
Detail Type Id Structure Methodology

Morningstar Manager Research

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Introduction

Each security in a fund portfolio is assigned a detailed asset classification, known as the Detail Type Id. In October 2022, Morningstar updated the list of Detail Type Ids. The broad categories of Detail Type Ids are bonds, derivatives, cash, funds, equities, and others.

Over time, the current list of Detail Type Ids will become outdated and insufficient as portfolio managers find new techniques and investing opportunities. The updated list as of October 2022 incorporates several new type codes for derivatives and fixed-income instruments and improves the accuracy of Detail Type Id assignments.

The Detail Type Id structure is reviewed by Morningstar's methodology and data experts on an annual basis. New type codes may be added to address new investing opportunities.

Bonds

This category includes 1) corporate bonds; 2) government bonds, including debt issues by governments and government agencies/quasi-agencies; 3) municipal bonds; 4) securitized fixed-income securities; and 5) bills. In this case, we define all fixed-income securities as bonds; for sector classifications, fixed-income securities with maturities less than one year are considered cash and equivalents. In general, though there are some exceptions, a bondholder receives coupon payments at certain periods over the issue's life, along with principal at maturity. Preferred stocks are included in bond sectors because even though preferred stock is legally structured as equity, it does not offer voting rights. Preferred stocks often pay a fixed dividend and have priority over common equity when an issuing company elects to pay dividends. Although preferred stocks are not debt instruments, investors often treat them as such because of their income payouts and higher capital-structure placement.

Corporate

A corporate bond is a fixed-income security issued by a corporation. Corporate bonds pay higher coupon rates than government or municipal bonds because they tend to carry more credit risk. They have a wide range of ratings and yields as the financial health of issuers can vary widely.

- ▶ Bond—Corporate Bond (B)
 - ▶ Debt obligations of corporations, commonly referred to as notes, bonds, or debentures. Specifically, this holding type does not have conversion features nor is it structured as a covered bond, although other secured structures such as an equipment loan trust are included.
- ▶ Bond—Corporate Inflation-Protected (IP)
 - ▶ Corporate bonds, which contain features that are intended to mitigate the risk of inflation—such as adjustments to interest or principal—commonly through benchmarking to an inflation index.
- ▶ Bond—Bank Loans (BR)
 - ▶ Loans issued by banks or other financial institutions.
- ▶ Bond—Capital Contingent Debt (CT)
 - ▶ Capital securities that have a conversion or write-down feature upon a breach of key ratio or at the discretion of the local/regional banking regulator/jurisdiction, when the issuing financial institutions no longer have capital adequacy to continue to be deemed viable, per BASEL III framework. This includes the discretionary loss absorption (Non-Viability Contingent Capital, NVCC, or Point of Non-Viability, PoNV) and other statutory loss-absorption mechanism based on the BASEL III framework.

Convertible

Convertible securities are exchangeable for a specified amount of other related securities, usually common stock. Convertible bonds offer some of the benefits of both stocks and bonds. Convertibles earn interest even when the stock is trading down, but when the stock prices rise, the value of the convertible increases.

- ▶ Bond—Convertible (BC)
 - ▶ Convertible bonds are corporate obligations that can convert into equity, usually when the referential share price hits a specified price level. Excludes contingent convertibles.
- ▶ Bond—Contingent Convertible (CN)
 - ▶ Convertible bonds are corporate notes that can convert into equity, whereas contingent convertible bonds automatically convert into equity upon specific financial contingencies. These are typically issued by financial institutions with regulatory equity capitalization requirements, and conversions are designed to enable firms to increase equity/debt ratios without going to the capital markets.

Preferred Stock

A preferred stock is an equity issue that provides a specific dividend that is paid before any dividends are paid to holders of common stock. Like common stock, preferred stocks represent partial ownership in a company, although preferred stock shareholders do not enjoy any of the voting rights of common stockholders. Also, unlike common stock, a preferred stock pays a fixed dividend that does not fluctuate, although the company does not have to pay this dividend if it lacks the financial ability to do so. Preferred stock takes precedence over common stock in the event of liquidation. That is, in the event the company goes bankrupt, preferred shareholders are paid off before common stockholders. In general, there are four different types of preferred stock: cumulative preferred, noncumulative, participating, and convertible.

- ▶ Nonparticipating Preferred Stock—Debtlike (P)
 - ▶ Securities that are preferred but pay interest and generally have a stated maturity date on which principal is repaid. Nonparticipating preferred stock is equity capital that pays a stated dividend based upon a stated par value of the preferred shares. This equity capital does not receive compensation above the par value of the shares in the event of a buyout of the company. Typically, preferred stock has perpetual or a long life until mandatory redemption. In common-law countries, these are typically just known as preferred shares.
- ▶ Preferred Convertible (PC)
 - ▶ Equity capital that receives or accrues a stated dividend based upon a stated par and is convertible into another class of equity (typically common), frequently at the option of the holder. The conversion feature entitles preferred convertible shareholders to participate in the upside of a company when the common equity increases in value. Participating preferred stock, or preference shares, are a class of stock that has some limitation on rights relative to common shareholders but receives preferential treatment in dividends and/or other returns. Most common in nations with legal systems based upon Napoleonic Law, where surrendering common stockholder rights is required to be compensated. Many issuances of preference shares pay an excess dividend in exchange for giving up voting rights.

Government

A government bond is a fixed-income security issued by a central government or Treasury. Government bonds generally have the highest credit quality and lowest risk, so they pay relatively low coupon rates.

- ▶ Bond—Government/Treasury (BT)
 - ▶ Debt issued by a sovereign government, and which carries the full faith and credit obligation. Does not include securities, which carry an inflation-protection feature.
- ▶ Bond—Government Inflation Protected (TP)
 - ▶ Sovereign government bonds, which contain features that are intended to mitigate the risk of inflation such as adjustments to interest or principal, commonly through benchmarking to an inflation index.
- ▶ Bond—Supranational (BZ)
 - ▶ Bonds issued by supranational bodies, such as the International Bank for Reconstruction and Development (World Bank).
- ▶ Bond—Subsovereign Government Debt (DS)
 - ▶ Debt issued by governments, which are below the sovereign level (such as province, territory, municipality, and prefecture) outside of the United States.
- ▶ Bond—Government Agency Debt (BD)
 - ▶ Debt issued by agencies or authorities of sovereign governments. May include entities that are government-owned or controlled.

Municipal

Municipal bonds are debt securities that states, cities, counties, and other local governmental entities issue to raise money for public purposes, such as building schools, highways, hospitals, sewer systems, and other special projects. A primary feature of many U.S. municipal securities is that interest paid is generally exempt from federal income tax. The interest may also be exempt from state and local taxes if the bondholder lives in the state where the bond is issued.

- ▶ Muni Bond—General Obligation (1)
 - ▶ Full faith and credit obligations of governmental entities that hold taxation powers.
- ▶ Muni Bond—Revenue (12)
 - ▶ Obligations that are paid from a source of revenue rather than the full faith and credit of governmental entities. Revenue source may be specified or general. Applicable to both governmental and corporate entities.
- ▶ Muni Bond—Double Barreled (14)
 - ▶ U.S. municipal securities that are secured by both a revenue source and a general obligation pledge.
- ▶ Muni Bond—Unspecified (0)
 - ▶ U.S. municipal bonds that cannot be definitively classified.

Mortgage-Backed

The most common form of securitized issues is mortgage-backed securities. MBS are bonds that represent claims to the cash flows from pools of mortgage loans, most commonly on residential property. Mortgage loans are purchased from banks, mortgage companies, and other originators and

then assembled into pools by a government agency or corporation. Mortgage-backed securities exhibit a variety of structures. Except in the case of commercial MBS, issues assigned to the following MBS type codes are backed by residential mortgages. For a more thorough definition of different types of MBS, see Appendix I.

- ▶ Bond—Government Agency Pass-Thru MBS (BG)
 - ▶ Mortgage-backed securities issued and guaranteed by U.S. agencies and government-sponsored enterprises (such as Ginnie Mae, Fannie Mae, and Freddie Mac). Includes pass-thru securities, excluding those with adjustable-rate mortgage collateral. Does not include securities in which cash flows have been structured (such as CMOs). The U.S. agency mortgage securities market is one of the largest fixed-income sectors globally.
- ▶ Bond—Government Agency ARM MBS (NE)
 - ▶ Adjustable-rate mortgage-backed securities issued by government agencies. The primary issuers of U.S. government agency MBS are Fannie Mae, Freddie Mac, and Ginnie Mae.
- ▶ Bond—Residential MBS (BH)
 - ▶ Nonagency MBS includes all residential mortgage-backed securities issued by a private entity, such as an investment bank.
- ▶ Bond—Commercial MBS (NB)
 - ▶ Mortgage-backed securities that are backed by mortgages on commercial rather than residential real estate. These exclude those that are issued through a government agency.
- ▶ Bond—U.S. Agency TBA (TG)
 - ▶ Forward delivery contracts widely used by U.S. agency mortgage participants in which pool collateral is used based on market conventions. TBA stands for "To Be Announced" and reflects the latitude of deliverable collateral. Participants may substitute Fannie Mae, Freddie Mac, or Ginnie Mae collateral interchangeably.
- ▶ Bond—Non-U.S. Government Agency MBS (BM)
 - ▶ Mortgage securities that are guaranteed by non-U.S. subsovereign entities.
- ▶ Bond—Global Nonagency MBS (GM)
 - ▶ Other Nonagency MBS that are backed by mixed or other (noncommercial/nonresidential) mortgages issued by a private entity (nonsovereign agency), such as an investment bank. The issuance is not limited to any geographical region.
- ▶ Bond—Global Nonagency CMO (GC)
 - ▶ Other Nonagency structured obligations that are backed by mixed or other (noncommercial/nonresidential) mortgages issued by a private entity (nonsovereign agency), such as an investment bank. The issuance is not limited to any geographical region.
- ▶ Bond—Non-U.S. Government Agency CMO (GA)
 - ▶ Structured mortgage obligations that are issued by non-U.S. subsovereign entities.

Collateralized Debt Obligations

- ▶ Bond—Collateralized Debt Obligations (CDO/CBO) (DO)
 - ▶ Securitized debt in which the underlying assets consist of debt instruments.

- ▶ Bond—Collateralized Loan Obligations (CLO) (LO)
 - ▶ Securitized debt in which the underlying assets consist of loans.

Structured CMO

- ▶ Bond—U.S. Agency Credit Risk CMO (NR)
 - ▶ Structured mortgage obligations issued by U.S. government-sponsored enterprises (such as Fannie Mae, Freddie Mac), in which investors assume credit risk.
- ▶ Bond—Government Agency CMO (NC)
 - ▶ Mortgage-backed securities issued by and guaranteed by U.S. agencies and government-sponsored enterprises (such as Ginnie Mae, Fannie Mae, Freddie Mac) in which cash flows are structured in multiple classes or tranches.

Covered Bond

- ▶ Bond—Covered Bond (ND)
 - ▶ Covered bonds are debt obligations of a financial institution that are further secured by collateral, which is "ring fenced" such that the collateral is sufficient to pay interest and principal. They differ from securitized debt in the fact that the collateral secures the debt but remains held by the issuer rather than being transferred to a special-purpose vehicle.

Asset-Backed

- ▶ Bond—Asset Backed (BY)
 - ▶ Asset-backed securities, or ABS, are securitized obligations that can be pass-thru or structured. Differentiated from mortgage-backed securities, common types of collateral include credit card loans, home equity loans, and auto loans.

Bills

- ▶ Bond—Short-Term Corporate Bills (BB)
 - ▶ Short-term debt securities, typically with maturity in one year or less, issued at a discount with interest paid at maturity, issued by corporations.
- ▶ Bond—Short-Term Government Bills (GS)
 - ▶ Short-term debt securities, typically with maturity in one year or less, issued at a discount with interest paid at maturity, issued by governments.

Reference-Linked Debt

- ▶ Structured Products (SU)
 - ▶ Debtlike instruments whose returns are based on customized terms and conditions. This includes exchange-traded notes and other exchange-traded products that are not bankruptcy remote and are linked only to the assets of one class of security.

Undefined

- ▶ Bond—Undefined (BQ)
 - ▶ Debt instruments that cannot be accurately identified.

Derivatives

Derivatives are contracts between two or more parties to buy or sell a specific asset (the “underlying”) at a prespecified price on a prespecified date. These financial instruments are purchased or sold to manage the risk associated with the underlying assets, to gain or hedge market exposure, to profit from the fluctuation of underlying asset prices, or to profit from the price discrepancies between the derivatives and the underlying assets. For more information on derivatives, please see Appendix II.

Swaps

Swaps are financial derivatives in which parties exchange certain features of financial instruments. For example, in the case of a debt swap, the counterparties may agree to exchange the fixed coupon payments from one bond for the floating-rate coupon payments from another. For more information on swaps and other derivatives, please see Appendix II.

- ▶ Interest-Rate Swap (SI)
 - ▶ Interest-rate swaps are contracts exchanging a fixed interest for a floating interest calculated at the contract’s notional amount, which is denominated in one currency. Many variants are possible, but those within this detail type exchange interest payments on a notional in a single currency, where the floating-rate interest is not linked to an inflation index.
- ▶ Inflation Swap (IS)
 - ▶ An inflation swap is a variant of an interest-rate swap in which at least one payment is a floating-rate payment linked to an inflation index.
- ▶ Credit Default Swap (SR)
 - ▶ In credit default swap, or CDS, agreements, one party pays fees similar to insurance premiums to the other party in return for protection against a default on bonds from a third party. If the reference entity does default, the party selling protection will reimburse the party buying protection with the difference between the par value and the postdefault market value of those bonds. This Type code includes CDS on individual issuances, issuers, and credit indexes.
- ▶ Asset Swap (SA)
 - ▶ An asset swap is similar in structure to an interest-rate swap. The key difference is that in an asset swap, the fixed and floating investments are being exchanged, rather than only the fixed and floating interest payments. It is also referred as a nonvanilla swap.
- ▶ Total Return Swap (ST)

- ▶ Total return swaps are swap agreements in which one party makes payments based on a set rate, either fixed or variable, while the other party makes payments based on the return of an underlying asset, which includes both the income it generates and any capital gains. In total return swaps, the underlying asset, referred to as the reference asset, is usually an equity index, a loan, or a bond. Total return swaps allow the party receiving the total return to gain exposure and benefit from a reference asset without actually having to own it.
- ▶ Debt Swap (SD)
 - ▶ A debt swap is a series of transactions where debts or receivables are exchanged between two entities. This detail-type code is deliberately left with an open-ended definition to encompass a wide variety of swaps.
- ▶ Equity Swap (SE)
 - ▶ These are total return swaps on specific stocks in which one party (the receiver) receives the total return on equity in return for paying a predetermined fixed or floating interest rate.
- ▶ Equity Index Swap (SQ)
 - ▶ These are total return swaps on stock indexes, in which one party (the receiver) receives the total return on equity index in return for paying a predetermined fixed or floating interest rate.
- ▶ Currency Swap (CS)
 - ▶ Currency swaps are financial contracts to exchange the interest and/or principal payments received in one currency for the interest and/or principal payments earned in another currency periodically for a specified period.
- ▶ Other Swap (SN)
 - ▶ Bespoke swap contracts that do not clearly fit into any specific swap subset. This group includes variance/volatility swaps and other swaps based upon partials of returns, excepting interest rates and credit.

Futures and Forwards

A futures contract is a standardized contract to buy or sell a certain underlying instrument at a future date at a specified price. Futures are standardized and traded on exchanges, priced by the equilibrium of supply and demand. A futures contract requires the parties involved to complete the delivery of the underlying assets on the final settlement date.

A forward contract is a nonstandardized agreement between two parties to buy or sell an asset at an agreed upon future point at a preset price. Forward contracts are traded off the exchanges, or “over the counter.”

For more information on futures, forwards, and other derivatives, please see Appendix II.

- ▶ Bond—Future (DA)
 - ▶ Futures contracts on specific bond issues, generally corporate bonds, which obligate the contract holder to buy or sell the bond issues on a specified date at a predetermined price.
- ▶ Bond—Treasury Future (TF)

- ▶ An exchange-traded derivative contract referenced to sovereign (government) bonds. Common product parameters define the terms of the reference security and match the issuance programs of specific sovereign governments. Typically, may be settled in cash or securities.
- ▶ Bond Index—Future (BL)
 - ▶ Futures contracts on bond indexes that obligate the contract holder to buy or sell the bond index on a specified date at a predetermined price.
- ▶ Equity—Future (DG)
 - ▶ Futures contracts on equities that obligate the contract holder to buy or sell the equity on a specified date at a predetermined price.
- ▶ Equity Index—Future (EL)
 - ▶ Futures contracts on equity indexes that obligate the contract holder to buy or sell the equity index on a specified date at a predetermined price.
- ▶ Commodity—Future (DM)
 - ▶ Commodity futures are exchange-traded derivative contracts that specify a future price, date, and other terms for the purchase/sale of a standardized commodity.
- ▶ Interest-Rate Future (SJ)
 - ▶ Futures contracts on an interest-bearing asset that obligate the contract holder to buy or sell the interest-bearing asset on a specified date at a predetermined price.
- ▶ Interest-Rate Forward (SK)
 - ▶ Forward contracts that represent the obligation to borrow or lend at a specific interest rate on a specific future date.
- ▶ Currency—Future (CL)
 - ▶ Currency futures are an exchange-traded derivative contract that specifies a future price, date, and other terms for the purchase/sale of one currency in the terms of another currency.
- ▶ Currency—Forward (CU)
 - ▶ Forward contracts that represent the obligation to buy or sell a specific currency in terms of a second currency on a specific future date.
- ▶ Contract for Difference (SF)
 - ▶ Contracts for difference, or CFDs, are contracts between two parties wherein one party (the buyer) agrees to pay the other party (the seller) the difference between the current price of an asset and its value at an agreed-upon date. CFDs are comparable to financially settled futures contracts, except they have higher counterparty risk because there is not necessarily a clearinghouse to manage counterparty risk. CFDs are not available in the United States due to SEC restrictions on certain over-the-counter instruments, but they are very popular in other markets.

Options

There are two types of options: call options and put options. A call/put option is an agreement in which the buyer has the right (but not the obligation) to buy/sell an asset at a preset price (strike price) on or before a future date (exercise or expiration date); the seller has the obligation to honor the terms of the

contract. When the issuer can redeem the bond before the maturity date, the option is a “call.” When the bondholder can redeem the bond before the maturity date, the option is a “put.”

Investors can sell or buy options by negotiating privately with other parties or by buying them on exchanges. Options can have a wider variety of underlying assets than futures contracts. Options can have futures or swaps as underlying assets while futures and swaps cannot. For more information on options and other derivatives, please see Appendix II.

- ▶ Bond—Option (Call) (DB)
 - ▶ A bond call option holder has the right, but not the obligation, to buy the bond at the strike price before expiry.
- ▶ Bond—Option (Put) (DE)
 - ▶ A bond call option holder has the right, but not the obligation, to buy the bond at the strike price before expiry.
- ▶ Equity—Option (Call) (DH)
 - ▶ An equity call option holder has the right, but not the obligation, to buy the equity at the strike price before expiry. The writer of a call option has the obligation to sell at the strike price.
- ▶ Equity—Option (Put) (DI)
 - ▶ An equity put option holder has the right, but not the obligation, to sell the equity at the strike price before expiry. The writer of a put option has the obligation to buy at the strike price.
- ▶ Equity Index—Option (Call) (EC)
 - ▶ An equity index call option holder has the right, but not the obligation, to buy the equity index at the strike price before expiry.
- ▶ Equity Index—Option (Put) (EP)
 - ▶ An equity index put option holder has the right, but not the obligation, to sell the equity index at the strike price before expiry.
- ▶ Currency—Option (Call) (CY)
 - ▶ A currency call option holder has the right, but not the obligation, to buy the currency at the strike price before or upon expiry.
- ▶ Currency—Option (Put) (CZ)
 - ▶ A currency put option holder has the right, but not the obligation, to sell the currency at the strike price before or upon expiry.
- ▶ Commodity—Option (Call) (DC)
 - ▶ A commodity futures call option holder has the right, but not the obligation, to buy the commodity future contracts at the strike price before or upon expiry.
- ▶ Commodity—Option (Put) (DP)
 - ▶ A commodity futures put option holder has the right, but not the obligation, to sell the commodity at the strike price before or upon expiry.
- ▶ Other Fixed-Income Derivative (FD)
 - ▶ Fixed-income option contracts that do not clearly fit into more specific option subsets.

Swaptions

There are two types of “swaptions”: payer swaptions and receiver swaptions. A swaption is an agreement in which the buyer has the right, but not the obligation, to enter a swap agreement with a counterparty at a preset price (strike price) on or before a future date (exercise or expiration date); the seller has the obligation to honor the terms of the contract. When the seller agrees to receive the fixed leg of the swap agreement before the maturity date, the swaption is a “payer.” When the seller agrees to pay the fixed leg of the swap agreement, the swaption is a “receiver.”

Investors can sell or buy swaptions by negotiating privately with other parties or by buying them on exchanges. For more information on swaptions and other derivatives, please see Appendix II.

- ▶ Swaption—Payer (SX)
 - ▶ Options on swap contracts that do not fit into the interest rate or credit default swaption categories. Payer swaptions entitle the buyer (obligate the seller) to pay the fixed payment and receive the linked floating payment.
- ▶ Swaption—Receiver (SY)
 - ▶ Options on swap contracts that do not fit into the interest rate or credit default swaption categories. Receiver swaptions entitle the buyer (obligate the seller) to pay the linked floating payment and receive the fixed payment.
- ▶ Interest-Rate Swaption—Payer (PS)
 - ▶ A payer swaption is an option that entitles the buyer (obligates the seller) to enter into a specified interest-rate swap paying fixed (floating) and receiving floating (fixed) interest payments, on or prior to expiration of the contract.
- ▶ Interest-Rate Swaption—Receiver (RS)
 - ▶ A receiver swaption is an option that entitles the buyer (obligates the seller) to enter into a specified interest-rate swap paying floating (fixed) and receiving fixed (floating) interest payments, on or prior to expiration of the contract.
- ▶ Credit Default Swaption—Payer (XP)
 - ▶ A CDS payer option holder has the right, but not the obligation, to purchase a specific CDS contract, protecting the buyer from the default of the underlying credit, bond, credit index, or issuing entity.
- ▶ Credit Default Swaption—Receiver (XR)
 - ▶ A CDS receiver option holder has the right, but not the obligation, to sell a specific CDS contract, protecting the buyer from the default of the underlying credit, bond, credit index, or issuing entity.
- ▶ Credit Default Swap Index (SW)
 - ▶ Credit default swaps based on an index or index tranche swaps.

Warrants/Rights

Warrants or rights function in a similar way as options, except they are sold attached to the issuance of a stock or bond. After initial issuing, they can be detached and traded in the market with their own market values.

- ▶ Bond—Warrants/Rights (Call) (BW)
 - ▶ These are call warrants/rights on specific bond issues.
- ▶ Bond—Warrants/Rights (Put) (BX)
 - ▶ These are put warrants/rights on specific bond issues.
- ▶ Equity—Warrants/Rights (Call) (EW)
 - ▶ These are call warrants/rights written on specific stock issues.
- ▶ Equity—Warrants/Rights (Put) (EV)
 - ▶ These are put warrants/rights written on specific stock issues.
- ▶ Undefined—Warrants/Rights (WR)
 - ▶ These are call and put warrants/rights written on issues that have not been accurately identified as bonds, stocks, or currency.

Units

Units are derivatives where the underlying instrument is a security issued by one of the counterparties. The issuer sells the unit to a buyer, who converts the unit for a prearranged amount of the underlying security at a prearranged price and date.

- ▶ Bond—Units (BU)
 - ▶ Units where the underlying security is the issuer's debt.
- ▶ Equity—Units (EU)
 - ▶ Units where the underlying security is the issuer's stock.

Other

- ▶ Derivative — Other (DJ)
 - ▶ Derivatives that don't fit within any specific derivative categorization or cannot be accurately identified.

Cash

This category includes (1) currencies; (2) short-term instruments like time deposits, commercial paper, stable-value funds, and repurchase agreements; (3) cash collateral; and (4) cash derivative offsets.

Cash

This includes noninvested cash, such as cash held for collateral and currency.

- ▶ Cash—Currency (CH)

- ▶ “Currency” here means uninvested money held by fund companies. A fund company can hold different currencies if it has portfolios diversified in different countries. Generally, they are deposit accounts with a bank that can be withdrawn on demand.
- ▶ Cash—Collateral (CA)
 - ▶ Encumbered deposits that are held to provide financial support for short positions and some derivative transactions. The deposit is not available for investment and is held to fund losses by the investor or protect from the default of a counterparty.
- ▶ Cash (C)
 - ▶ Short-term or cashlike assets that do not fit into any of the other cash security types. These assets can be receivables or payables, accounting adjustments, and so on.

Short-Term Instruments

Short-term instruments are fixed-income securities with less than one year in the market. They are considered highly liquid, secure instruments with low risks and earn very low yields. They include time deposits, commercial papers, repurchase agreements, and stable-value funds.

- ▶ Cash—CD/Time Deposit (CD)
 - ▶ Certificates of deposit (CDs) and time deposits are deposit instruments that generally must be held for a specified period of time to receive full amount of interest. Includes instruments which can be traded in a secondary market.
- ▶ Cash—Commercial Paper (CP)
 - ▶ Short-term securities commonly issued by corporations through shelf programs. Also includes asset-backed commercial paper in which underlying collateral is securitized.
- ▶ Cash—Repurchase Agreement (CR)
 - ▶ A repurchase agreement is an investment contract where a borrower sells securities to an investor on a very short-term basis with an agreement to buy them back for a price incorporating interest. The published repo rate is the standard interest rate charged to borrow against very high-quality assets (typically AAA or AA bonds).
- ▶ Cash—Stable-Value Fund (SV)
 - ▶ Stable-value funds are a specific type of investment fund designed to protect a portfolio from losses. These funds are frequently wrapped by an insurance contract.

Cash Derivative Offsets

Cash offsets for derivatives are not investment instruments, but they result from Morningstar conventions on reporting derivative holdings. Morningstar’s standards for reporting and categorizing portfolio holdings are designed to more accurately capture economic risks of derivative instruments. Rather than reporting in accounting value directly, Morningstar requires fund companies to report derivatives in their underlying asset values plus an additional offsetting cash line. This additional cash line is considered cash derivative offsets. A cash offset is the implied cash the company has borrowed or lent to gain exposure on the underlying asset using a derivative contract. It also works to reconcile the economic exposure to the accounting value of the derivative. It is equal to the difference between economic exposure and accounting value.

- ▶ Cash—General Offset (CQ)
 - ▶ This cash offset item results from reporting derivatives' holdings in their underlying asset values. It is equal to the derivatives' accounting value less underlying asset value.
- ▶ Cash—Option Offset (OO)
 - ▶ This cash offset item results from reporting options' holdings in their underlying asset delta-adjusted values. It is equal to the option contracts' accounting value less underlying asset delta-adjusted value.
- ▶ Cash—Swap Offset (OS)
 - ▶ This cash offset item results from reporting swaps' holdings in their underlying asset values. It is equal to the swap contracts' accounting value less underlying asset value.
- ▶ Cash—Forward Offset (OT)
 - ▶ This cash offset item results from reporting forwards' holdings in their underlying asset values. The cash offset for a forward contract is equal to the difference between the full economic exposure of the forward contract and the market value of the position.

Funds

By mutual fund, we refer to investment funds that pool money from a large number of investors and invest in a range of assets (in line with the objectives of the investors). Mutual funds give individual investors access to a wider range of securities than the investors themselves would have access to. There are two basic types of investment funds: open-end funds and closed-end funds. Please be aware that mutual funds often refer to open-end funds only, while closed-end funds are often referred to as investment trusts. But here, we mix open-end, closed-end, and other investment funds together as mutual funds.

Funds

- ▶ Mutual Fund—Money Market (FM)
 - ▶ Money market funds are mutual funds that invest in short-term securities. Most of their assets are short-term instruments, possibly with some additional bond investments. In the case of European funds, money market funds are included in the Mutual Fund – Open End (FO) Detail Type code.
- ▶ Mutual Fund—Closed End (FC)
 - ▶ Closed-end funds are investment funds that have a fixed number of shares outstanding and are not redeemed by investors the way a typical open-end fund is. Closed-end funds behave more like stocks than open-end funds. Closed-end funds issue a fixed number of shares to the public in an initial public offering, and then shares in the fund are bought and sold on a stock exchange. They are not obligated to issue new shares or redeem outstanding shares as open-end funds are. The price of a share in a closed-end fund is determined entirely by market demand, so the value of a share is not necessarily determined by the net asset value.
- ▶ Mutual Fund—Open End (FO)
 - ▶ Open-end funds are investment funds that have a variable number of shares outstanding and are redeemed by investors when requested. Unlike closed-end funds, open-end funds

are obligated to issue and redeem shares when requested after the initial offering. They are not traded on exchanges; investors buy or sell back shares through distributors at the price of their net asset values.

- ▶ Mutual Fund — ETF (FE)
 - ▶ Like open-end mutual funds, exchange-traded funds are open-end investment vehicles with a variable number of shares outstanding and redeemed by investors when requested. However, ETFs are traded on exchanges; their trade price may not be a direct factor of net assets and shares outstanding.
- ▶ Mutual Fund — Variable Annuity (FV)
 - ▶ A variable annuity is a contract between an investor and an insurance company under which the insurer agrees to make periodic payments to the investor, beginning either immediately or at some future date. Although the assets are typically invested in mutual funds, variable annuities differ from mutual funds in several important ways. First, variable annuities let you receive periodic payments for the rest of your life. Second, variable annuities have a death benefit. Third, variable annuities are tax-deferred.
- ▶ Mutual Fund — Separate Account (FS)
 - ▶ Separate accounts are privately managed investment accounts that use pooled funds to buy individual assets.
- ▶ Mutual Fund — CIT (SC)
 - ▶ Commingled investment trusts pool the assets of several different accounts, such as trusts and retirement plans. They are combined under a common investment strategy to reduce administrative costs.
- ▶ Income Trust (IT)
 - ▶ An income trust is an investment vehicle that has the primary goal of paying out consistent cash income to investors. An income trust may hold a variety of assets, including equity, debt, and property.
- ▶ Mutual Fund — Hedge Fund (FH)
 - ▶ Hedge funds are lightly regulated investment funds that are permitted to use a wider range of investment strategies than traditional long-only funds. They are generally limited by law to high-net-worth or institutional investors.
- ▶ Mutual Fund — Client Portfolio (FZ)
 - ▶ A Client Portfolio is a private open-end fund or a discretionary mandate that contains holdings such as investments into equities, bonds, derivatives, and other managed investments. Client portfolios may only be available (but not limited to) one investor and have an unspecified strategy. Unlike other managed investments in Morningstar's database, Morningstar will not require any additional information to be sent about client portfolios such as operational information, legal documents, and so on.
- ▶ Mutual Fund — Unspecified (EX)
 - ▶ These are mutual funds that have an unspecified strategy or a strategy that cannot be accurately identified.

Equities

This category includes all stocks.

Equities

This category refers to common stock shares: equity securities representing ownership in a corporation, providing voting rights, and entitling the holder to a share of the company's success through dividends and/or capital appreciation. This category also includes American depositary receipts, international depositary receipts, global depositary receipts, and European depositary receipts.

- ▶ Equity (E)
 - ▶ This is the general form of common stocks. Depositary receipts are also included.
- ▶ Equity—REIT (ER)
 - ▶ REITs are securities that pool investors' funds, along with borrowed funds, and invest them directly in real estate or mortgage loans. Unlike traditional real estate, they are highly liquid because they are traded on major exchanges or over the counter. Also, REITs enable sharing in nonresidential properties as well, such as hotels, malls, and other commercial or industrial properties.
- ▶ Participating Preferred Stocks (PA)
 - ▶ Participating preferred stock, or preference shares, are a class of stock that has some limitation on rights relative to common shareholders but receives preferential treatment in dividends and/or other returns. They are most common in nations with legal systems based upon Napoleonic Law, where surrendering common stockholder rights is required to be compensated. Many issuances of preference shares pay an excess dividend in exchange for giving up voting rights.
- ▶ Equity—Undefined (EQ)
 - ▶ These are equities that don't fit within any equity security type mentioned above.

Other

This category includes security types that don't fit within any category mentioned above.

Alternatives

Alternatives funds often hold alternative investments that are not classifiable as debt, equity, funds, or cash. These can be holdings of physical assets, such as real estate, or other financial instruments, such as hedge funds.

- ▶ Alternative—Farm & Timber Land (AF)
 - ▶ Land used solely for production of farm or timber commodities.
- ▶ Alternative—Infrastructure (AI)
 - ▶ Companies directly involved in large-scale economic or social facilities used for the functioning of an economy. Includes: Economic—transport, communication, utilities, and renewable energy; Social—education facilities, healthcare, security, and parks.
- ▶ Alternative—Master Investment Trust (AM)

- ▶ A collection of funds from individual investors pooled together in order to obtain wholesale prices and rates unavailable for regular investors.
- ▶ Alternative— Private Equity (AP)
 - ▶ Equity securities of operating companies that are not listed on a public exchange.
- ▶ Alternative— Real Estate (AR)
 - ▶ Property for the purpose of holding or leasing for income; this includes the rights to a piece of immovable land and any of its permanent affixtures.

Other

- ▶ Property (PP)
 - ▶ Property is usually real estate, which is defined as land plus any permanent attached fixture.
- ▶ Commodity (DD)
 - ▶ This refers to the physical holding of a commodity such as grains, oil, gold, silver, and other metals, which investors buy or sell via futures contracts.
- ▶ Cryptocurrency (YO)
 - ▶ A decentralized currency whose denomination, a coin, is typically created through a digital mining process. Its transactions are typically recorded, and coins redeemed through a cryptographic process on a digital ledger, blockchain.
- ▶ Cryptocurrency Future (YF)
 - ▶ Cryptocurrency futures are exchange-traded derivative contracts on a cryptocurrency reference rate maintained by the exchange. The contracts are cash settled. Bitcoin and ethereum futures on the Chicago Mercantile Exchange are examples of these types of contracts.
- ▶ Other Assets and Liabilities (QQ)
 - ▶ This contains undisclosed securities, as allowed by regulators. This code may also include certain accounting adjustments.
- ▶ Unidentified Holding (Q)
 - ▶ This includes any other security that cannot be definitively assigned to any of the Detail Type codes mentioned above.

Appendixes

Appendix I: Mortgage-Backed Securities

MBS are bonds that represent claims to the cash flows from pools of mortgage loans, most commonly on residential property. Mortgage loans are purchased from banks, mortgage companies, and other originators and then assembled into pools by a government agency or corporation. The entity then issues securities that represent claims on the principal and interest payments made by borrowers on the loans in the pool. This process is known as securitization. MBS exhibit a variety of structures.

The most basic types are pass-through participation certificates, which entitle the holder to a pro-rata share of all principal and interest payments made on the pool of loan assets. More complicated MBS, known as collateralized mortgage obligations, may be designed to protect investors from or expose investors to various types of risk.

Mortgage Pass-Throughs: For pass-through securities, the servicing intermediary collects the monthly mortgage loan payments from the original borrowers and, after deducting a service fee, passes them through directly to the holders of the pass-through security.

Collateralized Mortgage Obligations: For CMOs, the streams of principal and interest payments on the mortgages are distributed to the different classes, known as tranches, according to varying deal structures. CMO issuers restructure cash flow from the mortgages and distribute them to investors, so each tranche may have different principal characteristics, including varying levels of coupon rates, credit risk, prepayment risks, and maturity dates.

CMOs can also be divided into a principal-only (P/O) class and an interest-only (I/O) class. These are known as stripped MBS.

CMO I/O: I/O strips are a class that receives only the interest component of each payment. I/O holders receive only interest on the amount of principal outstanding.

CMO P/O: P/O strips are a class of securities that receive only the principal payment portion of each mortgage payment. They can represent the entire pool's principal, or the principal of only one tranche within the CMO.

Adjustable-Rate Mortgage: An adjustable-rate mortgage is a debt security backed by residential home mortgages whose interest rates are reset periodically in accordance with some benchmark index (or reference base). The benchmark is based on a commonly recognized index, usually either one based on U.S. Treasuries or one based on the cost of funds for thrifts. Payments made by the borrower may change over time with the changing interest rate.

Appendix II: Derivative Instruments

Derivatives are contracts between two or more parties to buy or sell a specific asset (the “underlying”) at a prespecified price on a prespecified date. These financial instruments are purchased or sold to manage the risk associated with the underlying assets, to gain or hedge market exposure, to profit from the fluctuation of underlying asset prices, or to profit from the price discrepancies between the derivatives and the underlying assets. All derivatives can be traded over the counter; futures and options can also be traded on exchanges.

Derivatives include forwards, futures, options, and swaps. Underlying assets range widely and can be commodities, currencies or exchange rates, short- or long-term interest rates, bonds or bond indexes, or stocks or stock indexes. Some can also be consumer price indexes, weather indexes, and so on.

Some types of derivatives are purchased through exchanges (for example, futures), while others require a unique contract between two parties (for example, forwards). For some types of derivatives, there is no payment exchanged when the contract is written. Periodic settlement payments can be made during the length of the contract, and at the maturity date the underlying asset is delivered or the parties involved can write an opposite/offsetting contract to close out the original transaction.

Forwards

A forward contract is an agreement between two parties to buy or sell an asset at an agreed-upon future point at a preset price. A common example is foreign-exchange forwards. A German fund company can invest in many U.S. stocks. It exchanges euros for U.S. dollars when it buys U.S. stocks, and U.S. dollars for euros when it pays dividends to investors. As exchange rates can go up or down over time, the company writes foreign-exchange contracts with banks to reduce risks associated with fluctuations of exchange rates. If the company anticipates a dividend payment in six months, and it expects that the euro/dollar exchange rate will go down, it can write a contract to sell U.S. dollars at a rate of 1.25 (EUR 1.25 per USD 1) to banks after six months. In that way, the fund company can lock in the 1.25 exchange rate; when the fund pays dividends, it can exchange dollars for euros at a rate of 1.25 regardless of the current exchange rate.

Futures

A futures contract is a standardized contract to buy or sell a certain underlying instrument at a future date at a specified price. Futures are quite similar to forward contracts, except the contracts are standardized and traded on exchanges, priced by the equilibrium of supply and demand. A futures contract requires the parties involved to complete the delivery of the underlying assets on the final settlement date.

For example, if a fund company anticipates that the S&P 500 will fall from its current price of 1,450 in March to 1,250 nine months later, it can sell a December S&P 500 futures at the current price of 1,420 (slightly lower than its current price). Then, in December, if the S&P 500 has fallen to 1,265 and the price of December S&P 500 futures has fallen to 1,270, the company can make a profit of 150 (1,420-1,270) by buying back the December S&P 500 futures.

Options

There are two types of options: call options and put options. A call/put option is an agreement in which the buyer (the bondholder) has the right, but not the obligation, to buy/sell an asset at a preset price (strike price) on or before a future date (exercise or expiration date); and the seller (the writer or bond issuer) has the obligation to honor the terms of the contract. When the issuer can redeem the bond before the maturity date, the option is a “call.” When the bondholder can redeem the bond before the maturity date, the option is a “put.” Option buyers must pay a premium/fee for acquiring the right to buy/sell the underlying assets at strike price. The losses for option buyers are limited to the amount of the option fees, but the profits are without limit.

To demonstrate, we can slightly modify the example above. Instead of selling a December S&P 500 futures contract, the fund company buys a December S&P put option with a strike price of 1,250 at a fee of 60. Unfortunately for the company, in December, the S&P 500 has risen to 1,560. If the company exercises the option, it has to buy the S&P 500 at 1,560 and sell it at 1,250, with a loss of 370 (1,250-1,560). As it has the right to do so, it can choose not to sell, limiting its loss to 60.

Investors can sell or buy options by negotiating privately with other parties or by buying them on exchanges. Options can have a wider variety of underlying assets than futures contracts. Options can have futures/swaps as underlying assets (for example, swaptions).

Warrants/Rights

Warrants or rights function in a similar way as options, except they are sold attached to the issuance of a stock or bond. After initial issuing, they can be detached and traded in the market with their own market values.

Swaps

Swaps are contracts where two parties exchange their streams of cash flows. One of the most typical swaps is an interest-rate swap, where one party exchanges its fixed interest rates for floating interest rates from the other party. For example, a fund company invests most of its money in floating-rate notes and anticipates the interest rate will go down in the future. To mitigate the risk of reduced coupon payments, it can enter a swap arrangement with the bank: In the coming years, the fund company pays the income based on floating interest rates (Libor plus 200 basis points) to the bank and receives the income based on fixed interest rates (5%).

Other types of swaps include debt swaps, total return swaps, and asset swaps. For more information on these, see their respective Detail Type definitions in Section III.

Swaptions

There are two types of “swaptions”: payer swaptions and receiver swaptions. A swaption is an agreement in which the buyer has the right, but not the obligation, to enter a swap agreement with a counterparty at a preset price (strike price) on or before a future date (exercise or expiration date); the

seller has the obligation to honor the terms of the contract. When the seller agrees to receive the fixed leg of the swap agreement before the maturity date, the swaption is a "payer." When the seller agrees to pay the fixed leg of the swap agreement, the swaption is a "receiver." Investors can sell or buy swaptions by negotiating privately with other parties or by buying them on exchanges.

Appendix III: Holding Attributes

Generally, a bond issuer pays coupons to the holders annually or semiannually (it can also be set quarterly, monthly, or even weekly or daily). Coupon payments can be fixed or floating. A holder of a fixed-rate bond would receive fixed/predetermined coupons, regardless of how interest rates change over the period that it is held. A holder of a floating-rate bond would receive floating coupons that change as interest rates change.

Fixed-Rate Notes

Fixed-rate notes pay a coupon rate that is determined at the time of issuance and does not change.

Floating-Rate Notes

Floating-rate notes are fixed-income securities with floating-rate coupons that change in the same direction as interest rates. If interest rates go up, floating-rate coupons increase; if interest rates fall, coupon payments decline.

Some fixed-income securities have variable rates or adjustable rates. These rates are similar to floating rates, except “adjustable” or “variable” is commonly used to refer to coupon rates that adjust less often than floating rates. It is important to note that this is not a hard and fast rule; the terms variable, adjustable, and floating are often used interchangeably.

Inverse Floating-Rate Notes

Inverse floating-rate notes are fixed-income securities with floating-rate coupons that change in the opposite direction of interest rates. If interest rates go up, inverse floating-rate coupons decrease.

Zero-Coupon/Discount Notes

Zero-coupon bonds, often called discount notes, pay no coupon over the life of the issuance. They are sold at a discount relative to their face value and redeemed for the full face value.

Inflation-Protected Notes

Some bonds are issued with “inflation-protected” payment rates. In these notes, the payments are adjusted periodically according to the Consumer Price Index or other price indexes. As such, they are intended to protect the investor from inflation, while other bonds are more subject to inflation risk. Inflation-protected bonds can be issued by corporations, but they are most often issued by central governments and Treasuries. In the U.S., the most common form of inflation-protected securities are U.S. Treasury Inflation-Protected Securities.

Rule 144(A)

Securities that trade subject to Rule 144(A) are quasi-private placements. The most important factor with 144(A) securities is that they are sold to qualified institutional buyers — normally institutional money managers, banks, funds, and individuals of high net worth — which must hold the securities for at least three years. During these three years, the securities are illiquid and cannot be sold; after three years, the securities may be sold publicly.

Private and illiquid securities are private placements sold to a small number of investors. These securities are initially sold directly to institutional investors, such as banks, mutual funds, insurance companies, and pension funds, which purchase them for investment purposes rather than resale. Unlike publicly sold notes, SEC registration is not required for private placements.

Subject to Alternative Minimum Tax

Municipal bonds in the U.S. are typically exempt from federal taxes and often the taxes of the states in which they are issued. Those taxation advantages may allow municipal governments to sell bonds at lower interest rates than those offered by comparable taxable bonds. The interest from certain tax-exempt municipal bonds may be excluded from gross income for federal income tax purposes, but it remains subject to the Alternative Minimum Tax.

Appendix IV: Mapping Old to New Detail Type Codes

In general, when type codes have been removed, mapping securities to new type codes is straightforward. In the following table, each of these mappings is described in detail.

Old Detail Type	Old Detail Description	New Detail Type	New Detail Description	Logic
2	MUNI BOND - UTILITY	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
3	MUNI BOND - HEALTH	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
4	MUNI BOND - WATER/WASTE	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
5	MUNI BOND - HOUSING	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
6	MUNI BOND - SCHOOL	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
7	MUNI BOND - TRANSPORTATION	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
8	MUNI BOND - DEMAND NOTES	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
9	MUNI BOND - COP/LEASE	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
10	MUNI BOND - PRIVATE ACTIVITY	12	MUNI BOND - REVENUE	All revenue bonds are now mapped to 12.
11	MUNI BOND - NONSPECIFIC	1 12 0	MUNI BOND - GENERAL OBLIGATION MUNI BOND - REVENUE MUNI BOND - UNSPECIFIED	If GO, or General Obligation, is in the name, map to 1. If a type of revenue bond (for example, water) is in the name, map to 12. If neither GO or a type of revenue bond is in the name, map to 0.
BA	BOND - ADJUSTABLE RATE MORTGAGE	NB NE BH	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY ARM BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If there's an agency name in the name, map to NE. If neither CMBS nor agency is in the name, map to BH.
BE	BOND - US GOV'T AGENCY DEBT FRN	BD	BOND - GOV'T AGENCY DEBT	If there's an agency name in the name, map to BD.
BF	BOND - FRN	BT BD B	BOND - GOV'T/TREASURY BOND - GOV'T AGENCY DEBT BOND - CORPORATE BOND	If there's government or Treasury in the name, map to BT. If there's an agency name in the name, map to BD. If neither government nor agency is in the name, map to B.

BI	BOND - PRIVATE/ILLIQUID (144A)	BT BD B	BOND - GOV'T/TREASURY BOND - GOV'T AGENCY DEBT BOND - CORPORATE BOND	If there's government or Treasury in the name, map to BT. If there's an agency name in the name, map to BD. If neither government nor agency is in the name, map to B.
BJ	BOND - CORPORATE PASS-THRU FRN	NB BH	BOND - COMMERCIAL MBS BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If CMBS isn't in the name, map to BH.
BK	BOND - U.S. GOV'T AGENCY PASS-THRU FRN	NB BG	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY PASS-THRU	If Commercial or CMBS is in the name, map to NB. If CMBS isn't in the name, map to BG.
BM	BOND - CMO	NB NC BH	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY CMO BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If there's an agency name in the name, map to NC. If neither CMBS nor agency is in the name, map to BH.
BN	BOND - IFRN	BT BD B	BOND - GOV'T/TREASURY BOND - GOV'T AGENCY DEBT BOND - CORPORATE BOND	If there's government or Treasury in the name, map to BT. If there's an agency name in the name, map to BD. If neither government nor agency is in the name, map to B.
BS	BOND - SHORTED	No mapping	No mapping	Originally removed in 2006.
BV	BOND - PASS-THRU	NB BG BH	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY PASS-THRU BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If there's an agency name in the name, map to BG. If neither CMBS nor agency is in the name, map to BH.
CB	CASH - BOND	BT BD B	BOND - GOV'T/TREASURY BOND - GOV'T AGENCY DEBT BOND - CORPORATE BOND	If there's government or Treasury in the name, map to BT. If there's an agency name in the name, map to BD. If neither government nor agency is in the name, map to B.
CF	BOND - CONVERTIBLE FRN	BC	BOND - CONVERTIBLE	All convertible bonds are now mapped to BC.
CI	BOND - CONVERTIBLE 144A	BC	BOND - CONVERTIBLE	All convertible bonds are now mapped to BC.

CT	CASH - TREASURY BILL	TP	BOND - GOV'T INFLATION PROTECTED	If it's an inflation protected government bond, map to TP.
DF	BOND - DEBENTURE FRN	BT	BOND - GOV'T/TREASURY	If there's government or Treasury in the name, map to BT.
		BD	BOND - GOV'T AGENCY DEBT	If there's an agency name in the name, map to BD.
		B	BOND - CORPORATE BOND	If neither government nor agency is in the name, map to B.
EI	EQUITY - PRIVATE/ILLIQUID (144A)	E	EQUITY	All equity is now mapped to E.
ES	EQUITY - SHORTED	No mapping	No mapping	Originally removed in 2006.
FT	BOND - FOREIGN GOVERNMENT	TP	BOND - GOV'T INFLATION PROTECTED	If it's an inflation protected government bond, map to TP.
		BT	BOND - GOV'T/TREASURY	All government bonds are now mapped to BT.
IF	BOND - PRIVATE/ILLIQUID (144A) FRN	BT	BOND - GOV'T/TREASURY	If there's government or treasury in the name, map to BT.
		BD	BOND - GOV'T AGENCY DEBT	If there's an agency name in the name, map to BD.
		B	BOND - CORPORATE BOND	If agency isn't in the name, map to B.
IN	BOND - PRIVATE/ILLIQUID (144A) IFRN	BT	BOND - GOV'T/TREASURY	If there's government or Treasury in the name, map to BT.
		BD	BOND - GOV'T AGENCY DEBT	If there's an agency name in the name, map to BD.
		B	BOND - CORPORATE BOND	If agency isn't in the name, map to B.
MF	BOND - CMO FRN	NB	BOND - COMMERCIAL MBS	If Commercial or CMBS is in the name, map to NB.
		NC	BOND - GOV'T AGENCY CMO	If there's an agency name in the name, map to NC.
		BH	BOND - NONAGENCY RESIDENTIAL MBS	If neither CMBS nor agency is in the name, map to BH.
MI	BOND - CMO 144A	NB	BOND - COMMERCIAL MBS	If Commercial or CMBS is in the name, map to NB.
		NC	BOND - GOV'T AGENCY CMO	If there's an agency name in the name, map to NC.
		BH	BOND - NONAGENCY RESIDENTIAL MBS	If neither CMBS nor agency is in the name, map to BH.
MN	BOND - CMO IFRN	NB	BOND - COMMERCIAL MBS	If Commercial or CMBS is in the name, map to NB.
		NC	BOND - GOV'T AGENCY CMO	If there's an agency name in the name, map to NC.

		BH	BOND - NONAGENCY RESIDENTIAL MBS	If neither CMBS nor agency is in the name, map to BH.
MQ	BOND - CMO I/O IFRN	NB NC BH	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY CMO BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If there's an agency name in the name, map to NC. If neither CMBS nor agency is in the name, map to BH.
MU	BOND - CMO I/O	NB NC BH	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY CMO BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If there's an agency name in the name, map to NC. If neither CMBS nor agency is in the name, map to BH.
MV	BOND - CMO P/O	NB NC BH	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY CMO BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If there's an agency name in the name, map to NC. If neither CMBS nor agency is in the name, map to BH.
MX	BOND - CMO I/O FRN	NB NC BH	BOND - COMMERCIAL MBS BOND - GOV'T AGENCY CMO BOND - NONAGENCY RESIDENTIAL MBS	If Commercial or CMBS is in the name, map to NB. If there's an agency name in the name, map to NC. If neither CMBS nor agency is in the name, map to BH.
PA	PREFERRED (CONVERTIBLE 144A)	PC	CONVERTIBLE PREFERRED	All preferred convertibles are now mapped to PC.
PI	PREFERRED (144A)	P	PREFERRED STOCK	All preferred stock is now mapped to P.
PK	PREFERRED (ARP)	P	PREFERRED STOCK	All preferred stock is now mapped to P.
YF	BOND - ASSET BACKED FRN	BY	BOND - ASSET BACKED	All ABS is now mapped to BY.
13	MUNI BOND – CASH	No mapping	No mapping	Removed in 2022.
BO	BOND INDEX – OPTION (CALL)	FD	OTHER FIXED INCOME DERIVATIVE -	All bond index options now mapped to FD.
BP	BOND INDEX – OPTION (PUT)	FD	OTHER FIXED-INCOME DERIVATIVE	All bond index options now mapped to FD.
CC	CASH – OPTION (CALL)	CY	CURRENCY – OPTION (CALL)	All currency call options now mapped to CY.
CV	CURRENCY – WARRANTS/RIGHTS (CALL)	CY	CURRENCY – OPTION (CALL)	All currency call options now mapped to CY.
CO	CASH – OPTION (PUT)	CZ	CURRENCY – OPTION (PUT)	All currency put options now mapped to CZ.

CX	CURRENCY – WARRANTS/RIGHTS (PUT)	CZ	CURRENCY – OPTION (PUT)	All currency put options now mapped to CZ.
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