that stocks are too dangerous. There is a high risk for losing money. Bonds will not work for a five year savings plan because they typically take 30 years to mature.

**IRA account:** An IRA account might be a better option than a money market because of how it’s taxed. An IRA is set up in a way that taxes are not levied when the money is deposited. The money that is put into the account accrues interest and when it is withdrawn, the money is then taxed. The money that I would have had to pay in taxes has been accruing interest. Essentially I would gain interest on taxed income that would otherwise be unavailable. Be aware however, of penalty fees for withdrawing money out of the IRA early. You do not get the fees waived for starting your business as it states on money.cnn.com.

Loans and Mortgages: Leasing vs Buying

When first thinking of leasing or buying, I need to look at location. Location will determine if I actually can purchase the building that I want or not. The second thing I need to think of is my long term business strategy. Do I want a really nice place that will last me a long time? Or do I want to start small and upgrade as my business grows? These are some of the items I will be discussing.

**Leasing:**

According to bizfilings.com, “The main advantage of leasing a business facility is that your initial outlay of cash to gain the use of an asset is generally less for leasing that it is for purchasing.” This is just stating that you spend less money paying to use the building than you would if you actually purchased a building to own up front. This is a great option for new business owners that need their money to stretch further on things like marketing and supplies. Other benefits for leasing include no maintenance responsibilities; I would be able to keep flexible mobility if I ever need to move locations or sell. Also, if my company’s credit rating can’t support a mortgage, then I have no other option.

I need to take into account how much money I should borrow from a bank. If I lease, my loan will be approximately $350,000.

2 years of lease in savings $74000

Payroll for 6 months (Accountant, Clerk) $16000

Marketing $30000

Signs, logos, shirts $40000

Stock i.e. books $60000

Renovations $100000

Company Vehicle $30000

Total: $350000

This is the formula that I used called the Loan Payment formula.



This excerpt is from the Excel Spreadsheet. All calculations are from the respective cells.

Using the loan payment formula that I put into Excel, I calculated my monthly payment for a $350,000 loan to be $3,712.29 per month. This means if I lease a building and include all of the monthly expenses listed I would need to make more than $3,712.29 per month to make money.

Mortgage:

Like I stated previously, leasing could be a better option. Mortgages have benefits that might outweigh the leasing benefits. Purchasing is actually cheaper in the long run than leasing is. Another advantage to purchasing is that if I ever decide to move locations or sell my business altogether, I would receive the benefit of any appreciation of the property. Other advantages of purchasing include: saving money through taxes by deductions, I could control the property, and the long term costs will be cheaper.

Mortgage Amount $200,000-$600,000

5% down payment $10,000-$30,000 (from savings or CDs)

Loan amount $100,000

Payroll for 6 months (Accountant, Clerk) $16000

Marketing $30000

Signs, logos, shirts $40000

Stock i.e. books $60000

Renovations $100000

Company Vehicle $30000

Total: $276,000

If I decided to buy rather than lease, I would be borrowing more money overall. I would be spending the $276,000 and on top of that the amount of the actual mortgage. Buying a building is more expensive to start with but it’s less expensive in the long run. The biggest risk whether you can make the minimum monthly payments. $3911.27 would be my minimum payments if I purchased a $200,000 building. $5879.03 would be my minimum payments if I purchased a $600,000 building.

The lease compared to the $200,000 mortgage is fairly comparable. Depending on which direction I felt like I needed to go, I could choose vs having the money decide for me.

Based on the numbers and calculations that this paper represents, I have a lot of options to consider when I start the process of opening my business. The option that I would most likely choose would be buying over renting because it’s cheaper in the long run and would be more beneficial to my long term savings plan. Buying is also not a large amount more per month than leasing. It is a realistic option to start a business with $32,700 saved over 5 years that I would accrue via savings. However, the hardest part would not be the money but the obtaining credit from a lender or investors, which is another topic altogether.

Excel Excerpts showing accumulation of savings.

|  |  |  |  |
| --- | --- | --- | --- |
| The Accumulation of savings using a CD | | | |
| Length of CD (years) | Rate | Deposit Amount | Future Value |
| 5 | 0.0211 | 545 | $604.98 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 4 | 0.0126 | 545 | $572.99 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 3 | 0.01 | 545 | $561.51 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 2 | 0.0075 | 545 | $553.21 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 1 | 0.005 | 545 | $547.73 |
| 0.5 | 0.0025 | 545 | $545.68 |
| 0.5 | 0.0025 | 545 | $545.68 |
| 0.5 | 0.0025 | 545 | $545.68 |
| 0.5 | 0.0025 | 545 | $545.68 |
| 0.5 | 0.0025 | 545 | $545.68 |
| 0.5 | 0.0025 | 545 | $545.68 |
| savings |  | 545 | $545.00 |
| savings |  | 545 | $545.00 |
| savings |  | 545 | $545.00 |
| savings |  | 545 | $545.00 |
| savings |  | 545 | $545.00 |
| savings |  | 545 | $545.00 |
| Total |  | $ 32,700.00 | $ 33,401.30 |

Works Cited

"Bank Rates." Simple Savings Calculator. 20 Apr. 2015. Web. 20 Apr. 2015. <http://www.bankrate.com/calculators/savings/simple-savings-calculator.aspx>.

"How to Decide Whether You Should Lease or Buy a Business Facility." How to Decide Whether You Should Lease or Buy a Business Facility. 24 May 2012. Web. 20 Apr. 2015. <http://www.bizfilings.com/toolkit/sbg/office-hr/your-workplace/business-facility- lease-or-buy.aspx>.

If You're 59 ½ or Older You're Usually All Clear. But If You're Younger than That. "When Are IRA Withdrawals Penalty-free?" CNNMoney. Cable News Network, 20 Apr. 2015. Web. 20 Apr. 2015. <http://money.cnn.com/retirement/guide/IRA\_Basics.moneymag/index7.htm?iid=EL>.

"Savings Rates." Certificate Rates. 20 Apr. 2015. Web. 20 Apr. 2015. <https://www.granite.org/rates/>.

"Today's Rates." *Current Rates*. Mountain America Credit Union, 20 Apr. 2015. Web. 20 Apr. 2015. <https://www.macu.com/rates#MoneyMarket-Tab>.

"Treasury Direct." Treasury Bonds. 27 Sept. 2013. Web. 20 Apr. 2015. <http://www.treasurydirect.gov/indiv/products/prod\_tbonds\_glance.htm>.