

Anthony S TAY

School of Economics
Singapore Management University (SMU)
90 Stamford Road, Level 5
Singapore 178903

Email: anthonytay@smu.edu.sg

Office Phone: (+65) 68280850



Education

PhD, University of Pennsylvania, United States of America, 1997

Bachelor of Social Science, National University of Singapore, Singapore, 1991

Academic Appointments

Associate Professor of Economics, School of Economics, SMU, Jul 2010 - Present

Assistant Professor of Economics, School of Economics, SMU, Apr 2007 - Jun 2010

Assistant Professor of Economics, School of Economics and Social Sciences, SMU, Jul 2003 - Mar 2007

Academic Administrative Positions

Associate Dean (Postgraduate), School of Economics, SMU, Jul 2016 - Jun 2018

Programme Director (Postgraduate Research), School of Economics, SMU, Jul 2013 - Jun 2018

Director (Postgraduate Research Programme), School of Economics, SMU, Jul 2012 - Jun 2013

RESEARCH

Research Interests

Econometrics (Theory, Forecasting), Empirical Macroeconomics, Empirical Finance

Publications

Journal Articles [Refereed]

The impact of transaction duration, volume and direction on price dynamics and volatility, by TAY, Anthony S.; TING, Christopher; TSE, Yiu Kuen; WARACHKA, Mitchell. (2011). *Quantitative Finance*, 11 (3), 447-457. <http://doi.org/10.1080/14697680903405742> (Published)

Using high-frequency transaction data to estimate the probability of informed trading, by TAY, Anthony S.; TING, Christopher; TSE, Yiu Kuen; WARACHKA, Mitchell. (2009). *Journal of Financial Econometrics*, 7 (3), 288-311. <http://doi.org/10.1093/jffinec/nbp005> (Published)

Modelling trade direction with autoregressive conditional marked duration and the probability of informed trading, by TAY, Anthony S.; TING, Christopher; TSE, Yiu Kuen; Warachka, Mitchell C.. (2009). *Journal of Financial Econometrics*, 7 (3), 288-311. <http://doi.org/10.1093/jfinec/nbp005> (Published)

Direction-of-change forecasts based on conditional variance, skewness and kurtosis dynamics: International evidence, by Christoffersen, Peter F.; Diebold, Francis X.; Mariano, Roberto S.; Tay, Anthony S.; Tse, Yiu Kuen. (2007). *Journal of Financial Forecasting*, 1 (2), 1-22. (Published)

Global and regional sources of risk in equity markets: Evidence from factor models with time-varying conditional skewness, by Hashmi, Aamir R.; Tay, Anthony S.. (2007). *Journal of International Money and Finance*, 26 (3), 430-453. <http://doi.org/10.1016/j.jimonfin.2007.01.003> (Published)

Non-fundamental expectations and economic fluctuations: Evidence from professional forecasts, by Choy, Keen Meng; Leong, Kenneth; Tay, Anthony S.. (2006). *Journal of Macroeconomics*, 28 (2), 446-460. <http://doi.org/10.1016/j.jmacro.2004.07.004> (Published)

Intraday stock prices, volume, and duration: A nonparametric conditional density analysis, by Tay, Anthony S.; Ting, Christopher. (2006). *Empirical Economics*, 30 (4), 827-842. <http://doi.org/10.1007/s00181-005-0004-y> (Published)

Density forecasting: A survey, by Tay, Anthony S.; Wallis, Kenneth F.. (2000). *Journal of Forecasting*, 19 (4), 235-254. [http://doi.org/10.1002/1099-131X\(200007\)19:4<235::AID-FOR772>3.0.CO;2-L](http://doi.org/10.1002/1099-131X(200007)19:4<235::AID-FOR772>3.0.CO;2-L) (Published)

Multivariate density forecast evaluation and calibration in financial risk management: High-frequency returns on foreign exchange, by Diebold, Francis X.; Hahn, Jinyong; Tay, Anthony S.. (1999). *Review of Economics and Statistics*, 81 (4), 661-673. <http://doi.org/10.1162/003465399558526> (Published)

Evaluating density forecasts with applications to financial risk management, by Diebold, Francis X.; Gunther, Todd A.; Tay, Anthony S.. (1998). *International Economic Review*, 39 (4), 863-883. <http://doi.org/10.2307/2527342> (Published)

Selecting an index for a stock index futures contract: An analysis of the Singapore market, by Tay, Anthony S.; TSE, Yiu Kuen. (1991). *Review of Futures Markets*, 10 (3), 412-431. (Published)

Book Chapters

Mean, volatility, and skewness spillovers in equity markets, by Hashmi, Aamir R.; Tay, Anthony S.. (2012). In L. Bauwens; C. Hafner; S. Laurent (Ed.), *Handbook of volatility models and their applications* (pp. 127-145) Hoboken, NJ: Wiley-Blackwell. <http://doi.org/10.1002/9781118272039.ch5> (Published)

Intraday stock prices, Volume, and duration: A nonparametric conditional density analysis, by TAY, Anthony S.; TING, Christopher. (2008). In L. Bauwens; W. Pohlmeier; D. Veredas (Ed.), *High frequency financial econometrics: Recent developments* (pp. 253-268) New York: Springer Verlag. http://doi.org/10.1007/978-3-7908-1992-2_11 (Published)

Evaluating density forecasts of inflation: The survey of professional forecasters, by Diebold, Francis X.; Tay, Anthony S.; Wallis, Kenneth F.. (1999). In H. White; R. F. Engle; C. W. J. Granger (Ed.), *Cointegration, causality, and forecasting: A festschrift in honour of Clive W. J. Granger* (pp. 76-90) Oxford: Oxford University Press. <http://www.worldcat.org/isbn/9780198296836> (Published)

Conference Paper

Intraday stock prices, volume, and duration: A nonparametric conditional duration analysis, by Tay, Anthony. (2005). *Winter Meeting of the Econometric Society*, Singapore. (Published)

Magazine Article

A brief survey of density forecasting in macroeconomics, by Tay, Anthony. (2015, October). *Macroeconomic Review*, 92-97. (Published)

Newspaper Article

Forecasting economic uncertainty, by TAY, Anthony, S. (2016, January 20). *Business Times (Singapore)*

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https://www.smu.edu.sg/sites/default/files/smu/news_room/smu_in_the_news/2016/Jan2016/Jan20/BT_201
 (Published)

Working Papers

The role of macroeconomic, policy, and forecaster uncertainty in forecast dispersion, by LI, You; TAY, Anthony. (2017). Singapore Management University, SMU Economics and Statistics Working Paper Series, Paper No. 01-2018. (Published)

Time-varying incentives in the mutual fund industry, by Olivier, Jacques; Tay, Anthony S.. (2008). Singapore: SMU Economics and Statistics Working Paper Series, Paper No. 10-2008. (Published)

Direction-of-change forecasts for Asian equity markets based on conditional variance, skewness and Kurtosis dynamics: International evidence, by Christoffersen, Peter F.; Diebold, Francis X.; Mariano, Roberto S.; Tay, Anthony S.; Tse, Yiu Kuen. (2007). Singapore: SMU Economics and Statistics Working Paper Series, Paper No. 15-2007. (Published)

Financial variables as predictors of real output growth, by Tay, Anthony S.. (2007). Singapore: SMU Economics and Statistics Working Paper Series, Paper No. 14-2007. (Published)

Modeling transaction data of trade direction and estimation of probability of informed trading, by TAY, Anthony; TING, Christopher; TSE, Yiu Kuen; WARACHKA, Mitch. (2007). Singapore: Singapore Management University. (Published)

Mixing Frequencies: Stock Returns as a Predictor of Real Output Growth, by Tay, Anthony. (2006). (Published)

Transaction-data analysis of marked durations and their implications for market microstructure, by TAY, Anthony; TING, Christopher; TSE, Yiu Kuen; Warachka, Mitchell. (2004). Singapore: SMU Economics and Statistics Working Paper Series, Paper No. 09-2004. (Published)

How should we interpret evidence of time varying conditional skewness?, by Tay, Anthony S.; Premaratne, Gamini. (2002). Singapore: National University of Singapore, Dept of Economics. (Published)

Dynamic regressions with variables observed at different frequencies, by Abeyasinghe, Tilak; Tay, Anthony S.. (2000). Singapore: National University of Singapore, Dept of Economics, Paper No. 2000/21. (Published)

Research Grants

Singapore Management University

Consensus economics data, SMU Internal Grant - Specialised Database Funding, Ministry of Education (MOE) Tier 1 , PI (Project Level): Anthony S TAY, 2015, S\$13,719

Macroeconomic Density Forecasts, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Anthony S TAY, 2007, S\$31,619.56

Optimal Use of Economic Data Sampled at Different Frequencies, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Anthony S TAY, 2005, S\$30,512

Global Volatility Dynamics, Financial Asset Return Predictability, and Market Timing: The U.S., Europe and Asia, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Anthony S TAY , Co-PI (Project Level): TSE Yiu Kuen, 2004, S\$55,299.44

Nonparametric Conditional Density Estimation, with an Application to Stock Returns Volatility, SMU Internal Grant, Ministry of Education (MOE) Tier 1 , PI (Project Level): Anthony S TAY, 2003, S\$26,642

TEACHING

Courses Taught

Singapore Management University

Undergraduate Programmes :

- Economic Forecasting
- Intermediate Econometrics
- Intermediate Mathematics for Economics

Postgraduate Professional Programmes :

- Dissertation
- Econometrics II
- Topics in Econometric Modeling

Consultancy

IE Singapore / Spring Singapore, Aug 2017 - Feb 2019

International Monetary Fund (IMF) Singapore Regional Training Institute, Aug 2016

International Monetary Fund (IMF) Singapore Regional Training Institute, Aug 2015

International Monetary Fund (IMF) Singapore Regional Training Institute, Aug 2014

Singapore Power, Jul 2014

Member of MOE Consultative Group on 'A' level Mathematics and Statistics syllabus, Sep 2013

International Monetary Fund (IMF) Singapore Regional Training Institute, Jun 2013

International Monetary Fund (IMF) Singapore Regional Training Institute, Mar 2012

Monetary Authority of Singapore, Feb 2005 - Jul 2005

Ministry of Manpower, Jul 2002