The Brattle Group

FASB Accounting Rules and Implications for Natural Gas Purchase Agreements

Bente Villadsen
Fiona Wang

February 7, 2011

Prepared for

American Clean Skies Foundation

National Commission on Energy Policy

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY 2
II. ACCOUNTING TREATMENT 3
A. General Accounting Treatment 3
B. Accounting Treatment by Contract Type 7
1. Spot Market Gas Contracts 7
2. Forward Contracts 7
C. Accounting Treatment of Hedges 9
III. ILLUSTRATIVE EXAMPLES AND INDUSTRY PRACTICE 10
A. Hypothetical Examples 10
B. Summary of Current Choices By Gas Users (Local Distribution Companies) and Chemical Companies 14
IV. SCOPE FOR NORMAL PURCHASES AND SALES EXCEPTION 15
V. EVALUATION OF CURRENT ACCOUNTING TREATMENT 16
A. Pros and Cons of Current Accounting 16
B. Does the Current Accounting Treatment Create Incentives to Choose Specific Contracts? 17
APPENDIX A: NATURAL GAS PRICES 19
APPENDIX B: QUALIFYING FOR HEDGE ACCOUNTING 20
APPENDIX C: GLOSSARY 22

I. EXECUTIVE SUMMARY

Gas contracts are usually accounted for using one of two methods:

- The normal purchases and sales exception, where costs are expensed as incurred and sales are booked as they occur, or
- Fair value accounting, where the market value of the gas contracts and associated obligations are estimated each quarter.

Under the normal purchases and sales exception, fluctuations in natural gas prices do not affect the buyer's and/or the seller's financial statements. Under fair value accounting, fluctuations in expected natural gas prices impact the financial statements of companies that rely on natural gas contracts. However, regardless of the accounting treatment, companies that use natural gas in their normal course of business do so to meet the needs of their production, customers, or to insure themselves against price and volume fluctuations. It is vital for these companies to enter into economically meaningful contracts and to engage in effective hedges that offer protection against price and volume fluctuations. The accounting treatment is a secondary issue.

To qualify for the normal purchases and sales exception, the contract must pertain to something other than a financial instrument and the quantities contracted for are expected to be used or sold by the company in its normal course of business. Therefore, natural gas contracts that do not involve an option to change contracted volumes and are not expected to net settle, i.e., be offset against another contract, typically qualify for the exception and costs are therefore expenses as incurred.

Among the advantages of the normal purchases and sales exception over fair value is that it does not require a quarterly valuation of the contract. As such, it is simpler and less costly. Further, under the normal purchases and sales exception, natural gas price fluctuations do not lead to fluctuations in the income statement or balance sheet. Among the disadvantages of the normal purchases and sales exception over fair value accounting is that it requires judgment to determine whether the exception is applicable. Further, the normal purchases and sales exception treatment in and of itself provides little or no information about the risk exposure of the company due to contracting (although the company can remedy this feature through footnote disclosure). Finally, the differing treatment can make it difficult to compare companies with different long-term gas contracts; some rely on the normal purchases and sales exception while others do not. As for the risk exposure, comparability could be enhanced through footnote disclosure.

Thus, while some companies see the current accounting treatment as favoring spot purchases and certain long-term contracts, the decision regarding contract type is not and should not be chosen based on the accounting treatment. In addition, we note that most utilities (both electric and gas) that enter into contracts that qualify for the normal purchases and sales exception do rely on the exception for some of their qualifying contracts. However, there are companies with qualifying contracts that do not rely on the exception. This may indicate that there is no one accounting treatment that is best suited for all companies. The accounting treatment is unlikely to drive the contract length or type in natural gas markets and likely different companies will prefer different accounting methods based on their unique facts and circumstances.

II. ACCOUNTING TREATMENT

A. General Accounting Treatment

The accounting treatment for natural gas contracts is prescribed by the Financial Accounting Standards Board ("FASB"), which has been granted the authority to establish the standards that govern the preparation of financial reports by non-government entities.[1] Gas contracts are typically accounted for using either:[2]

a. The normal purchases and normal sales exception, where costs are expensed as incurred and sales are booked when sales occurred,

or

b. Fair value accounting, where the fair value of the contract and associated liabilities are estimated each quarter.

For a gas contract to qualify for the normal purchases and sales exception, the contract must satisfy a number of criteria. Specifically, the following points are important for the **normal purchases and sales exception**:

- It pertains to contracts *other* than financial instruments and where the quantities contracted for are expected to be used or sold by the company in its normal course of business.
- Assessing whether a contract falls under the normal purchases and sales exemption requires judgment.

If a contract does not qualify for the normal purchases and sale exception then the contract's fair value has to be determined and the amount is recognized on the balance sheet as an asset or liability. The **fair value** of a contract is the price that would be received if the contract was sold in an orderly transaction between market participants.

To understand how to account for a gas contract, it is important to understand fair value accounting, which includes the accounting for derivatives and hedging instruments. A derivative is an investment contract based on an underlying investment called an "instrument." The most common type of derivative is an option contract, which involves the right to buy or sell the underlying instrument at an agreed price. Futures contracts are also derivatives. Many companies use derivative instruments to manage their exposure to various risks related to their gas contacts. In other words, they hedge their exposure to commodity price risk and other market fluctuations. The FASB's Accounting Standard Codification ("ASC") section 815, Derivatives and Hedging,[3] is devoted to the accounting treatment of

---

[1] The FASB accounting guidance is contained in the Accounting Standard Codification ("ASC"), which is available at FASB's website (www.fasb.org).

[2] While some power purchase contracts may involve the right to use property, plant and equipment and therefore are accounted for as leases, gas purchase contracts only rarely have lease features although contracts that involve gas well production may qualify for lease accounting.

[3] http://accountinginfo.com/financial-accounting-standards/asc-800/815-derivatives-hedging.htm. ASC 815 is an amendment of FASB Statement No. 133.

activities that includes instruments such as gas contracts. Under fair value accounting, the fair value of the contract and associated obligations is estimated each quarter and

- The estimated market value of the contract and associated obligations are recognized on the company's balance sheet.
- Increases (decreases) in the estimated market value of the contract are added (subtracted) on the income statement or on the balance sheet's equity portion.

The periodic process of measuring assets and liabilities is referred to as **mark to market**, as the fair value of an asset or liability is based on the market price of the asset or liability. If no market exists for the relevant asset or liability similar assets or liabilities or possibly an estimated fair value is used.[4]

A **derivative** is a financial instrument (or, more simply, an agreement between two parties) that has a value, based on the expected future price movements of the asset to which it is linked—called the underlying asset such as natural gas. There are many kinds of derivatives, with the most common in the gas market being futures and options. **Futures contracts** are standardized contracts between two parties to buy or sell a specified asset (e.g., natural gas) of standardized quantity and quality at a specified future date at a price agreed today (the futures price). These contracts are traded on a futures exchange such as NYMEX[5]. A closely related contract type is a **forward contract**, which is similar to a futures contract except that it is not traded on a public exchange. **An option** is a derivative financial instrument that establishes a contract between two parties concerning the buying or selling of an asset such as natural gas at a reference price. The buyer of the option gains the right, but not the obligation, to engage in some specific transaction on the asset, while the seller incurs the obligation to fulfill the transaction if so requested by the buyer. The price of an option derives from the difference between the price of the underlying asset (e.g., natural gas) plus a premium based on the time remaining until the expiration of the option. An option which conveys the right to buy something is called a **call**; an option which conveys the right to sell is called a **put**.

An important feature of commodities contracts is whether the contract allows for a **net settlement**, which means that the contract parties may settle the contract by means other than transferring the commodity. For example, if Party A owes Party B $1,000 and Party B owes Party A natural gas worth $800, then Party A pays Party B the net amount, $200. I.e., the contract is net settled.[6]

Derivatives are commonly accounted for at fair value, so each quarter, the fair value of the derivative is estimated and the company changes its financials to match the new estimate. Specifically, if the derivative has increased in value an amount is added to the asset side of the

---

[4] Fair value accounting is topic of ASC-820.

[5] The New York Mercantile Exchange (NYMEX) is the world's largest physical commodity futures exchange.

[6] FASB defines "Net settlement" as contract with settlement provisions meeting one of the following criteria:

(1) Neither party is required to deliver an asset that is associated with the underlying and that has a principal amount, stated amount, face value, number of shares, or other denomination that is equal to the notional amount (or the notional amount plus a premium or minus a discount). (2) One of the parties is required to deliver an asset of the type described in the first bullet above, but the contract specifies a market mechanism that facilitates net settlement. (3) One of the parties is required to deliver an asset of the type described in the first bullet above, but that asset is readily convertible to cash or is itself a derivative instrument.

balance sheet and the increase is recorded as either income or in the equity portion of the balance sheet.

Under current accounting guidance,[7] a derivative instrument is a financial instrument or other contract with all of the following characteristics:

a. There is an underlying asset and a notional payment provision.

b. The investment to obtain the derivative is zero or smaller than the initial investment would be required for other contracts that would be expected to have a similar a similar response to changes in market factors.

c. Requires or permits net settlement.

Fair value is the common measure for financial instruments and the only relevant measure for derivative instruments. Under Generally Accepted Accounting principles ("GAAP"), the fair value of an asset on the left side of the balance sheet is the amount at which that asset could be bought or sold in a current transaction between willing parties, other than in a liquidation sale. On right hand side of the balance sheet, the fair value of a liability is the amount at which the liability could be incurred or settled in a current transaction between willing parties, other than in a liquidation sale. If available, a quoted market price in an active market is the best evidence of fair value and should be used as basis for the measurement. If a quoted market price is not available, the fair value should be estimated using the best information available in the circumstances. In many circumstances, quoted market prices are unavailable and sometimes significant amounts of judgment needs to be used.

As noted above, an exception to the use of fair market values is the normal purchases and normal sales exception that allows contracts that fulfills certain criteria to be treated differently. Specifically, the costs of the contract are expensed as incurred. Normal purchases and normal sales are contracts that pertain to the purchase or sale of something other than a financial instrument or derivative instrument. It is expected that the contracted for volume will be delivered to the buyer and used in the buyer's normal course of business. Technically, for the normal purchases and sales exemption to be used it has to be expected that the volume will be delivered in quantities expected to be used or sold by the reporting entity over a reasonable period in its normal course of business. When a contract that contains derivative instruments can no longer be treated as normal purchases and normal sales, it is required to be treated under fair value accounting.

To qualify for the normal purchases and normal sales exception, the terms of the contract in question must be consistent with those of an entity's normal purchases or normal sales.

<u>Criteria used to evaluate whether the normal purchases and normal sales exception apply</u>:

- The quantity provided under the contract and the entity's need for this quantity need to be consistent. For example, a gas distribution company contracts for 10,000 MMbtu of natural gas and plans on using this volume to serve its customers.

[7] ASC 815-10-15-83.

- The point of delivery is consistent with the buyer's need for the quantity. For example, the contracted for amount is to be delivered in proximity to the buyer's facilities.
- The entity's prior practices with regard to such contracts are consistent with the purchase or sale occurring in the course of normal business.

Generally a normal purchases and normal sales contract is highly likely to not net settle. Sometimes the normal purchases and normal sales exception will result in different parties to the same contract (e.g., the buyer and the seller) reaching different conclusions about whether the contract falls within the scope of the normal purchases and sales exception. For example, a normal sale for one party to a contract may not be a normal purchase for the counterparty. That is, the application of the normal purchases and normal sales exception may not and is not required to result in symmetrical treatment by both counterparties to a contract.

An interesting observation is related to how net settlement is determined. Many contracts require a defaulting party to compensate the non-defaulting party for any loss incurred but does not allow the defaulting party to receive the effect of favorable price changes.

For example, Buyer agreed to purchase 10,000 MMbtu[8] of natural gas from Seller at $4.00 per unit with the provision that the Seller must deliver the 10,000 MMbtu of natural gas at a specific location 3 months from today.

- Assume Buyer defaults on the forward contract by not taking delivery and Seller must sell the 10,000 MMbtu in the market at the prevailing market price of $1.00 per MMbtu. To compensate Seller for the loss incurred due to Buyer's default, Buyer must pay Seller a penalty of $30,000 (that is, 10,000 MMbtu × ($4.00 – $1.00)).

- Assume that Seller defaults and Buyer must buy the 10,000 MMbtu Buyer needs in the market at the prevailing market price of $5.00 per MMbtu. To compensate Buyer for the loss incurred due to Seller's default, Seller must pay Buyer a penalty of $10,000 (that is, 10,000 MMbtu × ($5.00 - $4.00))

Because the event of default is out of the control of the non-defaulting party, such a provision does not give a gas contract the characteristic described as net settlement. However, a pattern of having the asymmetrical default provision applied in contracts between certain counterparties would indicate the existence of a tacit agreement between those parties that the party in a loss position would always elect the default provision, thereby resulting in the understanding that there would always be net settlement.

[8] Natural gas can be measured based on its volume (cubic feet or Mcf) or based on its heat content (British thermal units or therms). Prices can be converted from one basis to another by using the relative ratio of the corresponding heat or volume measure. A BTU (btu) or British thermal unit is a traditional unit of energy. It is approximately the amount of energy needed to heat 1 pound (0.454 kg) of water 1 °F (0.556 °C). One MMbtu is one million btu. Mcf is the volume of one thousand cubic feet of natural gas and equals 1.031 million Btu on average.

B. ACCOUNTING TREATMENT BY CONTRACT TYPE

1. Spot Market Gas Contracts

The spot market for natural gas is a market in which natural gas is bought or sold for immediate delivery or delivery in the very near future. Gas purchase and sales in the spot market are accounted for as normal purchases and normal sales. Therefore they are expensed as incurred. No assets or liabilities are recorded on the financial statements.

Example: Buyer purchased 10,000 MMbtu of natural gas in the spot market for $40,000; $4.00 per MMbtu. The $40,000 is accounted for as an expense of $40,000 or possibly as $40,000 in inventory if Buyer decided to store the gas for later use.

2. Forward Contracts[9]

Companies may enter into long term gas contracts for the purposes of managing certain risks or fulfilling production or customer needs. These contracts vary regarding the time horizon of the contract, the volumes contracted for, as well as in price determination, whether there are options to increase or decrease volumes, etc. From an accounting perspective, it is the characteristics of the contract rather than the contract length or natural gas volume that determines whether the contract qualifies for the normal purchases and normal sales exception.

Naturally, the longer the contract term, the more difficult it is to estimate the exact quantity needed. Therefore, the longer the contract term, the more plausible it is that the contracting parties would prefer an option to adjust the contracted for quantities or to net settle. However, if at inception it is expected that the contracted for quantity will be modified or the contract will net settle, then the contract does not qualify for the normal purchases and sales exception.

As an example, a power generator may forecast the need for 20,000 MMbtu of natural gas each day in July and August and enter into a forward purchase agreement for the delivery of the forecasted volume needed in the time period. Such a contract would generally qualify as a normal purchase. In general, forward contracts are treated as follows:

i. Forward contracts that do not include options
   - Forward contracts that do not contain net settlement provisions and are expected to be used in the normal course of business qualify for the normal purchases and normal sales exception. These forward contracts can be expensed as the gas units are delivered.[10]

---

[9] A forward contract is a non-standardized contract between two parties to buy or sell an asset at a specified future time at a price agreed today. A futures contract is very similar to a forward contract in that parties enter into the contract to buy or sell a particular commodity or financial instrument at a pre-determined price in the future. A futures contract differs from a forward contract in that it is generally traded at a futures exchange and standardized to facilitate exchange trading. The accounting for futures gas contracts vs. that for forward gas contracts are similar.

[10] As the default accounting practice is the fair value method, companies choose or elect the normal purchase and sales exemption. They are not required to use it, but the choice must be consistent, so a company cannot classify a contract as a normal purchase in 2008 and change the accounting methodology to fair value in 2009.

- Forward contracts that contain net settlement provisions are not eligible for the normal purchases and normal sales exception unless it is probable at inception and throughout the term of the contract that the contract will not settle net and will result in physical delivery. Net settlement of contracts in a group of contracts similarly designated as normal purchases and normal sales would call into question the classification of all such contracts as normal purchases or normal sales. Contracts that require cash settlements of gains or losses or are otherwise settled net on a periodic basis, including individual contracts that are part of a series of sequential contracts intended to accomplish ultimate acquisition or sale of a commodity, do not qualify for this exception.

ii. Forward contracts that include optionality features
   - Forward contracts that contain options that do not modify the quantity of the assets to be delivered are eligible to qualify for the normal purchases and normal sales exception. Except for certain power purchase or sales agreements, if an option component permits modification of the quantity of the assets to be delivered, the contract is not eligible for the normal purchases and normal sales exception, unless the option component permits the holder only to purchase or sell additional quantities at the market price at the date of delivery.

iii. Other contract types (e.g. options)
   - Option contracts that would require delivery of the related asset at an established price under the contract only if exercised are not eligible to qualify for the normal purchases and normal sales exception.

Prevailing accounting guidelines explicitly prohibit a company from bifurcating from a combined contract the forward component from the option component and then asserting that the forward component is eligible to qualify for the normal purchases and normal sales exception.[11]

<u>Examples:</u>

i. Company A enters into a forward contract to sell on a specified date a specified quantity of gas that is readily convertible into cash. The purchase price is determined as the market price at sale date, but it cannot exceed a predetermined price cap nor to can it fall below a price floor.
ii. Company B enters into a compound derivative contract consisting of a forward contract for the company to sell on a specified date a fixed amount of gas at a fixed price and a written call option that obligates Company B to sell gas at the lower price even if the market price of gas rises between the contract date and the delivery date.
iii. Company C enters into a compound derivative contract consisting of a forward contract for the company to sell on a specified date a specified quantity of gas and a written call option that obligates the company to sell a

[11] ASC 815-10-55-26.

specified additional quantity of gas at the below-market price if the market price of gas rises below the contract date and the delivery date.

In Example i, the contract features do not allow for a modification of the quantity to be delivered; thus, the contract is eligible for the normal purchases and normal sales exception. If the contract satisfies other features of normal purchases and normal sales exception, the contract should be eligible for normal purchases and sales exception.

In Example ii, the contract features allows for a modification of the price but not of the quantity of gas to be delivered; thus the contract is eligible for the normal purchases and sales exception.

In Example iii, the contract features allows for a modification of the quantity of gas to be delivered under the contract, thus the contract is not eligible for the normal purchases and sales exception. In this example, if the volumetric option feature has expired or has been exercised (even if the delivery of gas has not yet occurred), there is no longer uncertainty as to how much gas will be delivered under the forward contract. In this case, after the expiration or exercise, the forward contract would be eligible for designation as a normal purchase or a normal sale, provided the other conditions are met, including full physical delivery of the exercised option quantity.

C. ACCOUNTING TREATMENT OF HEDGES

Companies often enter into contracts to prevent negative change in gas inventories or in future gas purchases. Of the contracts that do not meet the normal purchase and normal sales exemption, some contracts may qualify for hedge accounting. **Hedges** aim to manage the company's exposure to fluctuations in prices. To account for natural gas hedge, prevailing accounting standards look to two types of hedges:

- A **cash flow hedge** intends to hedge variations in cash flow. If a company designates a hedge instrument as a cash flow hedge, the company records the fair value of the hedge on its balance sheet each quarter. Changes in the fair value from quarter to quarter are recognized in the equity segment of the company's balance sheet
- A **fair value hedge** intends to variations in the fair value of assets. If a company designates a hedge instrument as a fair value hedge, the company records the fair value of the hedge on its balance sheet each quarter. Changes in the fair value from quarter to quarter are recognized in the company's income statement with gains adding to income and losses subtracting from income.

Most hedging contracts that aim at managing price risk of gas contracts are designated as cash flow hedges.

The benefit of hedge accounting is a reduction in the earnings volatility that would otherwise result from recording changes in fair value of the hedging instrument in the income statement in a period different from the recognition of the effects of the hedged item. In addition, hedging transactions have more flexibility as to income statement classification, because realized and unrealized gains and losses can be split into separate line items in the income statement. Finally, hedge accounting may better align the accounting and reporting of the transaction with management's intent and objective of the transaction.

Production companies and users of commodities may need to manage their exposure to the price of purchasing inputs and to changes in the value of their inventories during the holding period. A fair value hedge can be used to protect against the risk of a change in the value of physical inventory during the hedging period. A cash flow hedge can be used by a company forecasting either (i) the future purchase of physical inventory to protect against the risk of changes in the price of the inventory prior to the forecasted purchase or (ii) the future sale of physical inventory to protect against the risk of changes in the sales price prior to the forecasted sale.

A common strategy for protecting against the risk of changes in the price of inventory, both owned and forecasted to be purchased, is by use of forward or futures contracts. However, other types of instruments are also popular. A more detailed description of the criteria that needs to be met to qualify for hedge accounting is provided in Appendix B.

III. ILLUSTRATIVE EXAMPLES AND INDUSTRY PRACTICE

A. Hypothetical Examples

The following example shows that a key aspect of qualifying for the normal purchases and normal sales exception is that the quantity of gas contracted for expected to be delivered to the purchasers. In the following several examples are provided, where the normal purchases and normal sales exception can be applied as well as several examples where it does not apply.

a. Normal purchases and sales exception. Accrual accounting applies.

Company A enters into a contract to purchase 10,000 MMbtu of natural gas in the spot market for $4.00 per MMbtu. Total purchase cost, $40,000, is booked as expenses on the Income Statement. No asset or liability is recognized on the balance sheet except for the reduction in cash.

Income Statement		**Balance Sheet**			
Expenses	(40,000)	Cash	(40,000)	Liabilities	0
Net Income	(40,000)	Other assets		Equity	(40,000)

b. Forward contract that (i) does not have optionality features and (ii) other features that qualify for the normal purchases and normal sales exception.

Company B forecasts it needs to provide its customers about 10,000 MMbtu of natural gas exactly two years from now. It enters into a forward contract to purchase 10,000 MMbtu of natural gas at $4.00 per MMbtu. Two years from now, the gas will be delivered to its service territory and the cost of $40,000 will be paid to the contract counter party.

Because this contract is not expected to net settle, and the amount and location are consistent with what Company B would do in its normal course of business, the normal purchases and normal sales exception applies. Nothing is recorded at the inception or during the 2 year period prior to gas delivery. The purchase cost of $40,000 is booked as expenses on the Income Statement at the time of delivery. No asset or liability is recognized on the balance sheet except for the reduction in cash.

At Inception

Income Statement		Balance Sheet			
Expenses	0	Cash	0	Liabilities	0
Net Income	0	Other assets		Equity	0

At Delivery (Two Years from Now)

Income Statement		Balance Sheet			
Expenses	(40,000)	Cash	(40,000)	Liabilities	0
Net Income	(40,000)	Other assets		Equity	(40,000)

c. *Forward contract that (i) does not have any optionality features and (ii) other features that do not qualify for the normal purchases and normal sales exception.*

Company C enters into a forward contract to sell 10,000 MMbtu of natural gas at $4.00 per MMbtu two years from now. The contract will net settle without physical delivery.

Because this contract is expected to be net settled, the normal purchases and normal sales exception does not apply and fair value accounting applies. At the inception of the contract, fair value of the contract is estimated and recorded on the balance sheet. The fair value of the contract is estimated periodically through the contract term. Market to market gain or loss is estimated and recorded on the income statement during the contract term. At the end of the contract term, Company C pays the difference between the market price and the contracted sales price, representing the realized gain or loss to be recorded on the income statement.

At Inception. Market price per MMbtu at inception is $4
Fair value of the contract is $40,000.

Income Statement		Balance Sheet			
Mark to Market Gain	0	Cash	40,000	Trading/Derivative Assets	40,000
Net Income	0	Other assets		Equity	0

At End of Year 1. Market price per MMbtu is $2
Fair value of the contract is $20,000.

Income Statement		Balance Sheet			
Mark to Market Gain	20,000	Cash	-	Trading/Derivative Assets	20,000
Net Income	20,000	Other assets		Equity	20,000

At End of Year 2. Contract ends. Market price per MMbtu is $6
Company C pays cash of $20,000 representing its realized loss from the contract.

Income Statement		Balance Sheet			
Realized Loss	(20,000)	Cash	(20,000)	Trading/Derivative Assets	0
Net Income	(20,000)	Other assets		Equity	(20,000)

d. Forward contract that (i) has an optionality feature that changes the price but not the quantity and (ii) other features that qualify for the normal purchases and normal sales exception.

Company D enters into a compound derivative contract that includes a forward contract to sell 10,000 MMbtu of natural gas at $4.00 per MMbtu two years from now, and a written call option that obligates Company D to sell gas for the higher exercise price of $5.00/MMbtu if the market price of gas falls below $3.00 per MMbtu two years from now.

Because the quantity is fixed and the other features qualify for the normal purchases and normal sales exception, the derivative contract may be accounted for using normal accrual accounting.

At Inception

Income Statement		**Balance Sheet**			
Expenses	0	Cash	0	Liabilities	0
Net Income	0	Other assets		Equity	0

At Contract End (Two years from now): Market price per MMbtu is $6
Because market price is above the floor of $3, the option is exercised by the option holder.
Company D is obligated to sell 10,000 MMbtu of gas at the exercise price of $5/MMbtu.

Income Statement		**Balance Sheet**			
Revenue	50,000	Cash	(10,000)	Liabilities	0
Gas Cost	(60,000)				
Net Income	(10,000)	Other assets		Equity	(10,000)

e. Forward contract that (i) has an optionality feature that changes the quantity and (ii) other features does not qualify for the normal purchases and normal sales exception.

Company E enters into a compound derivative contract that includes a forward contract to purchase 10,000 MMbtu of natural gas at $4.00 per MMbtu two years from now, and a written put option that obligates Company E to purchase additional 10,000 MMbtu gas at $4.00 per MMbtu if the market price of gas rises above $5.00 per MMbtu two years from now.

Because the option changes the quantity and the other features qualify for the normal purchases and normal sales exception, the derivative contract may be accounted for using normal accrual accounting.

At Inception. Market price per MMbtu at inception is $4
Fair value of the contract is $40,000.

Income Statement		Balance Sheet			
Mark to Market Gain	0	Cash	(40,000)	Liabilities	0
Net Income	0	Trading/Derivative Assets	40,000		
		Other assets		Equity	0

At End of Year 1. Market price per MMbtu is $2
Fair value of the contract is $20,000.

Income Statement		Balance Sheet			
Mark to Market Loss	(20,000)	Cash	-	Liabilities	0
Net Income	(20,000)	Trading/Derivative Assets	(20,000)		
		Other assets		Equity	(20,000)

At End of Year 2. Contract ends. Market price per MMbtu is $6
Company E buys 10,000 plus additional 10,000 MMbtu of gas at $4.00 per MMbtu.
The contract net settles.

Income Statement		Balance Sheet			
Realized gain	40,000	Cash	40,000	Liabilities	0
Net Income	40,000	Trading/Derivative Assets	-		
		Other assets		Equity	40,000

The examples above are all hypothetical examples of companies' transactions and illustrate the relevant accounting treatment. One thing that is immediately clear from the examples is that items that require fair value treatment lead to more volatility in income across periods than do transactions that qualify for the normal purchases and sales exception. Simply put, if a company has a 10,000 MMbtu futures contract that is accounted for at fair value, it may start out at $40,000 ($4 per MMbtu), but next quarter, the fair value has to be re-estimated. This leads to fluctuations on the balance sheet as well as on the income statement. These fluctuations are caused by fluctuating current and expected gas prices. Figure A.1 in Appendix A shows the day-ahead spot price from 1990 to January 2011. It is evident that natural gas prices have fluctuated dramatically - - so fair value accounting would lead to dramatic fluctuations in the balance sheet and income statement of companies that engage in long-term contracting using fair value accounting.

B. Summary of Current Choices By Gas Users (Local Distribution Companies) and Chemical Companies

Looking to whether companies choose to rely on the normal purchases and sales exception, we reviewed the 10-K for 2009 for all gas local distribution companies and basic chemical companies listed in Value Line Investment Survey's standard edition.[12] While most of the gas distribution companies do use the normal purchases and sales exception for some of their gas contracts, we note that two companies do not disclose any reliance on this provision and one company, New Jersey Resources Corp., has switched from using the normal purchases and sales exception to fair value accounting. New Jersey Resources cites the difficulty in asserting physical delivery as the reason for the switch. The following table lists the companies and whether they discuss their use of the normal purchases and normal sales exception. A "Y" in the right column means that the company elects normal purchases and normal sales exception for some of its contracts and discusses this in its 2009 10-K. An "N" in the right column means that the company does not discuss the normal purchases and normal sales exception for any of its contracts. Companies that rely on the normal purchases and sales exception for some contract, use fair value accounting for other contracts.

Natural Gas Utility Companies
Normal Purchases and Normal Sales Exception

Company	Rely on the Exception for Some Contracts
UGI Corporation	Y
AGL Resources	N
Atmos Energy Corporation	Y
Nicor Inc.	Y
The Laclede Group, Inc.	Y
NiSource Inc.	Y
New Jersey Resources Corp.	Y*
Northwest Natural Gas Company	Y
Piedmont Natural Gas Co Inc.	N
South Jersey Industries, Inc.	Y
Southwest Gas Corporation	Y
WGL Holdings Inc.	Y

Source:
Company annual reports or 10-K forms, 2009 or 2010.

*New Jersey Resources Corp. enters normal purchase and sales agreements for two of its subsidiaries, NJNG and NJR Energy.

"During fiscal 2007 and 2008, NJR employed normal purchases and normal sales exception for certain of its physical forward contracts at NJRES. Due to changes in the Company's ability to assert physical delivery, effective October 1, 2008, the Company chose to no longer apply normal treatment to physical commodity contracts. Therefore, as of October 1, 2008, all NJRES physical commodity contracts that meet the definition of a derivative are accounted for at fair value in the Consolidated Balance Sheets, with changes in fair value included in earnings as noted above." (AR 2009, New Jersey Resources Corp.)

[12] Value Line is a subscription service that follows approximately 1,700 companies.

Similarly, we looked to the chemical industry for evidence on the reliance on the normal purchases and normal sales exception and found that only three of eleven companies discuss the use of the normal purchases and normal sales exception in their 2009 10-K.

Basic Chemicals Companies
Normal Purchases and Normal Sales Exception

Company	Country	Main Business	Rely on the Exception for Some Contracts
Agrium, Inc.	Canada	Agricultural Products and Services	N
CF Industries Holdings, Inc.	USA	Nitrogen and Phosphate Fertilizer Products Distribution	Y
China Green Agriculture, Inc.	China	R&D, Production and Sales of Fertilizers and Agricultural Products	N
Compass Minerals Int'l	USA	Producer of Minerals (Salt, Sulfate of Potash Specialty Fertilizer and Magnesium Chloride)	N
Dow Chemical	USA	Specialty Chemical, Advanced Materials, Agrosciences and Plastics Businesses	N
Du Pont	USA	Science and Innovation (highly diversified)	N
FMC Corp.	USA	Agricultural Products, Specialty Chemicals and Industrial Chemicals	N
Georgia Gulf	USA	Integrated Chemical Product Lines	Y
Mosaic Company	USA	Producer and Marketer of Concentrated Phosphate and Potash Crop Nutrients	N
Olin Corp.	USA	Chemicals Manufacturer and Ammunition	N
Potash Corp.	Canada	Integrated Fertilizer and Related Industrial and Feed Products	Y

Source:
Company annual reports or 10-K forms, 2009 or 2010.

IV. SCOPE FOR NORMAL PURCHASES AND SALES EXCEPTION

For the normal purchases and normal sales exception to be applied to a contract, the company must provide adequate documentation that shows the quantity, location, time between contract start date and the delivery date that are consistent with the terms of the company's normal purchases and normal sales. The company should document its basis for concluding that it is probable that the contract will not net settle and will result in physical delivery. Additional documents on past trends, future demand, similar contracts, the company's operating locations, and the company and industry's customs are also helpful.

There are other requirements as well. For example, a contract must be indexed to an underlying asset (e.g., natural gas) that is clearly and closely related to the asset that is being purchased or sold. The "clearly and closely" needs to be evaluated based on both a qualitative analysis and a quantitative analysis. In other words the evaluation is subject to judgment. If a contract deemed to satisfy the criteria for normal purchases and normal sales exception except that the underlying in a contract has a price adjustment feature, the contract should be considered to not be "clearly and closely." This "clearly and closely" price adjustment assessment should be performed only at the inception of the contract.

Normal purchases and normal sales scope exception is an election an entity can make at the inception of a contract or at a later date. However, once an entity documents its election and a contract's compliance with other requirements for this exception, an entity is not permitted at a later date to change its election and treat the contract as a derivative.

A contract that is designated as a normal purchases or normal sale must be grouped with other "similarly designated contracts." Current accounting guidance stipulates that if a company were to net settle a contract that was designated as a normal purchase or normal sale contract, it will cast doubt on the company's designation of other contracts in the group, as well as its ability to designate similar contracts as normal purchases and normal sales in the future.

Sometimes although the criteria for normal purchases and normal sales exception are the same for both parties to an agreement, the scope exceptions are often unique to each party. Therefore, the application of the exception may result in different treatments by different counterparties to a contract.

V. EVALUATION OF CURRENT ACCOUNTING TREATMENT

A. PROS AND CONS OF CURRENT ACCOUNTING

The current accounting treatment has both pros and cons. Contracts that qualify for the normal purchases and normal sales exception are generally simpler than other contracts and often lead to a simpler accounting treatment. Among the distinguishing characteristics of fair value versus the normal purchases and normal sales exception are some of the following.

- Under fair value accounting, the fair value of contracts is estimated each quarter, which requires substantial documentation. In addition, preparers of financial statements are required to identify the purpose and risks of the derivative transactions.

- Under the normal purchases and normal sales exception, the company is required at contract inception to document that the quantity, location, time between contract start date and the delivery date are consistent with the terms of the company's normal purchases and normal sales. The company should document its basis for concluding that it is probable that the contract will not net settle and will result in physical delivery.

- The normal purchases and normal sales exception tend to keep the income statement and balance sheet more stable than does fair value accounting.

- Fair value accounting provides investors with quarterly information about the fair value of the contracts and also provides significant risk disclosure.

Each of these pros and cons has implications for stakeholders. For example, for a gas distribution company, reliance on the normal purchases and normal sales exception will provide a more stable balance sheet. Specifically, equity as a percentage of debt and equity remains relatively constant, which in turn makes it easier to keep gas rates stable for customers. At the same time, shareholders may seek more timely information about the value and risks inherent in the company's gas purchase agreement than is available through the normal purchases and normal sales exception. From a financial statement preparer perspective, fair value accounting is generally more complex, but because many companies cannot rely on the normal purchases and normal sales exception for all its contracts, it may be beneficial to treat all contracts similarly. Further, as contract terms lengthen, it becomes more difficult to assert physical delivery and not net settlement. This is the reason New Jersey Resources provided, when switching from the normal purchases and normal sales exception to derivative accounting for all its contracts.[13]

Because the income and balance sheet volatility is caused by gas price volatility, companies may view the relative benefits of the normal purchases and normal sales exception and fair value accounting differently during times of high and low gas price volatility. However, consistency in the chosen accounting method is important and prevailing accounting guidelines require once a company has elected to rely on the normal purchases and normal sales exception for a contract, the company cannot switch to a different accounting method at a later date.

B. DOES THE CURRENT ACCOUNTING TREATMENT CREATE INCENTIVES TO CHOOSE SPECIFIC CONTRACTS?

We note that most utilities (both electric and gas) that enter into contracts that qualify for the normal purchases and normal sales exception do rely on the exception for some of their qualifying contracts. However, there are exceptions. This may indicate that there is no one accounting treatment that is best suited for all companies. Further, we note that the volume of many types of natural gas contracts have grown dramatically over the last 20 years and that regardless of the accounting treatment, companies that engage in significant natural gas purchase and sales need to insure themselves against price fluctuations. It is vital for these companies to enter into economically meaningful contracts and to engage in economically effective hedging. The accounting treatment is a secondary issue. Thus, while some companies see the current accounting treatment as favoring spot purchases and certain longer term

[13] See New Jersey Resources Inc., 2009 Annual Report.

contracts, the decision regarding contract type is not and should not be chosen based the accounting treatment.

Under current GAAP, spot market purchases as well as forward contracts that obligates the buyer (seller) to purchase (sell) specific volumes at specific dates fall under the normal purchases and normal sales exception. Many more complex contracts do not qualify for this treatment. **If** a company or its management seeks to avoid fluctuations caused by gas price volatility, the company, **everything else equal**, has an incentive to purchase gas in the spot market or to use forward contracts with a fixed contract volume. This may be especially beneficial for rate regulated companies that need regulatory approval for rates. This link comes about because rates typically depend, in part, on the capital structure relied upon by a rate regulated company. As the balance sheet fluctuates with gas price fluctuations, so does the equity component of the capital structure of the company.[14]

From a shareholder perspective, an advantage of fair value accounting is that it provides more timely information about the value of the company's gas related assets. However, this benefit could alternatively be obtained through footnote disclosure under a different accounting treatment. In addition, the company and its shareholders could have an incentive to rely on fair value accounting if they expect future gas prices to rise, as it would provide an early recognition of the increased contract value. Similarly, **if** management faces a performance based compensation that is linked to income, they would, **everything else equal**, prefer fair value accounting during times of rising natural gas prices and the normal purchases and normal sales exception during time of declining natural gas prices.

The accounting treatment is unlikely to drive the contract length and type in natural gas markets and likely different companies will prefer different treatments depending on their unique facts and circumstances. However, it appears that a clarification of the current rules and guidelines would be beneficial. This is especially true in regards to the net settlement issue.

[14] Financial economists find that the overall cost of capital remains almost constant even if the capital structure fluctuates within a reasonable range. However, most regulators assign the same cost of equity to a company with a large equity component as to one with a small equity component.

APPENDIX A: NATURAL GAS PRICES

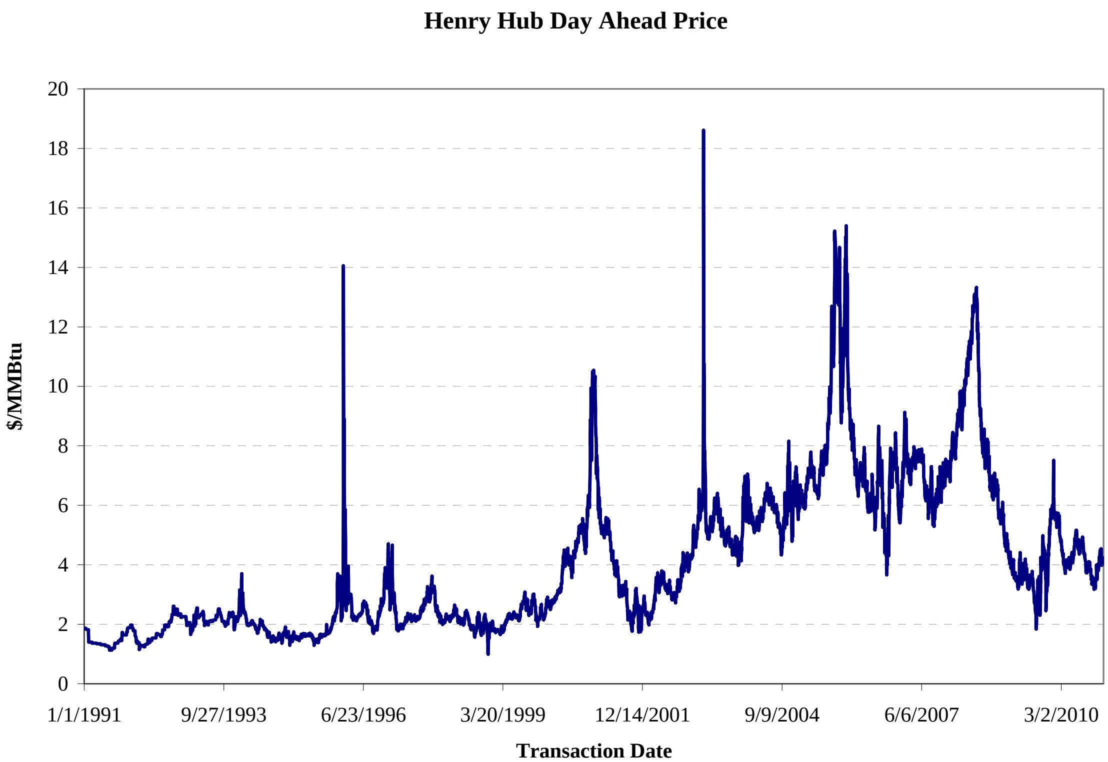

Figure A.1: Daily natural gas prices from January 1991 to December 2010.

APPENDIX B: QUALIFYING FOR HEDGE ACCOUNTING

The following criteria need to be satisfied in order for the contract to be considered for hedge accounting.

a. Nature of the hedging transaction. The hedging transaction must qualify and be designated as a valid fair value, cash flow, or foreign currency hedge. The risk management objective and strategy must be identified and documented, including identification of the hedging instrument; the hedged item or transaction and nature of the risk being hedged; and how the hedging instrument will be effective in hedging the identified risk exposure.
b. Earnings exposure. For a fair value hedge, the hedged item presents an exposure to changes in the fair value attributable to the hedged risk that could affect reported earnings (except for not-for-profit organizations that issue a statement of performance). For a cash flow hedge, the forecasted transaction is a transaction with a party external to the reporting entity (except as permitted by ASC 815-20-25-61 through 25-65 for intercompany foreign currency hedge transactions) and presents an exposure to variations in cash flows for the hedged risk that could affect reported earnings.
c. Assessment of hedge effectiveness. Hedge effectiveness must be assessed at the time of hedge designation, and a conclusion that the hedging transaction is expected to be highly effective in offsetting changes in the fair value or cash flows attributable to the hedged risk at inception and throughout the term of the hedge must be supported. Periodic support of hedge effectiveness on a prospective and retrospective basis must be assessed and documented at each financial reporting date and at least quarterly. Ineffectiveness, if present, should be calculated and recorded in earnings each reporting period.
d. Documentation and ongoing effectiveness assessment. A qualifying hedging transaction requires compliance with the rigorous documentation requirements that must be performed at the inception of the hedging relationship and at least quarterly, on an ongoing basis. Key terms of the hedging relationship must be specified, and the results of the effectiveness assessment must be documented.

A firm commitment is a binding agreement with a third party for which all significant terms are specified (e.g., quantity, price, and timing of the transaction). The price may be expressed either as a currency or as a specified interest rate or effective yield, and the agreement must include a penalty for non-performance that is sufficient to make performance probable. An unrecognized firm commitment designated and qualifying as the hedged item in a fair value hedge is recognized to the extent that changes in its fair value are attributable to the hedged risk. Firm commitments are generally limited to treatment as the hedged item in fair value hedges. One of the exceptions to this rule is in the case of all-in-one hedges.

For example, assume a company enters into a firm commitment, which also meets the definition of a derivative instrument, to purchase natural gas at a date on which it forecasts a need for natural gas. In an all-in-one hedge, the forecasted purchase of the natural gas would be the hedged item, and the firm commitment to purchase natural gas would be the hedging instrument. Since the hedged item and the hedging instrument are the same transaction, the critical terms match and the forecasted transaction is settled with the delivery of the natural gas pursuant to the firm commitment. As such, there is an expectation of no ineffectiveness for this hedging transaction. The derivative is reported at fair value, with the offset recorded in other comprehensive income. At the time of delivery of the natural gas, the fair value, not the commitment price, is used to record the natural gas purchase. However, the balance accumulated as accumulated other comprehensive income is reclassified into earnings as the natural gas impacts earnings through its consumption or sale. This treatment results in the net impact on earnings being equal to the fixed price under the firm commitment.

Some companies choose not to employ all-in-one hedging strategies and elect instead to apply the normal purchases and normal sales scope exception under ASC 815-10-15-22 to their firm commitments for the purchase of commodities like the natural gas in the example above. However, the normal purchases and normal sales scope exception may be applied only to contracts that will not net settle and will result in the physical delivery of the natural gas (as part of the company's normal course of business). It is important to note that the net settlement of a contract designated as normal purchases or normal sales would call into question the classification of all similar contracts designated as normal purchases or normal sales under ASC 815. Therefore, while the designation of a contract under the normal purchases and normal sales exception avoids the administrative burden associated with hedge accounting, the application of all-in-one hedge accounting avoids the potential tainting of other, similar contracts if there is a risk that the contract may not result in physical delivery.

APPENDIX C: GLOSSARY

Term	Definition
Btu	The British thermal unit (BTU or Btu) is a traditional unit of energy equal to about 1 055.05585 joules. It is approximately the amount of energy needed to heat 1 pound (0.454 kg) of water 1 °F (0.556 °C).
Call Option	An agreement that gives an investor the right (but not the obligation) to buy a stock, bond, commodity, or other instrument at a specified price within a specific time period
Cash Flow Hedge	A cash flow hedge is a hedge of the exposure to the variability of cash flow that is attributable to a particular risk associated with a recognized asset or liability. Such as all or some future interest payments on variable rate debt or a highly probable forecast transaction and could affect profit or loss (IAS 39, §86b).
Default	In finance, default occurs when a debtor has not met his or her legal obligations according to the debt contract, e.g. has not made a scheduled payment, or has violated a loan covenant (condition) of the debt contract. Other types of default can occur when parties to a contract fails to make payments stipulated by the contract in the given time frame.
Derivative	A derivative is a financial instrument (or, more simply, an agreement between two parties) that has a value, based on the expected future price movements of the asset to which it is linked—called the underlying asset— such as a share, a unit of certain commodity, or a currency.
Fair Value	Under US GAAP, fair value is the amount at which the asset could be bought or sold in a current transaction between willing parties, or transferred to an equivalent party, other than in a liquidation sale.
Fair Value Hedge	A fair value hedge is a hedge of the exposure to changes in the fair value of a recognized asset or liability that are attributable to a specific risk.
Financial Accounting Standards Board (FASB)	Since 1973, the Financial Accounting Standards Board (FASB) has been the designated organization in the private sector for establishing standards of financial accounting that govern the preparation of financial reports by nongovernmental entities. Those standards are officially recognized as authoritative by the Securities and Exchange Commission (SEC) (Financial Reporting Release No. 1, Section 101, and reaffirmed in its April 2003 Policy Statement) and the American Institute of Certified Public Accountants (Rule 203, Rules of Professional Conduct, as amended May 1973 and May 1979).
Forward Contract	A forward contract is a non-standardized contract between two parties to buy or sell an asset at a specified future time at a price agreed today.
Futures Contract	A futures contract is a contractual agreement, generally made on the trading floor of a futures exchange, to buy or sell a particular commodity or financial instrument at a pre-determined price in the future. Futures contracts detail the quality and quantity of the underlying asset; they are standardized to facilitate trading on a futures exchange.
Generally Accepted Accounting Principles (GAAP)	Generally Accepted Accounting Principles (GAAP) is a term used to refer to the standard framework of guidelines for financial accounting used in any given jurisdiction which are generally known as Accounting Standards. GAAP includes the standards, conventions, and rules accountants follow in recording and summarizing transactions, and in the preparation of financial statements.

Hedge	In finance, a hedge is a position established in one market in an attempt to offset exposure to price changes or fluctuations in some opposite position with the goal of minimizing one's exposure to unwanted risk.
Inventory	Inventories refer to the raw materials, work-in-process goods and completely finished goods that are considered to be the portion of a business's assets that are ready or will be ready for sale.
MMbtu	One million Btu
Net Settlement	"Net settlement": A contract with settlement provisions meeting one of the following criteria: (1) Neither party is required to deliver an asset that is associated with the underlying and that has a principal amount, stated amount, face value, number of shares, or other denomination that is equal to the notional amount (or the notional amount plus a premium or minus a discount). (2) One of the parties is required to deliver an asset of the type described in the first bullet above, but the contract specifies a market mechanism that facilitates net settlement. (3) One of the parties is required to deliver an asset of the type described in the first bullet above, but that asset is readily convertible to cash or is itself a derivative instrument.
Normal Purchase and Sales	Normal purchases and normal sales are contracts that provide for the purchase or sale of something other than a financial instrument or derivative instrument that will be delivered in quantities expected to be used or sold by the reporting entity over a reasonable period in the normal course of business.
Normal Purchase and Sales Exception	The purpose of the normal purchases and normal sales exception is to exclude certain routine types of transactions from the fair value accounting required for derivative instruments. The exception includes certain contracts that do not net settle (or not likely to net settle) and the terms of which are reasonably similar to those of the contracts in the normal course of business.
Notional Amount	A notional amount is a number of currency units, shares, bushels, pounds, or other units specified in a derivative contract. The notional amount generally represents the second half of the equation that goes into determining the settlement amount under a derivative instrument.
Option (see also Call Option, Put Option)	An option is a financial derivative that represents a contract sold by one party (option writer) to another party (option holder). The contract offers the buyer the right, but not the obligation, to buy (call) or sell (put) a security or other financial asset at an agreed-upon price (the strike price) during a certain period of time or on a specific date (exercise date).
Other Comprehensive Income (OCI)	Other comprehensive income is an entry that is generally found in the equity section of a corporation's balance sheet. Accumulated other comprehensive income measures gains and losses of a business that have yet to be realized.
Put Option	A put option is an option contract giving the owner the right, but not the obligation, to sell a specified amount of an underlying security at a specified price within a specified time. This is the opposite of a call option, which gives the holder the right to buy shares.
Swap	A swap is a derivative in which counterparties exchange certain benefits of one party's financial instrument for those of the other party's financial instrument. The benefits in question depend on the type of financial instruments involved.
Underlying	The underlying of a derivative is an asset, basket of assets, index, or even another derivative, such that the cash flows of the (former) derivative depend on the value of this underlying.