

5.8: Accounting for Leases and Installment Notes

Learning Objectives

At the end of this section, students should be able to meet the following objectives:

1. Recognize that a business can borrow to purchase assets using an installment loan.
2. Calculate the payment and account for that payment on an installment loan.
3. Understand the similarities between finance leases and installment loans.
4. Identify the criteria that determines whether a lease is accounted for using the finance lease or operating lease approach.

Question: Notes and bonds payable serve as the predominant source of reported noncurrent liabilities in the United States for large companies. Virtually all companies of any size raise significant sums of money by incurring debts of this type. However, smaller companies are more likely to borrow using installment loans. What is an installment loan or note and how is it accounted for?

Installment loans are most likely the form of borrowing that readers of this text are most familiar with. Home mortgages, student loans and car loans are common forms of installment loans used by individuals. Small and medium businesses acquire assets like buildings and equipment using installment loans or maybe leases. Both of these forms of borrowing, are referred to as installments because they require equal payments by the borrower – usually monthly but they could be on any other time schedule. Because they are annuities – equal payments and equal time periods in between – we can use the same tools (tables) given in the earlier section to develop the accounting. Each equal payment must be split into principal payment (amount to reduce the loan payable) and interest. The rule is that we always calculate the interest first.

Let's see how this might work with a typical situation. Say Abilene, Inc. wants to purchase an airplane for use in its charter tour business. The airplane will cost \$220,000 and Abilene will pay \$20,000 in cash and borrow the remaining amount using an installment loan. The terms worked out with the bank are monthly payments for 5 years with an annual rate of interest of 10%. The journal entry for this purchase would look like this:

	Debit	Credit
Airplane	\$220,000	
Cash		\$20,000
Note Payable		\$200,000

That does not seem too much different than our earlier discussion about recording liabilities. However, how do know the amount of the payment each month and how to account for that payment?

Knowing the interest rate and the number of equal payments on this loan, we can calculate the payment using the present value of an annuity table as given in the previous section. It is much easier to find the payments using an Excel spreadsheet. Using any version of Excel, you can find the PMT function and fill in the interest rate, number of payments and the amount borrowed to calculate the equal monthly payment.

[Link to youtube video explaining how to use PMT function in Excel](#)

Once the payment has been determined (\$4,249), the payment must be split into the interest and principal. Following the rule that interest is first we calculate interest for one month. The \$200,000 balance multiplied by 10% = 20,000 then divide by 12 to convert the annual interest for just one month. $\$20,000 / 12 = 1,667$ – this is the interest expense. The rest of the payment ($\$4,249 - \$1,667$) = \$2,583 which is the amount of the principal paid on the loan. Thus the journal entry for the payment would look like this.

	Debit	Credit
Interest Expense	1,667	
Note Payable	2,582	
Cash		4,249

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Interest expense goes on the income statement and increases expenses and reduces net income. Note payable debit reduces the balance in note payable from \$200,000 to 197,418 ($200,000 - 2,582$). For the second month this is the new balance that will be used to calculate interest. Each payment will have less interest expense and more note payable even though the credit to cash will be the same each time (equal installments).

Check Yourself

Using the example of Abilene and their airplane given in the text above, what would be the debit to interest expense for the **THIRD** monthly payment on the installment loan?

- A. \$1,623
- B. \$1,645
- C. \$2,604
- D. \$1,667

The correct answer is A. For the second payment on the loan, the interest would be $197,418 \times 10\% / 12 = 1,645$. That is subtracted from the payment of \$4,249 to get the amount of principal paid – 2,604. The new balance on the loan is $197,418 - 2,604 = 194,814$. This is used to calculate the interest for the third payment. $194,814 \times .10 / 12 = 1,623$.

Question: On Target's balance sheet, besides notes payable, Target reports \$2.6 billion in lease liabilities as of January 28, 2023. What is the differences between these liabilities and notes/loans payable?

Companies large and small use leasing arrangements to help them obtain control of assets such as buildings and equipment similar to what they would do with installment loans. Thus in some ways the accounting for them will be similar. After years of discussion and meetings, the FASB changed the accounting rules for leases such that almost all lease arrangements (both the liability and the related asset) are listed on the balance sheet. This is true even though from a legal standpoint, a lease does not transfer ownership to the lessee (renter). So an arrangement where Target leases space (lessee) in a mall and the lease is for 5 years, the amount of the control over that asset for 5 years is recorded as an asset while the payments (present value of them) is recorded as a liability. The mall retains legal ownership of the space even while it is in the control of Target. This focuses on control of the asset rather than ownership transfer.

The FASB did distinguish between two kinds of leases:

- **Finance lease.** Lessee gains substantially all the benefits and risks of ownership. The transaction is reported as a purchase with installment loan although the legal form is still that of a lease arrangement.
- **Operating lease.** Lessee does not obtain substantially all the benefits and risks of ownership. Lessee reports a right to use asset for the time they control the asset being leased.

In establishing reporting guidelines in this area, FASB created four specific criteria to serve as the line between the two types of leases. Such rules set a standard that all companies must follow. If any one of these criteria is met, the lease is automatically recorded by the lessee as a finance lease. Both the asset and liability are reported as if an actual purchase took place.

Note in each of these criteria the rationale for classifying the transaction as a finance lease.

1. The lease contract specifies that title to the property will be conveyed to the lessee by the end of the lease term. If legal ownership is to be transferred from **lessor** to **lessee**, the entire series of payments is simply a method devised to purchase the asset. In substance, the agreement was never intended to be a rental. From the beginning, the property was being acquired.
2. The lease contract allows the lessee to buy the property at a specified time at an amount sufficiently below its expected fair value so that purchase is reasonably assured. The availability of this bargain purchase option indicates, once again, that the true intention of the contract is the conveyance of ownership. The transaction is the equivalent of a purchase if the option price is so low that purchase by the lessee can be anticipated.
3. The lease contract is for a term that is equal to most of the estimated life of the property. This criterion is different from the first two where the transaction was just a disguised purchased. Here, the lessee will never gain legal ownership. However, the lease is for such an extensive portion of the asset's life that the lessee obtains a vast majority of its utility.

4. The fourth criterion is too complicated to cover in an introductory textbook. The general idea is that the lessee is paying approximately the same amount as would have been charged just to buy the asset. Paying the equivalent of the purchase price (or close to it) indicates that no real difference exists between the nature of the lease transaction and an acquisition.

If none of the criteria are satisfied then the lease is an operating lease. For both the finance lease and operating lease, an asset and liability are recorded on the balance sheet. For both the amount of the asset and liability is the present value of all future payments. For a finance lease it is treated as a purchase and whatever the asset that is acquired is recorded as the debit and in subsequent periods the asset is depreciated using what we learned in chapter 4. For operating leases the asset is referred to as the right to use the asset for a specified time and is not depreciated. More in depth accounting for leases will be covered in intermediate accounting.

Check Yourself

Which of the following is true with regard to the new FASB rules having to do with leases?

- A. Finance leases use the present value to calculate the amount to be recorded but operating leases do not.
- B. Companies that acquire control of assets using a finance lease will calculate depreciation on those assets.
- C. Leases that transfer ownership automatically at the end of the lease are always accounted for as operating leases.
- D. Control of assets is not as important as legal ownership transfer in accounting for leases.

The correct answer is B. The assets acquired with a lease that qualifies as a finance lease is treated just like any acquisition including depreciation. Both finance and operating leases use the present value to calculate the amount to be recorded. Those leases that automatically transfer ownership are finance leases and control of assets is more important than legal ownership.

Key Takeaway

Companies use installment loans to purchase buildings and equipment. The payment for any installment loan can be calculated using the PMT formula in an excel spreadsheet. Once the payment is calculated, each payment must be split into interest and principal. Unlike the amount of the payment, the interest does not need to be calculated using a formula or table. Finance leases are accounted for almost exactly like installment loans.

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