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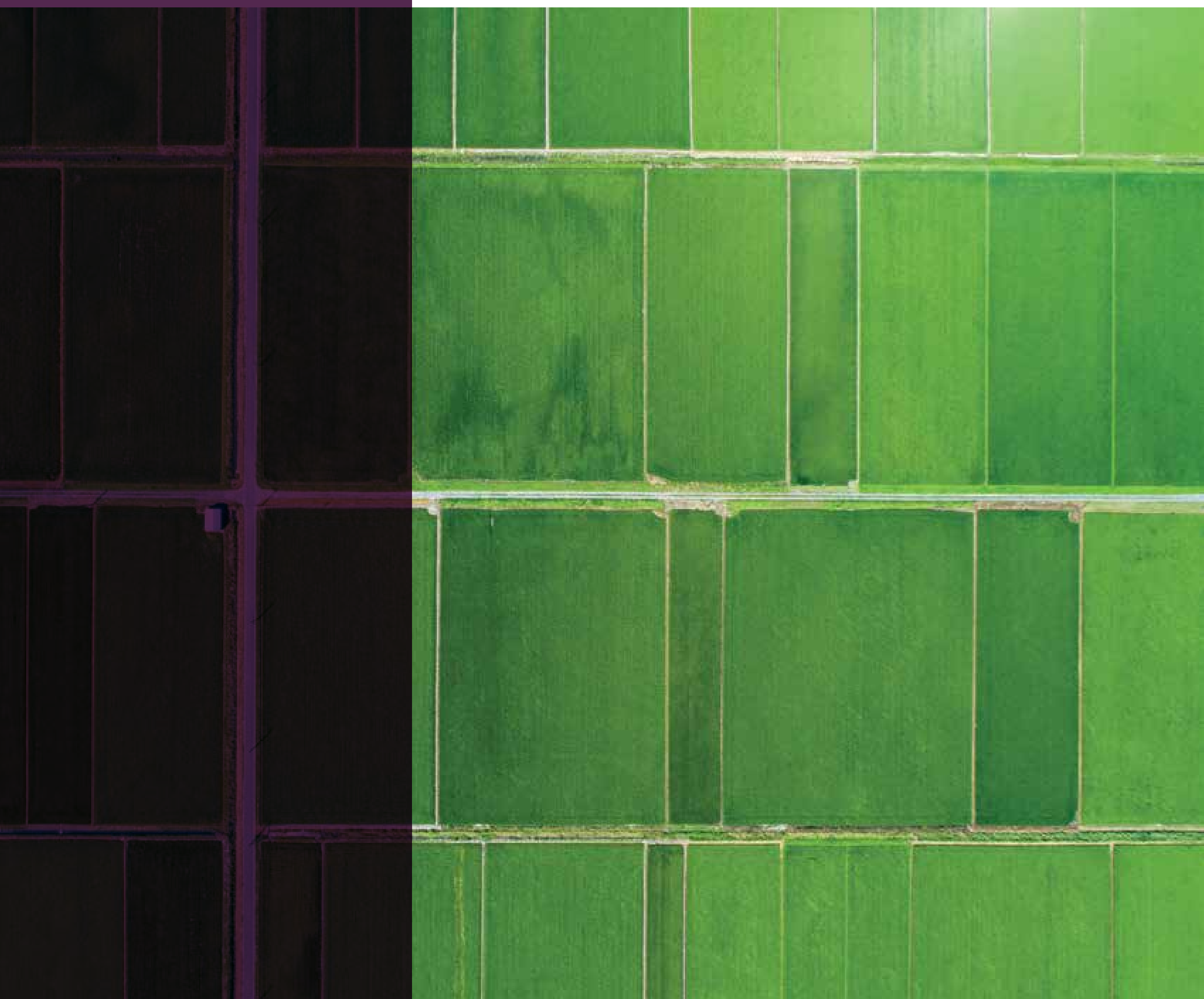
Rise of Collateralized Synthetic Obligations

Beware the Rhyme of History



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Report Highlights

- Low interest rates, benign credit conditions, and tight credit spreads have pressured investment returns and challenged investors' ability to meet yield objectives. This has led some investors to seek higher returns by taking more risk, particularly in derivatives-based investment products.

- The last time the market witnessed a powerful rise in synthetic credit products, the featured structures were collateralized debt obligations (CDO) and credit default swaps (CDS).

- These synthetic products were bets on the performance of mortgages and mortgage-backed securities, and when performance of the underlying mortgages deteriorated, equity and subordinated debt investors were unable to sell their illiquid securities, and ultimately were wiped out by credit losses.

- Late-cycle developments have led to the resurgence in investor sponsorship of a kind of synthetic structured product called collateralized synthetic obligations, or CSOs. The emergence of this market bears watching, because its continued growth could pose risks to the financial system.

- Post-crisis CSOs have recently regained some investor sponsorship. New issuance has steadily grown since 2014 and topped $95 billion in 2019. While new regulations have improved underlying CDS, unique risks and considerations persist.

- The CSO market is small, but its swift growth reflects the larger point that investors are not being adequately compensated for perceived risks.

Rise of Collateralized Synthetic Obligations

Beware the Rhyme of History

> "We have seen this type of late-cycle activity before. In particular, the re-emergence of, and rising demand for, CSOs reminds us of the years leading up to the financial crisis.

Low interest rates, benign credit conditions, and tight credit spreads have pressured investment returns and challenged investors' ability to meet yield objectives. This has led some investors to seek higher returns by taking more risk, particularly in derivatives-based investment products. These investments are often called synthetic credit products because the investor does not have direct exposure to the credit of the underlying borrower. Instead, the investor is able to get exposure to the underlying credit through derivatives and to increase returns through leverage. We have seen this type of late-cycle activity before. In particular, the reemergence of, and rising demand for, collateralized synthetic obligations (CSOs) reminds us of the years leading up to the financial crisis, when the rise of derivatives-based synthetics ended up amplifying credit events into a systemic problem. The growth of the CSO market is worth monitoring because of the investor behavior that it engenders and the potential for similar problems down the road.

A Brief History of Synthetic Credit Products

The last time the market witnessed a powerful rise in synthetic credit products, the featured structures were credit default swaps (CDSs) and synthetic collateralized debt obligations (CDOs). In the leadup to the financial crisis CDS gave investors an opportunity to take credit risk using derivatives. In CDS, investors take positions in the risk that an individual corporate borrower will default on a bond or loan through bilateral contractual relationships. Commonly thought of as an "insurance" contract on a credit problem, under the terms of the CDS if the borrower defaults on a specified debt security, goes bankrupt, or suffers another specified event, the CDS "insurance" buyer will be entitled to receive a payment from the CDS seller. The CDS seller is getting the exposure to the underlying credit without actually owning it, while the CDS buyer is either making an outright negative call on the underlying credit or hedging a cash position. The size of the payment is generally equal to the difference between par and the recovery amount.

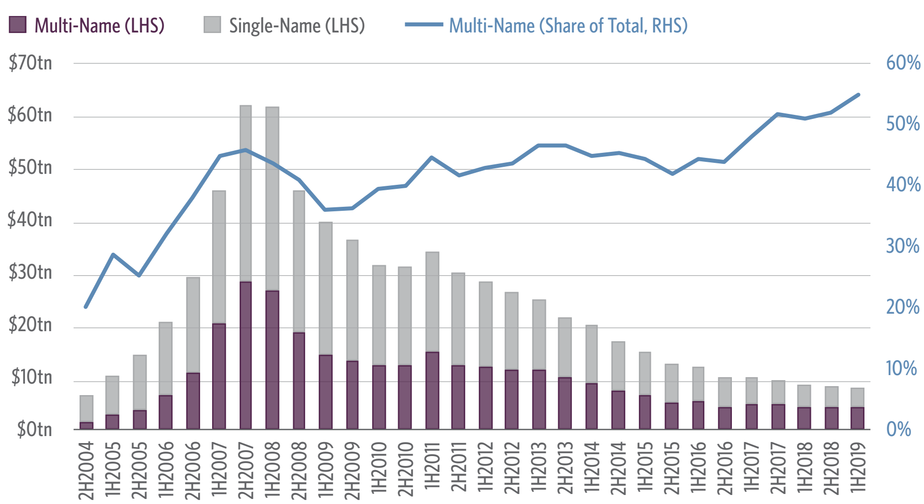
CDS offer an investor the ability to express constructive or negative credit views on a specific company or security. The CDS position typically references the senior unsecured segment of a corporate borrower's capital structure and most often has a tenor of five years. To initiate a CDS position, the investor typically posts up-front initial margin of 5–10 percent of the contract amount and remains liable for variation margin amounts resulting from market price changes. Because an investor only needs to post the initial margin and variable margin amounts, as opposed to fully funding a cash bond position, it permits highly leveraged expressions of an investor's positive or negative credit view (specifically when the investor is not merely using CDS to hedge a physical position).

In the past, the use of CDS to express credit views has been complicated by product limitations, counterparty risk, and aggressive investor behavior. The limits of CDS were exposed by the financial crisis.

- Unlike cash bond holders, those with synthetic credit exposure do not get a seat at the creditors' table if the company obligor falls into distress.
- Unlike cash securities, CDS contracts include an acknowledgement between parties that each may possess material information not known to the other party.
- During the financial crisis, the collapse of Lehman Brothers and the related counterparty risk on certain CDS contracts left CDS investors dangerously exposed to the creditworthiness of their counterparties.

The CDS market began over 25 years ago, but its outstanding notional amount has plummeted from $61.2 trillion in 2007 to just $9.4 trillion today.

CDS Outstanding Notional Amounts Peaked in 2007

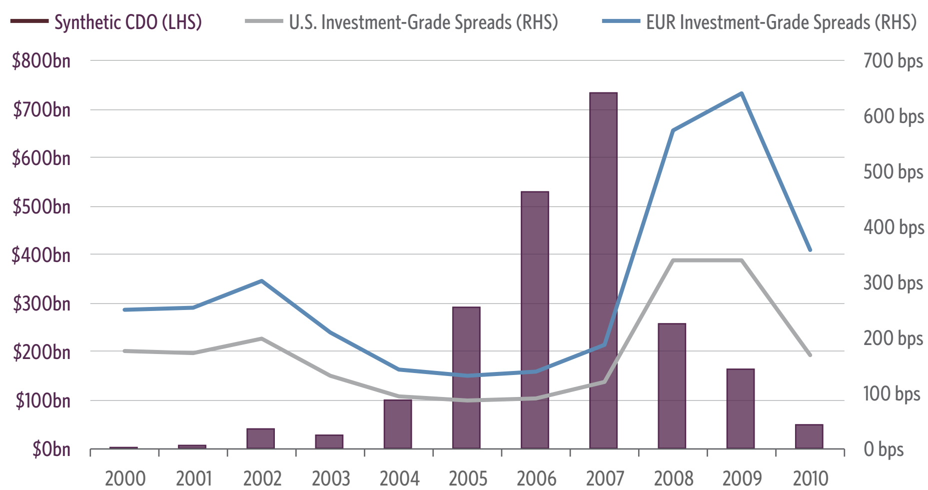


Source: Guggenheim Investments, Bank for International Settlements. Data as of 6.30.2019.

Many factors contributed to this decline, including increased netting of offsetting trades, regulatory capital changes, lack of rating agency participation, and investor avoidance of the product.

CDS contracts referencing specific residential and commercial mortgage-backed securities acted as the collateral for many synthetic CDOs. Synthetic CDOs use a portfolio of CDS contracts to create a rated securitization structure. Leading up to the financial crisis, the boom in mortgage lending created the collateral at the heart of CDOs, and the CDO market referencing those securities experienced parabolic growth in the three years leading up to the financial crisis, particularly as spreads tightened on more conventional investment-grade securities.

CDO Issuance Peaked in 2007



Source: Guggenheim Investments, Citi Research, Credit Flux.

Investment banks were able to design synthetic CDOs to meet the needs of investors scrambling to find higher-yielding investment alternatives. Insurance companies, monoline bond insurers, asset managers, hedge funds, and investment banks participated at different levels of the synthetic CDO capital structures. Opportunistic accounts generally participated in equity or subordinated tranches, and more rating-sensitive investors took positions in senior tranches, often via highly structured and leveraged structured investment vehicles. In retrospect, this product had many problems:

- Exceptionally high embedded leverage within synthetic structures caused heightened mark-to-market volatility and, ultimately, credit losses.
- Rating methodologies, which relied heavily on diversity, collapsed due to systemic credit issues in the underlying residential and commercial mortgage-backed securities.
- The lack of data transparency and standardized terms across synthetic instruments severely curtailed liquidity.

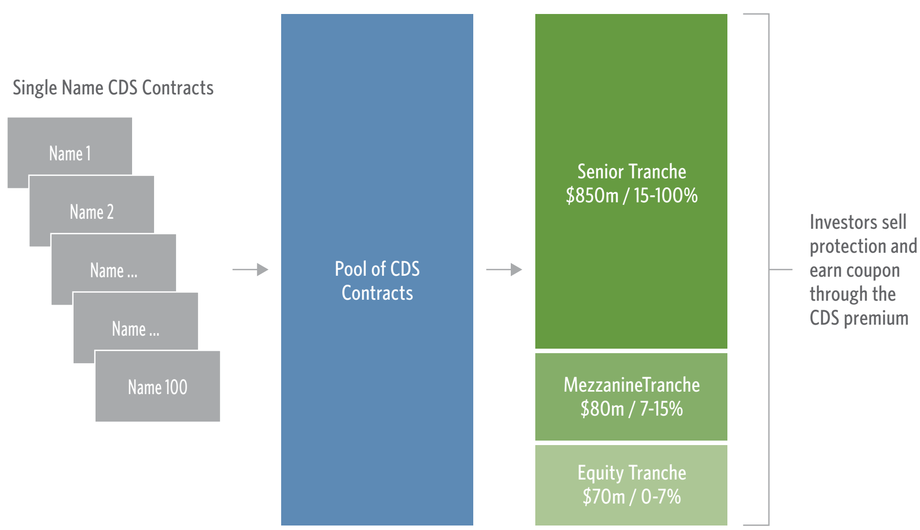
There was little room to escape this perfect storm. These synthetic products were bets on the performance of real mortgages and mortgage-backed securities, and when performance of the underlying mortgages deteriorated, equity and subordinated debt investors were unable to sell their illiquid securities and ultimately were wiped out by credit losses. Investors bore extreme mark-to-market pain and were often compelled to sell these illiquid products into disrupted markets at severely depressed levels.

Collateralized Synthetic Obligations
Bespoke Basket of CDS

As a result of the losses suffered on derivative-based credit instruments during the financial crisis, virtually no new issuance of bespoke synthetic credit structures took place during the five years following the financial crisis. But times are changing: Late-cycle developments have led to the resurgence in investor sponsorship of a kind of synthetic structured product called collateralized synthetic obligations, or CSOs. The rise of this procyclical market bears watching, because its continued growth poses risks to the financial system.

CSOs are securitizations collateralized by static portfolios of individually selected CDS comprising North American and European corporate credits. A CSO is created using a pool of CDS contracts. The CSO allocates the default risk associated with

Anatomy of a CSO
Illustration of Portfolio Tranches



Source: Guggenheim Investments, JP Morgan. Amounts and attachment points are for illustrative purpose only.

“Underwriting banks now issue and sell all the debt and equity in a CSO and do not retain any tranche risk.

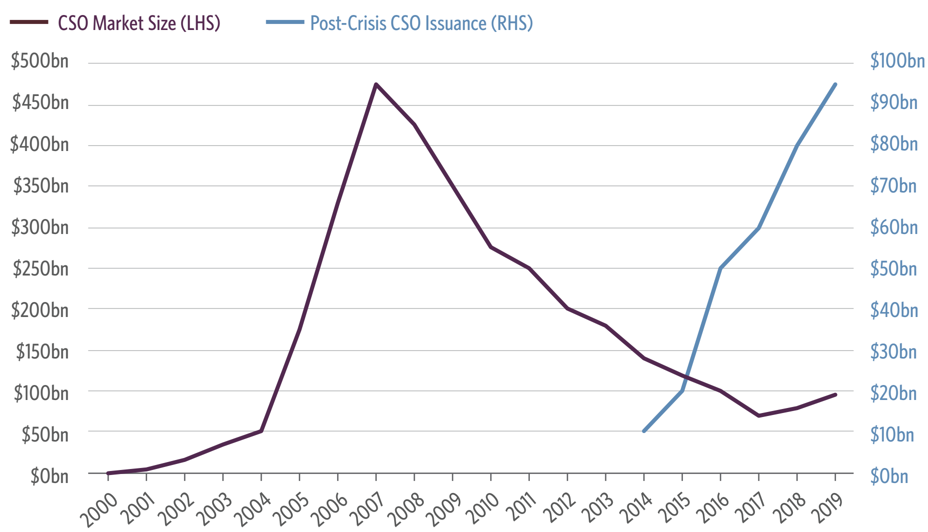
those contracts by creating tranches, where the equity tranche is in a first loss position, and the senior-most tranche remains loss remote unless and until the amount of defaults overwhelms the amount of mezzanine and equity tranches.

CSO equity purchasers select a basket of around 100 one- to five-year CDS contracts tied to corporate borrowers of varying credit quality. The equity buyer will then enlist an underwriting bank to structure and syndicate a senior and subordinate debt tranche to finance the purchase. The CDO is “long” the borrowers and the investor in the CDO tranches “sells” protection, thereby receiving its premium in the form of a coupon.

Like synthetic CDOs, CSOs issued prior to the financial crisis were customized to meet the unique investor demands of banks, hedge funds and highly leveraged investment vehicles. At that time, CSOs often had tenors of eight or nine years and garnered investment-grade ratings for senior and subordinate tranches. It was common practice for banks to retain certain tranches from a CSO, selling others to third-party investors.

Today’s post-crisis CSOs look considerably different to their pre-crisis counterparts. First, tenors for recent CSOs are considerably shorter, ranging from one to five years. Second, unlike pre-crisis CSOs, the CSO debt tranches are no longer rated. Before 2008, banks selectively “optimized” CSO collateral pools and structures for the specific purpose of earning an investment-grade rating; no rating agency has rated

Post-Crisis CSO Issuance Is on the Rise
CSO Market Size



Source: Guggenheim Investments, JP Morgan. Data as of 12.31.2019.

> “
> While new regulations have improved underlying CDS, unique risks and considerations persist.

CSO debt since the financial crisis. Finally, underwriting banks now issue and sell all the debt and equity in a CSO and do not retain any tranche risk. Post-crisis bank regulations have either prohibited or made uneconomic the ownership, trading, and warehouse financing of CSO risk.

The CSO market has evolved significantly since its inception nearly 20 years ago. Pre-crisis CSOs peaked at $475 billion outstanding in 2007 and have slowly rolled off. Post-crisis CSOs have recently regained some investor sponsorship, as yield-starved investors have stretched to find new investment opportunities. New issuance has steadily grown since 2014 and topped $95 billion in 2019.

As demand has grown for CSOs, so has investor acceptance of the specific risks associated with synthetic credit products. However, we do not believe many market participants fully appreciate the idiosyncratic and procyclical risks associated with CSOs.

- CSO collateral, which is a pool of CDS, is exposed to the idiosyncratic risks described above.
- CSOs do not benefit from a collateral manager who can oversee and mitigate potential credit issues, nor are there any performance-based tests or excess spread amounts that can be used to buttress the credit profile of senior debt tranches.
- Returns on CSOs’ senior tranche are heavily dependent on investors applying significant leverage. On a fully-funded, unlevered basis, CSO senior tranche yields range from 10–35 basis points, but banks may only require margin as low as 2 percent to be posted initially on exposure to the senior tranche, effectively offering leverage up to 50x. This high leverage substantially amplifies the impacts of any credit losses.
- Secondary liquidity is very limited, leaving investors generally unable to manage or exit risk at reliable market levels.

Implications for Investors

Potential for Procyclical Problems

As business cycles mature and investment returns get pressured by tightening credit spreads, investors migrate to increasingly risky investment options. This is as true today as it has been in past cycles. Recently, the appetite for exotic synthetic structures has drawn our attention and scrutiny. While new regulations have improved underlying CDS, unique risks and considerations persist. Rating agency discipline has limited bank and investor flexibility in originating and warehousing structured synthetic credit risk, but increasing demand from investors desperately seeking yield in a low rate, low volatility, and low credit spread environment resembles the environment that led to the growth in synthetics before the financial crisis. It remains to be seen whether today's growing volume of CSOs will have the same outcome as the synthetic CDOs or CDSs that turned out to be some of the most ill-fated assets in the financial crisis. Our memories are not so short, however. We see the rise of CSOs as rhyming with history.

While the corporate credits underlying today's CSOs are not an exact mirror of subprime mortgages, the synthetic credit exposure and the leverage of CSOs is a mirror image of the mortgage-based CDO structures. The amplification of losses during the financial crisis reflects the procyclical nature of synthetic financial products. Rising credit losses in a leveraged structure is the same problem in every market. The expansion of the CSO market may be small, but its swift growth reflects a larger point: Investors are not being adequately compensated for taking on credit risk in the cash markets, so they are increasingly looking to the synthetics market to find it. We have seen before that this behavior can end badly.

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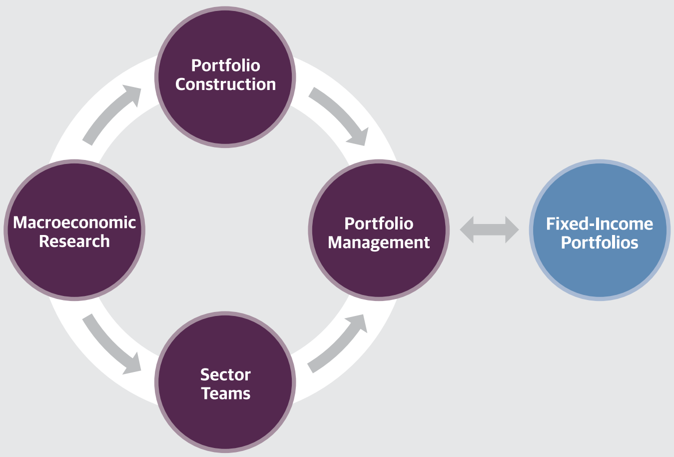

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