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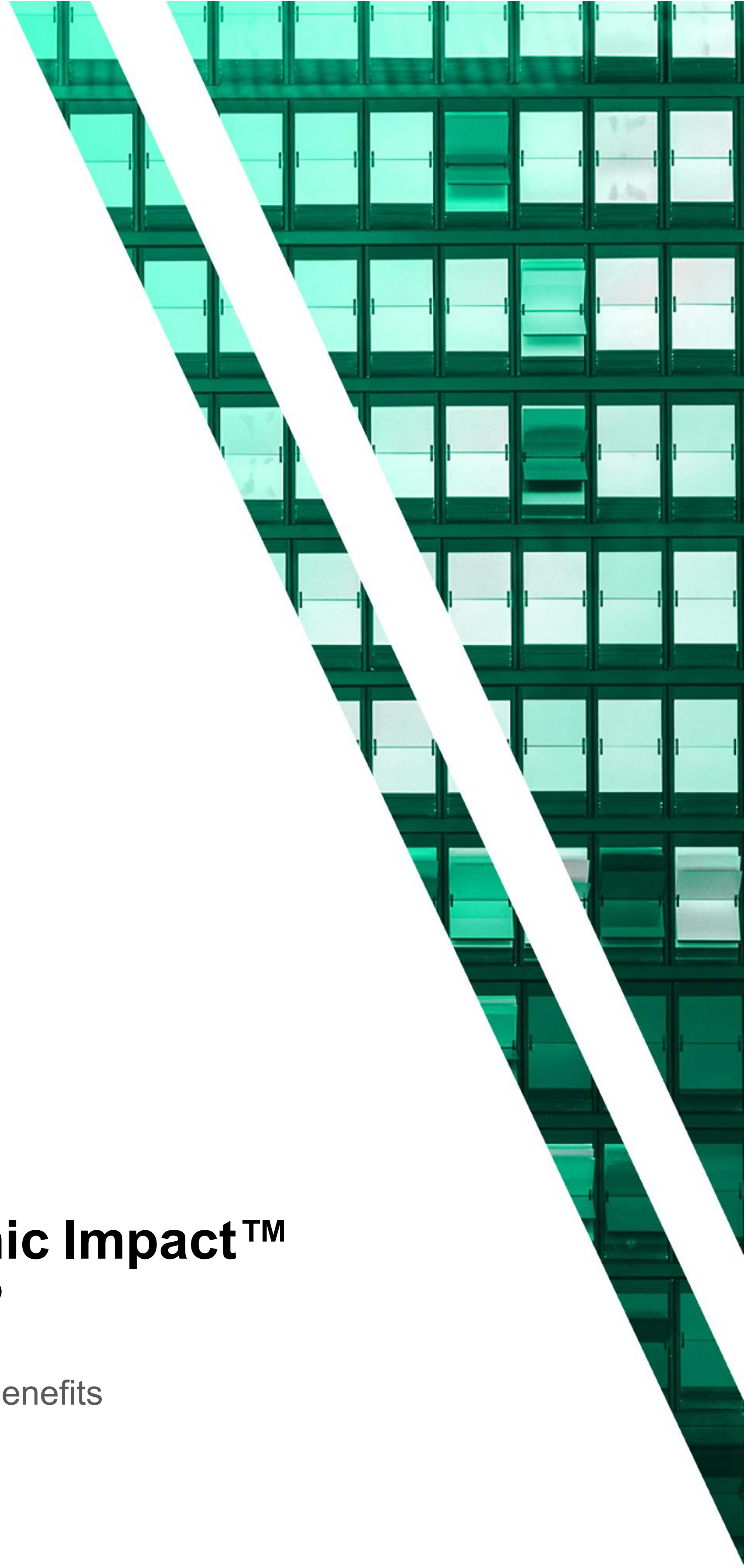

The Total Economic Impact™ Of VestmarkONE®

Cost Savings And Business Benefits Enabled By VestmarkONE

MARCH 2022

A FORRESTER TOTAL ECONOMIC IMPACT™ STUDY COMMISSIONED BY VESTMARK

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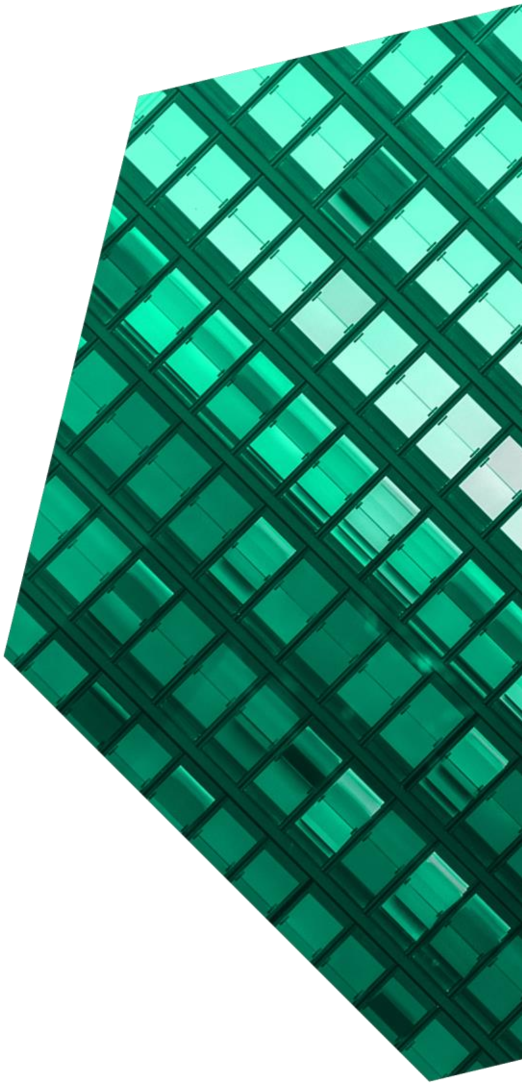


Executive Summary

The wealth management software space is densely populated. The VestmarkONE platform differentiates itself with an emphasis on building wealth management portfolios from a model-based unified managed account perspective, while offering wealth managers data centralization and workflow automation. With the number of software platform choices available, sleeve-level accounting, drift management, and tax optimization become key differentiators to acquire and retain client assets.

VestmarkONE is a portfolio management and trading platform solution that enables both small and large wealth management firms to deliver a breadth of investment solutions with automation and more efficient workflows. It is a solution that enables large wealth management capabilities, such as tax-lot and sleeve-level accounting, for all managed account programs along with other advanced functionalities that benefit financial advisors and their supporting middle- and back-office operations teams.

Vestmark commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying the VestmarkONE solution.[1] The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of VestmarkONE on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four decision-makers at wealth management organizations with experience using the VestmarkONE platform. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization.

Prior to using VestmarkONE, interviewees shared how their organizations searched for a solution that brought more sophisticated and advanced portfolio solutions, such as unified management account (UMA) functionality and enhanced portfolio management tools, for their advisors, along with improved ongoing infrastructure manageability of the platform. Utilizing a combination of homegrown solutions and legacy third-party software, the interviewees' wealth management enterprises were often unable to upgrade and effectively maintain their solutions. The ability to offer new, more sophisticated investment strategies and portfolio solutions served as growth drivers for these organizations that were unachievable without significant capital and time investments. Additionally, technology was moving forward as many of these organizations looked toward digital transformations to shift their workload to the cloud to better serve their distributed workforce. Legacy technology platforms, as the interviewees had expressed, were too outdated to upgrade and required a complete overhaul that required thoughtful consideration to a replacement approach.

KEY STATISTICS

Return on investment (ROI)
66%

Net present value (NPV)
$15.92M

Middle-office time savings due to VestmarkONE:

33%

Following the investment in the VestmarkONE platform, the interviewees' organizations operated in a cloud environment that not only reduced operational and development costs, but also made a wide range of functionality available to drive an increase in assets under management (AUM). Key results from the investment include pursuing strategic innovation on investment programs and portfolio solutions to enhance customer value, automating tasks such as rebalancing and reconciliation, and shifting IT costs to Vestmark.

KEY FINDINGS

Quantified benefits. Risk-adjusted present value (PV) quantified benefits include:

- **A time savings of 15% for financial advisors on rebalancing tasks, leading to a benefit of $23.5 million over a three-year span.** Financial advisors at wealth management firms spend a great deal of time both cultivating their customers and diligently managing their clients' portfolios. With VestmarkONE, rebalancing tasks, appropriating investments into the right sleeves, keeping track of portfolio drift, and scaling personalized investment targets become significantly easier, reducing as much as 15% of the day's effort for advisors. The three-year benefit value for the composite organization is $23.5 million PV.

- **Middle- and back-office work is streamlined and lowers effort by up to 75%.** Tasks performed by central home-office teams, such as rebalancing, reconciliation, and trade capture, were more quickly completed with the support of the VestmarkONE platform. With centralized data and established models, these tasks can be automated. The three-year benefit value for the composite organization is $2.3 million.

- **Increased growth in the business due to more sophisticated investment solutions made possible for advisors to leverage with clients.** Interviewees expressed that their organizations grew considerably following the switch to VestmarkONE. Especially of note was that access to sleeve-level accounting and advanced modeling capabilities — leveraged in advisor managed accounts and home-office-managed programs, such as UMAs, fund wrap, etc., — increased AUM upwards of 10% in the first year alone. The wide feature set that was on par with the platforms at the largest of the wealth management firms also made it easier to recruit and retain advisors. The three-year benefit value for the composite organization is $10.7 million, PV.

- **Reduced IT upkeep and development costs, which are driven down after adoption of Vestmark by over $3.5 million.** With on-premises infrastructure moving to the cloud, many IT upkeep-related tasks were absolved. More importantly, though, developers no longer needed to provide continued effort to not only maintain a level of service, but also improve upon features within the platform to keep the organization competitive. The three-year benefit value for the composite organization is $3.5 million.

Unquantified benefits. Benefits that are not quantified for this study include:

- **Increased productivity of junior-level advisors.** Models enabled in Vestmark provided greater assistance to more junior-level advisors. As models and "models of models" were deployed to advisors, the job of placing a customer in the right segment became easier with the number of choices available. As such, junior advisors performed at a much higher level than before and accumulated more AUM.

- **Additive growth products to attract new investments.** The fundamentals of sleeve and tax-lot accounting enabled customization at the client level in a scalable way, as well as the flexibility to create additional portfolio allocations for clients, bringing sophisticated solutions to smaller accounts, and opening new areas of the market to scalable and efficient management.

First year AUM growth on actively managed accounts after implementing Vestmark:

10%

Costs. Risk-adjusted PV costs include:

- **Overall solution costs.** The VestmarkONE platform is a software-as-a-service (SaaS) solution and is billed based on AUM, among a few other factors. The cost of the software solution includes fees paid to Vestmark as well as internal costs to support and manage, etc. Implementation and change management are also included in the calculations. In totality, costs over a three-year period for the composite organization amount to $24.1 million PV.

Back-office reconciliation and reporting time savings with VestmarkONE:

75%

The decision-maker interviews and financial analysis found that a composite organization experiences benefits of $40.1 million over three years versus costs of $24.1 million, adding up to a net present value (NPV) of $15.9 million and an ROI of 66%.

> **"It is a much more efficient way to rebalance and run model portfolios. You want to run a model across many accounts and rebalance efficiently — compared to what we had prior it's been a huge win. Advisors have said to us specifically that this tool has saved them a lot of time over our old architecture."**

— VP of equity advisory

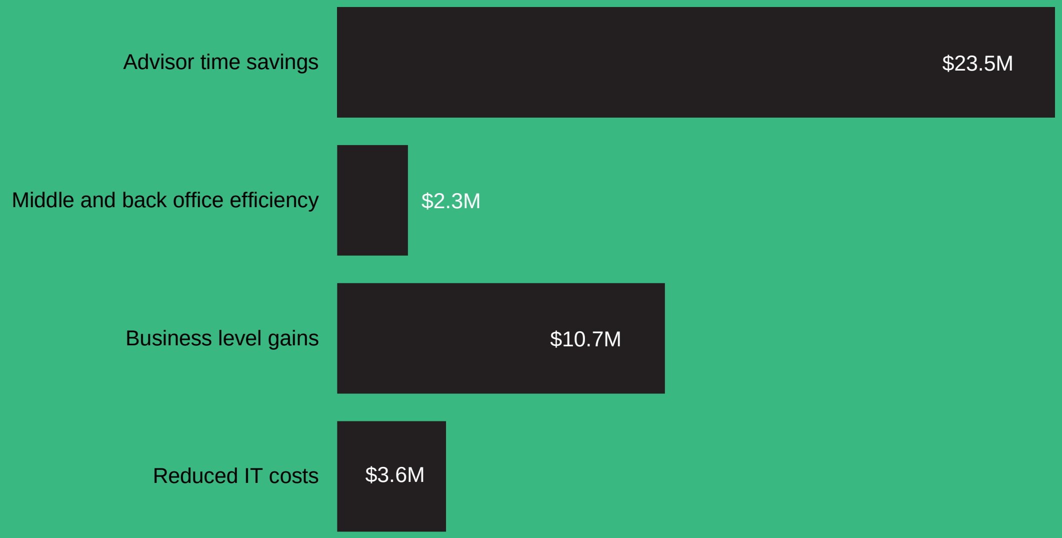
ROI
66%

BENEFITS PV
$40.1M

NPV
$15.9M

PAYBACK
<12 months

Benefits (Three-Year)



Usage of VestmarkONE reduces the effort of middle-office workers by 33% on tasks such as trade capture and rebalancing.

Back-office employees expend 75% less time with reconciliation and reporting work.

Organizations trying to shift to more sophisticated portfolio solutions can realize up to 10% of AUM growth with Vestmark.

Reliance on internal IT personnel is reduced by utilizing Vestmark's cloud platform.

TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for organizations considering an investment in the VestmarkONE platform.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact of the VestmarkONE platform on an organization.

DUE DILIGENCE

Interviewed Vestmark stakeholders and Forrester analysts to gather data relative to VestmarkONE.

DECISION-MAKER INTERVIEWS

Interviewed four decision-makers at organizations using the VestmarkONE platform to obtain data with respect to costs, benefits, and risks.

COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewees' organizations.

FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the decision-makers.

CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Vestmark and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in VestmarkONE.

Vestmark reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Vestmark provided the customer names for the interviews but did not participate in the interviews.

The VestmarkONE Customer Journey

Drivers leading to investment in the VestmarkONE platform

Interviewed Decision-Makers

Interviewee	AUM	Number of advisors using VestmarkONE	Middle/back-office FTEs
Head of advisory	$50+ billion	300	8
VP of equity advisory	$100+ billion	4,000	10
Product owner for trading platforms	$100+ billion	2,800	40
Chief operating officer	$10+ billion	200	5

KEY CHALLENGES

Wealth management organizations recovering from the financial crisis of the past decade faced two major challenges. First, investors desired newer investment strategies that were more flexible and tunable to specific risk and investment objectives. While this was possible with traditional actively managed strategies, it was not scalable with the existing wealth management tools, requiring new functionality in the software. Second, IT development and support were increasingly a hinderance where development speed would lag severely behind the demands of financial advisors. The internal IT structure could no longer support the needs of the business.

"Our old program was antiquated and wasn't funded accordingly because it was difficult to upgrade. There were no improvements actually. We couldn't get to the UMA structure that we wanted to do. Ultimately, we said 'Hey, look, we need a new trading program.'"

Product owner for trading platforms

"Our old platform was kept on life support because of the legacy applications that were connected. Unfortunately, many of our old workflows required a significant amount of manual processing to submit orders for example."

Manager of advisory operations

Overall, interviewees struggled with the following common challenges:

- **The need to work with a greater flexibility in investment solutions as clients required and in a scalable manner.** Interviewees stated that to move to the next level, they needed a platform that could bring sleeve capability so that models of models could be introduced at scale. There was no such capability with legacy platforms and development was out of reach.

- **Functionality limited by technology.** Interviewees cited the lack of ability to perform activities at scale. As an example, one interviewee didn't have the ability to apply to more than 200 accounts on a block order. Another stated their challenge with target drift and how to address it across thousands of accounts; rebalancing by association was also an issue.

- **Supporting existing software and the infrastructure was difficult with digital transformation.** As organizations progressed with digital transformation initiatives, integrations with data feeds and other systems of record became an issue. Live integrations required new development and were difficult given the existing architecture, ultimately resulting in organizations deciding not to update at all in fear of disrupting the connections in place.

"Strategically, we wanted to grow the business with certain capabilities, particularly with the UMA programs that basically were either not scalable in the infrastructure that we had or they were not really achievable to the same standards as some of our industry peers. So, Vestmark was really an avenue for us to scale quickly for us to get some of the functionality that some of our peer groups had."

Product owner for trading platforms

COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite company, and a ROI analysis that illustrates the areas financially affected. The composite organization is representative of the four decision-makers that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

Key assumptions

- **Broker-dealer wealth management org**
- **$83 billion AUM**
- **1,821 advisors use VestmarkONE**
- **25 middle- and back-office FTEs**
- **Advisors on VestmarkONE are discretionary traders**

Description of composite. The composite organization is a large wealth management organization that holds $83 billion in managed account AUM, which is held and traded on a discretionary basis. This organization has a significant base of financial advisors based in remote branch locations with nearly 2,000 advisors using the VestmarkONE platform to directly manage and trade accounts. These advisors manage and trade 75% of their book of business themselves within their branches, while outsourcing the trading and rebalancing of 25% of their accounts to their home office via centrally managed accounts (such as UMA programs, fund wrap programs, etc.). As a large brokerage, it is crucial that the organization offers products and models on a centralized platform so that advisors can access and leverage the full spectrum of investment and portfolio solutions for their clients — both advisor managed and home office managed.

Deployment characteristics. In moving to the VestmarkONE platform, the organization deprecates its existing on-premises infrastructure to support the legacy solution. An essential step to do this is integrating the Vestmark platform with other data sources, which is managed over a period of eight months. Once deployed, change management and ramp time takes no more than three weeks.

Analysis Of Benefits

Quantified benefit data as applied to the composite

Total Benefits						
Ref.	**Benefit**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Atr	Advisor time savings	$7,478,314	$10,369,928	$10,784,725	$28,632,967	$23,471,379
Btr	Middle- and back-office efficiency	$910,035	$933,424	$956,813	$2,800,271	$2,317,597
Ctr	Business level gains	$7,003,125	$3,081,375	$2,403,473	$12,487,973	$10,718,833
Dtr	Reduced IT costs	$2,713,500	$688,500	$688,500	$4,090,500	$3,553,107
	Total benefits (risk-adjusted)	$18,104,974	$15,073,227	$14,833,510	$48,011,711	$40,060,916

ADVISOR TIME SAVINGS

Evidence and data. Interviewees who deployed the VestmarkONE platform for representative as portfolio manager (Rep as PM) programs, which gave discretion and enabled rebalancing duties for advisors, praised how the VestmarkONE platform allowed advisors to reduce their workload in managing client accounts. Specifically, tasks such as managing tax implications, adjusting portfolios for drift, and other rebalancing tasks were key drivers of time savings. More importantly, a portion of the time saved was realigned to tasks such as relationship building and prospecting to increase AUM.

- For the interviewees' organizations, advisors in branches managed and traded accounts in Rep as PM programs but also to some extent leveraged centrally managed programs that were traded/rebalanced centrally by the home office. Advisors saved significant time — as much as 25% — using the VestmarkONE platform.
- Other tasks, such as identifying and managing tax implications and drift of portfolio targets, were equally as important and represented a portion of the time exerted for the advisors.
- Advisors with recouped time generally spent it on generating new business or nurturing existing business to greater AUM.

Advisor time savings on rebalancing tasks:

15%

Modeling and assumptions. Forrester based its modeling on the following:

- The composite organization's advisors manage or trade 75% of their accounts in their remote branches and ceded the trading/rebalancing to the home office for 25% of their accounts.
- There is an assumption that advisors will use time for business development, but we have factored in the usage of time dedicated to this is at a level of 40%, where the remaining time is dedicated to other tasks.
- Forrester made no assumptions on the *new business* that is generated and instead bases the value the composite organization recoups on the average compensation rate of advisors. The

potential for new business is *not* factored into the calculation and could potentially be more impactful than what is indicated.

Risks. Forrester found possible risks or potential variability in the benefit for organizations with different operating structures.

- Firms that depend on more middle- and back-office FTEs to handle rebalancing tasks will see a lower value in this benefit to advisors but a greater benefit to middle- and back-office employees.
- Firms that have higher reliance on models are more likely to realize the full benefit, while firms and advisors who rely less heavily on models will see a less significant benefit.
- The adoption of Vestmark as a discretionary trading platform will vary depending on the organization and therefore affect the usage of features that would have otherwise improved the benefit.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of approximately $23.5 million.

> **"Vestmark makes the work much easier for our advisors to do. The biggest lift is from an account portfolio management perspective in where we are seeing great time savings."**
>
> *Chief operating officer*

Advisor Time Savings

Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Number of total advisors	Composite	4,226	4,395	4,571
A2	Number of advisors with discretionary trading using VestmarkONE	A1*43% average from interviews	1,817	1,890	1,965
A3	Average annual fully loaded advisor compensation	Interviews	$228,630	$228,630	$228,630
A4	Percentage of advisor time saved on rebalancing related tasks	Interviews	15%	15%	15%
A5	Advisor annual time savings on rebalancing per advisor (hours)	A4*2,080 hours	312	312	312
A6	Total hours saved across discretionary FAs using Vestmark	A2*A5	566,960	589,639	613,224
A7	Time reallocated to prospecting and selling new products	A6*A7	40%	40%	40%
A8	Percentage of advisors performing rebalancing activities	Composite	75%	75%	75%
A9	Productivity capture	Assumption	50%	50%	50%
At	Advisor time savings	A2*A3*A4*A7*A8*A9	$9,347,892	$12,962,410	$13,480,907
	Risk adjustment	↓20%			
Atr	Advisor time savings (risk-adjusted)		$7,478,314	$10,369,928	$10,784,725
	Three-year total: $28,632,967		**Three-year present value: $23,471,379**		

MIDDLE- AND BACK-OFFICE EFFICIENCY

Evidence and data. Middle- and back-office employees form the engine driving operations. Interviewees expressed that a large benefit for these employees was the workflow automation the VestmarkONE platform enabled. Middle-office employees performed trade captures instantly with Vestmark, completing them in clicks for a few hundred accounts. The visibility and overall centralized nature of data created many more efficiencies for these employees. Similarly, back-office workers leveraged the same consolidated data to make reconciliation and reporting faster.

- The manager of advisory operations stated: "Controls are centralized in one place, so they no longer need to rely on email communication to resolve matters. There's no longer a reliance on humans to manually determine appropriate trades and which accounts are frozen."
- Trade capture was a huge win for another firm where they stated: "We've probably saved 3 to 4 FTEs just because we don't have people manually sending us trade instructions to capture trades. It's fully automated now and really shifted the workload off our operations group."

"Having to reconcile over a million accounts every single day — it simply wasn't very doable on our old model. We've decreased the work down to 20% of what it was before."

Manager of advisory operations

- For those organizations whose programs relied on rebalancing primarily via the middle- and back-office, the benefit gains in this segment were larger than what is represented for the composite.

"Our mid- and back- office side is saving 70% of their day on trade and reconciliation management."

Chief operating officer

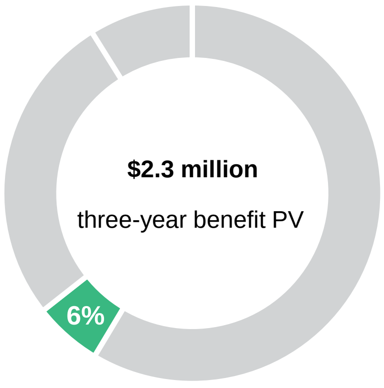
Modeling and assumptions. Forrester based its modeling on the following:

- The composite assumes the home office leverages middle- and back- office employees to handle the rebalancing and trading on 25% of accounts and reconciliation on 100% of accounts.
- Forrester assumes that advisors are in branch and remote locations performing discretionary trading and rebalancing tasks on the remaining 75% of the book of business.
- An allocation to the amount of capture of productivity has been assigned, based upon the utilization rate of these FTEs.

Risks. Forrester did not find any risks to this calculation and thus made no adjustments.

Results. The total gain of this benefit category over a three-year period results in a PV of over $2.3 million.

Middle- and back- office efficiency
6% of the total benefits



Middle- And Back-Office Efficiency					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
B1	Middle-office FTEs	Composite	8	9	10
B2	Back-office FTEs	Composite	15	15	15
B3	Middle-office annual fully loaded compensation	$75,000*1.35x multiplier	$101,250	$101,250	$101,250
B4	Back office annual fully loaded compensation	$68,000*1.35x multiplier	$91,800	$91,800	$91,800
B5	Percentage of time saved in middle office from trade capture and rebalancing (home office)	Interviews	33%	33%	33%
B6	Percentage of time saved in back office — reconciliation and reporting	Interviews	75%	75%	75%
B7	Productivity capture	Forrester standard	70%	70%	70%
Bt	Middle- and back-office efficiency	B7*(B1*B3*B5+B2*B4*B6)	$910,035	$933,424	$956,813
	Risk adjustment	0%			
Btr	Middle- and back-office efficiency (risk-adjusted)		$910,035	$933,424	$956,813
	Three-year total: $2,800,271	**Three-year present value: $2,317,597**			

BUSINESS LEVEL GAINS

Evidence and data. One of the most common rationales for switching to the VestmarkONE platform from older wealth management platforms was the addition of sleeves in a new UMA model. With centralized data and features, such as tax efficiency and guardrails on VestmarkONE, it was not only simpler to manage, but also afforded retail wealth managers the ability to be more prescriptive in their risk management and management of investment objectives across program types including advisor managed. Multiple interviewees noted the technology advancement that added UMA capabilities, sleeves, and more sophisticated modeling capabilities enabled their organizations to offer more sophisticated portfolio solutions — again across program types — and enhanced the customer experience, driving growth in their books of business.

> **"We've grown this line of our business with a lot of credit to Vestmark from a $20 billion to $70 billion dollar business in the last eight years."**
>
> *Head of advisory*

With the added capabilities that VestmarkONE brought, interviewees cited that their organizations brought big firm functionality to their organizations without the technology investment typically necessary of such an upgrade. The benefits of such a move resulted in an increase of recruitment and retention rates of advisors.

- Firms in general gained upwards of 10% AUM in their first year with it trailing off to more nominal gains of 4% in Year 2.

- For another organization, their product owner for trading platforms stated, "We've grown our business in this segment by orders of magnitudes in the time that we've used Vestmark."
- Recruiting and retention was crucial for all interviewees' organizations. One interviewee noted that their organization saw a retention rate that is more than double that of the industry average.
- While technology was not at the forefront of advisors' minds on joining organizations, it was important knowing that there was the capability to drive their books of business forward efficiently and effectively.

Modeling and assumptions. Forrester based its modeling on the following:

- Growth in AUM slows down after a lift of 10% in Year 1.
- People, processes, and technology are a ll contributors to growth. Given what has been observed, 30% of growth is attributed to the use of the VestmarkONE platform, which Forrester believes to be the underpinnings of newer and more sophisticated investment solutions and more efficient processes.

Risks. Forrester identified risks that could potentially change the benefit value calculated, including:

- The extent to which organizations use sleeves or leverage models affect the AUM growth.
- The number of advisors that use VestmarkONE.
- Asset management revenue is calculated at a fee of 1.25% of assets.
- It is anticipated that there is a 30% turnover rate with advisors.

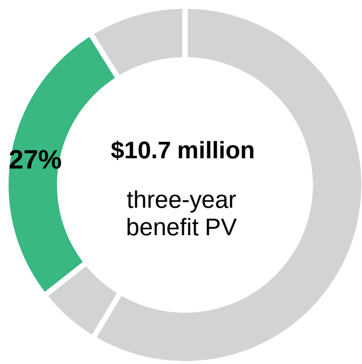
Results. The total benefit realized for a three-year period is a total PV of nearly $10.7 million.

"Recruiting is a big part of our growth. We've been very successful in that for the last several years and Vestmark has been a big part of that … It puts us on par with the larger firms that oftentimes have huge tech teams building their own platform."

Head of advisory

Business level gains

27% of the total benefits



Business Level Gains					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
C1	AUM growth on actively managed accounts managed with Vestmark	Y1: 10% Y2: 4% Y3: 3%	$8,300,000,000	$3,652,000,000	$2,848,560,000
C2	Average revenue margin	Industry average	1.25%	1.25%	1.25%
C3	Average profit margin	Industry average	25%	25%	25%
C4	Attribution to Vestmark	Assumption	30%	30%	30%
C5	Subtotal: Expected profit increase	C1*C2*C3*C4	$7,781,250	$3,423,750	$2,670,525
C6	Advisors recruited annually	A2*30% turnover	545	567	590
C7	Improved rate of recruiting	8% improvement (C6*10%)	44	45	47
C8	Subtotal: Business profit uplift from added advisors	C7*A3/35% advisor earnings*1.5% revenue*25%	$106,803	$111,114	$115,621
Ct	Business level gains	C5+C8	$7,781,250	$3,423,750	$2,670,525
	Risk adjustment	↓10%			
Ctr	Business level gains (risk-adjusted)		$7,003,125	$3,081,375	$2,403,473
	Three-year total: $12,487,973		**Three-year present value: $10,718,833**		

REDUCED IT COSTS

Evidence and data. Forrester found that, due to the entrenched nature of legacy proprietary systems and/or antiquated third-party systems, it was difficult to upgrade and maintain these systems, especially given that infrastructure design changes and movement to the cloud were becoming the norm with digital transformation plans.

- Existing software that was primarily on-premises-based were either retired or reallocated for other purposes.
- The upkeep eliminated from moving away from the prior infrastructure resulted in a reduction or repurposing in multiple FTEs both on the administrative and development side.
- Internal development efforts on home-grown proprietary systems were cut with some organizations reallocating up to 5 developer assets.

"Is it worth it in terms of what we are getting today? Yes, absolutely — just on the functionality level alone. And as for the future? Yes, again, on what they are doing for enhancements to make it even better."

VP of equity advisory

Modeling and assumptions. Forrester based its modeling on the following:

- The sunsetting of existing hardware is not factored into calculations.
- Service and administration of legacy architecture is factored at 20% of the overarching cost to build and develop the platform, which equates to 3 FTEs required, generally from the network operations and development fields.
- The cost to upgrade existing software requires three engineers for initial development and integration with data sources.

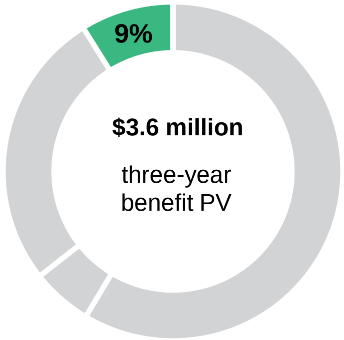
Higher recruiting success rate:

8%

Risks. Forrester found little risk associated with this benefit and in fact has been extremely conservative with the estimates of IT requirements.

Results. The benefit of relieving IT from the aforementioned tasks yields a three-year, risk-adjusted total PV of $3.6 million.

Reduced IT costs
9% of the total benefits



Reduced IT Costs					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
D1	Maintenance cost of existing software and infrastructure	Equivalent of 3 NetOps engineers at $135k per year fully loaded	$405,000	$405,000	$405,000
D2	Percentage of existing software retired	Interviews	50%	50%	50%
D3	Upgrade cost of existing software	Equivalent of 3 software engineers at $162k per year fully loaded	$486,000	$486,000	$486,000
D4	Cost of updating existing hardware infrastructure	D1/20%	$2,025,000		
Dt	Reduced IT costs	D1*D2+D3	$2,713,500	$688,500	$688,500
	Risk adjustment	0%			
Dtr	Reduced IT costs (risk-adjusted)		$2,713,500	$688,500	$688,500
	Three-year total: $4,090,500		**Three-year present value: $3,553,107**		

UNQUANTIFIED BENEFITS

Additional benefits that customers experienced but were not able to quantify include:

- **Increased productivity of junior-level advisors.** Interviewees' organizations using the predefined model layout from Vestmark quickly and effectively leveraged more junior-level advisors with preset boundaries and restrictions. Effectively, trades and portfolio targets were kept within bounds by guardrails that can be managed within the software thereby decreasing excessive trading and trading errors. Advisors achieved client requirements faster and hit the ground running more quickly and the firms were better able to manage risks.
- **Solutions mix growth to attract new investments.** The expanded matrix of products and solutions enabled by Vestmark with sleeves and sophisticated modeling capabilities gave advisors new ways to solve for clients' portfolio goals. Advisors gained the capability to greatly improve the sophistication and personalization of what they offer and at the same time, offer it at scale to many clients. While not directly attributable in a quantified fashion, multiple interviewees stated that this capability has helped their organizations grow AUM.

FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement VestmarkONE and later realize additional uses and business opportunities, including:

- **The modularity of the VestmarkONE platform.** Many modern wealth management platforms are end-to-end solutions, but the reality is that not everything can be converted at one given time. Interviewees were happy that costs could be contained to what was essential with the option to do more later. One interviewee simply did not need the full range of tools and were happy to buy just the components they needed.

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs

Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Etr	Overall solution cost	$1,954,399	$8,326,957	$9,080,425	$9,466,203	$28,827,983	$24,140,941
	Total costs (risk-adjusted)	$1,954,399	$8,326,957	$9,080,425	$9,466,203	$28,827,983	$24,140,941

OVERALL SOLUTION COST

Evidence and data. Organizational representatives expressed that their pricing model was generally aligned to the number of accounts and/or assets managed. In addition to software costs, organizations also incurred indirect costs such as implementation and change management.

- The licensing cost used in the calculations is at list pricing levels and should be construed as what is available on the open market. Pricing should be discussed with a Vestmark representative.
- Internal efforts to plan, integrate, and operationalize the platform were included in costs for interviewees' organizations. Professional services were key in bringing the teams up to speed, and the number of proprietary data sources along with external data sources resulted in a significant effort to bring all things together.

"Vestmark is expensive, but it has been worth it as it has been the driver to grow our assets like crazy."

VP of equity advisory

- People are often resistant to change. Vestmark required a change in both technology and process flow. Organizations saw that advisors needed approximately seven hours of training and ramp before being proficient with the platform.

Modeling and assumptions. Forrester based its modeling on the following.

- Advisors mostly train in the initial period.
- Internal integration and customization costs are spread between multiple DBAs and developers over a period of months.
- The expectation is that advisors have a turnover rate of 30% and, as such, training and adaptation is repeated for a small population of advisors in Years 2 and 3.

Risks. Forrester found very little risk for the cost of the licensing of the solution to shift. Pricing projections are based upon list/standard pricing from Vestmark and should be construed as such. Projections for change management and implementation are presented with conservatism in mind.

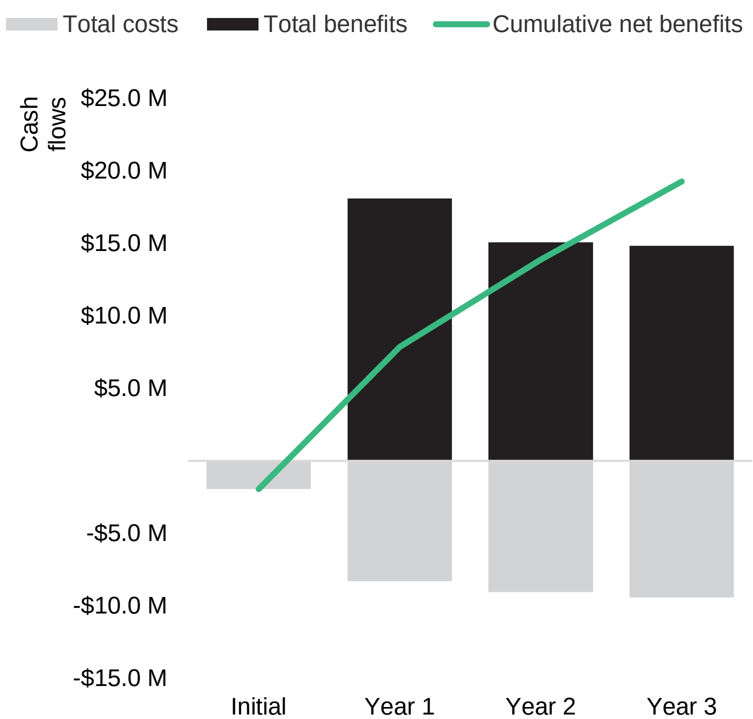
Results. The cost of software licenses, implementation, and change management on a three-year scale result in a PV (discounted at 10%) of $24.1 million.

Overall Solution Cost						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
E1	Direct and indirect costs, inclusive of change management and integration		$1,954,399	$8,326,957	$9,080,425	$9,466,20
Et	Total solution cost	E1	$1,954,399	$8,326,957	$9,080,425	$9,466,20
	Risk adjustment	0%				
Etr	Software solution cost (risk-adjusted)		$1,954,399	$8,326,957	$9,080,425	$9,466,20
	Three-year total: $28,827,983			**Three-year present value: $24,140,941**		

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	($1,954,399)	($8,326,957)	($9,080,425)	($9,466,203)	($28,827,983)	($24,140,941)
Total benefits	$0	$18,104,974	$15,073,227	$14,833,510	$48,011,711	$40,060,916
Net benefits	($1,954,399)	$9,778,016	$5,992,802	$5,367,308	$19,183,727	$15,919,975
ROI						66%
Payback period (months)						<12

Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

TOTAL ECONOMIC IMPACT APPROACH

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.

PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.

NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.

RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.

DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Appendix B: Supplemental Material

Related Forrester Research

“The Top Wealth Management Technology Investments in 2021,” Forrester Research, Inc., October 1, 2020.

“The Future Of Work In Wealth Management,” Forrester Research, Inc. March 2, 2020.

Appendix C: Endnotes

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[1] Total Economic Impact is a methodology developed by Forrester Research that enhances a company’s technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.


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