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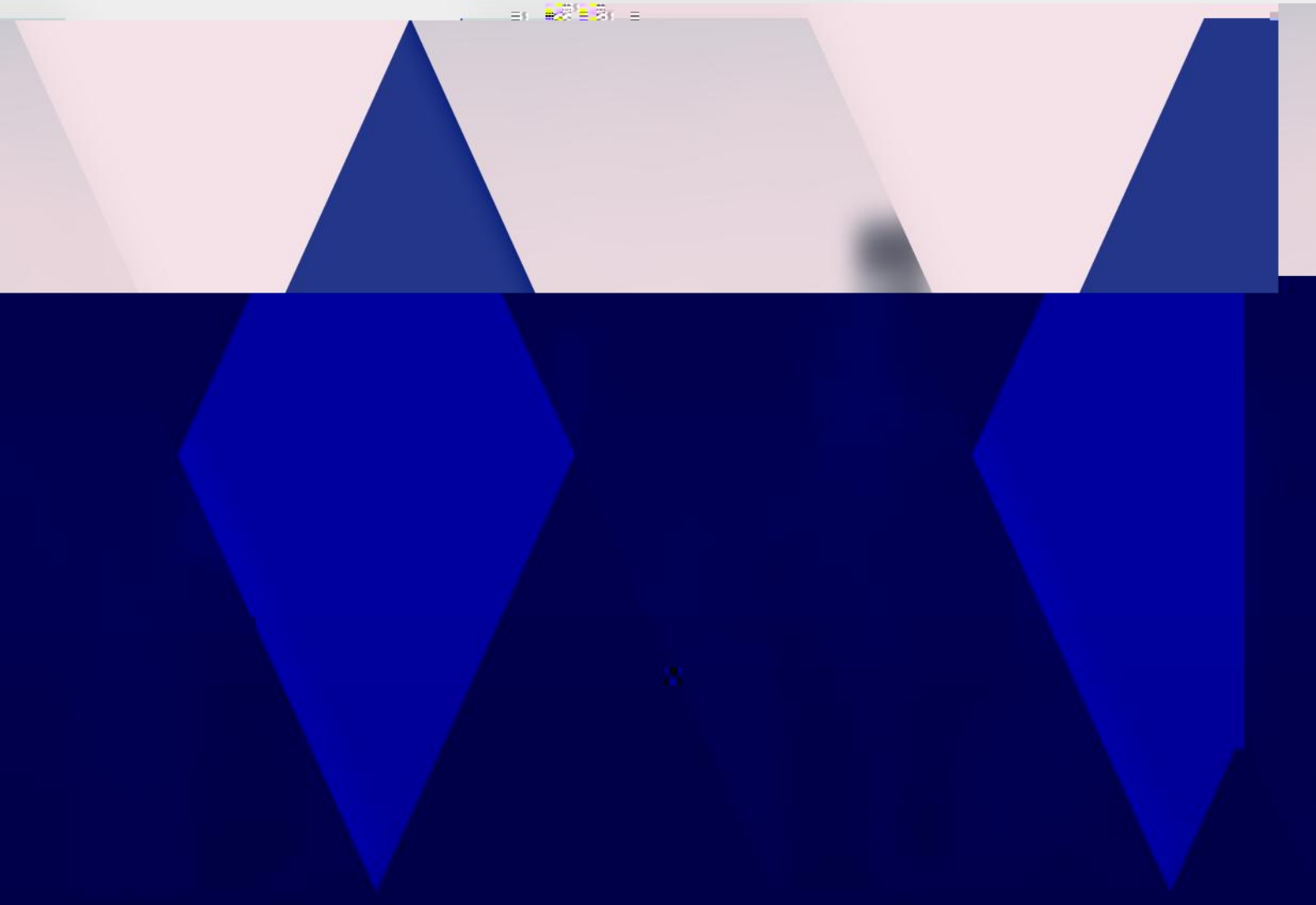

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	8:40-9:20	Keynote Speech 1	
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	10:15-11:55	Session 1	
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8:40-9:20 Keynote Speech 1

Can interval data Improve Volatlity forecasts? Evidence from Foregin Exchange Markets

9:20-10:00 Keynote Speech 2

Profile GMM Estimation of Panel Data Models with Interactive Fixed Effects

10:00-10:15

10:15-11:55 Session 1: Factor Model

1 Projected Estimation for Large-dimensional Matrix Factor Models
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2 Nonlinear Factor Models with Nonparametrically Targeted Predictors
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3 Weak Factor Models and Robust Diffusion Index Forecasts

4 Nonlinear Dynamic Duration Panel Data Model with Fixed Effect

11:55-14:00

14:00-15:40 Session 2: Time Series Econometrics

1 Bubble Testing under Polynomial Trends

2 Transformed Cointegration Models with Partially Linear Additivity

3 Parameter estimation in mixed fractional Ornstein-Uhlenbeck processes

4 Fully Modified Least Squares Estimation of Factor-Augmented Cointegration Regressions

15:40-15:55

15:55-17:10 Session 3: Financial Econometrics

1 Supply-chain concentration and risk premia

2 Portfolio Optimization with Higher-order Stochastic Dominance Constraints

3 Test Predictability for Asset Return with Persistent Predictors: A Novel Instrumental Variable Approach

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8:40-9:20 Keynote Speech 3

From Model Selection to Model Averaging: A Comparison Studies for Nested Linear Models

9:20-10:00 Keynote Speech 4

Testing the martingale difference hypothesis in high dimension

10:00-10:15

10:15-11:55 Session 4: Spatial/Panel Data

1 Threshold spatial autoregressive model

2 Spatial dynamic panel data models with high order time varying endogenous weights matrices

3 Semiparametric Conditional Factor Models: Estimation and Inference

4 Estimation and Inference on Time-Varying FAVAR Models

11:55-14:00

14:00-15:40 Session 5: Microeconometrics

1 Social Networks with Misclassified or Unobserved Links

2 Generalized Conditional Autoregressive Expectile Models: Estimation and Dynamic Test

3 Estimating the CARE system with possibly high-dimensional units

4 Instrumental variable estimation via a continuum of instruments with an

application to estimating the elasticity of intertemporal substitution in consumption

15:40-15:55

15:55-17:10 Session 6: Nonparametric Econometrics

1 Nonparametric Consistent Tests of Exogeneity in Quantile Regression Models
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2 Model averaging for functional-coefficient regressions based on forward-validation

3 Model Checks for Marginal Effects in Proportional Hazard Models

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Keynote Speech 3 **8:40-9:20** **可 573 928 475**

From Model Selection to Model Averaging: A Comparison Studies for Nested Linear Models

Model selection (MS) and model averaging (MA) are two popular approaches for dealing with model uncertainty. Most existing literature is limited to the optimal properties of MS and MA in their own terms, not their comparison. A foundational issue is whether MA offer any significant improvement over MS. Recently, Peng and Yang (2021) has answered this question in the nested model setting with series expansion. In this paper, our goal is to answer the same question in a linear regression framework. We further broaden the scope of analysis to compare MAs with the weights come from three popular weight sets. Simulation studies support the theoretical findings in a variety of settings.

Keynote Speech 4 **9:20-10:00** **可 573 928 475**

Testing the martingale difference hypothesis in high dimension

In this paper, we consider testing the martingale difference hypothesis for high-dimensional time series. Our test is built on the sum of squares of the element-wise max-norm of the proposed matrixvalued nonlinear dependence measure at different lags. To conduct the inference, we approximate the null distribution of our test statistic by Gaussian approximation and provide a simulation-based approach to generate critical values. The asymptotic behavior of the test statistic under the alternative is also studied. Our approach is nonparametric as the null hypothesis only assumes the time series concerned is martingale difference without specifying any parametric forms of its conditional moments. As an advantage of Gaussian approximation, our test is robust to the panel dependence of unknown magnitude. To the best of our knowledge, this is the first valid test for the martingale difference hypothesis that not only allows for large dimension but also captures nonlinear serial dependence. The practical usefulness of our test is illustrated via simulation and a real data analysis. The test is implemented in a user-friendly R-function.

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Session 1: Factor Model 10:15-11:55 可 654 765 647

1. Projected Estimation for Large-dimensional Matrix Factor Models

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In this talk, I will introduce a projection estimation method for large-dimensional matrix factor models with cross-sectionally spiked eigenvalues. By projecting the observation matrix onto the row or column factor space, we simplify factor analysis for matrix series to that for a lower-dimensional tensor. This method also reduces the magnitudes of the idiosyncratic error components, thereby increasing the signal-to-noise ratio, because the projection matrix linearly filters the idiosyncratic error matrix. We theoretically prove that the projected estimators of the factor loading matrices achieve faster convergence rates than existing estimators under similar conditions. Asymptotic distributions of the projected estimators are also presented. A novel iterative procedure is given to specify the pair of row and column factor numbers. Extensive numerical studies verify the empirical performance of the projection method. Two real examples in finance and macroeconomics reveal factor patterns across rows and columns, which coincide with financial, economic, or geographical interpretations.

2. Nonlinear Factor Models with Nonparametrically Targeted Predictors

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Both This paper proposes a new factor model that can summarize the nonlinear information content contained in observed predictors into factor formation and subsequent factor-augmented predictions. Nonparametric sieve method is adopted to approximate the nonlinear functional space of the predictors, with the partial correlation screening procedure used to target the relevant nonlinear predictors to reduce predictor dimension and improve prediction efficiency. Theoretical results including the sure screening property of the screening and the asymptotic normality of the predictive estimator are established. Further refinements are achieved through model selection and jackknife model averaging (JMA) in the prediction accuracy of the approximating factor model. The screening consistency of the model selection criteria and the asymptotic optimality of JMA are then proved. A hybrid procedure of model selection and JMA with asymptotic optimality is also introduced. Finally, numerical results demonstrate the nice performance of our proposed methods.

3. Weak Factor Models and Robust Diffusion Index Forecasts

This paper studies a latent factor model where the underlying factors can be either strong or weak or a mixture of both. We establish asymptotic properties of the estimators for factors, factor loadings, and common components, and contrast the results with the standard results under restricted strong factor models. We also propose a consistent estimator for the number of factors allowing for presence of weak factors. We further study how to make robust inference with diffusion index forecasts based on such weak factor models, in particular, how to construct valid confidence intervals for forecasts from a regression augmented by possible weak factors. We demonstrate the advantage of our methods via Monte Carlo simulations.

4. Nonlinear Dynamic Duration Panel Data Model with Fixed Effect

This paper proposes a new framework of econometric models for analyzing the nonlinear dynamic duration panel data. The duration outcomes are specified by the Generalized Accelerated Failure Time (GAFT) model with fixed effect unobserved heterogeneity. The model is multiplicative separable, thus, a first ratio transformation is used to difference out the fixed effect. This transformation results a panel of outcomes that are free from any time-invariant individual heterogeneity. We interpret
is parametrically
modelled. The intensity of each counting process can be constructed by specifying the distribution of error term of the GAFT model. A minimum distance estimation method is used, the resulting estimators are root-n consistent and asymptotically normal. We illustrate our method with a work absence application.

Session 2: Time Series Econometrics 14:00-15:40 可 654 765 647

1. Bubble Testing under Polynomial Trends

This paper develops the asymptotic theory of the least squares estimator of the autoregressive (AR) coefficient in an AR(1) model with intercept when data is generated from a polynomial trend model in different forms. It is shown that the commonly used right-tailed unit root tests tend to reject the unit root null hypothesis in favor of the explosive alternative. A new procedure, which implements the right-tailed unit root tests in an augmented AR model, is proposed. It is shown that

when the data generating process has a polynomial trend, the test statistics based on the new procedure cannot find evidence of explosiveness. Whereas, when the data generating process is mildly explosive, the new procedure finds evidence of explosiveness. Hence, it enables robust bubble testing under polynomial trends. Empirical application of the proposed procedure using data from the U.S. real estate market reveals some interesting findings. In particular, all the negative bubble episodes flagged by the traditional method are no longer regarded as bubbles by the new procedure.

2. Transformed Cointegration Models with Partially Linear Additivity

This paper considers two general classes of transformed cointegration models. In the first class of models, the dependent variable, after a parametric monotonic transformation, is cointegrated with nonlinear transformations of unit root regressors and stationary regressors in a linear form. The second class augment the first class with unknown integrable transformations of the unit root regressors in an additive way. Extremum estimators for the parameters in transformation function, the plug-in estimators for parameters in the linear components, and sieve estimators for the unknown functions are presented. Asymptotic properties of the proposed estimators are developed, which are shown to depend on the transformation functions and the model parameters. The theory is further extended to allow for both endogeneity of the nonstationary regressors and serially dependent errors. Numerical results demonstrate the nice performance of the estimators, corroborate the theoretical development and illustrate the practical merits of the proposed models.

3. Parameter estimation in mixed fractional Ornstein-Uhlenbeck processes

may exhibit long-range dependence, while, some empirical studies have illustrated the roughness of the volatility, recently. Based on discrete-sampled observations, this paper considers the statistic inference of unknown parameters in fractional volatility models driven by the mixed fractional Ornstein-Uhlenbeck process for all the range of the Hurst index. We prove the strong consistency and derive the asymptotic distribution of these estimators. Monte Carlo experiments show that these estimators are accurate fficient.

4. Fully Modified Least Squares Estimation of Factor-Augmented Cointegration

Regressions

We consider estimating and testing cointegration between an integrated series of interest and a vector of possibly cointegrated nonstationary latent factors. The latent factors are allowed to be cointegrated with each other and no prior knowledge of the number of unit roots among the common factors is required when estimating the main cointegrating regression. We adopt the fully modified least squares (FM-OLS) estimation to account for potential serial correlation and endogeneity in the main cointegration regression. We show that the FM-OLS estimators are consistent and asymptotically mixed normal; and the residual-based cointegration test can be used even with latent factors. Based on the estimated cointegration relation, it is demonstrated that an error correction term added to the traditional diffusion index forecast model improves forecasting accuracy.

Session 3: Financial Econometrics 15:55-17:10 可 654 765 647

1. Supply-chain concentration and risk premia

Ever since the financial recession in 2008, more and more attentions have been paid to the role that the production network played as a channel to translate idiosyncratic risks. According to the theoretical models, the idiosyncratic risks from the suppliers and/or customers of production intermediaries may be accumulated as network risks. In this paper, we investigate a source of network risks exposure that drives asset prices, the supply-chain concentration. Companies whose inputs are mainly purchased from big suppliers and/or whose outputs are mostly sold to a few customers have lower risk premia, which is empirically supported by the Chinese stock market.

2. Portfolio Optimization with Higher-order Stochastic Dominance Constraints

A framework is developed for portfolio optimization with higher-order Stochastic Dominance constraints. A finite system of restrictions on the lower partial moments can be used for evaluating the efficiency of a given benchmark and for constructing enhanced portfolios which dominate the benchmark for the relevant class of risk averters. The system can be linearlized for discrete distributions, allowing for implementation using Linear Programming. Imposing higher-order restrictions

expands the set of improvement possibilities and mitigates the risk of suboptimality due to estimation error. A simulation study exemplifies these benefits, for a simple hypothetical investment problem. In an empirical application to equity industry rotation, accounting for kurtosis aversion and Decreasing Absolute Prudence improves out-of-sample performance beyond levels achieved using more permissive assumptions.

3. Test Predictability for Asset Return with Persistent Predictors: A Novel Instrumental Variable Approach

For predictive regressions with highly persistent regressors, a conventional test statistic is invalid since its limiting distribution relies on the unknown persistence degree of predictors, which is unable to be estimated consistently. This paper proposes a new instrumental variable to offer a robust inference theory for both non-stationary and stationary predictors. We divide the sample into two parts and apply the independent variable in the second sub-sample for regression while the covariate in the second sub-sample as instrumental variable. Next, we apply the data-driven weighted combination of this instrumental variable estimator and IVX estimator using the recursive demeaning to obtain the final instrumental variable estimator. Thereafter, we construct the valid t and Wald-type test statistics robust to persistence and conditional heteroscedasticity. Under some mild conditions, it shows that the test statistics converge to a standard normal distribution or Chi-square distribution. Our new approach enjoys a nice property that it is not only valid for generalized linear hypothesis test but also have a better size control than the original IVX (Kostakis et. al., 2015) and the bootstrap IVX (Demetrescu et. al., 2021), while keeping the optimal converge rate T for non-stationary predictors and \sqrt{T} for stationary predictors. Simulations and empirical studies are provided to demonstrate the effectiveness of the newly proposed approach. The heterogenous predictability of US stock returns at different levels is reexamined.

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Session 4: Spatial/Panel Data 10:15-11:55 可 573 928 475

1. Threshold spatial autoregressive model

This paper considers the estimation and inferential issues of threshold spatial autoregressive model, which is a hybrid of threshold model and spatial autoregressive model. We consider using the quasi maximum likelihood (QML) method to estimate the model. We prove the tightness and the H\'{a}jek-R\'{e}nyi type inequality for a quadratic form, and establish a full inferential theory of the QML estimator under the setup that the threshold effect shrinks to zero along with an increasing sample size. Our analysis indicates that the limiting distribution of the QML estimator for the threshold value is pivotal up to a scale parameter which involves the skewness and kurtosis of the errors due to the misspecification on the distribution of errors. The QML estimators for the other parameters achieve the oracle property, that is, they have the same limiting distributions as the infeasible QML estimators, which are obtained supposing that the threshold value is observed a priori. We also consider the hypothesis testing on the presence of threshold effect. Three super-type statistics are proposed to perform this testing. Their asymptotic behaviors are studied under the Pitman local alternatives. A bootstrap procedure is proposed to obtain the asymptotically correct critical value. We also consider the hypothesis testing on the threshold value equal to some prespecified one. We run Monte carlo simulations to investigate the finite sample performance of the QML estimators and find that the QML estimators have good performance.

2. Spatial dynamic panel data models with high order time varying endogenous weights matrices

This This paper investigates spatial dynamic panel data models with high order time-varying endogenous weights matrices. We consider the panel data when n is large, and T can be large, but small relative to n. In this case, the maximum likelihood estimation (ML) approach would be either infeasible or computationally complicated. Furthermore, under a heteroskedastic error term, ML is inconsistent in general. We propose the generalized method of moments (GMM) estimation and establish its asymptotic properties with the finite moments condition and many moments condition. Monte Carlo simulations show that the proposed estimators have satisfactory finite sample performances. We then apply our model to study the strategic interaction of firms' innovation in China. Empirical results show that market spillover has the

greatest impact on R&D expenditure, while technological spillover has the greatest impact on the total factor of productivity.

3. Semiparametric Conditional Factor Models: Estimation and Inference

This paper introduces a simple and tractable sieve estimation for semiparametric conditional factor models, and develops a simple bootstrap procedure for inference on nullity of intercept function and linearity of intercept and factor loadings functions. We establish large-N-asymptotic properties of the estimators and the tests without requiring large T. We additionally provide two consistent estimators for the number of factors. The results enable us to estimate conditional (dynamic) behavior of a large set of individual assets from a number of characteristics exhibiting nonlinearity without the need to pre-specify factors, while allowing us to disentangle the alpha versus beta explanations. We apply the methods to explain the cross-sectional differences of individual stock returns in the US market, and find strong evidence of nonzero pricing error and nonlinearity in both alpha and beta functions.

4. Estimation and Inference on Time-Varying FAVAR Models

We introduce a time-varying (TV) factor-augmented vector autoregressive (FAVAR) model to capture the TV behavior in both the factor loadings and the FAVAR coefficients. We propose a two-stage estimation procedure by estimating the unobserved common factors by the local principal component analysis (PCA) in the first stage and estimating the TV coefficients by the local smoothing approach in the second stage. We establish the limiting distribution of the estimated coefficients. More importantly, we propose three test statistics to gauge possible sources of TV features in the FAVAR model. The basic idea of these tests is to regress the data on the conventionally estimated common factors by local smoothing and compares the fitted values of TV factor loadings and coefficients with those of time-invariant factor loadings and coefficients via PCA and OLS under the null. Simulation studies are conducted to evaluate both our nonparametric estimates and test statistics. We also provide an application for our model.

Session 5: Microeconometrics

We point identify and estimate linear social network models without observing any network links. The required data consist of many small networks of individuals, such as classrooms or villages, with individuals that are each only observed once. We apply ou
(STAR) Project. Without observing the latent network in each classroom, we identify

find that peer effects tend to be larger in bigger classes, and that increasing peer

2. Generalized Conditional Autoregressive Expectile Models: Estimation and Dynamic Test

In this paper, we propose a generalized conditional autoregressive expectil (GCARE) model, which includes autoregressive components in the measurement of tail expectile. GCARE can be treated as an infinite version of the conditional autoregressive expectile (CARE) model proposed by Kuan et al. (2009), and it can be implemented as a vehicle for the estimation of CAViaR models considered in Xiao and Koenker (2009). Because the latent components are not observable, the quasi-maximum likelihood (QML) estimation method is employed here. The asymptotic properties of the QMLEs are investigated in a time series context. Furthermore, a dynamic expectile (DE) test is proposed for both in-sample model adequacy evaluation and out-of-sample forecasting comparison purposes. Simulations and applications to real data provide empirical support for the proposed methodology.

3. Estimating the CARE system with possibly high-dimensional units

As the only coherent and elicitable risk measure, expectile has drawn the attention of many researchers recently. In this paper, we extend the single equation conditional autoregressive expectile (CARE) model of Kuan et al. (2009) to a CARE system with possibly high-dimensional units. We show how to estimate the CARE system model and derive the asymptotic distributions of our estimator. In an empirical study, we apply our CARE system to studying the systemic risk of large U.S. financial firms. We find that our CARE system is able to identify the asymmetric transmissions of the firms' systemic risk, i.e., the positive and the negative lagged returns generate different patterns of associations in the expectile connectedness.

4. Instrumental variable estimation via a continuum of instruments with an application to estimating the elasticity of intertemporal substitution in consumption

The endogeneity of regressors is a dominant feature of the linear regression model that continues to be a workhorse in econometrics. This paper introduces a new instrument variable estimation procedure based on a continuum of instruments. The proposed estimators are labeled as WNIV and WNIVF. Both are easy to compute, resembling the classic k-class IV estimators, but no any user-chosen number is needed. They are consistent and asymptotically normal distributed under weak instruments and heteroskedasticity of unknown form. Monte Carlo simulations demonstrate that the proposed estimators have excellent finite sample properties, outperforming alternative estimators in a wide range of cases. We apply the new estimation procedure to estimating the elasticity of intertemporal substitution (EIS) in consumption, which is of central importance in macroeconomics and finance. For UK quarterly data from 1970.3-1999.1, the WNIV estimate of EIS is 0.7, and statistically different from zero. For US quarterly data from 1947.3-2008.4, the WNIV estimate is as high as 2.0, and statistically different from zero. Moreover, these estimates are robust to model transformation, and different sets of conditioning variables. These empirical results are strikingly different from the alternative estimators, which are quite small, even very close to zero. These findings give strong support to the practice of model calibrations in macroeconomics and finance, where the EIS in consumption, as a crucial input parameter, is required to be large.

Session 6: Nonparametric Econometrics 15:55-17:10 可 573 928 475

1. Nonparametric Consistent Tests of Exogeneity in Quantile Regression Models

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This paper proposes two new nonparametric tests for a quantile regression model with endogenous regressors in a triangular system. Our first test is concerned with testing whether or not the endogeneity is present across quantiles. The proposed testing methodology is further extended to testing the parametric specification of the control function. The asymptotic properties of the proposed test statistics are established. To improve inference accuracy, a simple wild bootstrap method to implement the tests is suggested, with its theoretical justifications provided. A

simulation study illustrates the finite sample performance of our tests. We apply the proposed tests to two real data sets for empirical illustration.

2. Model averaging for functional-coefficient regressions based on forward-validation

Model averaging aims at providing an insurance against selecting a poor forecast model. All existing model averaging approaches in the literature are designed with constant combination weights. Very few attention has been paid to functional weighting in model averaging, which is more realistic in economics and finance. A novel model averaging estimator is proposed which selects optimal functional combination weights by minimizing a local leave-h-out forward-validation criterion. It is shown that the proposed leave-h-out forward-validation model averaging (FVMA) estimator is asymptotically optimal in the sense of achieving the lowest possible local squared error loss in a class of functional model averaging estimators. Under a set of regularity assumptions, the FVMA estimator is root-Th consistent. A simulation study and an empirical application highlight the merits of the proposed FVMA estimator relative to a variety of popular estimators with constant model averaging weights and model selection.

3. Model Checks for Marginal Effects in Proportional Hazard Models

The article considers a specification test of the parametric part of proportional hazard models, which determines the covariate effects. The test is based on a CUSUM process of the martingale residuals. We develop Principal Component Decomposition of the CUSUM residual process, where the components, which are asymptotically independent standard normal variables, provide a basis for different types of tests that specialized in certain directions. The decomposition method we propose extends existing methods, which only work for parametric efficient estimator, in such a way that it is able to accommodate any root-n consistent estimator of both parametric and nonparametric functions. As a result, the omnibus Cramer-von Mises test, which is the squared L2 -norm of the CUSUM process, has an orthogonal representation as a weighted sum of all squared components. Smooth tests that based on a few components are also constructed to improve the efficiency. Finite sample performance of the proposed tests is illustrated in the context of a Monte Carlo experiment.