

Global Investment Manager Analysis | October 26, 2020

GIMA Update

Operational Due Diligence During COVID-19

In March 2020, COVID-19 significantly disrupted the way asset managers conducted business and as a result certain trends around operational risk are likely to persist well into the future. With the onset of the pandemic, most firms made changes over a few short weeks to ensure the safety of their employees, which included moving a majority of their staff to working remotely. Subsequently, in the current environment, there has been increased scrutiny on certain operational risks within the investment management industry.

In previous publications, GIMA has outlined our practice of evaluating asset managers by our dedicated Operational Due Diligence (OpDD) team to ensure they are consistent with sound practices (found [here](#)). In this paper, we seek to assess the impact of COVID-19 on the non-investment operations of asset managers across the industry and how this will impact operational risk reviews going forward.

During the onset of the pandemic in March 2020 as markets reacted to the spread and impact of COVID-19, a number of heightened operational risks presented themselves given the current environment. Notable areas of non-investment risk emerged including business continuity, cybersecurity, valuation and key person risks.

Beyond GIMA's ongoing reviews of asset managers, since the market dislocation in March, we have proactively discussed these operational risks with firms. For example, technology and cybersecurity have been an enhanced area of focus and have gained more attention throughout the industry with the onset of the pandemic. Adequate resources, policies, and prioritization of technology, cybersecurity and business continuity have been essential for managers to successfully navigate the "new normal" since the onset of COVID-19. In addition, private asset valuations has been a key focus area as severe dislocations in public markets pointed to sudden potential valuation changes within the private markets.

The sections below outline some of the themes and findings obtained by the GIMA OpDD Team from these discussions and highlights several areas of focus in evaluating operational risk given the current environment.

Grant Badura

Investment Analyst

Grant.Badura@morganstanley.com

+1 212 296-1279

Keith Fortmiller

Investment Analyst

Keith.Fortmiller@morganstanley.com

+1 212 296-1839

Daniel Maccarrone

Investment Analyst

Daniel.Maccarrone@morganstanley.com

+1 212 296-1278

Business Continuity

42% of the US labor force was working from home full-time in May 2020

Source: Stanford Institute for Economic Policy Research

The spread of COVID-19 and the stay-at-home orders, initially prescribed by the federal and local government, has led to the vast majority of managers to engage their business continuity plans (BCPs). BCPs are formulated by managers to minimize disruptions resulting from events such as natural disasters and cyber-attacks. As part of the BCP, managers establish policies and procedures on how the firm can bring the entire business back to full functionality after a crisis and, in some instances, resume business operations outside of their regular office location. Further, managers must review the BCPs of their key service providers to ensure that the functions performed by these third parties are not impacted by any widespread disruptions. Adjacent to a BCP is a disaster recovery plan (DR), which typically outlines the technology-related aspects of the firm's operations to ensure minimal impact in the case of a business disruption.

GIMA's standard OpDD process includes an assessment of a manager's BCP and DR to determine if adequate protocols have been implemented. This includes reviewing whether a manager has formulated, tested, and periodically updated their DR/BCP to ensure that they can operate their businesses in a temporary or long-term business disruption, such as during the COVID-19 pandemic. At times, GIMA has identified gaps from sound practices and requested managers to make enhancements such as formalizing their BCP and DR plans and incorporating more comprehensive testing procedures.

During the COVID-19 outbreak, almost all of the managers under GIMA's purview successfully employed their DR/BCP and implemented "work from home" for the majority of their employees. To date, GIMA has not identified any significant disruptions to their core operations.

Managers indicated that today's technology has afforded them the ability to work remotely for an extended period of time. Notably, managers have implemented various digital collaboration tools such as Zoom, WebEx and Microsoft Teams, which have allowed for meetings to occur virtually with employees and current/prospective investors. Specifically, as part of the OpDD process, these collaboration tools have allowed managers to share confidential data (e.g., Compliance Manual and regulatory exam letters), which would often be shared during an onsite meeting.

300 million peak daily Zoom meeting participants in April 2020, up from 10 million in December 2019

Source: Zoom Video Communications, Inc.

While these tools are beneficial for managers, GIMA notes that there are certain risks that are associated with the usage of these collaboration tools. In an attempt to restrict unauthorized access to the meeting rooms, GIMA requests managers to utilize encrypted conference rooms, passwords for each virtual meeting, and that the host admits participants into the meeting. Further, as confidential documents are being viewed remotely, managers should utilize screen share watermarks, which allows managers to easily track any potential leaks of sensitive data. While the usage of these tools is somewhat new, GIMA has had discussions with managers to ensure they are implementing these sound practices.

Technology Infrastructure/ Cybersecurity

COVID-19 has forced most employees of investment managers to operate from a remote environment. This has coincided with a secular trend over the past few years of many firms shifting away from on-premises physical infrastructure to running core technology operations through cloud computing.

By leveraging cloud infrastructure, managers are afforded a measure of infrastructure scale and redundancy. As such, in today's environment, where employees have worked from home for extended periods of time, cloud solutions have been effective in ensuring long-term business continuity and stable continuing operations.

Average total cost of a data breach in the financial services industry in 2019 was \$5.86 million

Source: IBM

While leveraging the cloud may afford asset managers scale and cost efficiencies, it may push proprietary and/or sensitive information off-premises and into a third-party environment. This presents its own unique risks, including unauthorized access. GIMA's OpDD Team has sought to mitigate the risk of unauthorized access to sensitive information in the cloud. In recent years, it has been a standard practice for the GIMA OpDD Team to require managers to implement enhancements to mitigate risks of unauthorized access to sensitive data and the firm's networks.

Although data security measures had been adopted by some

GIMA UPDATE

managers, there have been many instances where the GIMA OpDD Team worked with a manager to institute multi-factor authentication (MFA) and segmentation of information to only employees who have an express business need to maintain access to such information. At the same time, cloud security protocols must be appropriately configured and GIMA generally relies upon a manager's best judgment and expertise to institute these protocols.

Cybersecurity attacks against financial institutions increased 238% between the months of February and May 2020

Source: Verizon Enterprise

Cybersecurity experts routinely state that the best defense against cybersecurity starts at the frontline with employees being aware and knowledgeable of cybersecurity risks. Accordingly, GIMA's OpDD Team reviews the robustness of a manager's cybersecurity training program and will request enhancements if the program is not adequate. This may involve targeted cybersecurity training as well as random phishing exercises. Phishing exercises are important given that phishing remains the leading method of breaches by hackers. A number of managers have reported increases in phishing attacks since the onset of COVID-19.

Return to Work

88% of employees in Financial Services were working from home in May 2020

Source: Salesforce

GIMA has engaged in conversations with numerous managers in regards to their plans for an eventual "return to work". Given the unique attributes of every manager, there does not appear to be a one-size-fits-all answer, model or plan for return to work. Ideally, the GIMA OpDD Team is looking for managers to be thoughtful and flexible in their planning and take into account office/employee location, the potentially changing circumstances around COVID-19, employee health and the impact of individual employees' circumstances. Matters that managers need to consider include the status of the COVID-19 outbreak in the locality of the manager's headquarters/offices and ability to social distance within the office and use of public transportation, among others.

As managers begin to transition employees back to the office, there have been preliminary discussions among some managers about potentially allowing certain employees flexibility to work from home on a more regular or permanent basis. For firms that choose this route, this may lead to a reduced office footprint. While this transition could take many years due to existing lease agreements with property

management companies, firms have seen many efficiencies with employees working from home, and a smaller office footprint could reduce firm expenses. Additionally, a remote footprint may allow firms to hire talent outside of the region from where they operate. With employers offering this flexibility to employees, the GIMA OpDD Team will continue to monitor the impact of working remotely and identify sound practices, which will help reduce operational, compliance and business risk that managers/employees may face.

Key Person Clauses

Attrition is a normal part of the asset management industry and presents its own unique set of risks from an OpDD perspective. A number of managers across the industry have experienced substantial drawdowns due to the market dislocation in March 2020 stemming from the spread of COVID-19. This has led to potential situations where portfolio managers and/or key decision makers may discover that it is difficult to earn carried interest/performance fees and may consider departing for new opportunities.

GIMA is not currently aware of any key person departure concerns amongst GIMA approved managers related to the recent drawdown. Nonetheless, the OpDD Team has consistently made it a priority to implement investor friendly key person terms that give investors the option not to continue with an investment if key decision makers depart.

The table below outlines the key features of a key person clause among hedge funds and private equity/credit funds GIMA typically seeks:

	Hedge Fund	Private Equity/Credit Fund
Structure	Perpetual life, generally fully invested in the fund once subscribed	Finite life with capital drawn down over a period of time (investment period)
Trigger	Typically the departure of a key Portfolio Manager	Departure of one or several key decision-makers
Purpose	Lifting of lock up and/or early redemption fee	Pause investment period, lift obligation to fund drawdowns until cured
Cure	Generally none. Investors can remain or depart depending on the succession plan, if presented	Vote by LP's on a replacement of departed personnel, continue/end investment period

Valuation

As outlined in further detail in the GIMA valuation papers written in [March 2020](#) and May 2020 (please contact your Financial Advisor for more information), the valuation of illiquid assets and the potential re-pricing lag of these assets in volatility markets can have a material impact on an investor's experience when making a subscription or redemption from a fund holding illiquid assets. This was

GIMA UPDATE

especially evident during the COVID-19-related volatility in March 2020.

Certain credit-oriented products, which may allow subscriptions on a daily or monthly basis, may hold significant illiquid holdings (50%+ in some instances). It is generally either unfeasible or cost-prohibitive to have third-party oversight of valuation of illiquid holdings on a daily basis. As such, managers have opted to utilize a third-party valuation agent to value these assets on a less frequent basis (e.g., monthly, quarterly). Given the lag in valuations, especially during a period of volatile markets such as in March 2020, investors who invested on a daily basis may have been impacted by investing in funds with significant illiquid holdings that did not re-price those illiquid holdings as the markets moved sharply lower.

In instances where GIMA reviewed daily subscription products with significant illiquid holdings, we have worked with the manager to 1) increase the frequency of third-party oversight of the valuation of the fund's illiquid holdings and 2) revise their subscription process for MSWM clients to match the frequency of third-party valuation oversight (i.e. monthly subscriptions instead of daily).

While GIMA's position on the frequency of third-party oversight of valuation is consistent among credit-oriented products, there are instances where real estate products allow for daily subscriptions where the third-party oversight of valuation of the underlying real estate properties may not be as frequent. GIMA's view is that the valuation risk is largely mitigated by the fact that these real estate products are highly diversified and invested in stable core real estate assets that generally do not have high intra-month price volatility and are valued utilizing back-tested valuation methodologies that have demonstrated accuracy and resilience.

GIMA's OpDD Process During COVID-19

COVID-19 caused GIMA's OpDD Team to make several adaptations to its OpDD process. In lieu of an on-site visit, OpDD analysts have leveraged video-conferencing tools (e.g., Zoom) as an alternative to a physical onsite visit. Having the ability to discuss the intricacies of the organization and process more in depth with a visual connection to the senior staff of the managers enhances the quality of the review beyond a review of firm/fund documents. However, video-conferencing tools do not completely replace the benefits of the onsite. Therefore, once COVID-19 subsides, GIMA expects to resume manager onsite visits. However, GIMA will likely utilize video-conferencing tools as a supplement to our onsite due diligence process going forward.

Conclusion

GIMA's Operational Due Diligence process continues to focus on business continuity, disaster recovery, cybersecurity, valuation and key person provisions as important areas of operational risk that have only become more heightened with the onset of the COVID-19 pandemic.

The GIMA OpDD continues to adapt to the current environment to assess the enhanced business risks that have arisen in recent months. Consequently, the risks that we identify now may differ from the risks that are identified in the future as the landscape evolves. As such, we the OpDD Team continues to adapt and refine its process and remains flexible in the manner in which it addresses new and emerging areas of concern.

GIMA UPDATE

Disclosure Section

Important Disclosures

Report for Use Only in Investment Advisory Programs

This report is only to be used in Morgan Stanley Wealth Management investment advisory programs and not in connection with brokerage accounts.

The Global Investment Manager Analysis (GIMA) services Only Apply to Certain Investment Advisory Programs

GIMA evaluates certain investment products for the purposes of some – but not all – of Morgan Stanley Smith Barney LLC's investment advisory programs (as described in more detail in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management). If you do not invest through one of these investment advisory programs, Morgan Stanley Wealth Management is not obligated to provide you notice of any GIMA status changes even though it may give notice to clients in other programs.

Consider Your Own Investment Needs

This report is not intended to be a client specific analysis or recommendation, an offer to participate in any investment, or a recommendation to buy, hold or sell securities (includes securities of Morgan Stanley, and/or their affiliates if shown in this report). Do not use this report as the sole basis for investment decisions. Do not select an asset class or investment product based on performance alone. Consider all relevant information, including your existing portfolio, investment objectives, risk tolerance, liquidity needs and investment time horizon.

Performance and Other Portfolio Information

General

Past performance does not guarantee future results. There is no guarantee that this investment strategy will work under all market conditions. As a result of recent market activity, current performance may vary from the performance referenced in this report.

For mutual funds, the investment return and principal value of an investment will fluctuate so that an investor's shares, when redeemed, may be worth more or less than their original cost. To obtain performance information, current to the most recent month-end, please contact the fund directly at the website set out on the cover page of this report.

Benchmark index

Depending on the composition of your account and your investment objectives, any indices shown in this report may not be an appropriate measure for comparison purposes and are therefore presented for illustration only.

Indices are unmanaged. They do not reflect any management, custody, transaction or other expenses, and generally assume reinvestment of dividends, accrued income and capital gains. Past performance of indices does not guarantee future results. You cannot invest directly in an index.

Performance of indices may be more or less volatile than any investment product. The risk of loss in value of a specific investment (such as with an investment manager or in a fund) is not the same as the risk of loss in a broad market index. Therefore, the historical returns of an index will not be the same as the historical returns of a particular investment product.

Other data

Portfolio analysis may be based on information on less than all of the securities held in the portfolio. For equity portfolios, the analysis typically reflects securities representing at least 95% of portfolio assets. This may differ for other strategies, including those in the fixed income and specialty asset classes, due to availability of portfolio information.

Other data in this report is accurate as of the date this report was prepared unless stated otherwise. Data in this report may be calculated by the investment manager, Morgan Stanley Wealth Management or a third party service provider, and may be based on a representative account or a composite of accounts.

Securities holdings

Holdings are subject to change daily, so any securities discussed in this report may or may not be included in your portfolio if you invest in this investment product. Your portfolio may also include other securities in addition to or instead of any securities discussed in this report. Do not assume that any holdings mentioned were, or will be, profitable.

Sources of Data

Material in this report has been obtained from sources that we believe to be reliable, but we do not guarantee its accuracy, completeness or timeliness. Third party data providers make no warranties or representations relating to the accuracy, completeness or timeliness of the data they provide and are not liable for any damages relating to this data.

No Tax Advice

Tax laws are complex and subject to change. Morgan Stanley Smith Barney LLC ("Morgan Stanley"), its affiliates and Morgan Stanley Financial Advisors and Private Wealth Advisors do not provide tax or legal advice and are not "fiduciaries" (under ERISA, the Internal Revenue Code or

GIMA UPDATE

otherwise) with respect to the services or activities described herein except as otherwise provided in writing by Morgan Stanley and/or as described at www.morganstanley.com/disclosures/dol. Individuals are encouraged to consult their tax and legal advisors (a) before establishing a retirement plan or account, and (b) regarding any potential tax, ERISA and related consequences of any investments made under such plan or account.

If any investments in this report are described as "tax free", the income from these investments may be subject to state and local taxes and (if applicable) the federal Alternative Minimum Tax. Realized capital gains on these investments may be subject to federal, state and local capital gains tax.

Conflicts of Interest

GIMA's goal is to provide professional, objective evaluations in support of the Morgan Stanley Wealth Management investment advisory programs. We have policies and procedures to help us meet this goal. However, our business is subject to various conflicts of interest. For example, ideas and suggestions for which investment products should be evaluated by GIMA come from a variety of sources, including our Morgan Stanley Wealth Management Financial Advisors and their direct or indirect managers, and other business persons within Morgan Stanley Wealth Management or its affiliates. Such persons may have an ongoing business relationship with certain investment managers or mutual fund companies whereby they, Morgan Stanley Wealth Management or its affiliates receive compensation from, or otherwise related to, those investment managers or mutual funds. For example, a Financial Advisor may suggest that GIMA evaluates an investment manager or fund in which a portion of his or her clients' assets are already invested. While such a recommendation is permissible, GIMA is responsible for the opinions expressed by GIMA. See the conflicts of interest section in the applicable Form ADV Disclosure Document for Morgan Stanley Wealth Management for a discussion of other types of conflicts that may be relevant to GIMA's evaluation of managers and funds. In addition, Morgan Stanley Wealth Management, MS&Co., managers and their affiliates provide a variety of services (including research, brokerage, asset management, trading, lending and investment banking services) for each other and for various clients, including issuers of securities that may be recommended for purchase or sale by clients or are otherwise held in client accounts, and managers in various advisory programs. Morgan Stanley Wealth Management, managers, MS&Co., and their affiliates receive compensation and fees in connection with these services. Morgan Stanley Wealth Management believes that the nature and range of clients to which such services are rendered is such that it would be inadvisable to exclude categorically all of these companies from an account. Morgan Stanley charges each fund family we offer a mutual fund support fee, also called a "revenue-sharing payment," on client account holdings in fund families according to a tiered rate that increases along with the management fee of the fund so that lower management fee funds pay lower rates than those with higher management fees.

© 2020 Morgan Stanley Smith Barney LLC. Member SIPC. Graystone Consulting is a business of Morgan Stanley.

RSI1603376636734 10/2020