NORTHFIELD

Northfield's 31st Annual Research Conference

Thursday, October 24, 2019 – Sunday, October 27, 2019

Fairmont Washington DC Georgetown
2401 M Street, NW
Washington, DC 20037

CAIA ASSOCIATION

The Chartered Alternative Investment Analyst (CAIA) Association is a supporter of Northfield's 31st Annual Research Conference.

Since 1989, Northfield's Research Conference has been the premier industry event for analytical research in the management of financial assets. As always, presentations were selected through a formal "call for papers." The 2019 program will include a broad array of topics including asset allocation, market return forecasting, advances in portfolio construction, and several cutting-edge approaches for alpha generation. Our distinguished list of presenters includes thought leaders from all sectors of the financial services industry, including asset owners, asset managers, and financial intermediaries. In aggregate, our twelve presenters have more than *two hundred publications to their credit* including several books that have been industry standards. We believe that no other conference can match this content in offering the ideal combination of academic rigor and industry experience. In keeping with Northfield custom, the conference will take full advantage of our spectacular venue to augment the working sessions with social events and family-friendly activities.

Conference Registration, Travel Arrangements and Accommodations

Reservations are on a first come basis, so it is a good idea to register early. Please note - we are accepting registrations via online registration only for the conference and hotel accommodations. To register for the 31st Annual Research Conference click here. If you have any difficulties registering, please contact Kathy Prasad; Kathy@northinfo.com or 617-208-2020 for assistance.

Hotel accommodations at the reduced conference rate of $299 USD per night plus taxes and fees **must** be arranged by contacting the Fairmont Washington DC Georgetown website by clicking here.

Venue

Our choices of Washington, DC is a purposeful one. Since the Global Financial Crisis of 2007-2009, the performance of financial markets has increasingly been dependent on "top down" macroeconomic events and the constant ebb and flow of geopolitical event risks ranging from armed conflict in the Middle East, Brexit, the loss of stability in international alliances such as the EU, and in numerous individual countries including Venezuela, Argentina and Sudan. Obviously, Washington DC is also the nexus of both unprecedented political instability in US domestic affairs, as well as international tensions between the world's leading economy and military power and just about every other sovereign government. Locating the event in Washington will focus attention to these big picture issues, which we hope to reinforce with some surprise additions to the presentation agenda.

Calendar

Our event will begin with an unofficial welcome reception and dinner on the evening of Thursday, October 24th, conference meeting sessions will begin on Friday, October 25th and finish with lunch on Sunday, October 27th. As is customary at Northfield events, a complete recreational and social calendar will complement the working sessions.

Business Agenda

Friday, October 25, 2019

8:00 am **Breakfast**

9:00 am **Seminar sessions:**
Morning sessions 9 am – 11 am

9:00 am **Momentum, Factor Timing and Long Horizon Simulations: Insight from Heterogeneous Agent Models**
Kenneth Blay and Robert Hillman, *Invesco*

With the proliferation of factor portfolio or "smart beta" strategies, interest has grown in how to combine or event shift allocations between factors over time. Recent research such as Polk (2019) links factor returns to the business cycle based on the cash-flow news concept of Campbell (1991). Heterogenous agent models are *becoming a prominent feature of many behavioral approaches (as summarized by Barberis, 2018) in the hope of explaining both momentum effects and long term mean revisions as observed in stock markets. In this paper, we extend this recent revival of heterogeneous agent models to two practical applications. The first is to discern the potential for market timing of factors, and secondly as a mechanism for creating long-horizon asset price simulations. Such long-term simulations are increasingly of interest to asset owners. We demonstrate that agent modeling should stand along other methods such as bootstrapping and scenario analysis to provide deeper insights into the risk and likely performance of investment strategies.*

10:00 am **Competition Links and Stock Returns**
Ronnie Sadka, *Boston College*

We consider a firm's competitiveness based on the manner by which other firms mention it on their 10-K filings. Using all public firm filings simultaneously, we implement a PageRank-type algorithm to produce a dynamic measure of firm competitiveness, denoted C-Rank. A high-minus-low C-Rank portfolio yields16% alpha annually, where return predictability mainly stems from cross-sector competitiveness. The findings are largely consistent with investor underreaction to firm business opportunities identified by other strong firms. Nevertheless, stock return covariation with the C-Rank portfolio spread suggests that part of the return predictability can be interpreted as compensation for systematic cross-sector disruption risk.

3:00 pm **General Session** **Middle East Institute 1763 N Street NW Washington, DC**
Afternoon sessions are from 3:00 pm – 4:30 pm

3:00 pm **Integrating Real and Financial Investment Decisions: Stock Buy-Backs and their Macroeconomic and Financial Implications**
Sergei Dodzin, *International Monetary Fund*

This paper provides a new theoretical linkage between the asset pricing literature in which firms seek to maximize shareholder value, the practice of corporate finance, and the macroeconomic levers that government policymakers have at their disposal to encourage economic growth and general prosperity. The new model comprehensively illustrates previously neglected connections between financial concepts like estimation of risk premia and the expected impact of tax cuts and other fiscal policies. The resulting outputs suggest that traditional economic models overestimate impact of exogenous policy events such as changes in interest rates or tax cuts on real investment and hence actual economic activity, as companies often utilize more favorable conditions to undertake stock buy-backs.

Special Guest Speaker

Saturday, October 26, 2019

8:00 am **Breakfast**

9:00 am **Seminar sessions:**
Morning sessions 9 am – 11 am

9:00 am **The Worst of Both Worlds: Dual Registered Investment Advisers**
Nicole Boyson, *Northeastern University*

The treatment of retail investors by wealth management organizations is highly regulated in many countries. A surprise 2007 ruling by the Washington, DC Federal Court of Appeals required that brokerage firms fee-based brokerage accounts to Registered Investment Adviser accounts. As fiduciaries, RIAs must put the best interest of their clients first. These "dual registered" (DR) investment advisers have numerous conflicts of interest including selling affiliated mutual funds, insurance cross-selling and mutual fund revenue sharing. Further, DRs appear to charge retail clients higher fees that independent RIAs and there have been many instances of regulators taking frequent disciplinary actions against them. Finally, DRs are observed to invest RIA client assets into the institutional share classes of the same underperforming mutual funds they offer brokerage clients. Hence, many dual registered advisers appear to be falling short of fiduciary standards. In this presentation, we will examine the structural deficiencies harming retail investors, document the economic impact of the problem and assess the potential for mitigation.

10:00 am **Real Estate Financing of Master Plan Communities**
Evan Schulman, *Tykhe Securities*

We propose a new type of real estate financing called a "Revenue Recognition Certificate" that is intended to address the problem of long-term financing of large-scale land development projects. In this presentation, we illustrate and use simulations to statistically test the structure of RRCs. We maintain that they represent a uniquely beneficial opportunity for both large scale property developers and large institutional investors.

2:00 pm **General Session**
Afternoon sessions are from 2:00 pm – 5:00 pm

2:00 pm **Factor Investing in Credit**
Hendrik Kaufmann, ***Quoniam Asset Management***

This paper investigates the application of factor investing in corporate bonds. Our results show that as drivers of risk and return, factors can be efficiently used for bottom-up corporate bond selection. We analyze five different widely recognized factors (Value, Equity Momentum, Carry, Quality and Size) and their combinations within the US$ investment grade (IG) and high yield (HY) bond markets. These factors have positive risk-adjusted returns and explain a significant portion of the cross-sectional variation in corporate bond excess returns. We find evidence that factor combinations are superior to single factors in risk adjusted terms. Use of multi-factor signal blending strategies is suitable for active strategies targeting high alpha, while portfolio blending is better aligned with more passive strategies with low turnover and low tracking error.

3:00 pm **Hedging High Yield and Emerging Market Bond Tail Risk with VIX® Futures**
Belinda Liu, ***S&P Dow Jones Indices***

In this paper, the authors suggest a different approach to hedging tail risk in certain segments of the fixed income market. VIX® futures are based on the implied volatility of equities and are not an obvious choice for hedging tail risk of bonds. We show a strong negative correlation between VIX returns and those of credit focused bonds. Empirically, the strength of the inverse relationship increases during down markets when the hedge is most needed. As there are significant costs associated with maintaining a VIX based hedge over time a static hedging strategy may be costly, but a more dynamic application of the hedge can effective reduce credit related bond losses during times of stress.

4:00 pm **ESG Production Networks in Multi-Objective Portfolio Selection: A Machine Learning Approach**
Gordon Dash, ***University of Rhode Island***

Financial models for portfolio selection have long assumed economic agents are unbiased processors of relevant information. Over time, theories of portfolio selection based on behavioral attributes are emerged as a plausible way to reconcile mean-variance and "behaviorally efficient" portfolios. In this paper we explore how the concept of a layered "mental account pyramid" (MAL) may allow us to formally incorporate investment preferences such as Environmental, Social and Governance considerations. This presentation provides a "shallow learning" neural network to extend behavior sensitive portfolio construction methods to directly incorporate an "ESG adjusted return". We further illustrate how the same technique can be extended to other portfolio objectives such as limiting option-implies shortfall risk. We conclude by demonstrating how the ability to dynamically update CVaR metrics has an immediate impact on stock selection given a hierarchical representation of portfolio shortfall risk.

Sunday, October 27, 2019

8:00 am **Breakfast**

9:00 am **Seminar sessions:**
Morning sessions 9 am – 12 pm

9:00 am **Machine Learning for Algorithmic Trading and Trade Schedule Optimization**
Robert Kissell, Molloy College and ***Kissell Research***

In this paper we present a machine learning technique that can be used in conjunction with multi-period trade schedule optimization in program trading. The technique is based on an artificial neural network (ANN) that determines a better starting solution for the non-linear optimization routine. Unlike many current industry approaches that use heuristics and numerical approximation our machine learning approach solves for the exact problem and provides a dramatic improvement in calculation times. As such, we believe this this technique represents a material advance in the ability of asset managers to more efficiently manage trade execution for large transactions.

10:00 am **Analytical Solutions of Optimal Portfolio Rebalancing**
Ding Liu, ***Alliance Bernstein***

We study optimal portfolio rebalancing in a mean-variance type framework and present new analytical results for the general case of multiple risky assets. We first derive the equation of the no-trade region, and then provide analytical solutions and conditions of the optimal portfolio under several simplifying yet important models of asset covariance matrix: uncorrelated returns, same non-zero pairwise correlation, and a one-factor *model. In some cases, the analytical conditions involve one or two parameters whose values are determined by combinatorial, rather than numerical, algorithms. Our results provide useful and interesting insights on portfolio rebalancing and sharpen our understanding of the optimal portfolio.*

11:00 am **Falling into a Trap of Your Own Making: Asset Allocation and Portfolio Construction for Pension Funds Experiencing Cash Outflows**
Dan diBartolomeo, *Northfield*

Due to demographic trends, the lack of expected contributions from plan sponsors, and low expectations of future portfolio returns, many pension funds are now concerned that they will be experiencing cash outflows for many years to come. This situation raises grave concerns about "sequencing risk" in terms of how the interaction of negative cash flows and the order of realized returns may impact solvency. This is particularly true for many defined benefit pension plans that are materially underfunded or are otherwise susceptible to failure due to optimistic return expectations. Unfortunately, many pension funds have dramatically increased their exposure to illiquid assets (e.g. private equity, commercial real estate) in the hope of increased returns, which poses a material problem for the subject organizations during periods of cash outflows. An immediate question for these organizations is whether it is better to incur the high transaction costs of liquidating some part of the illiquid assets so as to maintain portfolio allocations in their desired state, or fund outflows by liquidating liquid assets only. This second course of action minimizes short term costs but forces the portfolio allocation to drift into an increasingly illiquid state over time. If the negative cashflows were to be compounded by a concurrent market decline it is conceivable that many large pension schemes could exhaust the entire value of the liquid assets, forcing an extremely costly "fire sale" of remaining illiquid assets. In this presentation, we will consider this perplexing situation from two perspectives. The first is whether mean-variance asset allocation objectives are even relevant in such circumstances. The mean-variance objective is a Taylor series representation of a log wealth utility function, where the key feature is the compounding of returns over time. This traditional objective may be entirely inappropriate when investment returns are immediately paid out as benefits rather than compounded to generate greater future wealth. The second issue is how to explicitly model the tradeoffs of returns, risk and costs associated with this increasingly common situation to identify sensible courses of action.

12:00pm **Closing Luncheon**
Our final meal will be a buffet luncheon to encourage everyone to eat together and enjoy a final dose of local camaraderie. If you do need to catch a plane and must run, there will be boxes available so you can get your sandwich to go.

Social Agenda

Thursday, October 24, 2019

6:00 pm Cocktail Reception and Dinner

Friday, October 25, 2019

Activities Period 11 AM – 3 PM
We are offering attendees a variety of unique activities to complement our beautiful venue.

ACTIVITES

Bike the Sites Tour: Bike the Sites tour is an easy 3-hour ride and a unique, active, and environmentally friendly way to enjoy Washington! Guests will ride around the National Mall and the Potomac's Tidal Basin, featuring over 50 of the most famous attractions. This tour makes frequent stops along the way and allows guests time to walk around the memorials. Participants will visit the grounds surrounding the White House, the MLK Memorial, the Washington Monument, and Lincoln, Jefferson, Vietnam, and FDR Memorial, just to name a few.

Mount Vernon ~ George Washington's Estate: Mount Vernon was the plantation home of George Washington, first President of the United States and his wife, Martha Dandridge Custis Washington. The historic estate includes not only the Mount Vernon Mansion - George and Martha's home - but also a host of colonial era buildings, beautiful gardens, a working distillery and gristmill, and museum and interactive education center. Guests will tour the mansion and the surrounding service buildings, the interactive education center, and the Washington family museum, where personal effects of George and Martha are on display. Located 15 miles south of Washington, DC along the scenic Potomac River, Mount Vernon is a true national treasure guests will enjoy exploring.

Smithsonian's National Zoological Park Tour: Explore the wonders of the wild at The Smithsonian's National Zoo! Created by an Act of Congress in 1889 to study, celebrate, and protect the diversity of animals and their habitats, this 163-acre urban park is situated in the heart of Washington, D.C. The Zoo, one of the oldest in the Nation, houses roughly 2,000 animals of 400 different species. The Zoo's best known residents are the giant pandas; however, the Zoo is also home to great apes, big cats, Asian elephants, aquatic animals, reptiles and many more! A day at the National Zoo will give guests the opportunity to marvel at the wonderful animals, learn about wildlife and its conservation, and enjoy a beautiful, peaceful experience among the gardens.

5:00 pm Special Children's Program

Special event for Children – All children must be picked up by 11 PM

6:00 pm Black Tie Gala reception and dinner

Reminder proper formal attire is required. Click here for tuxedo rental information.

Saturday, October 26, 2019

Leisure Period 11 AM – 2 PM

Attendees are given time this afternoon to relax and take in the sites of Washington, DC.

6:00 pm Yacht dinner Cruise, Cocktail reception and dinner

Board motor coaches for **An Evening aboard the Odyssey III** for a unique tour of DC and monuments by water! Tour will return to the Fairmont at approximately 10:30 pm