**Swaps Introduction**

**Learning Objectives**

**Upon successful completion of this course, participants will be able to:**

* Understand what a swap is
* Know the uses and characteristics of the main types of swaps
* Understand the terminology associated with swaps
* Explain the basic processing within IFS
* Have a general understanding of the reconciliation process within IFS
* Identify the FLOD theme(s) related to Swaps

**What is a Swap?**

* A swap is derivate contract through which two parties (counterparties) agree to exchange stream cash flows for another stream for a specified term.
* Swap has Two legs – one cash flow is generally fixed, while the other is variable and based on a benchmark interest rate.
* Most swap involve cash flows based on notional principal amount; however, the notional amount does not change hands.
* Ownership of underlying asset or instrument is not usually exchanged
* Swap is an OTC (Over-the-Counter) product – not exchange traded
* Normal to have collateral account

**Why are Swaps used?**

* **Hedging**
* Manage the risk of an underlying asset
* **Speculation**
* Receive economic performance of an asset which the fund does not hold
* **Diversity/Leverage**
* As there is (generally) no cost associated in getting into a swap agreement, it does not strain the Fund’s leverage
* Allows additional investment (extra diversity) without additional cash requirement at the start of the contract.

**Main Types of Swaps:**

* **Interest Rate Swaps**

In an *interest rate swap*, (IRS) the counterparties swap payments in the same currency based on an interest rate. For example, one of the counterparties can pay a fixed interest rate and the other party a floating interest rate. The floating interest rate is commonly referred to as the *reference rate*.

**Example**

* Fund A and Fund B enter into an Interest Rate Swap agreement.
* Contract date 01/01/22
* Fixed rate 7% and floating rate LIBOR+0.75%
* Nominal principal 1,000,000.00
* Day count method 30/360. Resets annually at 21/31
* Termination date 12/31/2026
* LIBOR is currently 4.8%

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|  | **Fund A** | **Fund B** | **Net CashFlow** |
| Reset Year 1:  12/31/2022  Cash moved  01/01/2022 | Owes Fund B  1,000,000 \* (4.8% +0.75%)\*360/360 = 55,500 | Owes Fund A  1,000,000\*7%\*360/360= 70,000 | Fund B pays Fund A  70,000-55,500 = 14,500 |
| Reset year 2:  12/31/2023  LIBOR on 12/31/2022 = 6.2% | Owes Fund B  1,000,000 \* (6.2% +0.75%)\*360/360 = 69,500 | Owes Fund A  1,000,000\*7%\*360/360= 70,000 | Fund B pays Fund A  70,000-69,500= 500 |

* **Credit Default Swaps**

A *credit default swap* (CDS) is an OTC derivative that permits the buying and selling of credit protection against particular types of events that can adversely affect the credit quality of a bond such as the default of the borrower. Although it is referred to as a “swap,” it does not follow the general characteristics of a swap described earlier. There are two parties: the *credit protection buyer* and *credit protection seller*. Over the life of the CDS, the protection buyer agrees to pay the protection seller a payment at specified dates to insure against the impairment of the debt of a *reference entity* due to a credit-related event.

* **Currency Swaps**

In a *currency swap*, two parties agree to swap payments based on different currencies. Companies use currency swaps to raise funds outside of their home currency and then swap the payments into their home currency. This allows a corporation with operations outside their home country to eliminate currency risk (i.e., unfavorable exchange rate or currency movements) when borrowing outside of its domestic currency.

* **Commodity Swaps**

In a *commodity swap*, the exchange of payments by the counterparties is based on the value of a particular physical commodity. Physical commodities include precious metals, base metals, energy stores (such as natural gas or crude oil), and food (including pork bellies, wheat, and cattle). Most commodity swaps involve oil.

* **Equity Swaps and CDS**

An equity swap is an exchange of future cash flows between two parties that allows each party to diversify its income for a specified period of time while still holding its original assets. An equity swap is similar to an interest rate swap, but rather than one leg being the "fixed" side, it is based on the return of an equity index. The two sets of [nominally](https://www.investopedia.com/terms/n/nominal.asp) equal cash flows are exchanged as per the terms of the swap, which may involve an equity-based cash flow (such as from a stock asset called the [reference equity](https://www.investopedia.com/terms/r/reference-equity.asp)) that is traded for fixed-income cash flow (such as a [benchmark](https://www.investopedia.com/terms/b/benchmark.asp) interest rate).