

<https://www.suomenpankki.fi/en/research/seminars-and-conferences/conferences-and-workshops/2021/economics-of-payments-x/>

Economics of Payments X

Virtually on 20 - 22 October 2021



- Virtually on 20–22 October 2021
- Time: 14:00–20:00 (Helsinki time, UTC +3)
- Venue: Teams Meeting

The Bank of Finland was pleased to host the **10th Economics of Payments conference as a virtual event**. This series of events provides a venue for high quality dialogue on the various topics of payments economics among academic economists and central bankers as well as representatives of other regulatory authorities.

PROGRAMME

WEDNESDAY 20 OCTOBER 2021

14:00–15:00

Webinar venue open



15:00–15:30	<p>Opening of the conference</p> <p>Governor Olli Rehn, Bank of Finland (<u>speech (/en/media-and-publications/speeches-and-interviews/2021/governor-olli-rehn-going-digital--trends-in-payments-during-and-after-the-pandemic2/)</u>)</p>
15:30–17:10	<p>Session 1 - Retail and Cash</p> <p>Chair: James McAndrews (TNB, Wharton Financial Institutions Center)</p>
	<p>Consumer Surplus of Alternative Payment Methods: Paying Uber with Cash (<u>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/alvarez_argente_consumer-surplus-of-alternative-payment-methods-paying-uber-with-cash.pdf)</u>) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/argente_consumer-surplus-of-alternative-payment-methods-paying-uber-with-cash_presentation.pdf)</u>)</p> <p>David Argente (Pennsylvania State University) and Fernando Alvarez (University of Chicago)</p>
	<p>Cash and Crises: No surprises by the virus (<u>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/rosl_seitz_cash-and-crises-no-surprises-by-the-virus.pdf)</u>) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/seitz_cash-and-crises-no-surprises-by-the-virus_presentation.pdf)</u>)</p> <p>Franz Seitz (Weiden Technical University of Applied Sciences) and Gerhard Rösl (Technical University of Applied Sciences Regensburg)</p>
	<p>Discussant: Jose Luis Negrin (Banco de Mexico) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/negrin_discussion_consumer-surplus-of-alternative-payment-methods_cash-and-crises-no-surprises-by-the-virus_presentation.pdf)</u>)</p>

	<p>Distributional Effects of Payment Card Pricing and Merchant Cost Pass-through in Canada and the United States (<u>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/felt_etal_distributional-effects-of-payment-card-pricing-and-merchant-cost-pass-through-in-canada-and-the-united-states.pdf)</u>) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/welte_distributional-effects-of-payment-card-pricing-and-merchant-cost-pass-through-in-canada-and-the-united-states_presentation.pdf)</u>)</p> <p>Angelika Welte (Bank of Canada), Marie-Hélène Felt (Bank of Canada), Fumiko Hayashi (Federal Reserve Bank of Kansas City) and Joanna Stavins (Federal Reserve Bank of Boston)</p>
	<p>Interchange Fee Regulation and Card Payments: a Cross-Country Analysis (<u>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/ardizzi_etal_interchange-fee-regulation-and-card-payments-a-cross-country-analysis.pdf)</u>) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/sene_interchange-fee-regulation-and-card-payments-a-cross-country-analysis_presentation.pdf)</u>)</p> <p>Gabriele Sene (Bank of Italy), Guerino Ardizzi (Bank of Italy) and Diego Scalise (Bank of Italy)</p>
	<p>Discussant: Scott Schuh (West Virginia University)</p>
17:10–17:25	<p><i>Break</i></p>
17:25–19:05	<p>Session 2 – Covid-19 and payment habits</p> <p>Chair: Oz Shy (Federal Reserve Bank of Atlanta)</p>
	<p>The Impact of COVID-19 on Digital Payment Habits of Indian Households (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/awasthy_saroy_impact-of-covid-19-on-digital-payment-habits-of-indian-households_presentation.pdf)</u>)</p> <p>Sakshi Awasthy (Reserve Bank of India), Rajas Saroy (RBI), Naveen K. Singh (RBI), Sonali M. Adki (RBI) and Sarat C. Dhal (RBI)</p>

Switching from Cash to Cashless Payments during the COVID-19 Pandemic and Beyond ([paper \(/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/kotkowski_etal_switching-from-cash-to-cashless-payments-during-the-covid-19-pandemic-and-beyond.pdf\)](#)) ([presentation \(/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/polasik_switching-from-cash-to-cashless-payments-during-the-covid-19-pandemic-and-beyond_presentation.pdf\)](#))

Michal Polasik (Nicolaus Copernicus University), Radoslaw Kotkowski (Narodowy Bank Polski), Tomasz Piotr Wisniewski (The Open University), Andrea Moro (Cranfield University)

The Convenience of Electronic Payments and Consumer Cash Demand – Causal Evidence from the Staggered Introduction of Contactless Debit Cards ([paper \(/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/brown_etal_the-convenience-of-electronic-payments-and-consumer-cash-demand-causal-evidence-from-the-staggered-introduction-of-contactless-debit-cards.pdf\)](#)) ([presentation \(/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/stix_the-convenience-of-electronic-payments-and-consumer-cash-demand_presentation.pdf\)](#))

Helmut Stix (Central Bank of Austria), Martin Brown (University of St. Gallen), Nicole Hentschel (University of St. Gallen) and Hannes Mettler (University of St. Gallen)

The adoption of a mobile payment system: the user perspective ([paper \(/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/leon_the-adoption-of-a-mobile-payment-system-the-user-perspective.pdf\)](#)) ([presentation \(/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/leon_the-adoption-of-a-mobile-payment-system-the-user-perspective_presentation.pdf\)](#))

Carlos Leon (Banco de la Republica)

	<p>Payment Habits during Covid-19: Evidence from High-frequency Transaction Data (<u>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/dahlhaus_welte_payment-habits-during-covid-19-evidence-from-high-frequency-transaction-data.pdf)</u>) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/dahlhaus_payment-habits-during-covid-19_presentation.pdf)</u>)</p> <p>Tatjana Dahlhaus (Bank of Canada) and Angelika Welte (Bank of Canada)</p>
19:05–20:00	Informal networking time

THURSDAY 21 OCTOBER 2021

14:00–15:00	Webinar venue open
15:00–16:40	<p>Session 3 – FMI's</p> <p>Chair: Matti Hellqvist (Bank of Finland)</p>
	<p>Intraday Liquidity Around the World (<u>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/alexandrova-kabadjova_etal_intraday-liquidity-around-the-world.pdf)</u>) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/benos_intraday-liquidity-around-the-world_presentation.pdf)</u>)</p> <p>Evangelos Benos (University of Nottingham), Biliانا Alexandrova Kabadjova (Bank of Mexico), Anton Badev (Federal Reserve Board), Freddy Cepeda-Lopez (Bank of Colombia), James Chapman (Bank of Canada), Martin Diehl (Bundesbank), Ioana Duca-Radu (ECB), Rodney Garratt (UC Santa Barbara), Ronald Heijmans (DNB), Anneke Kosse (BIS), Antoine Martin (FRBNY), Thomas Nellen (SNB), Thomas Nilsson (BIS), Jan Paulick (Bundesbank), Andrei Pustelnikov (Bank of England), Francisco Rivadeneyra (Bank of Canada) and Sara Testi (ECB)</p>
	<p>Discussant: Shuji Kobayakawa (Meiji University) (<u>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/kobayakawa_discussion_intraday-liquidity-around-the-world_presentation.pdf)</u>)</p>

	<p>Instant payments as a new normal - Case study of liquidity impacts for the Finnish market (paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/hellqvist_korpinen_instant-payments-as-a-new-normal-case-study-of-liquidity-impacts-for-the-finnish-market.pdf)) (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/korpinen_liquidity-impacts-of-migration-to-instant-payments_presentation.pdf))</p> <p>Kasper Korpinen (Bank of Finland) and Matti Hellqvist (Bank of Finland)</p>
	<p>Discussant: Biliana Alexandrova Kabadjova (Banco de Mexico) (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/alexandrova-kabadjova_discussion_instant-payments-as-a-new-normal_presentation.pdf))</p>
	<p>Money Illiquidity (paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/livdan_et_al_money-illiquidity.pdf)) (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/sokolov_money-illiquidity_presentation.pdf))</p> <p>Vladimir Sokolov (Higher School of Economics), Dmitry Livdan, Haas Berkeley; Norman Schurhoff (University Of Lausanne)</p>
	<p>Assessing the Safety of Central Counterparties (paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/paddrik_young_assessing-the-safety-of-central-counterparties.pdf)) (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/paddrik_assessing-the-safety-of-central-counterparties_presentation.pdf))</p> <p>Mark Paddrik (Office of Financial Research) and H. Peyton Young (London School of Economic)</p>
	<p>Discussant: Argyris Kahros (IMF) (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/kahros_discussion_money-illiquidity_assessing-the-safety-of-central-counterparties_presentation.pdf))</p>
16:40–16:55	Break

16:55–18:15	<p>Session 4 – Fintech and distributed FMI's</p> <p>Chair: Antoine Martin (Federal Reserve Bank of New York)</p>
	<p>Estimating Policy Functions in Payments Systems Using Reinforcement Learning (<i>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/castro_etal_estimating-policy-functions-in-payments-systems-using-reinforcement-learning.pdf)</i>) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/desai_estimating-policy-functions-in-payments-systems-using-reinforcement-learning_presentation.pdf)</i>)</p> <p>Ajit Desai (Bank of Canada), Pablo S. Castro (Google Research, Brain Team), Han Du (Bank of Canada), Rodney Garratt (University of California Santa Barbara), and Francisco Rivadeneyra (Bank of Canada)</p>
	<p>Discussant: Michael Gofman (University of Rochester) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/gofman_discussion_estimating-policy-functions-in-payments-systems-using-reinforcement-learning_presentation.pdf)</i>)</p>
	<p>Distrust or Speculation? The Socioeconomic Drivers of U.S. Cryptocurrency Investments (<i>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/auer_tercero-lucas_distrust-or-speculation-the-socioeconomic-drivers-of-u.s.-cryptocurrency-investments.pdf)</i>) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/tercero-lucas_-distrust-or-speculation-the-socioeconomic-drivers-of-u.s.-cryptocurrency-investments_presentation.pdf)</i>)</p> <p>David Tercero-Lucas (Autonomous University of Barcelona) and Raphael Auer (BIS)</p>
	<p>Discussant: Joanna Stavins (Federal Reserve Bank of Boston) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/stavins_discussion_distrust-or-speculation-the-socioeconomic-drivers-of-u.s.-cryptocurrency-investments_presentation.pdf)</i>)</p>

	<p>Money Creation in Decentralized Finance: A Dynamic Model of Stablecoin and Crypto Shadow Banking (paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/li_mayer_money-creation-in-decentralized-finance-a-dynamic-model-of-stablecoin-and-crypto-shadow-banking.pdf)) (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/li_money-creation-in-decentralized-finance_presentation.pdf)))</p> <p>Ye Li (The Ohio State University Fisher College of Business) and Simon Mayer (Erasmus University Rotterdam)</p>
	<p>Discussant: Pablo Azar (Federal Reserve Bank of New York) (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/azar_discussion_money-creation-in-decentralized-finance_presentation.pdf)))</p>
18:15–19:15	<p>Key-note presentation</p> <p>Open Banking and Competition for Payments (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/parlour_key-note_when-fintech-competes-for-payment-flows_presentation.pdf)))</p> <p>Professor Christine A. Parlour, Berkeley Haas</p>
19:15–20:15	<p>Informal networking time</p>

FRIDAY 22 OCTOBER 2021

14:00–15:00	<p>Webinar venue open</p>
15:00–16:00	<p>Key-note presentation</p> <p>Retail CBDC: Macroeconomic or Political Risks? (presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/niepelt_key-note_retail-cbdc-macroeconomic-or-political-risks_presentation.pdf)))</p> <p>Professor Dr. Dirk Niepelt, University of Bern</p>

16:00–17:20	<p>Session 5 – CBCD</p> <p>Chair: Morten Bech (BIS)</p>
	<p>Falling Use of Cash and Demand for Retail CBDC (<i>paper</i> (https://www.imf.org/en/Publications/WP/Issues/2022/02/04/Falling-Use-of-Cash-and-Demand-for-Retail-Central-Bank-Digital-Currency-512766)) (<i>presentation</i> (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/humphrey_falling-use-of-cash-and-demand-for-retail-cbdc_presentation.pdf))</p> <p>David Humphrey (Florida State University), Tanai Khiaonarong</p>
	<p>Discussant: Cristina Picillo (Financial stability board) (<i>presentation</i> (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/picillo_discussion_falling-use-of-cash-and-demand-for-retail-cbdc_presentation.pdf))</p>
	<p>Demand for Payment Services and Consumer Welfare: The Introduction of a Central Bank Digital Currency (<i>paper</i> (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/huynh_etal_demand-for-payment-services-and-consumer-welfare-the-introduction-of-a-central-bank-digital-currency.pdf)) (<i>presentation</i> (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/huynh_demand-for-payment-services-and-consumer-welfare_presentation.pdf))</p> <p>Kim Huynh (Bank of Canada), Jozsef Molnar (Bank of Canada), Alex Shcherbakov (Bank of Canada), Jerr Yu (Bank of Canada)</p>
	<p>Discussant: Thomas Nellen (Swiss National Bank) (<i>presentation</i> (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/nellen_discussion-demand-for-payment-services-and-consumer-welfare_presentation.pdf))</p>
17:20–17:35	<p><i>Break</i></p>
17:35–18:55	<p>Session 6 – CBCD</p> <p>Chair: Aleksi Grym (Bank of Finland)</p>

	<p>Best Before? Expiring Central Bank Digital Currency and Loss Recovery (<i>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/kahn_etal_best-before-expiring-central-bank-digital-currency-and-loss-recovery.pdf)</i>) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/zhu_best-before-expiring-central-bank-digital-currency-and-loss-recovery_presentation.pdf)</i>)</p> <p>Yu Zhu (Bank of Canada), Charles M. Kahn (UIUC) and Maarten R.C. van Oordt (Bank of Canada)</p>
	<p>Discussant: Martin Diehl (Deutsche Bundesbank) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/diehl_discussion_best-before-expiring-central-bank-digital-currency-and-loss-recovery_presentation.pdf)</i>)</p>
	<p>Digital Currencies and Bank Competition (<i>paper (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/verdier_digital-currencies-and-bank-competition.pdf)</i>) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/verdier_digital-currencies-and-bank-competition_presentation.pdf)</i>)</p> <p>Marianne Verdier (Université Paris II Panthéon-Assas)</p>
	<p>Discussant: Jorge Cruz Lopez (Western University and FNA) (<i>presentation (/globalassets/en/research/seminars-and-conferences/conferences-and-workshops/documents/eopx2021/lopez_discussion-digital-currencies-and-bank-competition_presentation.pdf)</i>)</p>
18:55–19:10	<p>Closing</p> <p>Member of the Board Tuomas Välimäki, Bank of Finland (<i>speech (/en/media-and-publications/speeches-and-interviews/2021/board-member-tuomas-valimaki-closing-remarks-at-the-economics-of-payments-x-conference-22-october-2021/)</i>)</p>
19:10–20:10	<p>Informal networking time</p>

[research \(/en/other-pages/tag-search/?tag=research\)](https://en/other-pages/tag-search/?tag=research)

[payments \(/en/other-pages/tag-search/?tag=payments\)](https://en/other-pages/tag-search/?tag=payments)

[payment systems \(/en/other-pages/tag-search/?tag=payment systems\)](https://en/other-pages/tag-search/?tag=payment%20systems)

[financial market infrastructures \(/en/other-pages/tag-search/?tag=financial market infrastructures\)](/en/other-pages/tag-search/?tag=financial%20market%20infrastructures)

[#EconomicsOfPayments \(/en/other-pages/tag-search/?tag=#EconomicsOfPayments\)](/en/other-pages/tag-search/?tag=#EconomicsOfPayments)

CONTACT INFORMATION

eop2021[at]bof.fi

CONFERENCE RECORDINGS

- [Day 1, Wednesday 20 October \(https://www.youtube.com/watch?v=sBAQRbsiuzA\)](https://www.youtube.com/watch?v=sBAQRbsiuzA)
- [Day 2, Thursday 21 October \(https://www.youtube.com/watch?v=hubsZAaSPs\)](https://www.youtube.com/watch?v=hubsZAaSPs)
- [Day 3, Friday 22 October \(https://www.youtube.com/watch?v=DBRVL8U5L6U\)](https://www.youtube.com/watch?v=DBRVL8U5L6U)

PROGRAMME COMMITTEE

- James McAndrews (TNB, Wharton Financial Institutions Center)
- Antoine Martin (Federal Reserve Bank of New York)
- Oz Shy (Federal Reserve Bank of Atlanta)
- Morten Bech (BIS)
- Tuomas Takalo (Bank of Finland)
- Aleksi Grym (Bank of Finland)
- Matti Hellqvist (Bank of Finland)

PAST EVENTS IN THE CONFERENCE SERIES

- [EoP IX \(https://www.bis.org/events/eopix_1810.htm\)](https://www.bis.org/events/eopix_1810.htm) (BIS and CPMI)
- [EoP VIII \(https://www.bundesbank.de/en/bundesbank/research/economics-of-payments-viii-636254\)](https://www.bundesbank.de/en/bundesbank/research/economics-of-payments-viii-636254) (Deutsche Bundesbank)
- [EoP VII \(https://www.bostonfed.org/news-and-events/events/2014/the-economics-of-payments-7.aspx\)](https://www.bostonfed.org/news-and-events/events/2014/the-economics-of-payments-7.aspx) (Federal Reserve Bank of Boston)
- [EoP VI \(https://www.bankofcanada.ca/2012/05/economics-payments-vi-workshop/\)](https://www.bankofcanada.ca/2012/05/economics-payments-vi-workshop/) (Bank of Canada)



Bank of Finland
Snellmaninaukio
PO Box 160
00101 Helsinki
Tel. +358 9 1831