

The Costs of Money

We all like to think about our money compounding exponentially and ensuring us of wealthy futures. Ironically, our day-to-day interaction with money is often counterproductive to that dream. So far, we've talked about relative returns for different types of investment, the benefits of tax-free saving, and the effects of compounding. Now let's look at some of the *costs* of money. Without this information, you might make decisions that end up bleeding away your funds and thwarting your intentions to save and invest. With this in mind, we'll look at the following topics:

1. Student loans
2. Personal loans and lines of credit
3. Payday loans
4. Credit cards
5. Mortgages

Student loans...

Recently I asked my class, "What is the purpose of student loans?" The immediate response was "Free money." Making their decisions from that viewpoint, students might take as much student loan money as they can get. However, in this case "free" only applies in the short term, and sooner or later they'll have to pay the piper.

Government student loans in Canada are interest-free until you graduate, and repayment can be deferred until six months after that. However, most of these loans begin accumulating interest as soon as you graduate, even though you don't have to start repaying them immediately. At the end of the six-month grace period, you can either pay the interest in a lump sum right then, or have it added to your loan principal. In the case of a \$20,000 loan, the interest accrued dur-

ing the grace period would be \$800 at current rates. (This and all figures which follow were obtained using the CanLearn online loan repayment estimator.¹) If you choose not to immediately repay the \$800 interest from the first six months, your \$20,000 loan becomes a \$20,800 loan. You might recognize this as an example of compounding (i.e., interest paid on interest). However, in this case you will be *paying out* interest on interest rather than receiving it.

There was a time when, if you didn't have the money to pay for a post-secondary education, you didn't get one. The Canadian student loan program was introduced to democratize education by making it accessible to more people. That is an honourable goal. The unintended consequence has been that more people in their twenties are highly indebted than ever before. Consider these strategies to minimize your student debt:

1. Begin repaying the loan immediately after graduation rather than allowing interest to build during the grace period, if your loans start charging interest right away.
2. Pay more than the minimum payment each month, so it will be paid off in less than 10 years.
3. Reduce the amount of loan money you need by being resourceful, finding sources of income other than borrowed money, and keeping your expenses low.

Most people don't know that the default repayment period is 10 years. That is a long time to be in debt for your education, and it costs a lot in interest. On a \$20,000 loan, you will pay about \$9100 in interest over 10 years. If you paid the loan back in 5 years, you would save about \$4800. Your monthly payment increases as the repayment period is shortened. However, it's worth it to get the loan repaid quickly. I've known recent graduates who chose to live in their parents' home for a couple of years, contributing money to food and utilities, and paying off their student loan with the money they would have paid for rent elsewhere. In this way, they were able to move out debt-free in a couple of

years. When parents are willing to offer this option, it is a huge financial gift that should be considered seriously.

Another strategy for minimizing student loan interest is to take as little student loan money as possible—the smaller the loan, the less interest you will pay in total. A 10-year loan of \$5000 will cost about \$2200 in interest, whereas \$20,000 in loans will cost \$9100 interest.

If you are considering applying for student loans, it's wise to ask yourself how much you can afford. Remember that when you borrow money, you are responsible for repaying it without excuses. Even if you declare bankruptcy, your student loan is not automatically discharged. It will only be considered for discharge seven years after you've finished your studies (five years in the case of exceptional financial hardship). Even then, the government may object to the loan being discharged. If the objection is successful, you will be required to repay that loan. A rule of thumb used by Gail Vaz-Oxlade, author of *Debt-Free Forever*, is that you should only take student loans in an amount you can afford to pay off completely within five years of graduation.²

By being resourceful, you can minimize the amount of loan money you need. An eye-opening article on Vaz-Oxlade's website explores some of the alternatives to student loan debt.³ She reports that there are more than 22,000 scholarships available, many from sources you wouldn't have thought of. She provides web addresses for three sites that list scholarships, and provides practical tips about applying for them.

Vaz-Oxlade also points out an interesting money-math fact: If you get a \$1000 scholarship, that's the same as if you had earned \$1200. Because scholarship money isn't taxable, you keep it all...unlike your paycheck. When you have earnings from a job, a percentage will be paid to income tax. If you earn \$1200, you will likely keep about \$1000 of it. Financial writers refer to what you get to keep as "after-tax dollars."

Scholarships rarely cover the complete cost of your education. That may leave you looking at how you can combine part-time work with some student loans

to cover both your living costs and education expenses. If you can be imaginative and find part-time work that relates to your career goals, so much the better. Here are some of Vaz-Oxlade's examples:

I know a young lass named Stephanie who worked as an assistant to a financial advisor all the way through her university years. Since she planned to go into finance as a career, this stood her in very good stead when she went job hunting. If you want to be a vet, find work in the medical arena. If you want to be a teacher, try tutoring. If you want to be an artist, hire yourself out to your professors to do their artwork for books they may be in the process of writing. My friend Ian did this and, hey, it paid some of the bills... Think outside the box. Don't get caught in the McJob simply because your lack of imagination makes you feel there's no other option. Life will be full of challenges, consider this your first biggie!⁴

When you are a student, resourcefulness and thrifty practices will work to your advantage by minimizing your need for loans. For students who find that their studies require their full attention, take a year off periodically to work full-time and save as much as you can. Managing your cash flow⁵ and being creatively thrifty⁶ can help you save for the next year in school. The point is to keep your student loan debt to a minimum. You will undoubtedly be glad you did.

Once you have graduated, apply the same attitudes and habits toward reducing your daily expenses. This will allow you to pay off the loan quickly, leaving you debt-free and further ahead in the long run. The same principle applies to all loans—car, house, credit cards: the faster you pay them off, the less you will pay in total interest. Conversely, the longer they drag on, the more money you'll pay in interest charges.

Personal loans and lines of credit...

Personal loans allow an individual to borrow a lump sum for a specific purpose,

such as furniture or a car. In such cases, the item becomes the collateral, which means it is the security for the loan and will be repossessed if the borrower doesn't make the payments. A cosigner is another kind of security that may be required. A cosigner is typically needed when the lender is unsure about the credit-worthiness of the borrower. The person who cosigns is agreeing to be responsible for payments if the borrower defaults, and the lender has a legal right to enforce that agreement. If a friend asks you to cosign a loan, consider the implications very carefully because you could be on the hook for paying off the loan, if your friend stops making the payments.

A line of credit is set up differently from a personal loan. Originally, it was designed as a tool to help businesses bridge cash flow deficits, but in recent years *personal lines of credit* have been made widely available. A line of credit is essentially pre-approval to borrow up to a specified amount of money, usually \$10,000. You could think of it as a phantom bank account from which you can spend, as long as you don't exceed the limit and regularly make your payments, which will vary depending on the outstanding balance.

A personal line of credit typically has a lower interest rate than a personal loan. This could lead you to think that it makes financial sense to use a line of credit instead of personal loans. However, when it comes to money, it isn't just the math that counts, it's the psychology. Unlike with a personal loan, you don't need to ask permission or justify your expenditures to anyone except yourself when you spend from a line of credit. Thus, a person without plenty of self-discipline might over-spend because there's no external source of accountability.

There is also another type of line of credit that has come into common use in recent years—the home equity line of credit (HELOC). A *home equity line of credit* is similar to the personal line of credit in that you are pre-approved for a specified amount and may spend it at your discretion. The difference is that a personal line of credit is unsecured, whereas a HELOC is a secured loan, and the lender can take possession of the security if you default.

Your house is the security for a home equity line of credit. When you apply for

a HELOC, the lender approves a certain percentage of your *equity* (the amount of the market value that is not mortgaged) as the limit on your line of credit. If you use your home equity line of credit and are unable to make the payments on it, your house will be sold so the lender could recover the outstanding amount of your loan. The interest rate on a HELOC is lower than on a personal line of credit. That's because it is secured by the property, making the loan less risky for the lender than an unsecured personal line of credit.

Home equity loans seem appealing because they provide access to large sums of money at relatively low rates. A HELOC could provide enough money to take a great vacation, to remodel the house with more luxurious finishing materials, to buy new furniture or to buy a car or recreational vehicle. But think about it; are any of these worth taking a chance on losing the roof over your head? It would be hard to make a case that they were.

It is true that a HELOC can, in certain instances, be used to your advantage in a wealth-building program. Skillful use of a HELOC can be part of an overall strategy with a long-term view toward building further equity. However, it is not a tool for financial beginners. And it should *never* ever be used to purchase consumer goods and services.

Payday loans...

The availability of payday loans has increased dramatically in Canada over the past 20 years. Sometimes called pay-advance loans, these short-term loans are used to fill an income gap. A 2010 survey in the Maritime provinces of Canada found that 71% of payday loan customers chose them over other types of credit because they are quick, easy, and convenient. This study, commissioned by the Canadian Payday Loan Association, showed that almost two-thirds of payday loans were between \$100 and \$399, although loan amounts can be as high as \$1500. Borrowers reported they used these loans primarily to obtain emergency cash for necessities (36%) and to help out with unexpected expenses (24%).

A major criticism of payday lending is its inherently predatory nature. Prac-

tices such as rollovers and back-to-back renewals keep the borrower perpetually in debt and regularly paying high fees. These practices are termed predatory because they are so detrimental to borrowers that they are considered abusive.

Another criticism is the high cost of borrowing. When you look at the math, it is shocking that anyone takes out such a loan. But the people who use them are desperate to meet immediate needs and don't view it from the perspective I'm about to share with you. When a loan is approved, the amount is typically deposited directly into the borrower's account and a preauthorized debit is set up to withdraw the borrowed amount plus the loan fee on the next payday.

Payday loans in Canada are regulated provincially, resulting in considerable variation of legislation across the country. The following example of payday loan costs is taken directly from the website of a payday loan company and reflects Alberta legislation.

We charge: \$23 per \$100 lent

For a \$300 loan for 14 days:

Total cost of borrowing = \$69.00

Annual Percentage Rate = 599.64%

This information meets the requirements of the

*Payday Loans Regulation under the Fair Trading Act*⁷

As this example shows, it costs \$69 to borrow \$300. What if you wanted to borrow the maximum amount of \$1500—how much would it cost you? Going back to the example, we see that each \$100 will cost you \$23. \$1500 would cost 15 times that amount.

The cost of \$1500 would be $15 \times \$23 = \345

The fee is typically levied as a dollar amount, and I found most websites do not state the effective annual percentage rate (APR) as in the example above. However, the APR is more useful for you to know. You can go to an online calculator to figure it out.⁸ If you prefer to understand the theory, here's how to calculate

interest rate as an annual percentage.

Step A: Determine the percentage *for the time period of the loan*. In the above example, the time period is 2 weeks.

$$\text{Fee/Principal} \times 100\% = \$69/\$300 \times 100\% = \mathbf{23\% \text{ for 2 weeks}}$$

Step B: Using that information, determine the effective **annual percentage**. Said another way, if the rate is 23% for 2 weeks, how much is it for 52 weeks? Use a simple ratio formula:

$$\text{If 2 weeks} = 23\%$$

$$\text{Then 52 weeks} = 52/2 \times 23\% = \mathbf{598\% \text{ per year}}$$

The slight difference from their figure of 599.64% might be due to a rounding error and for our purposes is not significant. Either way, it's an outrageous amount, and not a game to be played by anyone trying to get ahead financially!

Now, what would be the interest rate if the money had only been borrowed for one week instead of two? The same process applies...

$$\text{Step A: Fee/Principal} \times 100\% = \$69/\$300 \times 100 = \mathbf{23\% \text{ for 1 week}}$$

$$\text{Step B: If 1 week} = 23\%$$

$$\text{Then 52 weeks} = 52/1 \times 23\% = \mathbf{1196\% \text{ per year}}$$

These figures are shocking, no doubt about it. They might lead you to wonder why payday loan companies are allowed to operate. It's not an easy situation to address. Some believe that payday loans should be banned to curtail unnecessary and expensive borrowing. On the other hand, there is concern that this would force people to meet emergency financial needs by dealing with pawn shops and loan sharks. It's a dilemma for governments: how much should be legislated, and to what extent should people be required to take responsibility for themselves and their choices?

Hopefully, you have not yet fallen into the pit of payday loans. But it could easily happen, as they are now readily available online and in many variations. Don't go there! If you have, do what it takes to get out; spend only the bare mini-

mum on everything else until you get it paid off. There is no way to win in this game—unless you are the lender.

Credit cards...

When it comes to credit cards, I don't worry about the interest rate. Surprised to hear that? Why would I not be concerned about looking for a credit card with the lowest possible rate? The answer is simple, and you may have already guessed it. I make it a policy to use my card as a convenience, not as a source of borrowed money. Since I intend to never pay interest, it's a non-issue.

What is the difference between using a credit card as a convenience and as a source of borrowed money? Interest. When you borrow money, you have to pay interest. With typical credit cards, annual interest rates are close to 20%. Card issuers generally offer a grace period of about three weeks before interest is charged on purchases. When you use your card because it is convenient and pay off the balance before the grace period ends, you benefit from the convenience without ever having to pay interest. Important note: The grace period does not apply to cash advances, which are tracked separately. If you take a cash advance on your card, you will be charged interest on that amount from the first day of the advance. The same is true if you use the credit card cheques sent by your card issuer with an encouraging invitation to use them. These cheques are a cash advance on your card and are treated accordingly. Find other ways of handling your finances, and don't ever use cash advances and credit card cheques.

In addition to only using my credit card as a convenience, I make it a personal policy to avoid all the insurance and other fees they keep trying to sell me, because these are a direct cost to me. If you carry a balance on your card, any fees have to be taken into account when working out the interest rate on your purchases. This example from *Debt-Free Forever* spells it out:

While the interest rate on a credit card may be set at 19.99%, you may be paying much more than that if your card has additional fees tacked on each month. Let's look at a credit card with an insurance fee of \$28.44 on a balance of \$1,623, along with an over-limit fee of \$35. When you add it all up:

- monthly interest = \$27.03
- plus insurance fee = \$28.44
- plus over-limit fee = \$35
- divided by balance = \$1,623
- multiplied by 100 (to get a percentage)
- and then multiplied by 12 to get the annual percentage

the effective interest rate on this card is a whopping 67%. The fees are just as important as the interest rate when it comes to determining what your credit card is really costing you.⁹

The effect of fees is one of those facts that many people prefer to ignore because the reality is shocking. It's difficult to remain complacent about the financial consequences of borrowing money using credit cards when you see that the actual interest rate is 67%.

Most people don't think about what they are really paying when they buy things on credit; they compartmentalize the price and the interest cost in two different parts of their brains and don't think of the total cost in an integrated way. That's the psychological trap of using a credit card. It's an avoidance tactic, but where is the sense in that? How can you ever get ahead if everything costs you more than you think. Being realistic is a much more powerful approach to using your credit card.

Remember that anything you buy with your credit card will cost you considerably more than the price on the tag...unless you pay off the entire balance before the grace period ends.

Another shocker

Now let's look at credit card usage from another angle—the length of time it

takes to pay off a balance. Here's an example to consider:

Balance	=	\$220.76
Minimum payment	=	\$10/month
Annual interest rate	=	19.49%

If you do not charge anything else on this card and make the minimum monthly payment without fail, how long will it take you to pay it off completely? If the math seems daunting, take your best guess.

The correct answer is 28 months—that's over two years to pay for something worth \$221. Paying \$10 a month for 28 months, you will pay \$280 for that \$221 item. The extra \$59 amounts to a 27% increase in the price of what you bought. Such a large surcharge increases your living costs substantially.

Now here's another scenario:

Balance	=	\$3172
First month payment	=	\$63
Annual interest rate	=	18.5%

Suppose you spent that money on a fabulous vacation to celebrate your 20th birthday. Assume you buy nothing else on this credit card and faithfully make the minimum payment each month. How old will you be when you make the last payment for that birthday trip? How much interest will you pay in total during that time?

According to information taken directly from the credit card statement used for this example, *the balance will be fully paid off in 42 years, 8 months*. Therefore, you will be four months shy of your 63rd birthday when you make that last payment on your 20th birthday celebration.

How much interest will be paid? This is not part of the required information on a credit card statement, so I found the answer by using an online calculator.¹⁰ According to the calculator, you will pay out a total of \$12,623 for that trip worth \$3172. The interest is therefore \$9,451. (Total paid of \$12,623 – original cost of \$3,172 = interest of \$9,451.) The interest is three times the original cost of your

celebratory trip. That's a huge surcharge, and I can't help wondering if anything is worth that much extra.

When I used the online calculator, I printed out the full repayment schedule for this loan. Looking at the printout was an eye-opener. I discovered that:

- It takes 83 payments to reduce the principal by \$1000. That is 6 years, 11 months until the principal is reduced from \$3172 to \$2172. By then you would have paid a total of \$4388 in your minimum monthly payments. Of that amount, \$3388 went to interest.
- The second \$1000 will be paid off after the 217th payment. That means it will take 134 more payments (11 years, 2 months more) to clear the second \$1000 of the debt.
- The third \$1000 is paid off after the 479th payment. That means it will take another 262 months (21 years, 10 months) after the second \$1000 is paid off until the third \$1000 is cleared.
- And to clear the last \$173 takes 20 more months because by then minimum payments are only \$10 a month.

How does this happen?

How could it take *42 years* to pay back any loan, much less one on a credit card for ordinary consumer goods, such as vacations, concert tickets, clothes, furniture, and eating out? For starters, the interest rate is high and the monthly payment is low. A rate of 18.5% per year works out to 0.05068% per day. In the first month, you will pay an average of \$1.63 each day in interest.

Because your monthly payment is low, *most of your monthly payment goes to interest*, leaving very little to pay down the loan itself. In our example, only \$14 of your \$63 goes toward paying down the principal. To see a chart showing the complete repayment schedule, go to the previously mentioned calculator to enter the data for this example. In the box marked "Option A," the minimum

monthly amount will be \$10.00 and the minimum monthly percentage is 2%. You'll find that the repayment time in the resulting chart is slightly different from the 42 years, 8 months given on the credit card statement. The calculator explains that a discrepancy may occur because credit card companies are permitted to round up your balance to the next \$100 when making their estimates, whereas the online calculator starts with your exact credit card balance.

Remember: Any repayment time estimate is accurate if, and only if, nothing else is ever charged on that card while it is being paid off. If you continue to use the card while making minimum payments, you are adding to your principal each month despite paying on the loan regularly. As a result, you will be increasing the repayment time to more than 42 years.

How can a person in this situation possibly get ahead? Certainly not by following the prescribed payments. But think about this: any extra paid each month goes directly to paying down the principal because the interest for that month has already been covered by the minimum payment.

In the previous example, when the first payment of \$63 was made, only \$14 went to paying down the principal. If \$113 had been paid instead of \$63 in the first month, the extra \$50 would have gone directly on the principal, reducing it by \$64 (\$14 from the regular payment + \$50 extra). This might seem a small difference, but the results of paying that extra \$50 a month are astounding. Most online calculators have a line that allows you to explore the effect of making larger payments each month. When I did that, I discovered that *by paying \$50 in addition to the minimum payment each month, the loan for that trip would be paid off in 4 years 7 months instead of about 42 years*. That is not a typographical error; it really was less than 5 years.

A monthly payment of \$100 plus the minimum will see this loan paid off in 2 years 6 months. Increase the monthly payment to \$150 plus the minimum payment, and it will be paid in 1 year 9 months instead of about 42 years. This is a sharp contrast to the way the debt drags on and on when you make only the minimum payments. (Remember that third \$1000, which took almost 22 years

to pay off according to the minimum payment schedule?)

It might take a bit of doing to find that extra \$150 per month, but spending less on optional items or taking a second job for a couple years, is worth it in this situation. Getting the debt paid off fast saves you a lot in the long term, and any money you were spending on debt repayment can be put to uses that are much more satisfying than paying interest.

The benefit of paying more than the specified minimum is a crucial concept because it applies to all loans, not just credit cards. As the foregoing shows, paying more reduces the principal more rapidly. Because the principal is reduced to zero in a fewer number of months, you are borrowing the money for less time and you will be paying less in total interest. There is no fancy math in that; it is simply common sense.

Strategies to reduce credit card charges

1. Use your credit card only as a convenience, and pay the balance in full each month before the grace period is up.
2. Do not take a cash advance or use credit card cheques because there is no grace period on money you access this way.
3. Choose a card with no fees and resist their pressure to buy insurance and such extras.
4. If you do have a balance on your card, never make just the minimum payment. Pay as much extra as you can manage each month because that will be applied directly to the principal and your loan will go down much faster.
5. When paying off an outstanding balance, stop using that card for any other purchases. If you continue using the card, your extra payments will be going to new interest rather than paying down the principal on your original balance. You won't get ahead.

Mortgages...

Paying interest is more or less unavoidable when you purchase a house. Housing prices are high compared to income, so it's rare for someone to save enough to purchase a house outright with cash. However, I do have one story about that.

A few years ago, I had a student in his early thirties who had started saving from part-time jobs when he was a teenager, and continued the habit as he worked throughout his twenties. Two months before coming to college as a full-time student, he had fully paid for a condominium with his own cash. He had two roommates and used their rent payments to cover taxes, utilities, and condo fees. Since he had no mortgage payments, he was able to be a student without needing either a loan or a job.

This young man didn't need to know about the ins and out of mortgages, but most of us do. Once you understand how mortgages are structured, you'll see how to save money on your mortgage by minimizing the interest you pay.

Understanding mortgage interest so you can pay less

A mortgage is the largest loan most of us will undertake. Because of the size and length of a mortgage loan, it costs you a surprising amount in total interest. That's not all bad. Carefully chosen real estate is generally considered to be a good investment because it can reasonably be expected to increase in value. A mortgage is a means of leveraging your investment in a house when you don't have the cash to pay for it outright. As you may recall from an earlier discussion, leveraging is defined as borrowing to invest.

If you take 25 years to pay off your mortgage and the interest rate is 6.5%, you will pay as much again in interest as the amount you borrowed. So, if the mortgage was \$200,000, then you will have paid the lender a total of \$400,000 when the last payment is made.

When interest rates are higher, you pay more in total amount interest. For example, when rates were 11.6% in the 1970s, home buyers paid twice the amount of the loan in interest. In that case, if a mortgage was \$200,000, the total paid to

the lender over those 25 years was \$600,000.

Clearly, anything that reduces the interest you pay is a good idea. To understand the rationale for such strategies, you need to first understand some basic mortgage terminology and how mortgages are structured.

Mortgage terminology

A *mortgage* is a loan for the purchase of real estate, with the property itself as the security. *Foreclosure* is the process of repossessing that security in the event of default (nonpayment) on the monthly mortgage payments. The *homeowner's equity* refers to the amount of the property that the borrower actually owns; it is the market value of the property minus the outstanding mortgage.

The *amortization period* of any loan, including a mortgage, is the length of time it takes until the loan is fully paid off. A unique characteristic of mortgages is that they are amortized for a significantly longer period of time than other loans—average length being 25 years.

A mortgage also has a *term*, which is shorter than the amortization period. Term is the length of time within the total amortization period for which there is an agreement at a specific interest rate. The term will normally be somewhere between one and five years, although some are as short as six months and you may see mortgage terms of seven or even ten years. At the end of the term, the lender offers you a chance to renew at whatever interest rate is then appropriate to market conditions. Also at the end of the term, you have the option to pay down the principal without any penalty.

Mortgages may be classed as either *open* or *closed*. This determines whether you can pay down the principal at times other than the end of the term without penalty. As you might guess from the name, an open mortgage gives you greater privileges for prepaying the principal. We'll discuss later why prepayment is significant in the big picture.

When applying for a mortgage, you might be asked if you're looking for a fixed or variable rate. A *fixed rate mortgage*, which is the most common, estab-

lishes the interest rate at the beginning of the term. That rate is fixed until the end of the term, then a new rate is agreed to for the next term, depending on market conditions. Your monthly payments are the same throughout the term, but may be different in the next term if interest rates have gone up or down.

A *variable rate mortgage* typically has a fixed monthly payment; however, unlike a fixed-rate mortgage, the interest rate varies as interest rates fluctuate in market. In other words, the interest rate is not locked in during the term. If interest rates go up, more of your monthly payment is used to pay off the mortgage interest. If the rate goes down, less is needed to cover the interest and therefore more can be applied to paying down the principal. Variable rate mortgages have evolved over the years and some are now structured so payments change when the interest rate does, rather than remaining the same each month. The disadvantage of a changing monthly payment is that it creates uncertainty and makes budgeting more difficult.

Mortgage structure

Here's the example we'll use to explore various aspects of mortgages, with a view to understanding how you can save on the amount of interest paid.

Amount borrowed:	\$258,670
Amortization period:	25 years
Term:	5 years
Interest rate:	5.2%
Monthly payments:	\$1534

Mortgages are structured with *equal blended payments*. "Equal" means that the monthly amount you pay is the same throughout the term of the mortgage. "Blended" means that each month your payment covers a combination of both principal and interest. The proportion of principal and interest varies: in early years, most of each payment goes to interest; in later years, most is applied to the principal.

In our example, \$18,408 is paid each year to the mortgage lender (\$1534/month × 12 months). The monthly amounts of \$1534 are used to pay the monthly interest charge and then pay back some of the principal that had been borrowed. The proportion going to interest and principal changes, while your payment is the same each month. Usually, we aren't particularly aware of the breakdown, although it is possible to find out what it is. By putting our example into an online payment schedule calculator,¹¹ I got the following information.

Mortgage: Equal Blended Payments in First Year

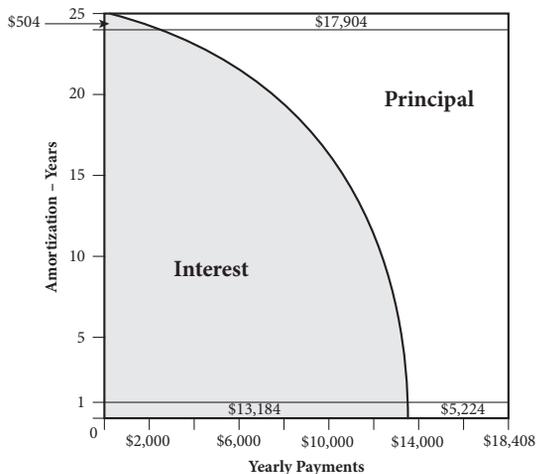
Month	Monthly payment	Amount to interest	Amount to principal
1	\$1,534	\$1,109	\$425
2	\$1,534	\$1,107	\$427
3	\$1,534	\$1,105	\$429
4	\$1,534	\$1,103	\$431
5	\$1,534	\$1,102	\$432
6	\$1,534	\$1,100	\$434
7	\$1,534	\$1,098	\$436
8	\$1,534	\$1,096	\$438
9	\$1,534	\$1,094	\$440
10	\$1,534	\$1,092	\$442
11	\$1,534	\$1,090	\$444
12	\$1,534	\$1,088	\$446
Totals for first year	\$18,408 total paid	\$13,184 to interest	\$5,224 to principal

By looking at the totals in the interest and principal columns for the first 12 months, we see that \$13,184 went to interest and \$5,224 was paid down on the principal in the first year.

A visual representation sometimes makes this easier to understand, so I have put the information into the following graph. Look at the horizontal axis to see how the money was distributed in the first year—\$13,184 to interest and \$5,224

on the principal. As you move up the vertical axis to later years, you'll notice that a bit less of the payment is taken by interest and a bit more goes to pay down the principal. In the last year, only \$504 goes to interest, and the remaining \$17,904 pays off the entire balance of the loan. The mortgage has been paid off or "retired."

Mortgage: Equal Blended Payments Full Amortization



When you have a mortgage, the lender sends a statement at the end of each year to show where things stand with your loan. In our example, the first statement would say:

Principal borrowed	\$258,670
Amount repaid	<u>5,224</u>
Loan outstanding	\$253,446

As you can see, the principal did not go down very much, even though over \$18,000 was paid to the lender. As the graph of the first year shows, almost three-quarters of that money went to interest. That's why it's to your advantage to use interest-reducing strategies when you have a mortgage.

Not everyone takes 25 years to pay off a mortgage

If you want to be inspired by someone who took the fast track to paying off a mortgage, search online for the article “How we paid off our house in three years.”¹² Author Perry Goertzen describes the circumstances that brought him to his early thirties with \$37,000 in debt, a rusty old car, few possessions, and no house. By then, he had a master’s degree and a plan that changed everything. He and his wife decided to continue to live like poor students, work as much as they could, and buy a house.

In June of 2002, we purchased our first home in a new subdivision in Milton [Ontario] for \$302,000, and took on a five-year, 5.2 per cent fixed-rate mortgage for \$220,000. At first, we intended to pay it off in 10 or 15 years. But then I looked at what would happen if I doubled up the payments and paid an extra 10 per cent a year. It was incredibly motivating to see how much interest you could save. So we doubled up every bi-weekly payment, from \$670 to \$1,340. We also made the annual 10 per cent prepayment, which was about \$22,000 a year.

At the end of the first year, we realized that we were saving much more than we needed, even with the doubled payments and annual prepayment, so I approached the bank and asked them if we could make an annual prepayment of 20 per cent instead. It took a little bit of coaxing and a few Tim Hortons coffees, but banks can be more flexible than you might think: don’t assume the terms of your mortgage can’t be changed.

At that rate of payment, we managed to pay off the whole thing in exactly 952 days. By paying off the mortgage in less than three years instead of 25, we saved a total of \$153,000 in interest charges, which amounts to more than half the original cost of the house. Meanwhile, the house had already increased in value to about \$420,000.¹³

Key strategies to reduce the mortgage interest you pay

- 1. Shorten the amortization period.** When you reduce the length of time for which you borrow money, you also reduce the total amount of interest you pay. However, this strategy will increase your monthly payments by a small amount. Play with the options, using an online calculator,¹⁴ to find out what will work for you.
- 2. Prepay the principal.** *Prepayment* means paying extra money, beyond your regular monthly payments, that goes directly to reducing the principal. Because mortgages are structured so most of your early payments go toward interest, it takes a long time to pay off the principal if you just follow the regular payment schedule. By prepaying on your mortgage, you can pay off your mortgage sooner than scheduled, while saving tens of thousands of dollars in interest. In our example of a \$258,670 mortgage, prepaying \$2000 a year means the mortgage will be paid off in 20 years instead of 25, and you will reduce the interest paid by \$42,000. When you get a mortgage, be sure to verify that it has prepayment privileges.
- 3. Pay weekly or biweekly.** Your lender may refer to this as making *accelerated payments*. If you pay every two weeks rather than once a month, you actually end up making extra payments. This extra money pays down the principal in the same way that a prepayment does. The reason you pay extra is that there are 26 two-week periods in a year, but the amount of your payment is calculated as if there were 24. Essentially, you pay 2 extra two-week periods, and this extra money goes toward the principal. In the example we've been using, making biweekly payments will get the mortgage paid off in 21 years and will save you \$33,500 in interest. Think what would happen if you paid your mortgage biweekly *and* also did a prepayment each year—perhaps using the money from your income tax refund.
- 4. Increase your monthly payment.** This is yet another means of applying

extra money to paying down the principal. You would, of course, need to confirm that your mortgage allows you to increase your monthly payments. Lenders vary in the options they offer and the terminology they use. Some may refer to this as the *double-up feature*.

5. **Shop for the best interest rate.** Because a mortgage is a lot of money borrowed for a long time, the effect of different rates is dramatic. Even half a percent in interest means a difference of about \$22,000 in what you pay over the life of the mortgage in my example. That's enough to make it worth the time and effort of shopping around.
6. **Make the largest down payment possible.** The availability of an extra amount of \$25,000 or \$100,000 might sound far-fetched, but could certainly be the result of an inheritance, for example. Using it to increase your down payment and thus reduce the amount you need to borrow would be a means of investing the money for your long-term benefit.

Crunching numbers

All of this money-math may seem intimidating. However, crunching mortgage numbers is not as daunting as it first appears. And it is invaluable in helping you understand and explore your options. This comment came from one of my daughters-in-law:

For me, using an online calculator was step one in learning about mortgages as related to buying my first place—taking theoretical numbers, crunching them, and then beginning to understand how down-payment dollars and amortization affected my payments. That is how I learned about mortgages initially. I find I still go to the mortgage calculators to figure out what we can afford for our “forever house” in the coming years. I would encourage people to “play with the numbers” to see what a difference time/payment schedule/down payment can make in their life and bottom line.

The figures in this section were generated by the Canadian mortgage payment calculator at canequity.com. I looked at several and chose this one because it allowed for flexibility in creating various scenarios, and it produced full repayment schedules that could be printed out for reference.

I have intentionally kept the figures to a minimum in this section to focus on my main point: *Mortgages are set up so that you pay mostly interest in the early years. You can substantially reduce the amount of interest you pay by using strategies to pay off your mortgage faster.* For more detailed explanations and tables supporting this point of view, refer to the resources section of my blogsite at www.TheUncommonGuides.com.

Is buying a house realistic?

Even if you use the recommended strategies to keep total interest as low as possible, there is no question that a house is an expensive purchase. It's easy to pay more than you can really afford because there are few "starter homes" on the market these days. Starter homes are smaller houses with modest finishing materials and lower price tags that used to make home ownership affordable for people starting out. Nowadays, new houses are large and filled with pricey finishing materials, such as granite countertops and wood flooring, which make them expensive to buy. Older homes have become expensive because they are located close to downtown, which increases land prices. For a while, condominiums filled the price gap. However, even they are being enlarged and upscaled, so they are no longer as affordable as they once were.

Why does it matter? If you don't keep your housing expenses reasonable, you will become *house poor*. Gail Vaz-Oxlade identifies the financial implications of being house poor:

Folks find themselves struggling to make ends meet and keep their dream roofs over their heads. Their best intentions end up with the worst consequences. And all because they failed to add up the real costs of buying their

home. While a mortgage is “good” debt—you’re building assets, after all—too much mortgage is a fast route to bad debt. Why? Well, when it takes too much of your money to keep that “good” debt in good standing, you’re more likely to turn to your credit cards and lines of credit just to make ends meet—never mind have some fun. The result: oodles of debt racked up, or a life given over to sitting in a home and staring at the bare walls.¹⁵

The idea that we should all aspire to a “dream home” is embedded in the cultural meta-narrative—that over-arching story that usually goes unquestioned. A conscious spender would not blindly accept it as a given. The conscious approach is to think about what is important to you in a house—and what you are willing to give up to get it. Vacations? Post-secondary education for your children? Financial freedom? Peace of mind? Examining the concept of a dream home can be a good focal point for thinking about what is essential to you, and why. It is particularly valuable for couples to have this conversation, since they frequently come together with different backgrounds and expectations.

What can be done to make your housing purchase manageable and avoid becoming house poor? Start by looking at your expectations. Until now, young people have expected that their first home would match the standard of the home where they grew up. It was a reasonable expectation until recently. The economic realities of this time no longer make that possible. Today’s young adults are the first generation that will find its housing standard *below* that of its parents. This may not seem fair, but it is the reality.

Changed expectations may relate to the size of the house, whether it’s single and detached, and how many people live in it. A large, detached house with one or two occupants in an expensive suburb is now a luxury. A more affordable option is a small condominium in a modest neighbourhood. To further reduce your costs, you could consider taking a roommate or two, as my student did. Their rent money will help pay your mortgage. Or, for your first house, you might buy one with a basement suite so you can live on one level and have a renter on the

other. You can charge more for a main-floor suite than one in a basement, so you may decide to live in the lower suite to generate the most income to apply toward the mortgage. Note that there are regulations prohibiting suites in some areas. If you buy a house without a suite and plan to turn the basement into one, be sure to check that this is allowed, before you make the purchase.

Another sound strategy is to acquire the largest down payment you can. The more you put down, the less you need to borrow and the lower your payments will be. Often older family members, appreciating the challenges of starting out today, are willing to lend you some money, perhaps even at a favourable interest rate. A strong note of caution, though: Be absolutely scrupulous with the initial arrangements and the repayments when dealing with family and friends. It's tempting to delay or skip payments on the assumption that they'll cut you some slack. Don't. These are people who will be in your life for a long time, and it's not worth jeopardizing your relationship with them.

Think-about's

Many people take no care of their money until they come nearly to the end of it, and others do just the same with their time.

~Goethe

If money was my only motivation, I would organize myself differently. ~Placido Domingo
Spanish tenor and conductor

In the end, how we value money says something about how we value ourselves, our labor, our time. ~Fred Brock

