Envestnet | PMC is the ultimate “advisor to the advisor.” Our goal is to help advisors strengthen relationships with their clients and improve outcomes through comprehensive manager research, portfolio consulting, and portfolio management.

PMC also powers the Envestnet Advisor Suite “investment engine” with approved lists, risk scores, asset allocation, and other investment intelligence, created through sound methodology. This guide describes the investment philosophy and processes that we employ.
The PMC Philosophy

At the foundation of PMC are deeply rooted principles that provide the framework for building diversified, risk-managed portfolios to meet the long-term investment goals of a broad spectrum of clients. These principles include:

Asset allocation. Thoughtful and professional asset allocation and a sound investment plan can help minimize losses and market-proof portfolios against volatility and uncertainty.

Vehicle and investment selection and monitoring. Choosing appropriate managers and determining whether they should be actively or passively managed are key considerations in the investment planning process.

Portfolio construction and rebalancing. When done correctly, diversification across the sub-asset classes can enhance a portfolio’s risk/return profile. Regular portfolio rebalancing also helps keep allocations and risk exposures in line.
The PMC Expertise

PMC is represented by groups of experienced and specialized investment professionals with deep expertise in research, consulting, portfolio construction, and portfolio management.

Investment Committee
The PMC Investment Committee plays a critical role in the exercise of fiduciary responsibilities for Envestnet clients. The Investment Committee is responsible for establishing and overseeing the broad investment policies instituted on the Envestnet platform and within the PMC group. Comprised of senior investment professionals, the Investment Committee among other things:

• oversees manager and mutual fund due diligence processes;
• guides investment product development and portfolio management;
• initiates and authorizes changes to investment policies and methodology on the platform; and
• reviews and approves revisions to capital market assumptions and asset class portfolios.

The Investment Committee meets formally on a quarterly basis, but more frequently on an ad hoc basis to consider issues of more immediate concern.

Leadership Team
+ Investment Committee
  Brandon Thomas
  Chief Investment Officer
  
  Tim Clift
  Chief Investment Strategist
  
  J. Gibson Watson, III, CIMA
  Vice Chairman
  
  Don Frerichs, CFA,
  SVP, Director of Mutual Funds,
  Sr. Portfolio Manager – PMC SIGMA Portfolios
  
  Lincoln Ross
  Executive Vice President, Advisory Services
  
  Janis Zvingelis
  Senior Vice President,
  Director of Quantitative Research
  
  Geoffrey D. Selzer, CFA
  Senior Vice President, Consulting Services
  
  Zachary Karabell
  Consultant, Head of Global Strategy

+ Manager Research
  Tim Clift
  Chief Investment Strategist

+ Quantitative Research
  Janis Zvingelis
  Senior Vice President,
  Director of Quantitative Research

+ Institutional Consulting
  Geoffrey D. Selzer, CFA
  Senior Vice President, Consulting Services

+ Portfolio Consulting
  Michael Featherman, CFA
  Senior Vice President,
  Director of Portfolio Strategies

+ Portfolio Solutions
  Brandon Thomas
  Chief Investment Officer

More details available at investpmc.com
The PMC Process

Every facet of PMC’s services are backed by methodology steeped in sound fundamental theory and disciplined execution. From market views, asset allocation, investment selection on through due diligence monitoring, PMC has established thorough, consistent, and transparent methodology.

Capital Market Assumptions

Capital markets assumptions (CMAs) are the expected returns, standard deviations, and correlations that represent the long-term risk/return forecasts for the asset classes on the Envestnet platform. These values are used to score portfolio risks, assist advisors in portfolio construction, construct PMC asset allocation models, and create Monte Carlo simulation inputs for portfolio wealth forecasts.
PMC’s approach to estimating CMAs and constructing asset allocation models is based on the following general assumptions:

- The global capital markets are largely efficient in the long run, where the efficiency of the markets is measured by the Capital Asset Pricing Model (CAPM).
- While the global capital markets are efficient in the long run, there might exist identifiable shorter-term inefficiencies in the capital markets.
- Risk premia are time-varying.

The six-step PMC process is run annually using statistically advanced techniques to combine information coming from theory, data, forecasts by recognized economic analysts, and PMC’s own views into overall estimates of the capital market assumptions.

<table>
<thead>
<tr>
<th>STEP 1</th>
<th>Estimating Standard Deviations and Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>STEP 2</td>
<td>Russell 3000 Expected Return Forecasting</td>
</tr>
<tr>
<td></td>
<td>Variables of interest:</td>
</tr>
<tr>
<td></td>
<td>• Current Dividend Yield</td>
</tr>
<tr>
<td></td>
<td>• Expected Growth Rate in Real Earning</td>
</tr>
<tr>
<td></td>
<td>• Valuation Multiple Adjustment Factor</td>
</tr>
<tr>
<td></td>
<td>• Forecasted Inflation</td>
</tr>
<tr>
<td></td>
<td>• Geometric-to-Arithmetic Rate Conversion</td>
</tr>
<tr>
<td>STEP 3</td>
<td>Reverse Optimization</td>
</tr>
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<td>STEP 4</td>
<td>Fixed Income Views</td>
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<td>STEP 5</td>
<td>Black-Litterman Process</td>
</tr>
<tr>
<td>STEP 6</td>
<td>Expected Return Forecasting for Alternative Asset Classes</td>
</tr>
</tbody>
</table>

PMC supports CMAs for the following asset classes.

<table>
<thead>
<tr>
<th>Equity</th>
<th>Fixed Income</th>
<th>Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Cap</td>
<td>Intermediate Bond</td>
<td>Alternative</td>
</tr>
<tr>
<td>Global Equity</td>
<td>Intermediate Muni</td>
<td>Market Neutral</td>
</tr>
<tr>
<td>Large-Cap Core</td>
<td>Long Bond</td>
<td>Equity Arbitrage</td>
</tr>
<tr>
<td>Large-Cap Growth</td>
<td>Long Muni</td>
<td>Hedged Equity</td>
</tr>
<tr>
<td>Large-Cap Value</td>
<td>Short Bond</td>
<td>Bear Market</td>
</tr>
<tr>
<td>Mid-Cap Core</td>
<td>Short Muni</td>
<td>Multi-Strategy</td>
</tr>
<tr>
<td>Mid-Cap Growth</td>
<td>High Yield</td>
<td>Alternative Fixed Income</td>
</tr>
<tr>
<td>Mid-Cap Value</td>
<td>International Bond</td>
<td>Managed Futures</td>
</tr>
<tr>
<td>Small-Cap Core</td>
<td>TIPS</td>
<td>Fund of Funds</td>
</tr>
<tr>
<td>Small-Cap Growth</td>
<td>Balanced</td>
<td></td>
</tr>
<tr>
<td>Small-Cap Value</td>
<td>Bank Loan</td>
<td></td>
</tr>
<tr>
<td>Int’l Developed Mkts</td>
<td>Emerging-Markets Bond</td>
<td></td>
</tr>
<tr>
<td>Int’l Emerging Mkts</td>
<td>Cash</td>
<td></td>
</tr>
</tbody>
</table>
Asset Allocation

The expected returns, standard deviations, and correlations created from the capital markets assumptions process are used to create portfolios at various risk levels using a mean/variance optimization (MVO) approach. Rather than simple mean-variance optimization, a resampled (also called bootstrap) version of MVO is used. Constraints based on the relative market capitalization of various asset classes are used in the optimization process to ensure that the constructed portfolios are optimal, given our capital markets assumptions, without straying far from the market portfolio.

A simple MVO approach produces portfolios that are very sensitive to even slight changes in the expected return assumptions. This problem is exacerbated by the fact that all the estimates of expected returns (as well as standard deviations and correlations) contain estimation error. To counter the inherent instability of the MVO approach, we use portfolio optimization in combination with bootstrap statistical methods. The portfolios resulting from this process are designed to be optimal under a broad variety of conditions and are far more stable over time than simple MVO-generated portfolios.

Another part of the portfolio creation process is the inclusion of a variety of diversifying asset classes such as commodities, REITs, emerging markets equities, and high-yield fixed income. To accommodate all the various combinations of diversifying asset classes, we first create a portfolio with all the asset classes at a 50/50 equity/fixed income level.

Each diversifying asset class is assigned to roll up either to fixed income or to equity. Any combination of risk level and asset class can be easily created by rolling up across stock/bond allocation levels to create more or less risky portfolios and rolling up to reduce the number/complexity of asset classes.

Asset Class Portfolios

The asset allocation methodology allows PMC to construct a series of risk-based asset class portfolios (ACPs) at various domestic equity tiers and a multitude of diversifying asset class combinations. Five- and seven-point series are available, and both have inclusive and exclusive versions of alternative strategy allocations.

Five-Point Risk Scale Portfolios

Capital Preservation
Conservative
Moderate
Growth
Aggressive Growth

Seven-Point Risk Scale Portfolios

Capital Preservation
Conservative
Conservative Growth
Moderate
Moderate Growth
Growth
Aggressive Growth

Asset Class Portfolio Update

More details available at pmcconsulting@envestnet.com
At each point in the series, there are three portfolio iterations:

<table>
<thead>
<tr>
<th>Diversified</th>
<th>Core</th>
<th>Concentrated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Includes large/small cap and value/growth splits</td>
<td>Includes value/growth splits for large cap, but core allocation for the small cap</td>
<td>No value/growth splits</td>
</tr>
</tbody>
</table>

For example, the following are the moderate risk category iterations from the PMC Asset Class Portfolios five-point risk scale:

There are three main uses of PMC’s ACPs:

1. as reference portfolios for use in risk scoring on the Envestnet platform;
2. as the basis for various managed solutions and PMC’s consulting framework; and
3. as suggested allocations provided via the platform for advisors to use in constructing portfolios.

Asset Class Considerations for PMC Asset Class Portfolios

<table>
<thead>
<tr>
<th>Equity</th>
<th>Fixed Income</th>
<th>Alternatives</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large-Cap Core</td>
<td>Intermediate Bond</td>
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<tr>
<td>Int’l Emerging Mkts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commodity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REITs</td>
<td></td>
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</tr>
</tbody>
</table>
Manager Research & Due Diligence

PMC performs the research and due diligence that drives the selection of asset managers on the Envestnet Platform. A four-stage, multifactor due diligence process delivers consistent, objective oversight in the best interest of investors.

PMC assumes that market inefficiencies exist and can be exploited by active management. True outperformance, however, is difficult to achieve and even more difficult to sustain. Distinguishing between generating “alpha”—defined as the positive contribution to performance that is attributable to a manager’s decisions rather than market movement—and luck requires an understanding of a manager’s investment thesis and competitive advantage. Through comprehensive quantitative and qualitative analysis, sound judgment and a consistent process, we believe that we can identify investment quality.

The PMC due diligence process helps assure advisors that the managers they deploy on their clients’ behalf have been thoroughly vetted by a team of experienced analysts. The process includes statistical analysis, site visits, and qualitative assessments of managers’ ability to execute their strategies.

Our research seeks to:
- provide comprehensive, unbiased coverage of asset classes and strategies;
- identify managers that consistently outperform their benchmarks on a risk-adjusted basis;
- maintain the integrity of asset allocations through appropriate manager recommendations; and
- provide advisors with timely communications, forward-looking opinions, and actionable recommendations.

PMC provides upfront selection and ongoing due diligence on managed account strategies, mutual funds, liquid alternatives, exchange-traded funds (ETFs), and fund strategist portfolios. While different investment vehicles demand unique due diligence requirements, all of PMC’s evaluations and recommendations are based on a consistent process:
## Separately Managed Accounts (SMAs) & Mutual Funds

### Stage 1: Unrestrained Manager Sourcing
Multiple sources are used to generate new ideas: PMC’s proprietary performance ranking tools, direct solicitation, referrals from clients and industry contacts, and trade publications. Quantitative performance ranking tools allow the analyst team to focus research efforts on investment strategies that have achieved consistent risk-adjusted results.

### Stage 2: Multi-Factor Evaluation
PMC’s analysts evaluate multiple factors of high-ranking investment candidates. A critical eye is focused on characteristics that lend confidence to a manager’s future prospects, including the thoughtfulness and integrity of the investment philosophy and process, personnel quality, and firm stability. In addition to interviewing key investment professionals through on-site visits and conference calls, analysts have the following tools at their disposal: single factor and multifactor returns-based analytics, and holdings-based analytics and attribution.

### Stage 3: Team Appraisal
Working in teams assigned to specific asset classes, PMC analysts present their research findings to the Research Team before a final recommendation is prepared. In these meetings, an analyst’s thesis is tested and gaps in the analysis are addressed. This stage of the process ensures that the collective experience and perspective of the Research Team is taken into consideration.

### Stage 4: Extensive Monitoring
PMC’s ongoing due diligence process includes regularly updated analyst opinions in addition to quarterly monitoring. On a quarterly basis, the Research Team reviews performance versus expectations and flags outliers for further examination. Analysts also continually monitor managers for material changes to the personnel, process, and firm.

### PMC’s Research Team evaluates eight attributes of a manager and the investment strategy by apply a number of qualitative and quantitative techniques and tools.

<table>
<thead>
<tr>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance</td>
<td>Quality of the Firm</td>
</tr>
<tr>
<td>Consistency of Style</td>
<td>Quality of the People</td>
</tr>
<tr>
<td>Quality of the Process</td>
<td>Quality of the Process</td>
</tr>
<tr>
<td>Customer Service</td>
<td>Tax Liability &amp; Efficiency</td>
</tr>
<tr>
<td>Quality of Composite</td>
<td>Quality of Composite</td>
</tr>
</tbody>
</table>
**Liquid Alternatives**

PMC believes alternative investments can improve the risk/return profile of a portfolio. Mutual funds with daily liquidity that utilize alternative strategies may be simpler from an implementation standpoint; however, they still require rigorous due diligence due to a rapidly growing universe, increasingly complex strategies, and misaligned expectations.

We view hedge fund-like mutual funds, commonly referred to as “liquid alternatives”, as non-traditional investment strategies rather than as a separate asset class. Like traditional managers, managers of alternative strategies take positions in the four major asset classes (equities, bonds, commodities, and currencies), albeit in conjunction with hedging strategies, through derivative structures or through non-public markets.

For liquid alternatives, PMC follows the same multifactor mutual fund evaluation process as defined previously. Our guiding philosophy for analyzing both traditional and non-traditional strategies is that all returns originate from risk exposures, and in this regard, non-traditional strategies are no different from traditional strategies. The difference then comes from the risk exposures that a manager of an alternative strategy accepts and/or seeks out in order to generate returns. Additionally, within the non-traditional space, idiosyncratic manager risks, such as inadequate financial controls or valuation processes, are much more pronounced. It is our job to understand all of these risks, investment-related or otherwise.

In particular, we focus our efforts on the following questions when evaluating liquid alternatives:

- Have they done this in the past? Is there evidence of success? Has true alpha been generated or is this alternative beta?
- Is the firm properly resourced in terms of people, both front and back office? How about in terms of systems, infrastructure, and data feeds?
- Is the strategy appropriate for a mutual fund vehicle?
**Fund Strategist Portfolios (FSPs)**

FSPs are asset-allocated investment solutions composed of some combination of mutual funds, and/or exchange-traded funds. A majority of the FSP solutions available on the platform are risk-based, asset-allocated portfolios which are offered in various models across the risk spectrum. Additionally, there are unique tactical and style-specific FSP solutions that focus on traditional investment styles, asset classes, or follow a more outcome-oriented mandate.

To help better organize this growing space, the PMC Research Team dedicates significant effort to classifying and categorizing third-party FSP solutions available to advisors on the Envestnet platform. FSP solutions range from traditional long-term, buy-and-hold investment mandates all the way to tactical, unconstrained solutions that utilize quantitative, short-term market timing investment techniques. Additionally, the underlying investment vehicles utilized within the various investment mandates range from mutual fund only, ETF only, to some combination of the two. Through our research process, PMC utilizes specific quantitative and qualitative insights to classify FSP solutions into two broad classifications: Asset Allocation Type and Fund Type. PMC categorizes FSPs into three distinct asset allocation categories: Strategic, Dynamic, and Tactical and Fund Type: Mutual Fund, ETF, Hybrid (holding both mutual funds and ETFs).

The FSP research and due diligence process is similar to those for SMAs and mutual funds, which were described previously. However, due to certain characteristics of these solutions, as well as the lack of formalized peer groups and standardized benchmarks, a specialized process is required for FSPs. A summary of the FSP research and due diligence approach, including qualitative and quantitative elements, is summarized below.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Strategy</th>
<th>Firm</th>
</tr>
</thead>
</table>
| • Investment Results  
• Portfolio Attribution  
• Composite Analysis | • Investment Philosophy and Process  
• Strategy Mandate and Positioning  
• Risk Analysis  
• Portfolio Holdings Analysis | • Firm and Strategy Assets  
• Product and Asset Distribution and Diversification  
• Business Structure and Operations  
• Key Investment Personnel  
• Legal and Compliance |

Quantitative Qualitative
Research Status Designations & Process
The following is a review of the manager onboarding process in addition to the process and key underpinnings of the Research Status designations on the Envestnet platform.

Available
To be considered for Available status, existing SMA and FSP managers must successfully complete Envestnet’s annual Compliance Questionnaire. Additionally, for new SMAs and FSPs to be considered for inclusion on the Envestnet Wealth Management Platform, a Compliance Questionnaire must be completed and also reviewed by Envestnet’s Business Partners Acceptance Committee (BPAC). Portfolios considered as Available are then eligible for Approved-PMC and Approved-FSP designations, as described below.

While they can be used in client portfolios, Available managers have not undergone an investment due diligence assessment by PMC or Envestnet.

Compliance Questionnaire
The Compliance Questionnaire is designed to help evaluate whether or not a manager meets a sufficient level of quality and stability through their policies and practices. All managers on the Envestnet platform are required to complete the Compliance Questionnaire annually. The questionnaire reviews the managers’: compliance program, code of ethics, investigations and reviews by regulators, material changes to the programs, ADV review, proxy voting procedures, personnel changes, trading practices, and material trading errors.

Envestnet’s Business Partners Acceptance Committee (BPAC) Review
Completed questionnaires and other applicable supporting materials are reviewed by Envestnet’s BPAC. The Committee, consisting of a cross-section of individuals from Envestnet’s Compliance, Legal, Research, Strategic Partners, Manager Services, Business Development, Product, and Sales departments, meets on a monthly basis to decide on candidates for the Available list. The BPAC considers all aspects of the submitted questionnaire and bases its decisions on the following factors:
• acceptable minimum firm and product assets: generally, firm assets of $300 million and product assets of $50 million;
• performance track record/historical performance: generally, a minimum of 36 months;
• strong risk-adjusted performance relative to stated benchmarks and peer groups; and
• relevant product offering given current roster of managed products/operational compatibility/trading requirements, etc.

Approved – PMC Status
All SMA and mutual fund portfolios added to the Envestnet Platform under the Available status are subsequently reviewed on a quarterly basis for consideration as “Approved-PMC.” The Approved list updates are announced approximately eight weeks after each quarter-end, and are implemented approximately 12 weeks after each quarter-end.
Objectives
Through a consistent application of the following process, PMC seeks to:
- provide a broad list of approved investment managers across asset classes, risk tolerances, styles, philosophies, and vehicles;
- meet industry best practices relating to objective, transparent methodology; and
- select managers that offer an attractive risk/reward proposition according to our proprietary quantitative ranking model or the Research Team’s due diligence process.

Classification
To be eligible for inclusion, a manager must meet the following criteria:
- three or five years (depending on Envestnet peer group) of complete, actual historical performance available on the Morningstar data feed; and
- a Morningstar style category universe membership.

Each quarter, the data for all managers who meet the required criteria are downloaded from Morningstar, classified according to Envestnet’s peer groups, and assigned best-fit benchmarks.

Managers are analyzed against their Morningstar-assigned benchmarks, which are unique to the Morningstar style category. In forming some of Envestnet’s peer groups (e.g., International Developed Equity), multiple Morningstar style categories are mapped into a single Envestnet peer group. Managers are also subject to a regression analysis to determine if the assigned Morningstar benchmark is appropriate. When possible, a benchmark, whose fit is deemed to be considerably better than the Morningstar benchmark, is selected for that particular Envestnet peer group from a pre-determined list. Finally, if the fit to the Morningstar benchmark and any other benchmark in the pre-determined set of benchmarks is poor, PMC reverts to the benchmark used in the Primary Prospectus for the analysis.

Q-Score Model Ranking
The proprietary Q-Score Ranking Model is a twelve-factor model used to rank all portfolios quarterly within each Envestnet peer group over the trailing 36 or 60 months (depending on the peer group). Mutual funds and SMAs are evaluated separately due to differences in fee levels. Index managers are removed from each universe to ensure only active managers are evaluated using this process. Index managers are evaluated in a subsequent section.

The model places a premium on managers with the following characteristics:
- Consistent active value: portfolios that have consistently beaten their benchmark over time.
- Effective and consistent risk control: portfolios that have consistently tracked their respective benchmark over time.
- Efficient risk/return profile: portfolios that have generated meaningful active returns relative to the risk taken.

Inputs to the model include both the three-year and five-year calculations of:

<table>
<thead>
<tr>
<th>Return Components</th>
<th>Risk Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Return</td>
<td>Beta</td>
</tr>
<tr>
<td>Batting Average</td>
<td>R-Squared</td>
</tr>
<tr>
<td>Information Ratio</td>
<td>Tracking Error</td>
</tr>
</tbody>
</table>
Research Team Appraisal
This stage of the process ensures that the collective experience and perspective of the Research Team is taken into consideration.

+ Analyst Exceptions
In a collaborative fashion, the Research Team further evaluates managers that have fallen below the 50% cutoff. The Research Team may approve managers by exception due to investment merit based on factors independent of the Q-Score ranking. For these exceptions, the Research Team will apply a comprehensive due diligence process, consisting of quantitative and qualitative evaluation techniques to monitor the manager going forward. A detailed description of the due diligence process is available upon request.

+ Analyst High-Conviction Additions
As an extension of, and independent from, the quantitative-based approval process described previously, managers that have earned the Research Team’s high-conviction assessment as a result of a full due diligence review can be added to the Approved List at the Team’s discretion.

PMC Portfolios
All proprietary PMC portfolios including mutual funds, SMAs, multi-manager portfolios and FSPs are assigned the “Approved-PMC” Research Status. PMC maintains fiduciary responsibility for all of its branded portfolios and therefore meets the standards for this research status designation. The PMC Investment Committee monitors all of its branded portfolios on an ongoing basis and performs due diligence on all sub advisors.
**Monitoring**

There are multiple facets to the ongoing monitoring process. Importantly, the Q-Score proprietary model is run and the results are vetted quarterly. The model itself is continually refined. SMA managers must successfully complete Envestnet’s Compliance Questionnaire annually.

Managers that are approved based on the Research Team’s discretion, both “Analyst Exceptions” and “Analyst High-Conviction Additions,” are subject to standard due diligence process monitoring.

The ongoing due diligence process includes regularly updated analyst reviews/peer appraisals in addition to quarterly monitoring. The Research Team reviews performance versus expectations quarterly and flags outliers for further examination. PMC analysts also continually monitor managers for material changes to the personnel, process, and firm.

“Analyst Exceptions” are monitored until such time that either:

- the manager’s Q-Score ranking rises to the point where it is above the standard cutoff, or
- the team loses confidence in the merit of the manager and recommends dropping the “Approved” status.

**ETF Approval Process**

The ETF ranking methodology consists of two main steps, quantitative screening then scoring and ranking. First, PMC screens all available ETFs on five criteria:

- legal structure
- active vs. passive management
- available data history
- Envestnet Platform style
- total sponsor assets under management (AUM)

PMC considers all available U.S.-based ETFs in the Morningstar Direct database. ETFs are eligible for the ranking process only if they meet all five criteria.

Following the screening process, PMC calculates a weighted average score of three performance dimensions and ranks the ETFs within their respective peer groups. The overall score is the weighted average of tracking, liquidity, and cost scores. Since the main purpose of the ETF is to provide exposure to a particular index (as opposed to delivering alpha), tracking a particular index is the most important feature. Consequently, the tracking score is emphasized in the construction of the overall score. We currently assign 50 percent weight to the tracking quality and 25 percent to both liquidity and cost.

The top two or three (in case of ties) ETFs per peer group are included in the Approved List. In addition, we also approve those ETFs with AUM greater than the maximum of the AUMs for quant-approved ETFs within the same peer group. The latter rule considers those ETFs that are very popular in the marketplace (i.e., high-AUM ETFs), but might not track a benchmark identical to that of a particular investment style. Also, PMC allows for approval of certain ETFs on a case-by-case basis.
This methodology is applied to the ETF ranking process on a quarterly basis. To reduce the turnover of ETFs in the Approved List, PMC maintains the approval rating of the two (or three) quant-approved ETFs, unless their overall ranking falls below the 70th percentile. A new ETF cannot be quant-approved unless an existing quant-approved ETF drops below the 70th percentile. This rule allows limiting the number of quant-approved ETFs to two or three ETFs per peer group.

There are certain categories (e.g., Bank Loan, Commodities Broad Basket), where the number of ETFs that meet the five criteria are too small to be ranked effectively via a quantitative process. These categories therefore are ranked manually and are eligible for “Approved-by-Exception” status.

**Approved – FSP**

Available FSP strategies in good standing must additionally meet the following criteria to be eligible for the Approved List:

- submission of Risk Score Questionnaire;
- submission of FSP Due Diligence Questionnaire; and
- Qualitative Analyst Assessment.

PMC’s Research Team reviews the Approved-FSP list on a quarterly basis, and may add and/or remove FSP solutions at any time throughout the year.

**Risk Score Questionnaire**

PMC calculates risk scores for FSPs that are available to advisors’ clients through the Envestnet Platform. PMC has established a methodology for calculating the risk scores of FSPs to closely calibrate an investor’s risk profile with the potential risk an FSP may assume. Following PMC’s Risk Score Policy and inputs using each FSPs Risk Score Questionnaire, a risk score is calculated based on the strategy’s policy allocation (maximum risk score) as well as a number of qualitative and quantitative.

**Due Diligence Questionnaire**

PMC’s Due Diligence Questionnaire serves to further assist the Research Team in evaluating the FSP strategies and their respective firms. All third-party FSP firms on the Envestnet Platform are required to thoroughly complete PMC’s Due Diligence Questionnaire annually. The questionnaire covers the following areas:

- Firm and Strategy Information
- Sales, Marketing and Distribution Capabilities
- Firm Governance Structure
- Firm and Product Asset History
- Investment Team
- Investment Philosophy
- Investment Process
- Risk Management
- Composite Information
- Trading
Analyst Assessment

Once all required materials are successfully submitted, PMC’s research analysts conduct a thorough review of submitted materials, as well as interviews (conference calls and/or onsite visits) with senior management and key investment personnel. These interviews are intended to gain a better understanding of the firm’s stability, key personnel, investment philosophy and process, performance metrics, risk controls, and product line-up.

FSP firms that have successfully completed all required materials and have not been “flagged” for material issues within the Compliance Questionnaire or additional qualitative and quantitative elements during the analyst review process are granted the status of Approved-FSP.

Although the Research Team conducts its review at the firm level, only products at that firm that have met the required criteria will display an “Approved-FSP” status.

Approved – Envestnet

The Approved-Envestnet status is granted to managers that are subject to a due diligence review and are deemed appropriate investment strategies in the designated asset class for suitable investors. While Envestnet has confidence in the Approved-Envestnet managers, they are not listed as Approved-PMC for reasons that may include a conflict of interest.

The due diligence process for Approved-Envestnet managers is less rigorous than that applied to Approved-PMC managers, but still incorporates a quantitative and qualitative review by the Research Team. The Investment Committee approves or disapproves all Approved - Envestnet managers and makes the continuing determination that a manager warrants to remain on the Approved-Envestnet list.

Approved – Select

Subscribers to PMC Premium Research can access the Research Team's high-conviction product ideas. Stemming from a four-stage due diligence process that includes a multifactor evaluation ranking system, PMC’s Research Team identifies and maintains a best-in-class list, i.e. Select List, of managed account products and mutual funds in various asset classes.

Whereas the Approved-PMC list provides a broad list of options that meet fiduciary standards for Approval status, the Approved-Select List consists of one to four best ideas in each investment style. By definition, all managed accounts and mutual funds that are Approved-Select are also Approved-PMC. The entire Research Team votes on the constituents of the Approved-Select list.

The Approved-Select List and the supporting opinions behind them are available in PrimaGuide or on the Envestnet platform via an entitlement option that is available for an additional subscription fee.

Approved – Watch List

The Approved-Watch List status is assigned to managers previously Approved but have recently experienced a significant due diligence event. Examples of these events may include but are not limited to: changes to key investment personnel, change in the investment process used, and/or significant departure from the proprietary ratings methodology. These portfolios will continue to be monitored and reviewed to determine if they should be removed from the Approved-PMC list by the PMC Research Team.

From a purely quantitative evaluation standpoint, Managed accounts and mutual funds with Overall Five Year Q-Score Rank percentiles that are approaching the 50% cut-off limit, may also be added to the Approved-Watch List.
Risk Scoring Methodology

The risk scoring methodology on the Envestnet Platform seeks to define the relative risk of a portfolio and assist advisors and clients in ensuring that suitable portfolios are constructed based on client-specific investment objectives.

There are several key components to the process, which include:

- PMC’s capital markets assumptions
- Asset class assignments
- Portfolio standard deviation
- Risk scales and scoring
- Client risk profile

All securities (and some investment strategies) on the Envestnet Platform are categorized into one of 37 currently supported asset classes for which capital markets assumptions have been developed. In order to calculate the risk score of a given portfolio that consists of individual securities or investment strategies defined by a single style, the key objective is the calculation of the projected standard deviation of the overall portfolio based upon PMC’s capital markets assumptions for each of the component’s holdings.

The standard deviation for a portfolio is computed based on the standard deviation and correlation assumptions for the asset classes. SMAs, mutual funds, ETFs, equities, and bonds are considered to portray an asset class exposure, and thus are mapped (as described above) into one of the asset classes as defined by the PMC capital markets assumption process.

Balanced mutual funds, balanced SMAs, and FSPs receive specialized treatment. For balanced mutual funds, the system breaks each down into a style allocation based on the most recent underlying asset allocation of the fund’s holdings as reported by Morningstar. For a balanced SMA, the system analyzes the actual current positions of the SMA model.

FSPs are evaluated and assigned a risk category (e.g., Conservative, Moderate, Growth, etc.) according to methodology that considers the flexibility of the FSP’s asset allocation and investment approach. For FSPs categorized as “Strategic”, PMC calculates the risk score based on the strategy’s most aggressive policy allocation. For “Dynamic” and “Tactical” FSP solutions, PMC has developed a weighted, multifactor methodology, a mix of quantitative and qualitative assessments of the strategy’s objectives, policy constraints, historical returns, and historical holdings.
PMC Portfolio Solutions

PMC combines specialist asset managers and PMC capital markets intelligence to create advanced mutual fund wrap, unified managed account, and separate account portfolios.

Through a multifaceted, collaborative effort between portfolio, consulting, quantitative research and manager research teams, PMC delivers a robust selection of strategic, tactical, and dynamic solutions to fit the needs of almost any investor.

### Strategic Portfolios

Designed to capture broad market returns over longer time horizons, PMC strategic portfolios offer stable asset allocations to meet the needs of a range of investors—from conservative to aggressive.

<table>
<thead>
<tr>
<th>Traditional</th>
<th>Asset Allocation</th>
<th>Vehicle</th>
<th>Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sigma MF Solution</td>
<td>PMC Strategic Global</td>
<td>Mutual Funds</td>
<td>PMC</td>
</tr>
<tr>
<td>Strategic ETF</td>
<td>PMC Strategic Global</td>
<td>ETF</td>
<td>PMC</td>
</tr>
<tr>
<td>Active Passive</td>
<td>PMC Strategic Global</td>
<td>Mutual Funds</td>
<td>PMC</td>
</tr>
<tr>
<td>Select Strategic</td>
<td>PMC Strategic Global</td>
<td>Mutual Funds</td>
<td>PMC</td>
</tr>
</tbody>
</table>
Tactical Portfolios

PMC tactical portfolios are designed to react to short-term changes in market environments, striving to protect capital on the downside while continuing to participate on the upside.

<table>
<thead>
<tr>
<th>Asset Allocation</th>
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<th>Manager</th>
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</thead>
<tbody>
<tr>
<td>PMC Strategic Global + Dynamic AA by William Blair</td>
<td>Mutual Funds (NTF)</td>
<td>PMC + Brian Singer (William Blair)</td>
</tr>
<tr>
<td>PMC Tactical Constrained</td>
<td>Innealta Dynamic ETF</td>
<td>Jeff Buetow (Innealta)</td>
</tr>
<tr>
<td>Dynamic ETF</td>
<td>William Blair Dynamic ETF</td>
<td>Brian Singer (William Blair)</td>
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</table>

Traditional / Alternative

Ascent Portfolios

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<tr>
<th>Asset Allocation</th>
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<tbody>
<tr>
<td>PMC Dynamic Global</td>
<td>Mutual Funds and ETFs</td>
<td>PMC</td>
</tr>
</tbody>
</table>

Dynamic Portfolios

Combining strategic asset allocation with limited tactical adjustments, PMC dynamic portfolios aim to take advantage of near-term market dynamics while maintaining a diversified asset allocation mix.

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Select Dynamic</td>
<td>Innealta Dynamic ETF</td>
<td>Jeff Buetow (Innealta)</td>
</tr>
<tr>
<td>PMC Tactical Constrained</td>
<td>Innealta Dynamic ETF</td>
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Traditional

Ascent Portfolios

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</table>
Portfolio Overlays

PMC portfolio overlays help advisors tap the real power and potential of managed accounts, offering solutions for clients with tax or impact investing requirements.

Oversight

Continuing management of the PMC portfolios is just as important as initial portfolio construction. On an ongoing basis, PMC’s portfolio managers:

- monitor the allocations of the portfolios and rebalance to the target weights as necessary so as to limit drift from the target allocation;
- recalculate the manager weights on a regular basis to update the allocations based on manager and capital market changes; and
- evaluate each manager to determine if any should be replaced or new ones added.

Irrespective of the approach used to constructing the portfolios, risk control is of paramount concern. PMC’s portfolio managers assess risk at the level of the individual manager being utilized as well as at the overall portfolio level. PMC Quantitative Research and Research teams provides essential insight into the holdings-based attribution of a manager’s performance to give PMC portfolio managers a deeper understanding of the risk controls a manager has in place, as well as the factor exposures inherent in the manager’s strategy. Armed with this information, PMC’s portfolio manager can determine the optimal way to mitigate risk so as to isolate a portfolio’s ability to add alpha.