



A State Street Company

ETF Management in Charles River IMS

Exchange Trade Funds (ETFs) provide buy-side firms with a versatile tool for alpha generation, targeted exposure to specific factors such as momentum and volatility, low cost strategy replication, hedging and risk management. Constrained liquidity and growing fragmentation in fixed income markets have opened additional opportunities for ETF sponsors to offer differentiated products that help asset managers implement fixed income strategies.

Launch of the ETF Rule

The US Securities and Exchange Commission (SEC) recently approved the adoption of Rule 6c-11, also known as the 'ETF Rule', in an attempt to modernize the regulatory framework for Exchange Trade Funds (ETFs) and level the playing field across ETF sponsors.* The new rule has several ramifications for ETF sponsors, Authorized Participants (APs) and fund custodians.

Important ETF Rule Provisions

Although most ETF sponsors currently post daily disclosures of portfolio holdings before the opening of regular trading on their firm's website, this is now mandatory for all ETFs covered by the rule. Portfolio holdings must be disclosed publicly and free of charge. Sponsors will also be responsible for expanded website reporting to give investors greater clarity on the total costs associated with trading and holding ETFs, as well as additional recordkeeping obligations. Under the new rule, most ETFs will have to publish their creation and/or redemption basket each morning before markets open. Note that leveraged, inverse, multi-class structures, master feeder structures, and all semi-transparent ETFs are exempt from the ETF Rule.

* Not covered under the rule are leveraged and inverse ETFs, ETFs organized as unit investment trusts ("UITs"), and ETFs organized as a share class of a fund that issues multiple classes of shares representing interests in the same portfolio.

Additionally, the rule allows ETF sponsors governed by the rule to utilize negotiated baskets during the creation and redemption of ETF shares. A negotiated basket enables an ETF issuer to review an inventory list sent by an AP to select the securities needed to effect a creation or redemption. Closely related, custom baskets allow an AP to opt out of providing a specific security during a creation. Leveraging negotiated baskets for this process enables the ETF sponsor to comprise a basket of securities that may not match an exact slice of the index it's tracking. The use of negotiated in-kind baskets enables sponsors to adjust their portfolio's holdings efficiently and minimize capital gains from higher-turnover, active strategies. While negotiated baskets will soon be applicable to all ETFs, they are especially useful for fixed income funds where particular bonds comprising an index may not be available from market makers or APs.

Managing ETFs in Charles River IMS

Charles River Investment Management Solution (Charles River IMS) provides comprehensive front-office capabilities for ETF management, enabling ETF sponsors and subadvisors to manage workflows for ETF creation and redemption efficiently, eliminate manual processes and retire legacy systems. Both custom and negotiated baskets are supported. Charles River's Investment Book of Record (IBOR) helps ensure portfolio managers have intraday visibility into positions, holdings and cash balances.

Creation/Redemption Workflows

ETFs are structured to support two primary creation/redemption frameworks: in-kind and cash. Both take place in the primary markets.



In-kind

The majority of US-based ETFs require APs to create and redeem shares in kind—that is, to create new ETF shares for a basket of securities, rather than cash. Additionally, when redeeming in-kind, an ETF can provide the authorized participant with the underlying securities with the lowest cost basis.



Cash

For the majority of EMEA-based ETFs and a small number of US ETFs -- typically those comprised of illiquid instruments or esoteric asset classes -- creation and redemption for particular securities may be transacted in cash. Once the ETF issuer receives the cash create order from the AP, they may choose to purchase the securities that comprise the ETF in order to update their holdings properly.

Portfolio Management



Portfolio analysis: Managers can access fund rollup information including absolute and relative analytics against multiple benchmarks, models or the current portfolio composition file (PCF) on an intra-day basis. Idea lists can be imported into Manager Workbench, enabling the ability to model potential trades without committing. Managers can also analyze and select securities for efficient construction of negotiated baskets.



Idea list generation: ETF managers can import and analyze an “inventory list” of securities from AP’s to inform security selection and custom basket construction. The ETF manager selects securities from the “inventory list” to create a negotiated basket in the form of an “idea list” in Charles River IMS. The “idea list” functionality grants the manager the ability to see the impact the proposed negotiated basket will have on the fund before the order is confirmed. Once the negotiated basket is finalized and (optionally, depending on ETF) approved by the transfer agent/distributor, the idea list transitions to a completed order within Charles River IMS.



Order creation: Orders can be created for cash rebalancing, slicing and deviation targeting. For in-kind transactions, negotiated basket create/redeem workflows are supported. Multi-asset order and execution capabilities enable efficient trading of securities baskets, helping minimize ETF operating costs.



Portfolio optimization: Managers can utilize their preferred portfolio optimizer and factor models to optimize security weights in proposed baskets.



Multi-currency and complex ETFs: Spot FX, currency forwards and OTC derivatives are supported for ETF’s priced in non-USD currencies or funds that use derivatives for hedging or leverage.

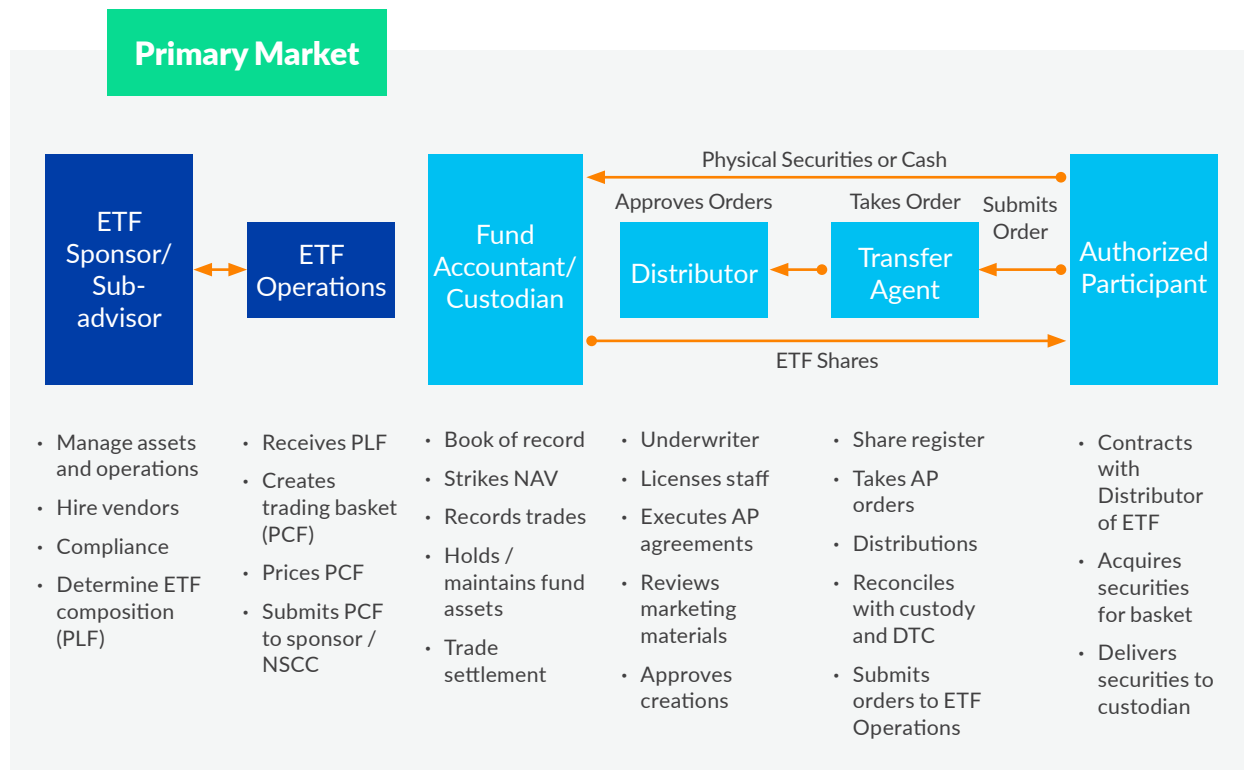
Trading

Charles River's Order and Execution Management System supports list and portfolio trading for equities and fixed income, enabling efficient trading of ETF baskets.

Charles River Client Benefits

- Construct and analyze target portfolios more frequently
- Designed to increase inflows by having a faster turnaround time with Authorized Participants
- Helps increase portfolio manager efficiency by reducing manual processes
- Manage pre-trade compliance and gain transparency into intraday holdings
- Retire homegrown front-end ETF management systems

ETF Primary Market Workflow



Glossary

Authorized Participant (AP)

One of the major parties at the center of the creation and redemption process for exchange-traded funds (ETF). They provide a large portion of liquidity in the ETF market by obtaining the underlying assets required to create a fund.

The Depository Trust Company (DTC)

An entity designed to reduce costs and provide clearing and settlement efficiencies by immobilizing securities and making “book-entry” changes to ownership of the securities.

Net Asset Value (NAV)

A daily calculation that is based off the most recent closing prices of the assets in the ETF and an actual accounting of the total cash in the fund at the time of calculation. This gives the ETF a standardized value that can be compared to other funds for performance statistics and accounting.

National Securities Clearing Corporation (NSCC)

Provides clearing, settlement, risk management, central counterparty services and a guarantee of completion for certain transactions for virtually all broker-to-broker trades involving equities, corporate and municipal debt, American depositary receipts, exchange-traded funds, and unit investment trusts.

Portfolio Composition File (PCF)

Also known as the trading basket, this file contains the securities, identifiers and number of shares that form the basis of the NAV calculation.

Portfolio Listing File (PLF)

This file serves as the foundation of the PCF. For a fully replicated, passively managed ETF this is usually disseminated by the index provider. For an actively managed ETF, this file is provided by the investment manager, and contains the securities, quantities, descriptions and identifiers comprising the ETF.

Charles River Development, A State Street Company

Investment firms, asset owners, wealth managers, hedge funds and insurers in more than 30 countries rely on Charles River's front and middle office investment management platform to manage more than US\$30 Trillion in assets. Together with State Street's middle and back office capabilities, Charles River's cloud-deployed software technology forms the foundation of State Street AlphaSM. The Charles River Investment Management Solution (Charles River IMS) is designed to automate and simplify the institutional investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. Charles River's growing partner ecosystem enables clients to seamlessly access external data and analytics, applications and liquidity venues that support the demands of their product and asset class mix. Headquartered in Burlington, Massachusetts, we serve clients globally with more than 1,000 employees in 11 regional offices.

(Statistics as of Q1 2021)

Learn more at [crd.com](https://www.crd.com)

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