

BDO KNOWS:
**TROUBLED DEBT
RESTRUCTURING, DEBT
MODIFICATION AND
EXTINGUISHMENT**



A Practice Aid From BDO's National Assurance Practice
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To ensure compliance with Treasury Department regulations, we wish to inform you that any tax advice that may be contained in this communication (including any attachments) is not intended or written to be used, and cannot be used, for the purpose of (i) avoiding tax-related penalties under the Internal Revenue Code or applicable state or local tax law provisions or (ii) promoting, marketing or recommending to another party any tax-related matters addressed herein.

Material discussed in this publication is meant to provide general information and should not be acted on without professional advice tailored to your individual needs.



▶ BACKGROUND AND PURPOSE

COMPANIES FREQUENTLY FUND THEIR OPERATIONS IN PART USING DEBT AND MAY RENEGOTIATE THEIR DEBT FOR A VARIETY OF REASONS FROM INCREASING BORROWINGS TO FINANCE AN EXPANSION OF THEIR OPERATIONS TO MANAGING CASH FLOW DIFFICULTIES.

The debtor and creditor may agree to modify the current loan agreement (or debt instrument) or to exchange one loan agreement (or debt instrument) for another. The accounting guidance applicable to accounting for the restructuring of obligations does not distinguish between a loan agreement, a payable, and a debt instrument, and we will use the term “loan” and “debt” interchangeably in this Practice Aid. This Practice Aid discusses the accounting for restructured debt from the perspective of the debtor. The document is intended to be used by practitioners of all experience levels. The examples are highlighted in gray. Users interested in only the accounting standards and interpretive guidance can pass over the highlighted areas of the Practice Aid. The examples within the body of the Practice Aid are simple and designed to explain the concepts. Appendix A provides simple examples using a different acceptable method of analysis. Appendix B provides more complex examples using both acceptable methods of analysis and is designed for users who understand the basics of debt modification.

The debtor’s accounting for the restructured loan depends on the facts and circumstances surrounding the changes to the loan. The appropriate accounting model depends on whether (a) there is a change in lender, (b) the transaction is considered to be a troubled debt restructuring and (c) the loan agreement has substantially changed. The accounting literature does not distinguish a modification of a loan agreement from an exchange of loan agreements between the same debtor and creditor. If the debtor pays off the creditor of the original loan with proceeds from a new lender, then the debtor company should report the original loan as extinguished. If the debtor restructures the loan with the original creditor, then the debtor should first consider troubled debt restructuring accounting. If troubled debt accounting is inapplicable, then the debtor should determine whether the loan is substantially changed. If the restructured loan is not substantially changed from the original loan, the loan is considered to be modified. If the restructured loan is substantially changed from the original loan, the original loan is considered to be extinguished, and the

restructured loan is treated as a new borrowing. If a company and its creditor are related parties, then any debt extinguishment resulting in a gain likely is a capital transaction, the effects for which are not reported in the statement of operations.¹

This Practice Aid provides the tests to determine the applicable model for accounting for a loan that is restructured with the same lender. The flowcharts in the Practice Aid summarize these tests. Depending on the results of the tests, the debtor may have to account for the restructured debt by:

- **Troubled debt restructuring** – Changing the amount of interest expense recognized in the statement of operations prospectively or recognizing a gain in the statement of operations using the basic extinguishment model (see below).
- **Modification or extinguishment** – Modifying the effective interest expense recognized in the statement of operations prospectively or derecognizing the carrying amount of the original loan using the basic extinguishment model (see below).

The Basic Extinguishment Model

The extinguishment model for troubled debt restructurings and other extinguishments is outlined in ASC Subtopic 470-50, Debt Modifications and Extinguishments, and ASC Subtopic 470-60, Troubled Debt Restructurings by Debtors. The model requires that whenever an existing debt obligation is extinguished, the debtor should recognize a gain or loss in the statement of operations for the difference between the reacquisition price and the net carrying amount of the extinguished debt. Key definitions are:

- **Reacquisition price** – The amount paid on extinguishment (e.g., the fair value of the securities issued, fair value of assets transferred, cash paid) and miscellaneous costs of reacquisition. If a company extinguishes debt early through issuance of common or preferred stock or the transfer of assets, the company should determine the reacquisition price of the debt by the fair value of (a) the stock issued, (b) the assets transferred or (c) the debt, whichever is more clearly evident. In a partial pay down of the debt, the company can use whichever is more clearly evident of either (a) or (b) as the reacquisition price.
- **Net carrying amount** – The face amount of the old debt, minus/plus unamortized discount/premium (fees paid to/received from the creditor), minus unamortized debt issue costs (fees paid to third parties), plus any accrued interest.
- **Effective interest rate** – The discount rate that equates the present value of all future cash payments with the net carrying amount of the debt and provides a constant return over the life of the debt.
- **Debt discount or premium** – Debt discounts are any fees paid by the debtor to the creditor and premiums are any fees paid by the creditor to the debtor. For example, if the debt has a discount, a company borrows less than the face amount of the debt and pays a higher rate of interest than the stated interest rate. If the debt has a premium, the company borrows more than the face amount of the debt and pays a lower rate of interest than the stated interest rate.
- **Debt issue costs** – Debt issue costs include third-party fees such as legal costs, accounting costs, investment banking or banking fees (other than fees paid to the creditor), registration costs, and other costs directly attributable to realizing the proceeds of the debt issued. Debt issue costs should be reported in the balance sheet as deferred charges under ASC 835-30-45-3, Imputation of Interest, Presentation.

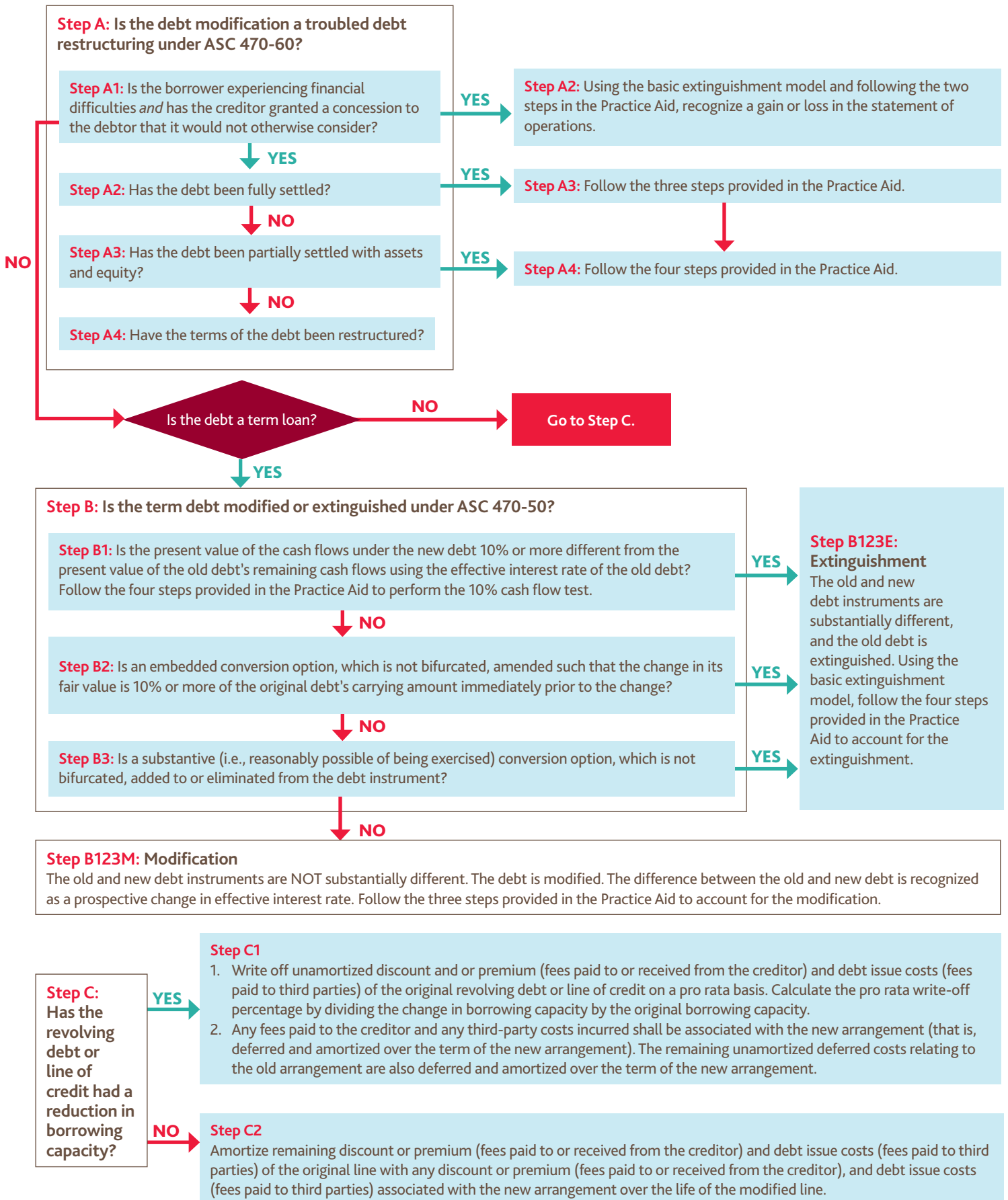
There is diversity in practice regarding the classification of the gain or loss upon the extinguishment of debt. Certain companies classify the gain or loss in interest expense. Other companies report the gain or loss on debt extinguishments separately. Both classifications are acceptable. It is not acceptable to classify a gain or loss on extinguishment of debt as an extraordinary item unless the gain or loss meets the criteria for presentation as an extraordinary item in ASC 225-20, Extraordinary and Unusual Items. We believe it will be rare that a gain or loss on extinguishment of debt meets those criteria.

This Practice Aid also considers accounting for preferred stock modification and extinguishments. The Aid does not discuss the extinguishment of convertible debt with a beneficial conversion feature. The Aid does not discuss situations in which the debtor restates its liabilities generally, for example a debtor that has filed a petition with the bankruptcy court and expects there will be a general restatement of its liabilities as part of its reorganization as a going concern under Chapter 11 of the Bankruptcy Code.

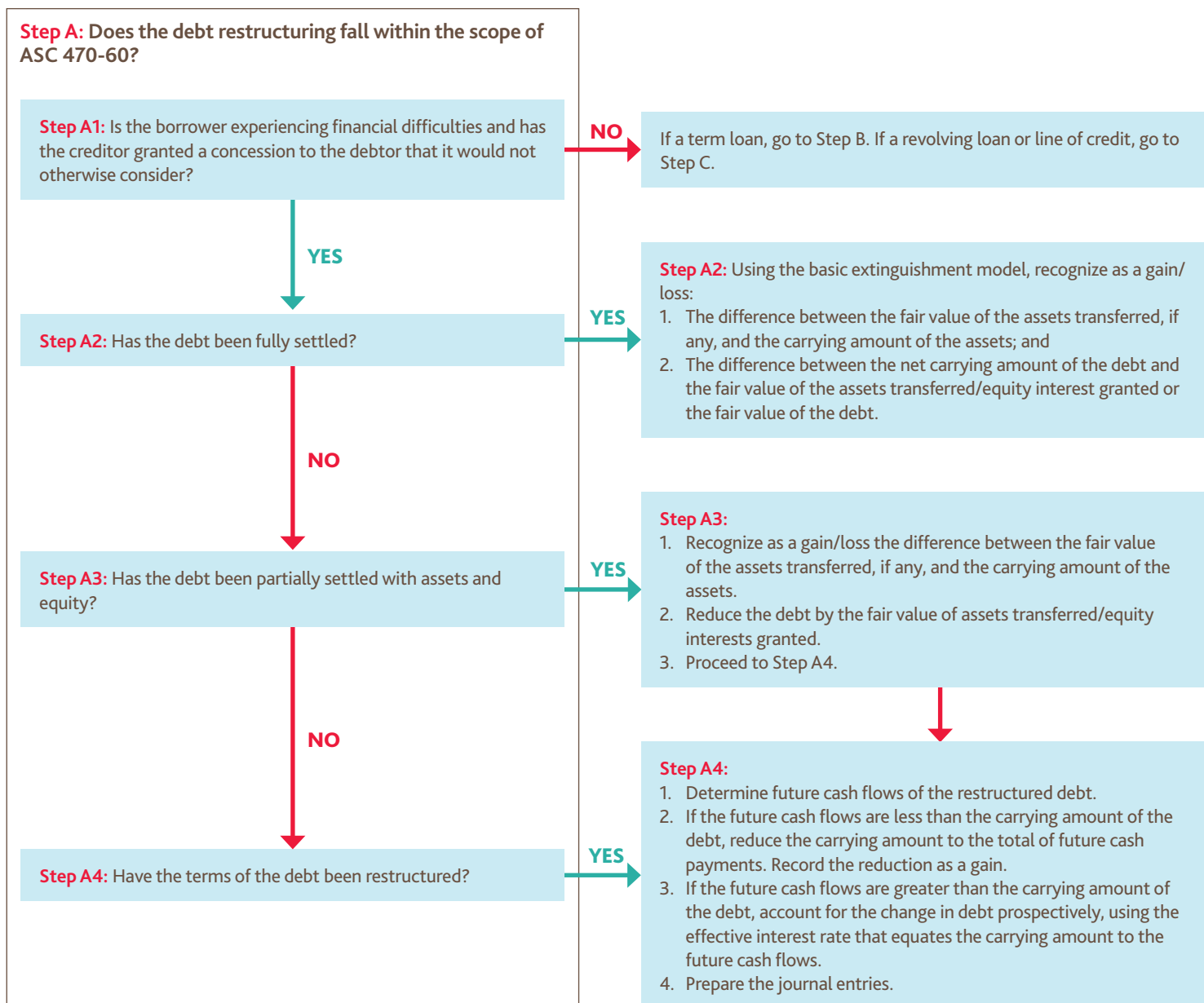
For our related Practice Aid, BDO Knows: Complex Financial Instruments, see <http://www.bdo.com/download/1365>.

¹ See Sagar S. Teotia, [Remarks before the 2010 AICPA National Conference on Current SEC and PCAOB Developments](#), "Debt Extinguishment – Related Party," for a discussion of extinguishment transactions between related parties that result in capital transactions.

TROUBLED DEBT RESTRUCTURING, DEBT MODIFICATION AND EXTINGUISHMENT FLOWCHART



STEP A: TROUBLED DEBT RESTRUCTURING



▶ TROUBLED DEBT RESTRUCTURING

STEP A: DOES THE DEBT RESTRUCTURING FALL WITHIN THE SCOPE OF ASC 470-60, TROUBLED DEBT RESTRUCTURING?

Troubled Debt Restructuring

ASC 470-60 and this section of the Practice Aid discuss troubled debt restructuring from the perspective of the debtor. For troubled debt restructuring from the perspective of the creditor, see ASC 310-40, Troubled Debt Restructurings by Creditors. Under ASC 470-60-15 as summarized in this section, the two key features of a troubled debt restructuring are that the debtor is experiencing financial difficulties and the creditor has provided concessions associated with the economic situation of the debtor.

FINANCIAL DIFFICULTIES AND CREDITOR GRANTED CONCESSIONS

Step A1: Is the Borrower Experiencing Financial Difficulties and Has the Creditor Granted a Concession to the Debtor That It Would Not Otherwise Consider?

The debtor should assess whether it is experiencing financial difficulties if it has had deterioration in credit since the debt was originally issued. Indicators of such deterioration might be a decrease in credit rating, a drop in the value of loan collateral, or generally poor performance in the company's industry sector. ASC 470-60-55-8 notes that all of the following factors are indicators that the debtor is experiencing financial difficulties:

- The debtor is currently in default on any of its debt.
- The debtor is in the process of or has declared bankruptcy.
- There is substantial doubt about the debtor continuing as a going concern.
- The debtor has securities that have been delisted.
- The debtor forecasts that its cash flows will be insufficient to service the existing debt (principal and interest).
- The debtor does not have access to any other funds to service its debt.

The debtor is not considered to be experiencing financial difficulties if the company is currently servicing its old debt and can obtain funds at a rate equal to the current market interest rate for nontroubled debtors from other creditors and the creditor agrees to restructure the debt solely to reflect decreases in market interest rates or improvement of creditworthiness of the debtor.

A creditor generally grants a concession to a debtor in an attempt to protect as much of its investment as possible. Under ASC 470-60-55-10, if the debtor's effective borrowing rate on the new debt is less than the effective borrowing rate of the old debt immediately prior to the restructuring, the creditor has granted a concession. The effective interest rate is defined as the discount rate that equates the present value of all future cash payments with the net carrying amount of the debt and provides a constant return over the life of the debt.

A restructuring of troubled debt may include, but is not necessarily limited to, one or a combination of the following:

- Transfer of assets or issuance of equity interest;
- Modification of terms of the debt such as:
 - Absolute or contingent² reduction of the stated interest rate;
 - Extension of the maturity date or dates at a stated interest rate lower than the current market rate for new debt with similar risk;
 - Absolute or contingent² reduction of the face amount or maturity amount of the debt; and/or
 - Absolute or contingent² reduction of accrued interest.

² If the troubled debt restructuring includes contingent interest and principal payments, we advise that you consult with your accounting advisor.

FULL SETTLEMENT

Step A2: Has the Debt Been Fully Settled?

A debtor may transfer assets and/or equity interests to the creditor to fully settle the debt. Under ASC 470-60-35-2 to 4, the debtor company should use the basic extinguishment model outlined on page four to account for the gain/loss on the settlement. The debtor should recognize two components of the gain/loss upon settlement:

1. The difference between the fair value of the assets transferred, if any, and the carrying amount of those assets, classified as gain/loss on asset disposal; and
2. The difference between the net carrying amount of the debt and the fair value of the assets transferred/equity interest granted or the fair value of the debt settled, whichever is more clearly evident, classified as gain/loss on debt restructuring.

For example, a company transfers a building with a net book value of \$1,500,000 and a fair value of \$2,000,000 to its creditor in full settlement of a \$2,200,000 debt obligation. Under (1) the company recognizes a gain on transfer of the building of \$500,000 for the difference between fair value and net carrying amount of the building. Under (2) the company records a gain of \$200,000 on the settlement of the debt for the difference between the fair value of the building transferred and the \$2,200,000 net carrying amount of the debt.

PARTIAL SETTLEMENT

Step A3: Has the Debt Been Partially Settled with Assets and Equity?

Companies that restructure debt by transferring assets should recognize the difference between the fair value and carrying amount of assets transferred to the creditor as a gain or loss. The carrying amount of the debt should be reduced by the fair value of the assets transferred or of the equity interest granted under ASC 470-60-35-2. For partial settlement, the guidance precludes companies from utilizing the fair value of the debt to calculate the reduction of the carrying amount of the debt. This prohibition prevents arbitrary allocations between extinguished and outstanding debt. If a company pays cash in partial settlement of the debt, the carrying amount of the debt should be reduced by the amount of cash paid. No gain on the restructuring of the debt should be recognized if the remaining carrying amount of the debt exceeds the total future cash payments of the debt (principal plus interest) remaining after the restructuring. If the number of future payments is indeterminate because the face amount and accrued interest is payable on demand, estimates of total future cash payments should be based on the maximum number of periods possible under the revised debt agreement. The company should follow the guidance in Step A4 to determine the accounting for the remaining life of the debt.

RESTRUCTURED TERMS

Step A4: Have the Terms of the Debt Been Restructured?

Under ASC 470-60-35-5 to 6, the debtor in a troubled debt restructuring that involves a modification of the terms of the debt should perform the following steps:

1. Determine the future cash flows on the restructured debt including both principal and interest.
2. If the future cash flows are less than the carrying amount of the debt:
 - a. Reduce the carrying amount to the total of future cash payments; and
 - b. Record the reduction as a gain.
3. If the future cash flows are greater than the carrying amount of the debt, account for the change in the debt prospectively by determining the effective interest rate that equates the carrying amount of the debt to the present value of the remaining cash flows.
4. Prepare the journal entries.

The debtor generally incurs third-party costs, such as legal and accounting fees, when it restructures debt. If the fees are directly attributable to the issuance of equity, the company should deduct these fees from the amount recorded for that equity interest. If the fees the company incurred are for both the issuance of equity and the restructured debt, and cannot be separated, then the fees should be allocated on a reasonable basis (e.g., pro rata). If the future cash flows of the new debt are less than the carrying amount of the old debt, the fees reduce the amount of the gain recognized. If the future cash flows of the new debt are greater than the carrying amount of the old debt, the company should expense the fees associated with the restructuring.

If the debtor company determines that the restructuring is not a troubled debt restructuring, then it should analyze the change in debt to determine whether it is a modification or extinguishment by testing the restructuring under Step B (term debt) or Step C (revolving debt).

Analyze a Troubled Debt Restructuring – R Company – Gain

FACTS

R Company has debt with a carrying amount of \$5,000 currently owed to UO Company. R Company is having financial difficulties and UO Company grants R Company a concession on its debt. After negotiations with UO Company, R Company's debt is reduced to \$3,000 due in 10 years, with interest of 5 percent due annually.

ANALYSIS

Step A4.1: What future cash flows will R Company pay to UO Company on the restructured debt?

The future cash flows on the restructured debt total \$4,500 (\$3,000 of principal plus \$1,500 interest (\$150 per year for 10 years). The future cash flows of \$4,500 are less than the carrying amount of the debt.

Step A4.2: What amount will R Company record to reduce the carrying amount of the debt and to record the gain?

R Company will reduce the carrying amount of the debt by \$500 (\$5,000 – \$4,500) and record a gain of \$500.

Step A4.4: What entries will R Company record at the date of the restructuring and for the remaining life of the debt?

R Company will not record any further interest on the debt. When the company pays the balance of the debt in year 10, it will extinguish the debt.

Dr	Old Debt	\$5,000			
			Cr	New Debt	\$4,500
			Cr	Gain-Restructured Debt	\$500
Years 1 – 10					
Dr	New Debt	\$150			
			Cr	Cash	\$150
Year 10					
Dr	New Debt	\$3,000			
			Cr	Cash	\$3,000

Analyze a Troubled Debt Restructuring – S Company – No Gain

FACTS

S Company has debt that is due to its creditor, UO Company of \$2,000 on August 1, 2012. S Company is having financial difficulties and UO Company grants S Company a concession on its debt. After negotiations with UO Company, S Company will have debt with a face amount of \$1,500, due over 10 years with an interest rate of 7.5 percent.

ANALYSIS

Step A4.1: What future cash flows will S Company pay to UO Company on the restructured debt?

S Company determines the annual interest and principal payment on a \$1,500 note with an interest rate of 7.5 percent to be \$221 by using TValue as shown in the schedule below. The company concludes that the future cash flows ($\$221 \times 10 = \$2,210$) are greater than the carrying amount of \$2,000.

Nominal Annual Rate: 7.500 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	08/01/2012	\$1,500	1		
2	Payment	08/01/2013	\$221*	10	Annual	08/01/2022

*Calculated by TValue

Step A4.3: What is S Company's effective interest rate on the restructured debt?

S Company determines the effective interest rate of the new debt to calculate the entries for the remainder of the life of the debt. S Company uses TValue as shown in the schedule below to determine that the annual effective interest rate on the new debt is 1.856 percent:

Compound Period: Monthly
Nominal Annual Rate: 1.856 percent*

Amortization Schedule – Normal Amortization

#	Date	Payment	Interest	Principal	Balance
1	08/01/2013	221	37	184	1,816
2	08/01/2014	221	34	187	1,629
3	08/01/2015	221	30	191	1,438
4	08/01/2016	221	27	194	1,244
5	08/01/2017	221	23	198	1,046
6	08/01/2018	221	20	201	845
7	08/01/2019	221	16	205	640
8	08/01/2020	221	12	209	429
9	08/01/2021	221	8	213	217
10	08/01/2022	221	4	217	0

*Calculated by TValue

Step A4.4: What entries will S Company record at the date of the restructuring and for the remaining life of the debt?

S Company will not record an entry at the date of the restructuring because the future cash flows are greater than the carrying amount of the debt.

When S Company makes its annual debt payment, it will record the interest expense at the calculated effective interest rate using the amortization schedule above.

August 1, 2013					
Dr	Interest Expense	\$37			
Dr	Debt	\$184			
			Cr	Cash	\$221
August 1, 2014					
Dr	Interest Expense	\$34			
Dr	Debt	\$187			
			Cr	Cash	\$221
August 1, 2015					
Dr	Interest Expense	\$30			
Dr	Debt	\$191			
			Cr	Cash	\$221
August 1, 2016					
Dr	Interest Expense	\$27			
Dr	Debt	\$194			
			Cr	Cash	\$221
August 1, 2017					
Dr	Interest Expense	\$23			
Dr	Debt	\$198			
			Cr	Cash	\$221

August 1, 2018					
Dr	Interest Expense	\$20			
Dr	Debt	\$201			
			Cr	Cash	\$221
August 1, 2019					
Dr	Interest Expense	\$16			
Dr	Debt	\$205			
			Cr	Cash	\$221
August 1, 2020					
Dr	Interest Expense	\$12			
Dr	Debt	\$209			
			Cr	Cash	\$221
August 1, 2021					
Dr	Interest Expense	\$8			
Dr	Debt	\$213			
			Cr	Cash	\$221
August 1, 2022					
Dr	Interest Expense	\$4			
Dr	Debt	\$217			
			Cr	Cash	\$221

STEP B: TERM DEBT MODIFICATION AND EXTINGUISHMENT

Step B: Is the term debt modified or extinguished under ASC 470-50?

Note: Refer to Step C for revolving debt and lines of credit.

Step B1: Is the present value of the cash flows under the new debt 10% or more different from the present value of the old debt's remaining cash flows using the effective interest rate of the old debt? Follow the four steps to perform the 10% test:

1. Determine the terms of the original debt (old debt) and the restructured debt (new debt).
2. Calculate the effective interest rate of the old debt, including interest payments at the contractual interest rate of the debt, debt issue costs, and debt discounts or premiums.
3. Determine, using the effective interest rate of the old debt:
 - a. The present value of the remaining cash flows of the old debt; and
 - b. The present value of the cash flows of the restructured terms of the new debt.
4. Calculate the percentage difference of the present value of the cash flows of the new debt and the present value of the remaining cash flows of the old debt. Is the difference at least 10 percent?

YES

Step B123E: Extinguishment

The old and new debt instruments are substantially different, and the old debt is extinguished. Using the basic extinguishment model, follow the four steps to account for the extinguishment:

1. Determine the fair value of the new debt.
2. Prepare the entry to write off the old debt and record the new debt. Any difference is recorded as a gain or loss in the statement of operations:
 - a. Write off the unamortized discount/premium (fees paid to/received from the creditor) and debt issue costs (fees paid to third parties) associated with the old debt.
 - b. Capitalize the new debt issue costs (fees paid to third parties).
 - c. Write off the old debt and record the new debt at fair value. Because the debt is recorded at fair value, any debt discount/premium (fees paid to/received from the creditor) is not separately presented.
3. Calculate the effective interest rate of the new debt.
4. Prepare the entries for the remaining life of the new debt.

NO

Step B2: Was an embedded conversion option, which is not bifurcated, amended such that the change in its fair value is 10 percent or more of the original debt's carrying amount immediately prior to the change?

YES

NO

Step B3: Was a substantive (i.e., reasonably possible of being exercised) conversion option, which is not bifurcated, added to or eliminated from the debt instrument?

YES

NO

Step B123M: Modification

The old and new debt instruments are NOT substantially different. The debt is modified. The difference between the old and new debt is recorded as a change in effective interest rate. Follow these three steps to account for the modification:

1. Record the entry upon modification.
 - a. Expense the debt issue costs (fees paid to third parties) incurred to modify the debt.
 - b. Recognize fees paid to/received from the creditor as a debt discount/premium.
 - c. Record any change in the amount of the debt and cash received/paid, if applicable.
2. Calculate the effective interest rate of the modified debt.
3. Prepare the entries for the remaining life of the modified debt.

▶ TERM DEBT MODIFICATION AND EXTINGUISHMENT

STEP B: IS THE TERM DEBT MODIFIED OR EXTINGUISHED UNDER ASC 470-50?

Introduction to Debt Extinguishment and Modification Under ASC 470-50

Once the company has determined that the changes to the terms of its debt do not represent a troubled debt restructuring under ASC 470-60, then the company must assess the change for debt modification or extinguishment under ASC 470-50. While the accounting model for extinguishment is the same under ASC 470-60 and ASC 470-50 (see page 4), the accounting model for debt modification is different under the two standards. Consequently, it is important to select the appropriate model and to always perform Step A, the troubled debt restructuring test, first. As noted above, this analysis is performed only if the change in debt is between the same debtor and creditor.

If the company concludes that the change to the terms of its debt is not a troubled debt restructuring, then the change (e.g., due date, interest rate, collateral, amount) should be analyzed under Step B. ASC 470-50-40-10 establishes three tests for determining if the debt is "substantially different" and therefore extinguished. If any one of the three tests is passed, the debt is substantially different, and the debtor then follows the basic extinguishment model on page 4 and records a gain or loss in the statement of operations. The three tests are:

1. *Ten percent or more difference in cash flows* – The present value of the cash flows under the terms of the new debt instrument is 10 percent or more different from the present value of the old debt's remaining cash flows using the effective interest rate of the old debt.
2. *Embedded conversion option fair value difference is 10 percent or more* – The change in the fair value of an embedded conversion option that is not bifurcated (calculated as the difference between the fair value of the embedded conversion option immediately before and after the change) is at least 10 percent of the carrying amount of the original debt instrument immediately prior to the change.
3. *Addition or elimination of a substantive conversion option* – A modification or an exchange of debt instruments that adds a substantive conversion option that is not bifurcated or eliminates a nonbifurcated conversion option that was substantive at the date of the modification or exchange. If this is the case, there is no need to perform tests one and two.

Tests two and three apply to changes in debt instruments in circumstances in which the embedded conversion option is not bifurcated (i.e., the option is not a derivative asset or liability and may be accounted for in equity). These tests do not apply to conversion options that are separately accounted for as derivative assets or liabilities before the change, after the change, or both before and after the change. In these circumstances, any change in the fair value of the bifurcated derivative is recorded in the statement of operations as a gain or loss. Further, the change in the debt is tested for modification and extinguishment solely using the 10 percent cash flow test.

Extinguishment

As noted above, if the debtor determines that the original loan has been extinguished, then the new loan should be recorded at fair value. The debtor should determine the fair value of the new debt based on the guidance in ASC 820, Fair Value Measurement. Under the ASC, the fair value of the new debt would be the price that a debtor would pay to transfer a liability in an orderly transaction between market participants. It is not appropriate to assume that the fair value of the new debt is equivalent to the carrying amount of the old debt, the face amount of the new debt, or the present value of the new debt's cash flows calculated for purposes of the 10 percent cash flow test (the discount rate for the 10 percent test is not necessarily the market rate that should be used to calculate fair value). Generally, it is challenging for companies to calculate the fair value of the new debt, and the debtor may want to consider hiring a valuation specialist. See the example in Step B for one approach in determining the fair value of a loan.

The four steps for accounting for and recording a debt extinguishment, Steps B123.1E – B123.3E, are:

1. Determine the fair value of the new debt.
2. Prepare the entry to write off the old debt and record the new debt. Any difference is recorded as a gain or loss in the statement of operations:
 - a. Write off the unamortized discount/premium (fees paid to/received from the creditor) and debt issue costs (fees paid to third parties) associated with the old debt.
 - b. Capitalize the new debt issue costs (fees paid to third parties).

- c. Write off the old debt and record the new debt at fair value. Because the debt is recorded at fair value, any debt discount/premium (fees paid to/received from the creditor) is not separately presented.
3. Calculate the effective interest rate of the new debt.
4. Prepare the entries for the remaining life of the debt.

Modification

If a company determines that its debt has been modified rather than extinguished, under ASC 470-50-40-14, the company accounts for the change by calculating a new effective interest rate for the modified loan based on the carrying amount of the debt and the present value of the revised future cash flow payment stream. Modification does not result in recognition of a gain or loss in the statement of operations, but does impact interest expense recognized in the future. Upon a modification, the debtor should not recognize a beneficial conversion feature or reassess an existing beneficial conversion feature.

The three steps for accounting for and recording a debt modification, Steps B123.1M – B123.3M, are:

1. Record the entry upon modification.
 - a. Expense the debt issue costs (fees paid to third parties) incurred to modify the debt.
 - b. Recognize fees paid to/received from the creditor as a debt discount/premium.
 - c. Record any change in the amount of the debt and cash received/paid, if applicable.
2. Calculate the effective interest rate of the modified debt.
3. Prepare the entries for the remaining life of the modified debt.

Details of Steps B123.1M – B123.3M, follow with examples.

CHANGES IN THE CASH FLOWS OF THE OLD AND NEW DEBT

Step B1: Have the Cash Flows of the Old and New Debt Changed by More than 10 Percent?

Guidance and Definitions

ASC 470-50-40 offers the following guidance and definitions to assist in performing the 10 percent cash flow test.

- **Discount rate** – The discount rate to be used to calculate the present value of the cash flows is the effective interest rate, for accounting purposes, of the original debt instrument.
- **Cash flows** – The cash flows of the new debt instrument include all cash flows specified by the terms of the new debt instrument plus any amounts paid by the debtor to the creditor less any amounts received by the debtor from the creditor as part of the exchange or modification (i.e., the change in the amount of the borrowing). If the debtor gave the creditor warrants or stock as a “sweetener” to effect the modification or exchange, these sweeteners are included in the cash flows of the new debt instrument.
- **Floating interest rate** – If the original debt instrument and/or the new debt instrument has a floating interest rate, then the variable rate in effect at the date of the exchange or modification is to be used to calculate the cash flows of the variable-rate instrument.
- **Callable/puttable debt** – If either the new debt instrument or the original debt instrument is callable or puttable, then separate cash flow analyses are to be performed assuming exercise and nonexercise of the call or put. The cash flow assumptions that generate the smaller change would be the basis for determining whether the 10 percent threshold is met.
- **Contingent payments** – If the debt instruments contain contingent payment terms or unusual interest rate terms, judgment should be used to determine the appropriate cash flows.
- **Third-party fees** – Third-party fees should not be included in the present values of the old and new debt cash flows for purposes of Step B1.3 below.
- **Cumulative changes within one year** – If within one year of the current transaction the debt has been exchanged or modified without being deemed to be substantially different, then the debt terms that existed a year ago should be used to determine whether the current exchange or modification is substantially different.
- **Change in value of embedded conversion option** – If such a change results from an exchange of debt instruments or a modification in the terms of an existing debt instrument, the change is not included in the 10 percent cash flow test. Rather, a separate test is performed by comparing the change in the fair value of the embedded conversion option to the carrying amount of the old debt instrument immediately before the modification. See Step B2.

The debtor should include in the analysis changes in the cash flow due to changes in the debt principal, interest rates, and or maturity dates. Under ASC 470-50-05-4, the analysis should also include fees paid to/from the debtor and creditor, such as fees to change debt recourse features, priority of the debt, collateral, covenants, waivers, guarantees, and option features. If the debtor or creditor pays noncash fees in for example, stock, warrants, or other assets, the fair value of these fees should be included in the analysis as a day-one cash outflow or inflow.

If the change in debt includes a change in the principal amount, we believe that there are two acceptable methods to perform the 10 percent test: the Gross Method and the Net Method. To explain the methods, we assume that R Company has old debt of \$100 million and new debt with the same creditor of \$120 million. The new debt is not a troubled debt restructuring. The Gross Method is a comparison of the cash flows of the old debt (\$100 million) and the new debt (\$120 million). For purposes of the new debt's cash flow test, the change in principal (\$20 million) is treated as a day-one cash inflow, as in our example, or an outflow. The Net Method compares the cash flows related to the lowest principal balance common to the old and new debt (\$100 million), also referred to as the rollover debt or rollover piece. If the new debt exceeds the old debt, the amount of new debt that exceeds the old debt is treated as a separate amount of new debt (\$20 million). If the old debt exceeds the new debt, the amount of old debt in excess of the new debt is treated as an extinguishment. Companies should select either the Gross or Net Method for performing the 10 percent test and should consistently apply the selected method (see examples below).

The debt modification/extinguishment analysis differs for loan participations and loan syndications. In a loan participation, a single lead creditor makes a loan to the debtor and then transfers participation interests in the loan to other creditors. A debtor company need only perform a single cash flow analysis for a loan participation because from the company's perspective, there is only one creditor. In a loan syndication, the debtor has a credit relationship with multiple creditors, i.e., each member of the syndicate. As a result, the debtor would need to perform a cash flow analysis for each creditor in the loan syndicate in a debt modification/extinguishment analysis.

If an intermediary is involved, the debt modification/extinguishment analysis differs depending on whether the intermediary is acting as the debtor's agent or as a creditor (a principal). ASC 470-50-55-1 to 5 provides guidance for distinguishing between an agent and a principal. If the intermediary is acting as an agent for the debtor company, the company and the agent are considered one, and the company should act as though it transacted directly with the creditor. If the intermediary is acting as a principal, the intermediary is treated like a third-party creditor in the debt modification/extinguishment analysis.

There are four steps to the 10 percent cash flow test, Steps B1.1 – B1.4:

1. Determine the terms of the original debt (old debt) and the restructured debt (new debt).
2. Calculate the effective interest rate of the old debt, including interest payments at the contractual interest rate of the debt, debt issue costs (fees paid to third parties), and debt discounts/premiums (fees paid to/received from the creditor).
3. Determine, using the effective interest rate of the old debt:
 - a. The present value of the remaining cash flows of the old debt; and
 - b. The present value of the cash flows of the new debt.
4. Calculate the percentage difference of the present value of the cash flows of the new debt and of the present value of the remaining cash flows of the old debt. Conclude on whether the change in the debt is an extinguishment or a modification.

Analyze a Debt Modification Using the 10 Percent Cash Flow Test – Gross Method

FACTS

UO Company lends \$750,000 to R Company on January 1, 2010. The debt is due on December 31, 2014 – it is issued at par, the contractual interest rate is 8 percent, the fee paid to the creditor (discount) is 4 percent of the face amount of the debt or \$30,000. Debt issue costs for lawyers and accountants amounted to \$20,000. Interest is due annually and principal is due on December 31, 2014.

R Company records the following entry on the date it borrows the \$750,000 from UO Company:

Dr	Cash	\$700,000			
Dr	Debt Discount	\$30,000			
Dr	Debt Issue Costs	\$20,000			
			Cr	Debt	\$750,000

On January 1, 2013, R Company borrows an additional \$375,000 from UO Company as it needs greater liquidity to finish developing and begin marketing a new product. UO Company agrees to extend the due date of the original debt three years and to make the additional debt due on the same date, December 31, 2017. UO also agrees to maintain the interest rate of the old debt, 8 percent. In return, R Company provides 20,000 shares of its common stock to UO Company with a fair value of \$45,790. R Company pays \$33,000 of debt issue costs to its accountant and attorneys for work associated with the loan modification. At January 1, 2013, R Company had amortized \$38,107 of the debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties); \$11,893 remained to be amortized. R Company uses the Gross Method and all calculations shown below assume the Gross Method has been used.

For the same example using the Net Method, see Appendix A. For a more complex example of an amortizing loan that includes both the Gross and the Net Method, see Appendix B.

ANALYSIS

Step B1: 10 percent Cash Flow Test Analysis

Using the 10 percent cash flow test, is R Company's change in debt a modification or extinguishment?

Step B1.1: What are the terms of R Company's old debt and new debt?

		Old Debt	New Debt
Face Amount		\$750,000	\$1,125,000
Contractual Interest Rate		8%	8%
Issuance/Restructure Date		01/01/2010	01/01/2013
Type of Cash Flows	Date	Amount	Amount
Debt	01/01/2010	\$750,000	
Debt Discount (fees paid to the creditor)	01/01/2010	-\$30,000	
Debt Issue Costs (fees paid to third parties)	01/01/2010	-\$20,000	
Annual Interest Payment	12/31/2010- 12/31/2014	-\$60,000	
Unamortized Debt Discount (fees paid to the creditor) and Debt Issue Costs (fees paid to third parties)	01/01/2013		-\$11,893
Additional Debt	01/01/2013		\$375,000
Debt Discount (fees paid to the creditor) – Common Stock	01/01/2013		-\$45,790
Debt Issue Costs (fees paid to third parties)	01/01/2013		-\$33,000
Annual Interest Payment	12/31/2013- 12/31/2017		-\$90,000
Principal Payment	12/31/2014	-\$750,000	
Annual Interest Payment	12/31/2015		
Principal Payment	12/31/2017		-\$1,125,000

Step B1.2: What is the effective interest rate of R Company's old debt? Include in the calculation interest payments at the contractual rate of interest, debt issue costs (fees paid to third parties), and debt discount (fees paid to the creditor).

R Company uses TValue as shown in the schedule below to determine that the annual effective interest rate on the old debt is 9.754 percent:

Compound Period: Annual

Nominal Annual Rate: 9.754 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2010	\$750,000	1		
2	Loan	01/01/2010	-\$30,000	1		
3	Loan	01/01/2010	-\$20,000	1		
4	Payment	12/31/2010	\$60,000	5	Annual	12/31/2014
5	Payment	12/31/2014	\$750,000	1		

*Calculated by TValue

Step B1.3: What is the present value of the old and new debt?

Step B1.3a: What is the present value of the remaining cash flows of R Company's old debt using the effective interest rate of the original debt?

R Company calculates the present value of the remaining cash flows to the creditor for the old debt using the effective interest rate of the original debt and TValue to be \$727,270:

Compound Period: Annual

Nominal Annual Rate: 9.754 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$727,270*	1		
2	Payment	12/31/2013	\$60,000	2	Annual	12/31/2014
3	Payment	12/31/2014	\$750,000	1		

*Calculated by TValue

Step B1.3b: What is the present value of the cash flows of R Company's new debt using the effective interest rate of the original debt?

R Company calculates the present value of the cash flows to the creditor for the new debt using the effective interest rate of the original debt to be \$720,771:

Compound Period: Annual

Nominal Annual Rate: 9.754 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$720,771*	1		
2	Loan	01/01/2013	\$375,000	1		
3	Loan	01/01/2013	-\$45,790	1		
4	Payment	12/31/2013	\$90,000	5	Annual	12/31/2017
5	Payment	12/31/2017	\$1,125,000	1		

*Calculated by TValue

Step B1.4: What is the percentage difference of the present values of the cash flows of R Company's new debt and the present value of the remaining cash flows of the old debt?

Percentage difference Gross Method – $720,771/727,270 = 99.1$ percent, a .9 percent difference

R Company concludes that the restructured debt represents a modification as the percentage difference is less than 10 percent.

R Company's debt does not include a conversion option. Consequently, R Company answers Steps B2 and B3 "no" and continues to Step 123 Modification.

Step B123: Modification

Step B123.1M: What entry does R Company make upon modification?

Step B123.1Ma: How does the Company account for debt issues costs (fees paid to third parties) at the time of the modification?

Debt issue costs are expensed. The Company incurred \$33,000 in debt issue costs (fees paid to attorneys and accountants) for the modification. Since these fees are expensed, they are not included in the calculation of effective interest rate of the modified debt.

Dr	Debt Modification Expense	\$33,000			
			Cr	Cash	\$33,000

Step B123.1Mb: How does R Company account for the fees paid to the creditor at the time of the modification?

The fees paid to the creditor are deducted from the loan proceeds as a debt discount. R Company issued shares of its common stock with a fair value of \$45,790 to UO Company for the debt modification.

Dr	Debt Discount	\$45,790			
			Cr	Common Stock	\$45,790

Step B123.1Mc: What does the Company record for the incremental debt and cash received, combined with the entries for a and b?

R Company records the following entry at the date of modification.

January 1, 2013 – Date of the Modification					
Dr	Cash	\$342,000			
Dr	Debt Discount	\$45,790			
Dr	Debt modification expense	\$33,000			
			Cr	Debt	\$375,000
			Cr	Common Stock	\$45,790

Step B123.2M: What is the effective interest rate of the modified debt?

The Company includes in its calculation of effective interest rate the interest payments at the contractual rate, remaining debt issue costs (fees paid to third parties) and discount (fees paid to the creditor) from the old debt, and discount (fees paid to the creditor) from the new debt, and determines the rate to be 9.335 percent:

		New Debt Gross
Effective Interest Rate		9.335%
	Date	Amount
Old Debt	01/01/2013	\$750,000
Additional New Debt	01/01/2013	\$375,000
Unamortized Debt Issue Costs and Discount of Old Debt	01/01/2013	-\$11,893
Fees Paid to the Creditor (Common Stock) for New Debt	01/01/2013	-\$45,790
Annual Interest Payment	12/31/2013- 12/31/2017	-\$90,000
Principal Payment	12/31/2017	\$1,125,000

R Company uses TValue as shown in the schedule below to determine the annual effective interest rate on the new debt to be 9.335 percent, and uses this information to prepare the journal entries:

Compound Period: Annual

Nominal Annual Rate: 9.335 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$750,000	1		
2	Loan	01/01/2013	\$375,000	1		
3	Loan	01/01/2013	-\$45,790	1		
4	Loan	01/01/2013	-\$11,893	1		
5	Payment	12/31/2013	\$90,000	5	Annual	12/31/2017
6	Payment	12/31/2017	\$1,125,000	1		

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$750,000				\$750,000
Loan	01/01/2013	\$375,000				\$1,125,000
Loan	01/01/2013	-\$45,790				\$1,079,210
Loan	01/01/2013	-\$11,893				\$1,067,317
1	12/31/2013		\$90,000	\$99,366	-\$9,366	\$1,076,683
2	12/31/2014		\$90,000	\$100,513	-\$10,513	\$1,087,196
3	12/31/2015		\$90,000	\$101,495	-\$11,495	\$1,098,691
4	12/31/2016		\$90,000	\$102,568	-\$12,568	\$1,111,259
5	12/31/2017		\$90,000	\$103,741	-\$13,741	\$1,125,000
6	12/31/2017		\$1,125,000	0	\$1,125,000	0

Step B123:3M: What entries does R Company record each year until the debt is paid off on December 31, 2017?

Using the amortization schedules above, R Company prepares the following journal entries.

December 31, 2013					
Dr	Interest Expense	\$99,366			
			Cr	Debt Discount	\$9,366
			Cr	Cash	\$90,000
December 31, 2014					
Dr	Interest Expense	\$100,513			
			Cr	Debt Discount	\$10,513
			Cr	Cash	\$90,000
December 31, 2015					
Dr	Interest Expense	\$101,495			
			Cr	Debt Discount	\$11,495
			Cr	Cash	\$90,000
December 31, 2016					
Dr	Interest Expense	\$102,568			
			Cr	Debt Discount	\$12,568
			Cr	Cash	\$90,000
December 31, 2017					
Dr	Interest Expense	\$103,741			
Dr	Debt	\$1,125,000			
			Cr	Debt Discount	\$13,741
			Cr	Cash	\$1,215,000

Analyze a Debt Extinguishment Using the 10 Percent Cash Flow Test – Gross Method

FACTS

Private Equity Company lends \$1,000,000 to R Company on January 1, 2012. Interest is due annually and principal is due with the final payment on December 31, 2016. The debt is issued at par, the contractual interest rate is 10 percent, and the fee paid to the creditor (the discount) is 5 percent of the face amount of the debt or \$50,000. Debt issue costs for lawyers and accountants amounted to \$40,000. R Company records the following entry on the date it borrows \$1,000,000 from Private Equity Company:

Dr	Cash	\$910,000			
Dr	Debt Discount	\$50,000			
Dr	Debt Issue Costs	\$40,000			
			Cr	Debt	\$1,000,000

On January 1, 2015, R Company negotiated with Private Equity Company to receive an additional \$900,000 and add it to the balance of the note with a due date of December 31, 2019. R Company determined that the new borrowing did not represent a troubled debt restructuring because the company was not having financial difficulties and Private Equity Company did not provide any concessions. R Company borrowed the additional \$900,000 from Private Equity Company as it needed capital to develop a new product.

R Company paid its accountants and attorneys \$45,000 for services rendered for the new debt (debt issue costs). Private Equity Company increased the interest rate to 12 percent. R Company paid Private Equity Company a fee of \$81,288 for the new debt.

At January 1, 2015, R Company had amortized \$68,052 of the debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties); \$21,948 remained to be amortized.

R Company uses the Gross Method and all calculations shown below assume the Gross Method has been used.

For the same example using the Net Method, see Appendix A. For a more complex example of an amortizing loan that includes both the Gross and the Net Method, see the Appendix B.

ANALYSIS

Step B1: 10 percent Cash Flow Test

Using the 10 percent cash flow test, is R Company's change in debt a modification or extinguishment?

Step B1.1: What are the terms of R's old debt and new debt?

		Old Debt	New Debt
Face Amount		\$1,000,000	\$1,900,000
Contractual Interest Rate		10%	12%
Issuance/Restructure Date		01/01/2012	01/01/2015
Terms	Date	Amount	Amount
Debt	01/01/2012	\$1,000,000	
Debt Discount (fees paid to the creditor)	01/01/2012	-\$50,000	
Debt Issue Costs (fees paid to third parties)	01/01/2012	-\$40,000	
Annual Interest Payment	12/31/2012- 12/31/2016	-\$100,000	
Remaining Unamortized Debt Discount (fees paid to the creditor) and Debt Issue Costs (fees paid to third parties)	01/01/2015		-\$21,948
Additional Debt	01/01/2015		\$900,000
Debt Issue Costs (fees paid to third parties)			-\$45,000
Debt Discount (fees paid to the creditor)	01/01/2015		-\$81,288
Principal Payment	12/31/2016	-\$1,000,000	
Annual Interest Payment	12/31/2015- 12/31/2019		-\$228,000
Principal Payment			-\$1,900,000

Step B1.2: What is the effective interest rate of R Company's old debt? Include in the calculation interest payments at the contractual interest rate, debt issue costs (fees paid to third parties), and debt discount (fees paid to the creditor, Private Equity Company).

R Company uses TValue as shown in the schedule below to determine that the annual effective interest rate on the old debt is 10.85 percent:

Compound Period: Annual

Nominal Annual Rate: 10.850 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2012	\$1,000,000	1		
2	Loan	01/01/2012	-\$50,000	1		
3	Loan	01/01/2012	-\$40,000	1		
4	Payment	12/31/2012	\$100,000	5	Annual	12/31/2016
5	Payment	12/31/2016	\$1,000,000	1		

*Calculated by TValue

Step B1.3: What is the present value of the old and new debt?

Step B1.3a: What is the present value of the remaining cash flows of R Company's old debt using the effective interest rate of the original debt?

R Company calculates the present value of the cash flows remaining to be paid to the creditor using the effective interest rate of the original debt to be \$985,685:

Compound Period: Annual

Nominal Annual Rate: 10.850 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Payment	01/01/2015	\$985,685*	1		
2	Payment	12/31/2015	\$100,000	2	Annual	12/31/2016
3	Payment	12/31/2016	\$1,000,000	1		

*Calculated by TValue

Step B1.3b: What is the present value of the cash flows of R Company's new debt using the effective interest rate of the original debt?

R Company calculates the present value of the cash flows to be paid to the creditor on the new debt using the effective interest rate of the original debt to be \$1,162,909:

Compound Period: Annual

Nominal Annual Rate: 10.850 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$1,162,909*	1		
2	Loan	01/01/2015	\$900,000	1		
3	Loan	01/01/2015	-\$81,288	1		
4	Payment	12/31/2015	\$228,000	5	Annual	12/31/2019
5	Payment	12/31/2019	\$1,900,000	1		

*Calculated by TValue

Step B1.4: What is the percentage difference of the present values of the cash flows of R Company's new debt and the present value of the remaining cash flows of the old debt?

Percentage difference – $1,162,909/985,685 = 118$ percent, an 18 percent difference

R Company concludes that the restructured debt represents an extinguishment as the change was greater than 10 percent.

R Company continues to Steps B123.1-4 Extinguishment.

Step B123.1E: What is the fair value of R Company's new debt?

In accordance with ASC 470-50-40, R Company will record the new debt at fair value. The company determines its fair value interest rate to be 14 percent given quotes it received from other lenders before proceeding with the loan from Private Equity Company. R Company refers to the interest and principal cash flow payments of the new debt in calculating the fair value of the debt at its fair value interest rate to be \$1,770,139:

		New Debt At Fair Value
Fair Value Interest Rate		14%
Issuance/Restructure Date		01/01/2015
Type of Cash Flows	Date	Amount
Annual Interest Payment	12/31/2015 -12/31/2019	-\$228,000
Principal Payment	12/31/2019	-\$1,900,000

Compound Period: Annual

Nominal Annual Rate: 14.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$1,770,139*	1		
2	Payment	12/31/2015	\$228,000	5	Annual	12/31/2019
3	Payment	12/31/2019	\$1,900,000	1		

*Calculated by TValue

Step B123.2E: What entry does R Company make upon extinguishment? Refer to the Facts and B123.1E for the amounts.

Step B123.2Ea: What amount does R Company write off for the unamortized debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties) associated with the old debt?

The unamortized discount and debt issue costs associated with the old debt of \$21,948 are written off to expense.

Step B123.2Eb: What amount does R Company capitalize for debt issue costs (fees paid to third parties) associated with the new debt?

Debt issue costs are capitalized when a debt extinguishment has occurred. Consequently, the company capitalized debt issue costs of \$45,000 which it paid in cash.

Step B123.2Ec: What amount does R Company write off for the old debt and record for the new debt?

The old debt is written off at its face amount of \$1,000,000. The new debt is recorded at cash of \$900,000 and a debt with a fair value of \$1,770,139 (\$1,900,00 less a discount of \$129,861). The difference of \$129,861 is recorded as a gain on debt extinguishment and netted with the other amounts written off. The fee paid to the creditor of \$81,288 upon issuance of the new debt is written off (netted with the gain on debt extinguishment) since the debt is recorded at fair value.

R Company summarizes these entries and records the gain on extinguishment as the difference:

January 1, 2015 – Date of Extinguishment							
c.	Dr	Old Debt	\$1,000,000				
b.	Dr	Debt Issue Costs – New Debt	\$45,000				
c.	Dr	Cash	\$773,712				
c.	Dr	Debt Discount – Fair Value	\$129,861	a.	Cr	Debt Issue Costs and Debt Discount – Old Debt	\$21,948
				c.	Cr	New Debt	\$1,900,000
				c.	Cr	Gain on Debt Extinguishment	\$26,625

Step B123.3E: What is the effective interest rate of R Company's new debt?

R Company calculates the effective interest rate of the new debt using TValue to be 14.738 percent. Note, since the fee paid to the creditor of \$81,288 has been written off upon extinguishment, this fee is not included in the effective interest rate calculation:

		New Debt At Fair Value
Effective Interest Rate		14.738%
Issuance/Restructure Date		01/01/2015
Type of Cash Flows	Date	Amount
Debt	01/01/2015	\$1,770,139
Debt Issue Costs	01/01/2015	-\$45,000
Annual Interest Payment	12/31/2015-12/31/2019	-\$228,000
Principal Payment	12/31/2019	-\$1,900,000

Compound Period: Annual

Nominal Annual Rate: 14.738 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$1,770,139	1		
2	Loan	01/01/2015	-\$45,000	1		
3	Payment	12/31/2015	\$228,000	5	Annual	12/31/2019
4	Payment	12/31/2019	\$1,900,000	1		

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal
Loan	01/01/2015	\$1,770,139			\$1,770,139
Loan	01/01/2015	-\$45,000			\$1,725,139
1	12/31/2015		\$228,000	\$253,553	\$1,750,692
2	12/31/2016		\$228,000	\$258,016	\$1,780,708
3	12/31/2017		\$228,000	\$262,439	\$1,815,147
4	12/31/2018		\$228,000	\$267,515	\$1,854,662
5	12/31/2019		\$228,000	\$273,339	\$1,900,000
6	12/31/2019		\$1,900,000	0	0

*Calculated by TValue

Step B123.4E: What entries does R Company record each year until the debt is paid off on December 31, 2019?

December 31, 2015					
Dr	Interest Expense	\$253,553			
			Cr	Debt Issue Costs and Debt Discount	\$25,553
			Cr	Cash	\$228,000
December 31, 2016					
Dr	Interest Expense	\$258,016			
			Cr	Debt Issue Costs and Debt Discount	\$30,016
			Cr	Cash	\$228,000
December 31, 2017					
Dr	Interest Expense	\$262,439			
			Cr	Debt Issue Costs and Debt Discount	\$34,439
			Cr	Cash	\$228,000
December 31, 2018					
Dr	Interest Expense	\$267,515			
			Cr	Debt Issue Costs and Debt Discount	\$39,515
			Cr	Cash	\$228,000
December 31, 2019					
Dr	Interest Expense	\$273,339			
Dr	Debt	\$1,900,000			
			Cr	Debt Issue Costs and Debt Discount	\$45,339
			Cr	Cash	\$2,128,000

CHANGES IN THE VALUE OF THE EMBEDDED CONVERSION OPTION

Step B2: Has the Value of the Embedded Conversion Option Changed by More than 10 Percent?

If a company exchanges debt with the same creditor and the change in cash flows is less than 10 percent, the debt still needs to be tested for extinguishment if it includes an embedded conversion option that is not bifurcated and has been amended. The new debt is considered substantially different if the change in fair value of the embedded conversion option immediately before and immediately after the modification is equal to or greater than 10 percent of the carrying amount of the original debt instrument immediately before the modification.

If such change is less than 10 percent, then the debt is considered modified, given that the company has already concluded that the debt is modified under the 10 percent cash flow test. If the debt is modified, the company should follow Step B123M. In this case, an increase in the fair value of the embedded conversion option reduces the carrying amount of the debt instrument, increasing the debt discount or reducing the debt premium (fees paid to or received for the creditor), with a corresponding increase in additional paid-in capital. However, a decrease in the fair value of an embedded conversion option resulting from a modification should not be recognized.

If the change in the conversion option is greater than 10 percent, then the debt is considered extinguished, and the steps in StepB123E are followed.

Analyze a Change in Value of an Embedded Conversion Option – Modification

FACTS

PE Ventures lends \$750,000 to R Company on January 1, 2010. The debt is convertible at a conversion price of \$75 per share or 10,000 shares. Since the company is private, the conversion options are not derivatives, and the conversion options are not bifurcated (they cannot be net settled outside the contract). On January 1, 2010, the fair value of the shares was \$50 per share. The debt is due on December 31, 2014 – it is issued at par, and the contractual rate of interest is 8 percent. There is no discount (fees paid to the creditor) and no debt issue costs (fees paid to third parties); interest is due annually and the principal is due at the maturity date. There is no beneficial conversion feature at the date of issuance as the effective conversion price of \$75 is greater than the fair value of \$50 per share.

On January 1, 2013, PE Ventures agrees to extend the due date of the original debt three years to December 31, 2017. PE Ventures maintains the interest rate of the old debt, 8 percent. In return, R Company provides warrants to PE Ventures for 6,667 shares of its common stock (with a fair value of \$15,263) that expire on December 31, 2022. R Company determines that the warrants should be classified in equity. Also, R Company reduces the conversion price on the debt from \$75 per share to \$70 per share. The company is still private and determines that the modified conversion options should not be bifurcated.

R Company has performed Step B1 and concluded the debt is not extinguished.

ANALYSIS

Step B2: What is the change in fair value of the embedded conversion option as a percentage of the carrying amount of the debt at the date of amendment?

R Company now tests to see if the change in the fair value of the embedded conversion is equal to or greater than 10 percent of the carrying amount of the debt. R Company has OuiValue perform a valuation of the conversion option immediately before and after the amendment. Per OuiValue, the fair value of the incremental consideration paid by R Company for the embedded conversion option is calculated as follows, and the percentage difference is 5.2 percent:

Fair value of conversion option before modification	\$589,270
Fair value of conversion option after modification	\$550,000
Fair value of incremental consideration	\$39,270
$\$39,270 / \$750,000 = 5.2\%$	

R Company concludes that since the change in the fair value of the embedded conversion option is less than 10 percent of the carrying amount of the debt, the debt is modified and NOT extinguished. R Company proceeds to perform Step 123M.

Step B123.1M: What entry does R Company make upon modification?

Step B123.1Ma: How does the company account for debt issue costs (fees paid to third parties) at the time of the modification?

Debt issue costs are expensed. The company did not incur any debt issue costs.

Step B123.1Mb: How does R Company account for the fees paid to the creditor at the time of the modification?

The fees paid to the creditor are accounted for as a debt discount. R Company paid \$15,263 in warrants and \$39,270 in incremental value of the conversion options to PE Ventures for the debt modification.

Dr	Debt Discount	\$54,533			
			Cr	APIC – Warrants	\$15,263
			Cr	APIC – Conversion Options	\$39,270

Step B123.1Mc: What does the company record upon the date of the modification?

Since there are no other changes, the entry made is the one noted above in b.

Step B123.2M: What is the effective interest rate of the modified debt?

The company includes in its calculation of effective interest rate the interest payments at the contractual rate, remaining debt issue costs (fees paid to third parties) and debt discount (fees paid to the creditor) from the old debt (if any), fees paid to the creditor from the new debt, and the increase in the fair value of the conversion option, and determines the rate to be 9.92 percent:

Effective Interest Rate		9.920%
Issuance/Restructure Date		01/01/2013
Cash Flows	Date	Amount
Debt	01/01/2013	\$750,000
Fees Paid to the Creditor – Warrants	01/01/2013	-\$15,263
Increase in Fair Value of the Conversion Option	01/01/2013	-\$39,270
Annual Interest Payment	12/31/2013-12/31/2017	-\$60,000
Loan Payment	12/31/2017	-\$750,000

Compound Period: Annual

Nominal Annual Rate: 9.920 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$750,000	1		
2	Loan	01/01/2013	-\$15,263	1		
3	Loan	01/01/2013	-\$39,270	1		
4	Payment	12/31/2013	\$60,000	5	Annual	12/31/2017
5	Payment	12/31/2017	\$750,000	1		

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$750,000				\$750,000
Loan	01/01/2013	-\$15,263				\$734,737
Loan	01/01/2013	-\$39,270				\$695,467
1	12/31/2013		\$60,000	\$68,803	-\$8,803	\$704,270
2	12/31/2014		\$60,000	\$69,865	-\$9,865	\$714,135
3	12/31/2015		\$60,000	\$70,844	-\$10,844	\$724,979
4	12/31/2016		\$60,000	\$71,919	-\$11,919	\$736,898
5	12/31/2017		\$60,000	\$73,102	-\$13,102	\$750,000
6	12/31/2017		\$750,000	0	\$750,000	0

Step B123.3M: What entries will R Company record each year until the debt is paid off on December 31, 2017?

Using the amortization schedules above, R Company prepares the following journal entries:

December 31, 2013					
Dr	Interest Expense	\$68,803			
			Cr	Debt Discount	\$8,803
			Cr	Cash	\$60,000
December 31, 2014					
Dr	Interest Expense	\$69,865			
			Cr	Debt Discount	\$9,865
			Cr	Cash	\$60,000
December 31, 2015					
Dr	Interest Expense	\$70,844			
			Cr	Debt Discount	\$10,844
			Cr	Cash	\$60,000
December 31, 2016					
Dr	Interest Expense	\$71,919			
			Cr	Debt Discount	\$11,919
			Cr	Cash	\$60,000
December 31, 2017					
Dr	Interest Expense	\$73,102			
Dr	Debt	\$750,000			
			Cr	Debt Discount	\$13,102
			Cr	Cash	\$810,000

Analyze a Change in Value of an Embedded Conversion Option – Extinguishment**FACTS**

The facts are the same as for the previous example with one difference. At January 1, 2013, R Company reduces the conversion price on the debt from \$75 per share to \$30 per share. R Company has performed Step B1 and concluded that the debt is not extinguished.

ANALYSIS**Step B2: What is the change in fair value of the embedded conversion option as a percentage of the carrying amount of the debt at the date of amendment?**

R Company now tests to see if the change in the fair value of the embedded conversion is equal to or greater than 10 percent of the carrying amount of the debt. R Company has OuiValue perform a valuation of the conversion option immediately before and after the amendment. Per OuiValue, the fair value of the incremental consideration paid by R Company for the embedded conversion option is calculated as follows:

Fair value of conversion option after modification	\$1,475,000
Fair value of conversion option before modification	\$550,000
Fair value of incremental consideration	\$925,000

Percentage change as a result of the change in conversion price: $\$925,000/\$750,000 = 123$ percent

R Company concludes that since the change in the fair value of the embedded conversion option is greater than 10 percent of the carrying amount of the debt, the debt is extinguished.

R Company proceeds to perform Step 123E.

Step B123.1E: What is the fair value of R Company's new debt?

Based on the above noted valuation, the fair value of R Company's new debt is \$1,475,000. There is no separate impact from the change in conversion rate, as this change is built into the increase in the fair value of the debt.

R Company refers to ASC 470-20-25-13 which states. "...if a convertible debt instrument is issued at a substantial premium, there is a presumption that such premium represents paid-in capital." Since the face amount of the debt is \$750,000, R Company concludes that the \$725,000 premium is substantial, and will record that premium to additional paid-in capital with the offset as a loss on extinguishment.

Step B123.2E: What entry does R Company make upon extinguishment? Refer to Facts and B123.1E for the amounts.

a. and b. Not applicable.

c. What amount does R Company write off for the old debt and record for the new debt?

The company writes off the face amount of the old debt for \$750,000 and records the new debt at \$750,000, its fair value of \$1,475,000 less the premium recorded in APIC of \$725,000. This difference of \$750,000 is recorded as a loss on debt extinguishment. The fee paid to the creditor, the \$15,263 of warrants, is written off and added to the loss on extinguishment. See the T accounts and the entry upon extinguishment below.

Debt			
Bal			\$750,000
Dr	\$750,000	Cr	\$750,000
	\$750,000		\$1,500,000
			\$750,000

APIC			
		Cr	\$725,000
		Cr	\$15,263
		–	\$740,263
		–	

Gain/Loss			
Dr	\$725,000		
Dr	\$15,263		
	\$740,263		–
	\$740,263		

R Company records these entries and including the expense on extinguishment:

January 1, 2013:							
c.	Dr	Old Debt	\$750,000				
c.	Dr	Debt Extinguishment Expense	\$740,263				
				d.	Cr	New Debt	\$750,000
				d.	Cr	APIC – Warrants	\$15,263
				d.	Cr	APIC – Premium	\$725,000

Step B123.3E: What is the effective interest rate of R Company's new debt?

The contractual interest rate of 8 percent is the same as the effective interest rate because there are no fees paid to the creditor or debt issue costs (fees paid to third parties).

Step B123.4E: What entries does R Company record each year until the debt is paid off on December 31, 2017?

December 31, 2013					
Dr	Interest Expense	\$60,000			
			Cr	Cash	\$60,000
December 31, 2014					
Dr	Interest Expense	\$60,000			
			Cr	Cash	\$60,000
December 31, 2015					
Dr	Interest Expense	\$60,000			
			Cr	Cash	\$60,000
December 31, 2016					
Dr	Interest Expense	\$60,000			
			Cr	Cash	\$60,000
December 31, 2017					
Dr	Debt	\$750,000			
Dr	Interest Expense	\$60,000			
			Cr	Cash	\$810,000

ADDITION OR ELIMINATION OF A SUBSTANTIVE CONVERSION OPTION

Step B3: Has a Substantive Conversion Option Been Added or Eliminated?

Under ASC 470-50-40-10, debt is extinguished if a company amends debt with the same creditor by adding or eliminating a substantive conversion option. A substantive conversion option is defined in ASC 470-20-40-7 as a conversion feature that is reasonably possible of being exercised in the future absent the issuer's exercise of a call option. Reasonably possible is defined by reference to ASC 450-10, Contingencies.

When evaluating whether a conversion option is substantive, the debtor should consider the following factors based on ASC 470-20-40-9. For purposes of this evaluation, the holder's intent is not considered:

- The fair value of the conversion option relative to the fair value of the debt instrument. The higher the relative percentage, the more likely it is that the conversion option is substantive.
- The effective annual interest rate per the terms of the debt instrument relative to the estimated effective annual rate of a nonconvertible debt instrument with an equivalent expected term and credit risk. The lower the relative percentage, the more likely it is that the conversion option is substantive.
- The fair value of the debt instrument relative to an instrument that is identical except for which the conversion option is not contingent. A comparison of the fair value of the debt instrument to the fair value of an identical instrument for which conversion is not contingent isolates the effect of the contingencies and may provide evidence about the substance of a conversion feature.
- A qualitative evaluation of the conversion provisions. The nature of the conditions under which the instrument may become convertible may provide evidence that the conversion feature is substantive.

The assessment of whether the conversion feature is substantive should be based on assumptions, considerations, and market data that is available as of the issue date.

In the following fact patterns, R Company has already performed Steps B1 and B2 and has preliminarily concluded that the debt has not been extinguished. The company proceeds to test the change in debt under Step B3.

Analyze Whether a Conversion Option Is Substantive

FACTS – Conversion Option Is Not Substantive

R Company issues \$1,000,000 of debt to UO Company on January 1, 2012 that is due on December 31, 2016. The 8 percent interest is due annually, and the principal amount is due with the final payment on December 31, 2016. On November 30, 2016, R Company negotiates a one-year extension to the debt with UO Company. The interest rate remains unchanged, R Company does not pay any fees to UO or to third parties, but does add a conversion option to the debt. On November 30, the company's stock was trading at \$3.00 a share and the conversion option is priced at \$20 per share.

ANALYSIS

R Company concludes that the conversion option is not substantive because it is unlikely that its stock will reach \$20 before the debt matures and the conversion option expires. Therefore the debt is considered modified. The entry made upon modification and the entries for the remaining life of the debt are calculated under the 10 percent cash flow test which is not presented here.

FACTS – Conversion Option Is Substantive

R Company issues \$10,000,000 of debt to UO Company on January 1, 2015 that is due on December 31, 2019. The 8 percent interest is due annually, and the principal amount is due with the final payment on December 31, 2019. On November 30, 2018, R Company negotiates a two-year extension to the debt with UO Company. The interest rate remains unchanged. R Company does not pay any fees to UO Company or to third parties, but does add a conversion option to the debt. On November 30, the company's stock was trading at \$5 per share and the conversion option is priced at \$6 per share.

ANALYSIS

R Company concludes that the conversion option is substantive because it is reasonably likely of being exercised before the debt matures and the option expires. The company believes that it is reasonably likely that its share price will be greater than \$6 in less than two years, and therefore the conversion option will be exercised. R Company consequently concludes that the debt is extinguished. The company will write off the old debt and record the new debt at fair value; the difference will be recorded as a gain or loss upon debt extinguishment in the statement of operations. The entry upon extinguishment is not presented here.

▶ REVOLVING DEBT OR LINE-OF-CREDIT MODIFICATION OR EXCHANGE

STEP C: HAS THE REVOLVING DEBT OR LINE OF CREDIT HAD A REDUCTION IN BORROWING CAPACITY?

A revolving-debt arrangement or a line-of-credit arrangement (hereafter both are referred to as an LOC) is an agreement that provides the debtor company with the option to make multiple borrowings or draw-downs up to a given maximum amount, to repay part of previous borrowings, and to then borrow again under the same contract. LOCs may include both amounts drawn by the borrowing company (debt) and a commitment by the creditor to make additional amounts available to the company under defined terms (loan commitment).

The analysis of amendments to LOCs is different from that summarized above for analyzing modifications/extinguishments of term loans. Borrowing capacity (amount of LOC multiplied by the remaining term, on an undiscounted basis) is the key used to determine the accounting for a modification to or exchange of an LOC.

Under ASC 470-50-40-21, borrowing capacity is analyzed when a debtor amends its LOC with the same creditor by:

1. Calculating the borrowing capacity of the old arrangement by multiplying the remaining term by the maximum available credit of the LOC; and
2. Calculating the borrowing capacity of the new arrangement by multiplying the term by the maximum available credit of the new LOC.

If the borrowing capacity of the new LOC is greater than or equal to that of the old LOC, then the debtor should defer and amortize over the life of the new LOC any debt issue costs (fees paid to third parties) and unamortized discount/premium (fees paid to/received from the creditor) associated with the old arrangement, in addition to debt issue costs and discount/premium associated with the new arrangement. If the borrowing capacity of the old LOC is greater than the borrowing capacity of the new LOC, then any debt issue costs and unamortized discounts/premiums associated with the old arrangement are written off in proportion to the reduction in borrowing capacity. The debt issue costs and unamortized discount/premium remaining after the proportional write-off, plus the debt issue costs and debt discount/premium associated with the new arrangement are deferred and amortized over the life of the new LOC. It is interesting to note that the model for treatment of third-party costs for changes in the borrowing capacity of LOCs differs from that of term loans. As noted in Step B, there is no pro rata write-off of debt issue costs for term loans; upon extinguishment all unamortized debt issue costs (fees paid to third parties) and debt discount (fees paid to the creditor) of the old debt are written off to the statement of operations.

Analyze a Change in an LOC

FACTS

R Company establishes a three-year LOC arrangement on September 30, 2012 with UR Bank under which R Company can draw up to \$10 million at an interest rate of 8 percent per annum on outstanding amounts. R Company incurs \$33,000 in third-party costs to establish the line and pays the bank a line origination fee of \$45,000. R is amortizing the costs and fees on a straight-line basis over the life of the line. On September 30, 2014, R Company accepts a reduction of the line to \$5 million for the last year of the line in return for a reduction in interest to 5 percent per annum. R Company incurs \$25,000 in third-party costs in association with the LOC modification and pays the bank a \$12,000 fee. On September 30, 2014, R Company has \$1.5 million outstanding on the LOC and \$11,000 of unamortized debt issue costs (fees paid to third parties) and \$15,000 of unamortized discount (fees paid to the creditor).

ANALYSIS

R Company calculates the borrowing capacity under both the old and the new LOC arrangements:

Old borrowing capacity = 1 year * \$10 million = \$10 million

New borrowing capacity = 1 year * \$5 million = \$5 million

The borrowing capacity of the new arrangement is 1/2 (change in borrowing capacity divided by the original borrowing capacity) that under the old arrangement. R Company writes off 1/2 of the unamortized debt issue costs (fees paid to third parties) ($\$11,000/2 = \$5,500$) and discount (fees paid to the creditor) ($\$15,000/2 = \$7,500$). The remaining debt issue costs of \$5,500 are combined with the issuance costs of \$25,000 for a total of \$30,500, which is associated with the new arrangement and amortized over one year, the remaining life of the LOC. The remaining unamortized discount of \$7,500 is combined with the \$12,000 in bank fees associated with the new arrangement for a total of \$19,500 and amortized over one year, the remaining life of the LOC.

▶ PREFERRED STOCK MODIFICATION OR EXTINGUISHMENT

Overview

While the SEC staff's literature (ASC 260-10-S99) addresses how to account for extinguishments of equity-classified preferred shares, it does not define how to determine whether an amendment of equity-classified preferred shares is a modification or extinguishment. Nor does the ASC address the accounting for such an amendment if it is determined to be a modification. ASC paragraph 105-10-05-2 requires that entities analogize to accounting principles for similar transactions or events when there is no guidance for a specific transaction or event. As a result, in this section, we will consider how to account for modifications to preferred shares classified in permanent equity primarily by looking to ASC 470-50, the accounting literature discussed above that addresses modifications and extinguishments of debt, and ASC 718-20, Stock Compensation, the accounting literature that discusses modifications in stock compensation arrangements. First, we will consider the accounting for extinguishments of preferred shares classified in permanent equity, and then we will discuss defining and accounting for modifications of such preferred shares.

If a company is public, an amendment to preferred shares classified in permanent equity will generally affect earnings available to common shareholders and earnings per share similar to the treatment of a preferred dividend. If the company is private, under ASC 505-10, the changes within equity as a result of such an amendment will require disclosure either in the statement of changes in shareholders' equity or in the notes to the financial statements. Amendments to preferred shares classified in permanent equity include adding, eliminating, or changing a conversion option, a redemption feature or date, a dividend rate, and/or voting rights.

Extinguishments

The SEC provides guidance in ASC 260-10-S99, Earnings per Share, on accounting for extinguishments of equity-classified preferred shares. This guidance applies to preferred shares classified in both permanent equity and those classified in mezzanine equity. ASC 260-10 requires that if a company concludes its equity-classified preferred shares are extinguished, the registrant should calculate the difference between:

- a. The fair value of the consideration provided to the holders of the preferred stock and
- b. The carrying amount of the preferred stock in the registrant's balance sheet net of issuance costs.

The registrant should add (if b is greater than a), or subtract (if a is greater than b), the difference to/from net earnings, respectively, to arrive at net earnings available to common shareholders. The SEC staff believes that these changes represent a return to the preferred stockholder and should be treated in a manner similar to the treatment of preferred stock dividends, termed deemed dividends. The deemed dividends resulting from the preferred stock extinguishment change net earnings available to common shareholders, equity, and earnings per share, but do not affect the income statement. However, the deemed dividends and earnings available to common shareholders should be disclosed on the face of the income statement when there is a material difference between net earnings and net earnings available to common shareholders.

If the company that extinguishes equity-classified preferred shares is not public, then we recommend that the company disclose the incremental value conveyed to the preferred stockholders, describe how it was derived, and the accounting for the extinguishment.

Extinguishment or Modification

Under ASC 470-50-4, a debt instrument or a preferred stock instrument that is classified as debt is extinguished if it is substantially different as a result of a restructuring. The debtor company then follows the basic extinguishment model. As discussed above, ASC 470-50 defines changes in debt that represent substantial differences. The ASC does not define when a change in a preferred stock instrument represents a substantial difference, nor does it outline how to account for modifications of equity-classified preferred shares. Consequently, we believe an issuer of preferred stock classified as equity that modifies such an instrument would need to make an accounting policy election for purposes of making this evaluation. We have provided two examples of accounting policies that we believe to be reasonable:

- *Ten percent cash flow test* – Perform the 10 percent cash flow test for the remaining cash flows of the original and modified equity-classified preferred shares. If the present value changes by 10 percent or more, the instrument is considered extinguished. This policy would usually be appropriate for equity instruments with dividend streams that are economically similar to interest payments and preferred stock that is redeemable (not classified as a liability under ASC 480-10 because it is either conditionally redeemable or convertible redeemable).
- *Fair value* – Calculate the fair value of the equity-classified preferred share immediately before and after the amendment. If the fair value changes by 10 percent or more, the instrument is extinguished. This policy is not limited in terms of application.

Whichever policy is chosen, issuers of preferred stock should document the factors considered and judgment used in applying the policy, and should document the factors considered and judgment used in applying the policy in order to support their position. The policy should be disclosed in the notes to the financial statements. All changes that are not considered to be extinguishments are determined to be modifications.

Modifications

Once again, we will consider a model for accounting for the modification of equity-classified preferred stock by analogy to other accounting literature, specifically, ASC 470-50 and ASC 718-20:

- *Prospective accounting* – Under ASC 470-50, prospective accounting for the modification is implemented if the preferred stock issuer has used the 10 percent test and concluded that it has a modification. Registrants refer to ASC 480-10-S99 to select the method of prospective accounting that will result in charges/credits to earnings available to common shareholders. (Under ASC 480-10-S99, once redemption is probable, registrants use the calculated effective yield on the modified preferred stock to determine the new accretion/dividend rate or recognize changes in the redemption value directly as they occur and adjust the carrying value of the security to equal the redemption value at the end of each reporting period.) Private companies disclose the changes in equity resulting from the prospective accounting.
- *Fair value change* – Under ASC 718-20-35, companies with share-based compensation that is classified in equity and is modified, account for the change as the difference in the share-based compensation fair value the moment before and after the modification. Modifications of preferred stock are accounted for based on this guidance. For registrants, the difference is accounted for as a deemed dividend and charged/credited to earnings available to common shareholders. For private companies, the value conveyed to preferred shareholders should be disclosed.

APPENDIX A – ANALYZE A DEBT MODIFICATION AND EXCHANGE USING THE NET METHOD

Appendix A displays the application of the Net Method to the 10 percent cash flow test examples provided in the body of the Practice Aid.

Analyze a Debt Modification Using the 10 Percent Cash Flow Test – Net Method

FACTS

UO Company lends \$750,000 to R Company on January 1, 2010. The debt is due on December 31, 2014 – it is issued at par, the contractual interest rate is 8 percent, and the fee paid to the creditor (discount) is 4 percent of the face amount of the debt or \$30,000. Debt issue costs for lawyers and accountants amounted to \$20,000. Interest is due annually and principal is due on December 31, 2014.

R Company records the following entry on the date it borrows the \$750,000 from UO Company

Dr	Cash	\$700,000			
Dr	Debt Discount	\$30,000			
Dr	Debt Issue Costs	\$20,000			
			Cr	Debt	\$750,000

On January 1, 2013, R Company borrows an additional \$375,000 from UO Company because it needs greater liquidity to finish developing and begin marketing a new product. UO Company agrees to extend the due date of the original debt by three years and to make the additional debt due on the same date, December 31, 2017. UO also agrees to maintain the interest rate of the old debt at 8 percent. In return, R Company provides 20,000 shares of its common stock to UO Company with a fair value of \$45,790. R Company pays \$33,000 of debt issue costs to its accountants and attorneys for work associated with the loan modification. At January 1, 2013, R Company had amortized \$38,107 of the debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties); \$11,893 remain to be amortized. R Company uses the Net Method, and all calculations shown below assume the Net Method has been used.

For a more complex example of an amortizing loan that includes both the Gross and the Net Method, see Appendix B.

ANALYSIS

Step B1: 10 Percent Cash Flow Test Analysis

Using the 10 percent cash flow test, is R Company's change in debt a modification or extinguishment?

Step B1.1: What are the terms of R's old debt and new debt?

		Old Debt	New Debt Rollover Piece	New Debt New Piece
Face Amount		\$750,000	\$750,000	\$375,000
Contractual Interest Rate		8%	8%	8%
Issuance/Restructure Date		01/01/2010	01/01/2013	01/01/2013
Type of Cash Flows	Date	Amount	Amount	
Loan	01/01/2010	\$750,000		
Payment to Creditor	01/01/2010	-\$30,000		
Payments to Third Parties	01/01/2010	-\$20,000		
Annual Interest Payment	12/31/2010-12/31/2014	-\$60,000		
Unamortized Debt Discount (fees paid to the creditor) and Debt Issue Costs (fees paid to third parties)	01/01/2013		-\$11,893	
Debt Discount (fees paid to the creditor) – Common Stock	01/01/2013		-\$45,790*2/3= -\$30,527	-\$45,790*1/3= -\$15,263
Debt Issue Costs (fees paid to third parties)	01/01/2013		-\$33,000*2/3= -\$22,000	-\$33,000*1/3= -\$11,000
Annual Interest Payment	12/31/2013-12/31/2017		-\$60,000	-\$30,000
Principal Payment	12/31/2014	-\$750,000		
Principal Payment	12/31/2017		-\$750,000	-\$375,000

Step B1.2: What is the effective interest rate of R Company's old debt? Include in the calculation interest payments at the contractual rate of interest, debt issue costs (fees to third parties), and debt discount (fees paid to the creditor).

R Company uses TValue as shown in the schedule below to determine that the annual effective interest rate on the old debt is 9.754 percent:

Compound Period: Annual
Nominal Annual Rate: 9.754 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2010	\$750,000	1		
2	Loan	01/01/2010	-\$30,000	1		
3	Loan	01/01/2010	-\$20,000	1		
4	Payment	12/31/2010	\$60,000	5	Annual	12/31/2014
5	Payment	12/31/2014	\$750,000	1		

*Calculated by TValue

Step B1.3: What is the present value of the old and new debt?

Step B1.3a: What is the present value of the remaining cash flows of R Company's old debt using the effective interest rate of the original debt?

R Company calculates the present value of the remaining cash flows to the creditor for the old debt using the effective interest rate of the original debt and TValue to be \$727,270:

Compound Period: Annual
Nominal Annual Rate: 9.754 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$727,270*	1		
2	Payment	12/31/2013	\$60,000	2	Annual	12/31/2014
3	Payment	12/31/2014	\$750,000	1		

*Calculated by TValue

Step B1.3b: What is the present value of the cash flows of R Company's rollover piece of the new debt using the effective interest rate of the original debt?

R Company calculates the present value of the cash flows to the creditor of the rollover piece of the new debt using the effective interest rate of the original debt to be \$730,515:

Compound Period: Annual
Nominal Annual Rate: 9.754 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$730,515*	1		
2	Loan	01/01/2013	-\$30,527	1		
3	Payment	12/31/2013	\$60,000	5	Annual	12/31/2017
4	Payment	12/31/2017	\$750,000	1		

*Calculated by TValue

Step B1.4: What is the percentage difference of the present values of the cash flows of R Company's rollover piece of the new debt and the remaining cash flows of the old debt?

Percentage difference Net Method – $730,515/727,270 = 100$ percent, a less than .1 percent difference

R Company concludes that the restructured debt represents a modification because the percentage difference is less than 10 percent.

R Company's debt does not include a conversion option. Consequently, R Company answers Steps B2 and B3 "no" and continues to Step 123 Modification.

Step B123: Modification

Step B123.1M: What entry does R Company make upon modification?

Step B123.1Ma: How does the company account for debt issue costs (fees paid to third parties) at the time of the modification?

Debt issue costs are expensed. The company incurs \$33,000 in debt issue costs, fees paid to attorneys and accountants, for the modification. Debt issue costs associated with the rollover piece of the debt, \$22,000, are expensed, and consequently not included in the calculation of effective interest rate of the rollover piece of the debt. The \$11,000 of debt issue costs associated with the new piece of the debt are capitalized, and are included in the calculation of effective interest rate of the new piece of the debt.

Dr	Debt Modification Expense	\$22,000			
Dr	Debt Issue Costs	\$11,000			
			Cr	Cash	\$33,000

Step B123.1Mb: How does R Company account for the fees paid to the creditor at the time of modification?

The fees paid to the creditor are deducted from the loan proceeds as a debt discount. R Company issued shares of its common stock with a fair value of \$45,790 as the fee to its creditor. Both the shares associated with the rollover piece of the debt and the new debt piece are accounted for as debt discount.

Dr	Debt Discount	\$45,790			
			Cr	Common Stock	\$45,790

Step B123.1Mc: What does the company record for the incremental debt and cash received, combined with the entries for a and b?

R Company records the following entry at the date of modification:

January 1, 2013 – Date of the Modification					
Dr	Cash	\$342,000			
Dr	Debt Discount	\$45,790			
Dr	Debt Modification Expense – Rollover Piece	\$22,000			
Dr	Debt Issue Costs – New Debt Piece	\$11,000	Cr	Debt – New Debt Piece	\$375,000
			Cr	Common Stock	\$45,790

Step B123.2M: What is the effective interest rate of the rollover debt piece?

The company includes in its calculation of effective interest rate the interest payments at the contractual rate; unamortized debt issue costs (fees paid to third parties) and discount (fees paid to the creditor) from the old debt; and discount (fees paid to the creditor) from the new debt. R Company determines the effective interest rates to be 9.478 percent for the rollover piece and 9.846 percent for the new debt piece:

		Net Rollover Piece	Net New Debt Piece
Effective Interest Rate		9.478%	9.846%
	Date	Amount	
Old Debt	01/01/2013	\$750,000	\$375,000
Unamortized Debt Discount (fees paid to the creditor) and Debt Issue Costs (fees paid to third parties) – Old Debt	01/01/2013	-\$11,893	
Debt Issue Costs (fees paid to third parties)			-\$11,000
Debt Discount (fees paid to the creditor) – Common Stock	01/01/2013	-\$30,527	-\$15,263
Annual Interest Payment	12/31/2013-12/31/2017	-\$60,000	-\$30,000
Principal Payment	12/31/2017	-\$750,000	-\$375,000

R Company uses TValue as shown in the schedule below to determine the annual effective interest rate on the new debt. R Company includes the amortization information in the schedule below for purposes of preparing the journal entries.

Calculating Effective Interest Rate of Debt Rollover Piece

Compound Period: Annual
Nominal Annual Rate: 9.478 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$750,000	1		
2	Loan	01/01/2013	-\$30,527	1		
3	Loan	01/01/2013	-\$11,893	1		
4	Payment	12/31/2013	\$60,000	5	Annual	12/31/2017
5	Payment	12/31/2017	\$750,000	1		

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$750,000				\$750,000
Loan	01/01/2013	-\$30,527				\$719,473
Loan	01/01/2013	-\$11,893				\$707,580
1	12/31/2013		\$60,000	\$66,881	-\$6,881	\$714,461
2	12/31/2014		\$60,000	\$67,717	-\$7,717	\$722,178
3	12/31/2015		\$60,000	\$68,448	-\$8,448	\$730,626
4	12/31/2016		\$60,000	\$69,249	-\$9,249	\$739,875
5	12/31/2017		\$60,000	\$70,125	-\$10,125	\$750,000
6	12/31/2017		\$750,000	0	\$750,000	0

Calculating Effective Interest Rate of New Debt Piece

Compound Period: Annual
Nominal Annual Rate: 9.846 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$375,000	1		
2	Loan	01/01/2013	-\$15,263	1		
3	Loan	01/01/2013	-\$11,000	1		
4	Payment	12/31/2013	\$30,000	5	Annual	12/31/2017
5	Payment	12/31/2017	\$375,000	1		

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$375,000				\$375,000
Loan	1/1/2013	-\$15,263				\$359,737
Loan	1/1/2013	-\$11,000				\$348,737
1	12/31/2013		\$30,000	\$34,243	-\$4,243	\$352,980
2	12/31/2014		\$30,000	\$34,755	-\$4,755	\$357,736
3	12/31/2015		\$30,000	\$35,224	-\$5,224	\$362,959
4	12/31/2016		\$30,000	\$35,738	-\$5,738	\$368,697
5	12/31/2017		\$30,000	\$36,303	-\$6,303	\$375,000
6	12/31/2017		\$375,000	0	\$375,000	0

Step B123.3M: What entries does R Company record each year until the debt is paid off on December 31, 2017?

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization Rollover Piece (from Step B123.2M)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$750,000				\$750,000
Loan	1/1/2013	-\$30,527				\$719,473
Loan	1/1/2013	-\$11,893				\$707,580
1	12/31/2013		\$60,000	\$66,881	-\$6,881	\$714,461
2	12/31/2014		\$60,000	\$67,717	-\$7,717	\$722,178
3	12/31/2015		\$60,000	\$68,448	-\$8,448	\$730,626
4	12/31/2016		\$60,000	\$69,249	-\$9,249	\$739,875
5	12/31/2017		\$60,000	\$70,125	-\$10,125	\$750,000
6	12/31/2017		\$750,000	0	-\$750,000	0

Schedule B – AMORTIZATION SCHEDULE – Normal Amortization New Debt Piece (from Step B123.2M)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$375,000				\$375,000
Loan	1/1/2013	-\$15,263				\$359,737
Loan	1/1/2013	-\$11,000				\$348,737
1	12/31/2013		\$30,000	\$34,243	-\$4,243	\$352,980
2	12/31/2014		\$30,000	\$34,755	-\$4,755	\$357,736
3	12/31/2015		\$30,000	\$35,224	-\$5,224	\$362,959
4	12/31/2016		\$30,000	\$35,738	-\$5,738	\$368,697
5	12/31/2017		\$30,000	\$36,303	-\$6,303	\$375,000
6	12/31/2017		\$375,000	0	-\$375,000	\$375,000

Schedule C – Total of Schedule A and B for Payment, Interest, and Principal Used for Entries Below

	Date	Loan	Payment	Interest	Principal
1	12/31/2013		\$90,000	\$101,124	-\$11,124
2	12/31/2014		\$90,000	\$102,472	-\$12,472
3	12/31/2015		\$90,000	\$103,672	-\$13,672
4	12/31/2016		\$90,000	\$104,987	-\$14,987
5	12/31/2017		\$90,000	\$106,428	-\$16,428

Using Schedule C above, R Company prepares the following journal entries:

December 31, 2013					
Dr	Interest Expense	\$101,124			
			Cr	Debt Discount	\$11,124
			Cr	Cash	\$90,000
December 31, 2014					
Dr	Interest Expense	\$102,472			
			Cr	Debt Discount	\$12,472
			Cr	Cash	\$90,000
December 31, 2015					
Dr	Interest Expense	\$103,672			
			Cr	Debt Discount	\$13,672
			Cr	Cash	\$90,000
December 31, 2016					
Dr	Interest Expense	\$104,987			
			Cr	Debt Discount	\$14,987
			Cr	Cash	\$90,000
December 31, 2017					
Dr	Debt	\$106,428			
Dr	Interest Expense	\$1,125,000			
			Cr	Debt Discount	\$16,428
			Cr	Cash	\$1,215,000

Analyze a Debt Extinguishment Using the 10 Percent Cash Flow Test – Net Method

FACTS

Private Equity Company lends \$1,000,000 to R Company on January 1, 2012. Interest is due annually and principal is due with the final payment on December 31, 2016. The debt is issued at par, the contractual interest rate is 10 percent, and the fee paid to the creditor (the discount) is 5 percent of the face amount of the debt, or \$50,000. Debt issue costs for lawyers and accountants amounted to \$40,000. R Company records the following entry on the date it borrows \$1,000,000 from Private Equity Company:

Dr	Cash	\$910,000			
Dr	Debt Discount	\$50,000			
Dr	Debt issue costs	\$40,000			
			Cr	Debt	\$1,000,000

On January 1, 2015, R Company negotiates with Private Equity Company to receive an additional \$900,000 and add it to the balance of the note with a due date of December 31, 2019. R Company determines that the new borrowing does not represent a troubled debt restructuring as the company was not having financial difficulties and Private Equity Company did not provide any concessions. R Company borrowed the additional \$900,000 from Private Equity because it needed capital to develop a new product.

R Company paid its accountants and attorneys \$45,000 for services rendered for the new debt (debt issue costs). Private Equity Company increased the interest rate to 12 percent. R Company paid Private Equity Company a fee of \$81,288 in cash for the new debt.

At January 1, 2015, R Company had amortized \$68,052 of the debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties); \$21,948 remained to be amortized.

R Company uses the Net Method, and all calculations shown below assume the Net Method has been used.

For a more complex example of an amortizing loan that includes both the Gross and the Net Method, see Appendix B.

ANALYSIS

Step B1: 10 Percent Cash Flow Test

Using the 10 percent cash flow test, is R Company's change in debt a modification or an extinguishment?

Step B1.1: What are the terms of R Company's old debt and new debt?

		Old Debt	New Debt Rollover Piece	New Debt New Piece
Face Amount		\$1,000,000	\$1,000,000	\$900,000
Contractual Interest Rate		10%	12%	12%
Issuance/Restructure Date		01/01/2012	01/01/2015	01/01/2015
Terms	Date	Amount	Amount	
Debt	01/01/2012	\$1,000,000		
Debt Discount (fees paid to the creditor)	01/01/2012	-\$50,000		
Debt Issue Costs (fees paid to third parties)	01/01/2012	-\$40,000		
Annual Interest Payment	12/31/2012-12/31/2016	-\$100,000		
Remaining Unamortized Debt Discount (fees paid to the creditor) and Debt Issue Costs (fees paid to third parties)	01/01/2015		-\$21,948	
Debt Issue Costs (fees paid to third parties)			-\$45,000 *1/1.9 = -\$23,684	-\$45,000 *.9/1.9 = -\$21,316
Debt Discount (fees paid to the creditor)	01/01/2015		-\$81,288 *1/1.9 = -\$42,783	-\$81,288 *.9/1.9 = -\$38,505
Principal Payment	12/31/2016	-\$1,000,000		
Annual Interest Payment	12/31/2017-12/31/2019		-\$120,000	-\$108,000
Principal Payment			-\$1,000,000	-\$900,000

Step B1.2: What is the effective interest rate of R Company's old debt? Include in the calculation interest payments at the contractual interest rate, debt issue costs (fees paid to third parties), and debt discount (fees paid to the creditor, Private Equity Company).

R Company uses TValue as shown in the schedule below to determine that the annual effective interest rate on the old debt is 10.85 percent:

Compound Period: Annual
Nominal Annual Rate: 10.850 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2012	\$1,000,000	1		
2	Loan	01/01/2012	-\$50,000	1		
3	Loan	01/01/2012	-\$40,000	1		
4	Payment	12/31/2012	\$100,000	5	Annual	12/31/2016
5	Payment	12/31/2016	\$1,000,000	1		

*Calculated by TValue

Step B1.3: What is the present value of the old and new debt?**Step B1.3a:** What is the present value of the remaining cash flows of R Company's old debt using the effective interest rate of the original debt?

R Company calculates the present value of the cash flows remaining to be paid to the creditor using the effective interest rate of the original debt to be \$985,685:

Compound Period: Annual
Nominal Annual Rate: 10.850 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Payment	01/01/2015	\$985,685*	1		
2	Payment	12/31/2015	\$100,000	2	Annual	12/31/2016
3	Payment	12/31/2016	\$1,000,000	1		

*Calculated by TValue

Step B1.3b: What is the present value of the cash flows of R Company's rollover debt piece using the effective interest rate of the original debt?

R Company calculates the present value of the cash flows to be paid to the creditor using the effective interest rate of the original debt to be \$1,085,741:

Compound Period: Annual
Nominal Annual Rate: 10.850 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$1,085,741*	1		
2	Loan	01/01/2015	-\$42,783	1		
3	Payment	12/31/2015	\$120,000	5	Annual	12/31/2019
4	Payment	12/31/2019	\$1,000,000	1		

*Calculated by TValue

Step B1.4: What is the percentage difference of the present values of the cash flows of R Company's rollover debt and the present value of the remaining cash flows of the old debt?

Percentage difference – $1,085,741/985,685 = 110.2$ percent, a 10.2 percent difference

R Company concludes that the restructured debt represents an extinguishment as the change was greater than 10 percent.

R Company continues to Steps B123.1-4 Extinguishment.

Step B123.1E: What is the fair value of R Company's new debt?

In accordance with ASC 470-50-40, R Company will record the new debt at fair value. The company determines its fair value interest rate to be 14 percent given quotes it received from other lenders before proceeding with the loan from Private Equity Company. R Company refers to the interest and principal cash flow payments of the new debt in calculating the fair value of the debt to be \$931,652:

		New Debt At Fair Value
Fair Value Interest Rate		14%
Issuance/Restructure Date		01/01/2015
Type of Cash Flows	Date	Amount
Annual Interest Payment	12/31/2015 -12/31/2019	-\$120,000
Principal Payment	12/31/2019	-\$1,000,000

Fair Value of New Debt

Compound Period: Annual
Nominal Annual Rate: 14.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$931,652*	1		
2	Payment	12/31/2015	\$120,000	5	Annual	12/31/2019
3	Payment	12/31/2019	\$1,000,000	1		

*Calculated by TValue

Step B123.2E: What entry does R Company make upon extinguishment? Refer to the Facts and Step B123.1E for the amounts; see T accounts for detail.

Debt			
	bal		\$1,000,000
c.	\$1,000,000	c.	\$1,000,000
		c.	\$900,000
	\$1,000,000		\$2,900,000
			\$1,900,000

Debt Discount			
	\$21,948		bal
c.	\$68,348		
c.	\$38,505	a.	\$21,948
	\$128,801		\$21,948
	\$106,853		

Gain/Loss			
		c.	\$68,348
c.	\$42,783		
a.	\$21,948		
	\$64,731		\$68,348
			\$3,617

Cash			
		b.	\$45,000
		c.	\$42,783
c.	\$900,000	c.	\$38,505
	\$900,000		\$126,288
	\$773,712		

Debt Issue Costs			
b.	\$45,000		
	\$45,000		
	\$45,000		

a. **What amount does R Company write off for the unamortized debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties) associated with the old debt?**

The unamortized debt discount and debt issue costs associated with the old debt of \$21,948 are written off to expense.

b. **What amount does R Company capitalize for debt issue costs (fees paid to third parties) associated with the rollover piece and the new debt piece?**

The company capitalized debt issue costs for both the rollover piece and the new debt piece for a total of \$45,000 which it paid in cash.

c. **What amount does R Company write off for the old debt and record for the new debt piece?**

The old debt is written off at its face amount of \$1,000,000. The rollover debt is recorded at a fair value of \$931,652 (\$1,000,000 less a discount of \$68,348). The difference of \$68,348 is recorded as a gain on debt extinguishment and netted with the other amounts written off. The fee paid to the creditor associated with the rollover debt of \$42,783 is written off (netted with the gain on debt extinguishment) since the debt is recorded at fair value.

The new debt is recorded at its face amount of \$900,000 net of a debt discount (fees paid to the creditor) of \$38,505. The cash received of \$900,000 is recorded.

R Company summarizes these entries and records the loss on extinguishment as the difference:

January 1, 2015 – Date of Extinguishment						
c.	Dr	Old Debt	\$1,000,000			
b.	Dr	Debt Issue Costs – Rollover Piece and New Debt Piece	\$45,000			
c.	Dr	Debt Discount – Rollover Piece to Fair Value	\$68,348			
	Dr	Debt Discount – New Debt	\$38,505			
c.	Dr	Cash	\$773,712			
				b.	Cr	Debt Issue Costs and Debt Discount – Old Debt
						\$21,948
				c.	Cr	New Debt
						\$1,900,000
					Cr	Gain on Loan Extinguishment
						\$3,617

Step B123.3E: What is the effective interest rate of R Company's new debt?

R Company calculates the effective interest rate of the new debt using TValue. Note, since the rollover piece is recorded at fair value, the fee paid to the creditor of \$42,948 has been written off to expense; this fee is not included in the effective interest rate calculation. The effective interest rate for the rollover piece is 14.738 percent and for the new debt piece is 14.023 percent:

		New Debt Rollover Piece At Fair Value	New Debt At Fair Value
Effective Interest Rate		14.738%	14.023%
Issuance/Restructure Date		01/01/2015	01/01/2015
Type of Cash Flows	Date	Amount	Amount
Debt	01/01/2015	\$931,652	\$900,000
Debt Issue Costs (fees paid to third parties)	01/01/2015	-\$23,684	-\$21,316
Debt Discount (fees paid to the creditor)			-\$38,505
Annual Interest Payment	12/31/2015-12/31/2019	-\$120,000	-\$108,000
Principal Payment	12/31/2019	-\$1,000,000	-\$900,000

Effective Interest Rate of New Debt Rollover Piece

Compound Period: Annual

Nominal Annual Rate: 14.738 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$931,652	1		
2	Loan	01/01/2015	-\$23,684	1		
3	Payment	12/31/2015	\$120,000	5	Annual	12/31/2019
4	Payment	12/31/2019	\$1,000,000	1		

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2015	\$931,652				\$931,652
Loan	01/01/2015	-\$23,684				\$907,968
1	12/31/2015		\$120,000	\$133,449	-\$13,449	\$921,417
2	12/31/2016		\$120,000	\$135,798	-\$15,798	\$937,215
3	12/31/2017		\$120,000	\$138,126	-\$18,126	\$955,341

4	12/31/2018		\$120,000	\$140,797	-\$20,797	\$976,138
5	12/31/2019		\$120,000	\$143,862	-\$23,862	\$1,000,000
6	12/31/2019		\$1,000,000	0	\$1,000,000	0

Effective Interest Rate of New Debt Piece

Compound Period: Annual

Nominal Annual Rate: 14.023 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$900,000	1		
2	Loan	01/01/2015	-\$23,684	1		
3	Loan	01/01/2015	-\$38,505	1		
4	Payment	12/31/2015	\$108,000	5	Annual	12/31/2019
5	Payment	12/31/2019	\$900,000	1		

*Calculated by T-Value

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2015	\$900,000				\$900,000
Loan	01/01/2015	-\$23,684				\$876,316
Loan	01/01/2015	-\$38,505				\$837,811
1	12/31/2015		\$108,000	\$117,164	-\$9,164	\$846,975
2	12/31/2016		\$108,000	\$118,771	-\$10,771	\$857,746
3	12/31/2017		\$108,000	\$120,282	-\$12,282	\$870,028
4	12/31/2018		\$108,000	\$122,004	-\$14,004	\$884,032
5	12/31/2019		\$108,000	\$123,968	-\$15,968	\$900,000
6	12/31/2019		\$900,000	0	\$900,000	0

Step B123.4E: What entries does R Company record each year until the debt is paid off on December 31, 2019 (see T accounts for details)?

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization Rollover Piece (from Step B123.3E)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2015	\$931,652				\$931,652
Loan	1/1/2015	-\$23,684				\$907,968
1	12/31/2015		\$120,000	\$133,449	-\$13,449	\$921,417
2	12/31/2016		\$120,000	\$135,798	-\$15,798	\$937,215
3	12/31/2017		\$120,000	\$138,126	-\$18,126	\$955,341
4	12/31/2018		\$120,000	\$140,797	-\$20,797	\$976,138
5	12/31/2019		\$120,000	\$143,862	-\$23,862	\$1,000,000
6	12/31/2019		\$1,000,000	0	1,000,000	0

Schedule B – AMORTIZATION SCHEDULE – Normal Amortization New Debt Piece (from Step B123.3E)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2015	\$900,000				\$900,000
Loan	1/1/2015	-\$23,684				\$876,316
Loan	1/1/2015	-\$38,505				\$837,811
1	12/31/2015		\$108,000	\$117,164	-\$9,164	\$846,975
2	12/31/2016		\$108,000	\$118,771	-\$10,771	\$857,746
3	12/31/2017		\$108,000	\$120,282	-\$12,282	\$870,028
4	12/31/2018		\$108,000	\$122,004	-\$14,004	\$884,032
5	12/31/2019		\$108,000	\$123,968	-\$15,968	\$900,000
6	12/31/2019		\$900,000	0	\$900,000	0

Schedule C – Total of Schedule A and B for Payment, Interest, and Principal Used for Entries Below

	Date	Loan	Payment	Interest	Principal
1	12/31/2015		\$228,000	\$250,613	-\$22,613
2	12/31/2016		\$228,000	\$254,569	-\$26,569
3	12/31/2017		\$228,000	\$258,408	-\$30,408
4	12/31/2018		\$228,000	\$262,801	-\$34,801
5	12/31/2019		\$228,000	\$267,830	-\$39,830

December 31, 2015					
Dr	Interest Expense	\$250,613			
			Cr	Debt Issue Costs and Debt Discount	\$22,613
			Cr	Cash	\$228,000
December 31, 2016					
Dr	Interest Expense	\$254,569			
			Cr	Debt Issue Costs and Debt Discount	\$26,569
			Cr	Cash	\$228,000
December 31, 2017					
Dr	Interest Expense	\$258,408			
			Cr	Debt Issue Costs and Debt Discount	\$30,408
			Cr	Cash	\$228,000
December 31, 2018					
Dr	Interest Expense	\$262,801			
			Cr	Debt Issue Costs and Debt Discount	\$34,801
			Cr	Cash	\$228,000
December 31, 2019					
Dr	Interest Expense	\$267,830			
Dr	Debt	\$1,900,000			
			Cr	Debt Issue Costs and Debt Discount	\$39,830
			Cr	Cash	\$2,128,000

APPENDIX B – ANALYZE A COMPLEX DEBT MODIFICATION USING THE GROSS AND NET METHOD

Appendix B includes two complex examples of Step B1, the 10 percent cash flow test. These examples are based on the base cases in the body of the Practice Aid, but include amortizing principal payments. Also, both the Gross and the Net Methods are presented.

Analyze a Complex Debt Modification Using the 10 Percent Cash Flow Test – Gross and Net Method

FACTS

UO Company lends \$750,000 to R Company on January 1, 2010. The debt is due on December 31, 2014 – it is issued at par, the contractual interest rate is 8 percent, the fee paid to the creditor (discount) is 4 percent of the face amount of the debt or \$30,000. Debt issue costs for lawyers and accountants amounted to \$20,000. Interest and principal payments are due annually in the amount of \$187,804.

R Company records the following entry on the date it borrows the \$750,000 from UO Company:

Dr	Cash	\$700,000			
Dr	Debt Discount	\$30,000			
Dr	Debt Issue Costs	\$20,000			
			Cr	Debt	\$750,000

On January 1, 2013, R Company borrows an additional \$375,000 from UO Company because it needs greater liquidity to finish developing and begin marketing a new product. UO Company agrees to extend the due date of the original debt by three years and to make the additional debt due on the same date, December 31, 2017. UO also agrees to maintain the interest rate of the old debt, 8 percent. In return, R Company provides 20,000 shares of its common stock to UO Company with a fair value of \$45,790. R Company pays \$33,000 of debt issue costs to its accountant and attorneys for work associated with the loan modification. At January 1, 2013, R Company had amortized \$38,107 of the debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties); \$11,893 remained to be amortized. R Company had paid \$415,095 of principal; \$334,905 of principal remained to be paid on the outstanding debt.

This example provides analyses under both the Gross and the Net Method. For simple examples see the body of the Practice Aid for the Gross Method and Appendix A for the Net Method.

ANALYSIS

Step B1: 10 Percent Cash Flow Test Analysis

Using the 10 percent cash flow test, is R Company's change in debt a modification or an extinguishment?

Step B1.1: What are the terms of R Company's old debt and new debt? Calculation of the payment amounts is shown below.

		Old Debt	New Debt Gross	Rollover Piece Net	New Debt Piece Net
Face Amount		\$750,000	\$709,905	\$334,905	\$375,000
Contractual Interest Rate		8%	8%	8%	8%
Issuance/Restructure Date		01/01/2010	01/01/2013	01/01/2013	01/01/2013
Type of Cash Flows	Date	Amount	Amount	Amount	Amount
Debt	01/01/2010	\$750,000			
Debt Discount (fees paid to the creditor)	01/01/2010	-\$30,000			
Debt Issue Costs (fees paid to third parties)	01/01/2010	-\$20,000			
Annual Payment (principal and interest)	12/31/2010	-\$187,804			
Annual Payment (principal and interest)	12/31/2011	-\$187,804			
Annual Payment (principal and interest)	12/31/2012	-\$187,804			
Remaining Principal	01/01/2013		\$334,905	\$334,905	
Unamortized Debt Discount (fees paid to the creditor) and Debt Issue Costs (fees paid to third parties)	01/01/2013		-\$11,893	-\$11,893	

Additional Debt	01/01/2013		\$375,000		\$375,000
Debt Discount (fees paid to the creditor) – Warrants	01/01/2013		-\$45,790	-\$21,600 ³	-\$24,190
Debt Issue Costs (fees paid to third parties)	01/01/2013		-\$33,000	-\$15,572 ⁴	-\$17,428
Annual Payment (principal and interest)	12/31/2013	-\$187,804	-\$177,764	-\$83,862	-\$93,902
Annual Payment (principal and interest)	12/31/2014	-\$187,804	-\$177,764	-\$83,862	-\$93,902
Annual Payment (principal and interest)	12/31/2015		-\$177,764	-\$83,862	-\$93,902
Annual Payment (principal and interest)	12/31/2016		-\$177,764	-\$83,862	-\$93,902
Annual Payment (principal and interest)	12/31/2017		-\$177,764	-\$83,862	-\$93,902

³ This represents an allocation of the fees of the new debt to the amount carried forward ($\$45,790/\$709,705 * \$334,905 = \$21,600$).

⁴ This represents an allocation of the fees paid to third parties when the debt was modified ($\$33,000/\$709,705 * \$334,905 = \$15,572$).

Payment Terms – Old Debt

R Company has been given a payment and amortization schedule from UO Company for the original debt of \$750,000. R Company uses TValue to check the schedule, and the results are shown in the table below. R Company notes that the amount of the debt principal remaining at January 1, 2013 is \$334,905 and the annual principal and interest payment is \$187,804:

Compound Period: Annual
Nominal Annual Rate: 8.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2010	\$750,000	1		
2	Payment	12/31/2010	\$187,804*	5	Annual	12/31/2014

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Payment	Interest	Principal	Balance
Loan	1/1/2010				\$750,000
1	12/31/2010	\$187,804	\$59,836	\$127,969	\$622,031
2	12/31/2011	\$187,804	\$49,763	\$138,042	\$483,990
3	12/31/2012	\$187,804	\$38,719	\$149,085	\$334,905
4	12/31/2013	\$187,804	\$26,792	\$161,012	\$173,893
5	12/31/2014	\$187,804	\$13,911	\$173,893	0

Payment Terms – Gross Method – New Debt

R Company checks the payment and amortization schedule of the new debt provided by UO Company. This payment schedule assumes use of the Gross Method, includes both the remaining principal of the old debt of \$334,905 and the new debt of \$375,000, and calculates the annual principal and interest payment to be \$177,764:

Compound Period: Annual
Nominal Annual Rate: 8.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$334,905	1		
2	Loan	01/01/2013	\$375,000	1		
3	Payment	12/31/2013	\$177,764*	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$334,905				\$334,905
Loan	1/1/2013	\$375,000				\$709,905
1	12/31/2013		\$177,764	\$56,637	\$121,127	\$588,778
2	12/31/2014		\$177,764	\$47,102	\$130,662	\$458,116
3	12/31/2015		\$177,764	\$36,649	\$141,115	\$317,001
4	12/31/2016		\$177,764	\$25,360	\$152,404	\$164,596
5	12/31/2017		\$177,764	\$13,168	\$164,596	0

*Calculated by TValue

Payment Terms – Net Method – Rollover Piece

R Company checks the payment and amortization schedule of the new debt provided by UO Company. This payment schedule assumes use of the Net Method, includes the rollover piece – the remaining principal of the old debt of \$334,905 – and calculates the annual principal and interest payment to be \$83,862:

Compound Period: Annual

Nominal Annual Rate: 8.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$334,905	1		
2	Payment	12/31/2013	\$83,862*	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Payment	Interest	Principal	Balance
Loan	1/1/2013				\$334,905
1	12/31/2013	\$83,862	\$26,719	\$57,143	\$277,762
2	12/31/2014	\$83,862	\$22,221	\$61,641	\$216,121
3	12/31/2015	\$83,862	\$17,290	\$66,572	\$149,548
4	12/31/2016	\$83,862	\$11,964	\$71,898	\$77,650
5	12/31/2017	\$83,862	\$6,212	\$77,650	0

*Calculated by TValue

Payment Terms – Net Method – New Debt Piece

R Company checks the payment and amortization schedule of the new debt provided by UO Company. This payment schedule assumes use of the Net Method, includes the new piece of the new debt – \$375,000 – and calculates the annual principal and interest payment to be \$93,902:

Compound Period: Annual

Nominal Annual Rate: 8.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$375,000	1		
2	Payment	12/31/2013	\$93,902*	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Payment	Interest	Principal	Balance
Loan	01/01/2013				\$375,000
1	12/31/2013	\$93,902	\$29,918	\$63,984	\$311,016
2	12/31/2014	\$93,902	\$24,881	\$69,021	\$241,995
3	12/31/2015	\$93,902	\$19,360	\$74,543	\$167,452
4	12/31/2016	\$93,902	\$13,396	\$80,506	\$86,946
5	12/31/2017	\$93,902	\$6,956	\$86,946	0

*Calculated by TValue

Step B1.2: What is the effective interest rate of R Company's old debt? Include in the calculation interest payments at the contractual rate of interest, debt issue costs (fees paid to third parties), and debt discount (fees paid to the creditor, UO Company).

R Company uses TValue as shown in the schedule below to determine that the annual effective interest rate is 10.675 percent:

Compound Period: Annual

Nominal Annual Rate: 10.675 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2010	\$750,000	1		
2	Loan	01/01/2010	-\$30,000	1		
3	Loan	01/01/2010	-\$20,000	1		
4	Payment	12/31/2010	\$187,804**	5	Annual	12/31/2014

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Step B1.3: What is the present value of the old and new debt?

Step B1.3a: What is the present value of the remaining cash flows of R Company's old debt using the effective interest rate of the original debt?

Present Value of Old Debt at January 1, 2013

R Company calculates the present value of the remaining cash flows to the creditor using the effective interest rate of the original debt and TValue to be \$323,097:

Compound Period: Annual

Nominal Annual Rate: 10.675 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$323,097*	1		
2	Payment	12/31/2013	\$187,804**	2	Annual	12/31/2014

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Step B1.3b: What is the present value of the cash flows of R Company's new debt under both the Gross and Net Methods using the effective interest rate of the original debt?

Present Value of New Debt at January 1, 2013 – Gross Method

R Company calculates the present value of the cash flows to the creditor for the new debt using the effective interest rate of the original debt and the annual payments of \$177,764 under the Gross Method calculated above. The present value is calculated to be \$333,370:

Compound Period: Annual

Nominal Annual Rate: 10.675 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$333,370*	1		
2	Loan	01/01/2013	\$375,000	1		
3	Loan	01/01/2013	-\$45,790	1		
4	Payment	12/31/2013	\$177,764**	5	Annual	12/31/2017

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Present Value of New Debt at January 1, 2013 – Net Method – Rollover Piece

R Company calculates the present value of the cash flows to the creditor using the effective interest rate of the original debt and the annual payments of \$83,863 under the Net Method rollover piece calculated above. The present value is calculated to be \$324,475:

Compound Period: Annual

Nominal Annual Rate: 10.675 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$324,475 *	1		
2	Loan	01/01/2013	-\$11,893	1		
3	Payment	12/31/2013	\$83,863**	5	Annual	12/31/2017

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Step B1.4: What is the percentage difference of the present value of the cash flows of R Company's new debt and the present value of remaining cash flows of the old debt?

Percentage difference Gross Method – $333,370/323,097 = 103.2$ percent, a 3.2 percent difference

Percentage difference Net Method – $324,475/323,097 = 100.4$ percent, a .4 percent difference

R Company concludes that the restructured debt represents a modification under both the Gross Method and the Net Method.

R Company's debt does not include a conversion option. Consequently, R Company answers Steps B2 and B3 "no" and continues to Step B123 Modification.

Step B123: Modification
Step B123.1M: What entry does R Company make upon modification?

Step B123.1Ma: How does the company account for debt issue costs (fees paid to third parties) at the time of the modification?

Debt issue costs associated with the modified debt are expensed. The company incurred \$33,000 in debt issue costs (fees to attorneys and accountants).

- Under the Gross Method, the entire \$33,000 is expensed.
- Under the Net Method, \$15,572, the amount of expenses associated with the rollover piece, are expensed. The remainder, \$17,428, associated with the new debt piece is capitalized. The fees that are expensed are not included in the calculation of effective interest rate of the modified debt.

Gross Method

Dr	Debt Modification Expense	\$33,000			
			Cr	Cash	\$33,000

Net Method

Dr	Debt Modification Expense – Rollover	\$15,572			
Dr	Debt Issue Costs – New	\$17,428			
			Cr	Cash	\$33,000

Step B123.1Mb: How does R Company account for fees paid to the creditor at the time of the modification?

The fees paid to the creditor are deducted from the loan proceeds as a debt discount under both the Gross and the Net Method. R Company issued shares of its common stock with a fair value of \$45,790 to UO Company for the debt modification.

Dr	Debt Discount	\$45,790			
			Cr	Common Stock	\$45,790

Step B123.1Mc: What does the company record for the incremental debt and cash received, combined with the entries for a and b?

R Company records the following entry at the date of modification:

January 1, 2013 – Date of the Modification – Gross Method					
Dr	Cash	\$342,000			
Dr	Debt Discount	\$45,790			
Dr	Debt Modification Expense	\$33,000			
			Cr	Debt	\$375,000
			Cr	Common Stock	\$45,790

January 1, 2013 – Date of the Modification – Net Method for Rollover Piece and New Debt Piece					
Dr	Debt Discount	\$45,790			
Dr	Debt Modification Expense	\$15,572			
Dr	Debt Issue Costs	\$17,428			
Dr	Cash	\$342,000			
			Cr	Common Stock	\$45,790
			Cr	Debt	\$375,000

Step B123.2M: What is the effective interest rate of the modified debt?

The company includes in its calculation of effective interest rate the interest payments at the contractual rate, remaining debt issue costs (fees paid to third parties) and discount (fees paid to the creditor) from the old debt, and discount (fees paid to the creditor) from the new debt. The company determines the rates to be 11.3 percent under the Gross Method, 12.13 percent for the rollover piece under the Net Method, and 12.63 percent for the new piece under the Net Method:

		New Debt Gross	Rollover Piece Net	New Debt Net
Effective Interest Rate		11.30%	12.13%	12.63%
	Date	Amount	Amount	
Old Debt	01/01/2013	\$334,905	\$334,905	
Additional New Debt	01/01/2013	\$375,000		\$375,000
Unamortized Debt Issue Costs and Discount of Old Debt	01/01/2013	-\$11,893	-\$11,893	
Debt Issue Costs				-\$17,428
Fees Paid to the Creditor (Common Stock) for New Debt	01/01/2013	-\$45,790	-\$21,600	-\$24,190
Annual Interest and Principal Payment	12/31/2013	-\$177,764	-\$83,862	-\$93,902
Annual Interest and Principal Payment	12/31/2014	-\$177,764	-\$83,862	-\$93,902
Annual Interest and Principal Payment	12/31/2015	-\$177,764	-\$83,862	-\$93,902
Annual Interest and Principal Payment	12/31/2016	-\$177,764	-\$83,862	-\$93,902
Annual Interest and Principal Payment	12/31/2017	-\$177,764	-\$83,862	-\$93,902

R Company uses T-Value as shown in the schedule below to determine the annual effective interest rate on the new debt under the Net Method (rollover – 12.13 percent; new – 12.63 percent) and the Gross Method (11.3 percent). R Company includes the amortization information in the schedules below for purposes of preparing the journal entries:

Calculating Effective Interest Rate of New Debt – Gross Method

Compound Period: Annual
Nominal Annual Rate: 11.30 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$334,905	1		
2	Loan	01/01/2013	\$375,000	1		
3	Loan	01/01/2013	-\$11,893	1		
4	Loan	01/01/2013	-\$45,790	1		
5	Payment	12/31/2013	\$177,764**	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$334,905				\$334,905
Loan	01/01/2013	\$375,000				\$709,905
Loan	01/01/2013	-\$11,893				\$698,012
Loan	01/01/2013	-\$45,790				\$652,222
1	12/31/2013		\$177,764	\$73,511	\$104,253	\$547,969
2	12/31/2014		\$177,764	\$61,930	\$115,834	\$432,135
3	12/31/2015		\$177,764	\$48,839	\$128,925	\$303,210
4	12/31/2016		\$177,764	\$34,268	\$143,496	\$159,714
5	12/31/2017		\$177,764	\$18,050	\$159,714	0

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Calculating Effective Interest Rate of New Debt – Net Method – Rollover Piece

Compound Period: Annual
Nominal Annual Rate: 12.13 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$334,905	1		
2	Loan	01/01/2013	-\$1,893	1		
3	Loan	01/01/2013	-\$21,600	1		
4	Payment	12/31/2013	\$83,862**	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$334,905				\$334,905
Loan	01/01/2013	-\$11,893				\$323,012
Loan	01/01/2013	-\$21,600				\$301,412
1	12/31/2013		\$83,862	\$36,465	\$47,397	\$254,015
2	12/31/2014		\$83,862	\$30,815	\$53,047	\$200,969

3	12/31/2015		\$83,862	\$24,380	\$59,482	\$141,487
4	12/31/2016		\$83,862	\$17,164	\$66,698	\$74,789
5	12/31/2017		\$83,862	\$9,073	\$74,789	0

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Calculating Effective Interest Rate of New Debt – Net Method – New Debt Piece

Compound Period: Annual

Nominal Annual Rate: 12.630 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$375,000	1		
2	Loan	01/01/2013	-\$24,190	1		
3	Loan	01/01/2013	-\$17,428	1		
4	Payment	12/31/2013	\$93,902**	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$375,000				\$375,000
Loan	01/01/2013	-\$24,190				\$350,810
Loan	01/01/2013	-\$17,428				\$333,382
1	12/31/2013		\$93,902	\$41,991	\$51,912	\$281,470
2	12/31/2014		\$93,902	\$35,550	\$58,353	\$223,118
3	12/31/2015		\$93,902	\$28,180	\$65,722	\$157,395
4	12/31/2016		\$93,902	\$19,879	\$74,023	\$83,372
5	12/31/2017		\$93,902	\$10,530	\$83,372	0

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Step B123.3M: What entries does R Company record as a result of the modification each year until the debt is paid off on December 31, 2017?

Using the amortization schedules that follow, R Company prepares the following journal entries below for the Gross Method:

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization New Debt Gross Method (from Step B1.1)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$334,905				\$334,905
Loan	1/1/2013	\$375,000				\$709,905
1	12/31/2013		\$177,764	\$56,637	\$121,127	\$588,778
2	12/31/2014		\$177,764	\$47,102	\$130,662	\$458,116
3	12/31/2015		\$177,764	\$36,649	\$141,115	\$317,001
4	12/31/2016		\$177,764	\$25,360	\$152,404	\$164,596
5	12/31/2017		\$177,764	\$13,168	\$164,596	0

Schedule B – AMORTIZATION SCHEDULE – Normal Amortization New Debt Gross Method (from Step B123.2M)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$334,905				\$334,905
Loan	1/1/2013	\$375,000				\$709,905
Loan	1/1/2013	-\$11,893				\$698,012
Loan	1/1/2013	-\$45,790				\$652,222
1	12/31/2013		\$177,764	\$73,511	\$104,253	\$547,969
2	12/31/2014		\$177,764	\$61,930	\$115,834	\$432,135
3	12/31/2015		\$177,764	\$48,839	\$128,925	\$303,210
4	12/31/2016		\$177,764	\$34,268	\$143,496	\$159,714
5	12/31/2017		\$177,764	\$18,050	\$159,714	0

Schedule C – Schedule A and B for Payment, Schedule A for Principal, Schedule B for Interest, Difference Between A and B Principal or Interest as Amortization of Debt Issue and Discount

	Date	Loan	Payment	Interest	Principal	Debt Issue Costs and Discount
1	12/31/2013		\$177,764	\$73,511	\$121,127	\$16,874
2	12/31/2014		\$177,764	\$61,930	\$130,662	\$14,828
3	12/31/2015		\$177,764	\$48,839	\$141,115	\$12,190
4	12/31/2016		\$177,764	\$34,268	\$152,404	\$8,908
5	12/31/2017		\$177,764	\$18,050	\$164,596	\$4,882

Gross Method Entries

December 31, 2013						
Dr	Interest Expense		\$73,511			
Dr	Debt		\$121,127			
				Cr	Cash	\$177,764
				Cr	Debt Issue Costs and Discount	\$16,874
December 31, 2014						
Dr	Interest Expense		\$61,930			
Dr	Debt		\$130,662			
				Cr	Cash	\$177,764
				Cr	Debt Issue Costs and Discount	\$14,828
December 31, 2015						
Dr	Interest Expense		\$48,839			
Dr	Debt		\$141,115			
				Cr	Cash	\$177,764
				Cr	Debt Issue Costs and Discount	\$12,190
December 31, 2016						
Dr	Interest Expense		\$34,268			
Dr	Debt		\$152,404			
				Cr	Cash	\$177,764
				Cr	Debt Issue Costs and Discount	\$8,908
December 31, 2017						
Dr	Interest Expense		\$18,050			
Dr	Debt		\$164,596			

			Cr	Cash	\$177,764
			Cr	Debt Issue Costs and Discount	\$4,882

Using the amortization schedules that follow, R Company prepares the journal entries below for the Net Method Rollover Piece:

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization Rollover Piece Net Method (from Step B1.1)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$334,905				\$334,905
1	12/31/2013		\$83,862	\$26,719	\$57,143	\$277,762
2	12/31/2014		\$83,862	\$22,221	\$61,641	\$216,121
3	12/31/2015		\$83,862	\$17,290	\$66,572	\$149,548
4	12/31/2016		\$83,862	\$11,964	\$71,898	\$77,650
5	12/31/2017		\$83,862	\$6,212	\$77,650	0

Schedule B – AMORTIZATION SCHEDULE – Normal Amortization Rollover Piece Net Method (from Step B123.2M)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$334,905				\$334,905
Loan	1/1/2013	-\$11,893				\$323,012
Loan	1/1/2013	-\$21,600				\$301,412
1	12/31/2013		\$83,862	\$36,465	\$47,397	\$254,015
2	12/31/2014		\$83,862	\$30,815	\$53,047	\$200,969
3	12/31/2015		\$83,862	\$24,380	\$59,482	\$141,487
4	12/31/2016		\$83,862	\$17,164	\$66,698	\$74,789
5	12/31/2017		\$83,862	\$9,073	\$74,789	0

Schedule C – Schedule A and B for Payment, Schedule A for Principal, Schedule B for Interest, Difference Between A and B Principal or Interest as Amortization of Debt Issue and Discount

	Date	Loan	Payment	Interest	Principal	Debt Issue Costs and Discount
1	12/31/2013		\$83,862	\$36,465	\$57,143	\$9,746
2	12/31/2014		\$83,862	\$30,815	\$61,641	\$8,594
3	12/31/2015		\$83,862	\$24,380	\$66,572	\$7,090
4	12/31/2016		\$83,862	\$17,164	\$71,898	\$5,200
5	12/31/2017		\$83,862	\$9,073	\$77,650	\$2,861

Net Method – Rollover Piece Entries

December 31, 2013						
Dr	Interest Expense	\$36,465				
Dr	Debt	\$57,143				
			Cr	Cash		\$83,862
			Cr	Debt Issue Costs and Discount		\$9,746
December 31, 2014						
Dr	Interest Expense	\$30,815				
Dr	Debt	\$61,641				
			Cr	Cash		\$83,862
			Cr	Debt Issue Costs and Discount		\$8,594

December 31, 2015					
Dr	Interest Expense	\$24,380			
Dr	Debt	\$66,572			
			Cr	Cash	\$83,862
			Cr	Debt Issue Costs and Discount	\$7,090
December 31, 2016					
Dr	Interest Expense	\$17,164			
Dr	Debt	\$71,898			
			Cr	Cash	\$83,862
			Cr	Debt Issue Costs and Discount	\$5,200
December 31, 2017					
Dr	Interest Expense	\$9,073			
Dr	Debt	\$77,650			
			Cr	Cash	\$83,862
			Cr	Debt Issue Costs and Discount	\$2,861

Using the amortization schedules that follow, R Company prepares the journal entries below for the Net Method New Debt Piece:

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization New Debt Piece Net Method (from Step B1.1)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$375,000				\$375,000
1	12/31/2013		\$93,902	\$29,918	\$63,984	\$311,016
2	12/31/2014		\$93,902	\$24,881	\$69,021	\$241,995
3	12/31/2015		\$93,902	\$19,360	\$74,543	\$167,452
4	12/31/2016		\$93,902	\$13,396	\$80,506	\$86,946
5	12/31/2017		\$93,902	\$6,956	\$86,946	0

Schedule B – AMORTIZATION SCHEDULE – Normal Amortization New Debt Piece Net Method (from Step B123.2M)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$375,000				\$375,000
Loan	1/1/2013	-\$24,190				\$350,810
Loan	1/1/2013	-\$17,428				\$333,382
1	12/31/2013		\$93,902	\$41,991	\$51,912	\$281,470
2	12/31/2014		\$93,902	\$35,550	\$58,353	\$223,118
3	12/31/2015		\$93,902	\$28,180	\$65,722	\$157,395
4	12/31/2016		\$93,902	\$19,879	\$74,023	\$83,372
5	12/31/2017		\$93,902	\$10,530	\$83,372	0

Schedule C – Schedule A and B for Payment, Schedule A for Principal, Schedule B for Interest, Difference Between A and B Principal or Interest as Amortization of Debt Issue and Discount

	Date	Loan	Payment	Interest	Principal	Debt Issue Costs and Discount
1	12/31/2013		\$93,902	\$41,991	\$63,984	\$12,072
2	12/31/2014		\$93,902	\$35,549	\$69,021	\$10,668
3	12/31/2015		\$93,902	\$28,180	\$74,543	\$8,821
4	12/31/2016		\$93,902	\$19,879	\$80,506	\$6,483

5	12/31/2017		\$93,902	\$10,530	\$86,946	\$3,574
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Net Method – New Debt Piece

December 31, 2013						
Dr	Interest Expense	\$41,991				
Dr	Debt	\$63,984				
			Cr	Cash		\$93,902
			Cr	Debt Issue Costs and Discount		\$12,073
December 31, 2014						
Dr	Interest Expense	\$35,549				
Dr	Debt	\$69,021				
			Cr	Cash		\$93,902
			Cr	Debt Issue Costs and Discount		\$10,668
December 31, 2015						
Dr	Interest Expense	\$28,180				
Dr	Debt	\$74,543				
			Cr	Cash		\$93,902
			Cr	Debt Issue Costs and Discount		\$8,821
December 31, 2016						
Dr	Interest Expense	\$19,879				
Dr	Debt	\$80,506				
			Cr	Cash		\$93,902
			Cr	Debt Issue Costs and Discount		\$6,483
December 31, 2017						
Dr	Interest Expense	\$10,530				
Dr	Debt	\$86,946				
			Cr	Cash		\$93,902
			Cr	Debt Issue Costs and Discount		\$3,574

Analyze a Complex Debt Extinguishment Using the 10 Percent Cash Flow Test – Gross and Net Method**FACTS**

Private Equity Company lends \$1,000,000 to R Company on January 1, 2012. Interest and principal payments are due annually over a five-year period. The final payment is due on December 31, 2016 – it is issued at par, the contractual interest rate is 9 percent, the fee paid to the creditor (the discount) is 5 percent of the face amount of the debt or \$50,000. Debt issue costs for lawyers and accountants amounted to \$40,000. R Company records the following entry on the date it borrows \$1,000,000 from Private Equity Company:

Dr	Cash	\$910,000			
Dr	Debt Discount	\$50,000			
Dr	Debt Issue Costs	\$40,000			
			Cr	Debt	\$1,000,000

On January 1, 2013, R Company negotiated with Private Equity Company to receive an additional \$900,000 and add it to the balance of the note with a due date of December 31, 2017. R Company determined that the new borrowing did not represent a troubled debt restructuring as the company was not having financial difficulties and Private Equity Company did not provide any concessions. R Company borrowed the additional \$900,000 from Private Equity because it needed capital to develop a new product.

R Company paid its accountants and attorneys \$45,000 for services rendered for the new debt. Private Equity Company increased the interest rate to 12 percent. R Company paid Private Equity Company a fee of \$81,288 for the new debt.

At January 1, 2013, R Company had amortized \$25,941 of the debt discount and debt issue costs; \$64,056 remained to be amortized. At that date, R company had paid \$167,092 of principal; \$832,908 of the principal remained to be paid on the outstanding debt.

ANALYSIS

Step B1: 10 Percent Cash Flow Test

Using the 10 percent cash flow test, is R Company's change in debt a modification or extinguishment?

Step B1.1: What are the terms of R Company's old debt and new debt? Calculation of the payment amounts is shown below.

		Old Debt	New Debt Gross	Rollover Piece Net	New Debt Net
Face Amount		\$1,000,000	\$1,732,908	\$832,908	\$900,000
Contractual Interest Rate		9%	12%	12%	12%
Issuance/Restructure Date		01/01/2012	01/01/2015	01/01/2015	01/01/2015
Type of Cash Flows	Date	Amount	Amount	Amount	Amount
Loan	01/01/2012	\$1,000,000			
Debt Discount (fees paid to the creditor)	01/01/2012	-\$50,000			
Debt Issue Costs (fees paid to third parties)	01/01/2012	-\$40,000			
Annual Payment Principal and Interest	12/31/2012	-\$257,092			
Annual Payment Principal and Interest	12/31/2013	-\$257,092			
Annual Payment Principal and Interest	12/31/2014	-\$257,092			
Remaining Unamortized Debt Discount (fees paid to the creditor) and Debt Issue Costs (fees paid to third parties)	01/01/2015		-\$64,056	-\$64,056	
Additional Loan	01/01/2015		\$900,000		\$900,000
Debt issue costs (fees paid to third parties)			-\$45,000	-\$21,629 ⁵	-\$23,371
Debt Discount (fees paid to creditor)	01/01/2015		-\$81,288	-\$39,070 ⁶	-\$42,218
Annual Payment Principal and Interest	12/31/2015	-\$257,092	-\$480,584	-\$230,989	-\$249,595
Annual Payment Principal and Interest	12/31/2016	-\$257,092	-\$480,584	-\$230,989	-\$249,595
Annual Payment Principal and Interest	12/31/2017		-\$480,584	-\$230,989	-\$249,595
Annual Payment Principal and Interest	12/31/2018		-\$480,584	-\$230,989	-\$249,595
Annual Payment Principal and Interest	12/31/2019		-\$480,584	-\$230,989	-\$249,595

⁵ This represents an allocation of the fees of the new debt to the net principal amount ($\$45,000/\$1,732,908 * \$832,908 = \$21,629$).

⁶ This represents an allocation of the fees paid to the creditor to the new debt rollover amount based on the net principal amount ($\$81,288/\$1,732,908 * \$832,908 = \$39,070$).

Payment Terms – Old Debt

R Company has been given a payment and amortization schedule from Private Equity Company for the original debt of \$1,000,000. R Company uses TValue to check the schedule, and the results are shown in the table below:

Compound Period: Annual
Nominal Annual Rate: 9.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2012	\$1,000,000	1		
2	Payment	12/31/2012	\$257,092*	5	Annual	12/31/2016

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Payment	Interest	Principal	Balance
Loan	01/01/2012				\$1,000,000
1	12/31/2012	\$257,092	\$90,000	\$167,092	\$832,908
2	12/31/2013	\$257,092	\$74,962	\$182,131	\$650,777
3	12/31/2014	\$257,092	\$58,570	\$198,523	\$452,254
4	12/31/2015	\$257,092	\$40,703	\$216,390	\$235,864
5	12/31/2016	\$257,092	\$21,228	\$235,865	0

*Calculated by TValue

Payment Terms – Gross Method – New Debt

R Company checks the payment and amortization schedule of the new debt calculated by Private Equity Company. This payment schedule assumes use of the Gross Method, includes both the remaining principal of the old debt of \$832,908 and the new debt of \$900,000, and calculates the annual principal and interest payment to be \$480,584:

Compound Period: Annual
Nominal Annual Rate: 12 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$832,908	1		
2	Loan	01/01/2013	\$900,000	1		
3	Payment	12/31/2013	\$480,584*	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$832,908				\$832,908
Loan	01/01/2013	\$900,000				\$1,732,908
1	12/31/2013		\$480,584	\$207,379	\$273,205	\$1,459,703
2	12/31/2014		\$480,584	\$175,164	\$305,420	\$1,154,283
3	12/31/2015		\$480,584	\$138,514	\$342,071	\$812,212
4	12/31/2016		\$480,584	\$97,465	\$383,119	\$429,093
5	12/31/2017		\$480,584	\$51,491	\$429,093	0

*Calculated by TValue

Payment Terms – Net Method – Rollover Piece

R Company checks the payment and amortization schedule of the new debt provided by Private Equity Company. This payment schedule assumes use of the Net Method, includes the rollover piece (the remaining principal of the old debt of \$832,908), and calculates the annual principal and interest payment to be \$230,989:

Compound Period: Annual
Nominal Annual Rate: 12.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$832,908	1		
2	Payment	12/31/2013	\$230,989*	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Payment	Interest	Principal	Balance
Loan	01/01/2013				\$832,908
1	12/31/2013	\$230,989	\$99,675	\$131,314	\$701,594
2	12/31/2014	\$230,989	\$84,191	\$146,798	\$554,797
3	12/31/2015	\$230,989	\$66,576	\$164,413	\$390,383
4	12/31/2016	\$230,989	\$46,846	\$184,143	\$206,240
5	12/31/2017	\$230,989	\$24,749	\$206,240	0

*Calculated by TValue

Payment Terms – Net Method – New Debt Piece

R Company checks the payment and amortization schedule of the new debt provided by Private Equity Company. This payment schedule assumes use of the Net Method, includes the new debt piece of \$900,000, and calculates the annual principal and interest payment to be \$249,595:

Compound Period: Annual
Nominal Annual Rate: 12.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$900,000	1		
2	Payment	12/31/2013	\$249,595*	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Payment	Interest	Principal	Balance
Loan	01/01/2013				\$900,000
1	12/31/2013	\$249,595	\$107,704	\$141,891	\$758,109
2	12/31/2014	\$249,595	\$90,973	\$158,622	\$599,486
3	12/31/2015	\$249,595	\$71,938	\$177,657	\$421,829
4	12/31/2016	\$249,595	\$50,619	\$198,976	\$222,853
5	12/31/2017	\$249,595	\$26,742	\$222,853	0

*Calculated by TValue

Step B1.2: What is the effective interest rate of R Company's old debt? Include in the calculation interest payments at the contractual interest rate, debt issue costs, and origination fees paid to Private Equity Company.

R Company uses TValue as shown in the schedule below to determine that the annual effective interest rate on the old debt is 12.74 percent:

Compound Period: Annual
Nominal Annual Rate: 12.741 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2012	\$1,000,000	1		
2	Loan	01/01/2012	-\$50,000	1		
3	Loan	01/01/2012	-\$40,000	1		
4	Payment	12/31/2012	\$257,092**	5	Annual	12/31/2016

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Step B1.3: What is the present value of the old and new debt?

Step B1.3a: What is the present value of the remaining cash flows of R Company's old debt using the effective interest rate of the original debt?

Present value of Old Debt at January 1, 2013

R Company calculates the present value of the remaining cash flows to the creditor using the effective interest rate of the original debt and TValue to be \$769,084:

Compound Period: Annual

Nominal Annual Rate: 12.741 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$769,084*	1		
2	Payment	12/31/2013	\$257,092	4	Annual	12/31/2016

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Step B1.3b: What is the present value of the remaining cash flows of R Company's new debt under both the Gross and the Net Method using the effective interest rate of the original debt?

Present Value of New Debt at January 1, 2013 – Gross Method

R Company has made a policy decision to use the Gross Method. R Company calculates the present value of the cash flows to the creditor using the effective interest rate of the original debt to be \$882,877:

Compound Period: Annual

Nominal Annual Rate: 12.741 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2015	\$882,877*	1		
2	Loan	01/01/2015	\$900,000	1		
3	Loan	01/01/2015	-\$81,288	1		
4	Payment	12/31/2015	\$480,584	5	Annual	12/31/2019

*Calculated by TValue

Present Value of New Debt at January 1, 2013 – Net Method – Rollover Piece

R Company calculates the present value of the cash flows to/from the creditor using the effective interest rate of the original debt:

Compound Period: Annual

Nominal Annual Rate: 12.741 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$960,843*	1		
2	Loan	01/01/2013	-\$39,070	1		
3	Payment	12/31/2013	\$230,989	5	Annual	12/31/2017

*Calculated by TValue

**Payment amount is calculated above under Step B1.1

Step B1.4: What is the percentage difference of the present values of the cash flows of R Company's new debt and the present value of the remaining cash flows of the old debt?

Percentage difference Gross Method – $882,877/769,084 = 114.8$ percent, a 14.8 percent difference

Percentage difference Net Method – $960,843/769,084 = 124.9$ percent, a 24.9 percent difference

R Company concludes that the restructured debt represents an extinguishment under both the Gross Method and the Net Method as the change was greater than 10 percent.

R Company continues to Steps B123.1-4 Extinguishment.

Step B123.1E: What is the fair value of R Company's new debt?

In accordance with ASC 470-50-40, R Company will record the new debt at fair value. The company determines its fair value interest rate to be 14 percent given quotes it received from other lenders before proceeding with the loan from Private Equity Company. R Company refers to the interest and principal cash flow payments of the new debt in calculating the fair value of the debt at its fair value interest rate to be \$1,650,439 under the Gross Method and \$793,271 under the Net Method – Rollover Piece:

		New Debt At Fair Value Gross	New Debt At Fair Value Net
Fair Value Interest Rate		14%	14%
Issuance/Restructure Date		01/01/2015	01/01/2015
Type of Cash Flows	Date	Amount	Amount
Interest and Principal Payment	12/31/2015	-\$480,584	-\$230,989
Interest and Principal Payment	12/31/2016	-\$480,584	-\$230,989
Interest and Principal Payment	12/31/2017	-\$480,584	-\$230,989
Interest and Principal Payment	12/31/2018	-\$480,584	-\$230,989
Interest and Principal Payment	12/31/2019	-\$480,584	-\$230,989

Fair Value of New Debt – Gross Method

Compound Period: Annual

Nominal Annual Rate: 14.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$1,650,439*	1		
2	Payment	12/31/2013	\$480,584	5	Annual	12/31/2017

*Calculated by TValue

Fair Value of New Debt – Net Method – Rollover Piece

Compound Period: Annual

Nominal Annual Rate: 14.000 percent

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$793,271*	1		
2	Payment	12/31/2013	\$230,989	5	Annual	12/31/2017

*Calculated by TValue

Since the new debt piece of the new debt will be recorded similarly to debt with a new creditor, it will be recorded at face rather than fair value.

Step B123.2E: What entry does R Company make upon extinguishment? Refer to the Facts on page 56 and B123.1E above for the amounts. (See T accounts for details).

Gross Method T Accounts

Debt			
	bal		\$832,908
c.	\$832,908	c.	\$832,908
		c.	\$900,000
	\$832,908		\$2,565,816
			\$1,732,908

Debt Discount			
	\$21,948		bal
c.	\$82,469	a.	\$21,948
	\$104,417		\$21,948
	\$82,469		

Gain/Loss			
		c.	\$82,469
c.	\$81,288		
a.	\$21,948		
	\$103,236		\$82,469
	\$20,767		

Cash			
		b.	\$45,000
		c.	\$81,288
c.	\$900,000		
	\$900,000		\$126,288
	\$773,712		

Debt Issue			
b.	\$45,000		
	\$45,000		
	\$45,000		

Net Method T Accounts

Debt			
	bal		\$832,908
c.	\$832,908	c.	\$832,908
		c.	\$900,000
	\$832,908		\$2,565,816
			\$1,732,908

Debt Discount			
	\$21,948		bal
c.	\$39,637		
c.	\$42,218	a.	\$21,948
	\$104,417		\$21,948
	\$82,469		

Gain/Loss			
	Gain/Loss	d.	39,637
c.	\$39,070		
a.	\$21,948		
	\$61,018		\$39,637
	\$21,381		

Cash			
	Cash		
		b.	\$45,000
		c.	\$39,070
c.	\$900,000	c.	\$42,218
	\$900,000		\$126,288
	\$773,712		

Debt Issue			
b.	\$45,000		
	\$45,000		
	\$45,000		

- a. What amount does R Company write off for the unamortized debt discount (fees paid to the creditor) and debt issue costs (fees paid to third parties) associated with the old debt?

The unamortized discount and debt issue costs associated with the old debt of \$21,948 are written off to expense under both the Gross and Net Methods.

- b. What amount does R Company capitalize for debt issue costs (fees paid to third parties) associated with the new debt?

Debt issue costs are capitalized when a debt extinguishment has occurred. Consequently, the company capitalized debt issue costs of \$45,000 which it paid in cash under both the Gross and Net Methods.

c. What amount does R Company write off for the old debt and record for the new debt?

Gross Method

The old debt is written off at its carrying amount of \$832,908. The new debt is recorded at cash of \$900,000 and a debt with a fair value of \$1,650,439 (\$1,732,908 less a discount of \$82,469). The difference of \$82,469 is recorded as a gain on debt extinguishment and netted with the other amounts written off. The fee paid to the creditor of \$81,288 upon issuance of the new debt is written off (netted with the gain on debt extinguishment) since the debt is recorded at fair value.

Net Method

The old debt is written off at its carrying amount of \$832,908. The rollover piece of the new debt is recorded at a fair value of \$793,271 (\$832,908 less a discount of \$39,637). The difference of \$39,637 is recorded as a gain on debt extinguishment and netted with the other amounts written off. The new piece of the new debt is recorded to cash and debt for \$900,000. The fee paid to the creditor of \$39,070 for the new debt associated with the rollover piece is written off (netted with the gain on debt extinguishment) since the debt is recorded at fair value. The fee paid to the creditor of \$42,218 for the new debt associated with the new piece is recorded as a debt discount and added to the \$39,637 discount noted above to total \$81,855.

R Company summarizes these entries and records the loss on extinguishment:

Gross Method

January 1, 2013 – Date of the Extinguishment					
Dr	Cash	\$773,712			
Dr	Old Debt	\$832,908			
Dr	Debt Issue Costs	\$45,000			
Dr	Loss on Debt Extinguishment	\$20,767			
Dr	Debt Discount	\$82,469	Cr	Debt	\$1,732,908
			Cr	Debt Issue Costs and Debt Discount	\$21,948

R Company summarizes these entries and records the loss on extinguishment:

Net Method

January 1, 2013 – Date of the Extinguishment					
Dr	Cash	\$773,712			
Dr	Old Debt	\$832,908			
Dr	Debt Issue Costs	\$45,000			
Dr	Debt Discount	\$81,855			
Dr	Loss on Extinguishment	\$21,381			
			Cr	New Debt	\$1,732,908
			Cr	Debt Issue Costs and Debt Discount	\$21,948

Step B123.3E: What is the effective interest rate of R Company's new debt?

R Company calculates the effective interest rate of the new debt using TValue to be 15.161 percent under the Gross Method, 14.209 percent under the Net Method for the rollover piece, and 12.546 percent under the Net Method for the new piece:

		New Debt at Fair Value Gross	New Debt at Fair Value Net Rollover Piece	New Debt at Cost Net New Debt Piece
Effective Interest Rate		15.161%	15.161%	12.546%
Issuance/Restructure Date		01/01/2013	01/01/2013	01/01/2013
Type of Cash Flows	Date	Amount	Amount	Amount
Debt	01/01/2013	\$1,732,908	\$832,908	\$900,000

Debt Issue Costs (fees paid to third parties)	01/01/2013	-\$45,000	-\$21,629	-\$23,371
Debt Discount (fees paid to creditor)		-\$82,469	-\$39,637	-\$42,218
Interest and Principal Payment	12/31/2013	-\$480,584	-\$230,989	-\$249,595
Interest and Principal Payment	12/31/2014	-\$480,584	-\$230,989	-\$249,595
Interest and Principal Payment	12/31/2015	-\$480,584	-\$230,989	-\$249,595
Interest and Principal Payment	12/31/2016	-\$480,584	-\$230,989	-\$249,595
Interest and Principal Payment	12/31/2017	-\$480,584	-\$230,989	-\$249,595

Effective Interest Rate of New Debt – Gross Method

Compound Period: Annual

Nominal Annual Rate: 15.161 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$1,732,908	1		
2	Loan	01/01/2013	-\$45,000	1		
3	Loan	01/01/2013	-\$82,469	1		
4	Payment	12/31/2013	\$480,584	5	Annual	12/31/2017

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$1,732,908				\$1,732,908
Loan	1/1/2013	-\$82,469				\$1,650,439
Loan	1/1/2013	-\$45,000				\$1,605,439
1	12/31/2013		\$480,584	\$242,738	\$237,846	\$1,367,593
2	12/31/2014		\$480,584	\$207,344	\$273,240	\$1,094,354
3	12/31/2015		\$480,584	\$165,918	\$314,666	\$779,687
4	12/31/2016		\$480,584	\$118,211	\$362,374	\$417,314
5	12/31/2017		\$480,584	\$63,270	\$417,314	0

Effective Interest Rate of New Debt – Net Method – Rollover Piece

Compound Period: Annual

Nominal Annual Rate: 15.161 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	01/01/2013	\$832,908	1		
2	Loan	01/01/2013	-\$39,637	1		
3	Loan	01/01/2013	-\$21,629	1		
4	Payment	12/31/2013	\$230,989	5	Annual	12/31/2017

*Calculated by TValue

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	01/01/2013	\$832,908				\$832,908
Loan	01/01/2013	-\$39,637				\$793,271
Loan	01/01/2013	-\$21,629				\$771,642
1	12/31/2013		\$230,989	\$116,670	\$114,319	\$657,323
2	12/31/2014		\$230,989	\$99,658	\$131,331	\$525,993
3	12/31/2015		\$230,989	\$79,747	\$151,242	\$374,751
4	12/31/2016		\$230,989	\$56,817	\$174,172	\$200,579
5	12/31/2017		\$230,989	\$30,410	\$200,579	0

Effective Interest Rate of New Debt – Net Method – New Debt Piece

Compound Period: Annual

Nominal Annual Rate: 15.130 percent*

CASH FLOW DATA

	Event	Date	Amount	Number	Period	End Date
1	Loan	1/1/2013	\$900,000	1		
2	Loan	1/1/2013	-\$23,371	1		
3	Loan	1/1/2013	-\$42,218	1		
4	Payment	12/31/2013	\$249,595	5	Annual	12/31/2017

AMORTIZATION SCHEDULE – Normal Amortization

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$900,000				\$900,000
Loan	1/1/2013	-\$23,371				\$876,629
Loan	1/1/2013	-\$42,218				\$834,411
1	12/31/2013		\$249,595	\$125,901	\$123,694	\$710,717
2	12/31/2014		\$249,595	\$107,532	\$142,063	\$568,654
3	12/31/2015		\$249,595	\$86,038	\$163,557	\$405,097
4	12/31/2016		\$249,595	\$61,292	\$188,303	\$216,794
5	12/31/2017		\$249,595	\$32,801	\$216,794	0

*Calculated by TValue

Step B123.4E: What entries does R Company record each year until the debt is paid off on December 31, 2017?

Using the amortization schedules that follow, R Company prepares the journal entries below for the Gross Method:

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization Gross Method

(from Step B1.1)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$832,908				\$832,908
Loan	1/1/2013	\$900,000				\$1,732,908
1	12/31/2013		\$480,584	\$207,379	\$273,205	\$1,459,703
2	12/31/2014		\$480,584	\$175,164	\$305,420	\$1,154,283
3	12/31/2015		\$480,584	\$138,514	\$342,071	\$812,212
4	12/31/2016		\$480,584	\$97,465	\$383,119	\$429,093

5	12/31/2017		\$480,584	\$51,491	\$429,093	0
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Schedule B – AMORTIZATION SCHEDULE – Normal Amortization Gross Method

(from Step B123.3E)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$1,732,908				\$1,732,908
Loan	1/1/2013	-\$82,469				\$1,650,439
Loan	1/1/2013	-\$45,000				\$1,605,439
1	12/31/2013		\$480,584	\$242,738	\$237,846	\$1,367,593
2	12/31/2014		\$480,584	\$207,344	\$273,240	\$1,094,354
3	12/31/2015		\$480,584	\$165,918	\$314,666	\$779,687
4	12/31/2016		\$480,584	\$118,211	\$362,374	\$417,314
5	12/31/2017		\$480,584	\$63,270	\$417,314	0

Schedule C – Schedule A and B for Payment, Schedule A for Principal, Schedule B for Interest, Difference Between A and B Principal or Interest as Amortization of Debt Issue and Discount

	Date	Loan	Payment	Interest	Principal	Debt Issue Costs and Discount
1	12/31/2013		\$480,584	\$242,738	\$273,205	\$35,359
2	12/31/2014		\$480,584	\$207,344	\$305,420	\$32,180
3	12/31/2015		\$480,584	\$165,918	\$342,071	\$27,404
4	12/31/2016		\$480,584	\$118,211	\$383,119	\$20,746
5	12/31/2017		\$480,584	\$63,270	\$429,093	\$11,779

Gross Method Entries

December 31, 2015						
Dr	Interest Expense	\$242,738				
Dr	Debt	\$273,205				
			Cr	Cash		\$480,584
			Cr	Debt Issue Costs and Discount		\$35,359
December 31, 2016						
Dr	Interest Expense	\$207,344				
Dr	Debt	\$305,420				
			Cr	Cash		\$480,584
			Cr	Debt Issue Costs and Discount		\$32,180
December 31, 2017						
Dr	Interest Expense	\$165,918				
Dr	Debt	\$342,071				
			Cr	Cash		\$480,584
			Cr	Debt Issue Costs and Discount		\$27,404
December 31, 2018						
Dr	Interest Expense	\$118,211				
Dr	Debt	\$383,119				
			Cr	Cash		\$480,584
			Cr	Debt Issue Costs and Discount		\$20,746
December 31, 2019						

Dr	Interest Expense	\$63,270			
Dr	Debt	\$429,093			
			Cr	Cash	\$480,584
			Cr	Debt Issue Costs and Discount	\$11,779

Using the amortization schedules that follow, R Company prepares the journal entries below for the Rollover Piece Net Method:

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization – Rollover Piece Net Method

(from Step B1.1)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$832,908				\$832,908
1	12/31/2013		\$230,989	\$99,675	\$57,143	\$701,594
2	12/31/2014		\$230,989	\$84,191	\$61,641	\$554,797
3	12/31/2015		\$230,989	\$66,576	\$66,572	\$390,383
4	12/31/2016		\$230,989	\$46,846	\$71,898	\$206,240
5	12/31/2017		\$230,989	\$24,749	\$77,650	0

Schedule B – AMORTIZATION SCHEDULE – Normal Amortization – Rollover Piece Net Method

(from Step B123.3E)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$832,908				\$832,908
Loan	1/1/2013	-\$39,637				\$793,271
Loan	1/1/2013	-\$21,629				\$771,642
1	12/31/2013		\$230,989	\$116,670	\$114,319	\$657,323
2	12/31/2014		\$230,989	\$99,658	\$131,331	\$525,993
3	12/31/2015		\$230,989	\$79,747	\$151,242	\$374,751
4	12/31/2016		\$230,989	\$56,817	\$174,172	\$200,579
5	12/31/2017		\$230,989	\$30,410	\$200,579	0

Schedule C – Schedule A and B for Payment, Schedule A for Principal, Schedule B for Interest, Difference Between A and B Principal or Interest as Amortization of Debt Issue and Discount

	Date	Loan	Payment	Interest	Principal	Debt Issue Costs and Discount
1	12/31/2013		\$230,989	\$116,670	\$131,314	\$16,995
2	12/31/2014		\$230,989	\$99,658	\$146,798	\$15,467
3	12/31/2015		\$230,989	\$79,747	\$164,413	\$13,171
4	12/31/2016		\$230,989	\$56,817	\$184,143	\$9,971
5	12/31/2017		\$230,989	\$30,410	\$206,240	\$5,661

Net Method – Rollover Piece Entries

December 31, 2013						
Dr	Interest Expense	\$116,670				
Dr	Debt	\$131,314				
			Cr	Cash		\$230,989
			Cr	Debt Issue Costs and Discount		\$16,995
December 31, 2014						

Dr	Interest Expense	\$99,658			
Dr	Debt	\$146,798			
			Cr	Cash	\$230,989
			Cr	Debt Issue Costs and Discount	\$15,467
December 31, 2015					
Dr	Interest Expense	\$79,747			
Dr	Debt	\$164,413			
			Cr	Cash	\$230,989
			Cr	Debt Issue Costs and Discount	\$13,171
December 31, 2016					
Dr	Interest Expense	\$56,817			
Dr	Debt	\$184,143			
			Cr	Cash	\$230,989
			Cr	Debt Issue Costs and Discount	\$9,971
December 31, 2017					
Dr	Interest Expense	\$30,410			
Dr	Debt	\$206,240			
			Cr	Cash	\$230,989
			Cr	Debt Issue Costs and Discount	\$5,661

Using the amortization schedules that follow, R Company prepares the journal entries below for the Net Method new debt piece:

Schedule A – AMORTIZATION SCHEDULE – Normal Amortization – New Debt Piece Net Method

(from Step B1.1)

	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$900,000				\$900,000
1	12/31/2013		\$249,595	\$107,704	\$141,891	\$758,109
2	12/31/2014		\$249,595	\$90,973	\$158,622	\$599,486
3	12/31/2015		\$249,595	\$71,938	\$177,657	\$421,829
4	12/31/2016		\$249,595	\$50,619	\$198,976	\$222,853
5	12/31/2017		\$249,595	\$26,742	\$222,853	0

Schedule B – AMORTIZATION SCHEDULE – Normal Amortization New Debt Piece Net Method

(from Step B123.3E)

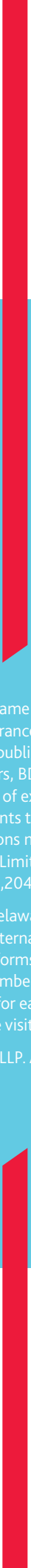
	Date	Loan	Payment	Interest	Principal	Balance
Loan	1/1/2013	\$900,000				\$900,000
Loan	1/1/2013	-\$23,371				\$876,629
Loan	1/1/2013	-\$42,218				\$834,411
1	12/31/2013		\$249,595	\$125,901	\$123,694	\$710,717
2	12/31/2014		\$249,595	\$107,532	\$142,063	\$568,654
3	12/31/2015		\$249,595	\$86,038	\$163,557	\$405,097
4	12/31/2016		\$249,595	\$61,292	\$188,303	\$216,794
5	12/31/2017		\$249,595	\$32,801	\$216,794	0

Schedule C – Schedule A and B for Payment, Schedule A for Principal, Schedule B for Interest, Difference Between A and B Principal or Interest as Amortization of Debt Issue and Discount

	Date	Loan	Payment	Interest	Principal	Debt Issue Costs and Discount
1	12/31/2013		\$249,595	\$125,901	\$141,891	\$18,197
2	12/31/2014		\$249,595	\$107,532	\$158,622	\$16,559
3	12/31/2015		\$249,595	\$86,038	\$177,657	\$14,100
4	12/31/2016		\$249,595	\$61,292	\$198,976	\$10,673
5	12/31/2017		\$249,595	\$32,801	\$222,853	\$6,059

Net Method – New Debt Piece Entries

December 31, 2013						
Dr	Interest Expense	\$125,901				
Dr	Debt	\$141,891				
			Cr	Cash		\$249,595
			Cr	Debt Issue Costs and Discount		\$18,197
December 31, 2014						
Dr	Interest Expense	\$107,532				
Dr	Debt	\$158,622				
			Cr	Cash		\$249,595
			Cr	Debt Issue Costs and Discount		\$16,559
December 31, 2015						
Dr	Interest Expense	\$86,038				
Dr	Debt	\$177,657				
			Cr	Cash		\$249,595
			Cr	Debt Issue Costs and Discount		\$14,100
December 31, 2016						
Dr	Interest Expense	\$61,292				
Dr	Debt	\$198,976				
			Cr	Cash		\$249,595
			Cr	Debt Issue Costs and Discount		\$10,673
December 31, 2017						
Dr	Interest Expense	\$32,801				
Dr	Debt	\$222,853				
			Cr	Cash		\$249,595
			Cr	Debt Issue Costs and Discount		\$6,059



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