Leasing Versus Buying

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Using this comparison:

1. This comparison summarizes the major similarities and differences between leasing and buying in 17 subject areas.
2. To get a detailed explanation for each item shown with a bullet point, just click on that item.
3. Some of the paragraphs have “More Info” notations or “Example” notations that will provide additional information including examples.
4. To print any of the items, use the print menu.

This “leasing versus buying” comparison is an educational tool to make general comparisons of these two methods of obtaining a vehicle. It is not an advertisement for and does not describe a particular lease or loan. It does not include all of the terms of a lease or a loan. In many places, the identified costs do not include all fees and taxes. Please refer to the specifics of the lease and loan you are considering for the actual terms. To reduce the complexity of the comparisons, the advantages and disadvantages of purchasing a vehicle for cash are not included. However, most statements applicable to financing a vehicle also apply to purchasing it with cash.

	Leasing	Buying/Financing
D1 Monthly Payments **[Different]**	**Monthly lease payments are usually lower than monthly finance payments because you are paying only for the vehicle's depreciation rather than the full purchase price during the lease term, plus rent charges (like interest). Alternatively, you can lease a more expensive vehicle for the same monthly payment as financing.** • **Payment components.** • **Vehicle depreciation.** • **Amortization of other amounts.** • **Rent charge.** • **Sales or Use Tax.** • **Other fees.**	**Monthly finance payments are usually higher than monthly lease payments because you are paying for the entire purchase price of the vehicle, plus interest and other finance charges, and taxes. For the same monthly payment as leasing, you must finance a less expensive vehicle.** • **Payment components.** • **Amount financed.** • **Interest.** • **Other finance charges.** • **Other fees**.
Payment components	**Payment components.** The monthly lease payment consists of five items**:** • vehicle depreciation • amortization (payment) of any other amounts included in the gross capitalized cost such as service contracts, insurance, or outstanding prior credit or lease balances • rent charge for the lessor • sales or use tax • any other fees associated with the lease.	**Payment components**. The monthly loan payment consists of four items**:** • the amount you choose to finance (the purchase price of the vehicle plus up-front sales tax and other amounts you choose to finance minus any down payment) • interest charged by the creditor on the amount financed • other finance charges, which together with interest determine the Annual Percentage Rate (APR) • any other fees associated with the purchase.
Vehicle depreciation / Amount financed	**Vehicle depreciation**. The vehicle depreciation is generally the amount by which a vehicle is expected to decline in value over a specific time period. In vehicle leasing, depreciation is the difference between (1) the original agreed-upon value of the vehicle minus any capitalized cost	**Amount financed.** The amount financed is the total purchase price of the vehicle plus any additional items purchased such as service contracts, insurance, or maintenance agreements • plus any outstanding prior loan or lease balances • plus sales tax on the purchase price,

	reduction and (2) the residual value of the vehicle at the end of the lease**.**	or, in some states, the net trade-in difference if a vehicle is traded • plus luxury tax, if applicable • minus any down payment.
Amortization of other amounts	**Amortization of other amounts.** This is the payment of items such as taxes, fees, service contracts, insurance, and any outstanding prior credit balance or lease balance included in the gross capitalized cost of the lease. These items are fully paid for over the term of the lease.	
Rent charge / Interest	**Rent charge.** The rent charge for the lessor is also included in the lease payment. The monthly rent charge represents the primary cost of leasing (in addition to the vehicle depreciation). This charge is similar to interest on a loan.	**Interest.** Interest charged by the creditor is also included in the monthly loan payment. Interest represents the primary cost of financing (in addition to the purchase price of the vehicle).
Other finance charges		**Other finance charges**. Other finance charges such as payments for credit report fees or required credit life insurance, may be included in the loan payment.
Sales or Use Tax	**Sales or Use Tax**. The sales or use tax included in the lease payment is determined by the state or county where the vehicle is registered. In most states, this monthly tax replaces the initial sales tax on the purchase price of a vehicle.	
Other fees	**Other fees**. Other fees may include items paid monthly over the term that are not subject to the monthly sales/use tax, such as • vehicle or credit insurance • taxes that are not due at purchase, but are due periodically over the term, such as personal property taxes.	**Other fees.** Other fees may include items that are not subject to the monthly sales/use tax but are paid monthly over the term such as • vehicle or credit insurance you choose • taxes that are not due at purchase but are assessed periodically over the term such as personal property taxes.

D2 Vehicle Return [Different]	**You may return the vehicle at lease end, pay any end-of-lease costs and "walk away."** • **End-of-term responsibilities.** • **Gain or loss at lease end.** • **Where you return the vehicle.** • **Other options at lease end.** • **End-of-lease costs**.	**You have to sell or trade the vehicle when you decide you want a different vehicle.** • **End-of-term responsibilities.** • **Gain or loss at sale or trade-in.**
End-of-term responsibilities	**End-of-term responsibilities.** In a closed-end lease, you return the vehicle at the end of the lease, unless you buy the vehicle (usually by exercising your purchase option, if any). You are responsible for any excess mileage and excess wear and tear charges if you return the vehicle, plus any disclosed vehicle disposition fee. You would also be responsible for any amounts due under the lease, such as parking tickets paid by the lessor, personal property taxes, or late charges.	**End-of-term responsibilities.** If you own your vehicle and decide to sell or trade it, you negotiate the sales or trade-in price of the vehicle yourself. You also decide when, where, and how to sell or trade the vehicle to get the best possible price. This may involve reconditioning the vehicle, advertising it for sale, and obtaining different sale bids or trade-in offers.
Gain or loss	**Gain or loss at lease end.** In a closed-end lease, if the market value of the vehicle is less than the residual value stated in your lease agreement for reasons other than excess mileage or excess wear (i.e., the actual depreciation was greater than the depreciation shown in your lease), you are not responsible for the difference. If the market value of the vehicle is more than the residual value stated in your lease (i.e. the actual depreciation was less than the depreciation shown in your lease), there may be equity in the vehicle. You don't receive this equity in the vehicle if you return it at the end of the lease. However, you may be able to acquire this equity in two ways:	**Gain or loss at sale or trade-in.** The trade-in or sales price of the vehicle will not be known until you negotiate it. If the value of the vehicle is greater than your loan payoff, you receive this equity. If the value of the vehicle is less than your loan payoff, you are responsible for this difference.

	1. exercise your purchase option negotiate the vehicle value and the transfer of your purchase option to a dealer or other third party you choose.	
Where you return the vehicle	**Where you return the vehicle.** You should check your lease agreement or contact the lessor to determine where you can return the vehicle. You may be charged an additional fee if you do not return the vehicle to the location designated by the lessor**.**	
Other options at lease end	**Other options at lease end.** At the end of the lease you may also have other options. For example, most lessors will also permit you to extend your lease on a month-to-month basis for up to 6 months if you haven't made a decision about getting a replacement vehicle. Some lessors will permit you to re-lease your vehicle on terms you negotiate.	
End-of-lease costs	**End-of-lease costs.** If you are returning the vehicle to a dealer and you have a question or concern about your end-of-lease costs, you should contact the company holding the lease agreement.	
	For more information related to vehicle return, see • Disposition fee • Future value • Mileage • Excess wear • End of term.	

D3 Future Value **[Different]**	**The lessor has the risk of the future market value of the vehicle. You generally have the opportunity to gain any vehicle equity.** • **Factors affecting future value.** • **Fixed future residual value.** • **Depreciation cost.** • **Fixed depreciation cost.** • **Purchase option opportunity.** • **Purchase option costs.**	**You have the risk of the vehicle's market value when you trade or sell it. You would also have any vehicle equity.** • **Factors affecting future value.** • **Unknown future value.** • **Depreciation cost.**
Factors affecting future value	**Factors affecting future value.** At the beginning of a lease, the market value of the vehicle at lease end is unknown. The future vehicle value can be influenced by a wide variety of factors and market changes including	**Factors affecting future value.** At the beginning of a finance agreement, the market value when you sell or trade the vehicle is unknown. The future vehicle value can be influenced by a wide variety of factors and market changes including
	• the perceived reliability, safety, and overall attractiveness of the vehicle compared to other used vehicles • new vehicle prices • technological advances in new vehicles • characteristics of new vehicles affecting their attractiveness to consumers • general consumer preferences • general economic conditions • auto industry competitive factors • gasoline prices • the supply of used vehicles and the terms, rates, and availability of used vehicle financing and leasing.	• the perceived reliability, safety, and overall attractiveness of the vehicle compared to other used vehicles • new vehicle prices • technological advances in new vehicles • characteristics of new vehicles affecting their attractiveness to consumers • general consumer preferences • general economic conditions • auto industry competitive factors • gasoline prices • the supply of used vehicles and the terms, rates, and availability of used vehicle financing and leasing.
Known / Unknown future value	**Known future value.** At the beginning of a closed-end lease, the lessor establishes a future value for the vehicle. This future	**Unknown future value.** You may have considered the vehicle's history of retaining its value when you made your purchase decision or you may have monitored the

	value is called the residual value. It is used to calculate your monthly payment. The residual value determines the amount of depreciation you will pay over the lease term because Depreciation = Adjusted Capitalized Cost minus Residual Value.	value after you purchased it. However, you will not know the precise market value of the vehicle you own and the actual depreciation that has occurred until you sell it or trade it. The trade-in or sales price determines the amount of depreciation you will incur over the finance term because Depreciation = Original Purchase Price minus Trade-in or Sales Price. The higher the trade-in or sales price you negotiate, the less depreciation you will incur.
Depreciation cost **Fixed depreciation cost**	**Depreciation cost.** The residual value indicates how well the vehicle is expected to retain its value. You can compare the residual value in different lease offers. The higher the residual value (without changing any other variables), the less depreciation you will pay over the lease term. **Fixed depreciation cost.** In a closed-end lease, the amount of depreciation you pay over the term of the lease is fixed or "closed" when you sign the lease. It is disclosed in your lease. At the scheduled end of the lease, you have the right to return the vehicle, pay any charges related to your obligations under the lease and "walk away." *See* Vehicle Return. You have no obligation if the vehicle is worth less than the residual value, i.e., the "actual depreciation" was greater than the amount you paid for depreciation in your lease. In this case, you would have paid less for depreciation than the vehicle actually depreciated. For example, consider the following lease: Vehicle value $19,000 Minus residual value -10,000 Equals lease depreciation 9,000 If the actual value of the vehicle at lease end is $8,500, the actual vehicle	**Depreciation cost.** You can determine the depreciation by comparing the initial purchase price to the trade-in or sales price. For example, if you purchased a vehicle for $19,000 and traded it (or sold it) 4 years later for $10,000, the depreciation you incurred in four years of using the vehicle was $9,000: Initial purchase price $19,000 Minus trade-in/sale price -10,000 Equals depreciation $9,000 (This example does not include the effect of any remaining loan balance). *See* More Info at end of section.

	lease end is $8,500, the actual vehicle depreciation during the lease term is $10,500, which is $1,500 more than the Lease Depreciation you paid. On the other hand, consider the case in which the vehicle is worth more than the residual value. For example, consider the same lease discussed above with a Lease Depreciation of $9,000. If the actual value of the vehicle at the end of the lease is $10,500, the actual vehicle depreciation is $7,500, which is $1,500 less than the Lease Depreciation you paid. You would have paid more for depreciation than the vehicle actually depreciated unless you buy the vehicle for the residual value. If you buy the vehicle in the preceding example for the $10,000 residual value, you will have paid $9,000 in depreciation plus the $10,000 purchase price for a total of $19,000. Since the vehicle is worth $11,500, your actual depreciation will be $7,500.	
Purchase option opportunity	**Purchase option opportunity**. In most leases you have the right to purchase the vehicle at the end of the term for the amount stated in the lease or in a specific used car guidebook. If you believe that you can sell or trade the vehicle for more than the purchase option price after paying the costs of selling the vehicle, then it is in your economic interest to exercise your purchase option and resell the vehicle. In this way, you have the opportunity to capture some or all of any positive difference between the actual resale value of your vehicle and the residual value in the lease.	
Purchase option costs	**Purchase option costs.** When exercising your purchase option for the purpose of reselling the leased	

	vehicle, be sure to consider what effect other costs and fees will have on your ability to make a profit. These fees and costs will often include sales tax, license plate and vehicle registration fees, vehicle inspection fees, and the costs of financing your purchase. If the lessor uses a vehicle dealer to process the transaction, and you have any questions about the costs of exercising your purchase option, you should contact the company holding the lease agreement. *See* **More Info** at end of section.	

More Info on Future Value—Leasing and Buying

Comparison of future value in buying versus leasing. When comparing buying and leasing a vehicle, one of the items you can compare is the depreciation for which you are responsible. In leasing, the amount of depreciation is fixed and incorporated in your lease. In buying, the amount of depreciation is unknown but can be estimated using guidebooks or other resources. To estimate the depreciation when you buy, subtract the estimated future value from the vehicle purchase price. To determine the depreciation included in your lease, subtract the residual value from the agreed-upon value of the vehicle. (This depreciation may be different than the “Depreciation and any amortized amounts” on your lease if there are other items included in the Gross Capitalized Cost or if you make a Capitalized Cost Reduction.)

Projecting future vehicle value. When purchasing a vehicle, there are various sources to guide you in estimating the vehicle’s future value. You can consult various publications for information on the future value and/or the depreciation you can expect. Projected future vehicle values can also be found on a number of web sites on the Internet. Although publications on future vehicle values may not be readily available, there are several industry publications (“lease residual value guidebooks”) that give you projected vehicle values that you can use when buying. These guidebooks are published in both dollar and percentage formats for new vehicles and include instructions on how to use them. Most residual guidebooks for new vehicles use the percentage method.

Example

Using a Percentage Residual Guidebook
(available only for new vehicles)

A percentage residual guidebook provides the value of the base vehicle stated as a percentage of the Manufacturers Suggested Retail Price (MSRP) for the desired lease term. The MSRP of any dealer added equipment that is listed in the guidebook is then added to this amount to get the Adjusted MSRP.

Sample page of a Percentage Residual Guidebook

SPARK SPORT UTILITY	12 Mo.	24 Mo.	36 Mo.	48 Mo.	60 Mo.
1 U86 2d Wagon 4WD	68%	58%	50%	42%	34%
2 U94 4d Wagon 4WD	70%	60%	53%	45%	37%
3 U94 4d Cargo 2WD	50%	45%	40%	35%	30%
Add for CD Player	$250	$200	$150	$100	$75

Add for Moon roof	$450	$400	$350	$300	$250
Deduct for no Cruise Control (except 3)	$100	$100	$100	$100	$100

For example, follow these steps to determine the future value of a new 4-door (4d) Spark Sport Utility 4 Wheel Drive (4WD) Wagon for a 3-year period of ownership:

1. First find the MSRP (window sticker price) of the vehicle before any deductions are made (e.g., deductions for a special equipment packages). Assume that the MSRP is: $29,475.

2. Determine if there is any equipment being installed by the dealer. *Add* the MSRP of these items, but do not exceed the maximum amounts shown in the guidebook. For example, assume that the dealer is adding a sliding moon roof and compact disc player. Add for those items:

Base MSRP	$29,475
Plus dealer installed equipment:	
Sliding moon roof	+ $350
Compact disc player	+ $150
Equals Adjusted MSRP	$29,975

3. Find the base residual percentage for the vehicle for the 36-month term. Assume it is 53%.

4. If the initial mileage on the vehicle is more than the stated number of miles at lease inception in the guidebook (e.g., 500 miles) or if the lease annual mileage is different than 15,000 miles a year, find the table for the mileage adjustment. This will usually be a percentage to add to or subtract from the base percentage. For example, if the annual mileage is 12,000 miles a year but the guidebook is based on 15,000 miles a year, assume that the mileage adjustment for a 36-month term is 2%. Add this to the base residual percentage to get the Adjusted Residual Percentage: 53% + 2% = 55%.

5. The 3 year future value is the Adjusted MSRP times the Adjusted Residual Percentage: $29,975 $\times$ 55% = $16,486.25.

Most residual guidebooks for used vehicles use the dollar method.

Example

Using a Dollar Residual Guidebook

A dollar residual guidebook provides a specific dollar amount for the base vehicle at the end of the lease term. There is an adjustment if the mileage in the lease is more or less than 15,000 miles per year. Then, there are stated additions or deductions for optional equipment. (Most residual guidebooks for new vehicles use the percentage method. Residual guidebooks for used vehicles almost always use the “dollar method.”)

For example, follow these steps to determine the future value of a used 2 year old 4 door (4d) Spark Sport Utility 4 Wheel Drive (4WD) Wagon for a 36-month period of ownership:

Sample page of a Dollar Residual Guidebook

SPARK SPORT UTILITY	**12 Mo.**	**24 Mo.**	**36 Mo.**	**48 Mo.**	**60 mo.**
1 U86 2d Wagon 4WD	$13,000	$11,500	$10,500	$9,500	$7,500
2 U94 4d Wagon 4WD	14,500	13,000	12,875	10,000	8,200
3 U94 4d Cargo 2WD	10,500	10,000	9,000	8,000	6,000
Add for CD Player	250	200	150	100	75

Add for Moon roof	450	400	325	300	250
Deduct for no Cruise Control (except 3)	100	100	100	100	100

6. If it is during the 2001 model year, you would first go to the 1999 models and look up the base value of the Spark Sport Utility 4WD Wagon. The guidebook will have an explanation of the equipment required on the vehicle for this value. Compare the actual equipment on the vehicle to this list.

7. If any of the required equipment is missing from the vehicle, *subtract* the stated value of that item (for the 36-month term). For example, if "cruise control" is a required item and it is not on the vehicle and the guidebook lists the 36-month value as $100, then subtract $100 from $12,875:

Base Value	$12,875
Minus missing items:	
Cruise control	- $100
Equals	$12,775

8. The guidebook will also have a list of equipment (sometimes on a separate page) that *may* be found on the vehicle along with a value.

9. If there is additional equipment not on the required list, *add* the stated value of that item (for the 36-month term). For example, if the vehicle has a sliding moon roof and a compact disc player which are not on the required list, then add for those items

Base Value	$12,875
Minus missing items:	
Cruise control	- $100
Equals	$12,775
Plus additional items:	
Sliding moon roof	+ $325
Compact disc player	+ $150
Equals Adjusted Value	$13,250

10. Mileage adjustment: the final step is to make any required mileage adjustment. For each model year, there will be a chart showing an amount to add or subtract based on the beginning mileage plus permitted mileage over the term. The adjustment may be based on the Current Retail Value (CRV) of the vehicle.

    For example, if a two-year-old model has 20,000 miles and the lease permits 12,000 miles per year for the 36-month term, the mileage adjustment may direct you to add an amount determined by multiplying the CRV of the vehicle times 6%:

Adjusted Value	$13,250
Plus or minus mileage adjustment	$1,440
(CRV of $24,000 times plus 6%)	
Equals Final Value	$14,690

You may want to consult the reference librarian in your local library. There also may be a charge for the printed or Internet information.

When you purchase, the future value of the vehicle is unknown. The future value could turn out to be more or less than the residual value if you had leased the vehicle. If the actual market value of the vehicle is more than the residual value, you will have gained money relative to a lease because you would have paid for less depreciation than the lease would have required. However, if you buy the vehicle for the residual value in the lease, you will have paid the same depreciation as if you had originally purchased it.

Example

LEASE		BUY	
Vehicle value	$19,000	Purchase price	$19,000
Minus residual value	- $10,000	Minus future value	- $11,000
Equals depreciation[1]	$9,000	Equals depreciation[2]	$8,000

[1] Lease "depreciation" as it is used here includes the "capitalized cost reduction" amount plus the depreciation portion of the "depreciation and any amortized amounts" from your lease agreement.

[2] Loan "depreciation" as it is used here is the purchase price of the vehicle excluding any sales tax minus the projected future value (the trade-in or sales price). The loan "depreciation" amount is determined by the trade-in value or the sales price you negotiate. The higher the price, the lower the depreciation.

If the future value is less than the residual value if you had leased, you would have lost money because you would have paid more depreciation than you would have under the lease.

Example

LEASE		BUY	
Vehicle value	$19,000	Purchase price	$19,000
Minus residual value	- $10,000	Minus future value	- $9,000
Equals depreciation[1]	$9,000	Equals depreciation[2]	$10,000

[1] Lease "depreciation" as it is used here includes the "capitalized cost reduction" amount plus the depreciation portion of the "depreciation and any amortized amounts" from your lease agreement.

[2] Loan "depreciation" as it is used here is the purchase price of the vehicle excluding any sales tax minus the projected future value (the trade-in or sales price). The loan "depreciation" amount is determined by the trade-in value or the sales price you negotiate. The higher the price, the lower the depreciation.

If you sell or trade in the vehicle, you may want to recondition the vehicle, advertise it for sale, and obtain different sales or trade-in offers. *See* Vehicle Return.

When you own the vehicle, you keep any amount by which the resale value exceeds the loan payoff amount. You may get more or less in trade for your purchased vehicle than the residual value that would have been established for the vehicle if you had leased it.

D4 Up-Front Costs **[Different]**	**Up-front costs of leasing a vehicle are usually less than up-front financing costs. They typically include the first month's payment, a refundable security deposit, registration fees and sometimes local taxes. Up-front costs can include:** • **Capitalized cost reduction.** • **Taxes.** • **Other government or lessor charges.** • **Optional insurance and services.** • **First monthly payment.** • **Refundable security deposit.** • **Prior lease balance.** • **Prior credit balance**.	**Up-front costs of buying a vehicle are typically greater than up-front leasing costs. They typically include the cash price or a down payment, sales taxes on the full price of the vehicle, registration fees, and other government charges. Up-front costs can include:** • **Cash price or down payment.** • **Sales Tax.** • **Other taxes.** • **Other government or lender charges.** • **Optional insurance and services.** • **First monthly payment.** • **No refundable security deposit.** • **Prior lease balance.** • **Prior credit balance.**
Capitalized cost reduction / Cash price or down payment	**Capitalized cost reduction.** A capitalized cost reduction is the sum of any cash down payment, trade-in allowance, or rebate that is subtracted from the gross capitalized cost. The remainder is the adjusted capitalized cost of the lease. A capitalized cost reduction reduces your monthly payment in two ways. First, it reduces the amount of depreciation and any amortized amounts that you pay as part of your monthly payment. Second, it reduces the total rent charges by reducing the beginning lease balance (the adjusted capitalized cost), thereby reducing the average lease balance over the term.	**Cash price or down payment.** The full cash price must be paid when you purchase the vehicle, unless you obtain financing. If the vehicle is financed either by the seller or a third party, a down payment is usually required. The remaining cash you must pay for the purchase (the amount you must finance) may be reduced by a net trade-in allowance or a rebate.
Taxes / Sales Tax	**Taxes.** Unlike purchasing a vehicle, in most states state and local sales tax is not assessed on the capitalized cost of the lease. However, several types of taxes may be due at lease signing, depending on the taxation rules of the state and the policies of the lessor: • state sales tax on any capitalized	**Sales Tax.** State and local sales tax is typically assessed on the full purchase price. However, if a vehicle is traded as part of the purchase, sales tax may be assessed only on the purchase price minus the trade-in value (the "trade difference"), depending on state law. You may have the option to have the creditor pay the sales tax and then include it

Other taxes	cost reduction (similar to down payment) • county or other local taxes • state sales tax on the monthly payments or vehicle depreciation • state property taxes on the vehicle • federal luxury tax if the vehicle value exceeds a threshold amount, adjusted periodically for inflation. Instead of paying for these taxes at lease signing, you may have the option to have the lessor pay them and then include them in the gross capitalized cost, thereby increasing your monthly payment.	in the amount financed, thereby increasing your monthly payment. **Other taxes**. Several types of other taxes may be due at purchase depending on the taxation rules of the state: • county or other local taxes • state property taxes on the vehicle • federal luxury tax if the vehicle value exceeds a threshold amount, adjusted periodically for inflation. You may have the option to have the creditor pay these taxes and then include them in the amount financed.
Other charges	**Other charges.** Several other types of charges may be assessed at lease signing, such as • Vehicle license and registration fees • Vehicle title fee • Documentation fee • Lessor acquisition fee.	**Other charges**. Several other types of charges may be assessed at purchase, such as • Vehicle license and registration fees • Vehicle title fee • Dealer documentation fee • Credit application fee.
Optional insurance and services	**Optional insurance and services**. There are optional insurance products and other services that you may choose when you lease a vehicle: • Credit life and disability insurance • Unemployment insurance • Gap coverage (usually already included) • Vehicle maintenance services • Vehicle service contract or mechanical breakdown protection • Other services or insurance coverages. For any products or services you select, you may be able to obtain them from the lessor, or you can obtain them from a third party. If you obtain them from the lessor, you may have the option to include them in the	**Optional insurance and services.** There are optional insurance products and other services that you may choose when you purchase a vehicle: • Credit life and disability insurance • Unemployment insurance • Gap coverage • Vehicle maintenance services • Vehicle service contract or mechanical breakdown protection • Other services or insurance coverages. For any products or services you select, you can purchase them from a third party, or you may be able to obtain them from the creditor. If you purchase them from the creditor, you may have the option to include them in the amount financed (and pay interest on them) or pay for them at purchase.

	gross capitalized cost (and pay rent charge on them) or pay for them at lease signing.	
First monthly payment	**First monthly payment.** Most leases (other than single payment leases) require you to make monthly payments in advance at the beginning of each monthly period. That is why the first monthly payment is typically due at lease signing. Some leases require the last monthly payment or several of the last monthly payments of the term to be paid at lease signing. In a special type of lease called a “single payment lease,” you pay a single large payment at lease signing instead of making monthly payments over the term of the lease.	**First monthly payment.** Most finance agreements require you to make monthly payments at the end of each monthly period. That is why the first payment is not made at purchase.
Refundable security deposit	**Refundable security deposit.** Most leases require a security deposit to be made at lease signing. The security deposit may be used by the lessor in the case of your default or at the end of the lease to offset any amounts you owe under the lease agreement. Security deposits are often determined by rounding the first monthly payment to the next higher $25 or $50, although the security deposit may be any amount established by the lessor. Some lessors offer the option to obtain lower rent charges and a lower monthly payment by paying a higher security deposit. Security deposits do not usually earn interest.	**Refundable security deposit.** Finance agreements do not require security deposits.
Prior lease balance	**Prior lease balance.** A prior lease balance is the balance due under a previous lease agreement after crediting the value of the previously leased vehicle. If the lessor agrees to buy your previously leased vehicle, you will have to pay any prior lease balance unless this balance is included in the Gross Capitalized	**Prior lease balance.** A prior lease balance is the balance due under a previous lease agreement after crediting the value of the previously leased vehicle. If the lessor agrees to buy your previously leased vehicle, you will have to pay any prior lease balance unless this balance is included in the Amount Financed.

	Cost.	
Prior credit balance	**Prior credit balance.** A prior credit balance is the amount due under a previous finance agreement after crediting the value of the vehicle traded in on the lease. If you trade your previously financed vehicle when you lease, you will have to pay any prior credit balance unless this balance is included in the Gross Capitalized Cost.	**Prior credit balance.** A prior credit balance is the amount due under a previous finance agreement after crediting the value of the vehicle traded in on the new finance agreement. If you trade your previously financed vehicle when you finance another vehicle, you will have to pay any prior credit balance unless this balance is included in the Amount Financed.
D5 Total Costs **[Different]**	**The total costs of leasing a vehicle for a fixed period are generally less than for financing because of: lease savings on depreciation and gap coverage; reduced sales tax; and the time value of money benefits.** • **Depreciation** • **Gap coverage** • **Sales/use tax** • **Time value of money** **However, it may be harder to capture any equity in the vehicle when leasing.**	**The total costs of financing a vehicle for a fixed period are generally more than for leasing because of: higher costs of depreciation and gap liability; more sales tax; and the time value of money differences.** • **Depreciation** • **Gap coverage** • **Sales tax** • **Time value of money**
Depreciation	**Depreciation.** When you lease, you pay only for the depreciation expected during the lease term rather than for the full value of the vehicle. There are several reasons why you generally pay less total vehicle depreciation when you lease a vehicle than when buying and trading the vehicle: ▪ The lessor takes the risk of unexpected depreciation of the vehicle – if predicting exact used car values is virtually impossible, the lessor may understate the depreciation 50% of the time; ▪ Even without a residual subsidy, the residual value is based on the amount the lessor expects to get	**Depreciation.** There are several reasons why you generally pay more vehicle depreciation when you purchase a vehicle: ▪ You take the risk of unexpected depreciation of the vehicle; ▪ The depreciation is based on the trade-in value or sale price you can negotiate when you trade the vehicle or sell the

	for the vehicle when it is sold to the highest auction bidder after professionally reconditioning the vehicle and transporting it to the market with the highest demand. This is typically greater than the trade-in value a consumer can negotiate. ▪ Lessors compete by offering lower monthly payments than their competitors by increasing residual values, which thereby reduces the depreciation you pay. Manufacturers often increase the residual value as a special promotion to make lease payments more attractive. [MORE INFO]	vehicle. This amount is typically less than the amount for which the leasing company can sell the vehicle through a professionally managed dealer auction process. ▪ Lenders don't compete by increasing trade-in values. Dealer increases in trade-in values ("over-valuing the trade") are usually offset by higher prices of the new vehicle. Manufacturers do not subsidize vehicle trade-in values.
Gap coverage	**Gap coverage.** Gap coverage is usually included in lease agreements, but if not, it may be purchased. See Gap Coverage for a discussion of its value.	**Gap coverage.** Gap coverage is usually not included in finance agreements, but it may be purchased.
Sales/use tax	**Sales/use tax.** In most states, sales or use tax is paid only on the monthly payments you make, plus any capitalized cost reduction you pay. Thus, you pay less total sales tax and you generally pay it over the term rather than at the beginning, so it has a lower "present value" cost because of the time value of money.	**Sales tax.** In all states, sales tax is paid when you purchase the vehicle. It is generally paid on the full purchase price, but in most states, if you trade a vehicle, you pay sales tax only on the trade-in difference. Unless you trade a vehicle with a high trade-in value, you generally pay more total sales tax and you pay it at the beginning.

Time value of money	**Time value of money.** You generally must make a lower initial payment and lower monthly payment so there are cash flow savings compared to purchasing a vehicle for cash or financing it. You can use those savings to pay down other debts (like higher interest credit cards), make investments or for other needed purposes. The money you save from the reduced debt amount or the return you make on the investment are part of the financial benefits of leasing that must be taken into account when comparing the costs to financing.	**Time value of money.** You generally must make a higher initial payment and higher monthly payment so there are cash flow disadvantages compared to leasing a vehicle.
D6 Frequency Of Changing Vehicles **[Different]**	**Leasing has advantages if you change vehicles frequently.** • **Trade-in and warranty advantages.** • **Unexpected depreciation advantages.** • **Tax effects.**	**Buying has advantages if you do not change vehicles frequently.** • **Cost advantages.** • **Tax effects.**
Trade-in and warranty advantages **Unexpected depreciation advantages**	**Trade-in and warranty advantages.** If you change vehicles often, you can turn your vehicle in at lease end, pay any fees due, and lease or purchase a different vehicle. You do not have to negotiate the vehicle trade-in value at the end of the lease. If you lease another vehicle, however, you will negotiate the terms of the new lease and will pay any upfront fees due, including any capitalized cost reduction. In addition, the shorter the lease term that you choose, the greater the likelihood that the vehicle will remain under warranty during the full lease term. **Unexpected depreciation advantages.** In closed-end leases,	**Cost advantages.** If you keep your vehicle for an extended period (e.g., more than 5 years), you may save money by buying your vehicle and continuing to drive it after you have finished making your monthly payments. If you finance your vehicle, you will own it outright once you have made all the payments required under your finance agreement. However, the longer you keep your vehicle, the greater the likelihood that you may incur expenses outside the manufacturer's original warranty**.** If you trade in or sell your purchased vehicle, you will have to negotiate a trade-in or sales price and you may incur expenses in advertising or selling the vehicle. *See* Vehicle Return. You will also not know the precise market value of the vehicle that you own or the depreciation that has occurred

advantages	you also are not responsible for market depreciation of the vehicle below the residual value of the vehicle at scheduled lease end. (However, you will pay for the vehicle depreciation down to the residual value as part of your lease.) At the end of the lease term, you may have paid more or less in depreciation than the vehicle actually depreciated**. *See*** Future Value**.** The residual value established in your lease may be higher than the residual value published in one of the lease residual value guidebooks. If so, your lease residual value probably would be higher than the actual trade-in value of your vehicle at the end of the lease. Therefore, when you change vehicles, and if the residual value is greater than the guidebook value, you will have paid less in depreciation than the vehicle actually depreciated.	until you sell or trade it. *See* Future Value.
Tax effects	**Tax effects.** Many states impose sales or use tax only on the amount of the monthly lease payments and on any capitalized cost reduction, rather than on the full purchase price of the vehicle. In these states, you may pay less sales tax or use tax if you lease a particular vehicle and return it at lease end than if you purchase it. Note: this advantage is eliminated if you purchase the vehicle at lease end because you incur sales tax on the purchase price. In most of these states, you pay the sales or use tax at the time you make your monthly payments. A few states require payment of this total at the beginning of your lease. In this case, you can choose to pay this amount upfront or capitalize the taxes and pay additional rent charge.	**Tax effects.** If you purchase a vehicle, you will pay sales tax on the full purchase price. This amount is due at the time of sale. In some states, if you are trading in a vehicle, your sales tax is calculated only on the trade-in difference. If you live in a state that imposes personal property tax or similar tax on motor vehicles based on the value of the vehicle, these taxes will decline over the years.

	A few other states impose sales or use tax on the entire value of the vehicle, and require that payment at the beginning of your lease. You can choose to pay this amount upfront or capitalize the taxes and pay additional rent charge.	
D7 Gap Coverage **[Different]**	**Gap coverage is usually included in lease agreements, but if not, it may be purchased.** • **Gap coverage.** • **Gap amount.** • **Reason for gap amount.** • **Example of gap coverage.** • **Taxes.** • **Inclusion in lease agreements.** • **Requirement to maintain gap coverage.** • **Variations in gap coverage.** • **Value of gap coverage.**	**Gap coverage is usually not included in finance agreements, but it may be purchased.** • **Gap coverage.** • **Gap amount.** • **Reason for gap amount.** • **Example of gap coverage.** • **Taxes.** • **Inclusion in finance agreements.** • **Requirement to maintain gap coverage.** • **Variations in gap coverage.** • **Value of gap coverage.**
Gap coverage	**Gap coverage**. If your vehicle is stolen or totaled, gap coverage is an agreement by the lessor or a third party to cover the gap amount.	**Gap coverage.** If your vehicle is stolen or totaled, gap coverage is an agreement by the lender or a third party to cover the gap amount.
Gap amount	**Gap amount.** The gap amount is typically the amount by which (1) the early termination payoff, not including any past due amounts, exceeds (2) the insured value of your vehicle, before any policy deductions. If gap coverage is not included in your lease, you may be able to buy it separately. If you do, gap coverage usually has a one-time charge or premium for the term of the lease.	**Gap amount.** The gap amount is typically the amount by which (1) the early payoff not including any past due amounts exceeds (2) the insured value of your vehicle, before any policy deductions. Gap coverage is usually not included in finance agreements, but you may be able to buy it separately. If you do, gap coverage usually has a one-time charge or premium for the term of the finance agreement.
Reason for gap amount	**Reason for gap amount.** A gap amount exists because your vehicle usually depreciates faster at the beginning of the lease than you pay down your lease balance. If your vehicle is stolen or totaled, gap	**Reason for gap amount.** A gap amount exists because your vehicle usually depreciates faster at the beginning of the loan than you pay down your loan balance. If your vehicle is stolen or totaled, gap coverage is designed to cover the gap

	coverage is designed to cover the gap amount portion of your early termination liability. *See* Early Termination. See Example 10, p.72. However, it does not cover any capitalized cost reduction or initial fees you have paid. Nor does it cover any past due amounts you owe under the lease or other lease amounts like personal property taxes or unpaid parking tickets. In most cases, gap coverage does not cover your insurance deductible or any insurance policy deductions for past due premiums, excess wear and use of the vehicle, etc.	amount portion of your prepayment liability. *See* Early Termination. However, gap coverage does not reimburse you for any down payment or monthly payments you have made. It does not cover past due amounts you owe under the finance agreement or other amounts like personal property taxes or unpaid parking tickets for which you are responsible. In most cases, gap coverage does not cover your insurance deductible or any insurance policy deductions for past due premiums, excess wear and use of the vehicle, etc.
Example of gap coverage	**Example of gap coverage.** For example, assume that 1. you paid a $3,000 capitalized cost reduction at the beginning of the lease 2. your vehicle is stolen and the current lease payoff is $14,000 3. the insured value of the vehicle is $12,000 4. your insurance deductible is $500 5. you have no other insurance policy deductions such as for past due premiums or excess mileage 6. you don't owe any other amounts. The gap amount is $2,000 ($14,000 minus $12,000). The gap amount does not include the $3,000 capitalized cost reduction you made. The insurance proceeds to be paid to the lessor are $11,500 ($12,000 minus $500). If you have gap coverage, you will have to pay the $500 insurance deductible to the lessor to fulfill your lease early termination responsibility. If you don't have gap coverage, you will have to pay the full $2,500.	**Example of gap coverage.** For example, assume that 1. you paid a $3,000 down payment at the beginning of the loan 2. your vehicle is stolen and the current loan payoff is $14,000 3. the insured value of the vehicle is $12,000 4. your insurance deductible is $500 5. you have no other insurance policy deductions such as for past due premiums or excess mileage 6. you don't owe any other amounts. The gap amount is $2,000 ($14,000 minus $12,000). The gap amount does not include the $3,000 down payment you made. The insurance proceeds to be paid to the creditor are $11,500 ($12,000 minus $500). If you have gap coverage, you will have to pay the $500 insurance deductible to the creditor to fulfill your loan prepayment responsibility. If you don't have gap coverage, you will have to pay the full $2,500.
Taxes	**Taxes.** In states where sales/use tax is paid at lease inception, gap coverage	**Taxes.** Gap coverage in a finance agreement does not include reimbursement to you of

	does not reimburse the tax you paid unless the tax is part of the adjusted capitalized cost. In those states, you will incur initial sales tax again when you lease a replacement vehicle.	the sales tax you paid at vehicle purchase, unless the tax is part of the amount you financed. You will incur sales tax again when you purchase a replacement vehicle.
Inclusion in lease / finance agreements	**Inclusion in lease agreements.** Many lease agreements include gap coverage as a standard feature of the lease without a separate charge. Other leases offer gap coverage as an optional feature for an additional charge.	**Inclusion in finance agreements.** If the vehicle is stolen or totaled, since gap coverage is not typically included in finance agreements, you generally have a risk of early termination liability. *See* Early Termination. In finance agreements that do not include gap coverage, you may have the option to purchase it for an additional charge.
Requirements to maintain gap coverage	**Requirements to maintain gap coverage.** Leases that include gap coverage often require you to maintain your vehicle insurance and not be in default at the time of the loss of your vehicle in order to receive the gap coverage.	**Requirements to maintain gap coverage.** Finance agreements that include gap coverage often require you to maintain your vehicle insurance and not be in default at the time of the loss of your vehicle in order to receive the gap coverage.
	Variations in gap coverage. How the gap amount is determined may vary among states, lease agreements, or third-party providers. Procedures for documenting the loss and obtaining the gap coverage may also vary.	**Variations in gap coverage.** How the gap amount is determined may vary among states, finance agreements, or third-party providers. Procedures for documenting the loss and obtaining the gap coverage may also vary.
D8 Warranty Expiration **[Different]**	**If you lease a new vehicle for a term of 36 months or less, all vehicle manufacturer warranties will cover the full lease term, subject to the warranty mileage restrictions.**	**If you finance a vehicle for a term of 48 months or more, most new vehicle manufacturer warranties will not cover the full finance term.**
	• **Warranty expiration.** • **Fixed costs of driving.**	• **Warranty expiration.** • **Unknown costs of driving**.
Warranty expiration	One of the advantages of short-term leasing (36-month term or less) is that most new vehicle manufacturer warranties cover the full lease term. As long as the mileage limitations in the warranty are not exceeded (often between 12,000 and 15,000 miles per year), the leased vehicle remains under full warranty protection for the entire lease term. Unexpected repair costs are thereby avoided.	One of the effects of keeping a new vehicle for the full four or five-year finance term is that most new vehicle manufacturer warranties will end prior to the completion of the financing term. You are then subject to the uncertain costs of vehicle repairs and replacement of parts that were previously covered under the manufacturer's warranty.

Fixed costs of driving	When you choose a closed-end lease with a lease term and mileage within the manufacturer new vehicle warranty, the two major variables in the cost of driving are eliminated: • Depreciation costs are fixed in a closed-end lease so you are not responsible for more depreciation than stated in your lease agreement if you complete the lease term; and • Major repair costs are covered by the manufacturer warranty so there are no unexpected repair costs. The elimination of these two primary causes of unexpected driving costs makes short-term leasing a way to gain "fixed costs of driving."	When you choose a new vehicle finance term longer than the manufacturer's new vehicle warranty, you are subject to two major variables in the cost of driving: • Depreciation costs are not fixed when you finance a vehicle since you are responsible for the actual depreciation which isn't known until you trade or sell your vehicle; and • Major repair costs may occur that are not covered by the manufacturer warranty so you may have this unexpected cost. These two primary causes of unexpected driving costs keep financing from giving you a "fixed cost of driving."
D9 Ownership **[Different]**	**You do not own the vehicle. You get to return it at the end of the lease unless you choose to buy it or sell it.** • **Achieving full ownership.** • **Conditions on vehicle use.** • **Right to purchase.** • **Duty to return the vehicle.** • **Registration and titling.**	**You own the vehicle and get to keep it at the end of the financing term unless you choose to sell it.** • **Achieving full ownership.** • **Conditions on vehicle use.** • **Loan options.** • **Registration and titling.**
Achieving full ownership	**Achieving full ownership.** You must exercise your purchase option at either early termination or end-of-term in order to become the owner of the leased vehicle. Until then, the title is in the lessor's name, although you may be listed as the driver or registered owner depending on the state. Under the lease agreement, you typically have all of the same operational responsibilities of insuring, maintaining and registering the vehicle as you would if you owned it.	**Achieving full ownership.** When buying a vehicle with cash, you immediately become the vehicle owner. When purchasing a vehicle with an installment sales contract or loan, you pay down the loan balance and eventually build equity in the vehicle. You receive full ownership only after you make your final payment. Until then, the finance company has a lien on the vehicle title.

Conditions on vehicle use	**Conditions on vehicle use.** A lease agreement gives you the right to use a vehicle for a specified period of time, subject to various conditions. Those conditions typically state: • insurance requirements for the vehicle • maintenance and use requirements • limitations on vehicle alterations • restrictions on subleasing • the maximum mileage allowed without further payments • limitations on drivers and • other restrictions designed to insure that the vehicle will be in good operating condition at the end of the lease.	**Conditions on vehicle use.** The finance agreement typically has conditions designed to protect the lender's security interest in the vehicle: • insurance requirements for the vehicle • maintenance requirements • restrictions on renting or leasing and other restrictions designed to ensure that the creditor's security interest is protected and the vehicle value is not abnormally reduced during the term of the finance agreement.
Right to purchase / Loan options	**Right to purchase.** Most leases give you the right to purchase the vehicle any time over the lease or at lease end. The purchase price, or method of determining the price, is stated in the lease agreement. Otherwise, there must be a statement in the lease disclosure that you do not have a purchase option at lease end.	**Loan options.** A vehicle loan balance or installment sale balance may be repaid before the end of the term, subject to any stated prepayment charge. At the end of the term, you own the vehicle and you can sell it, trade it, or keep it.
Duty to return the vehicle	**Duty to return the vehicle.** If you do not purchase the vehicle at the end of the lease, you must return the vehicle to the lessor (the leasing company), or the party designated by the holder of the lease agreement.	

Registration and titling	**Registration and titling.** You are responsible to register the vehicle according to the specific requirements of the lessor and those of the state where the vehicle is garaged. However, the title to the vehicle is in the name of the lessor or the company to which the lease is assigned (the assignee). If you purchase the vehicle, it will be retitled in your name noting any lienholder that provides financing for the purchase.	**Registration and titling.** The title to the vehicle is in your name, but notes the lienholder during the term of the finance agreement. When all payment obligations are fulfilled, the creditor will release the lien.
D10 Mileage **[Different]**	**Lease payments are based on a predetermined number of miles (often 12,000 or 15,000 miles per year). You can request a higher mileage limit and pay a higher monthly payment. You will likely have to pay charges for exceeding those limits, but only if you return the vehicle.** • **Reasons for mileage limits.** • **Reducing excess mileage charges.**	**You may drive as many miles as you want, but higher mileage will reduce the vehicle's trade-in value or resale value.** • **Effect of more miles.** • **Effect of less miles.**
Reasons for mileage limits / Effect of more miles	**Reasons for mileage limits.** Vehicle leases include a mileage limit because the residual value is based on the expected mileage. Driving more miles reduces the value of the vehicle. Generally, excess mileage charges are the way lessors recover the expected decrease in value from the additional use.	**Effect of more miles.** If you drive more miles than you expect, there is no excess mileage charge owed to the creditor, but the vehicle will be worth less when you trade or sell it.
Effect of less miles		**Effect of less miles.** If you drive fewer miles than you expect, the vehicle will be worth more when you trade or sell it.
Reducing excess mileage charges	**Reducing excess mileage charges.** To reduce or eliminate end-of-term mileage charges, consider negotiating	

	the lease to reflect the extra miles you expect to drive during the term. The lessor will likely then reduce the lease residual value to reflect the higher expected mileage. This reduction will increase your monthly payment and decrease or eliminate the end-of-term charge for excess miles. Some lessors refund the charge for extra miles you purchase above the standard 15,000 miles per year if you don’t drive the extra miles. Excess mileage charges typically range from 10 cents to 25 cents per mile. The higher charges are often on more expensive vehicles since the decline in value of these vehicles is generally greater than for less expensive vehicles. It often costs less for you to negotiate a higher mileage limit in the lease (that increases your monthly payment) than to pay for excess miles at the end. Increasing your mileage limit and your monthly payment can reduce or eliminate large (and often unbudgeted) end-of-term expenses. It also should reduce the total rent charge since the average lease balance is reduced.	
D11 Moving Out Of State **[Different]**	**Some lease agreements restrict you from moving with the vehicle to another state and usually restrict you from moving to another country.** • **Right to move the vehicle.** • **Retirees, Canadians, and military.** • **Notification if you move.** • **Taxes.**	**Finance agreements generally do not restrict you from moving with the vehicle out of state but usually restrict you from moving to another country.** • **Right to move the vehicle.** • **Canadians and military.** • **Notification if you move.** • **Taxes.**
Right to move the vehicle	**Right to move the vehicle.** Some lessors, particularly those operating regionally, prohibit lessees from permanently moving the leased	**Right to move the vehicle.** There are rarely restrictions in finance agreements on permanently moving out of state. However, a creditor may include such a condition.

	vehicle to another state. Most lessors limit the lessee's right to take the vehicle out of the country. However, there may be exceptions for vacation use to visit Canada for a maximum period, such as 30 days.	Most vehicle finance agreements do not allow the consumer to move out of the United States or to take the vehicle to another country. However there may be exceptions for vacation use to visit Canada for a maximum period, such as 30 days.
Retirees, Canadians, and military	**Retirees, Canadians, and military.** Retirees, others who maintain residences in two different states, Canadians who spend their winters in the United States, and members of the military should be especially careful regarding restrictions on moving, which may be in their lease agreements.	**Canadians and military.** Canadians who spend their winters in the United States, and members of the military should be especially careful regarding restrictions on moving, which may be in their finance agreements.
Notification if you move	**Notification if you move.** In most lease agreements, if you have the right to move out of state, you must notify the lessor that you have moved and be sure that the vehicle is properly titled and registered in the new state.	**Notification if you move.** In most finance agreements, you must notify the lender that you have moved out of state and be sure that the vehicle is properly titled and registered in the new state.
Taxes	**Taxes.** If you move, you should be aware that a new state may tax your vehicle in a different manner. Some states collect certain taxes at the beginning of the lease while other states collect these taxes during the term of the lease. For example, if you move from a state that collects all the sales taxes at the beginning of the lease to a state that collects sales or use tax during the course of the lease, you must pay additional sales/use taxes on the vehicle in the second state. You will usually not get a credit for paying the taxes in the first state.	**Taxes.** If you move, you should be aware that a new state may tax your vehicle in a different manner. Some states collect certain taxes at the time of the sale such as sales taxes. In addition to collecting sales taxes on vehicles sold in that state, other states will require taxes to be paid in the form of a personal property or ad valorem tax on vehicles moved into those states. For example, you may have to pay sales tax on the vehicle when you buy it, and pay personal property tax on the same vehicle when it is moved to a new state.

D12 Rate Disclosure **[Different]**	**Federal law does not require a uniform calculation and disclosure of a lease rate.** • **No federal rate standard.** • **Problems in defining a lease rate.**	**Federal law requires a uniform calculation and disclosure of an Annual Percentage Rate (APR) for credit.** • **Reliable federal rate standard.**
No federal rate standard / Reliable federal rate standard **Problems in defining a lease rate**	**No federal rate standard.** In leasing, there is no federal requirement for lessors to disclose a lease rate. There is also no mandatory federal formula for calculating a lease rate. Standardizing the lease rate calculation would be extremely complex. It would also involve use of certain estimates that can vary among lessors. Because of various limitations, a lease rate is not a reliable measure of the total lease cost. **Problems in defining a lease rate.** For example, the residual value would be one factor in a lease rate calculation. The residual value is the end-of-term value of the vehicle established at the beginning of the lease. Because the actual end-of-term value of the vehicle is not known at lease inception, lessors must select a residual value when calculating a lease rate. Lessors use different methods for selecting the residual value. Some lessors use residual value guidebooks, while others may develop estimations based on area market conditions and their own experience. Variations in the lease rate could result from lessors' use of different good faith methodologies to select residual values. Also, because reducing the residual value can lower a lease rate, the residual value could be used by less scrupulous lessors to	**Reliable federal rate standard.** In credit transactions, such as vehicle loans, federal law requires disclosure of the annual percentage rate (APR). The APR is an annualized rate that reflects the total cost of credit, including interest and certain other charges. Federal law requires the use of a specific formula when calculating the APR.

	manipulate the lease rate to make it look more attractive.	
D13 End Of Term **[Different]**	**At the end of the lease (typically 2-4 years), you usually have four options: (1) return the vehicle, (2) trade or sell the vehicle, (3) purchase the vehicle, or (4) arrange for a third party to purchase it.** • **Options at end of term.** • **Cash needs.** • **Monthly payments.** • **Achieving full ownership.** • **Comparison to buying.**	**At the end of the finance term (typically 4-6 years), you have two options: (1) trade or sell the vehicle or (2) keep the vehicle.** • **Options at end of term.** • **Cash needs.** • **Monthly payments.** • **Achieving full ownership.**
Options at end of term	**Options at end of term.** At the end of the lease (typically 2–4 years), you do not own the vehicle so you must return the vehicle unless 1. you buy it, 2. you re-lease it, or 3. if the lessor agrees, you arrange for a dealer, a friend, or another third party to buy it from the lessor.	**Options at end of term.** At the end of the term (typically 4–6 years), you own the vehicle and you can sell it, trade it, or keep it.
Cash needs	**Cash needs.** Unless you have the cash to buy the leased vehicle outright or to buy a different vehicle, you will have a new monthly payment either to lease or buy the existing vehicle or to lease or buy another vehicle. You may also need some cash for that new lease or loan.	**Cash needs.** At the end of the financing, you own the vehicle and do not have to make any further monthly payments. However, if you trade the vehicle for a different vehicle, and finance the purchase of the different vehicle, you will have more monthly payments.
Monthly payments	**Monthly payments.** Monthly lease payments are usually lower than monthly finance payments because you are not paying for the whole value of the vehicle. *See* Monthly Payments. There may also be a leasing subsidy from the manufacturer or lessor. In addition, if	**Monthly payments.** Monthly finance payments are usually higher than monthly lease payments because you are paying for the entire purchase price of the vehicle, plus interest and other finance charges, and taxes. However, there may be a finance subsidy from the manufacturer or finance source.

	you finance the purchase of the vehicle at the end of the lease, the lease and finance agreements together offer a way to pay for a vehicle over a longer period than allowed under most finance agreements (e.g., a 3-year lease and 5-year loan). However, you will pay a rent charge during the lease term and finance charges during the loan term.	
Achieving full ownership **Comparison to buying**	**Achieving full ownership.** Alternatively, if you lease for a short term (e.g., 2 years) and then purchase the vehicle through a short-term finance agreement, (e.g., 2 years) you can achieve full ownership in a period comparable to financing the vehicle for the combined terms (i.e., 4 years). **Comparison to buying.** In the lease/loan combination, the lease payment is likely to be lower (depending on the residual value) and the loan payment is likely to be higher than the payment in the 4-year loan only case. You will have to pay a rent charge for the lease term and finance charges for the loan term compared to paying finance charges for the full 4-year term. Using this option, you can wait until the end of the lease term to decide whether you want to buy the vehicle and gain full ownership. However, if you want to finance your end-of-lease purchase, you will have to obtain used car financing which usually has a higher interest rate than new car financing.	**Achieving full ownership.** When buying a vehicle with cash, you receive immediate ownership of the vehicle. When purchasing a vehicle with an installment sales contract or loan, you pay down the loan balance and eventually build equity in the vehicle. You receive full ownership of the vehicle when you make your final payment.

D14 Excess Wear **[Different]**	**Leases limit the amount of wear to the vehicle. You will likely have to pay extra charges if you exceed those limits and return the vehicle.** • **Excess wear and tear standards.** • **Example of excess wear and tear.** • **Maintenance requirements.**	**There are no limits or charges for excessive wear to the vehicle, but excessive wear will lower the vehicle's trade in or resale value.** • **Effect of excess wear and tear.** • **Maintenance requirements.**
Excess wear and tear standards / Effect of excess wear and tear **Examples of excess wear and tear**	**Excess wear and tear standards.** Excess wear and tear is wear that exceeds the standards stated in your lease agreement. Many leases have a wear and tear standard defined in specific terms. Any standard must be reasonable. Just like excess mileage, excess wear and tear will decrease the value of the vehicle whether it is purchased or leased. **Examples of excess wear and tear.** The residual value in your lease assumes that your vehicle is returned in a certain condition. You should be aware of the lessor's wear and tear standards and follow them if you want to return the vehicle at scheduled lease termination without an excess wear charge. Typical examples of excess wear and tear include • Broken or missing parts • Dented or damaged body panels or trim • Cuts, tears, burns or permanent stains in the fabric or carpet • Excessively worn tires • Cracked or broken glass	**Effect of excess wear and tear.** The condition of the vehicle is a primary determinant of its resale value. The more wear and damage, the lower the vehicle's trade-in or resale value. If you purchase the vehicle and do not maintain it according to the manufacturer's recommendations or do not repair any damage that occurs, the value of the vehicle may be reduced. **The creditor does not take the risk of the end-of-term value of the vehicle when you purchase a vehicle.**

	• Poor quality repairs	
Maintenance requirements	**Maintenance requirements.** Most lessors require the vehicle to be maintained according to the manufacturer's recommendations. This does not mean that the vehicle has to be serviced by the manufacturer's franchise dealers. However, you should be prepared to document that the required servicing was provided by a professional auto servicer. If you can't show that the vehicle was properly maintained, you may be charged for excess wear attributable to the lack of proper maintenance or charged for the cost of performing past due servicing. Charges that the lessor assesses for returning the vehicle to the condition stated in your lease may be limited by state law to either actual repair costs or reasonable estimates of the costs of repairing the damage or excessive wear.	**Maintenance requirements.** Although creditors may legally require you to properly maintain the vehicle and keep it in good condition and repair, there is no assessment of excess wear and tear at the end of the term because the vehicle is not being returned to the creditor. You will only be affected by the reduced value when you trade or sell the vehicle**.**
S1 Ongoing Costs **[Similar]**	**During the lease, you have to pay your monthly payment, other fees for licenses and registration, any periodic taxes such as personal property taxes, insurance premiums, ongoing maintenance costs and any safety and emissions inspections.** • **Monthly payment** • **Vehicle insurance** • **Maintenance** • **Annual government fees** • **Personal property tax**	**During the loan, you have to pay your monthly payment, other fees for licenses and registration, any periodic taxes such as personal property taxes, insurance premiums, ongoing maintenance costs and any safety and emissions inspections.** • **Monthly payment** • **Vehicle insurance** • **Maintenance** • **Annual government fees** • **Personal property tax**
Monthly payment	**Monthly payment.** Lease monthly payments are made at the beginning of the month. There is no monthly payment at the end of the lease.	**Monthly payment.** Finance monthly payments are made at the end of the month. There is a monthly payment at the end of the loan.
Vehicle insurance	**Vehicle insurance.** You are generally required to purchase and	**Vehicle insurance.** You are generally required to purchase and maintain vehicle

	maintain vehicle insurance throughout the lease. When you sign the lease, you will be required to show proof of coverage.	insurance throughout the loan. When you sign the finance agreement, you will be required to show proof of coverage.
Maintenance	**Maintenance.** You are generally required to maintain the vehicle and make any needed repairs to keep in it good operating order. Some lessors may provide and/or pay for certain maintenance work specified in your lease agreement. The work to be done and the place where it is to be done may be set forth in a separate agreement or in coupons that the lessor provides to you. Typically, there is a separate charge for this maintenance. If so, you can choose whether or not to buy these services.	**Maintenance.** You are responsible for all maintenance costs unless other stated in your finance agreement. Some finance agreements may provide and/or pay for certain maintenance work. The work to be done and the place where it is to be done may be set forth in a separate agreement or in coupons the seller provides to you. Typically, there is a separate charge for this maintenance. If so, you can choose whether or not to buy these services.
Annual government fees	**Annual government fees.** You must generally pay for all annual state and local government fees required to register the leased vehicle and operate it.	**Annual government fees.** You must generally pay for all annual state and local government fees required to register the leased vehicle and operate it.
Personal property tax	**Personal property tax.** Some states have a personal property tax that applies to leased vehicles. You will generally be responsible for payment of any applicable tax either to the lessor or directly to the taxing authority.	**Personal property tax.** Some states have a personal property tax that applies to owned vehicles. You will generally be responsible for payment of any applicable tax directly to the taxing authority.

S2 Early Termination **[Similar]**	**You are responsible for any early termination charges if you end the lease early including any deficiency charges if you trade the vehicle.** • **Disclosure requirements.** • **Early termination option.** • **Involuntary termination.** • **Calculation of early termination charges.** • **Amount of early termination charges.** • **Reasons for early termination charges.** • **Early termination charge methods.** • **Options at early termination.** • **Examples for early termination.**	**You are responsible for the payoff amount if you end the loan early including any deficiency charges if you trade the vehicle.** • **Disclosure requirements.** • **Payoff option.** • **Involuntary termination.** • **Calculation of loan payoff amount.** • **Reasons for payoff deficiency.** • **Payoff methods.** • **Options at loan payoff.**
Disclosure requirements	**Disclosure requirements.** Early termination means that the lease ends before the scheduled termination date for any reason, voluntary or involuntary. The federal Consumer Leasing Act requires the lessor to state the conditions under which a lease may be terminated early and the amount, or description of the method for determining the amount, of any penalty or other charge for early termination.	**Disclosure requirements.** A loan can end before the scheduled completion date either through early payoff or default. If you prepay your loan, you may have to pay a penalty or you may be entitled to a refund of part of the finance charge. The federal Truth in Lending Act requires the creditor to state whether or not a penalty will be imposed and whether or not you are entitled to a rebate.
Early termination option / Payoff option	**Early termination option.** Voluntary termination means that you choose to end your lease before its scheduled termination. Most leases give you the option to end your lease early. In most of these leases, you can turn in the vehicle, pay the balance due (including any associated early termination and other costs), and end the lease. Some leases permit you to terminate early only if you purchase the vehicle.	**Payoff option.** Voluntary payoff means that you choose to pay your loan in full before the end of the scheduled term. Most finance agreements give you this option.

Involuntary termination	**Involuntary termination.** Involuntary termination means that the lease ends early for reasons unrelated to a voluntary termination, such as when the vehicle is stolen or totaled in an accident. You may have gap coverage to pay some or all of the deficiency owed in this case. A default, which means that you fail to meet one or more conditions of your lease agreement, may also lead to involuntary early termination.	**Involuntary termination.** Involuntary termination means that the loan must be paid early for reasons unrelated to a voluntary payoff, such as when the vehicle is stolen or totaled in an accident. Your insurance may cover some or all of the payoff amount owed in this case. Involuntary termination may also include default, which means that you failed to meet one or more conditions of your loan agreement.
Calculation of early termination **Amount of early termination charge**	**Calculation of early termination charges.** If your lease ends early, you may have to make a payment ("early termination charge") to satisfy your lease obligations. This payment may be substantial. The early termination charge is typically the difference between the remaining balance of the lease and the amount credited for the vehicle ("realized value" of the vehicle). This calculation is set forth in the lease. Usually, the amount credited will be the actual wholesale price received for the vehicle or a wholesale value established by some other means, such as an independent appraisal. In addition, the early termination charge may include charges such as fees for disposal of the vehicle, transfer fees, and taxes. In virtually all cases, you must pay other amounts owed, such as late charges, past due monthly payments, and parking tickets. Some lessors also charge an additional amount, usually a fixed dollar amount, to reimburse their costs of early termination and the portion of their initial costs that would have been covered by the remaining rent charge. **Amount of early termination charge.** The earlier you end your lease, the greater the early termination	**Calculation of loan payoff amount.** To pay your loan in full before the end of the scheduled term, you must pay the loan payoff amount. In virtually all cases, you also must pay other amounts owed, such as late charges and past due monthly payments. The loan payoff amount may be more or less than the trade-in or market value of your vehicle. If you prepay your loan during the first half of the loan term, it is likely that your loan payoff amount will be more than the market value of your vehicle, unless you have made a very large down payment.

	charge is likely to be. The charge may be up to several thousand dollars and may exceed the amount you would have paid if you completed the lease. Thus, because early termination may be expensive, you may want to select a lease term for the length of time you plan to drive the vehicle, instead of choosing a longer term (to get a lower monthly payment) with the idea of terminating the lease early. For an illustration of the early termination charge, see Example 10 on p.72.	
Reasons for early termination charges / Reasons for payoff deficiency	**Reasons for early termination charges.** A large part of your early termination charge occurs because the market value of the leased vehicle declines more quickly at the beginning of the lease. In the early part of the lease, the amount you pay for depreciation does not fully cover the amount the vehicle actually depreciates. So, if you end the lease early, there will usually be a shortfall. As the lease nears the end, this shortfall is generally reduced because more of your payment is allocated for depreciation. In a closed-end lease, at the end of the lease, if you have made all of your payments, you are not responsible for any shortfall between the depreciation you have paid and the actual vehicle depreciation. For further information, see p.71.	**Reasons for payoff deficiency.** This difference arises when the actual vehicle depreciation exceeds the principal paid, plus any down payment. This usually occurs because the market value of the financed vehicle declines more quickly at the beginning of the term and the amount of your payment applied to the principal is smallest at the beginning of the term. As you continue making monthly payments, at some point (usually in the second half of the finance term), the vehicle value will exceed the loan payoff amount, creating "equity," which is a positive trade-in value of the vehicle.
Early termination charge methods / Payoff methods	**Early termination charge methods.** The amount of each monthly payment allocated to depreciation depends on the formula used by the lessor. Some formulas are: the "constant yield" ("actuarial") method (the most commonly used method) **More Info.** The method of earning rent charges in which the rent charge earned each month is proportional to the remaining lease balance. Using this method, the lessor or assignee	**Payoff methods.** There are different formulas for calculating finance payoff amounts. The payoff amount will depend on how the lender computes interest on the loan. These methods include: (1) Simple Interest; **More Info.** Under the simple interest method, interest is computed only on the principal balance actually used and the balance declines gradually over the loan term. The simple interest method is usually the least expensive form of consumer financing and

	earns rent charges at an equal rate over the term, similar to most home first mortgages. *See* **Example 1** at end of section. and the "Rule of 78" method. **More Info.** A method of earning rent charges in which the lessor or assignee earns rent charges faster than under the constant yield or actuarial methods so that less of each payment reduces your lease balance. Using this method, when you terminate your lease early, you will have paid more rent charges than under these other methods. Your early termination payoff (early termination balance) will therefore be higher than with the constant yield or actuarial early termination payoff. *See* **Example 2** at end of section. The federal Consumer Leasing Act requires the lessor to disclose the amount or the method used.	your early payoff will usually be less than using the other methods. It is always less costly than the Rule of 78. *See* **Example 3** at end of section. (2) Rule of 78; **More Info.** In some loans, lenders "precompute" the interest. This means that they compute the amount of interest that will accrue based on the entire loan amount. That interest then becomes part of the amount you owe. In this kind of loan, you are contractually obligated to pay back the principal plus all the precomputed interest. However, you should receive a rebate of the portion of interest you paid that is considered "unearned," or this unearned amount should be deducted when your payoff amount is calculated. Using this method, when you pay off your loan early, even if each payment is made on the due date or within any grace period, you usually will have paid more interest than under the other methods described in this section. This is because the lender earns the interest faster so that less of each payment during the earlier months of your loan reduces your principal balance. Your early payoff will, therefore, be higher than with the other methods assuming you make all payments on the due date. *See* **Example 4** at end of section. (3) Actuarial; **More Info.** As an alternative to the Rule of 78, the actuarial method can be used to calculate the rebate amount in a precomputed finance agreement. In this method, the amount of each payment allocated to interest is generally determined by multiplying the outstanding principal balance by the monthly interest rate (the remainder of each monthly payment is credited to principal). Using this method, the lender earns interest at an equal rate over the term. *See* **Example 5** at end of section. and (4) Daily Simple Interest. **More Info.** The daily simple interest method enables lenders to accrue interest on loans on a daily basis by applying a periodic rate to the outstanding balance. This means that

		the lender's calculations and your paying habits will determine the amount of the total interest due and the amount of the final payment. For example, if you make any periodic payment before its due date (e.g., the 12th instead of a scheduled payment on the 15th) and then make each subsequent payment on the same date in each succeeding month (always pay on the 12th of each month), you will pay less interest and should get a rebate after your last payment. This occurs because the loan balance will reduce more rapidly and less interest will accrue on a daily basis. On the other hand, if you make scheduled payments after the scheduled due date (e.g., on the 18th of a month instead of a scheduled payment on the 15th), even if they are during a grace period, you'll end up paying more and will owe an additional amount after the last scheduled payment. Depending upon state law, daily simple interest loans may or may not be subject to late charges for payments after any grace period in addition to the interest that has accrued. *See* **Example 6** at end of section. The federal Truth in Lending Act does not require the lender to disclose the method it uses. However, you may ask the lender which method is used. While you are contractually required to pay a certain amount of interest, the lender is usually required by law or contract to rebate to you some or all of the "unearned" portion of the interest, if you prepay the loan. As a result, if you prepay, the total amount you must pay will equal the principal plus the earned interest and other charges.
Options at Early Termination / Options at Loan Payoff	**Options at Early Termination**. You typically have three options at voluntary early termination: 1. Return the vehicle to the lessor and pay any early termination charges due. 2. Trade in the vehicle to a third party (such as a dealer or leasing company). If the proceeds exceed your lease balance, you can apply	**Options at Loan Payoff.** Generally, you have three options if you decide to prepay your loan: 1. Pay off the loan and keep the vehicle. 2. Trade in the vehicle to a third party (such as a dealer). If the trade-in value of the vehicle is higher than the loan payoff amount, the third party will refund this difference to you or apply it toward your new vehicle purchase or lease. If the

	the excess to your lease or purchase of another vehicle or receive the excess in cash. If there is a shortfall, you are responsible for this deficiency. If you buy or lease another vehicle, you may be able to include this deficiency as part of the amount financed (if you finance the purchase of another vehicle) or the gross capitalized cost (if you lease another vehicle). 3.Negotiate a sale price with a third party and then request that this person exercise any early termination purchase option. You would then receive any positive difference in the negotiated price over the purchase option price from the third party or pay any deficiency. 4. Exercise any early termination purchase option, resell the vehicle, and use the proceeds to offset what you paid for the vehicle.	trade-in value is less than the loan payoff amount, you are responsible for this deficiency. You can pay this deficiency or ask the third party to add it to the amount financed (if you finance the purchase of another vehicle) or the gross capitalized cost (if you lease another vehicle). 3. Sell the vehicle (if permitted by your contract) and use the proceeds to pay off your loan.

Examples for Early Termination

Lease Example Disclaimer. The example represents one application of the method. There are often differences between the results shown here and the results in your situation. There are three reasons why these differences occur: (1) variations in state laws; (2) variations in computer systems of different lessors; and (3) variations in the contracts of different lessors. These examples calculate the monthly rent charge as 1/12 of the annual rent charge. Your lease agreement using this method may not work similarly to this example. The example only addresses the rebating of rent charges, not any other charges that may exist in the lease.

EXAMPLE 1: Constant Yield Method for Leasing

Example:

Adjusted Capitalized Cost	$18,800.00
Term	48 months
Monthly payment	$244.69

First payment rent charge	=	($18,800.00 – $244.69) × 8.497% ÷ 12	=	$131.39
First payment depreciation	=	$244.69 – $131.39	=	$113.30
End of month 1 lease balance	=	$18,800.00 – $113.30	=	$18,686.70
Second payment rent charge	=	($18,686.70 – $244.69) × 8.497% ÷ 12	=	$130.59
Second payment depreciation	=	$244.69 – $130.59	=	$114.10
End of Month 2 lease balance	=	$18,686.70 – $114.10	=	$18,572.60
Full term rent charge	=	Total base payments – Depreciation		

Depreciation	=	Adjusted Capitalized Cost – Residual Value		
Full term rent charge	=	($244.69 × 48) – ($18,800 –$12,300)	=	$5,295.10

Additional payments are not permitted to reduce the lease balance. If an additional $1,000 payment is made at the end of month 1, it would be treated as prepayment of the monthly payments due at the beginning of months 3, 4, 5 and 6. If the remaining payments are made on time or within the grace period, there would be no savings of the full term projected rent charge since the amount of rent charge of each payment is precomputed. If the lease were prepaid after 24 payments, the balance would be $15,847.42, which is $1,024.34 lower than the Rule of 78 balance.

EXAMPLE 2: Rule of 78 Method for Leasing

Example:

Adjusted Capitalized Cost	$18,800.00
Term	48 months
Monthly payment	$244.69

First payment rent charge	=	$5,295.10 × (48÷(1+2+3+ . . .48))	=	$216.13
First payment depreciation	=	$244.69 – $216.13	=	$28.56
End of month 1 lease balance	=	$18,800.00 –$28.56	=	$18,771.44
Second payment rent charge	=	$5,295.10 × (47÷(1+2+3+ . . .48))	=	$211.62
Second payment depreciation	=	$244.69 – $211.62	=	$33.07
End of Month 2 lease balance	=	$18,771.44 – $33.07	=	$18,738.37
Full term rent charge	=	Total base payments – Depreciation		
Depreciation	=	Adjusted Capitalized Cost – Residual Value		
Full term rent charge	=	($244.69 × 48) – ($18,800 –$12,300)	=	$5,295.10

Additional payments are not permitted to reduce the lease balance. If an additional $1,000 payment is made the end of month 1, it would be treated as prepayment of the monthly payments due at the beginning of months 3, 4, 5 and 6. If the remaining payments are made on time or within the grace period, there would be no savings of the full term projected rent charge since the amount of rent charge of each payment is precomputed. If the lease were prepaid after 24 payments, the balance would be $16,871.76, which is $1,024.34 higher than the constant yield balance.

Loan Example Disclaimer. The example represents one application of the method. There are often differences between the results shown here and the results in your situation. There are three reasons these differences occur: (1) variations in state laws; (2) variations in computer systems of different lenders; and (3) variations in the contracts of different lenders. These examples calculate the monthly interest as 1/12 of the annual interest. Your finance agreement using this method may not work similarly to this example. The example only addresses the rebating of interest charges, not any other charges that may exist in the loan.

EXAMPLE 3: Simple Interest Method for Buying

The Simple Interest Method is similar to the Actuarial Method except you can prepay principal amounts during the loan and thereby reduce the outstanding balance and the interest portion of subsequent payments. If you prepay a portion of the principal and then continue to make all required payments on time, you should either receive a notice that your loan will be repaid earlier than scheduled or receive a rebate after your last payment. (Note that the Simple Interest Method may not give you the same balance as the Actuarial Method. Also note that the Simple Interest Method is not the same as the Daily Simple Interest Method described below.)

Example:

Amount financed	$18,800.00
Term	48 months
APR	9.00%
Monthly payment	$467.84

First payment interest	=	$\$18,800 \times 9\% \div 12$	=	$141.00
First payment principal	=	$467.84 – $141.00	=	$326.84
End of Month 1 loan balance	=	$18,800.00 – $326.84	=	$18,473.16
Second payment interest	=	$\$18,473.16 \times 9\% \div 12$	=	$138.55
Second payment principal	=	$467.84 – $138.55	=	$329.29
End of Month 2 loan balance	=	$18,473.16 – $329.29	=	$18,143.87
Full term interest	=	$(\$467.84 \times 48) - \$18,800$	=	$3,656.32

If an additional $1,000 principal is paid at the end of the first month, the loan balance is reduced from $18,473.16 to $17,473.16. Month 2 interest charges will be based on this reduced balance so more principal will be credited from each payment. If the remaining payments are made on time or within the grace period, the loan would be repaid in 45 months rather than 48 months by making an extra $1,000 principal payment in month 1. The total interest paid would be $3,224.84 instead of $3,656.32, a savings of $431.48 of interest.

EXAMPLE 4: Rule of 78 for Buying

Example:

Amount financed	$18,800.00
Term	48 months
APR	9.00%
Monthly payment	$467.84

First payment interest	=	$\$3,656.32 \times (48 \div (1+2+3+ \ldots 48))$	=	$149.23
First payment principal	=	$467.84 – $149.23	=	$318.61
End of Month 1 net loan balance	=	$18,800.00 – $318.61	=	$18,481.39
Second payment interest	=	$\$3,656.32 \times (47 \div (1+2+3+ \ldots 48))$	=	$146.13
Second payment principal	=	$467.84 – 146.13	=	$321.71
End of Month 2 net loan balance	=	$18,481.39 – $321.71	=	$18,159.68
Full term interest	=	$(\$467.84 \times 48) - \$18,800$	=	$3,656.32

Additional payments of principal are not permitted. If an additional $1,000 is paid at the end of the first month, it would often be treated as prepayment of the monthly payments due at the end of months 2 and 3. If the remaining payments are made on time or within the grace period, there would be no savings of the full term projected interest since the amount of interest of each payment is precomputed. If the loan were prepaid after 24 payments, the balance would be $54.81 higher than the actuarial balance.

EXAMPLE 5: Actuarial Method for Buying

The Actuarial Method is similar to the Simple Interest Method except in order to pay off the loan early, you may have to pay the full remaining principal and interest (which is precomputed.) The lender should then refund the unearned interest to you. (In some cases, the creditor may deduct the unearned interest from the amount you owe to reduce the amount you must pay.) The other difference from the Simple Interest Method is that you do not reduce the outstanding balance and the interest portion of subsequent payments by making extra monthly payments or paying less than the full loan balance. (Note: The Actuarial Method may not give you the same net payoff as the Simple Interest Method.)

Example:

Amount financed	$18,800.00
Term	48 months
APR	9.00%
Monthly payment	$467.84

First payment interest	=	$\$18,800 \times 9\% \div 12$	=	$141.00
First payment principal	=	$467.84 – $141.00	=	$326.84
End of Month 1 net loan balance	=	$18,800.00 – $326.84	=	$18,473.16
Second payment interest	=	$\$18,473.16 \times 9\% \div 12$	=	$138.55
Second payment principal	=	$467.84 – $138.55	=	$329.29
End of Month 2 net loan balance	=	$18,473.16 – $329.29	=	$18,143.87
Full term interest	=	$(\$467.84 \times 48) - \$18,800$	=	$3,656.32

Additional payments of principal are not permitted, so if a $1,000 payment is made at the end of month 1, it would be treated as prepayment of the monthly payments due at the end of months 2 and 3. If the remaining payments are made on time or within the grace period, there would be no savings of the full term projected interest since the amount of interest of each payment is precomputed. If there were no prepayments of principal and the loan were prepaid after 24 payments, the balance would be the same as the simple interest balance but $54.81 lower than the Rule of 78 balance.

EXAMPLE 6: Daily Simple Interest Method for Buying

The Daily Simple Interest Method is similar to the Simple Interest Method except interest is calculated on the actual balance each day. Payments are credited and the loan balance is reduced on the day the payment is received, rather than on the due date as in a simple interest loan. It offers the same advantage as the simple interest loan of allowing principal amounts to be prepaid during the loan and thereby reducing the outstanding balance and the interest portion of subsequent payments if all subsequent payments are made on the due date. The term of the loan and your total interest would be reduced when you make additional principal payments if all subsequent payments are made on the due date. However, if the monthly payments are made a few days after the due date each month, the interest paid will be higher than the Simple Interest Method (and higher than the Actuarial Method if no prepayments of principal are made).

Example:

Amount financed	$18,800.00
Term	48 months
APR	9.00%
Monthly payment	$467.84

Assuming that each payment is made exactly on its due date:

First payment interest	=	$\$18,800 \times 9\% \div 2$	=	$141.00
First payment principal	=	$467.84 – $141.00	=	$326.84
End of Month 1 loan balance	=	$18,800.00 – $326.84	=	$18,473.16
Second payment interest	=	$\$18,473.16 \times 9\% \div 12$	=	$138.55

Second payment principal	=	$467.84 – $138.55	=	$329.29
End of Month 2 loan balance	=	$18,473.16 – $329.29	=	$18,143.87
Full term interest if each payment is made on the due date	=	($467.84 × 48) – $18,800	=	$3,656.32

If an additional $1,000 principal is paid at the end of the first month, the loan balance is reduced from $18,473.16 to $17,473.16. Month 2 interest charges will be based on this reduced balance so more principal will be credited from each payment if all subsequent payments are made on the due date. If the remaining payments are made on time or within the grace period, the loan would be repaid in 45 months rather than 48 months by making an extra $1,000 principal payment in month 1. The total interest paid would be $3,224.84 instead of $3,656.32, a savings of $431.48 of interest. However, if no principal reduction is paid and every payment is made 5 days after the due date, the total additional interest paid will be $30.38. The early termination balance at month 24 would be $27.91 higher than the simple interest or actuarial methods but $26.90 less than the Rule of 78 Method.

S3 Vehicle Maintenance and Excess Wear **[Similar]**	**Lease agreements generally require you to follow all manufacturer maintenance requirements. Typically, you pay separately for vehicle maintenance. Most leases limit the amount of wear to the vehicle. If you return the vehicle, you will probably have to pay extra charges if you exceed those limits.** • **Typical lease requirements.** • **Vehicle changes.** • **Vehicle maintenance.**	**Finance agreements may require you to follow all manufacturer maintenance requirements. Failing to do so may affect the warranty protection. Typically, you pay separately for vehicle maintenance. There are usually no limits or charges for excessive wear to the vehicle, but excessive wear will lower the vehicle's trade-in or resale value.** • **Typical finance requirements.** • **Vehicle changes.** • **Vehicle maintenance.**
Typical lease requirements / Typical finance requirements	**Typical lease requirements.** Most lease agreements require you to keep the vehicle in good working order and condition and to make necessary repairs and replacements. Most leases also require that you have the vehicle regularly serviced as recommended in the owner's manual. Some of these maintenance responsibilities may also be required to keep the vehicle covered under any warranty or service contract.	**Typical finance requirements.** Your finance agreement may require you to maintain the vehicle or to keep it in good condition, although there is no assessment of wear and use charges because you do not return the vehicle at the completion of the agreement. Failure to maintain your vehicle or to follow the recommended maintenance program provided in the owner's manual may affect the value of your vehicle for trade-in or sale. Some maintenance responsibilities may be required to keep the vehicle covered under any warranty or service contract.
Vehicle changes	**Vehicle changes.** Additionally, some lease agreements prohibit you from making any changes to the vehicle that would decrease its value or	**Vehicle changes.** Most finance agreements do not prohibit you from making any changes to the vehicle.

	utility. Doing so without the lessor's written consent would constitute default.	
Vehicle maintenance	**Vehicle maintenance.** Some lessors may provide and/or pay for certain maintenance work specified in your lease agreement. The work to be done and the place where it is to be done may be set forth in a separate agreement or in coupons that the lessor provides to you. Typically, there is a separate charge for this maintenance. If so, you can choose whether or not to buy these services.	**Vehicle maintenance.** Some finance agreements may provide and/or pay for certain maintenance work. The work to be done and the place where it is to be done may be set forth in a separate agreement or in coupons the seller provides to you. Typically, there is a separate charge for this maintenance. If so, you can choose whether or not to buy these services.

Using Lease-Versus-Buy Models

Information about leasing versus buying vehicles often includes a comparison of the costs and features of these options (lease verses buy models or models). These models may be helpful as a starting point in deciding whether to lease or buy. This comparison may include a chart or other numerical presentation and may appear

- in consumer publications and other articles;
- on television, radio, or the Internet; and
- in dealers' showrooms and at leasing companies.

Different sources develop the models, and they may cover leasing, financing, and/or buying with cash. The information in this section focuses on leasing and financing (referred to as buying). This material may be used with

- a specific lease proposal you are considering
- information obtained from a lease ad
- a hypothetical lease example you wish to consider.

Limitations of models

Models compare the costs and features of leasing or buying a vehicle in different ways. However, they usually have three major limitations. They may

- exclude your personal preferences (subjective factors)
- exclude some important factors and thus may be incomplete and simplistic
- include factors that are complex and difficult to specify with accuracy

Exclusion of personal preferences (subjective factors)

In considering whether to lease or buy, there may be personal preferences, aside from costs, that are part of your decision. Although these preferences may have cost implications, they are usually excluded from the models. Examples of excluded items are:

1. any preference you have for owning a vehicle;
2. any preference you have for changing vehicles frequently;
3. the importance to you of driving a vehicle that maintains its value well over time;

   More Info. For example, you may prefer to drive a certain type or make of vehicle, regardless of its rate of depreciation. Or the rate of depreciation may be an important consideration when you=re selecting a vehicle.
4. the importance to you of protection from unexpected depreciation of the vehicle (*see* Future Value);
5. the importance to you of specific features of a particular lease or finance plan, such as gap coverage;
6. your financial limitations, when you are considering a particular vehicle; and
7. your attitude toward disposing of your vehicle, for example, negotiating the trade-in or sale of the vehicle if you finance, or having an inspection for excessive wear and tear if you lease.

Problem of incompleteness or oversimplification

These models also have limitations because they may exclude some important factors in the lease-versus-buy decision in an effort to simplify the comparison. Examples of items that may be excluded are

1. your ability to pay or obtain money for the down payment and other front-end costs, monthly payments, and other required costs of a particular lease or finance plan;

2. the time value of money and the value of any difference in up-front costs

   More Info. The value of any difference in the amounts due at signing in a lease versus a finance agreement is calculated as the difference in the initial amount times the value received from the use of that difference. The value you receive could be the return from investing the difference or the interest savings from paying a debt.

      Example. If the lease requires an initial payment of $1,200 and the finance agreement requires an initial payment of $2,000, the $800 difference could be invested to generate earnings or used to pay off other bills and thereby save interest payments. These earnings or savings will generate investment earnings or interest savings that should be applied to the cost of the lease. Generally, it is better to do this calculation after taking deducting any income taxes due on the earnings.

      If the $800 difference is deposited in a money market earning 5% taxable funds and your tax rate is 30%, the effective monthly after-tax interest rate you earn is $5\% \div 12 \times (1–30\%) = .2917\%$. The benefit for each month in the lease term is $\$800 \times .2917\% = 2.33$ per month. If the $800 difference is used to pay a non-deductible credit card debt at 16%, the benefit received each month in the lease term is $\$800 \times 16\% \div 12 = \$10.67$ per month.

      If you don't invest the funds or pay down an existing debt, then you will not receive these economic benefits. Also, there may be conditions on the investment or changes in your situation that make your rate or yield assumption invalid. Because your assumptions project the benefits over the full term of the lease and finance options your are considering, unforeseen circumstances could always arise that would change your rate or yield projections.

and monthly payments in a particular lease versus a finance plan;

More Info. Similar to the value of the difference in payments at the beginning of a lease versus a purchase, the value of any difference in monthly payments should also be included in the buy-versus-lease comparison. The methodology is the same as for any difference in the initial payments except that the amount of the savings will be different each month and should include the reinvestment of any interest earnings received from investments or interest savings received from debt payments. Thus, a table would have to be developed that shows how the monthly payment savings and earnings from those savings accumulate.

Example. Assume that there is an $800 difference in the up-front costs. If the lease monthly payment is $40 less than the finance payment and the difference is used to pay a credit card debt at a monthly rate of 1.333% (16% APR), the following calculation would be required to incorporate both the initial payment difference and the monthly payment difference.

Col. A	**Col. B**	**Col. C**	**Col. D**	**Col. E**	**Col. F**
Time period	Initial lease payment difference plus monthly payment difference	Accumulated interest from previous months	Total payment difference plus earnings	Interest saved equals Col. D times 1.333%	End of month total savings amount (D + E)
Beginning	$800.00	0	800.00	10.67	810.67
Month 2	840.00	10.67	850.67	11.34	862.01
Month 3	880.00	22.01	902.01	12.02	914.03
~	~	~	~	~	~
Month 36					

If the interest rate benefit were different in any month, the Column E monthly interest rate multiplier would change for that month. Thus, you would have to be able to project the return you would receive on the payment difference over the full term to accurately include this economic effect.

3. your ability to pay the costs you may incur if you terminate a lease early compared with paying off financing early;
4. the value of gap coverage if the coverage (and the cost) are included in the lease or loan;

More Info. The value of gap coverage in either a lease or a finance agreement is the probability of the vehicle being totaled or stolen in each month during the term times the dollar amount of the early termination deficiency that would have to be paid or waived in that month. An actuarial table could be developed for drivers of different types of vehicles with different ages and driving records that established the probability of vehicle theft or casualty loss each month.

Example. Assume that the probability of the vehicle being totaled or stolen in the first month is .2%. Each month, this probability (.2% in month 1) would be multiplied times the potential gap benefit for the lease and finance agreement ($2,200 and $500, respectively, in month 1). This potential gap benefit (Line H below) will be reduced over the term as the lease or finance early termination balance is reduced over the term. The following table compares just the first month's value of gap coverage in a lease with a loan (with the characteristics as specified).

		Finance	Lease
A.	Purchase price (finance) or gross capitalized cost (lease)	$22,000	$22,000
B.	Down payment (finance) or capitalized cost reduction (lease)	$3,000	$1,000
C.	Amount financed (finance) or adjusted capitalized cost (lease) (A – B)	$19,000	$21,000
D.	Loan payoff (finance) or early termination payoff (lease) in month 1	$19,000	$20,700
E.	Vehicle's insured value	$18,000	$18,000
F.	Gap amount (D – E)	$1,000	$2,700
G.	Insurance deductible	$500	$500
H.	Potential gap benefit (F – G)	$500	$2,200
I.	Probability of vehicle loss	.2%	.2%
J.	Value of gap coverage in month 1 (H × I)	$1.00	$4.40

This analysis would have to be completed for each month of the term as the gap amount changed for each option to calculate the value of the gap coverage for each option.

5. the cost or effect on the vehicle=s value of the number of miles you may drive over the term;

More Info. If you expect to drive *more* than the standard lease mileage of 15,000 miles per year, the model should include

the *lower* residual value that will be used in your lease if you request a mileage allowance of more than 15,000 miles per year

the excess mileage charge you will be assessed if you don't request additional miles and you return the leased vehicle at lease-end with more than the allowed mileage

the reduced trade-in value of the vehicle if you finance it and trade it with more than 15,000 miles per year.

On the other hand, if you expect to drive *less* than the standard lease mileage of 15,000 miles per year, the model should include

- the *higher* residual value that will be used in your lease if you request a mileage allowance of less than 15,000 miles per year
- the greater value of the vehicle compared with the residual value if you don't request a reduced mileage allowance, but you drive less than the 15,000 mile per year mileage allowance
- the greater trade-in value of the vehicle if you finance it and trade it with less than 15,000 miles per year.

6. the value of the protection from unexpected decline in the vehicle's value;

More Info. In a closed-end lease, you have the right to return the vehicle to the lessor at scheduled termination without responsibility for any amount by which the actual depreciation has exceeded the expected depreciation (assuming that you have complied with other lease requirements related to mileage and excess wear and tear). If the actual depreciation exceeds the expected depreciation, the vehicle will be worth less than the lease residual value. For any lease residual value, the possibility exists that the vehicle will be worth less than that residual value at full term. The higher the residual value compared with a standard residual value guidebook's prediction, the greater the probability.

Example. If a residual value guidebook projects that the vehicle will have a wholesale value of $12,000 after 3 years and the residual value in the lease is $11,500, the probability that the vehicle will be worth less than $11,500 might be 35%. (Note: this example contains a hypothetical probability and a hypothetical average depreciation saved. These amounts are not derived from any actual data.) On the other hand, if the lease residual value on that same vehicle is $13,000, the probability that the vehicle will be worth less than $13,000 might be 75%. The following table illustrates one method of analyzing the value of the excess depreciation protection of these two leases, compared with purchasing the vehicle. The example assumes that you would trade the vehicle for the $12,000 amount listed in the residual guidebook.

		Finance	Lease A	Lease B
A.	Purchase price (finance) or gross capitalized cost (lease)	$22,000	$22,000	$22,000
B.	Residual value stated in the lease	n/a	$11,500	$13,000
C.	Depreciation stated in the lease (A – B)	n/a	$10,500	$9,000
D.	Projected wholesale value at end of term	$12,000	$12,000	$12,000
E.	Projected depreciation (A – D)	$10,000	$10,000	$10,000
F.	Probability that actual depreciation at end of term will be greater than depreciation stated in the lease (C)*	n/a	35% *	75% *
G.	Average depreciation saved if actual depreciation exceeds depreciation stated in the lease*	n/a	$500*	$1,000*
H.	Value of protection from excess depreciation (F × G)	0	$175	$750

* Hypothetical value

These amounts are only hypothetical averages and probabilities. On any given vehicle, the savings could be substantially more or less than the calculated value of protection from excess depreciation. *See* Future Value for further discussion of the wide range of items that can affect the vehicle's value.

7. the cost or effect on the vehicle's value of any excessive wear and use you (and your family, friends, pets, and others) may cause to a vehicle;

   More Info. For example, if you lease the vehicle and return it at the end of the lease term with a cracked windshield and two bald tires that must be replaced, the excess wear-and-tear charge may be $450. If you purchased the vehicle and traded it or sold it with the cracked windshield and two bald tires, the reduced price you receive because of those problems may be more or less than $450.

8. your ability to obtain funds to purchase the vehicle at the scheduled end of a lease or for a down payment and other front-end costs for another car in a finance plan or another lease; and

9. your ability to find the particular lease or finance terms in the marketplace included in the lease-versus-buy models.

   More Info. For example, a model may compare lease and/or finance plans with no front-end costs or no down payment, respectively, but some lessors or creditors may require a specific down payment and other fees in lease and/or finance transactions.

Problem of complexity

Some models have limitations because, in an attempt to be thorough, they are so complex that they require you to project or estimate certain information that is not readily available regarding:

- the vehicle

your economic circumstances

the underlying lease and loan terms.

This process is often difficult, time-consuming, and imprecise. Also, the estimate or calculation you make may be incorrect, which will affect the results. Examples of items that the models may require you to research or estimate are

1. Lease purchase-option price. If the model requires you to provide a purchase option price and you are not considering a specific lease from a specific lessor (that is, you are considering information from a lease ad or a hypothetical lease that does not provide the purchase option price), you will need to estimate this price. Or if you are considering a specific lease from a specific lessor and the purchase option price is based on a used car guidebook's value (which means there is no specific price in the lease), you will also have to estimate that price. An estimate is required in this situation because the relevant guidebook that provides used car values may not be available until the end of the lease. In either situation, two ways to estimate this price are (1) develop a price from a current residual value guidebook

More Info. Most residual guidebooks for new vehicles use a percentage method for estimating residual values.

Example

Using a Percentage Residual Guidebook

(available only for new vehicles)

A percentage residual guidebook gives the value of the base vehicle stated as a percentage of the Manufacturers Suggested Retail Price (MSRP) for the desired lease term. The MSRP of any dealer added equipment that is listed in the guidebook is added to this amount to get the adjusted MSRP.

Sample page of a Percentage Residual Guidebook

SPARK SPORT UTILITY	**12 Mo.**	**24 Mo.**	**36 Mo.**	**48 Mo.**	**60 Mo.**
1 U86 2d Wagon 4WD	68%	58%	50%	42%	34%
2 U94 4d Wagon 4WD	70%	60%	53%	45%	37%
3 U94 4d Cargo 2WD	50%	45%	40%	35%	30%
Add for CD Player	$250	$200	$150	$100	$75
Add for Moonroof	$450	$400	$350	$300	$250
Deduct for no Cruise Control (except 3)	$100	$100	$100	$100	$100

Follow these steps to determine the future value of a new 4-door (4d) Spark Sport Utility-4 Wheel Drive (4WD) Wagon for a 3-year period of ownership:

1. Find the MSRP (window sticker price) of the vehicle before any deductions are made (e.g., deductions for a special equipment package). Assume that the MSRP is $29,475.

2. Determine if any equipment is being installed by the dealer. Add the MSRP of these items, but do not exceed the maximum amounts shown in the

guidebook. For example, assume that the dealer is adding a sliding moon roof and CD player. Add those items:

Base MSRP	$29,475
Plus dealer installed equipment:	
Sliding moon roof	+ 350
CD player	+ 150
Equals adjusted MSRP	$29,975

3. Find the base residual percentage for the vehicle for the 36-month term. Assume it is 53%.

4. If the initial mileage on the vehicle is more than the stated number of miles at lease inception in the guidebook (e.g., 500 miles) or if the lease annual mileage is different from 15,000 miles a year, find the table for the mileage adjustment and the percentage to add to or subtract from the base percentage. For example, if the annual mileage is 12,000 miles a year, but the guidebook is based on 15,000 miles a year, assume that the mileage adjustment for a 36-month term is 2%. Add this percentage to the base residual percentage to get the adjusted residual percentage: 53% + 2% = 55%

5. The 3 year future value is the Adjusted MSRP times the Adjusted Residual Percentage: $29,975 X 55% = $16,486.25

Most residual value guidebooks for used vehicles use the dollar method for estimating residual values.

Example

Using a Dollar Residual Guidebook

A dollar residual guidebook provides a specific dollar amount for the base vehicle at the end of the lease term. There is an adjustment if the mileage in the lease is more or less than 15,000 miles per year. Also, there are stated additions or deductions for optional equipment. Most residual guidebooks for new vehicles use the percentage method. Residual guidebooks for used vehicles almost always use the dollar method.

Sample page of a Dollar Residual Guidebook

SPARK Sport Utility	**12 Mo.**	**24 Mo.**	**36 Mo.**	**48 Mo.**	**60 mo.**
1 U86 2d Wagon 4WD	$13,000	$11,500	$10,500	$9,500	$7,500
2 U94 4d Wagon 4WD	14,500	13,000	12,875	10,000	8,200
3 U94 4d Cargo 2WD	10,500	10,000	9,000	8,000	6,000
Add for CD Player	250	200	150	100	75
Add for Moonroof	450	400	325	300	250
Deduct for no Cruise Control (except 3)	100	100	100	100	100

Follow these steps to determine the future value of a used 2-year old 4-door (4d) Spark Sport Utility 4-Wheel Drive (4WD) Wagon for a 36-month period of use:

6. Suppose in 2001 you want to lease a 1999 Spark wagon. Go to the 1999 models and look up the base value of the Spark Sport Utility 4WD Wagon. The guidebook will list the equipment required on the vehicle for this value. Compare the actual equipment on the vehicle with this list.

7. If any of the required equipment is missing from the vehicle, *subtract* the stated value of that item (for the 36-month term). For example, if cruise control is a required item and it is not on the vehicle and the guidebook lists the 36-month value as $100, subtract $100 from $12,875:

Base value	$12,875
Minus missing items/cruise control	– 100
Equals	12,775

8. The guidebook will also have a list of equipment and its value (sometimes on a separate page) that may be found on the vehicle.

9. If there is additional equipment not on the required list, *add* the stated value of that item (for the 36-month term). For example, if the vehicle has a sliding moon roof and a CD player that are not on the required list, then add those items:

Base value	$12,875
Minus missing items/cruise control	– 100
Equals	12,775
Plus additional items:	
Sliding moon roof	+ 325
CD player	+ 150
Equals adjusted value	$13,250

10. Mileage adjustment: Finally make any required mileage adjustment. For each model year, a chart will show an amount to add or subtract based on the beginning mileage plus permitted mileage over the term. The adjustment may be based on the Current Retail Value (CRV) of the vehicle.

    If a 2-year-old model has 20,000 miles and the lease permits 12,000 miles per year for the 36-month term, the mileage adjustment may tell you to add an amount determined by multiplying the CRV of the vehicle times 6%:

Adjusted value	$13,250	
Plus or minus mileage adjustment	∀1,440	(CRV of $24,000 times 6%)
Equals final value	$14,690	

You may want to consult the reference librarian in your local library. There may also be a charge for the printed or Internet information.

or (2) project a price from a current used car guidebook. In some instances, you may also need to compare this price with the residual value in your lease agreement.

More Info. If you purchase the vehicle at the end of the lease and your lease has a fair market value purchase option, you may pay more or less than the residual value. If you pay more, you will have paid more than the initial gross capitalized cost when you add the purchase price to the initial capitalized cost reduction plus the depreciation and any amortized amounts you paid over the term. If the residual value in the lese agreement is lower than the projected residual value in a standard industry guidebook, there is a higher probability that the fair market value purchase-option price will be higher. The fair market value price can be either a wholesale or a retail amount. The definition of the fair market value purchase price will also affect the probability that the purchase price will be greater than (or less than) the residual value.

Example. The following table shows the probability that the purchase-option price will be greater than the residual value and shows the additional cost to you of purchasing the vehicle at lease-end compared with purchasing it initially. The probability and potential additional cost is shown for 2 leases with different residual values.

	Finance	Lease A	Lease B
A. Purchase price (finance) or gross capitalized cost (lease)	$22,000	$22,000	$22,000
B. Residual value	n/a	$11,500	$13,000

C.	Depreciation paid over the term (A – B)	n/a	$10,500	$9,000
D.	Probability that published guidebook value purchase price will exceed residual value*	n/a	75%*	25%*
E.	Average additional cost if published guidebook value exceeds lease residual value*	n/a	$1,000*	$500*
F.	Added potential cost from lease purchase (D × E)	0	$750	$125

* Hypothetical value

To evaluate this lease fully, you should also consider the potential purchase savings, and the potential added purchase costs shown above. A similar table could be developed showing the probability that the purchase price would be less than the residual value that would accrue a savings, compared with purchasing the vehicle initially.

2. Residual values. The model may require you to search for residual values, either to insert this information in the model or to ensure the accuracy of the residual value used in the model. If the residual value is incorrect, it will affect other lease terms.

3. Costs based upon length of lease or financing. Some items in the comparison can change—for example, the security deposit (lease), up-front costs (lease or financing), APR (financing), or residual value (lease)—based on the length of the lease or finance agreement you select. Therefore, you will need to repeat the calculation each time you change the length of the agreement. If you do not change all the finance or lease items as required, the result will be incorrect or not what you intended.

4. Time value of money. There is usually a difference in the number, timing, and/or amount of up-front costs and monthly payments in the lease and finance plans you are considering. Many models assume that you will (1) invest the resulting cost difference, (2) use it to reduce the balance on an existing loan, or (3) use it for another purpose. These models assume a specific interest rate or yield to reflect this value or ask you to provide a rate. They also assume that you will actually invest or save this difference and receive the benefit. However, there are two problems with this approach: (1) You may not be able to identify the proper rate or yield and/or (2) You may not have the money available for these uses.

More Info. The value of any difference in the amounts due at signing in a lease versus a finance agreement is calculated as the difference in the initial amount times the value received from the use of that difference. The value you receive could be the return from investing the difference or the interest savings from paying another debt.

Example. If the lease requires an initial payment of $1,200 and the finance agreement requires an initial payment of $2,000, the $800 difference could be invested to generate earnings or used to pay off other bills and thereby save interest payments. These earnings or savings will generate investment earnings or interest savings that should be applied to the cost of the lease. Generally, it is better to do this calculation after deducting any income tax due on the earnings.

If the $800 difference is deposited in a money market account earning 5% taxable funds and your tax rate is 30%, the effective monthly after-tax interest rate is $5\% \div 12 \times (1 - 30\%) = .2917\%$. The benefit for each month in the lease term is \$800 × .2917% = \$2.33 per month. If the \$800 difference is used to pay a non-deductible credit card debt at 16%, the benefit received each month in the lease term is \$800 × 16% ÷12 = \$10.67 per month.

Similar to the value of the difference in payments at the beginning of a lease versus a purchase, the value of any difference in monthly payments should also be included in the buy-versus-lease comparison. The methodology is the same as for any difference in the initial payments except that the amount of the savings will be different each month and should include the reinvestment of any interest earnings received from investments or interest savings received from the debt payments. Thus, a table would have to be developed that shows how the monthly payment savings and earnings from those savings accumulate.

Example. Continue the above example for the difference in initial payments. If the lease monthly payment is \$40 less than the finance and the difference is used to pay a credit card debt at a monthly rate of 1.333% (16% APR), the following calculation would be required to incorporate both the initial payment difference and the monthly payment difference.

Col. A Time period	**Col. B** Initial lease payment difference plus monthly payment difference	**Col. C** Accumulated interest from previous months	**Col. D** Total payment difference plus earnings	**Col. E** Interest saved equals Col. D times 1.333%	**Col. F** End of month total savings amount (D + E)
Beginning	\$800.00	0	800.00	10.67	810.67
Month 2	840.00	10.67	850.67	11.34	862.01
Month 3	880.00	22.01	902.01	12.02	914.03
~	~	~	~	~	~
Month 36					

If the interest rate benefit were different in any month, the column E monthly interest rate multiplier would change for that month. Thus, you would have to be able to project the return you would receive on the payment difference over the full term to accurately include this economic effect.

Bottom Line

There are various limitations of lease-versus-buy comparison models. Do these limitations mean the models are useless or misleading? No. Some of these models can serve as a helpful starting point in the lease-versus-buy decision. However, be aware that the models are not perfect tools for the comparison, and do not rely upon them as the sole, or final, factor in your decision. Carefully consider all the information you can obtain about the costs and features of leasing or financing; shop around; talk with family, friends, and fellow workers who have financed and/or leased, and then make your decision.