Griffith Alternative Investments Conference

Program

3rd – 4th November 2016

Welcome

Welcome to the inaugural Griffith Alternative Investments Conference. This grand event is proudly hosted by the Griffith Centre for Personal Finance and Superannuation (GCPFS) within the Department of Accounting, Finance and Economics, Griffith Business School. We are excited to hold the 2016 event in the jewel of Australia, the Gold Coast.

Alternative investments are becoming increasingly important in the current environment of low expected returns. Investors are searching for yield in the ‘new normal’ of very low interest rates and lower returns from risky assets. Going forward, investors need to fully understand the risks in alternative investments as they seek higher returns.

Griffith University and its team of researchers have a respectable track record in the field of alternative investments. Our researchers have expertise in the areas of infrastructure, commodities, energy markets, carbon markets, socially responsible investing (SRI) and active alternative strategies.

This conference aims to bring the world’s best researchers and industry professionals together to share the latest research and new ideas in this important segment of the finance industry. We hope you enjoy the two day conference and please contact me if you require further information on the topics and research papers being presented.

Thank you for contributing to the success of this event.

Best regards,

Dr Robert Bianchi

Associate Professor of Finance

Griffith University

Conference Director

Program – Day 1   Thursday 3rd November 2016

Registration **8:15am – 9:00am**	Registration - Pre Function Area		
Opening Speech **9:00am – 9:15am**	Welcome address by Professor David Grant, Pro Vice Chancellor, Griffith University		
Keynote Presentation **9:15am – 10:15am**	**Keynote Presentation** ***Building Benchmarks for Infrastructure Investors*** Dr Frédéric Blanc-Brude, EDHEC Business School Asia-Pacific		
Morning Tea **10:15am – 10:45am**	Morning Tea - Pre Function Area		
Session 1 **10:45am – 12:45pm**	**Session 1A**	**Session 1B**	**Session 1C**
	Commodities 1 (Ballroom I)	Infrastructure 1 (Ballroom II)	Alternative Strategies 1 (Executive Room)
Lunch **12:45pm – 1:45pm**	Buffet Lunch - Salt Grill Restaurant		
Session 2 **1:45pm – 3:45pm**	**Session 2A**	**Session 2B**	**Session 2C**
	Commodities 2 (Ballroom I)	Infrastructure 2 (Ballroom II)	Alternative Strategies 2 (Executive Room)
Afternoon Tea **3:45pm – 4:05pm**	Afternoon Tea - Pre Function Area		
Panel Session **4:05pm – 5:00pm**	Chair: A/Prof Robert Bianchi **Infrastructure Panel:** Dr Frédéric Blanc-Brude, EDHEC Business School Asia-Pacific Syd Bone, CP2 Group Ltd Anthony De Francesco, MSCI Inc. Martin Hollander, Barangaroo Private Holdings		
Break **5:00pm – 6:00pm**	Break		
Pre-Dinner Drinks **6:00pm – 7:00pm**	Pre-Dinner Drinks – The deck bar by the pool		
Dinner **7:00pm**	**Conference Dinner Keynote Presentation** ***Is There a Role for Alternatives in Defined Contribution Plans?*** Professor Michael Drew, Griffith University Presentation of Best Paper Prize Dinner - Ballroom I & II		

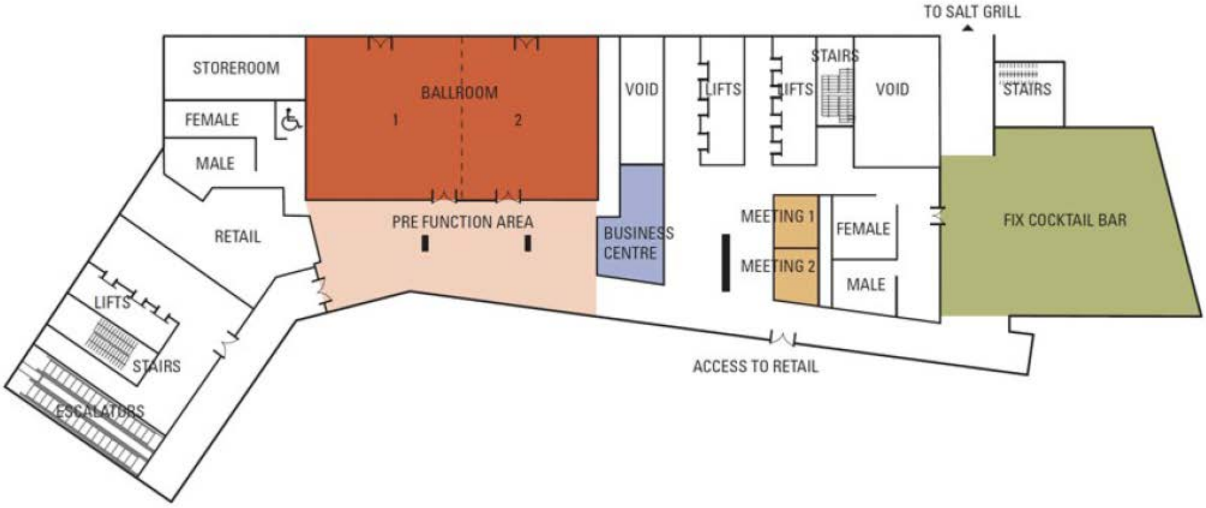
Program – Day 2   Friday 4th November 2016

Keynote Presentation 9:00am – 10:00am	**Keynote Presentation** ***Harvesting Commodity Risk Premia*** Professor Joëlle Miffre, EDHEC Business School (France)		
Morning Tea 10:00am – 10:30am	Morning Tea - Pre Function Area		
Panel Session 10:30am – 11:30am	Chair: A/Prof Robert Bianchi **The Future of Alternative Investing Panel:** Andrew Kaleel, Henderson Global Investors Professor Joëlle Miffre, EDHEC Business School (France) Scott Pappas, Vanguard Investments Australia Ltd		
Industry Presentation 11.30am – 12.00pm	**Industry Presentation** ***Introduction to the MSCI Global Infrastructure Asset Index*** Anthony De Francesco, MSCI Inc.		
Lunch 12:00pm – 1:00pm	Buffet Lunch - Salt Grill Restaurant		
Session 3 1:00pm – 3:00pm	**Session 3A**	**Session 3B**	**Session 3C**
	Commodities 3 (Ballroom I)	Carbon/Energy 1 (Ballroom II)	Alternative Strategies 3 (Executive Room)
Afternoon Tea 3:00pm – 3:20pm	Afternoon Tea - Pre Function Area		
Session 4 3:20pm – 4:20pm	**Session 4A**	**Session 4B**	**Session 4C**
	Commodities 4 (Ballroom I)	Real Estate 1 (Ballroom II)	Carbon/Energy 2 (Executive Room)
Closing Speech 4:20pm – 4:30pm	Closing address by Associate Professor Robert Bianchi, Conference Director, Griffith University		

Conference Concludes 4:30pm

Hotel Maps

Level 1



Ballroom I & II

- **Keynote Presentations**
- **Breakout Sessions A and B**
- **Panel Sessions**
- **Conference Dinner**

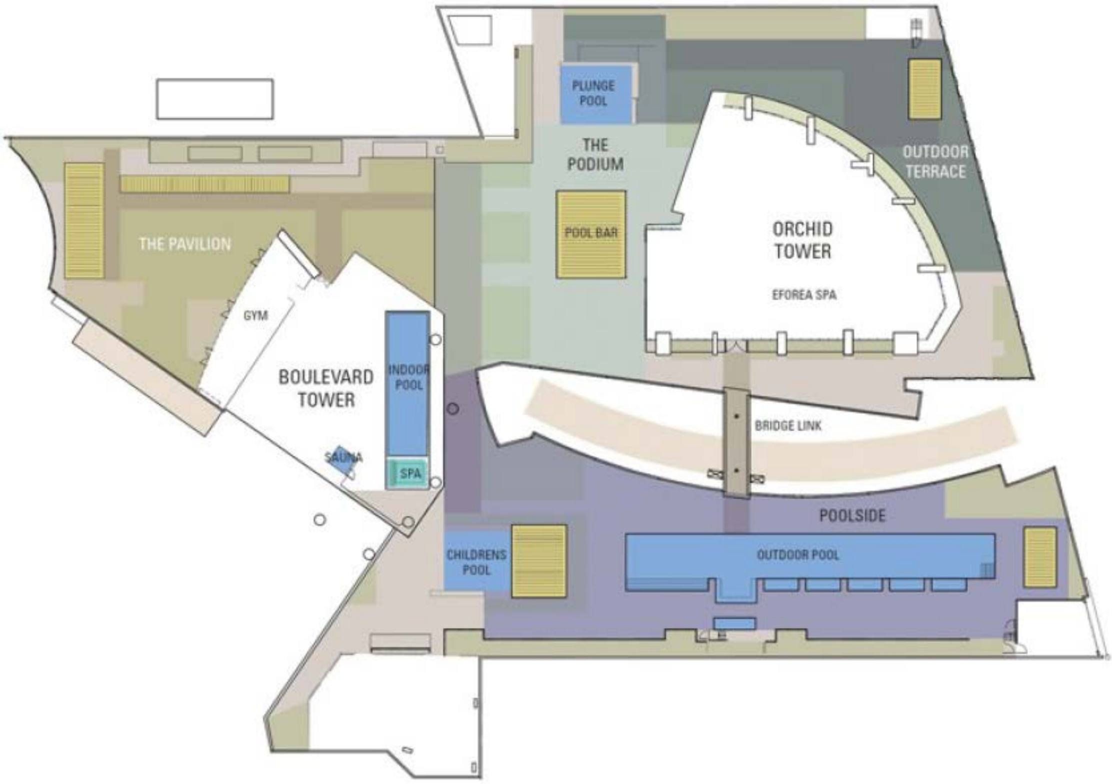
Pre Function Area

- **Registration**
- **Morning Tea**
- **Afternoon Tea**

Salt Grill Restaurant

- **Lunch**

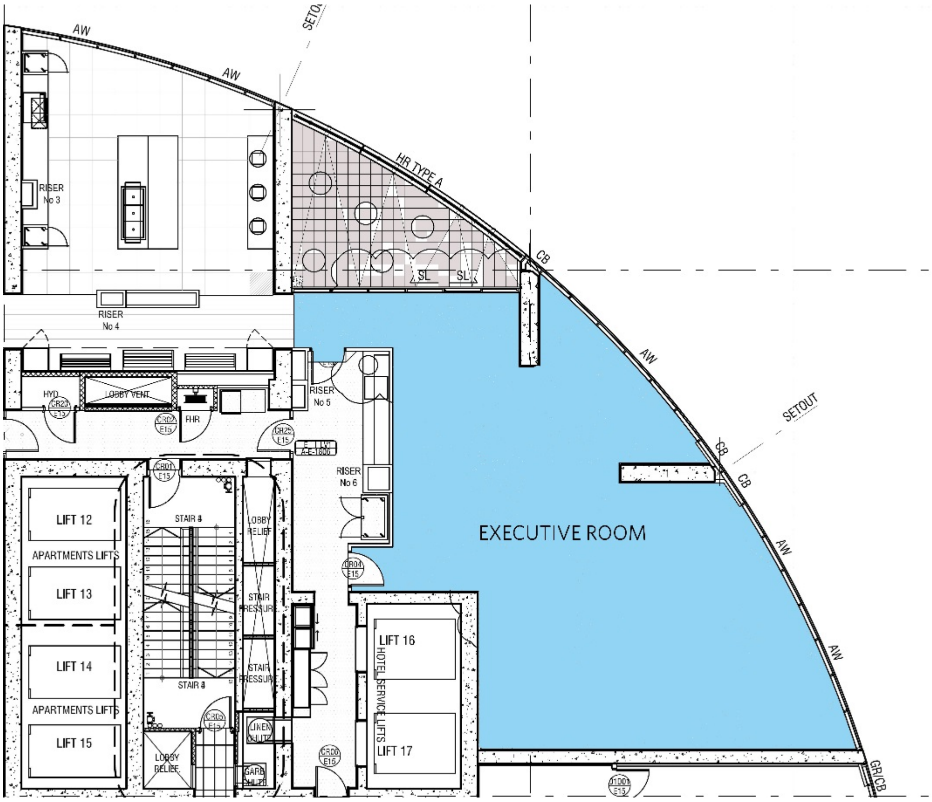
Level 2



Pool Bar

- **Pre-Dinner Drinks**

Level 15



Executive Room

- **Breakout Session C**

Lift 16 and 17

- **Hotel Service Lifts Connecting Level 1 Main Conference Venue**

Keynote Speakers

Dr Frédéric Blanc-Brude

Director, EDHEC Asia-Pacific

Director, EDHEC Infrastructure Institute-Singapore

Dr Frédéric Blanc-Brude is an economist specialised in unlisted investments, from private equity to infrastructure, real estate and other direct and long-term forms of investment. He holds a PhD in Finance from the University of London and several degrees from the universities of London, Paris and the Paris Institute of Political Studies.

Dr Blanc-Brude is the Director of EDHEC Infrastructure Institute Singapore and author of numerous scientific publications on infrastructure economics and investment. His latest book on infrastructure asset valuation was published in March 2015. He also teaches an infrastructure investment and benchmarking course as part of the EDHEC-Risk Institute/Yale-SOM executive program on alternative investments and represents EDHEC on the Advisory Council of the World Bank's Global Infrastructure Facility (GIF).

Prior to joining EDHEC, Dr Blanc-Brude had ten years of direct professional experience in the field of infrastructure finance, including an active involvement in transactions representing a cumulative value of more than US$6bn in Europe, Asia and the Middle East.

Topic: Building Benchmarks for Infrastructure Investors

Dr Anthony De Francesco

Executive Director, MSCI Inc.

Head of Coverage, APAC Real Estate, MSCI Inc.

Dr Anthony De Francesco is Executive Director, and is currently Head of Coverage for APAC Real Estate, MSCI Inc.

Anthony joined IPD (now MSCI Real Estate) in October 2009. IPD (Investment Property Databank) is the world leader in performance analysis for the owners, investors, managers and occupiers of real estate. Anthony has over fifteen years experience in various research roles. The research functions generally involved: developing house views; undertaking strategic research on real asset markets on a global scale; reviewing international markets (both economic and property fundamentals); product development and servicing and business development.

Anthony received his doctorate degree in Economics from UNSW in 2001. Prior to his current role, Anthony held a variety of roles that included:

- Executive Director, Head of Products: Infrastructure and Sustainability, MSCI (2014-2015)
- Managing Director, IPD Australia (2009-2014)
- Head of Research – Property and Infrastructure, Colonial First State Global Asset Management (2005-2009)
- Head of Research, Colonial First State Property (2003-2005)
- Senior Quantitative Analyst with Commsec, Commonwealth Bank of Australia (2002-2003)
- Head of Research with Lend Lease Real Estate Investments Ltd (1998-2002)

Topic: Introduction to the MSCI Global Infrastructure Asset Index

Professor Michael Drew

Director, Drew, Walk & Co.

Professor of Finance, Griffith University

Dr Michael E. Drew is a Director at Drew, Walk & Co., a boutique firm of consulting financial economists (co-founded with Dr Adam N. Walk), and Professor of Finance at Griffith University. Michael received his PhD in the field of economics from the University of Queensland. He has written and lectured extensively on Australia's superannuation system, defined-contribution (DC) pension plans and retirement security.

Michael has held Senior Executive and Committee appointments with QSuper, QIC (Queensland Investment Corporation), Wilson HTM, Ord Minnett and J. B. Were & Son and is a trusted advisor to fiduciary clients in matters relating to asset allocation, portfolio construction and investment governance.

Topic: Is There a Role for Alternatives in Defined Contribution Plans?

Professor Joëlle Miffre

Professor of Finance

EDHEC Business School (France)

Dr Joëlle Miffre is Professor of Finance at EDHEC Business School (France). Her research focuses on the pricing and management of commodities and equities. Her articles are published in academic journals such as the *Review of Finance* and the *Journal of Banking and Finance*. As testimonies of the relevance of her research to the industry, her work forms the basis of strategies followed in the industry and was awarded grants from financial market participants (CME Group, INQUIRE). Professor Miffre is associate editor of four academic journals, one of which is the *Journal of Banking and Finance*.

Professor Miffre received her master and doctorate degrees in finance from Brunel University. Before joining EDHEC Business School, Professor Miffre held academic positions at Cass Business School, the University of Technology, Sydney and the ICMA Centre. Over the years, she has been teaching courses in Asset Management, Commodities, Corporate Finance, Derivatives, Econometrics and Fixed-Income at undergraduate, postgraduate and executive levels.

Topic: Harvesting Commodity Risk Premia

Session 1A: Commodities 1 **Ballroom I**
Thursday 3rd November 2016 **10:45am-12:45pm**

Microscopic Momentum in Commodity Futures
Robert Bianchi, Griffith University
Michael Drew, Griffith University
John Fan, Griffith University
Discussant: Joëlle Miffre, EDHEC Business School (France)

How Successful Are Equities Investment Strategies When Applied in the Commodity Futures Market?
Hossein Rad, University of Queensland
Rand Kwong Yew Low, University of Queensland
Joëlle Miffre, EDHEC Business School (France)
Robert Faff, University of Queensland
Discussant: John Fan, Griffith University

Session Chair: Neda Todorova, Griffith University

Session 1B: Infrastructure 1 **Ballroom II**
Thursday 3rd November 2016 **10:45am-12:45pm**

Revenue and Profitability in Privately-Held Infrastructure Investments
Frédéric Blanc-Brude, EDHEC Infrastructure Institute-Singapore
Majid Hasan, EDHEC Infrastructure Institute-Singapore
Qi Wang, EDHEC Infrastructure Institute-Singapore
Tim Whittaker, EDHEC Infrastructure Institute-Singapore
Discussant: Robert Bianchi, Griffith University

Design Going Concern Option in the BOT Project to Prevent the Operator's Self-Interest Behavior
Yanfang Sun, China University of Petroleum
Discussant: Tim Whittaker, EDHEC Infrastructure Institute-Singapore

Session Chair: Suman Neupane, Griffith University

Session 1C: Alternative Strategies 1 **Executive Room**
Thursday 3rd November 2016 **10:45am-12:45pm**

Time Varying Price Discovery in VIX Exchange Traded Notes: A Tale of Retails vs. Institutional Trades
Adrian Fernandez-Perez, Auckland University of Technology
Bart Frijns, Auckland University of Technology
Ilnara Gafiatullina, Auckland University of Technology
Alireza Tourani-Rad, Auckland University of Technology
Discussant: Sonja Kobinger, Griffith Unviersity

Long-Term Time Series Reversal: International Evidence
Sonja Kobinger, Griffith University
Graham Bornholt, Griffith University
Mirela Malin, Griffith University
Discussant: Ilnara Gafiatullina, Auckland University of Technology

Session Chair: Graham Bornholt, Griffith University

Session 2A: Commodities 2 **Ballroom I**
Thursday 3rd November 2016 **1:45pm-3:45pm**

Financialization of Commodities: An Asset Pricing Perspective
Devraj Basu, University of Strathclyde
Olivier Bautheac, University of Strathclyde
Discussant: Huayun Jiang, Griffith University

Rolling Quantile Based Trading Strategy in the US and Chinese Agricultural Futures Markets
Huayun Jiang, Griffith University
Eduardo Roca, Griffith University
Jen-Je Su, Griffith University
Neda Todorova, Griffith University
Discussant: Olivier Bautheac, University of Strathclyde

Session Chair: John Fan, Griffith University

Session 2B: Infrastructure 2 **Ballroom II**
Thursday 3rd November 2016 **1:45pm-3:45pm**

Investment Risk in Toll Roads: A Case Study of Four Projects
Robert Bianchi, Griffith University
Michael Drew, Griffith University
Timothy Whittaker, EDHEC Infrastructure Institute-Singapore
Discussant: Majid Hasan, EDHEC Infrastructure Institute-Singapore

Cash Flow Dynamics of Private Infrastructure Project Debt
Frédéric Blanc-Brude, EDHEC Infrastructure Institute-Singapore
Majid Hasan, EDHEC Infrastructure Institute-Singapore
Discussant: Robert Bianchi, Griffith University

Session Chair: Tim Whittaker, EDHEC Infrastructure Institute-Singapore

Session 2C: Alternative Strategies 2 **Executive Room**
Thursday 3rd November 2016 **1:45pm-3:45pm**

How Australian Socially Responsible Funds Screen Investments
Adam Carey, Deakin University
Steve Ogden-Barnes, Deakin University
Adrian Raftery, Deakin University
Discussant: Sophia Bian, Griffith University

Does It Pay to Invest in SRI?
Sophia Bian, Griffith University
John Fan, Griffith University
Victor Wong, Griffith University
Discussant: Adrian Raftery, Deakin University

Session Chair: Suman Neupane, Griffith University

Session 3A: Commodities 3 **Ballroom I**
Friday 4th November 2016 **1:00pm-3:00pm**

The Costs of Financialization – Evidence from Exchange-Traded Funds on Gold
Dirk Baur, University of Western Australia
Discussant: Neda Todorova, Griffith University

Convenience Yield Risk Premiums
Rangga Handika, Macquarie University
Olaf Korn, Georg-August-Universität Göttingen
Stefan Trueck, Macquarie University
Discussant: Dirk Baur, University of Western Australia

Session Chair: John Fan, Griffith University

Session 3B: Carbon/Energy 1 **Ballroom II**
Friday 4th November 2016 **1:00pm-3:00pm**

Quantile Serial Dependence in Crude Oil Markets: Evidence from Improved Quantilogram Analysis with Quantile Wild Bootstrapping
Jen-Je Su, Griffith University
Adrian Cheung, Curtin University
Eduardo Roca, Griffith University
Discussant: Victor Wong, Griffith University

Recent Evidence on the Oil Price Shocks on GCC Stock Markets
Victor Wong, Griffith University
Suzanna El Massah, Cairo University
Discussant: Eduardo Roca, Griffith University

Session Chair: Alexandr Akimov, Griffith University

Session 3C: Alternative Strategies 3 **Executive Room**
Friday 4th November 2016 **1:00pm-3:00pm**

Do Investors Flip Less in Bookbuilding than in Auction IPOs?
Suman Neupane, Griffith University
Andrew Marshall, University of Strathclyde
Krishna Paudyal, University of Strathclyde
Chandra Thapa, University of Strathclyde
Discussant: Scott Pappas, Griffith University

Risk Factors and Extreme Correlations
Robert Bianchi, Griffith University
Michael Drew, Griffith University
Scott Pappas, Griffith University
Discussant: Suman Neupane, Griffith University

Session Chair: Robert Bianchi, Griffith University

Session 4A: Commodities 4 **Ballroom I**
Friday 4th November 2016 **3:20pm-4:20pm**

A Factor Model Index (FMI) Benchmark for Commodity Investment
Daniel Broby, University of Strathclyde
Andrew McKenzie, University of Arkansas
Olivier Bautheac, University of Strathclyde
Discussant: Robert Bianchi, Griffith University

Session Chair: Suman Neupane, Griffith University

Session 4B: Real Estate 1 **Ballroom II**
Friday 4th November 2016 **3:20pm-4:20pm**

Bubbles and Crashes in the Australian Residential Property Market
Dirk Baur, University of Western Australia
Richard Heaney, University of Western Australia
Discussant: Richard Chung, Griffith University

Session Chair: Mirela Malin, Griffith University

Session 4C: Carbon/Energy 2 **Executive Room**
Friday 4th November 2016 **3:20pm-4:20pm**

Carbon Prices and Macroeconomic Risks in China: Evidence from the Pilot Trading Phase
John Fan, Griffith University
Neda Todorova, Griffith University
Discussant: Stefan Trueck, Macquarie University

Session Chair: Alexandr Akimov, Griffith University

Paper Abstracts

Session 1A: Commodities 1

Paper 1: Microscopic Momentum in Commodity Futures

Authors: Robert J. Bianchi, Michael E. Drew and **John Hua Fan** (Griffith University)

Conventional momentum strategies rely on 12 months of past returns for portfolio formation. Novy-Marx (2012) shows that the intermediate return momentum strategy formed using only twelve to seven months of returns prior to portfolio formation significantly outperforms the recent return momentum formed using six to two month returns prior. In commodity futures, this paper proposes a more granular strategy termed ‘microscopic momentum’, which further decomposes the intermediate and recent return momentum into single-month momentum components. The novel decomposition reveals a new seasonal-based momentum anomaly, which generates persistent economic profits even after controlling for standard and commodity-specific risk factors, transaction costs and sector-specific or month-of-year seasonality effects. Moreover, our findings suggest that conventional momentum profits can be explained by term structure and hedging pressure risks after controlling for the observed cross-sectional seasonality.

Paper 2: How Successful Are Equities Investment Strategies When Applied in the Commodity Futures Market?

Authors: **Hossein Rad** (University of Queensland), Rand Kwong Yew Low (University of Queensland), Joëlle Miffre (EDHEC Business School) and Robert Faff (University of Queensland)

We examine whether and to what extent successful equities investment strategies are transferrable to the commodities futures market. We investigate a total of 7 investment strategies that involve optimization and mean-variance timing techniques. To account for the unique characteristics of the commodity futures market, we propose a novel method of classification based on momentum or term structure properties in the formation of long-short portfolios in conjunction with the quantitative strategies from the equities literature. Our approach generates significant excess returns and risk-adjusted performances as measured by the Sharpe and Sortino ratios and the maximum drawdown. We find no significant correlation between the strategies' excess returns and common risk factors. There is no evidence that excess returns are a compensation for liquidity risk. The strategies are robust to transaction costs and choice of model parameters and exhibit stable performance across various market conditions including times of financial crisis.

Paper Abstracts

Session 1B: Infrastructure 1

Paper 1: Revenue and Profitability in Privately-Held Infrastructure Investments

Authors: Frédéric Blanc-Brude, Majid Hasan, Qi Wang and **Tim Whittaker** (EDHEC Infrastructure Institute-Singapore)

In this paper, we provide evidence that firms identified as infrastructure providers possess statistically significant different characteristics to that of non-infrastructure firms. We employ a unique dataset of individually identified and hand collected financial statements of private, un-listed infrastructure firms in the United Kingdom. We find that unlisted infrastructure firms are smaller, exhibit higher leverage and possess earnings characteristics that are more resilient to economic shocks than other types of companies. These findings support the claims that infrastructure is different, when compared to other companies and provide the first steps in examining the infrastructure investment narrative.

Paper 2: Design Going Concern Option in the BOT Project to Prevent the Operator's Self-Interest Behavior

Author: **Yanfang Sun**, China University of Petroleum

Due to the incompleteness of the contract for the BOT project, the concessionaire would take various self-interest behaviors to maximize his own interests but do harm to the project's overall benefit. From the whole life cycle perspective, this paper creatively designs a going concern option in the BOT project contract. Through the analysis based on a wastewater treatment BOT project, it is shows that the concessionaire would focus on short-run self-interest actions by extending the equipment's depreciable life. This behavior is detrimental to the long-term value of the project. This option could efficiently motivate the concessionaire to make equipment renewal decisions from the project's long-term benefits. The greatest contribution of this paper is to prove the effectiveness of the design of going concern option in correcting concessionaire's short-sighted decision making behavior.

Paper Abstracts

Session 1C: Alternative Strategies 1

Paper 1: Time Varying Price Discovery in VIX Exchange Traded Notes: A Tale of Retails vs. Institutional Trades

Authors: Adrian Fernandez-Perez, Bart Frijns, **Ilnara Gafiatullina** and Alireza Tourani-Rad (Auckland University Technology)

This study investigates the intraday price discovery between the VIX short-term futures ETNs (VXX) and inverse VIX short-term ETNs (XIV) for the period January 3, 2011 to December 31, 2015. Applying both the Hasbrouck (1995) information share and the Gonzalo and Granger (1995) common factor weight approach, we observe strong time variation in the price discovery contribution between the direct and inverse notes. We find that the classical measures of trading costs and market liquidity are significant determinants of price discovery. We also document that price discovery of the VXX increases with greater institutional ownership and on days when the level of the VIX is high. We also report that order imbalance of both retail and institutional investors has a significant effect on price discovery.

Paper 2: Long-Term Series Reversal: International Evidence

Authors: **Sonja Kobinger**, Graham Bornholt and Mirela Malin (Griffith University)

This paper is the first to examine the predictability of expected equity returns from the long-term past performance using a time-series approach. Extending the recent findings on the short-term “time-series” momentum effect, the evidence indicates that returns following extreme low past long-term performance history tend to outperform those following extreme high past long-term returns for MSCI developed country indices. Positive excess returns manifest the long-term “time-series reversal” (TSR) effect. Strategies exploiting this TSR effect provide persistent superior risk-adjusted returns for up to two years. A diversified country-average portfolio based on the long-term TSR effect limits downside risk and predicts financial crises with an average lead-time of four months.

Paper Abstracts

Session 2A: Commodities 2

Paper 1: Financialization of Commodities: An Asset Pricing Perspective

Authors: Devraj Basu and **Olivier Bautheac** (University of Strathclyde)

The last two decades have seen major changes in the nature of the commodity markets with the influx of financial investor inflows followed by the financial crisis. We study the effect of these events on commodity futures pricing dynamics using commodity asset pricing techniques. We consider both futures market based factors and the traditional market factor and find that a hedging pressure based factor is able to best detect the effects of commodity financialization while the effects of the financial crisis and after are most clearly visible through the performance of the market factor. The futures market seems to have been the main channel for the effects of commodity financialization, which seems to have affected the metals sector most strongly, while the effects of post financial crisis monetary policy seems to have resulted in greater covariation between commodity and equity markets.

Paper 2: Rolling Quantile Based Trading Strategy in the US and Chinese Agricultural Futures Markets

Authors: **Huayun Jiang**, Eduardo Roca, Jen-Je Su and Neda Todorova (Griffith University)

This paper is the first in the literature to formulate and examine the profitability of trading strategies based on signals generated from different quantiles in the returns distribution. We conduct momentum and contrarian trading strategies on a cross market basis in relation to the US and Chinese agricultural futures over a range of holding periods (daily, intraday, and overnight) for soybean, wheat, corn, and sugar. Overall, we find that the greatest profit is generated from trades based on extreme quantiles. This result highlights the value of harvesting information from the different parts of the returns distributions which has so far been neglected in the trading strategy literature.

Paper Abstracts

Session 2B: Infrastructure 2

Paper 1: Investment Risk in Toll Roads: A Case Study of Four Projects

Authors: **Robert J. Bianchi** (Griffith University), Michael E. Drew (Griffith University) and Timothy Whittaker (EDHEC Infrastructure Institute-Singapore)

Understanding the time-variation of investment risk across the life of an infrastructure project is essential for investors. This issue is becoming critically important for investors especially as public policy is shifting towards encouraging private sector provision of public infrastructure. The study explores the common belief that investors in infrastructure projects are exposed to the highest levels of risk during the construction phase and risk decreases when operations begin. This rationale is founded on the fact that the construction phase carries higher investment risk than the operations phase due to the absence of revenue streams being generated by the underlying asset. We test this hypothesis by examining the population of listed toll roads in Australia for the period 1996 through 2010. Our findings reveal high levels of firm-specific risk in Australian toll roads. Importantly, we report that this firm-specific risk is time-varying in nature, with the risk of toll roads being relatively low during the construction phase and subsequently increasing during the operations phase. The empirical evidence presented in this study challenges the conventional perspectives of infrastructure project risk and reveals that the risk for investors is at its highest when the assets shifts from the construction phase to the operations phase. The source of this elevated risk between the construction and operations phases occurs when realised traffic demand does not meet forecast expectations. This finding has important implications for investors and policy makers seeking to promote private investment in public infrastructure.

Paper 2: Cash Flow Dynamics of Private Infrastructure Project Debt

Authors: Frédéric Blanc-Brude and **Majid Hasan** (EDHEC Infrastructure Institute-Singapore)

Both long-term investors and policy-makers have become increasingly aware of growing investment opportunities in illiquid infrastructure debt in recent years. Yet matching the supply of new infrastructure assets with institutional investments remains elusive, primarily due to a lack of knowledge about the risk pro_le of infrastructure investments. In this paper, we use hand collected data for about 200 infrastructure projects over a period of 15 years, and analyse the characteristics of debt service cover ratio (DSCR) both in the cross-section and time-series. The cross-sectional analysis of the DSCR suggests that the business model of the infrastructure project, which determines its revenue risk, is the most important determinant of the DSCR distribution. The time-series analysis of DSCR observations suggests that infrastructure projects exhibit a life-cycle effect, and de-risk over time. Our results shed light on the dynamics of credit risk in infrastructure debt instruments, and have implications for asset allocation to infrastructure assets and capital requirements for such investments.

Paper Abstracts

Session 2C: Alternative Strategies 2

Paper 1: How Australian Socially Responsible Funds Screen Investments

Authors: Adam Carey, Steve Ogden-Barnes and **Adrian Raftery** (Deakin University)

Socially Responsible Investment (SRI) is concerned with the ethical as well as environmental, social and governance aspects of investment decision-making. It incorporates the strategies of investment screening and company engagement in addition to risk-return metrics. However, there are concerns that there is an inconsistency in reporting and communication by Australian-based SRI funds against investor expectations. Using an online questionnaires and interviews, this paper reviews the equity holdings of 19 socially responsible funds to firstly assess the effectiveness of their negative screening policies and secondly to better understand their investment decision making processes. We benchmark and analyse the way Australian SRI funds apply negative screening in the context of the funds' decision-making and governance structures. We find significant variability in how Australian-domiciled SRI fund managers define, communicate and then implement negative screening. We discuss the implications of our findings and make a number of recommendations for industry.

Paper 2: Does It Pay to Invest in SRI?

Authors: **Sophia Bian**, John Hua Fan and Victor Wong (Griffith University)

This paper examines the diversification benefits of Socially Responsible Investment (SRI) in a portfolio context. SRIs have been documented with lower volatility, while not sacrificing returns as compared to mainstream shares. Two portfolios are formed from an Australian investors' perspective using daily data from 1994 to 2015 and are compared against each other; one portfolio consisting of SRI with mainstream shares and bonds and another without SRI. The results confirm the benefits of SRI in a portfolio with a higher efficient frontier and the SRI portfolio obtained higher risk-adjusted return with lower value-at-risk. The findings are useful to SRI investors and fund managers who have interest in diversifying their portfolios into SRI.

Paper Abstracts

Session 3A: Commodities 3

Paper 1: The Costs of Financialization – Evidence from Exchange-Traded Funds on Gold

Author: **Dirk Baur** (University of Western Australia)

Exchange-traded funds (ETFs) on indices provide access to a diversified portfolio of assets at a low cost. Whilst ETFs on single commodities have less obvious advantages its number has grown substantially in recent years. This paper analyzes the benefits and risks of single-asset ETFs theoretically and empirically. We show that ETFs on gold provide a low cost and more liquid alternative to physical investments in gold. As a consequence, the introduction of ETFs on gold leads to a structural demand shift with implications for the price of gold and the volatility of gold. Our analysis provides new evidence on the financialization of commodities and can help to explain the growth of gold ETFs and changes in the price of gold.

Paper 2: Convenience Yield Risk Premiums

Authors: Rangga Handika (Macquarie University), Olaf Korn (Georg-August-Universität Göttingen) and **Stefan Truck** (Macquarie University)

The convenience yield is an important risk factor for commodity derivatives, but very little is known about how convenience yield risk is priced. In this paper, we construct portfolios of commodity futures that track the convenience yield risk premium. Our empirical results for a variety of different commodities show that premiums are consistently positive, as suggested by an argument based on hedging demand. However, the magnitude of the premium varies strongly between groups of commodities. Such differences can be explained by different market structures. Our study has implications for the risk management of commodity positions and demonstrates the value of convenience yield risk premiums for investors. For grains, a risk-averse investor realizes monetary utility gains over a risk-free investment of up to 11% per year from a trading strategy that tracks the premium.

Paper Abstracts

Session 3B: Carbon/Energy 1

Paper 1: Quantile Serial Dependence in Crude Oil Markets: Evidence from Improved Quantilogram Analysis with Quantile Wild Bootstrapping

Authors: Jen-Je Su (Griffith University), Adrian Cheung (Curtin University) and **Eduardo Roca** (Griffith University)

We examine the quantile serial dependence in crude oil prices based on the Linton and Whang's (2007) quantile-based portmanteau test which we improved by means of quantile wild bootstrapping. Through Monte Carlo simulation, we find that the quantile wild bootstrap based portmanteau test performs better than the bound testing procedure suggested by Linton and Whang (2007). We apply the improved test to examine the efficiency of two crude oil markets – WTI and Brent. We also examine if the dependence is stable via rolling sample tests. Our results show that both WTI and Brent are serially dependent in all, except the median quantiles. These findings suggest that it may be misleading to examine the efficiency of crude oil markets in terms of mean (or median) returns only. These crude oil markets are relatively more serially dependent in non-median ranges.

Paper 2: Recent Evidence on the Oil Price Shocks on GCC Stock Markets

Authors: **Victor Wong** (Griffith University) and Suzanna El Massah (Cairo University)

The recent plunge in the oil price affected many countries, especially major oil producers and exporters, such as Gulf Corporation Council (GCC), which accounts for half the world's oil reserves. Lower oil prices generate concerns about economic growth and stock market movements. Our main aim is to capture the effects of oil price3s on GCC stock markets covering a 10-year period, 2005-2015. We examine the direction of influence and influence absorption through Granger causality and impulse response function. The results are important for portfolio management at the international level, and to help government and regulatory authorities to make correct decisions in times of oil-price change. Additionally, it calls for more economic diversification at the country level in the GCC region to mitigate high volatility in the event of oil shocks.

Paper Abstracts

Session 3C: Alternative Strategies 3

Paper 1: Do Investors Flip Less in Bookbuilding than in Auction IPOs?

Authors: **Suman Neupane** (Griffith University), Andrew Marshall (University of Strathclyde), Krishna Paudyal (University of Strathclyde) and Chandra Thapa (University of Strathclyde)

Using a regime change setting, this paper examines whether investors flip their initial allocation less in bookbuilding in comparison to auction initial public offerings (IPOs). Based on bookbuilding theory, we posit that the ability to control allocation flexibility in the bookbuilding mechanism should enable underwriters to avoid flippers and target long-term investors. Consistent with this premise, we find that investors flip significantly less in bookbuilding IPOs, both in overall terms and separately for frequent and non-frequent investors. We also find that the influence of underwriter reputation is stronger in bookbuilding regime with frequent investors flipping considerably less in IPOs that are managed by high reputation underwriters in bookbuilding IPOs compared to auction IPOs. Both frequent as well as non-frequent investors in bookbuilding IPOs continue to hold their shares for much longer than investors in auction IPOs. The results highlight the benefits of allocation discretion, which allows underwriters to influence investors' behavior as well as use non-bid information in the IPO process.

Paper 2: Risk Factors and Extreme Correlations

Authors: Robert J. Bianchi (Griffith University), Michael E. Drew (Griffith University) and **Scott N. Pappas** (Griffith University)

The returns on investment portfolios based on risk factors have unique characteristics when compared to those of other portfolios. This paper explores the exceedance correlation between risk-factor returns and reveals three distinguishing empirical facts: exceedance correlations are generally symmetric; where asymmetries exist, positive asymmetries are as common as negative; and normality is rejected for both positive and negative exceedance correlations. Examining (bivariate) risk-factor portfolio returns, this paper also reveals that they are largely symmetric for all but the most extreme returns. Risk-factor investments exhibit unique and complex correlation structures which appear to have a largely positive impact on portfolio diversification.

Paper Abstracts

Session 4A: Commodities 4

Paper: A Factor Model Index (FMI) Benchmark for Commodity Investment

Authors: Daniel Broby (University of Strathclyde), Andrew McKenzie (University of Arkansas) and **Olivier Bautheac** (University of Strathclyde)

Investing in commodities as an asset class has increased dramatically. This process is termed finacialization and is typically conducted through the futures market. The tools to implement and benchmark the success or failure of such an investment strategy are still in their infancy. Commodity investment, like traditional investment, requires suitable benchmarks for performance measurement and attribution. In this paper we propose an appropriate benchmark for such investment based on common principal components. We argue that factor model based index (FMI) benchmarks are a viable alternative to existing production based indexes. Using Principal Component Analysis, we identify five factors related to grains, meats, industrial metals, energy and precious metals. We suggest that FMI benchmarks constructed using a factor model based on our approach would allow commodity investors to better measure their investment objectives.

Paper Abstracts

Session 4B: Real Estate 1

Paper: Bubbles and Crashes in the Australian Residential Property Market

Authors: **Dirk Baur** and Richard Heaney (University of Western Australia)

This paper analyzes the Australian property market, the relationships between cities, houses and units, and the stock market with a focus on bubbles and crashes. Using monthly housing and unit prices for all eight capital cities we find that bubbles are more frequent, last longer and are more synchronized than crashes. Also, crashes do not immediately follow bubbles and are more prevalent across apartment units. Despite the existence of corrections in property prices the average returns and the risk-return relationships are more favorable in the property market than the stock market. We also identify a strong and positive change in correlations between the stock market and the property market around the global financial crisis consistent with financial contagion. A Vector Autoregression (VAR) further shows that policy interest rates and stock market returns significantly influence property prices which in turn influence the cash rate and the stock market. The relative stability of Australian property prices over the last 20 years suggests that policy makers played a role by providing an accommodating environment.

Paper Abstracts

Session 4C: Carbon/Energy 2

Paper: Carbon Prices and Macroeconomic Risks in China: Evidence from the Pilot Trading Phase

Authors: **John Hua Fan** and Neda Todorova (Griffith University)

This paper is the first to investigate the empirical link between carbon prices and macroeconomic risks in China's cap-and-trade pilot scheme. Using data from four pilot markets in Beijing, Guangdong, Hubei and Shenzhen from October 2013 through February 2016, we demonstrate that the carbon price in Beijing is weakly linked to Daqing crude oil prices but not to international crude oil price level. Furthermore, our results indicate that energy, utilities, industrial and materials sector indices are positively related to the allowance prices in Hubei and Shenzhen. The results suggest that the Chinese Carbon market is currently immature. The carbon price fundamentals are weak and the markets are not efficient in an informational sense. The findings presented in this study provide important policy implications for the upcoming integration of the national carbon market.

Notes

Griffith Centre for Personal Finance and Superannuation

Griffith Business School

Griffith University

Nathan Campus, 170 Kessels Rd, Nathan QLD 4111 Australia

Email: GCPFS@griffith.edu.au

Phone: +61 7 3735 4272

Fax: +61 7 3735 3719

Website: www.griffith.edu.au/aiconf