

NORTHFIELD

Northfield's 27th Annual Newport Seminar

Wednesday, June 14, 2023

International Tennis Hall of Fame, 194 Bellevue Avenue, Newport, RI

We are pleased to invite you and your colleagues to our annual Newport seminar. The purpose of the seminar is to present recent research and technical advances to our clients and friends while enjoying the many pleasures afforded by our unique venue.

Given the global stresses induced by the COVID-19 pandemic, we have endeavored to formulate a robust agenda worthy of an in-person event. Our choice of topics is intended to reflect both analytical advances in investing, and the current interest in making the investment industry a positive contributor to the world at large. As a traditional center of American wealth, Newport serves as the perfect backdrop to consider the broad context of the impact of finance on society.

Our meeting venue, The Newport Casino was designed as a social and sporting club and was the center of cultural life for the Astors, Vanderbilts and Newport Society in the "Gilded Age." Designed by Stanford White and considered a masterpiece of Victorian shingle-style architecture.

As always, our meeting date has been selected to coincide with the US Professional Championships of Court Tennis. An ultimate illustration of "sustainability," Court tennis is the medieval progenitor of all modern racquet sports. It has been played in the current form for about *seven hundred years*, including many royal devotees such as Louis XIV and Henry VIII making it perhaps the world's most exclusive sport. Quantitative finance professionals will appreciate that due to the complexity of matches, a paid expert is required just to keep score.

After tennis on Wednesday afternoon, we will move to the Forty 1° North Hotel and Marina in the Newport yachting district for a waterfront dinner party. We look forward to seeing you!

View from the USTA Wing & Porch overlooking one of the grass courts.



Marina view, Forty 1° North

Registration, Travel Arrangements and Accommodations

There is no charge for participation in any aspect of this event. We will accept any donation you might care to make on behalf of the Pine Street Inn, Boston's primary homeless shelter. Registrants are responsible for the cost of their transportation and lodging. Please note - we are accepting registrations online only at <https://www.northinfo.com/events.php>. As always, attendees are welcome to bring a guest for tennis and dinner.

For those planning to spend the night in Newport, ***please remember that this is a BUSY time in NEWPORT and most hotels have very limited space.*** In addition to 41 North, the Viking Hotel, Gurney's Resort, the Newport Harbor Marriott and Newport Harbor Hotel and Marina are recommended. Newport also has many delightful inns: further information is available at <https://www.newportinns.com>. For all questions, please contact Kathy Prasad at 617-208-2020 or kathy@northinfo.com. The deadline for all reservations is Friday, May 27, 2022..

International Tennis Hall of Fame
194 Bellevue Avenue
Newport, RI 02840
Phone : 401-849-3990

For more information regarding Tennis Hall of Fame
<https://www.tennisfame.com>

Forty 1° North
351 Thames Street
Newport, RI 02840
Phone: (401) 846-8018

For more information regarding Forty 1° North
Forty 1° North – Newport's Premier Waterfront Hotel and Marina
(41north.com)

Agenda

8:15 AM **Continental Breakfast**

9:00 AM **Welcome**

9:15 AM **Evaluation of Investment Performance When Returns are Not Normally Distributed**

Dan diBartolomeo, Northfield Information Services

Beyond the routine measurement and reporting of investment returns, it is essential that financial organizations analyze performance outcomes to understand their economic implications and statistical significance. Most metrics of investment performance (e.g. Sharpe Ratio) silently embed the same assumptions that are present in established financial theories (e.g. MPT, CAPM). In using such metrics in their usual form, we are assuming that returns are normally distributed, random (or almost so), and that transaction costs are inconsequential. In addition, many financial entities such as pension funds and insurance companies use unrealistically high return expectations, relative to which realized returns will be non-normally distributed. The highly non-linear impact of capital gain taxes also generates skew in after-tax returns. In this presentation, we will first provide illustrations of the critical limitations of our performance metrics when these assumptions fail. Secondly, we provide some basic methods to test whether such assumptions are justified for a particular set of return observations, or whether adjustments in analytical methods are required. Finally, we will present some algebraic adjustments to traditional investment performance metrics that will allow their values to be interpreted correctly. This presentation is based on a paper recently published in *Journal of Performance Measurement*.

10:05 AM **Asset Coverage Extension Services (ACES): the Culmination of Everything, Everywhere**

Daniel Mostovoy, Northfield Information Services

More than twenty years ago, Northfield set out on what most industry people consider an impossible task. We undertook to provide our highly granular analysis of *all financial assets (both traded and private) globally*, a concept that became known as *Everything, Everywhere*. That two-decade quest has now been largely achieved as we have recently brought *on coverage of more than one-hundred new countries* (i.e. literally everywhere), regular production of risk data on exchange traded derivatives, and an internal credit rating process for companies and private credit instruments without published ratings. This new coverage extends our existing broad range of modeling across equities, fixed income, derivatives, private equity, real estate, private credit, commodities, currencies, and infrastructure financing. Today's presentation will focus on the final stage of the Everything, Everywhere effort. Our new software system called ACES *automates the process applying all EE data to client portfolios being analyzed* in our applications. If a client portfolio contains security identifiers that Northfield databases do not recognize, ACES swings into action reconciling multiple identifiers (e.g. CUSIP, SEDOL, ISIN, GLOBEX), matching the terms and conditions of the underlying instrument to our coverage universe, and delivering the required Northfield data to the analysis in progress. We will demonstrate ACES resolving large numbers of such data discrepancies in a few seconds. This unique process allows Northfield users faster and more accurate analyses than ever before, while greatly reducing the data workload on users.

11:00 AM **Coffee Break**

11:20 AM **Deep Order Flow Imbalance: Extracting Alpha at Multiple Horizons from the Limit Order Book**

Professor Petter Kolm, New York University and Journal of Portfolio Management "Quant of the Year" for 2021

We describe how deep learning methods can be applied to forecast stock returns from high frequency order book states. We review the literature in this area and describe a study where we evaluate return forecasts for several deep learning models for a large subset of symbols traded on the Nasdaq exchange. We investigate whether transformations of the order book states are necessary and relate the performance of deep learning models to the stocks' microstructural properties. In addition, we provide some color on hyperparameter sensitivity for the problem of high frequency return forecasting. The joint working paper with Jeremy Turiel and Nicholas Westray is available at

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3900141

12:10 PM **A Newport Luncheon**

1:30 PM **Scenario Analysis and Stress Testing for Private LP Fund Investments**

Emilian Belev, Northfield Information Services

The lack of analytical tools that link private fund cash flows and NAVs with real world risk factors and macro variables has put private fund investment teams at a disadvantage with respect to their public asset class peers when it comes to scenario analysis and stress testing. Northfield offers pioneering analytics for both scenario analysis and forecasting private fund cash flows and NAVs. In this session we will demonstrate how these tools effectively combine to allow private fund investors to analyze the full range of scenarios of their choice. The first step in this process is to bootstrap a statistical distribution of portfolio growth vectors that has exhibited historically under the conditions of the user-specified scenario. The second step is to provide that growth vector distribution as an input to the cash flow and NAV simulation engine to generate forecasts of the most likely outcomes for the private fund performance under the given scenario environment, as well as a dispersion of outcomes at different levels of likelihood.

2:30 PM **Why Banks Fail and What to Do About It**

Dan diBartolomeo, Northfield Information Services

The entire financial system has recently been shaken by the failure of several major banks (SVB, Credit Suisse, Signature, First Republic). While the reasons vary as to why particular banks have come under fire, the predominant risk to the banking system, depositors, and the shareholders of banks is the potential for “bank runs,” where uninsured depositors all want concurrent withdrawals beyond the available liquidity of a specific bank. We assert that the recent set of bank failures as well those experienced in the Global Financial Crisis of 2008-2009 share a simple common root. Banks managements see risk management as a binding constraint which is always costly. They therefore prefer to ignore any risk which they are not required by regulators to address. *Instead, we propose a dynamic risk management policy that contributes positively to the success of deposit institutions.* Our framework aligns the interests of banks, shareholders and bank regulators in a new way and is demonstrably optimal for the long-term profitability of commercial banks. The proposed process relies on sound economic theory from Litzenberger and Rubinstein (*Journal of Finance*, 1976), Wilcox (*Journal of Portfolio Management*, 2000), Acerbi and Scandolo (*Quantitative Finance*, 2007) and diBartolomeo (*Journal of Performance Measurement*, 2021).

3:10 PM **Court Tennis Rules Demonstration**

3:30 PM **Quarter Final Match, the US Pro Court Tennis Championships**

6:00 PM **Reception and Dinner, Forty 1^o North**