The Family Office Association Audio Series: Volume 2 with Sam K. Won

Institutional Quality Risk Management for Family Offices

Governance, Process and Controls

FOA Audio Series Volume 2

Institutional Quality Risk Management for Family Offices Governance, Process and Controls with Sam Won

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Samuel K. Won is the Founder and Managing Director of Global Risk Management Advisors, Inc.

Mr. Won has close to 25 years of risk management, capital markets, trading and portfolio management experience at major financial institutions in the public and private sectors. In the investment management industry, Mr. Won was Chief Risk Officer at Brencourt Advisors, Chief Risk Officer at Ospraie Management, and he headed up investment risk management of over $44 billion in alternative assets for Citigroup Alternative Investments. On Wall Street, Mr. Won led trading risk management for customer trading, proprietary trading and capital markets for Citigroup Global Markets, and he played a similar role as Global Head of Risk Management at Dresdner Kleinwort Benson. In the public sector, Mr. Won was in charge of risk management for the capital markets portion of the bailout of the Savings and Loan industry during the 1980s. Mr. Won played a leading role in creating the risk management section of the Managed Funds Association's Sound Practices for Hedge Fund Managers. He has advised leading hedge funds, private equity funds, other asset managers, institutional-investors and regulatory agencies, including the SEC, the CFTC, the Federal Reserve, the Office of the Comptroller of the Currency and the FSA, on major risk management, trading and capital markets issues and policies.

Mr. Won has extensive experience in investment risk management, risk architecture and analysis, asset allocation/risk budgeting, portfolio strategy, and investor relations/marketing for a wide range of asset classes and investment strategies, including hedge funds, private equity, real estate and long-only investments. In addition, Mr. Won served on the investment and risk committees at several major financial institutions, where he headed up investment risk management. Mr. Won was named Co-Chairman of the Managed Funds Association's Chief Risk Officer Forum/Steering Committee.

Mr. Won completed a B.A. at Northwestern University, attended the Tuck School of Business at Dartmouth College and received a Masters degree from Columbia University with a concentration in International Finance and Economic Policy Management.

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Angelo J. Robles is Founder and CEO of the Greenwich, Connecticut-based Family Office Association (FOA), a global membership organization that delivers private educational and networking opportunities, proprietary research, and access to salient thought leadership to multiple generations of wealthy families and the professionals who run their single-family offices.

A member of the Princeton Council on Family Offices and the NYU Stern Family Office Council, Mr. Robles has a long record of leadership positions at top financial-service companies, including UBS. Before launching FOA, he founded and ran several successful entrepreneurial ventures: He served as President of the New England chapter of the Hedge Fund Association, and pioneered online retirement planning for Fortune 1000 executives with two Internet startups - 401KRollover.com and IRARollovers.com.

Author of several books and articles, Mr. Robles has appeared on Bloomberg Television and Radio, and has been quoted in the Wall Street Journal, Thompson Reuters, Institutional Investor, Opalesque, Registered Rep, HFM Week, Investment News, EurekaHedge, The Luxury Institute, Private Asset Management, The Greenwich Times and many other media outlets.

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Family Office Association is a global community of ultra-high net worth families and their single family offices. We are committed to creating value for each family that we serve; value that grows wealth, strengthens legacy, and unites multiple generations by speaking to shared interests and passions. FOA has the resources to solve your most difficult challenges and help you achieve your
collective goals: to invest intelligently, give strategically, and learn exponentially.

FOA is the community leader in serving all the key imperatives for ultra-high net worth families, respecting your privacy but enabling an intimate community of global families like yours. Our organization delivers private education and networking opportunities, proprietary research, and access to salient thought leadership that will interest all generations of your family.

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FOA Audio Series Volume 2: Institutional Risk Management for Family Offices: Governance, Process and Controls

Angelo Robles: Hello, everyone, it's Angelo Robles at Family Office Association in today's audio podcast. I am here with my friend Sam Won, founder and managing director, Global Risk Management Advisors. Hello, Sam. How are you?

Sam Won: I am fine, Angelo. How are you?

Angelo Robles: I am doing fantastic, such a pleasure to connect. We are going to have a conversation today about risk management specifically as it pertains to financial wealth, which I believe is one of the most important, if not the foundation of importance when it comes to investing. On that note, Sam, let us get right to it. If you do not mind, for our audience, define the meaning of a risk management as it pertains to the financial wealth of a very wealthy family or a single family office.

Sam Won: I would be happy to answer that question. Angelo, risk management in relationship to financial wealth really needs to be thought of in two segments. The first segment that family offices should care about is protection of assets or wealth preservation. The second important factor they need to think about is how can they have growth in that wealth over time in a sound, sustainable manner. With that, the kinds of risks that Family Offices should be aware of really fall into several buckets. The first is market or price risk meaning that the price of their investment or their asset is subject to going down and that decline can happen many times in market cycles very dramatically as it did in the 2008 financial crisis, where S&P went down 38.5 percent. The other kind of risks that Family should also be aware of in relation to their investments or their investment portfolio are liquidity risk. That is are the investments that they have made liquid to meet their liabilities or their other financial needs. Thirdly, in the financial crisis, one of the things that became evident was credit or counter party risk. By credit or counter party risk, many families saw institutions such as Lehman Brothers or Bear Stearns that have been around for well over one hundred years disappear. They also saw investments in their portfolio that may have been triple A rated that were in fact not triple A rated. The credit crisis, or the financial crisis rather, brought to the forefront that credit and counter party risk, liquidity risk, are very much risk factors that affect all investors, but in particular family

> Risk Management in relation to financial wealth really needs to be thought of in two segments. The first...is protection of assets or wealth preservation. The second...how can they have growth in that wealth over time in a sound, sustainable manner.

offices investors because of the size of their portfolios.

The other kind of risk that family offices should also be aware of is leverage risk. That is in the number of their investments, there is either implicit or explicit leverage. Typically, this kind of leverage is found in their alternatives investment portfolio in investments whether it is hedge funds or private equity. Finally, the other risk that family offices need to be cognizant of is what we call concentration risk. That is a fancy way of saying that sometimes family offices have too much of their wealth concentrated in a few eggs within the nest.

Angelo Robles: Absolutely, speaking to potentially the definition from a financial perspective and to kind of bring our audience into the challenges that they face effectively defining risk, probably a classic definition, risk is the probability that an investment return will differ from its average historical return during a defined investment period. I suppose that you cannot make acute decisions if you can't measure risk. What are some of the metrics that an organization or a family could do to truly help and I know we have multiple levels of risk here. You described a couple of them, liquidity, credit, counter party, etc. Where does a family even start?

Sam Won: The starting point, that is a great question, Angelo. It is a question that we get asked often. The correct starting point for a family office, if they are going to do more formal what we call institutional quality style risk management begins with governance and risk management framework. That is what is sort of the top down. That is also what makes it possible to have actionable risk management because metrics alone will not give a family office or any other institutional investor guidance on what to do about your risk. When we work with family offices, the first place we start is in creating an investment policy statement. For some families where they have family members that sit on a board of a foundation or endowment would be familiar with this document. This document essentially defines what your investment approach is, it serves as your investment charter. It also defines what you do for risk management, what the roles and responsibilities of the families members are to the extent that there is some kind of committee within the family that is an investment or risk management committee. It should define the roles and responsibilities for the family's risk management. As an addendum to this

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document, what typically you would want to have in place are risk policy guidelines. The risk policy guidelines effectively define the risk budget or the risk tolerance level for a family. This is very, very important because you cannot begin to do any kind of risk based asset allocation, you cannot begin to do any risk management if there is no benchmark against which you are governing your risks because you have not defined what your appetite or budget for risk is. Let me give you a few examples to make it more tangible.

Within the risk policy guidelines [would also be] the kind of investments that are permissible, the kind of asset allocation that the family is comfortable with. There might also be guidelines around credit or credit party risk, liquidity, leverage, volatility...

The typical kinds of things that it would be in this risk policy guideline that would be an addendum or subset of the family offices investment policy statement would be things such as what is the family's limit or tolerance for draw down on their investments. In other words, how much do you feel comfortable losing before you are going to escalate or take some escalated action, meaning go to cash or redeem from investments. It would also be within these risk policy guidelines, the kinds of investments that are permissible and the kind of asset allocation that the family is comfortable with. There might be also guidelines around credit or credit party risk, liquidity, leverage, volatility often expressed by value-at-risk or VaR as it is known to some people. All of these kinds of documents essentially create a parameter, if you will call it that, and define the family's objectives for investment and it also defines what the risk is. Now, if you define what your investment objectives and what your risks are and you understand that risk and return work in an inverse nature, than it sets the foundation by which the family can now begin to try to govern it. The governance has been defined in that investment policy statement that the thresholds and the parameters for risk have been delineated in the risk policy guidelines.

Then to your earlier question, you are absolutely correct, Angelo in that you cannot manage what you do not measure and monitor. It is critical that family offices are able to have meaningful metrics that give them an idea of what their market, credit, liquidity, counter party, leveraged risks are in any single investment. Then, it is also critical that they understand what the correlative effects are for the investment risks in their aggregate portfolio. When I mean aggregate portfolio, I mean both their liquid investments such as long only, as well as their illiquid investments such as real assets, hedge fund investments, private equity investments, etc. So what I just described is

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not only the starting point, but it is really the basis and the framework for risk management that families need to understand and must have in place if they are really going to be doing any kind of meaningful and actionable risk management.

Angelo Robles: That effectively implies institutional quality risk management which let's be honest, Sam, the vast majority of SFOs, even ones that are very large and often sophisticated, often this is overlooked. I would like to circle back. We may hit upon importance of the investment policy statement and some of the parameters that should be outlined there and before that, and you also noted it in your commentary governance. Sometimes you do not hear that word too often as it relates to the world of investing or specifically the risk management portion. If you do not mind, give our audience a little deeper and more granular perspective of what governance would include? Is it a combination of members within the family? Is it a written document structured by legal people? How would they even go about setting governance as it pertains to risk management?

Sam Won: That is a great question and I am happy to try to tackle it. Governance, at the end of the day, really can be used as a synonym for manage and management done well. You are absolutely correct that the typical family office / SFO, we observe in our extensive experience that they do not have the internal staff. They do not have the systems. They do not have the know how to really properly do internal risk management. That is one of the reasons, not meaning to be self-serving, why we exist, to facilitate that and to help these families to better manage it, to better govern those risks. But to answer how does this all work? Part of the answer lies in the fact that your question was a good one. If you asked that question to me as a yes or no type of question, I would have said all of the above, meaning that in order for there to be good governance or good management of risk with this family office or SFO, you have got to have that document which really defines who is doing what, what your appetite for risk is, and how you are a going to affect, with an "a," risk management in the way that the family invests, redeems, monitors, and manages their investment portfolio. That document (IPS and Risk Policy Guidelines)needs to spell all of those things out.

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One of the things that I often get asked is they say we like the fact that you talk about actionable risk management. What is actionable risk management? What actionable risk management means is that if you have that budget for risk so you do not get over your skis, you know that you have a boundary for how much volatility or how much draw down that portfolio can suffer. That is usually measured against a scenario such as a scenario that a lot of our clients are particularly interested in is if we were to have another 2008, how much could we lose in that investment portfolio? Is it within our parameters for risk, within our tolerance levels? Then, you would need to establish formal processes to say if we fall outside of that risk budget or parameter, what is supposed to happen? Typically, this is part of an escalation policy where members of the family and/or committee such as a risk and investment management committee makes decisions when there is a material breach of the risk policy guidelines. We highly recommend that in order not to be too insular or inbred, so to speak, that it does make sense to have some qualified people to assist a family with risk management. I underscore qualified people who have the investment and risk management chops to be able to independently and neutrally sit on a governance committee for a family. In other words, it cannot be somebody who is trying to sell you an investment or sell you an asset allocation. If you establish these processes and the kind of processes we think are important for having effective governance, it translates into actionable risk management. Actionable risk management requires that there is a formal process that the family must go through in terms of due diligence, and for ensuring that the family is within their risk parameters or risk budget and has performed the necessary downside analysis before a new investment has been made. Even the most brilliant investors, it does not matter if you are a prophet (of “Omaha”), make mistakes. You want to make sure that if you do make a mistake, there is a well thought out process in place to defease risk or in other words cut your losses. That (process) needs to be a written and formal process. There should also be a formal process by which you periodically monitor your investments and evaluate your managers against benchmarks and against your risk policy guidelines to see if they are performing as intended and as expected. If they are not (performing well or as intended) part of that process should call for putting them on some kind of watch list, then the next level of escalation with redemption.

By doing all of these things, we have created now a formal process for what needs to happen before you invest the next dollar. You have also created a formal process by which you are objectively and both quantitatively and qualitatively monitoring your investments to ensure that they meet the family’s investment objectives and expectations for why you invest with them and also very importantly that it is within the confines of your risk policy statement, or your risk budget, or your risk parameters. By doing these things, this is

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how you take things that might seem in an investment policy statement to be "pie in the sky" and you make it actionable because now you have brought it down to the weeds, and into how you invest, how you are monitoring the investments, and what triggers redemption. This is how one creates actionable risk management and that all starts with effective risk management governance.

Angelo Robles: Absolutely, very well explained. We understand the importance. Although we can spend hours on some of these subjects, we are going to have to move along. Governance and a risk management framework are critical, integral. Having an investment policy statement, systematically the decisions of an asset allocation policy and implementation of the investments, come from that. Moving from that, especially if active allocators in outside alternative managers, many families really don't truly know what they own. Often in a large complex portfolio, it's integral that they have some type of account aggregation and reporting system?

Sam Won: That is exactly right. These, as I mentioned earlier, you cannot manage what you do not measure and monitor. Then in terms of measuring and monitoring, it has to be against something or versus something. That is why it is versus the investment policy statement and more specifically the risk policy guidelines. Most, the systems that are out there that would allow a family to robustly, and I emphasize the word robustly be able to look at an investment or a sleeve of investments, meaning fixed income versus equities, and be able to meaningfully look at both performance and risk, which are, as you know, inexorably linked, these systems, unfortunately, are not plug and play systems. They are not systems that you just put a CD ROM in your laptop or computer and hit "enter" a few times when it prompts you to say "next" and the software says, "completed and successfully installed." What we usually find is that most families use an Excel spreadsheet. They will use a very junior person, sometimes a person with accounting background that will merely take the statements that they receive from the various investments or exit managers. They put in what their original cost basis was. They put in the most recent NAV kind of number or valuation number. That is about it. Unfortunately, that does not tell you anything about risk. It does not tell you anything about how it is doing versus what you intended or how performance is. What we see other families do is in order to try to get something

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better than an Excel spreadsheet, which really is a blotter for what they have invested in, they have tried to go to some inexpensive services that give them some generic metrics about well, the hedge fund average is this. The S&P is up three percent this year. Unfortunately, that becomes at a risk view elevation that is so high, that would be like trying to read a map that somebody is looking at on the sidewalk as you fly by a plane at 30,000 feet. Impossible, right? Those kind of metrics which we see families try to use as just a sort of general compass, is also relatively worthless and not meaningful because the elevation is: a) too high, and b) is not specific to the investments they have made. That is where the utility is lost (if the family uses simple or generic software that is not robust for risk management purposes).

The thing that we see as very much the minority is when families typically say, "Okay, I get it that an Excel spreadsheet does not tell me what my risk or performance is. If I use a couple of these sorts of database kind of services, it just tells me generically where things are. It does not really, it is not specific to my particular portfolio." Then if they do some inquiry or diligence and they have some of the vendors come in, they realize quickly that these systems are very, very expensive and would require their own team of sort of risk management professionals and investment professionals. Then that first visit from the vendor becomes the last visit. Then they choose to live in what we call denial and as a friend of mine says, "we are not talking about a river in Egypt." Those are typically the kind of mistakes that we see. That leaves you with where most families are, unfortunately. They tend to think that if they picked good managers and if they get a good market cycle, they will be okay. They just rely on sort of wishfulness as their tool for risk management, unfortunately.

Angelo Robles: How then could our listeners do this correctly?

Sam Won: Well, the right way to do it would be ideally to work with the right people who have the risk management experience to be able to provide proper risk reports. Most families, as you know Angelo, did not make their money by being in the investment management business. We firmly believe that whatever reporting metric has to be something that the family can understand and utilize in managing their investments. The expectation, it is unreasonable in our community if the expectation is they have to get a Ph.D. in finance and a CFA and then they will be able to understand the reports that they receive. That is unreasonable. Along with those reports, they very much, we find, need the guidance and interpretation from somebody who is a neutral or independent party. That is very, very important because it cannot be from one of the usual suspects, such as the sort of investment or pension consultant who are charged with doing asset allocation and manager selection. It is important to

remember you cannot be both the maker and the checker. So the reports that typically would make sense for most families because unless you are a family such as the Soros family or the Ziff brothers who are actively managing their risk on a day-to-day basis. And in the case of the Soros they are actually principally investing and principally trading investments. That is if you want the sort of penultimate, that would be the one extreme.

The other extreme, unfortunately, which is the larger segment of the people (families) who are doing largely nothing and hoping that wealth just begets wealth. The kind of things in terms of reporting that would make sense would be in our opinion typically on a quarterly basis. In that quarterly report, it should have

Quarterly reports should have a breakdown that mirrors those risk policy guidelines of 'what does my liquidity risk look like?' 'What does my leverage risk look like/" It should be about the investment level and at the aggregate sleeve level.

a breakdown that mirrors those risk policy guidelines of what does my liquidity risk look like? What does my leverage risk look like? It should be about the investment level and at the aggregate (investment) sleeve level. When I say the investment level, let us say that a family has invested in Elliot Associates, a specific hedge fund. It should show you what your risk profile looks like there. Then it should in aggregate, show you what your risk profile looks like for the ten other hedge fund investments you made. Then it should be benchmarked against the specific strategy or style. If it is multi start or long short equity or global macro, that is a benchmark that it should be shown against. Then you can clearly see is my investment, are they doing better than their peers and are they producing alpha or are they just giving me beta?

Angelo Robles: Now, if you do not mind me interrupting because I think you made a very important point. For families that have alternatives, whether an intimate number or a large number, my experience is oftentimes there is really not a great sense of coordination with the alternatives as a part of their portfolio. Well these are alternative managers the families say. "They are hedging my downside risk." That is way, way too broad of an overstatement. You noted the one fund, which is a very successful one, very large, would you look into it and analyze for the family or simply is this something they should know? Not only how it compares to a specific benchmark, but what kind of credit risk, how much leverage? Do the partners or founders have a specific percentage of their capital in the fund? How do you obtain what you need to measure the metrics needed in such alternatives?

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Sam Won: The answer is that the first part of your question, my answer is yes. That is a family needs to know those kinds of things. That is if we use Elliott Associates, which is very fine firm and I have a lot of respect for them, is that they are taking leverage risks. They do have credit and counter party risk. They do have concentration risk. You have to understand that. Then the other thing that somebody has to understand, they are managing now many tens of billions of dollars. If you believe the data that it is becomes harder to invest effectively the more money that a firm manages, that is something that somebody who has investors say they are currently invested with Elliott Associates should be looking at. I am not recommending redemption. I do not want people to read into what I am saying, but it is something that we recommend that people should be monitoring because size matters. For hedge funds, there is a lot of data that shows that once you get to a larger size, it is to deploy that might effectively produce good alpha. There are also qualitative considerations. In answer to the data being available, more and more transparency is available. If you look at institutional investors pre- and post- 2008, pre-2008 the transparency that most institutional investors got outside of their long only investments, which by the way they can get 100 percent transparency there. On the alternative side, it was in the neighborhood of 50 to 60 percent. If you look today, that percentage is north of 80 percent. Most institutional investors, our definition of institutional investors are endowments, foundations, pensions, and the more sophisticated family offices. Within that group, the majority is using managed account vehicles, which require that they get transparency. Within that bucket, it is now nearly 100 percent. When we work with families, because we have that underlying data, we are able to do very granular and robust analysis. For a family to have the internal capabilities, the system staff to do that, the data is there now which they can do meaningful risk benchmarking performance-attributing analysis. That kind of analysis, we would recommend an interval of no less than quarterly and either semiannually or annually, there should be some review mechanism by which these things re formally reviewed and discussed.

Angelo Robles: If it is an LP interest, whether an organization like yours or a family internally inquiring to the GPPM / fund, will they be able to obtain much of that they need?

Sam Won: Today, yes. I mean prior to the financial crisis, that group, the hedge fund, private equity group in particular was very full of themselves. They made investors feel as if they should feel grateful to be in an LP. Today that smugness is gone from I would say 98 percent of that universe. They realize that it is the other way around. So our experience has been that in most cases, if we do not get

100 percent transparency, we are able to get enough transparency which we can do reverse engineering and other parallel analysis to have meaningful metrics about concentration risk, leverage, liquidity, volatility. Those are the kind of things that a family, a I mentioned earlier, needs to understand in order to say that they understand what their investment risks are and to understand whether their investments are working out as intended and how they are doing versus peers, as well as make the determination that one needs to make is if I had taken that money and done something else with, what would that opportunity return been or the opportunity cost been.

Angelo Robles: Even with sophisticated institutional investors and family offices, too often following the endowment model with multiple outside alternative managers, often times, they may have significant allocations to multiple managers that are effectively running similar a long short strategy, the most common hedge fund type manager. I would have to assume that there must be tremendous cross over and correlation in the holdings. That is not even factoring in some of the duplicate of the long only holdings the family may have in other parts of their more liquid portfolio. You are able to effectively x-ray and show them this? Listen, you have so much correlation. How often do you come across that? Is it an education for the family for the CIO?

Sam Won: That is an excellent question and I am so glad that you brought that up, Angelo. You are absolutely correct. This is something that families, when we point it out to them, they definitely get it, the "aha moment." I will name names. That is if you look in any family offices portfolio that we have ever seen, you look in their equity portfolio, I mean their long only equity portfolio, and some of the names you will see are names such as Apple and Google. Ones that are very popular this year are Netflix and Michael Kors. Great, you are a long only manager who is supposed to in most cases be trying to achieve beta there. Beta meaning that you are trying to get the market return, right. Those are all great companies. By no means am I bashing Apple and Google, but what the family does not realize is that when they go to the silo which they think is supposed to be uncorrelated or non-correlated or less correlated, that they typically when they have, to the extent that they have any reports or they even just informally discuss their portfolio, they discuss it as two separate sleeves to the

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alternatives. Guess what positions are sitting with their long short hedge fund managers? Apple, Google, Netflix, Michael Kors. When we aggregate what the family has in those stocks as an example, most families have no idea that "Oh my god, I own a huge piece of Apple and Google and Netflix and Michael Kors" in both my long only as well as my hedge fund investments.

It is clearly a great example, a Harvard Business School case study example of a couple of things One, it is exemplary of the fact that the family does not really know what risks are underlying the portfolio. Two, undue concentration risk. After the financial crisis, I was asked to comment almost to the point of ad nauseum in conferences and media, television, as well as press interviews about causes and lessons learned and not learned from the financial crisis. One of those things is that you found that many investors, even sophisticated investors did not realize that they had undue concentration risks in their portfolio. Your question is a good one, but that is absolutely correct that most families do not realize how much overlap, how much duplication and how much undue concentration risk that they have in their portfolio because as I a mentioned earlier again, they are not able to manage because they are not properly measuring and monitoring the risks in their portfolio. They are totally clueless or unaware of this overlap.

Angelo Robles: In some of the fine public equities that you noted and those are some wonderful companies.

Sam Won: Absolutely.

Angelo Robles: I will use a phrase that you used in some of our prior meetings in that when you invest and are "paying for" an alternative manager, that often can be two and 20 (in expenses) and also very tax inefficient, you are starting well behind the starting line on something that you are likely already getting beta exposure for. I know we do not mean to be kicking alternative mangers. There are some very, very fine alternative managers out there that truly do some wonderful work and are worth every penny of the "high fees" they charge. I have to admit that post 2008 and especially much of the last several years, that number is dwindling. It is getting a little harder and a little harder to sometimes to find truly talented alpha generating managers.

Sam Won: That is why we think it is critically important for families, family offices, SFOs, if they want to know, this is something that a question I typically pose. It is done semi facetiously, in a cheeky way you could argue. If you ask a family, do they have insurance for their house and they will look at you as if you have three brains. Of course, they have insurance for the house. Of course, they have insurance for their car. How many family offices have insurance for their investment

portfolio, which I guarantee you is worth more than their house and their car and all of the possessions inside. The way you buy this insurance is not by having a crystal ball. We do not have a crystal ball at our firm. The family does not have a crystal ball. Warren Buffett does not have a crystal ball. The way you create sound, repeatable, and sustainable investment results over time is by having better blocking and tackling, better processes, better controls, better governance, because that is how you were able to ride the various market and economic cycles. That is what ultimately produces superior risk-adjusted return. That is what families should be learning as part of their lexicon that it is all about risk-adjusted return. Well, guess what, you cannot have good risk-adjusted return if you do not know what the risks are. We advise families that if you are willing to spend $X for your homeowner's insurance or your car insurance or for life insurance, you should be willing to spend some reasonable portion of money to protect your investments so that you have better governance. You have actionable risk management because where it pays off and this is something that I get asked. They say, "Well, if I do this, am I not just increasing the cost line of managing my SFO or family offices?" We say absolutely not. What you are doing is you are increasing the risk adjusted performance line because, guess what, through better monitoring, better processes, and controls, you kick out all the poseurs who are not getting you alpha and not getting your two and 20's worth. You are kicking them to the curb now. That is one thing. Secondly, because you have a better understanding of what is driving your risks, hopefully you can make better and more intelligent risk decisions about optimizing for that trade-off between risk and return. All of these things are increasing and accretive in terms of creating value not only in the near term but also in the long term about repeatability and sustainability. Good risk management and good governance when it comes to the portfolio more than pays itself when you get rid of a couple of managers that are not really justifying their two and 20 fees as an example. It (risk management) has more than paid for itself for several years when you weed out the deadbeats in the portfolio. That is something that is important for families to understand. It is not increasing the cost line. It is actually improving the risk adjusted return line through sound governance and risk management.

If you are willing to spend $X for your homeowner's insurance or your car insurance or for life insurance, you should be willing to spend some reasonable portion of money to protect your investments so that you have better governance.

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Angelo Robles: Although there are many more investment specific questions I would love to ask, we are heading a little bit to the home stretch in terms of our dialogue today, which I am greatly enjoying. I suppose I will bring up a common question that I am given by my families and SFOs. We are designing a well-diversified portfolio that is low correlation or as uncorrelated to some of the other holdings that we have. Everyone says that and 2008 proved that in certain horrific markets like that that almost everything "went down." Nonetheless, the concept of it by using metrics and probably let us not get too deep in the weeds on correlation metrics like Pearson's correlation, Spearman's ranked correlation, we will save that for a deeper dive at a point in the future, but I am assuming there are metric and analytics that the family and an organization like yours could do that could truly measure whether this part of the portfolio or this specific manager or internal strategy that we are doing as a family really is low correlation to other parts of our portfolio. How do you handle the math and metrics behind that?

Sam Won: Well, the math and metrics for looking at performance and risk, unfortunately, cannot just be calculated on the back of a cocktail napkin. Nor can it easily be done in Excel. The kind of metrics, again, we think are most important are ounces that provide linkage to the risk policy guidelines. There are literally dozens and dozens and dozens of different kinds of metrics that are nuanced that can give you this — I will give you an example. Let us take volatility as an example. People understand that mathematically volatility it just means it is a standard deviation. It is another name for standard deviation. I can tell you that for within my professional space, we have many different metrics that can split volatility into upside volatility versus downside volatility. There are many derivatives to sharpe ratio, which is meant to give you a risk adjusted return versus the risk free rate. There is a Treynor ratio. There is Sortino ratio and things like that which many families will recognize when they look at their statements that they receive from some of their asset managers. They do not understand them, but some of their individual statements, they may recognize these metrics. We think what is most important about metrics is metrics that provide insight and allow support to your risk policy guidelines. Remember the risk policy guidelines that I mentioned are things like draw down. The way draw down should be looked at is under typically three kinds of scenarios. What does my draw down look like under sort of more normal conditions? What does it look like under stressed market conditions? What does it look like under highly stressed? You are getting three different ranges of potential loss. What is my volatility look like? If there was another 2008 and I went to redeem because I needed liquidity, who can redeem from and how long would it take. These are metrics that should be monitored. Those are the kind of metrics that again, provide insight.

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Then somebody does not need to be a rocket scientists necessarily to understand them and make them actionable, especially if a well thought out process has been documented and exists. More importantly, it all goes back to the investment policy statement and risk policy guidelines, which is your governing charter. That is the same thing as what a good coach does when they have a bunch of plays that they have set that they are going to run under certain conditions. It is analogous to that. That is what a family should be doing. We are not in favor of metrics for the sake of metrics. The metrics have to have what we call decision analysis support and decision analysis is the underlying analysis that makes a process actionable. Our belief is it is not about quantity. It is about quality of metrics. Then the metrics have to be linked to insight and supporting the risk policy guidelines. That is how the family can then know they are then over their skis and they need to do something. As an example, let us say that under a highly stressed scenario, their draw down has crept up to 30 percent and the family office tolerance level is 25 percent, meaning that they do not in a severe market want to lose more than a quarter of the (total value of their) investments in terms of price decline. Well, guess what? In the investment policy statement and the accompanying processes that are extensions of the investment policy statement, there must be a plan for what the family is going to do, where they are going to go to cash, where they are going to get liquidity, where they are going to try to live to fight another day. If you look at the financial crisis, families did not need to have predicted financial crisis (to have fared better). Those, who even during the midst of it took action, might have lost 20 percent or 25 percent versus 38.5 percent, which is what the S&P lost (in total at the end of 2008). You do not need a math degree from MIT to know that you are significantly better off because just to get back to where you started, you would need to do double (when you have negative returns). That is the way the math works, as you know Angelo. As far as metrics, the punchline is there has to be insight and it must provide support to making decisions that are already prescribed in the investment policy statement and risk policy guidelines. Those are the metrics the family should care about. Otherwise, if metrics are not tied to specific actions they are merely interesting statistics.

Angelo Robles: We are taking a little bit of a hard look, and rightfully so, and many large families and SFOs fall short on risk management. I think many of them realize that. Hopefully through something like this interview, programming, and other work that we (and others) are doing will be insightful and be of value. Given that I am such an extreme advocate of SFOs, I would like to point out that if it makes them feel a little better and Sam please comment. It is not that an alternative, well, “let us take our money and go to a series of private banks or let us go to MFOs” is a great solution. Of course, there are some good

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ones and good teams out there that can do a good job, but the vast majority are not going to be sophisticated in the areas that are you are talking about and often are going to be far more conflicted from a sales perspective. I do not want to give the impression that oh wow, this is so hard. Let us pack it in as an SFO. Often the best answer is correct it all in house (through internal talent or a risk management consultant) I am giving my opinion, which is a little conflicted to the SFO side I'll admit. Comments?

Sam Won: Yeah, no I think that is a good area to sort of conclude our conversation. That is, that part of the rationale for a family to have an SFO is if it has reached the level of wealth where from a cost benefit perspective, it makes sense for them to manage their wealth internally versus paying, as you pointed out, the various middle man kind of mark ups and surcharges that many service providers (banks and asset management firms) knowing that the family offices have some wealth are going to tack on. It is almost a surcharge for being wealthy. You are absolutely correct. There are many multifamily offices, private banks, etc., other than giving you leather-bound books with your initials or your account number in there, are charging you more for the same checking account than if you did not have two nickels to rub together. You are absolutely correct that there is not necessarily any substantive value that they are providing. Our recommendation to family offices and single family offices in particular is the way to do it is in essence to work backwards. That is to say, what is my objective in terms of investment management, risk management? To achieve that objective, what are the personnel? Should I do this in-sourced? Should I work with a firm like our firm? To do that analysis and decide what makes sense from a cost, from efficiency, from a benefit perspective, that should be determining how they proceed there. I think that with the advances in technology and with the advances in more services and high quality services are available on a managed service or outsourced basis, do it in a smart and strategic way. They can do these things internally. They should not fear that oh my gosh this means that I have got to XYZ bank and be a part of that bank where I have got to hook up with hundreds of other family offices and I can no longer be independent. I do not think that is necessarily the case. We recommend that you start with your objective or your end goals, what you really need to do it properly and then do some research. **That is why organizations such as yours, Angelo, are a tremendous resource to family offices**

We recommend that you start with your objective or your end goals, what you really need to do it properly and then do some research.

and SFOs because you can be a nonpartisan facilitator to help family offices. We always think that where family offices should shoot, as an objective, given the level of wealth, and given the money at stake, is to take a more institutional quality or institutional style approach to investing and to risk management of their investments.

Angelo Robles: Absolutely, I concur. For our families that are listening in and desire to reach out, Sam, maybe if you could share maybe some of your contact info on this audio recording.

Sam Won: Yeah, I would be delighted to. The name of my firm is Global Risk Management Advisors. We are based in New York City on Park Avenue. If you go to our website, www.gramainc.com, you will be able to see a profile of our principals, a well as our services. I would be delighted, especially for the members of Family Offices Association if they wish to call me, my direct line is (212) 230-1610. I would be delighted to chat with family more about these things. It is something that we feel very passionately about. It is very, very important for the ongoing future for families as it regards to their investment portfolios.

Angelo Robles: On behalf of San Won, founder and managing director of Global Risk Management Advisors, and myself, Angelo Robles, founder and CEO, with Family Office Association, we would like to thank you all for listening. I am sure you found this of value. We look forward to engaging in even deeper dialogue with Sam on this topic in the future, so stay tuned. On that note, Sam and everyone listening, have a great day. Thank you everyone.

Sam Won: Thank you.