University of Otago

2019 (Jun) PhD Workshop

Department of Accountancy and Finance, Otago Business School

Program for 2019 (Jun) PhD Workshop

Department of Accountancy and Finance, Otago Business School

11:00am-2:00pm, 4 June 2019 (Tue), Commerce Boardroom 2.19/2.20

Organizer: Dr. Xinfeng Ruan

PhD Presentations

11:05 am to 11:11 am	Presenter: Tian Yue Title: The Volatility Index in China
11:11 am to 11:17 am	Presenter: Nuradhi Kalpani Jayasiri Title: Integrated Reporting in Sri Lanka: An Exploratory Study
11:17 am to 11:23 am	Presenter: Dzung Nguyen Title: Loans from my neighbour: East Asian Commercial Banks, Financial Integration and Bank Default Risk
11:23 am to 11:29 am	Presenter: Quyên Thi Hoàng Nguyễn Title: Climate Transition Risk in Loan Portfolios: Are All Banks The Same?
11:29 am to 11:35 am	Presenter: Wei Guo Title: Do Brothers `Smirk' Differently? Evidence from SPX and SPY Options
11:35 am to 11:41 am	Presenter: Mahnoor Sattar Title: Outside Directors and Bank Performance in Bangladesh
11:41 am to 11:47 am	Presenter: Wei Lin Title: The Valid Regions of Gram-Charlier Densities
11:47 am to 11:53 am	Presenter: Khurshid Ali Title: Climate change risk discourse in the 21st century: a review of evidence from the top-tier accounts/finance journals listed in ABDC

Mix and Mingle

12:15 pm to 2:00 pm	Lunch

Abstracts

Tile: The Volatility Index in China

Tian Yue, PhD in Finance

Abstract

We introduce and evaluate the CN-VIX: the implied volatility index for the Chinese equity index market from SSE50 ETF options. The CN-VIX is created according to the CBOE (2003) methodology and improved with interpolation/extrapolation virtual option dataset from implied volatility function by Zhang and Xiang (2008), Carr and Wu (2009) and Chang et al (2013). We compare the CN-VIX with the VIX (Volatility Index on SPX option) and VXFXI (Volatility Index on China FXI ETF option). We also evaluation the CN-VIX in terms of leverage effect and volatility forecasting of realized volatility.

Tile: Integrated Reporting in Sri Lanka: An Exploratory Study

Nuradhi Kalpani Jayasiri, PhD in Accounting

Abstract

N/A

Tile: Loans from my neighbour: East Asian Commercial Banks, Financial Integration and Bank Default Risk

Dzung Nguyen, PhD in Finance

Abstract

The paper examines the impact of financial integration on bank default risk for East Asian commercial banks that receive foreign claims from international banks. Sampling commercial banks from eight East Asian countries during 1999-2014, I report that financial integration lowers recipient countries' bank default risk. The impact is primarily driven by the foreign claims extended by Asian lenders and the foreign claims extended via local affiliates. Consistent with prior evidence, the close proximity of lenders and borrowers alleviates information asymmetry, effectively disciplining the loan relationship. The result supports the fostering of financial integration, promoting deeper intra-regional connectedness throughout East Asia.

Tile: Climate Transition Risk in Loan Portfolios: Are All Banks The Same?

Quyên Thi Hoàng Nguyễn, PhD in Finance

Abstract

This paper examines financial institutions' exposure to climate transition risk using a bottom-up methodology. In our previous paper, we extend the prior work for predicting corporate level carbon footprints by introducing machine learning approaches. We use those enhanced predictions as the proxy to measure the climate transition profile of the twenty largest banks in the United States using their commercial syndicated loan portfolios in the period 2005-2018. Additionally, we conduct a climate stress test on the same group of banks to explore their vulnerability under a variety of transition pathways from 2018 IPCC Special Report (above 2oC, higher 2oC, lower 2oC, 1.5oC high overshoot and 1.5oC low overshoot). The stress test is designed to incorporate heterogeneous shocks on primary and secondary energy market share as well as on the implementation of an autarkic carbon price from 2020 to 2100. In stress testing, the change in loan losses across a variety of transition pathways is compared against the Business-as-Usual scenario.

Our preliminary results reveal that strong variations exist in climate transition risk profiles among the U.S. banks, driven not only by their exposure to the energy sectors but also due to their borrowers' carbon emission profiles. Banks generally lend a relatively minimal amount to coal mining (0.3%) but hold a considerable exposure in oil and gas (4.7%) and utility sector (6.3%). Taken together, the U.S. loan portfolio has a large aggregated shares of climate-relevant sectors (11.4%), with an underlying carbon intensity of 151 CO2-e ton per million dollars in revenue. Interestingly, we notice that while banks maintain a stable climate transition profile over time, they are affected by the rising interests in climate change and temporarily/permanently downsize their fossil-fuel exposure in the aftermath of the Paris Agreement. Climate stress-tests with shocks on top-line (market share) and bottom-line (carbon price) reveal that the median incremental loss starts out minimal (-0.07% -0.06%) but grows exponentially by the end of century (0.11%-15.65%). The risk magnitude is much higher in the 1.5oC pathways, which may grow twice as large as compared to the 2oC target. This tail-end risk is equivalent to an additional loss of 13.6% -15.6% on the entire US loan portfolios. Interestingly, the loss is mainly driven by potential carbon price increase across all sectors (0.03%-15.64%) and less by changes in energy market share (-0.07%-2.83%). Also, banks' vulnerabilities are subject not only to their climate risk, but also to the financial risk of their borrowers. Findings of this paper are critical to the U.S. banking sector to strategically plan their loan portfolios against potential climate-related risks.

Tile: Do Brothers `Smirk' Differently? Evidence from SPX and SPY Options

Wei Guo, PhD in Finance

Abstract

This paper documents the implied volatility (IV) difference between SPX and SPY options. We examine time series and term structure of the three factors, the level, slope and curvature. We find that the level factor (ATM volatility) for SPY options is larger than that for SPX options,

which Implies a larger expected volatility for SPY option traders. The IV curves for SPX and SPY options are downward sloping and steepen with time to maturity. The SPY options IV curves are usually steeper than those for SPX options. We also find some factors that are proxies for liquidity, sentiment and trading cost and economic cycle explain the IV difference in these two options. The ATM IV difference normally decreases as the liquidity increases, while the ATM IV difference increases as the trading cost increases.

Tile: Outside Directors and Bank Performance in Bangladesh

Mahnoor Sattar, PhD in Finance

Abstract

Using pooled OLS and lagged performance models on a sample of 29 listed banks with data from 2003-2017, we find robust evidence that board independence has a significant positive effect in an environment dominated by family control and inordinate inside director power. Bank profitability is enhanced by greater outside director representation on the board. One of the benefits from independent monitoring is through the reduction of non-performing loans and additional tests reveals outside directors have a non-linear relation with operating income. Our results contribute to the extant literature supporting board independence in emerging markets.

Tile: The Valid Regions of Gram-Charlier Densities

Wei Lin, PhD in Finance

Abstract

If a probability distribution is sufficiently close to a normal distribution, its density can be approximately by the truncated Gram-Charlier series where skewness and kurtosis directly appear as parameters. However, the existing literature is restricted to truncating the series expansion until fourth moment because it becomes difficult to keep its nonnegative. This paper presents how valid region of higher cumulants can be numerically implemented by the semidefinite algorithm, which ensures that a series truncated at a moment of arbitrary even order represents a valid probability density. Furthermore, the impact of higher moments on the valid regions has been shown.

Tile: Climate change risk discourse in the 21st century: a review of evidence from the top-tier accounts/finance journals listed in ABDC

Khurshid Ali, PhD in Accounting

Abstract

N/A