KASNEB

PART 3

SECTION 5

ALTERNATIVE INVESTMENT ANALYSIS

REVISED ON: MARCH 2019

STUDY PACK

15.0 LEARNING OUTCOMES

A candidate who passes this paper should be able to:

- Identify the principal classes of alternative investments
- Identify various players in the alternative investment market
- Apply valuation techniques to price alternative investments
- Advise a client on how to incorporate alternative investment in his/her portfolio according to his or her investment objectives and risk tolerance
- Evaluate the importance of asset backed securities and mortgage backed securities as asset classes

CONTENT

15.1 Overview of alternative investments

- Distinction between alternative investments from traditional investments
- Categories of alternative investment (real assets, hedge funds, commodities, private equity and structured products)
- Types of alternative investment structures: regulatory, securities, trading, compensation, institutional
- Distinction of alternative and traditional investments based on return characteristics and methods of analysis
- Goals of alternative investing

15.2 The environment of alternative investments

- Participants in the alternative investing environment: buy side participants (plan sponsors; foundations and endowments; private wealth institutions; hedge funds; funds of funds; private equity funds; commodity trading advisors; separately managed accounts) and their roles
- Sell side participants (large dealer banks, brokers) and their roles in the alternative investing environment
- Outside service providers (prime brokers, accountants and auditors, advocates, fund administrators, hedge fund infrastructure, consultants, depositories and custodians, commercial banks) and their roles in the alternative investing environment
- Role of financial markets in alternative investments: primary, secondary, third and fourth markets

- Regulatory issues related to alternative investments
- Effect of taxation on alternative investments: income taxes(taxes on capital gains, dividends, interest), non-income tax conventions(real estate taxes, VAT), effect of variation in income tax conventions around the world on investments and investment decisions

15.3 Real assets investments

- Land as an alternative asset; timber and timberland as alternative assets; farmland as an alternative asset; infrastructure as an alternative asset; intellectual property as an alternative asset
- Effect of smoothing on the valuation and volatility of real assets investments: smoothing of prices and returns, smoothed returns with market returns
- Real estate investment trusts (REITs): types of REITs and the potential advantages they offer to investors, net asset value per share (NAVPS) in REIT valuation, estimating NAVPS based on forecasted cash net operating income, use of funds from operations (FFO) and adjusted funds from operations (AFFO) in REIT valuation, comparison of net asset value, relative value (price-to-FFO and price-to-AFFO)and discounted cash flow approaches to REIT valuation; value of a REIT share using net asset value, price-to-FFO and price-to-AFF and discounted cash flow approaches
- Real Estate Equity Investments: Processes of developing real estate in the context of alternative investments, Valuing of real estate development as a string of real options, decision tree and backward induction to the valuation of a real estate development project, valuation and risks of real estate equity: direct capitalization and discounted cash flow approach (income approach) to valuing real estate, comparable sale prices for valuing real estate, cost approach, risks of real estate as an investment
- Alternative real estate investment vehicles: private equity real estate funds, commingled real estate funds, syndications, joint ventures, the concepts of gearing and loan-to-value(LTV) ratios; open-end real estate mutual funds; options and futures on real estate indices; exchange-traded funds based on real estate indices; closed-end real estate mutual funds; equity real estate investment trusts
- Depreciation of real estate: methods of depreciation of real estate

(without income taxation, with depreciation disallowed for tax purposes, with economic depreciation allowed for tax purposes, with accelerated depreciation allowed for tax purposes, and with expensing of capital expenditures for tax purposes) in the analysis of returns

15.4 Hedge funds

- Features of hedge funds; three primary elements of hedge funds; reasons for hedge fund industry growth and concentration
- Classification of hedge funds; single-manager hedge funds, funds of funds and multi-strategy funds
- Hedge fund fees: the approach for determining total annual hedge fund fees; the effects of high water marks (HWM) and hurdle rates on hedge fund fees over time; effects of incentive fees on hedge fund manager behavior; annuity view of hedge funds fees; option view of incentive fees and its implications on manager behavior
- Hedge fund strategies: types of hedge fund strategies (Equity based strategies, arbitrage based strategies, opportunistic strategies, multiple strategies)
- Reasons for incorporating hedge funds into an investment program: return enhancement and diversification potential of hedge funds as additions to portfolios of traditional assets; characteristics and potential benefits of opportunistic hedge fund investing
- Hedge fund indices: asset-weighted hedge fund indices and equal-weighted hedge fund indices; concepts of representativeness and data biases (survivorship, selection, instant history, liquidation) and their effects on hedge fund returns reported by databases
- Determinants of investability of hedge fund indices

15.5 Private Equity

- Structure of private equity funds and investments
- Roles of various entities involved in private equity investments
- Major forms of private equity investments that involve direct ownership of equity: leveraged buyouts, management buyouts, venture capital, merchant banking and their characteristics
- Major forms of private equity that involve direct ownership of debt securities: mezzanine debt, distressed debt securities, debt covenants, leverage loan securities and factors contributing to their growth

- Trends and innovations in private equity markets: secondary markets in the context of private equity; private investment in public equity (PIPE) transactions; hedge fund participation in private equity, contrast between private equity funds and hedge funds
- Venture capital: role of venture capital and leverage buyouts as sources of funding for corporations through their life cycle, role of business plans and exit plans in venture capital investment, structure of venture capital funds, stages of the life cycle of venture capital funds and portfolio companies, compound option embedded in most venture capital investments, the concept of the J-curve in the context of a startup company; risk and return characteristics of venture capital investments, sources of return (risk premiums) to venture capital investments equities
- Leveraged buyout (LBO) transactions: structure of LBO funds and the role of various entities involved in LBO transactions; fees associated with investments in LBO funds; effects of leverage on the payoffs and returns of LBO transactions; exit strategies of LBOs; risk and return characteristics of LBOs
- Mezzanine debt: characteristics, typical exit strategy for mezzanine debt investors, how mezzanine debt affects company cost of capital, types of mezzanine debt investors and their motivations
- Distressed debt: characteristics, supply and demand of distressed debt, typical distressed debt investment strategies, types of corporate bankruptcy processes; risks associated with investments in distressed debt; role of business risk in distressed debt investing

15.6 Structured Products

15.6.1 Asset-backed securities

- Basic structural features of, and parties to a securitisation transaction; the roles they play, and the legal structures involved
- Prepayment tranching and credit tranching
- Payment structure and collateral structure of a securitisation backed by amortising assets and non-amortising assets
- Types of external and internal credit enhancements; cash flow and prepayment characteristics for securities backed by home equity loans, manufactured housing loans, automobile

loans, student loans and credit card receivables; financial ratios as used in analysis of commercial mortgages(Loan-to-Value, interest coverage ratio, and debt service coverage ratio); collateralised debt obligations (CDOs): cash and synthetic CDOs; primary motivations for creating a collateralised debt obligation (arbitrage and balance sheet transactions).

- Collateralised debt obligations (CDOs): general structure and life cycle of a CDO, balance sheet CDOs and arbitrage CDOs, cash-funded CDOs and synthetic CDOs, cash flow and market value CDOs, credit risk and enhancement of CDOs, new developments in CDOs(distressed debt CDOs, hedge fund CDOs, single-tranche CDOs)

15.6.2 Mortgage-backed securities

- Collateralised mortgage obligations (CMOs): characteristics, sequential-pay CMOs, other types of CMO structures and tranches (Planned Amortisation Class, Targeted Amortisation Class, Principal-only CMOand Floating-rate)
- Mortgage loans: cash flow characteristics of a fixed-rate mortgage, level paymentand fully amortised mortgage
- Mortgage pass-through securities: investment characteristics, payment characteristicsand risks; repayment amount on a mortgage pass-through security for a month, given the single monthly mortality rate; conditional prepayment rate (CPR); Public Securities Association (PSA) prepayment benchmark
- Relevance of average life of a mortgage-backed with respect to the security's maturity; factors that affect prepayments and the types of prepayment risks
- Collateralised mortgage obligation (CMO): creation of a collateralised mortgage obligation and its use in matching of assets and liabilities for institutional investors
- Mortgage tranches in a CMO: sequential pay tranche; the accrual tranche, the planned amortisation class tranche and the support tranche; risk characteristics and relative performance of each type of CMO tranche, given changes in the interest rate environment; investment characteristics of stripped mortgage-backed securities; agency and non-agency mortgage-backed securities; credit risk analysis of

commercial and residential non-agency mortgage-backed securities; basic structure of a commercial mortgage-backed security (CMBS) ;ways in which a CMBS investor may realise call protection at the loan level and by means of the CMBS structure.

15.7 Valuing mortgage-backed and asset-backed securities

- Computation, use and limitations of the cash flow yield, nominal spread and zero-volatility spread for a mortgage-backed security and an asset-backed security
- Monte Carlo simulation model for valuing a mortgage-backed security
- Path dependency in pass-through securities and the implications for valuation models
- Calculation of option-adjusted spread using the Monte Carlo simulation model and its interpretation
- Evaluation of a mortgage-backed security using option-adjusted spread analysis
- Reasons for having different effective durations reported by various dealers and vendors; interest rate risk of a security, given the security's effective duration and effective convexity; cash flow, coupon curve and empirical measures of duration and limitations of each in relation to mortgage-backed securities
- Use of nominal spread, zero-volatility spread, or option-adjusted spread in evaluating a specific fixed income security

15.8 Commodities

- Types of market participants in commodity futures markets, ways of participating in commodity markets
- Overview of forward and futures contracts; marking-to-market of futures positions, initial margin to futures positions, maintenance margins to futures positions
- Return characteristics of commodity investments
- Roll process of futures contracts: process of creating and maintaining long-term futures exposures through short-term futures positions; effects of rollover decisions on the returns of long-term futures exposures
- Term structure of forward prices and the pricing models of futures and forward prices: arbitrage-free pricing models and its application on pricing physical assets ,convenience yield
- The concepts of backwardation, normal backwardation, contango,

and normal contango; relationships between forward prices and spot prices under normal backwardation and normal contango; expected returns to spot positions and forward positions (long and short) under normal backwardation and normal contango

- Potential diversification benefits offered by commodities; commodities in the context of equilibrium diversification; commodities as a diversifier of inflation risk; commodities as potential return enhancers
- Insurance perspective, the hedging pressure hypothesis and the theory of storage and their implications for futures prices and expected future spot prices
- Investing in commodities without future
- (through related equity instruments, exchange-traded funds (ETFs), commodity linked notes)

15.9 Emerging issues and trends

TOPIC **PAGE**

CHAPTER ONE

OVERVIEW OF ALTERNATIVE INVESTMENTS

Alternative investment is sometimes viewed as including any investment that is not simply a long position in traditional investment. Typically traditional investments include;

1. Equity
2. Fixed income
3. Cash

Classes of Alternative investments include;

1. **Private equity-**Includes both equity and debt positions that among other things are not publicly traded. In most cases the debt positions contain so much risk in cash flow uncertainty that their short-term return behavior is similar to that of equity position.

Venture capital-refers to support via equity finance to start-up companies that do not have sufficient size, track record or desire to attract capital from traditional sources such as public markets or lending institutions.

Leverage buy-outs – Refers to those transactions which the equity of a publicly traded company is purchased using a small amount of investor capital and a large amount of borrowed funds in order to take the firm private. The borrowed funds are secured by the assets or cash flows of the target.

Mezzanine debt –Derives its name from its position in the capital structure of a firm between the ceiling of senior structure debt and the floor of equity. Refers to a spectrum of claims including preference shares, convertible debt and debt that

includes equity kickers that allow the investors to benefits from any upside success in the underlying business also called hybrid securities.

2. **Hedge funds-**They are privately organized investment vehicles that uses its less regulated nature to generate investment opportunities that are substantially distinct from opportunities offered by traditional investment vehicles which are subject to regulations such as those restricting the use of leverage and derivatives.

3. **Real assets** –Involves direct ownership of non-financial assets rather than ownership through financial assets such as securities.

4. **Structured Products-**Are instruments created to exhibit particular return, risk, taxation or other attributes. These instruments generate cash flows from a partitioning of the cash flows from a traditional investment or linking the return of the investment product to one or more market values.

5. **Commodities** e.g. precious metals

CHAPTER TWO

THE ENVIRONMENT OF ALTERNATIVE INVESTMENTS

MARKET PARTICIPANTS

The major participants in the environment of AI include; buy-side, sell-side, outside service providers and regulators.

BUY-SIDE INSTITUTIONS

Are asset managers that focus on acquiring appropriate securities for their investment portfolio the institutions includes;

a) Plan sponsor

Is an organization such as a corporation, government entity etc. that funds the health care or retirement plan for qualified member. The plan sponsor is responsible for managing the plan assets to meet its obligations.

b) Foundation

Is a non- profit fund established for charitable purpose to support the specific types of activities. Typical foundations investment objective is to fund its charitable activities on a continual basis.

c) Home office private wealth institutions

Manage the assets of high net worth individuals such as family of elite individuals in the society.

d) Sovereign wealth funds

Refers to pools of assets owned by a government and managed by central bank. These funds often originate from government surpluses or sale of natural resources.

e) Separate managed accounts (SMA)

Is a portfolio owned by a single investor and managed according to that investor's preference by an investment advisor

SELL-SIDE INSTITUTIONS

They are less concerned with account management and instead focus on providing investment research and transaction execution services to their customer which may be by side institution.

CHAPTER THREE

REAL ASSETS INVESTMENTS

It involves the purchase of ownership, rental management or sale of real estate for profit. It is land anything attached to land which is immovable or permanent including appliances, buildings, fixtures and improvement not including growing crops, structures and utility systems

Real estate can be termed as real property whereas real assets are anything (including land) that is permanently attached to it. Real property is ownership rights of a real estate. (JUNE 2008 Q5)

TYPES OF REAL ESTATE PROPERTY

1. Rural land use
   - Farmland
   - Forestry
   - Mineral land
2. Urban land use
- Commercial
- Industrial
- Residential
3. Special purpose
- Streets or recreational Centre

FORMS OF REAL ESTATE

There are 4 forms of real estate investment that can be described in terms of two dimensional quadrants. In the 1st dimension, the investment can be

described in terms of public or private markets. In the private market, ownership involves a direct investment like purchase of property. Direct investment can be solely owner or indirectly owned through partnerships or commingled real estate funds (CREFS). The public market it does not consider direct investment rather ownership involves securities that serve as claims on underlying assets .Public real estate investment include investment in REITS or a Real Estate ownership company (REOC).

The 2nd dimension describes whether an investment involves debt or equity. An equity investor has an ownership interest and they control decisions such as borrowing money, property management and the exit strategy.

Type	Debt	Equity
Private	Mortgage	Direct investment through partnership or solepropretor
Public	MBS	REOC

CHAPTER FOUR

HEDGE FUNDS

HFs are alternative investment using pooled funds that employ numerous different strategies to earn active return or alpha for their investors.

Hedge funds Vs Mutual funds

1. HFs are a broad group of investment vehicles pursuing a wide variety of investment strategies compared to mutual funds.
2. HFs are less regulated which allows less disclosure of fund performance and use of leverage.
3. Unlike mutual funds, HFs may offer their products only to qualified investors and require higher minimum investment.
4. HFs use extensive derivatives short selling and multiple asset classes in their strategies.
5. Compared to the liquidity of mutual funds, HFs are less liquid. They impose lock up periods of between one and three years.
6. Disclosure requirements for mutual funds include filing of prospectuses and reporting net asset values daily and fund holdings semi-annually. HFs do not have these disclosure requirements making performance

HFs fees often have a high watermark position where a manager cannot earn an incentive fee until the investors have recouped that negative return in the previous periods.

HEDGE FUND STRATEGIES

1. Arbitrage based

It attempts to profit security mispricing while matching the characteristics of their short positions to those of their long positions. This hedging structure results in a lower standard deviation of net returns and the highest Sharpe ratios of all hedge fund strategies.

2. Convertible bond arbitrage

It goes long a convertible bond and shorts the underlying equity. The convertible bond provides long exposure to a fixed income security and a call option on the underlying stock.

3. Equity market neutral

It seeks to hedge market exposure in equity investments through long and short positions with equal better exposure. Though the long-term goal of this strategy is to have zero beta exposure, short term deviations are common while these strategies minimizes beta risk other equity factor exposures such as size, industry classification and style may remain.

4. Event driven

Are driven by the outcome of specific expected events. One subset of event driven funds is distressed debt funds, which focus on debt securities of companies that are in or near bankruptcy, and take an active or passive role in the bankruptcy process

CHAPTER FIVE

PRIVATE EQUITY

Private equity (PE) is playing an increasing role in the Kenyan economy.PE firms provide working capital to a target company to nurture expansion, new product development etc. In the last decade, PE has grown from a small niche activity to a critical component of the financial system. One of manifestation of this has been a huge amount of money that investors have committed to PE, estimated at around Ksh.10B between 2009 and 2012.

There can be perspectives on PE valuation where PE firms evaluate potential investments and assessment of costs as well as risks of investing in portfolio of funds/investments. Definition of private equity may differ but a summary of the definitions is summarized below;

Broad category	Sub category	Brief description
1. Venture capital	• Seed stage • Start-up stage • Expansion stage	• Financing provided to research business ideas, develop prototype products and conduct market research. • Financing to recently created companies with well-articulated business and marketing plans • Financing in companies that have started their selling effort and may be breaking

		even.
2. Buy-out	• Acquisition capital • Leverage buy-outs (LBO) • Management buy-out (MBO)	• Financing in the form of debt, equity or quasi equity provided to a company to acquire another. • Financing provided by a firm through LBO to acquire another firm. • Financing provided to the management to acquire company or a division.
3. Special situations	• Mezzanine debt • Distressed debt	• Financing generally provided in the form of subordinated debt and an equity kicker (warrants) frequently • Financing of companies in need of restructuring or facing financial distress.

SOURCES OF VALUE CREATION IN PRIVATE EQUITY

1. Re-engineering the portfolio company

In order to re-engineer the portfolio companies, many PE firms have an in house staff of experienced industry CEOs and other former senior executives.

2. Obtaining favorable debt financing

During 2007/2008 financial crisis, the availability of cheap credit with few covenants let many firms to use debt for buy-outs transactions. In PE firms, deb

is more heavily utilize and is quoted as a multiple of EBITDA as opposed to a multiple of equity as for public firms.

3. Alignment of interest between management and PE ownership.

PE firms must align the interest rates of the management and PE ownership.

DIFFERENCE BETWEEN VENTURE CAPITAL AND BUY-OUT INVESTMENTS

Characteristic	Venture capital investment	Buy-out investment
1. Asset base	Weak	Strong
2. Exit	Exit via IPO or company sale is difficult	Exit for buy-out is predictable
3. Management team	New team and have a strong entrepreneurial record	Strong and experienced
4. 4. Product market	New product market with uncertain future	Strong market position with a niche
5. Financial leverage	Low debt use	High debt use

CHAPTER SIX

STRCTURED PRODUCTS

1. ASSET-BACKED SECURITIES

Asset-backed securities (ABS) are securities created from the pooling of non-mortgage assets (e.g., auto loans, credit card receivables, and corporate bonds). You should have a solid understanding of the basic structure of each of these different types of ABS. Also focus on the similarities and differences between mortgage-backed securities (MBS) and ABS; both are exposed to varying degrees of prepayment risk, but credit risk is a more important consideration for ABS investors. Remember that you're being tested on your skills as an analyst, not as an investment banker; concentrate on the risks faced by investors who hold ABS, not on the details of how various ABS are created.

Basic structural features of and parties to a securitization transaction.

Let's illustrate the basic structure of a securitization transaction with a simplified, fictitious example of Fred Motor Company.

Fred Motor Company manufactures and sells automobiles in a wide range of styles and prices. Most of the company's sales are done on retail sales installment contracts (i.e., auto loans). The customer buys the automobile, and Fred loans the customer the proceeds for the purchase (i.e., Fred originates the loan) using the auto as collateral and receives principal and interest payments on the loan until it matures. The loans have maturities of 48 to 60 months at varying interest rates. Fred is also the **servicer** of the loan: the company collects principal and interest payments, sends out delinquent notices, and repossesses and disposes of the auto if the customer doesn't make timely payments.

Fred has 50,000 auto loans totaling $1 billion that it would like to remove from its balance sheet. It accomplishes this by selling the loans to a special purpose vehicle (SPV) called Auto Owner Trust for $1 billion (which is why Fred is called the **seller**)

The SPV, which is set up for the specific purpose of buying these auto loans, is referred to as the **trust** or the **issuer**. The SPV then issues asset-backed securities (ABS) to investors using the portfolio of auto loans as collateral.

Let's review the parties to this transaction and their functions:

- The **seller** (Fred Motor Company) originates the auto loans and sells the portfolio of loans to Auto Owner Trust, the SPV.
- The **issuer/trust** (Auto Owner Trust) is the SPV that buys the loans from the seller and issues ABS to investors.

The **servicer** (Fred Motor Company) services the loans

CHAPTER SEVEN

VALUING MBS AND ABS

Cash Flow Yield and Nominal Spread

The **cash flow yield** is the discount rate that makes the price of a mortgage-backed security (MBS) or asset-backed security (ABS) equal to the present value of its cash flows. To compute the cash flow yield:

- Estimate the future monthly cash flows.
- Calculate the monthly rate of return that makes the present value of these future cash flows equal to the security's current market price.

The monthly cash flow yield is usually converted to a bond-equivalent basis for comparison to yield-to-maturity:

$$\text{Bond-equivalent yield} = 2[(1+\text{monthly cash flow yield})^6 - 1]$$

The challenge in applying this concept is that the cash flows from the MBS or ABS are uncertain because we don't know what future prepayment rates will be. In order to compute a cash flow yield for an MBS and ABS, we must make a prepayment assumption. Furthermore, if the security is not an agency issue, we also need assumptions about default and recovery rates
The cash flow yield has three major deficiencies. When we use cash flow yield as our estimate of the bond's expected return, we assume:

1. The cash flows will be reinvested at the cash flow yield prevailing when the MBS or ABS is priced. In past topic reviews, we've called this **reinvestment risk**.

2. The MBS or ABS will be held until maturity. If the security is sold prior to maturity, uncertainty is introduced regarding terminal cash flows. This is called **price risk**.

3. The cash flows will be realized as expected. This assumption is less appropriate for MBS and ABS than many other fixed-income securities because of the risk of prepayment.

Nominal spread is the difference between the cash flow yield on an MBS and the

YTM on a Treasury security with a maturity equal to the average life of the MBS. A portion of the nominal spread represents compensation to the investor for exposure to prepayment risk.

The limitation of using nominal spread to analyze MBS is that we don't know how much of the nominal spread reflects the significant prepayment risk associated with MBS. This is particularly true for support (companion) collateralized mortgage obligation (CMO) tranches.

Let's look at an application of nominal spread and explore its limitations. Suppose the yield curve for U.S. Treasury bonds (T-bonds) is as shown in Figure 1.

Figure 1: U.S. Treasury Yields

Maturity	*5-year*	*7-year*	*9-year*	*12-year*	*20-year*
YTM	6.0%	6.2%	6.5%	6.9%	7.2%

Now consider a Ginnie Mae passthrough certificate with a stated maturity of 20 years and an average life of 12 years. Assume that the bond equivalent cash flow yield for this MBS is 7.75% based on a prepayment assumption of 150 Public Securities Association (PSA). Suppose a 12-year AA corporate bond with a YTM of 7.50% is also available.

The nominal spread for an MBS is traditionally measured relative to a Treasury security with a maturity equal to the average life of the MBS:

7.75% – 6.9% = 85 basis points

The nominal spread for the corporate is also computed relative to the 12-year

Treasury: 7.50% – 6.9% = 60 basis points

We can't necessarily conclude from this relative value analysis that the MBS is a better investment, despite the fact that it has a higher spread and slightly lower credit

risk than the AA bond. The reason is that some or perhaps most of that 85 basis point spread reflects the significant prepayment risk of the MBS. What we need is a spread measure that explicitly accounts for the prepayment option embedded in MBS.

Zero Volatility Spread

Zero-volatility spread is another commonly used measure of relative value for MBS and ABS. The zero-volatility spread (also known as the Z-spread or static spread) is the spread that must be added to each Treasury spot rate that will cause the discounted value of the cash flows for an MBS or ABS to equal its price, assuming that the security is held until maturity. Note that there is a Treasury spot rate associated with each of these cash flows but only one value for the Z-spread that must be simultaneously added to each of the rates. A computer-assisted, iterative process can be used to determine the zero- volatility spread.

The zero-volatility spread and the nominal spread converge as the average life of the MBS decreases. Also, the difference between the zero-volatility spread and nominal spread increases as the slope of the yield curve increases.

CHAPTER EIGHT

COMMODITIES

The concepts of backwardation and contago are based on the relationship between current prices and future prices.

Contago refers to a situation into a commodities future contracts where the futures prices is above the spot price, the price of current purchase and delivery of the physical commodity. This is the current situation in the all futures market. It is based on the needs of other of long or short hedgers, with the oil prices rising in the last 2 years. Users of oil and oil related commodities are concerned with the risk they face from rising oil prices.

Airlines such as KQ sell tickets at prices based on expected future prices and are exposed to the financial consequences of increases in fuel prices above those expected to prevail in future.

Backwardation refers to a situation where the futures price is below the spot price. If the dominant traders in a commodity future are producers of the commodity, hedging the exposure to financial loss arising from unexpected price decline in future, the result will be backwardation. In this situation, producers are paying for protection against price declines and that is reflected in futures prices which are lower than current market prices (spot prices).

Historically, producers hedging the price risk of future production have been dominant in futures markets so that backwardation was typically referred to as normal backwardation.

Sources of return and risk for a commodity investment

An investor who desires long exposure to a commodity price will typically achieve this exposure through a derivative investment in forwards or futures. To take a position in forwards and futures, a speculator or hedger must post collateral. If Kenyan T-bills are posted as collateral. Collateral yield is simply the yield on the T bills. Active management of the collateral within the bounds of what is acceptable collateral can increase the collateral yield above the 9day T bills.

The price return on a long only investment in commodity derivatives can be positive or negative depending on the direction of change in the spot price of commodity over the life of derivatives contract. Since commodity derivatives expire, a speculator or hedger who wants to maintain position overtime must close out the existing derivative position and r-establish a new position with a settlement date further in future. This process is referred to as rolling over the position and leads to gains or losses known as roll yield.

As a futures contract gets into expiration, the futures price converges towards spot price. At expiration the futures price must be equal to spot price. For a future or forward in backwardation, the roll yield is positive. Since an unchanged spot price at contract settlement would mean the futures/forward price increased over the life of the contract. For future/forward in contago, the roll yield is negative and an unchanged spot price over the life of the contract means the futures price will have fallen and losses will result in a position that is closed out.

Commodity index strategy

An index strategy in equities is considered a passive strategy while changes may be necessary if one of the components of securities of the index is changed in the absence of any change in component stocks; no active management of an index is required. Because of the necessity of closing out and re-establishing long derivative positions to maintain long exposures to changes in commodity prices, a commodity index strategy is considered an active strategy.

There are two other aspects of commodity index investing that require active management. The weightings of various commodities and commodity blocks (such as metals and energy) in indices do not necessarily change with the value of derivative positions of the portfolio. Since commodities index weightings whether based on commodity production or consumption change overtime, a manager who seeks to match the index must actively manage the size of the exposure to various commodity markets as positions are rolled over