The ICEF 20th Anniversary Sixth International Moscow Finance and Economics Conference

Day 1. 27 October, Friday

Finance sessions

Session 1. Credit Risk. 10:00-11:30 AM

Session chair: Christian Julliard (LSE)

1.A. Maria Chaderina (Vienna University of Economics and Business). "Bond Fire Sales".
 Discussant: Svetlana Bryzgalova (Stanford GSB)

We analyze the problem of optimal bond liquidation when institutional investors are hit with a liquidity shock. Institutions fail to fully account for the effect of selling commonly-held bonds on other market participants. The over-selling of these bonds generates substantial price impacts. In data, there are few liquid bonds and they are more commonly-held. In fire-sales liquid bonds exhibit larger price impacts than illiquid ones. However, controlling for commonality of the bond, liquid bonds have smaller price impacts. We argue that even when portfolios have low similarity the commonality of liquid bonds matters for fire-sales losses and financial stability.

- 1.B. Fabiano Schivardi (LUISS and EIEF). "Credit Misallocation During the European Financial Crisis".

Discussant: Norman Schurhoff (HEC, Lausanne)

Do banks with low capital extend excessive credit to weak firms, and does this matter for aggregate efficiency? Using a unique data set that covers almost all bank-firm relationships in Italy in the period 2004-2013, we find that, during the Eurozone financial crisis: (i) Undercapitalized banks were less likely to cut credit to non-viable firms. (ii) Credit misallocation increased the failure rate of healthy firms and reduced the failure rate of non viable firms. (iii) Nevertheless, the adverse effects of credit misallocation on the growth rate of healthier firms were negligible, and so were the effects on TFP dispersion. This goes against previous influential findings that, we argue, face serious identification problems. Thus, while banks with low capital can be an important source of aggregate inefficiency in the long run, their contribution to the severity of the great recession via capital misallocation was modest.

Session 2. Corporate Finance. 12:00-1:30 PM

Session chair: Arkaja Chakraverty (ICEF, HSE)

- 2.A. Dmitry Livdan (University of California, Berkeley). "Adjusting Q: Vintage Capital and Irreversibility".

Discussant: Sergey Stepanov (ICEF, HSE)

This paper extends the Q-theory of investment to capital goods with arbitrary efficiency profiles. Under the assumption of geometric economic depreciation employed by the traditional Q-theory, a firm's replacement cost of assets-in-place is independent of their vintage composition

and can be directly measured by the firm's current productive capacity, i.e., its capital stock. When the economic depreciation is non-geometric, the firm's current capital stock and the replacement cost of its assets are fundamentally different aggregates of its investment history. We construct empirical proxies for these two quantities and show that, consistent with our theoretical predictions, vintage capital effects significantly improve the explanatory power of investment regressions. We further find that the effect of vintage capital in investment regressions is at least as strong as that of cash flow.

2.B. Norman Schurhoff (HEC, Lausanne). "Agency Conflicts Around the World".
 Discussant: Vladimir Sokolov (ICEF, HSE)

We use a dynamic model of financing decisions to measure agency conflicts for a large panel of 12,652 firms from 14 countries. Our estimates show that agency conflicts are large and vary significantly across firms and countries. Differences in agency conflicts are largely due to differences in firm-level governance, ownership concentration, and other firm characteristics, including intangibles and cash. The origin of law is more relevant for curtailing governance excesses than for guarding the typical firm. Agency costs split about equally between wealth transfers and value losses from policy distortions, the latter being smaller in civil law countries where ownership is more concentrated.

Keynote Speech (3:00-4:00 PM)

"Fearing the FED: How Wall Street Reads Main Street"
Amir Yaron (Wharton School of the University of Pennsylvania).

Session 3. Asset pricing and Credit markets. 4:30-6:00 PM

Session chair: Vincent Fardeau (ICEF, HSE)

3.A. Veljko Fotak (SUNY, Buffalo). "A BIT of Investor Protection: How Bilateral Investment
 <u>Treaties Impact the Terms of Syndicated Loans</u>".
 Discussant: Fabiano Schivardi (LUISS and EIEF)

We study the impact of government expropriation risk on the terms of cross-border syndicated loans. By comparing loans by foreign lenders from countries covered by bilateral investment treaties (BITs) to loans from non-covered countries, we isolate and quantify the impact of strengthening property rights against government expropriation on loans. We find that stronger property rights lead to a lower cost of debt, larger loans, larger syndicates, less collateral, and fewer covenants. Results are stronger in countries with a history of government expropriations and robust to methodologies accounting for the endogenous nature of BITs and for the simultaneous determination of loan terms. Our findings persist after the inclusion of other metrics of institutional quality, such as legal origin identifiers and an index of creditor rights risk.

- 3.B. Stephan Dieckmann (University of Pennsylvania). "The EU Sovereign CDS Ban:

<u>Asset Pricing and Welfare Implications under Optimal Beliefs</u>".

Discussant: Dmitry Makarov (ICEF, HSE)

Trading in the CDS market in this paper occurs because irrational investors have optimal beliefs about the default state of the economy, those investors tend to be overly optimistic that default is less likely. Since the imposition of the CDS ban on member states of the European Union in2012, not only are investors forced to share risk through an incomplete capital market, optimal beliefs about default can also change. I show two sets of asset pricing implications can occur, one in which stock market values increase and countries' borrowing rates decrease after the ban is imposed, and one in the opposite direction. I find empirical support for the former, and also show the CDS ban is welfare improving in this case. While rational investors would benefit from lifting the ban, the gain is not sufficient to compensate irrational investors for their utility loss.

Day 2. 28 October, Saturday

Session 4. Market Microstructure. 9:00-10:30 AM

Session chair: Luca Gelsomini (ICEF, HSE)

4.A. Jos van Bommel (Luxemburg University). "<u>Asymmetric Information and the Distribution</u>
of Trading Volume".

Discussant: Alexey Boulatov (ICEF, HSE)

We propose the Volume Coefficient of Variation (VCV), the ratio of the standard deviation to the mean of trading volume, as a new and easily computable measure of information asymmetry in security markets. We use a simple microstructure model to demonstrate that VCV is strictly increasing in the proportion of informed trade. Empirically, we find that firm-year observations of VCV, computed from daily trading volumes, are correlated with extant firm-level measures of asymmetric information in the cross-section of US stocks. Moreover, from trading volumes around earnings announcement dates, we find that VCV steeply decreases after potential information asymmetries are resolved.

4.B. Vincent Fardeau (ICEF, HSE). "<u>Dynamic Strategic Trading</u>".
 Discussant: Georgy Chabakauri (London School of Economics)

In this paper, I study the price effects of anticipated supply shocks (e.g. bond reopenings, SEOs, predictable portfolio rebalancings) in a model of strategic trading. Strategic traders are imperfectly competitive and trade to share risk with price-takers. Thanks to market power, they limit risk-sharing and trade slowly to smooth price impact. As a result, price-takers hold suboptimal positions and demand a liquidity premium to do so. When a supply shock is announced, the liquidity premium gradually increases, reaching a peak at the time of the shock, and reverts gradually afterwards. This V-shaped pattern is consistent with empirical evidence and occurs even though all market participants are informed about the upcoming shock. The result arises whether strategic traders submit market orders (Cournot competition) or post a

series of limit orders (demand schedule competition), although the magnitude of the price distortions is larger in the former case. The V-shaped price pattern, however, depends crucially on the presence of price-takers.

Session 5. Corporate Finance and Asset pricing. 11:00 AM-12:30 PM

Session chair: Maria Chaderina (Vienna University of Economics and Business)

 5.A Sergey Tsyplakov (University of South Carolina). "Optimal Terms of Contingent Capital, Incentive Effects, and Capital Structure Dynamics".
 Discussant: Dmitry Livdan (University of California, Berkeley)

We present a dynamic capital structure model to quantify how Contingent Convertible Bonds with conversion terms that dilute the issuer's shareholders will induce incentives to preemptively raise equity to avoid triggering conversion. Pre-emptive recapitalization also leads to fewer defaults, lower borrowing rates, and higher debt capacity. The model characterizes the optimal conversion rate and optimal capital structure dynamics that maximizes the value created by incentives net of deadweight costs. Conversely, if bond principal is written-down at the conversion without diluting shareholders, then the issuer will have perverse incentives to destroy a portion of its capital (burn money) to force conversion.

- 5.B Han Ozsoylev (Said, Oxford). "<u>Trading ambiguity: a tale of two heterogeneities</u>". Discussant: Luca Gelsomini (ICEF, HSE).

We analyse equilibrium in assets markets where the return of an asset is uncertain and ambiguous in the sense that there is uncertainty about the probability distribution governing each random return. The uncertainty about return distribution is conceptualized as a consequence of model uncertainty, the model being a random variable. In this set up, model uncertainty only affects the (conditional) mean of the return, not the (conditional) variance, which is identical under each model realization. The condition mean of the return has a Normal distribution as does the "second order belief" describing the model random variable. We incorporate two kinds of heterogeneities in our asset market model. The agents in the market may be heterogeneously ambiguity averse and assets may be differently affected by ambiguity. An asset may be more ambiguous than another in that the second order belief about mean return of a more ambiguous asset is more uncertain. Agents' preferences are described by a specification of the smooth ambiguity model (Klibanoff, Marinacci and Mukerji (2005, 2009)) such that they coincide with the generalized mean variance preferences posited in Maccheroni, Marinacci and Ruffino (2014).

Economics sessions

Session 6. Labor-Finance I. 2:00-3:30 PM

Session chair: Markus Gebauer

 6.A. Paige Ouimet (UNC Business School). "Mergers and Acquisitions, Technological Change and Inequality".

Discussant: Fabian Slonimczyk (ICEF, HSE)

This paper documents important shifts in the occupational composition of industries following high merger and acquisition (M&A) activity as well as accompanying increases in mean wages and wage inequality. We propose mergers and acquisitions act as a catalyst for skill-biased and routine-biased technological change. We argue that due to an increase in scale, improved efficiency or lower financial constraints, M&As facilitate technology adoption and automation, disproportionately increasing the productivity of high-skill workers and enabling the displacement of occupations involved in routine-tasks, typically mid-income occupations. An increase in M&A intensity of 1% is associated with a 2.8% (2.9%) reduction in industry (industry-local labor market) routine share intensity and an one (six) percentage point increase in the share of high skill workers. These results have important implications on wage inequality: An increase in M&A activity is associated with higher hourly wages and an increase in wage polarization in an industry (industry-local labor market). Our results are robust to several robustness tests which further support the notion that firm reorganizations through M&As are a first-order driving force of job polarization and inequality.

6.B. Daniel Metzger (Stockholm School of Economics). "Since you're so rich, you must be really smart: Talent and the finance wage premium".
 Discussant: Sara Holland (University of Georgia)

Relative pay in the financial sector has experienced an extraordinary increase over the last few decades. A proposed explanation for this pattern has been that the demand for skilled workers in finance has risen more than in other sectors. We use Swedish administrative data, which include detailed cognitive and non-cognitive test scores as well as performance in high-school and university, to examine the implications of this hypothesis for talent allocation and relative wages in the financial sector. We find no evidence that the selection of talent into finance increased or improved, neither on average nor at the top of the talent distribution. A changing composition of talent or their returns cannot account for the surge in the finance wage premium. These findings alleviate concerns about a "brain drain" into finance at the expense of other sectors, but they also suggest that rents in finance are high, increasing, and largely unexplained.

Session 7. Macro-Finance. 4:00-5:30PM

Session chair: Emiliano Catonini

7.A. Alexis Toda (UC San Diego). "<u>The Equity Premium and the One Percent</u>".
 Discussant: Udara Peiris (ICEF, HSE)

We show that in a general equilibrium model with heterogeneity in risk aversion or belief, shifting wealth from an agent who holds comparatively fewer stocks to one who holds more reduces the equity premium. Since empirically the rich hold more stocks than do the poor, the top income share should predict subsequent excess stock market returns. Consistent with our theory, we find that when the income share of top earners in the U.S. rises, subsequent one year excess market returns significantly decline. This negative relation is robust to (i) controlling for classic return predictors such as the price-dividend and consumption-wealth ratios, (ii) predicting out-of-sample, and (iii) instrumenting with changes in estate tax rates. Cross-country panel regressions suggest that the inverse relation between domestic inequality and returns also holds outside of the U.S., with stronger results in relatively closed economies than in ones with low home bias (in which U.S. inequality predicts returns).

- 7.B. Dimitrios Tsomocos (Oxford). "Optimal Bank Regulation in the Presence of Credit and Run Risk".

Discussant: Madina Karamysheva (HSE Econ)

We modify the Diamond and Dybvig (1983) model of banking to jointly study various regulations in the presence of credit and run risk. Banks choose between liquid and illiquid assets on the asset side, and between deposits and equity on the liability side. The endogenously determined asset portfolio and capital structure interact to support credit extension, as well as to provide liquidity and risk-sharing services to the real economy. Our modifications create wedges in the asset and liability mix between the private equilibrium and a social planner's equilibrium. Correcting these distortions requires the joint implementation of a capital and a liquidity regulation.

Day 3. 29 October, Sunday

Session 8. Labor-Finance II. 9:00-10:30 AM

Session chair: Fabian Slonimczyk

- 8.A. Sara Holland (University of Georgia). "<u>Health Insurance Risk and Firm Financial</u> Leverage".

Discussant: Markus Gebauer (ICEF, HSE)

When firms face financial distress, workers risk losing employer-sponsored health insurance and subsequent access to health care. Frictions in the health insurance market make it difficult to compensate workers ex ante for bearing this risk. We exploit exogenous variation in health insurance risk created by state laws mandating firms to continue coverage for terminated workers under company health plans. We find firms increase financial leverage when mandates reduce health insurance risk. Leverage increases for

firms in states with higher union coverage where workers are more likely to monitor and influence leverage policy, for firms where the cost of losing health insurance is larger, and for smaller firms that are less likely to self-insure health benefits and avoid state mandates.

- 8.B. Ramin Baghai (Stockholm School of Economics). "Bankruptcy, Team-Specific Human Capital, and Innovation".

Discussant: Paige Ouimet (UNC Business School)

This paper studies the impact of bankruptcies on the career and productivity of inventors in the U.S. We find that when inventor teams are dissolved because of bankruptcy, inventors subsequently become less productive. When, instead, inventor teams remain intact and jointly move to a new firm, their post-bankruptcy productivity increases. Consistent with the labor market recognizing the value of team stability, we find that the probability of joint inventor reallocation post-bankruptcy is positively associated with past collaboration. Our results highlight the important role of team-specific human capital and team stability for the production of knowledge in the economy, and shed light on the microeconomic channels by which the process of "creative destruction" operates.

Session 9. Decision Theory. 11:00-12:30 PM

Session chair: Udara Peiris

9.A. Simone Cerreia-Vioglio (Bocconi). "Robust Mean-Variance Approximations".
 Discussant: Ozgur Evren (NES)

We study robust mean-variance approximations for a very large class of preferences. Compared to the standard mean-variance approximation result, we show that, when preferences are not expected utility, another index of dispersion appears. We show that this approximation is economically meaningful. It indeed captures important behavioral traits: namely, risk aversion, absolute risk attitudes, ambiguity aversion, absolute ambiguity attitudes.

- 9.B. Emiliano Catonini (ICEF, HSE). "Ambiguity Attitudes and Self-Confirming Equilibrium in Sequential Games".

Discussant: Andrei Savochkin (NES).

We consider a game with sequential moves played by agents who are randomly drawn from large populations and matched. We assume that, when players are uncertain about the strategy distributions of the opponents, preferences over actions at any information set admit a smooth-ambiguity representation in the sense of Klibanoff, Marinacci, and Mukerji (Econometrica, 2005). This may induce dynamically inconsistent preferences and calls for an appropriate definition of sequential best response. We take this into account in our analysis of self-confirming equilibrium (SCE) and rationalizable SCE in sequential games with feedback played by agents with non-neutral ambiguity attitudes. Battigalli, Cerreia-Vioglio, Maccheroni, and Marinacci (Amer. Econ. Rev., 2015) show that the set of SCE's of a simultaneous-move game with feedback expands as ambiguity aversion increases. We

show by example that SCE in a sequential game is not equivalent to SCE applied to the strategic form of such game, and that the previous monotonicity result does not extend to general sequential games. Still, we provide sufficient conditions under which the monotonicity result holds for (rationalizable) SCE.