



NOMURA

General Product Introductory Material

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An illustration of the applicable risk rating of the product has been provided to guide investors on the possible risk rating of the product. The following is a legend for the risk rating. Within each section, the possible ratings which the product may have are shaded in red.



Risk Level	Explanation
1	■ Very low level of risk with potentially limited returns
2	■ Low to Medium level of risk with low volatility and expecting below average to average level of returns
3	■ Medium level of risks with medium level of volatility and expecting average expected returns
4	■ Medium to high level of risk and volatility and with high variance in the returns
5	■ High level of risk and volatility with a very high variance in returns

2. Introduction

This introductory paper is provided by Nomura, to provide you, the investor, with information on financial products as you seek to cultivate your investment portfolio.

The purpose is to allow you to understand more about various investments – their nature, the different types of products available to investors, benefits of trading such products and the key risks involved. The information in this paper is relevant for transactions that the bank currently offers to our clients as part of our product suite.

In this paper, we discuss the following products and services:

- Money Market Instruments
- Foreign Exchange
- Bonds
- Equities
- Exchange Traded Funds (ETFs)
- Managed Products (Funds)
- Precious Metals
- Leverage

3. Introduction to Money Market



Product Risk Rating

Money market instruments refer to short-term debt instruments held with Nomura. They typically have tenors of up to a year or less and are interest bearing or accruing. Money market instruments include cash in the clients' accounts, time deposits offered by Nomura as well as money market instruments issued by third parties such as certificates of deposits, commercial paper and treasury bills. Money market instruments do not have embedded derivatives. See section 6.2 for definition of derivatives.

Money market instruments provide the following key features:

- Short term in nature with maturity of up to a year
- Liquidity tends to be high
- Investors would be able to hold the cash or deposits in multiple currencies with Nomura

In a money market instrument issued by third parties, the investor would be exposed to the credit risk of the issuer. For a money market instrument issued by Nomura, the investor would be exposed to the credit risk of Nomura.

4. Introduction to Foreign Exchange



Product Risk Rating

The foreign exchange rate (forex, FX, or currency market) between two currencies is the rate at which one currency is exchanged for another. The spot exchange rate refers to the current exchange rate. The forward exchange rate refers to an exchange rate that is quoted and traded today but delivered and paid on a specific future date.

Foreign exchange can be used for settlement, hedging or speculation purposes. For example, if you had purchased Hong Kong securities and require HKD for settlement but you only have USD in your account, you would have to sell the USD to purchase the required amount of HKD.

FX can also be used for speculation purpose when one has a view that a currency will appreciate or depreciate. If one views that the Euro will depreciate in the near future against the USD, then one will sell (short) the Euro today. Conversely, one will buy (long) the Euro and sell the USD now if there is an expectation that the Euro will rise in the future.

In some cases, FX can be used for hedging. If an individual or a company has future needs of foreign currency to fund projects, buy property or pay school fees etc., given the known sum and time horizon, an FX contract can be entered now to lock in the current rate of conversion so that the upfront payment required in home currency can be made certain. Doing so means a hedge had been put in place of future exchange rate fluctuation that may go against the individual or company.

FX trading are typically done Over-the-Counter (OTC). Over-the-counter (OTC) trading is done directly between two parties, without any supervision of an exchange. In OTC trading, contracts are bilateral with each party having credit exposure to the other party.

4.1 Spot

For a FX conversion, there are two methods of quotations; direct and indirect quotes. In a direct quotation, the quotes are denominated as the number of home (domestic, reference, base) currency per unit of foreign (alternate) currency. Indirect quotation refers to the foreign (alternate) currency price of one unit of home (domestic, reference, base) currency.

For example, if one is based in the US, US\$1.0050 = CHF1.0000 will be a direct quote and US\$1.0000 = CHF0.9850 will be an indirect quote.

While the concept of direct and indirect quotes is dependent on where the person is based in, the foreign exchange market has quoting conventions that transcend local borders. Below are some standard quotations:

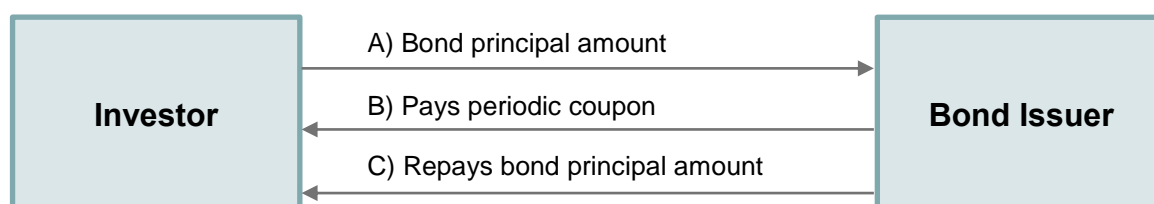
1 EUR = 1.1350 USD (EURUSD)
 1 GBP = 1.3150 USD (GBPUSD)
 1 AUD = 0.7650 USD (AUDUSD)
 1 USD = 100 JPY (USDJPY)
 1 USD = 1.2800 CAD (USDCAD)
 1 USD = 1.3450 SGD (USDSGD)

5. Introduction to Bonds



Product Risk Rating

A bond is a debt investment in which an investor lends money to an entity (typically a corporate or government) for a defined period of time at a variable or fixed interest rate. Bonds are used by a variety of issuers (companies, municipalities, states and sovereign governments) to raise money and finance the company or a variety of projects. Owners of bonds are debt holders, or creditors, of the issuer. Bonds are commonly referred to as fixed-income securities. Bonds typically trade over-the-counter (OTC) but some are listed and traded on exchanges as well.



To understand how a bond works, consider an example where an investor purchases a bond with a par value or the bond principal amount of \$1,000 with an annual coupon of 2% and a tenor of 5 years. The investor will pay the initial bond principal amount at the inception of the trade. The bond issuer would pay the annual coupon of 2% or \$20 each year for the next 5 years to the investor. At the end of the 5 year tenor, the bond issuer is expected to repay the investor the bond principal amount of \$1,000.

In most typical bonds, if the bond issuer is unable to pay the coupon or repay the principal amount, it would be regarded as an event of default. Please refer to Section 5.3 for the key risks of investing in bonds.

5.1 Key Features

Par Value or **Bond Principal Amount** or **Face Value** is the amount the bond is worth at maturity. It is typically the reference amount the bond issuer uses to calculate interest payments.

Coupon Rate: It is the interest rate per annum that will be paid by the issuer. A fixed rate bond would have the same rate of interest over the tenor of the bond. A floating rate bond would have its interest reset regularly based on a reference rate (e.g. US 3-months London interbank offer "LIBOR" rate) which changes based on the pre-set frequency. Coupon rate is expressed in %.

Maturity Date: Date when face value of the bond will be repaid by the issuer.

Call Date: Where a bond has a call feature, the call dates would be the periods when the issuer of the bond is able to call the bond back from the investor whereupon the bond issuer would repay the investor the face value of the bond.

Issue Price is the price at which the bond issuer sells the bond.

Remaining Tenor: It is the remaining time to maturity. The longer the bond's tenor, the more it is affected by changes in interest rates.

Credit Rating: A bond's credit rating indicates its credit quality and is based on the issuer's financial ability to make regular interest payments and repay the loan in full at maturity. The higher the rating the lesser the risk, and hence the lower the yield of the bond. Please refer below for further details on credit ratings.

Capital Tier: Represents the seniority of claims in the case of a default event. A senior bond would rank higher in priority than a subordinated bond.

Offer (or Ask) Price: It is the price at which a customer buys a bond in the secondary market. Bond prices are expressed in terms of % of face value.

Bid Price: A bid price is the price that an investor is paid when he sells a bond in the secondary market. Bond prices are expressed in terms of % of face value.

Yield: It is the rate of return of the bond. Yield to Maturity (YTM) is the most commonly used term to describe the yield of a bond, which assumes the bond is held to maturity and all received coupon can be reinvested at YTM. YTM is inversely related to bond price. Thus an increase in the bond price would result in a reduction in yield and vice versa, all else being equal.

5.2 Types of Bonds

By Issuer – Government and Corporate Bonds

Categories of bonds are mainly classified based on the nature of issuers - common categories known to investors include:

Government Bonds – e.g. US Treasury bills, notes or bonds or/China sovereign bonds.

Corporate Bonds – e.g. bonds or notes issued by financial institutions or companies.

By Credit Rating – Investment grade and Non-investment Grade Bonds

A bond's credit rating indicates its credit quality and is based on the issuer's financial ability to make regular interest payments and repay the loan in full at maturity. Credit rating agencies evaluate the creditworthiness of bonds to assess the probability of default of the issuer. The three major independent credit rating services are Moody's, Standard & Poor's ("S&P") and Fitch.

	Moody's	Standard & Poor's	Fitch	What the Ratings Means
Investment Grade	Aaa	AAA	AAA	Highest quality
	Aa1,Aa2,Aa3	AA+,AA,AA-	AA+,AA,AA-	High quality
	A1,A2,A3	A+,A,A-	A+,A,A-	Upper-medium quality
	Baa1,Baa2,Baa3	BBB+,BBB,BBB-	BBB+,BBB,BBB-	Medium quality
Non-Investment Grade	Ba1, Ba2, Ba3	BB+, BB, BB-	BB+, BB, BB-	Speculative
	B1, B2, B3	B+, B, B-	B+, B, B-	Highly speculative
	Caa1,Caa2, Caa3	CCC,CC,C	CCC,CC,C	
	Ca, C	D	D	Default

- i) Moody's applies a numerical indicator 1, 2, and 3 in each generic rating, (e.g. A1 is better than A2). Standard & Poor's and Fitch uses a plus or minus indicator, (e.g. A+ is better than A, and A is better than A-)
- ii) Ratings affect a bond's yield. The lower the rating, the higher will be the expected yield as investors will need extra incentive to compensate for higher risk
- iii) Investment Grade bonds are of relatively high quality, with a minimum S&P/Fitch rating of BBB- or a minimum Moody's rating of Baa3
- iv) Non-Investment Grade bonds, on the other hand, are of lower quality and carry a higher risk of default. S&P and Fitch rates these bonds BB+ and below, while Moody's rates them Ba1 and below

By Coupon Type – Fixed Rate/Floating Rate/Zero Coupon Bonds

Fixed Rate Bond – A bond that pays a fixed rate of interest over its lifespan.

Floating Rate Bonds/Notes (FRNs) – FRNs are bonds that have a variable coupon, adjusted according to the market interest rates and therefore reflect changes in a market interest rate, like the USD LIBOR. A floating rate bond would have its interest reset regularly based on a reference rate (e.g. US 3-months London interbank offered rate “LIBOR”) which changes based on the pre-set frequency. For corporate bonds, there is typically an additional interest rate in addition to the reference rate. The additional interest rate is termed a “spread” and is set when the bonds are issued. For instance, the bond coupon would be expressed as US 3-months LIBOR + 2.5% where the reference rate is US 3 –months LIBOR and the spread is 2.5%. If US 3-months LIBOR is 0.5%, the coupon for the period is 3.0%. The variable coupon rate adjustment means that FRNs have relatively stable bond prices due to limited interest rate risk. FRNs provide capital preservation and higher income as interest rate rises.

Zero Coupon Bonds – Zero coupon bonds do not pay any interest prior to maturity. These bonds are sold at a deep discount and mature at the par value of the bond. As compared to fixed rate or floating rate bonds, zero-coupon bonds would have a higher sensitivity to interest rate changes, all else being equal.

By Seniority – Senior/Subordinated Bond

Senior Bond – Senior Bond refers to debt obligations that have higher claim priority to Subordinated Debt and Equity on the issuer’s assets in the event of liquidation.

Subordinated Bond – Subordinated bond refers to debt obligation that places the investor in a subordinated or more junior position relative to the company’s senior creditors. Securities issued as subordinated bond will pay interest and principal after all interest that is due and payable has been paid on to all senior debt and creditors in the event of bankruptcy or liquidation. To compensate for the higher risks taken by subordinated bond investors as compared to senior bond investors, the former often are traded at higher yields than the latter. Yet for investors, it is necessary to recognize that while the returns are higher, the risks are also higher.

By Securitization – Secured/Unsecured Bond

Secured Bond – It is a debt obligation backed by specific assets or revenues of the borrower. In the event of default, secured lenders can force the sale of such assets to meet their claims

Unsecured Bond – It is a debt obligation with no specific collateral in the event of bankruptcy or liquidation. Senior bonds in the market are mainly unsecured bonds.

By Complexity – Vanilla/Convertible/Exchangeable/Dual Currency/Contingent Convertibles/Perpetual/Hybrid Bonds

Vanilla Bond – A plain vanilla bond pays a fixed/float rate of interest and has a fixed redemption (maturity) date, but does not have any exotic features.

Convertible Bond – A convertible bond is a bond that can be converted into a predetermined amount of the company’s equity at a certain times during its life, usually at the discretion of the bondholder.

Exchangeable Bond – An exchangeable bond (or XB) is a type of hybrid security consisting of a straight bond and an embedded option to exchange the bond for the stock of a company other than the issuer (usually a subsidiary or company in which the issuer owns a stake) at some future date and under prescribed conditions.

Dual Currency Bond – A dual currency bond is a debt instrument in which the denomination of the bond and the actual payments are in two different currencies. For instance, the bond may be denominated in GBP but all payments (initial, coupon and repayment) are performed in USD. Thus, investors will be exposed to foreign exchange risk in addition to the typical bond risks.

Contingent Convertible Bond – A contingent convertible bond also known as CoCo bond, CoCo or contingent convertible note, differs from convertible bonds as the condition for the conversion to equity is based on or “contingent” on a specified event. The event is typically related to the capital

level of the issuing institution (e.g. the bank's capital ratio falling below a prescribed level). CoCos are typically issued by banks.

Perpetual Bond – A perpetual bond is a bond with no maturity date. Perpetual bonds are not redeemable but pay a steady stream of interest forever. Perpetual bonds can be called back by the issuer. **Hybrids** – A hybrid bond contains features of both debt and equity. Hybrid bonds pay interest like bonds but they are typically subordinated in nature and are intended to act as a cushion between senior bondholders and shareholders. Unlike typical bonds, hybrid bonds typically allow the issuer to skip paying coupons without triggering an event of default and are perpetual with no maturity date.

5.3 Key Risks

Credit Risk: Bonds are not guaranteed by Nomura or by its related corporations or affiliates, and are subject to the risks of the issuer or counterparty, including but not limited to failure by such issuer or counterparty to make good, valid or timely delivery or payment to investors. A credit rating is not a recommendation or assurance as to the issuer and/or guarantor's creditworthiness or the risks, returns or suitability of the bond/debenture.

High-yield bonds are typically rated below investment grade or are unrated and are often subject to a higher risk of issuer default. Such bonds typically fall more in value than investment grade ones, during economic downturns.

Liquidity Risk: There can be no assurance as to how bonds will trade in the secondary market, whether there will be a secondary market or, if a secondary market does exist whether such market will be sustainable or liquid or illiquid. The liquidity of a bond may also be affected by restrictions, if any, on offers and sales of the bond in some jurisdictions.

Market Risk: There are numerous factors affecting the market value of bonds that investors may face. Investors may sustain substantial losses on their investment in bonds if the credit/market conditions move against their positions.

Coupon Deferral Risk: Coupon payment may be deferred or even suspended at the discretion of the issuer.

Interest Rate Risk: Bond prices move in the opposite direction of interest rates. An increase in market interest rates would result in a fall in bond prices, all else equal. The longer the term of the bond, the greater the price fluctuation or volatility that results from any change in interest rates.

Foreign Exchange Risk: Where bonds contain foreign exchange features, fluctuations in foreign currency rates will have an impact on the investor's profit and loss, e.g. for dual currency bonds, where the bond denomination is in one currency while the settlement is in a different currency. Movements in the currency exchange rate between the two currencies will affect the profit and loss of the investor.

Emerging Markets Risk: Investments in bonds in emerging countries may be associated with certain risks. Such risks include political risks (including confiscation of assets, restriction of an investor's rights of disposal, or decline in the value of assets as a result of state intervention or the introduction of state monitoring and control mechanisms), risks of economic instability, heightened levels of the general risks described above (e.g. credit risk, exchange rate risk, liquidity risk etc.), greater prevalence of illegitimate market practices (e.g. insider trading) and laws and regulations which afford inadequate protection and safeguards to the investor.

Issue Price: Bond may be transacted at, above or below par. For new issues, the issue price of the bond/debenture may not be an accurate reflection of the market value as at the date of issue. The price at which it may be sold in secondary market transactions may be lower than the issue price. In particular, the issue price may take into account, amongst other things, the distribution fee payable to any appointed distributor with respect to the offer and sale of the bond/debenture.

Subordinated Risk: Bonds issued as subordinated debts have a lower priority of claim than senior creditors in the event of the issuer's liquidation. Investors can only get back their principal after other senior creditors are paid.

Perpetual Risk: Perpetual bonds do not have a maturity date, and interest payments depend on the viability of the issuer in the very long term. Investors should not expect the principal to be redeemed.

Early Redemption Risk: For bonds where the issuer has a right to redeem the issue prior to maturity, investors may face reinvestment risk when the issuer exercises its right to redeem it before maturity. Investors may only be able to reinvest the principal at lower rates of return.

Event Risk: There may be adjustments to the terms of the bond/debenture due to events such as but not limited to market disruption, settlement disruption, insolvency, delisting and nationalization. The terms and conditions of the investment may be adjusted due to the occurrence of such or other events. The price of the bond/debenture could move substantially.

Inflation Risk: Since bond interest payments are fixed, their value can be eroded by inflation. The longer the term of the bond, the higher the inflation risk.

5.3.1 Additional Risks of Investing in Contingent Convertible (“CoCo”) Bonds

Loss Absorption Risk: CoCo bonds features have been designed to meet specific regulatory requirements imposed on banking institutions. In particular, CoCo bonds can be converted into equity of the issuing banking institution or have their principal written down if their regulatory capital ratio falls below a pre-determined level or when the relevant regulatory authority deems the banking institution as reaching the point of non-viability (PONV). Investors might be subject to fluctuations in the price of the stock, and may lose the entire investment in the case that the loss absorption feature is triggered. The point of non-viability refers to the point in which the regulators determine that the issuer is no longer viable.

Subordination Risk: CoCo bonds will, in the majority of circumstances, be issued in the form of subordinated debt instruments in order to provide the appropriate regulatory capital treatment prior to a conversion. Accordingly, in the event of liquidation, dissolution or winding-up of an issuer prior to a conversion having occurred, the rights and claims of the holders of the CoCos, against the issuer in respect of or arising under the terms of the CoCos shall generally rank junior to the claims of all holders of unsubordinated obligations of the issuer.

Market Risk: The value of CoCo bonds will be influenced by many factors including, without limitation (i) the creditworthiness of the issuer and/or fluctuations in such issuer's applicable capital ratios; (ii) supply and demand for the CoCos; (iii) general market conditions and available liquidity and (iv) economic, financial and political events that affect the issuer, its particular market or the financial markets in general. CoCos can be mispriced due to (i) regulators' discretion in establishing when Point of Non Viability (PONV) has been reached; (ii) behavior of the securities upon conversion; (iii) the amount of losses that holders of CoCos would suffer when they are triggered.

Coupon Cancellation Risk: Annual coupon payments for Additional Tier 1 (AT1) CoCos are at the discretion of the issuer. This can lead to coupons being partially or completely suspended, depending on different terms. Coupons may be cancelled due to regulatory or accounting reasons as well. For jurisdictions with Maximum Distributable Amount (MDA) regulations, banks which breach certain capital or accounting levels may have its discretionary payments (including CoCo coupons) restricted. In certain jurisdictions, banks may not be able to pay coupons if they have insufficient reserves. Additional Tier 1 securities refer to securities issued to meet capital requirements of the bank and are highly subordinated.

Credit Risk: Credit ratings may not reflect all risks of an investment in the CoCos, and changes to any credit rating assigned to the issuers may affect the market value of the CoCos. A credit rating is not a recommendation to buy, sell or hold securities and may be revised or withdrawn by the rating agency at any time in its sole discretion.

5.4 Investment Rationale

By purchasing bonds, an investor becomes a creditor to the corporation (or government). The primary advantage of being a creditor is that you have a higher claim on assets than shareholders do. When an issuer defaults, creditors or bondholders will have to be repaid fully before shareholders.

In addition, you can achieve the following objectives:

Yield Enhancement: Investing in bonds may improve the investor's yield as compared to cash.

Regular Income Source: Bonds deliver stable and predictable coupons as streams of income. Bonds also offer predictable repayment of principal at maturity.

Risk Diversification Tool: Bonds exhibit low correlation to other asset classes; hence the inclusion of bonds can bring relative stability to a portfolio.

Capital Gain Potential: The market price of a bond is affected by market interest rates, and perceived creditworthiness of the issuer. Potential for capital gain from price appreciation occurs when market interest rates fall or when perceived creditworthiness of the bond's issuer strengthens.

6. Introduction to Equities

Product Risk Rating

6.1 Listed Equities

An equity is part ownership of a company; the more equity you have, the greater your ownership of a business. Owning equities gives you access to the company's profits and net assets. In accounting terms, the definition of equity can be represented with the equation:

Equity = assets – liabilities.

A business may offer to sell a portion of its ownership by issuing stock. The most common form of stock is called "common stock".

In turn, a company's stock is divided into shares. A shareholder of a public company enjoys dividends from the company's profits, participates in its share price performance, and has the right to vote at its shareholders meeting.

Stocks may be bought or sold, usually but not always, in the context of a securities exchange.

6.1.1 Key Features

The following key factors may affect the performance of stocks:

Market Factor: Examples include domestic and global economic outlooks, inflationary pressures and actions by central banks.

Sector Specific Factors: Examples include retail sales, commodity prices, government measures etc.

Company-related Developments: Examples include new product launches, acquisition of major contracts, performance of the company with respect to competitors, changes in management team or substantial shareholders etc.

6.1.2 Types of Listed Equities

Common Equities or ordinary shares

Each share represents an equal amount of ownership in the company and equal entitlement to participation in the company's profits and losses. If the company's board of directors declares a dividend, each share will receive the same amount. Each common share also entitles the shareholder to one vote at the company's annual shareholders meeting.

Preferred Shares

Preferred shares are a hybrid instrument with both equity and fixed income characteristics. They entitle the holders to a fixed dividend, in which payment takes priority over ordinary share dividends. They also rank more senior to ordinary shares, but are subordinate to bonds in terms of claim on the company's assets.

Preferred shares often do not offer voting rights.

Real Estate Investment Trusts (REITs)

Real Estate Investment Trusts (REITs) are securities that invest in a portfolio of income generating real estate assets such as shopping malls, offices or hotels, usually with the intention of generating income for unit holders of the fund (i.e. investors of the REITs).

Assets of REITs are professionally managed and revenues generated from assets (primarily rental income) are normally distributed at regular intervals to investors. REITs allow investors to access real property assets, and share the benefits and risks of owning a portfolio of properties.

Units of REITs are bought and sold like other securities listed on the exchange at market-driven prices.

REIT is discussed in greater detail at the section (6.1.5).

6.1.3 Key Risks

Price Risk: Prices can fall below your purchase price due to macroeconomic or company-specific factors.

Volatility: This refers to the risk in which the value of a security fluctuates significantly over time. Investors should note that long-term price trends may differ from short-term fluctuations.

Liquidity Risk: This is characterized by an unusually high bid-ask spread, which is a scenario where there is a significant gap between the buying price and the selling price of the stock, and buyers and sellers cannot be matched in the market.

6.1.4 Investment Rationale for Stocks

Capital Growth: When an investor buys shares in a company, its revenue and profits may grow over time. The resulting increase in share prices is capital growth.

Dividend Income: A dividend is a distribution of a portion of a company's earnings or reserves to its shareholders. Established companies tend to pay dividends regularly, others pay dividends some of the time or not at all. Dividends can be issued as cash payments or as shares of the stock.

Liquidity: A stock is one of the most liquid assets. Investors enjoy transparency of prices transacted on the exchange and are able to buy/sell shares quickly in flexible amounts (depending on the board lot size per counter) through brokers.

6.1.5 Real Estate Investment Trusts (REITs)

6.1.5.1 Key Risks of investing in REITs

The risks associated with a REIT investment vary and depend on the unique characteristics of each REIT (e.g. leverage ratio, cost of refinancing, alignment of management fees), as well as the geographical location and quality of the underlying property investments (e.g. concentration of properties, length of lease).

Other risks associated with stock investing (e.g. price risk, volatility and liquidity risks) also apply.

6.1.5.2 Investment Rationale for REITs

Portfolio Diversification: REITs typically own multi-property portfolios with diversified tenant pools. This reduces the risk of relying on a single property and tenant in the case of directly owning a real estate asset.

Income Distribution: REITs typically have regular cash flows since most of the revenues are derived from rental payments under contractually-binding lease agreements with specific tenure.

Tax Benefits: For income distributions, individual investors may enjoy a tax-exempt distribution which comes in the form of dividends in the REITs structure.

6.2 Listed Derivatives

Derivatives are financial contracts for which prices are derived from assets and instruments with underlying such as equities, bonds, currencies, precious metals, commodities, interest rates, credit, benchmarks including indices, non-traditional asset classes, spot, forward contracts, swaps, options or any combination of the foregoing. The value of the derivatives to the investor depends directly on the value of the underlying asset. Factors which may affect the value of a derivative product include market factors like changes in interest rates, economic environment or geo-political landscape, etc.

Derivatives may be traded via an exchange, or via over-the-counter (OTC) trading (i.e. the trade is done directly between two parties, without any supervision of an exchange). Our focus in this paper is on exchange-traded derivatives, or listed derivatives.

Derivatives are flexible instruments and used for a variety of reasons. They can be used by investors in the same way and for the same reasons as the underlying assets; the investor holds a view that the prices of the underlying would move in a certain direction during a predefined period. The investor can then enter into a derivatives instrument to “lock” in a predetermined price at which he will trade in that product in a future date.

6.2.1 Key Features

Speculation: An investor may take on derivative positions for speculative reasons if he holds a view that markets and the price of the underlying security will move in his favour. As such, he is willing to take on a speculative bet to enhance his yield or to participate in the performance of the underlying.

Access to various asset classes or markets: Through derivatives, an investor would be able to gain access to certain asset classes or markets that he would otherwise not have access to. For example, an investor who has a view on the Russian equity market would be able to participate in the performance of the Russian index through a synthetic Exchange Traded Fund (ETF). Synthetic ETFs attempt to track a certain index through the use of underlying derivatives like swaps and options.

Leverage Effect: Derivatives enable the investor to ride on the movement of the market prices of the underlying without having to purchase the actual underlying security itself. In so doing, an investor need not fork out the full notional amount to purchase the underlying security but is only required to purchase the underlying warrants for a smaller notional amount. This is commonly referred to as the “Leverage Effect”.

Hedging: An investor would be able to hedge his position on an underlying security. As a result of the hedge, the investor can preserve the value of his position against adverse market movements.

6.2.2 Types of Listed Derivatives

Structured and/or company warrants

Structured and company warrants are usually traded on an exchange.

Company warrants are issued by listed companies on their own shares to raise funds.

Warrants offer investors an alternative avenue to participate in the price performance of an underlying asset at a fraction of the underlying asset price. They can also be used as hedging tools to reduce or diversify the investor’s portfolio risks.

Holder or buyers of warrants are referred to as having a ‘long’ position. Warrant holders have the right but not the obligation to buy (for call warrants) or sell (for put warrants) an underlying asset at a predetermined price on or before the expiry date.

Warrants have a limited lifespan and cease to exist on expiry date. Unless the warrants are in-the-money, they become worthless at its expiry.

Structured warrants are issued by third-party financial institutions (usually banks), and usually cash-settled on expiry. Structured warrants are similar to company warrants in its features and are issued for trading purpose.

Warrant is discussed in greater detail at section (6.2.4).

Callable Bull/Bear Contracts (CBBC)

CBBC are a type of structured product that tracks the performance of an underlying asset without requiring investors to pay the full price required to own the actual asset. They are issued either as

Bull or Bear contracts with a fixed expiry date, allowing investors to take bullish or bearish positions on the underlying asset. CBBC are issued by a third party, usually an investment bank.

CBBC are issued with a call option by the issuer at its Call price. During their lifespan, they will be called by the issuer when the price of the underlying asset reaches the call price specified in the listing document.

CBBC are settled in cash only, and may be issued with a lifespan of three months to five years.

CBBC is discussed in greater detail at section (6.2.5).

Rights

A rights issue is an offer by way of rights to existing holders of securities which enables those holders to subscribe securities in proportion to their existing holdings.

In doing so, a rights issue is an avenue for companies to raise equity capital.

Rights issues may be renounceable or non-renounceable.

Renounceable rights: With a renounceable rights issue, shareholders can sell their rights on the market.

During a specified trading window before the date which new shares can be purchased, shareholders may trade the rights on the market the same way they would trade ordinary shares.

Alternatively, the shareholder may choose to take up the rights to maintain his percentage stake holding in the company.

If the shareholder does not take any action, allowing the rights to expire worthless would result in a dilution of the investor's ownership in the company.

Non - Renounceable rights: Non-renounceable rights issues cannot be sold.

An investor may choose to either take up the rights to maintain his percentage stake holding in the company, or ignore it by allowing the rights to expire. Allowing the rights to expire will result in a dilution of the investor's ownership in the company.

6.2.3 Key Risks

Market Risk: Prices of derivatives are affected by the prices of the underlying securities. Hence, fluctuations in prices of these underlying assets will ultimately affect derivative product prices.

Issuer Risk: Derivatives are usually issued by third party "issuers" which are usually listed companies or financial institutions. In the event of default due to solvency issues, prices of the derivative products may be affected. In the worst case scenario, derivative products might even lose all their value.

Default can generally be defined as:

- (1) Bankruptcy
- (2) Failure to pay
- (3) Debt Restructuring
- (4) Obligation default
- (5) Repudiation

Event Risk: Event Risk occurs because of rare, discontinuous and very large, unanticipated changes in the market environment. It could potentially increase both market and credit risks which would affect prices of derivative products as highlighted above. In the worst case scenario, derivative products might even lose all their value.

Event risk can be generally defined as:

- (1) A natural or manmade incident
- (2) A takeover or corporate restructuring

(3) Regulatory change

Leverage Risk: As derivative products can be leveraged, a small movement in the prices of the underlying might cause a larger change in the price of the derivative product.

Limited Lifespan: Unlike the underlying asset, warrants have a limited lifespan and will expire. If they expire at-the-money or out-of-the-money, investors holding onto these warrants will lose their entire investment capital used to purchase the warrants.

Suspension from trading: Trading of warrants will be halted or suspended if the underlying stock is halted or suspended. Warrant investors will not be able to unwind their positions in such circumstances.

6.2.4 Warrants

6.2.4.1 Key Features of warrants

Put or Call: Warrants can be issued either as call warrants or put warrants. Call warrants benefit from an upside price movement in the underlying asset, while put warrants benefit from a downward trend.

	Call	Put
Buy	<ul style="list-style-type: none"> Investor pays a premium in exchange for the right and not the obligation to buy the underlying at the pre-determined strike price within specific time period Investor has a bullish view on underlying equity and expects underlying to rise by the expiry of the warrant 	<ul style="list-style-type: none"> Investor pays a premium in exchange for the right and not the obligation to sell the underlying at the pre-determined strike price within specific time period Investor has a bearish view on underlying equity and expects underlying to fall by the expiry of the warrant

Exercise Price: This is the predetermined price, which is fixed in advance before the warrant is listed. It is a price at which the holder of the warrant can buy (for a call warrant) or sell (for a put warrant) the underlying asset.

Expiry Date: Warrants have a finite lifespan and cease to exist on its expiry date.

American or European-style: American-style warrants can be exercised any time between its listing and expiry, whereas European-style warrants can only be exercised on the expiry date. Warrant holders do not need to take any action to exercise a European-style warrant if it expires to their benefit. Company warrants issued by listed companies on their own shares to raise funds are mainly American-style, while structured warrants issued by third-party financial institutions are usually European-style.

Conversion ratio: Conversion ratio (also known as “entitlement ratio”) is the number of warrants needed to exercise into 1 unit of the underlying asset. A warrant with a conversion ratio of 5 means that 5 warrants are needed to convert into 1 unit of the underlying asset.

Underlying assets: Warrants are a form of derivative as they derive their value from underlying assets, which are the assets that investors have the right to buy or sell. Warrants can be issued on a wide range of asset classes. The selection of underlying assets for warrants issuance is often driven by the potential demand from market participants. Most warrants traded on the exchange are issued on equities, indices, and Exchange Traded Funds.

Common Terminology

- (i) **ATM: At-the-money**
An option is at-the-money if the strike price is the same as the spot price of the underlying asset on which the option is written.
- (ii) **ITM: In-the-money**
A call option is in-the-money when the strike price is below the spot price. A put option is in-the-money when the strike price is above the spot price.
- (iii) **OTM: Out-of-the-money**
A call option is out-of-the-money when the strike price is above the spot price of the underlying asset. A put option is out-of-the-money when the strike price is below the spot price.
A deep out of the money option is one where the strike price is far from the underlying spot price. For instance, the call strike is far above the underlying spot price or the put strike is far below the underlying spot price.

6.2.4.2 Worst-case Scenario

For a warrant buyer, the investor's maximum loss amount is limited to the total investment outlay.

6.2.4.3 Key Risks of investing in Warrants

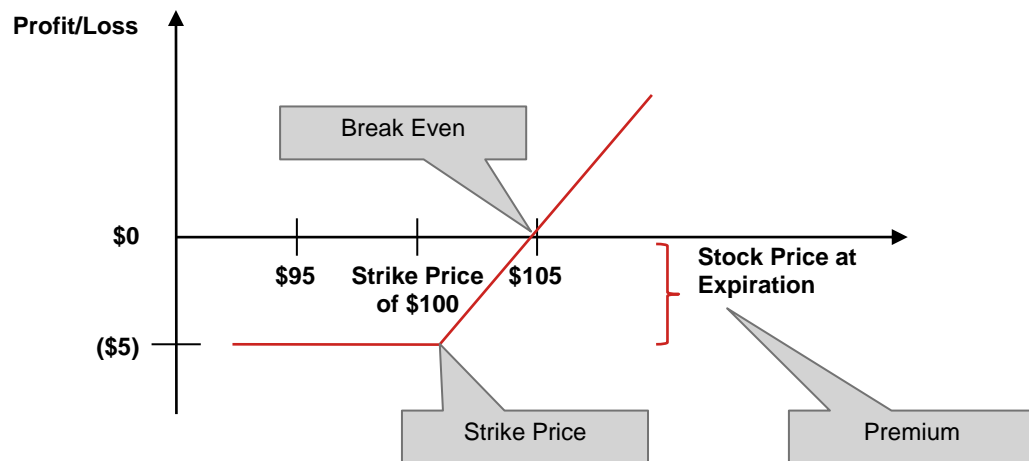
	Call	Put
Buy	<ul style="list-style-type: none"> ■ You could lose the entire premium paid if the prevailing spot price closes below the strike price when the warrant expires 	<ul style="list-style-type: none"> ■ You could lose the entire premium paid if the prevailing spot price closes above the strike price when the warrant expires

The investor will be exposed to equity risk, and risk of adverse or unanticipated market, financial or political developments which may negatively impact underlying equity.

The investor will be subject to corporate risks (e.g. market disruptions, mergers, tender offers, public offerings, delisting or any other appropriate actions) that may affect the share price. This includes exposure to unanticipated changes in the operating environment such as legal matters, lawsuits, regulatory changes and man-made or natural disasters. Such events may negatively impact the value of the warrant.

6.2.4.4 Payoff for Call warrants at expiration

Payoff Diagram



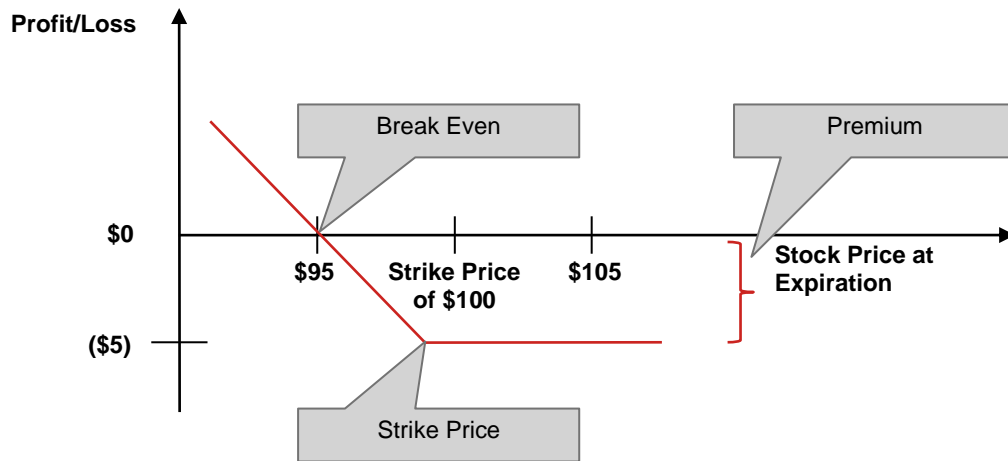
The investor is the buyer of the call warrant. The buyer of the call warrant has purchased the right to buy the underlying security with the view that the price of the underlying security will go up in the near term. The investor is expressing a bullish view. The above scenario shows the payoff at expiration for the investor. The investor pays a premium of \$5 for the right to buy a specified quantity of the security at the strike price of \$100.

Where the underlying security price at expiration is above the strike price of \$100 the investor's net profit at expiration would be the difference between the final share price at expiration and the strike price, after deducting the premium paid up front. The break-even price of \$105 is the share price at expiration where the investor would have no profit or loss.

Where the price at expiration is below the strike price, the loss incurred would be the upfront premium of \$5.

6.2.4.5 Payoff for Put warrants at expiration

Payoff Diagram



The investor is the buyer of the put warrant. The buyer of the put warrant has purchased the right to sell the underlying security with the view that the price of the underlying security will go down in the near term. The investor is expressing a bearish view. The above scenario shows the payoff at expiration for the investor. The investor pays a premium of \$5 for the right to sell a specified quantity of the security at the strike price of \$100.

Where the underlying security price at expiration is below the strike price of \$100, the investor's net profit at expiration would be the difference between the final share price at expiration and the strike price, after deducting the premium paid up front. The break-even price of \$95 is the share price at expiration where the investor would have no profit or loss.

Where the price at expiration is above the strike price, the loss incurred would be the upfront premium of \$5.

6.2.5 Callable Bull/Bear Contracts (CBBC)

6.2.5.1 Key Features of CBBC

Price movement tends to track the price of underlying asset closely. If the underlying asset increases in value, a Bull CBBC with entitlement ratio of 1 to 1 generally increases in value by approximately the same amount, whereas the equivalent Bear CBBC would decrease in value. However, when the underlying asset of a CBBC is trading at a price close to its Call Price, the change in the value of CBBC may be more volatile and disproportionate with the change in the value of the underlying asset due to the probability of it being called.

Call Price and Mandatory Call: For Bull contracts, the Call Price must be either equal to or above the Strike Price. For Bear contracts, the Call Price must be equal to or below the Strike Price. If the underlying asset's price reaches the Call Price at any time prior to expiry, the CBBC will expire early, and trading of the CBBC will be terminated immediately. Such an event is referred to as a Mandatory Call Event.

Category N and Category R:

- (i) A Category N CBBC refers to a CBBC where its Call Price is equal to its Strike Price, and the CBBC holder will not receive any cash payment once the price of the underlying asset reaches or goes beyond the Call Price (i.e. when the CBBC is called).

- (ii) A Category R CBBC refers to a CBBC where its Call Price is different from its Strike Price, and the CBBC holder may receive a small amount of cash payment (called “Residual Value”) when the CBBC is called. In the worst case, no residual value will be paid by the issuer.

Valuation at expiry: CBBC can be held until maturity (if not called before expiry) or sold on the exchange before expiry.

- (i) In the case of a Bull contract, the cash settlement amount at normal expiry will be the positive amount of the settlement price of the underlying asset as determined by the valuation day less the Strike Price.
- (ii) In the case of a Bear contract, the cash settlement amount at normal expiry will be the positive amount of the Strike Price less the settlement price of the underlying asset on valuation day.

There will be no cash settlement if the amounts calculated under (i) and (ii) are negative.

Determination of Residual Value for Category R: When a Category R Bull contract is called; the residual value will be the positive amount of the settlement price as determined according to the terms in the listing document less the Strike Price. The settlement price of a Bull contract must not be lower than the minimum trade price of the underlying asset (i.e. the lowest traded price) after the Mandatory Call Event and up to and including the next trading session.

Similarly, when a Category R Bear contract is called, the residual value will be the positive amount of the Strike Price less the settlement price as determined according to the terms in the listing document. The settlement price of a Bear contract must not be higher than the maximum trade price of the underlying asset (i.e. the highest traded price) after the Mandatory Call Event and up to and including the next trading session.

6.2.5.2 Key Risks of investing in CBBC

Mandatory call: A CBBC may be called by the issuer when the price of the underlying asset hits the Call Price and that CBBC will expire early. Payoff for Category N CBBC will be zero when they expire early. When Category R CBBC expire early the holder may receive a small amount of Residual Value payment, but there may be no Residual Value payment in adverse situations.

Gearing effects: A CBBC is a leveraged product, hence the percentage change in the price of a CBBC may be greater compared with that of the underlying asset.

Limited life: A CBBC has a limited lifespan of three months to five years. The life of a CBBC may be shorter if called before the fixed expiry date. Depending on price fluctuations, the CBBC may become worthless after expiry, or if it has been called early.

Market risk: Prices of CBBC are affected by the prices of the underlying securities. Hence, fluctuations in prices of these underlying assets will ultimately affect CBBC prices.

Liquidity: Although CBBC have liquidity providers, there is no guarantee that investors will be able to buy/sell CBBC at their target prices any time they wish.

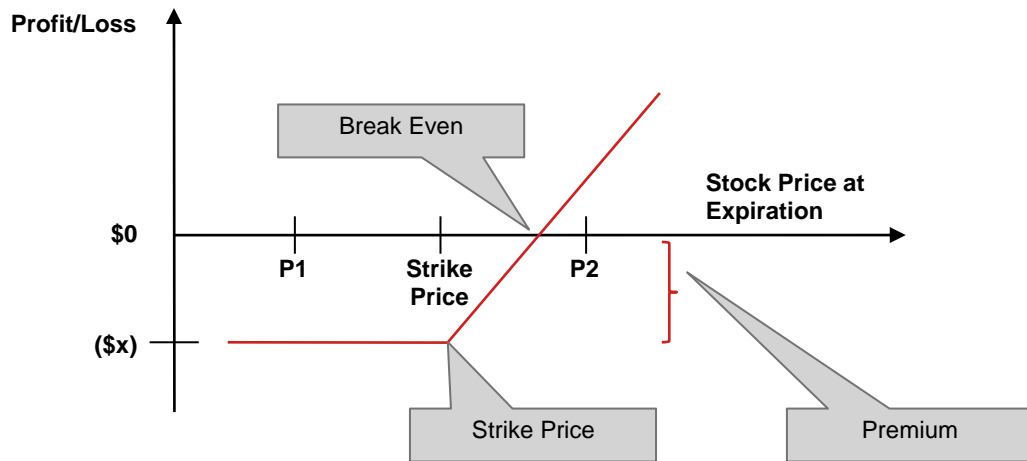
Funding costs: The issue price of a CBBC includes funding costs charged upfront for the entire period from launch to normal expiry. When a CBBC is called, the investor will lose the funding cost for the remaining period even though the actual period of funding for the CBBC turns out to be shorter. Investors should also note that the funding costs of a CBBC after launch may vary during its life.

Trading of CBBC close to Call Price: When the underlying asset is trading close to the Call Price, the price of a CBBC may be more volatile with wider spreads and uncertain liquidity, as the CBBC may be called at any time and trading will terminate as a result.

Note that the trade input by the investor may still be executed and confirmed after the Mandatory Call Event (MCE), since there may be some time lapse between the MCE time and suspension of the CBBC trading. Any trades executed after the MCE will not be recognized and will be cancelled. Therefore, investors should be aware of the risk and apply special caution when the CBBC is trading close to the Call Price.

6.2.5.3 Payoff for Bull CBBC at expiration (i.e. No early call has taken place)

Payoff Diagram



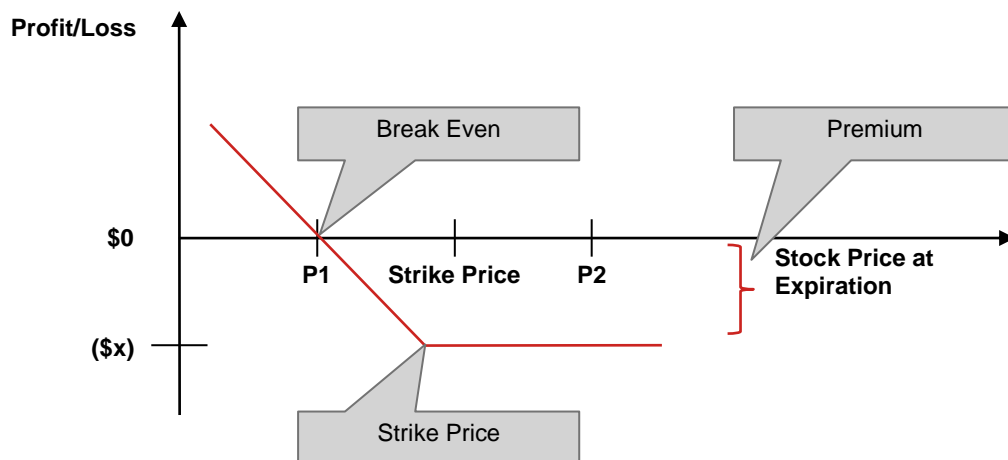
With the view that price of the underlying asset will go up moderately in the near term, the investor buys a Bull CBBC that grants the right to buy a specified quantity of the security for \$x.

In the scenario, where price at expiration is above the Strike Price, investors receive a settlement amount that is the positive price differential between the Settlement Price and the Strike Price. Net profit (or loss) is the settlement amount less the original investment in the CBBC.

In the scenario, where the Settlement Price is below the Strike Price, the settlement amount is zero, and the investor incurs the total investment outlay in the CBBC as a loss.

6.2.5.4 Payoff for Put CBBC at expiration (i.e. No early call has taken place)

Payoff Diagram



With the view that price of the underlying asset will go down moderately in the near term, the investor buys a Bear CBBC that grants the right to sell a specified quantity of the security for \$x.

In the scenario, where price at expiration is below the Strike Price, the investor receives a settlement amount that is the positive price differential between the Settlement Price and the Strike Price. Net profit (or loss) is the settlement amount less the original investment in the CBBC.

In the scenario, where the Settlement Price is above the Strike Price, the settlement amount is zero, and the investor incurs the total investment outlay in the CBBC as a loss.

6.2.5.5 Investment Rationale of investing in CBBC

CBBC's gearing feature allows investors to capture the movement of the underlying asset and hence magnify investment returns by paying only a fraction of the underlying asset price. However, the investor's potential loss would also be magnified in the same fashion if their "market forecast" is proven to be wrong.

The mandatory call mechanism of CBBC is often considered an automatic execution of stop-loss arrangement on behalf of the investor. A CBBC being called implies that the investor have already forecasted the price movement of the underlying asset inaccurately. The mandatory call event may allow the investor to regain part of the principal for further investment.

7. Introduction to Exchange Traded Funds (ETFs)



Exchange Traded Funds (ETFs) are open-ended investment funds listed and traded on a stock exchange. An ETF owns the underlying assets (shares of stock, bonds, oil futures, gold bars, foreign currency, etc.) and divides ownership of those assets into shares.

Investors' monies are pooled and invested according to the ETF's stated investment objective. Shareholders do not directly own or have any direct claim to the underlying investments in the fund; rather they indirectly own these assets.

An ETF typically aims to produce a return that tracks or replicates a specific index such as a stock or commodity index. Such index tracking ETFs are passively managed by ETF managers and do not try to outperform the underlying index.

ETFs may have complex structures. They may be structured as cash-based ETFs or as synthetic ETFs, which involve the use of derivatives.

7.1 Key Features

7.1.1 Pricing of ETFs

Bid and Ask Price

ETFs, like stocks, have a bid and ask price. The bid price is the highest price other investors are currently offering to buy shares, and the ask price is the lowest price other investors are currently offering to sell shares.

The difference between the two, known as the bid/ask spread, is a measure of the costs of transacting in the ETF shares (narrow spreads equate to lower costs).

Spreads widen and narrow for various reasons. If the ETF is popular and trades with robust volume, then bid/ask spreads tend to be narrower. But if the ETF is thinly traded, or if the underlying securities of the fund are highly illiquid, that can also lead to wider spreads.

Net Asset Value

As with mutual funds, an ETF calculates net asset value (NAV) at the end of each day.

It reflects the total per-share value of the underlying securities, plus cash and any other assets held in the portfolio, and less liabilities.

Investors use the NAV as the most recent estimate of the value of the ETF's shares by the ETF's sponsor or the company that issues the ETF. Because net asset value is calculated only at the end of each day and is based on the information available at that time, the NAV (unlike market price and bid and ask price) is always stale once it has been published.

Reasons for difference in price of ETF and its underlying assets

ETF prices tend to closely reflect their fair value if their underlying assets are liquid such as US large cap stocks. That said, an ETF's price and net asset value will frequently differ – that is, the exchange traded fund will trade above its NAV (at a premium) or below it (at a discount).

Timing Difference: When the ETF holds securities that do not trade at the same time as the fund itself, there will be timing differences between the values used to calculate NAV and the market price. For instance, US ETFs that hold non-US underlyings or fixed income ETFs where last traded prices for bonds may differ from the value used to calculate the NAV of the ETF.

7.1.2 Primary vs Secondary Market for ETFs

ETFs can trade on both the primary and secondary market.

Primary Market: Trading on the primary market involves the creation and redemption of ETF units through an authorised participant. The liquidity of the ETF depends on the liquidity of the underlying assets. Trading on the primary market typically requires larger trading sizes.

Secondary Market: Secondary liquidity is the “on screen” liquidity from brokerage (i.e., volume and spreads), and it’s determined primarily by the volume of ETF shares traded.

7.1.3 Fees

Transactional charges: Fees charged to transact on the ETF which includes brokerage fees and other market charges such as clearing fees and stamp duties.

Payable by ETF: The fees payable to the ETF manager. This is captured by the total expense ratio which refers to the total cost of the fund, expressed as a ratio of the assets. These include management fee, index licensing fees, legal fees, administration etc.

7.2 Types

7.2.1 By investment method

Physical/Cash Based ETFs: ETFs that invest directly into the assets that makes up the index. They may invest in all of the index’s component stocks, bonds or assets or invest in a representative selection of the index’s component stocks, bonds or assets.

Synthetic ETFs: Synthetic ETFs are ETFs that use derivative products such as swaps or access products (for example, participatory notes) to produce returns which track the relevant indices. The use of derivatives means more parties are involved, e.g. the swap counterparty or the access product issuer. An investor is exposed to the risk that the swap counterparty or access product issuer defaults on its payment obligations under the swap or access product. Such a party may default if it becomes bankrupt or insolvent. The amount of loss the investor suffers will depend on the ETF’s exposure to the counterparty or issuer.

7.2.2 By underlying assets

Equities/stocks: these ETFs aim to track the performance of a stock index, such as the Heng Seng Index (HSI). Equity/Stock ETFs provide investors with exposure to stock indices.

Bonds: these ETFs aim to track the performance of a specific bond index. Bond ETFs provide investors with exposure to bond indices.

Commodities: these ETFs aim to track the performance of a specific commodity index. Commodity ETFs provide the investor with exposure to commodity indices.

Currency: Currency ETFs track the movements of a single currency or basket of currencies.

7.2.3 Inverse and leveraged

Inverse ETFs, as known as Short (bear) ETFs, tracks the inverse performance of indices. These inverse ETFs can also be leveraged by using derivatives to provide double and triple the daily return of a given index. Like others derivatives-based ETFs, these funds are used primarily by speculators and momentum players that frequently hold on to these positions for no more than a few days.

Leveraged: An exchange-traded fund (ETF) that uses financial derivatives to amplify the returns of an underlying index called Leveraged ETF. While a regular ETF will attempt to match the benchmark index’s performance 1:1, a leveraged ETF will usually match it 2:1 or 3:1. That means for each \$1 you have invested, you have \$2 or \$3 of exposure to the index, magnifying your potential risk and volatility by 200% or 300%.

Investors should note that the impact of negative compounding can result in long-term inaccuracy. As leveraged or inverse ETFs typically compound on a daily basis which may lead to the ETF performance detracting from the performance of the underlying index. In the example below,

On day 1, both index and the leveraged inverse ETF starts at the same level of 100.

On day 2, the index gains 10%, going from 100 to 110 (+10% of 100 is 110). The ETF performance would be -20%, thus the ETF value would fall from 100 to 80 (-20% of 100 is -20).

On day 3, the index falls by 10%, which is a fall from 110 to 99 (-10% of 110 is -11). The ETF should rise by 20%, thus the ETF value would rise from 80 to 96 (+20% of 80 is 16).

As you can see, due to the daily compounding effect, although the index has fallen by 1 from day 1 to day 3, the ETF has, in fact, fallen by 4.

	Day 1	Day 2	Day 3
Underlying index	100	110 (+10%)	99 (-10%)
2x Leveraged Inverse ETF	100	80 (-20%)	96 (+20%)

Many leveraged ETFs trade only a few thousand shares per day, leading to low liquidity. Leveraged ETFs are a higher-risk investment.

7.3 Key Risks

Each fund is associated with its own set of risks. Below are some of the risks that are usually associated with ETFs.

Market Risk: Exposed to market risk or the volatility of the specific benchmark tracked. For example, the price performance of an ETF tracking the STI will be directly affected by the price fluctuations of the component stocks of the STI.

Tracking Error: Changes in an ETF's net asset value (NAV) may not exactly correspond to price changes of the index. In cash-based ETFs, the manager may not be able to buy or sell the component stocks in their exact proportion, or adjust its underlying component stocks to keep up with market or weighting changes. Execution costs, investment constraints, or timing differences may also add to tracking error.

Liquidity Risk: Designated market makers provide liquidity in ETFs by providing continuous bid-ask prices throughout the trading day. However, if the market maker fails to perform its duty due to insolvency, or extreme market conditions, liquidity of the ETF units in the secondary market may disappear, making it difficult for investors to sell their ETF units.

ETF's traded price not reflective of NAV per unit: An ETF's traded price may not reflect NAV as the traded price is subject to market demand and supply conditions.

Security Lending: Assets used in cash-based structures may be used for securities lending purposes. Investors are exposed to the risk that the borrower of the securities defaults and does not return the securities leading to loss in the NAV value of the ETF.

Reset period (For leveraged and inverse ETFs): The majority of leveraged ETFs reset their exposure daily, which means they amplify returns over the course of a single day. So, when considering the performance over a week, the performance depends largely on the path the ETF takes. Please refer to the above illustration of the effect of a daily compounding of returns. This may be less of a problem in trending markets, but could impact your investment in volatile markets.

7.4 Investment Rationale

Trades like a stock: ETFs can be traded intraday; they provide an opportunity for speculative investors to bet on the direction of shorter-term market movements through the trading of a single security. ETFs can also be used for speculative trading strategies, such as short selling and trading on margin.

Lower Fees Compared to Managed Funds: ETFs, which are passively managed, usually have lower expense ratios compared to other managed funds. Thus investing in an ETF will usually be more cost-efficient than investing in a mutual fund.

Flexibility: When investors are bearish on a particular market, sector or industry, they can simply buy shares in the corresponding inverse ETF rather than selling anything short. Investors are also able to have 200% or 300% exposure to the underlying index, if they wish to do so.

8. Managed Products (Funds)



Product Risk Rating

8.1 Description

Managed products are products which are managed by an external manager on a commingled basis.

The types of managed products may include mutual fund, unit trust, closed-ended fund, listed fund and liquid alternative fund.

Investors' monies are pooled and invested in a portfolio of assets to achieve the investment objective of the managed product.

The funds are typically managed by the Investment Manager and other functions are segregated and separately managed to minimise the risk of mismanagement. Other functions include the custodian, administrator, legal and compliance. The board of directors or trustees will oversee the managed products.

8.2 Key Features

8.2.1 Pricing of Funds

Investors invest in a fund by buying units in the fund. There is capital gain when the price of the units rises above the price you paid for the fund. Some funds pay dividends.

The price of each unit is based on the fund's net asset value (NAV) divided by the number of units outstanding. The NAV of a fund is the market value of the fund's net assets (investments, cash and other assets minus expenses, payables and other liabilities). The NAV is usually computed daily to reflect changes in the prices of the investments held by the fund.

Funds are priced either by the "bid and offer pricing" method or the "single pricing" method:

Bid and Offer Pricing

Bid price at which investors sell their units.

Offer Price at which investors buy units.

Spread Difference (spread) between bid and offer prices of fund's units reflects subscription (sales) and redemption charges (if any).

In the "bid and offer pricing" method, the subscription charge is added to the NAV per unit, while the redemption charge is deducted from the NAV per unit.

Single Pricing

The fund provides a single quote that reflects the NAV per unit.

A subscription charge may be imposed by the distributor and are deducted from the amount invested before the units are allocated.

A redemption charge may be imposed by the distributor and will be deducted from the redemption proceeds (if any).

Scenario	Assumed Numbers	Bid and offer pricing	Single pricing
Buying with \$1,000 investment.	(i) Initial 5% subscription charge (ii) NAV of \$1.00 per unit	Offer price per unit = NAV of \$1.00 + initial subscription charge of 5% = \$1.05 Number of units bought = \$1,000/\$1.05 = 952.38 With \$1,000, you buy: 952.38 units valued at \$952.38	Buy price per unit = NAV of \$1.00 per unit = \$1.00 Number of units bought = \$950 (after deducting 5% subscription charge from the initial \$1,000) buy price = 950 With \$1,000, you buy: 950 units valued at \$950

8.3 Fees

There are 2 broad categories of fees

- (i) Fees and charges payable by you – these represent sales or redemption charges imposed by the distributor of the fund or the fund manager themselves to subscribe or redeem in a fund

Subscription fee or initial sales charge (also known as “front-end load”)	Redemption fee or realisation charge (also known as the “back-end load”)	Switching fee
Payable when you buy a fund.	Payable when you sell or redeem the fund.	Payable when you switch from one fund to another fund managed by the same fund manager
Ranges from 0% - 5% of your investment	Ranges from 0% - 5% of your investment	

- (ii) Fees and charges payable by the fund – these are recurring fees that the fund manager, trustee and other parties charge the fund for providing their services and ultimately reduce your return on investment. The recurrent fees make up the Total Expense Ratio (TER)

Management fee	Custodian fee	Miscellaneous fees
An annual fee charged by the fund manager for managing the fund Usually 0.5% - 2% per annum of the fund’s NAV	An annual fee charged by the custodian for providing custodian services for safekeeping the fund’s assets Usually 0.1-0.15% per annum of the fund’s NAV	Other fees include fund administration fees and audit and legal fees

8.4 Key Risks

Each fund is associated with its own set of risks. Below are some of the risks that are usually associated with the following type of funds.

Do note that this is not an exhaustive list. More information can be found in the fund’s official offering documents.

General Risks:

High Total Expense ratios and sales charges: Such fees would reduce overall investments returns.

Management abuses: Risk of churning or window dressing if the investment manager is abusing its authority. Churning is the act of excessive trading in a fund, thus increasing the transaction costs and window dressing are actions performed by managers near the quarter or year end to improve the appearance of the portfolio. For instance, managers may sell holdings which have performed poorly and replace them with better performing ones to improve the appearance in the reports sent to investors.

Underperformance: Although one of the key advantages of investing in funds is professional management, there are managers who are unable to outperform the benchmark.

Money Market Fund:

Counterparty risk/money market & deposit: A failure of a deposit institution or an issuer of a money market instrument could create losses.

Capital risk/negative yields: When interest rates are very low or negative, the fund's yield may be zero or negative, and you may potentially incur losses.

Bond Funds:

Investments in bonds or other debt securities are subject to the credit risk of the issuer. In a credit event such as an event of default, the value of the relevant underlying securities may be adversely impacted.

Use of derivatives exposes investors to liquidity, counterparty, volatility and valuation risk.

High yield bonds may be subject to greater credit risk. If the issuer of an underlying security is in default with respect to interest or principal payments, the fund may lose its entire investment.

Worst case scenario: Entire purchase price of the fund is at risk of loss if there is no recovery after default.

Currency Fund:

Currency Risk: Potential exposure to a portfolio of currencies or foreign exchange (FX) risk. FX can also be used for speculation purpose when the manager has a view that a currency will appreciate or depreciate. For example: if the manager views that the Euro will depreciate in the near future against the USD, then one will sell (short) the Euro today. Conversely, one will buy (long) the Euro and sell the USD now if there is an expectation that the Euro will rise in the future. (Please refer to section 4: Introduction to Foreign Exchange for more details)

Worst case scenario: The value of the fund and its dividends or coupons may rise or fall. These risk factors may cause you to lose some or all of your investment.

Commodity Fund:

Generally invests in equity, exposed to companies in commodities including but not limited to Gold, Silver, Platinum and Palladium which may cause the price of the respective assets to drop significantly. (Please refer to section 9: Introduction to Precious Metals for more details)

Global country risks: Investments in issuers located in a particular country or geographic region may have more risk because of particular market factors affecting that country or region.

Worst case scenario: The value of the fund and its dividends or coupons may rise or fall. These risk factors may cause you to lose some or all of your investments.

Equity Funds:

Equity risks: Exposed to company-specific risks of the underlying securities which may cause the price of the respective assets to drop significantly.

Global country risks: Investments in issuers located in a particular country or geographic region may have more risk because of particular market factors affecting that country or region.

Worst case scenario: The value of the fund and its dividends or coupons may rise or fall. These risk factors may cause you to lose some or all of your investment.

Multi Asset Funds:

Investors in Multi Asset Funds would be exposed to a combination of the above risks depending on the portfolio of assets the Fund is invested in, i.e. equity, bond and money market risks.

Liquid Alternatives:

Liquid alternative funds may have higher-than-average concentration in securities, and have net long or net short exposure to, industry sectors, markets and/or currencies. As a result, may potentially be more volatile than more broadly diversified funds.

9. Introduction to Precious Metals



Product Risk Rating

Precious metals refer to the classification of metals with rare and high economic value. It generally refers to Gold, Silver, Platinum and Palladium. With trading established in London in the early decades of the last century, it has since become an important centre for metals trading. Loco (referring to the location) London forms the basis of international trading and settlement. As a result, the loco London price has become the common denominator amongst dealers around the world. The settlement process can be likened to that in international foreign exchange markets where settlement is effected by debits and credits over currency nostro accounts in the relevant banking systems. In more recent time, Zurich was added as the location of gold trading too. Troy ounce is the traditional unit of weight used for precious metals.

As gold tends to perform inversely to stocks and bonds prices and may perform well during political and economic uncertainty, some investors may choose to invest in gold as a form of portfolio diversification. Gold is also sometimes used as a buffer against inflation.

In the same way as one could exchange US dollars for Euro, gold too has a price and that price can fluctuate relative to any currencies, such as the US dollar or Japanese Yen. In this manner, gold has the capacity to trade like a currency. The market is generally quoted in US dollars per ounce.

The account, through which the investment in gold is conducted, is not an interest-bearing account with neither yield nor interest provided. It also does not involve physical holding or delivery of gold. The account is held with a bullion bank which provides custodial service for such an account. The investor would be exposed to the counterparty risk of the bullion bank as well as NSL.

10. Introduction to Leveraged Portfolios

10.1 Definitions

Leverage is the use of various financial instruments or borrowed capital such as margin to increase the potential return of an investment.

Leveraged investments can be risky. For 2 portfolios invested in the same assets, the portfolio with the higher level of leverage will lose more on a net basis than the other portfolio in case of negative market movements against these portfolios.

Various facilities offered by Nomura allow you to leverage your portfolio. Facilities such as the Lombard Facility (Short-term(ST)/Derivative-Trading (DT) facility) and the FX Margin (FXMT) facilities allows you to utilize a wide range of credit and derivative financial instruments which can lead to building a leveraged portfolio.

Such flexible facilities allow you to take advantage of investment opportunities without having to sell your existing positions, take advantage of the leverage effect in pursuit of higher investment returns, enhance the diversification of your invested portfolio, or to cover your short term liquidity needs.

If you decide to use leverage in your portfolio, it is important that you take into account not only the potential positive effect of leverage on your assets returns but also all the risks involved with the maintenance of a leveraged portfolio. The risk of losses on a leveraged portfolio is not limited to your assets pledged or capital invested and therefore it is recommended that you regularly review your leverage and margin levels, and ensure that sufficient liquidity is available in the event of margin calls. Last but not least, keep in mind that concentrated positions in a leveraged portfolio lead to a high level of directional risk and high losses should the market move against your concentrated positions.

10.2 Key benefits

Leveraged portfolio invested with Nomura through the various facilities offered allows you to:

- Have access to a simple and convenient source of liquidity while keeping your existing investment strategy intact
- Enhance the yield of your portfolio by leveraging your portfolio
- Optimize the risk profile of your portfolio through re-investment & diversification of your portfolio
- Profit from short term investment opportunities
- Provide flexible leverage on your currency exposure. You can trade with no leverage or with leverage based on your personal preference and risk appetite
- Hedge your currency exposure

10.3 Key Features of Facilities used for leverage

10.3.1 Credit/trading Limit

ST/DT Facilities, FXMT facilities and other credit or trading facilities are granted with a limit which defines the maximum aggregated amount allowed to be used under the facilities.

These facilities are collateralised facilities and utilisation is subject to maintenance of sufficient collateral to cover the aggregate liabilities under the facility at all times.

10.3.2 Uncommitted Facility

The facilities granted are uncommitted and the availability of any utilisation is subject entirely to Nomura's discretion. Nomura has no obligation to make or continue to make available to the Borrower all or any of part of any of the Facilities or to allow or continue to allow any particular utilisation thereof.

It also means that the facilities can be recalled at any time, which may require investors to repay the loans and overdrafts or close the derivative exposure early upon demand.

10.3.3 Borrowing costs

Loans and overdrafts are priced based on the agreed conditions defined in the facility letter which are usually based on Nomura's Cost Of Fund +X% or any other rates determined by Nomura from time to time. The cost of fund (COF) varies depending on the currency, the tenors of the loans and the time of start of the exposure, interest rate applied to the liabilities may differ at each roll-over. For example, you may enter into a 1,000,000 USD loan on the 3rd of January for 30 days and your facility letter mentions a pricing of COF +1%. The COF for such 30 days loan is 0.35%. In this example the amount of interests due to Nomura at maturity of the loan will be based on:

Nominal x (COF+1%) x Number of Days/Currency Annual Factor.

Which will lead to: $1,000,000 \times (0.35\% + 1\%) \times 30/360 = 1,125$ USD of interest to be paid at maturity.

At maturity the COF for a 30-day loan may have increased &/or decreased. Therefore there is a risk that the interest rate may change beyond the initial 1.35% if the loan is rolled over to a new period. Note that depending on currency the annual factor may be 360 or 365 based on prevailing market practice.

10.3.4 Loan Term

Subject to availability of funding, the interest period for each Short Term Loan shall be up to a maximum of one year or any other periods determined by Nomura.

10.3.5 Loan Maturity

At Loan maturity, the account holder can either:

- Repay 100% of the loan and the interest that is due
- Roll the loan for another term and pay the interest due from surplus cash held in the portfolio
- Roll the loan and the interest for another term

10.3.6 Collateral Required & Margin Call

The Borrower undertakes to maintain sufficient collateral value to secure the exposure. If, at any time, Nomura determines that the collateral value of all the charged assets is insufficient to cover the exposure, you will have to upon demand by Nomura:

- (i) Deposit, deliver and/or place additional security with Nomura; and/or
- (ii) Reduce and/or pay or prepay or close some of the positions so that the collateral value becomes sufficient to cover the exposure under the facilities

Note that in the case of collateral shortfall, Nomura may exercise its right to proceed, among other things, without prior notice to close some of your positions, unwind derivative positions, sell your collateral, convert your loans or cash to other currencies.

10.4 Key Risks associated with Leveraged portfolios

- (i) **Price risk:** The value of the collateral pledged to secure the exposure generated by the utilisation of the facilities is subject to price fluctuations. If the value of the assets pledged decline, you may have to provide additional assets as collateral, or to reduce the outstanding exposure by the applicable amount to ensure your exposure is covered by adequate collateral. In the same manner on derivative positions, the amount of collateral required to cover positions include the necessity to cover mark-to-market (MTM) losses on the derivative positions. Mark-to-market (MTM) refers to the current value of the position.
- (ii) **Collateral Value Risk:** The collateral value of assets pledged to secure the exposure generated by the utilisation of your facilities are reviewed on a regular basis and is a percentage of the market value of the collateral. This percentage applied to the Market Value of the securities is reviewed on a regular basis by Nomura and is subject to change. Factors such as market capitalisation, liquidity, volatility, currency, credit rating among others are taken into consideration to decide on the final collateral value of each assets pledged.
- (iii) **Margin Requirement Risk:** Margin required for derivative positions are subject to regular review by Nomura. Factors such as market capitalisation, liquidity, volatility, currency, credit rating among others are taken into consideration to decide on the final margin required for your derivative positions.
- (iv) **Currency Risk:** A mismatch between the currency of your exposure and the currency of your collateral exposes you to risks of loss and a risk of margin call if the value of your exposure increases compared to the value of your collateral due to currency movement.
- (v) **Margin Call Risk:** A margin call situation may force you to close positions, leading you to realize losses earlier than you intended. Investors who use leverage should keep sufficient available free margin, to cater for adverse market movements which may impact your collateral value or the amount of margin required. This will give you the ability to hold your positions if you want to. If you do not maintain sufficient collateral, you may be able to transfer additional assets as collateral to secure your positions, although under certain circumstances, the time required to transfer these assets will be too long and forced liquidation of your positions may happen even if the transfer of additional collateral has been initiated.
- (vi) **Gearing Risk:** Nomura defines your gearing as your level of nominal exposure, divided by your net asset value.

For example, a portfolio with US\$2,000,000 of assets invested and US\$500,000 of loans has a gearing of $1.33 = 2,000,000 / (2,000,000 - 500,000)$

A portfolio US\$2,000,000 invested, US\$1,000,000 of loan and with a FX forward exposure of US\$5,000,000 will have a gearing of $7 = (2,000,000 + 5,000,000) / (2,000,000 - 1,000,000)$

While returns can be magnified through gearing, it is important to stress that losses are also magnified when leverage is used. This has an impact not only on the performance of your account, but also on the speed at which your available margin gets reduced in case of negative market movement.

A high level of gearing is associated with larger risks than the same portfolio investments with no gearing.

When deciding on the level of gearing you want your leveraged portfolio to have, it is important that you take into account the risks involved with such portfolios. Section 10.5 provides important illustrations of the risks involved for portfolios with various level of gearing.

- (vii) **Risk of losses beyond capital invested:** Losses under a leveraged facility is not limited to the collateral pledged to secure it. Despite the fact that the facilities used for leverage are collateralised, there can be events when after liquidation of all the collateral and the closing of outstanding positions, there is a remaining uncovered debt owed to Nomura. In this case additional funds will need to be transferred in by you to cover these losses.

10.5 Illustrations of the risks of various gearing levels

10.5.1 Impact of gearing on P&L

The chart below illustrates the impact of various gearing levels in term of % of gain or loss of leveraged portfolios for various market movements.

		Loss compared to the initial investment amount (%)							
		Gearing Level							
		1	2	4	6	8	10	15	20
Market Movements	(40.0%)	(40.0%)	(80.0%)	(160.0%)	(240.0%)	(320.0%)	(400.0%)	(600.0%)	(800.0%)
	(30.0%)	(30.0%)	(60.0%)	(120.0%)	(180.0%)	(240.0%)	(300.0%)	(450.0%)	(600.0%)
	(20.0%)	(20.0%)	(40.0%)	(80.0%)	(120.0%)	(160.0%)	(200.0%)	(300.0%)	(400.0%)
	(10.0%)	(10.0%)	(20.0%)	(40.0%)	(60.0%)	(80.0%)	(100.0%)	(150.0%)	(200.0%)
	(7.5%)	(7.5%)	(15.0%)	(30.0%)	(45.0%)	(60.0%)	(75.0%)	(112.5%)	(150.0%)
	(5.0%)	(5.0%)	(10.0%)	(20.0%)	(30.0%)	(40.0%)	(50.0%)	(75.0%)	(100.0%)
	(2.5%)	(2.5%)	(5.0%)	(10.0%)	(15.0%)	(20.0%)	(25.0%)	(37.5%)	(50.0%)
	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	2.5%	2.5%	5.0%	10.0%	15.0%	20.0%	25.0%	37.5%	50.0%
	5.0%	5.0%	10.0%	20.0%	30.0%	40.0%	50.0%	75.0%	100.0%
	7.5%	7.5%	15.0%	30.0%	45.0%	60.0%	75.0%	112.5%	150.0%
	10.0%	10.0%	20.0%	40.0%	60.0%	80.0%	100.0%	150.0%	200.0%
	20.0%	20.0%	40.0%	80.0%	120.0%	160.0%	200.0%	300.0%	400.0%
	30.0%	30.0%	60.0%	120.0%	180.0%	240.0%	300.0%	450.0%	600.0%
40.0%	40.0%	80.0%	160.0%	240.0%	320.0%	400.0%	600.0%	800.0%	

The following chart illustrates the impact of various gearing levels in term of amount of gain or loss of a leveraged portfolio with an initial investment amount of US\$1,000,000 for various market movements.

		Amount of loss in USD dollar of an initial investment amount of US\$1,000,000							
		Gearing Level							
		1	2	4	6	8	10	15	20
Market Movements	(40.0%)	(400,000)	(800,000)	(1,600,000)	(2,400,000)	(3,200,000)	(4,000,000)	(6,000,000)	(8,000,000)
	(30.0%)	(300,000)	(600,000)	(1,200,000)	(1,800,000)	(2,400,000)	(3,000,000)	(4,500,000)	(6,000,000)
	(20.0%)	(200,000)	(400,000)	(800,000)	(1,200,000)	(1,600,000)	(2,000,000)	(3,000,000)	(4,000,000)
	(10.0%)	(100,000)	(200,000)	(400,000)	(600,000)	(800,000)	(1,000,000)	(1,500,000)	(2,000,000)
	(7.5%)	(75,000)	(150,000)	(300,000)	(450,000)	(600,000)	(750,000)	(1,125,000)	(1,500,000)
	(5.0%)	(50,000)	(100,000)	(200,000)	(300,000)	(400,000)	(500,000)	(750,000)	(1,000,000)
	(2.5%)	(25,000)	(50,000)	(100,000)	(150,000)	(200,000)	(250,000)	(375,000)	(500,000)
	0.0%	-	-	-	-	-	-	-	-

2.5%	25,000	50,000	100,000	150,000	200,000	250,000	375,000	500,000
5.0%	50,000	100,000	200,000	300,000	400,000	500,000	750,000	1,000,000
7.5%	75,000	150,000	300,000	450,000	600,000	750,000	1,125,000	1,500,000
10.0%	100,000	200,000	400,000	600,000	800,000	1,000,000	1,500,000	2,000,000
20.0%	200,000	400,000	800,000	1,200,000	1,600,000	2,000,000	3,000,000	4,000,000
30.0%	300,000	600,000	1,200,000	1,800,000	2,400,000	3,000,000	4,500,000	6,000,000
40.0%	400,000	800,000	1,600,000	2,400,000	3,200,000	4,000,000	6,000,000	8,000,000

For an investor using gearing, short term negative market movement can lead to margin calls and cut-loss, which may lead to closing some positions and crystallising the losses. After such event it may take years to recoup these losses as the capital invested is reduced compared to the initially invested amount.

The chart above shows that with a Gearing of 10 times, a 7.5% market movement against the portfolio would lead to 75% losses on the initial invested amount. If such positions gets closed at this level, the investor would only have US\$250,000 left to recoup on the losses – If the investor decides to maintain a 10 time gearing and re-invest, he would need a 30% positive market movement to recoup its losses.

10.5.2 Gearing level of 1 to 3

The chart below illustrates the behavior of 3 portfolios based on initial amount invested of US\$1,000,000 and different levels of gearing.

Portfolio 1 has a gearing level of 1 – that is to say it is not leveraged

Portfolio 2 has a gearing level of 2 – After borrowing US\$1,000,000 a total of US\$2,000,000 is invested.

Portfolio 3 has a gearing level of 3 – After borrowing US\$2,000,000 a total of US\$3,000,000 is invested.

If we consider a collateral value of 70% of the assets invested, the below show the initial situation in terms of available collateral value before margin call.

	Portfolio 1	Portfolio 2	Portfolio 3
	Gearing Level		
	1.00	2.00	3.00
MTM of invested assets after leverage	1,000,000	2,000,000	3,000,000
Collateral value of invested assets after leverage @70%	700,000	1,400,000	2,100,000
Exposure	-	1,000,000	2,000,000
Free margin	700,000	400,000	100,000

The following is the impact of a 10% drop of the value of the assets invested in these portfolios. You will note that the gearing level of these portfolios increase despite the fact that no new positions are taken.

	Portfolio 1	Portfolio 2	Portfolio 3
	Gearing Level		
	1.00	2.25	3.86
After 10% drop of the asset value			
MTM of invested assets	900,000	1,800,000	2,700,000
Collateral value of invested assets after leverage @70%	630,000	1,260,000	1,890,000
Exposure	-	1,000,000	2,000,000
Free margin	630,000	260,000	(110,000)
Loss if position is closed	(100,000)	(200,000)	(300,000)
Loss as % of initial investment amount	10%	20%	30%

Portfolio 1 will have lost US\$100,000 or 10% of the initially invested assets - and there is no risk of margin call as there is no leverage.

Portfolio 2 will have lost US\$200,000 or 20% of the initially invested assets – and the free margin before margin call has reduced by 35% to US\$260,000 from the initial US\$400,000.

Portfolio 3 will have lost US\$300,000 or 30% of the initially invested assets – and the account is now in Margin call by US\$110,000 which will require to transfer collateral with a collateral value of US\$110,000 or to liquidate US\$366,666 of collateral to repay the loans by the same amount to regularize the shortfall.

As illustrated even at gearing level 2 or 3, there can be a very large impact on the value of your portfolio, especially if you invest in volatile assets, and the multiplier factor does apply even on low volatility assets. It is therefore important that you consider these risks carefully before deciding whether to enter into leveraged positions.

10.5.3 Very High gearing levels above 10

The chart below illustrates the behaviour of 3 portfolios based on initial amount invested of US\$1,000,000 (which we will consider fixed) and different levels of gearing through derivative exposure such as FX accumulators, selling FX Options or FX Forward. We will then consider 2 sets of shocks on the MTM of the derivative positions and illustrate the impact on these portfolios.

We will consider for this example an initial margin required of 7%, a Margin Call/Maintenance Margin trigger of 5%, and a cut-loss/Close out trigger of 3%.

	Portfolio 1	Portfolio 2	Portfolio 3
	Gearing Level		
	10.00	14.00	18.00
MTM of invested assets after leverage	1,000,000	1,000,000	1,000,000
Net Open Position	10,000,000	14,000,000	18,000,000
MTM of derivative position	-	-	-
Margin required @7%	700,000	980,000	1,260,000
Free margin	300,000	20,000	(260,000)
Net recovery if closing at this level	1,000,000	1,000,000	1,000,000
Loss compared to initial investment (%)	0.0%	0.0%	0.0%

Cover ratio	10.0%	7.1%	5.6%
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We can see from the Cover Ratios/Margin Ratios and the Free Margin levels that portfolio 1 has more free collateral than portfolio 2 and 3. We also note that portfolio 3's cover ratio is below the required Initial margin of 7% although it has not triggered the margin call level as yet. For FXMT facilities, Cover ratio/Margin Ratio is the percentage which the Net Security Value bears to the Aggregate Value of the Aggregate Net Open Position at such time, as determined by Nomura based on the weighted average of the then applicable Acceptable Currency/Acceptable Currency pairs involved.

From these levels we are now going to consider a 2% market movements against the derivative positions.

	Portfolio 1	Portfolio 2	Portfolio 3
	Gearing Level		
2% Drop from initial situation	13.80	20.80	29.70
MTM of invested assets after leverage	1,000,000	1,000,000	1,000,000
Net Open Position	10,000,000	14,000,000	18,000,000
MTM of derivative position	(200,000)	(280,000)	(360,000)
Margin required @7%	700,000	980,000	1,260,000
Free margin	100,000	(260,000)	(620,000)
Net recovery if closing at this level	800,000	720,000	640,000
Loss compared to initial investment (%)	(20%)	(28%)	(36%)
Cover ratio	8.0%	5.1%	3.6%

We can see that 2% negative movements lead to larger losses for portfolio 3 than for portfolio 2 and 1 – which is directly linked to the higher gearing. In addition, it is notable that Portfolio 3 is now in Margin Call and Portfolio 2 in an insufficient margin situation, while portfolio 1 is still fully secured.

Also, despite the fact that no new positions were entered, the gearing levels of the 3 portfolios increased.

Using the initial situation, we are now going to consider a 4% market movements against the derivative positions.

	Portfolio 1	Portfolio 2	Portfolio 3
	Gearing Level		
4% Drop from initial situation	18.30	34.10	67.90
MTM of invested assets after leverage	1,000,000	1,000,000	1,000,000
Net Open Position	10,000,000	14,000,000	18,000,000
MTM of derivative position	(400,000)	(560,000)	(720,000)
Margin required @7%	700,000	980,000	1,260,000
Free margin	(100,000)	(540,000)	(980,000)
Net recovery if closing at this level	600,000	440,000	280,000
Loss compared to initial investment (%)	(40%)	(56%)	(72%)

Cover ratio	6.0%	3.1%	1.6%
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Again, we can see that the 4% negative movements lead to larger losses for Portfolio 3, which has already lost 72% of the initial investment amount, than for Portfolio 1 and Portfolio 2.

Portfolio 3 is now below cut-loss level, Portfolio 2 is now in margin call and close to cut-loss level, whereas Portfolio 1 is in insufficient margin situation.

Take note that it is possible for a client with Portfolio 2 to have insufficient time to transfer additional collateral to replenish the shortfall before triggering the cut-loss level amid adverse movements. This may prompt Nomura to close some of the client's positions to reduce exposure, realizing losses which the client may have wanted to avoid whilst seeking a market recovery. In such cases, the client should ensure that sufficient collateral are available to fully secure his positions at all time.

It is also important to note that while breaching the cut-loss level may prompt Nomura to cut some or all open positions, there is no guarantee that Nomura will only cut the positions by up to 3%, and there is no guarantee that the losses incurred on this leveraged portfolio will not exceed the amount of invested assets.

10.5.4 Variations to margin trading

The table below illustrates the behaviour of a portfolio that has high gearing and comprises of derivatives such as FX structures and FX options (sell). It also captures the margin required against the transactions which is computed based on the Delta, Vega, Gamma attributes of the positions at that moment in time. We will then consider 2 sets of shocks on the portfolio with respect to changes in Delta, Vega, Gamma and Mark to Market (“MTM”) of the derivative positions and illustrate the impact on these portfolios. We will consider for this example an Initial Margin (“IM”) required of 7%, a Margin Call /Maintenance Margin (“MM”) trigger of 5% and a Close Out (“CO”) trigger of 3%.

In this portfolio, at inception, the Basic Cover Charge is computed as the portfolio IM required (7%) multiplied by the Delta Net Open Position of the portfolio (which is Total Notional of the Portfolio * Delta of 20%). This Basic Cover Charge along with the Additional Vega & Gamma Add-On Charges will give us to Total Cover @ IM of the overall portfolio. On the back of these positions, Free Margin is computed as Collateral minus Total Cover @ IM + MTM Losses. Having a positive Free Margin will allow the investor to increase exposure within the portfolio to the extent that this number remains as a non-zero number. In addition to the Free Margin computation, the Margin Ratio (computed as (Collateral + MTM Losses) divided by Delta NOP) will also be used to determine how much potentially the client can increase the exposure within the portfolio to avoid any IM / MM / CO breach.

	-1% MTM move and Delta 20% of Notional	-5% MTM move and Delta 30% of Notional	-7% MTM move and Delta 50% of Notional
Collateral	1,000,000	1,000,000	1,000,000
Total Notional of Trade	10,000,000	10,000,000	10,000,000
Delta Net Open Position	2,000,000	3,000,000	5,000,000
Basic Cover Charge	140,000	210,000	350,000
Additional Vega & Gamma Add-On Charges	40,000	50,000	80,000
Total Cover @ IM	180,000	260,000	430,000
Total Cover @ MM	128,571	185,714	307,143
Total Cover @ CO	77,143	111,429	184,286
MTM Losses	(100,000)	(500,000)	(700,000)
Free Margin	720,000	240,000	-130,000
Cover Ratio	611.11%	576.92%	395.35%
Margin Ratio	45.00%	16.67%	6.00%
Gearing	2.22	6.00	16.67
IM	9.00%	8.67%	8.60%
MM	6.43%	6.19%	6.14%
CO	3.86%	3.71%	3.69%

After we shock this portfolio, we can see that a 5% negative move in the MTM leads to an increase in the Total Cover as the Delta% increases (thereby impacting Basic Cover Charge) and the Gamma+Vega add-ons change. The net impact to this -5% MTM move and change in Delta / Vega / Gamma% has is on both the Free Margin Available as well as the Margin Ratio. For example, with a -7% drop in MTM, the Basic Cover Charge increases from 140,000 to 210,000 (as Delta NOP changes from 20% to 30%), and the Vega + Gamma Add on cover increase from 40,000 to 50,000. In addition to this, the negative MTM reduces the Free Margin in the portfolio and has an impact on the Margin Ratio (drops from 45% to 16.67%) thereby increasing the Gearing Ratio from 2.22x to 6.00x. If the trade is closed at MTM, the loss of 500,000 leads to a net loss of 50% on the Collateral in the portfolio. Following this shock, the overall portfolio continues to

have a positive Free Margin and a Margin Ratio higher than the IM, MM, CO levels. It is also important to note that the IM / MM / CO levels change as the Total Cover @ IM levels change.

After we shock this portfolio further, we can see that a 7% negative move in the MTM leads to an increase in the Total Cover as the Delta% increases (thereby impacting Basic Cover Charge) and the Gamma+Vega add-ons change. The net impact to this -7% MTM move and change in Delta / Vega / Gamma% has is on both the Free Margin Available as well as the Margin Ratio. For example, with a -7% drop in MTM, the basic cover charge increases from 140,000 to 350,000 (as Delta NOP changes from 20% to 50%) and the Vega + Gamma Add on cover increases from 40,000 to 80,000. In addition to this, the negative MTM reduces the Free Margin in the portfolio and has an impact on the Margin Ratio (which drops from 45% to 6.00%) thereby increasing the Gearing Ratio from 2.22x to 16.67x. If the trade is closed at MTM, the loss of 700,000 leads to a net loss of 70% on the Collateral in the portfolio. Following this shock, the overall portfolio now has a negative Free Margin and a Margin Ratio that is below the IM and MM level but above the CO level. Take note that because of this new Margin Ratio which is below MM level, the client will be required to regularize the portfolio either by reducing exposure or by bringing in additional collateral to bring the Margin Ratio percentage above the IM threshold.

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