WHAT HAVE WE LEARNED FROM HOSTING TWO YEARS OF EMPIRICAL AML RESEARCH CONFERENCES?

Introduction

In recent years, the Central Bank of The Bahamas has engaged with the international AML research community, in order to improve our financial crime suppression capability. What we discovered was a substantial research base for legal and political matters, which is reflected in the FATF's success in the past 30 years in infusing international standards for AML/CFT into national legislation and regulation. What we did not find was a coherent research community for economics-oriented, empirical AML research, but rather a relative handful of researchers, sometimes working in semi-isolation. We also discovered that when it comes to AML, there is almost no consolidated data available on anything other than compliance with laws and regulations.

To help remedy these shortcomings, in January 2020 the Central Bank hosted an inaugural international research conference on empirical approaches to AML and financial crime suppression[1]. This conference succeeded both in an academic sense and as a community-building exercise. It led to a second (virtual) iteration in January 2021. The positive results from these two conferences have encouraged the Central Bank to make them an annual event. The third conference is scheduled (Covid allowing) for a combination of physical and virtual presences in January 2022. The Bank recognize the need to expand conference participation beyond the north Atlantic researcher and participant focus of the first two events. To that end, we are hopeful that the third conference will allow for Spanish language papers and two-way translations.

Working on these two conferences has given us the benefit of reading approximately 60 submitted papers, including the 35 papers selected for presentation. We have also benefitted from formal and informal engagement at the conferences, and as part of the build-up to the conferences.

In this paper, the Central Bank wishes to share some of the lessons we have learned on the global state of empirical AML practice and research. Author and paper references are to the papers as presented at the 2020 and 2021 conferences, which are available in online folders at:

https://bahamasamlconference.com/

As a general observation, the 2020 conference was tremendously positive in helping to build an empirical AML research community, but on the whole the papers emphasized negative aspects of the current state

[1] We note with appreciation support from the Inter-American Development Bank and the Association of Supervisors of Banks of the Americas.

of arrangements. The 2021 conference continued much of this work, but there was a considerably larger proportion of selected papers indicating that empirical analysis would assist the world to achieve better AML outcomes.

2020 conference themes[2]

The 2020 conference opened with three papers from European research teams, looking at methods to identify dubious cross border flows, or cross border corporate ownership. Various models were proposed and draft results presented, which in the case of two papers following similar approaches resulted in inconsistent and even opposing conclusions as to which jurisdictions might be problematic. This work demonstrated that there is the enticing possibility of using research-driven economic modelling to better identify suspect transactions, customers and companies. However, the state of the art on data availability is short of this outcome. As would become a common theme, the absence of any dependent variable data (comprehensive data on arrests, asset recoveries, or the like) makes validating any regression-based model an exercise in frustration.

Session 2 covered AML impacts in the Caribbean, among which bank de-risking was a prominent issue. To consolidate a larger discussion held over the two days of the conference in both formal and informal sessions, a reasonable consensus emerged that AML-driven de-risking is perhaps not as big an issue as it has been made out to be. Some points in favour of this view include:

- When correspondent banking is measured based upon the number of links, shrinkage is observed, but the same does not apply when measured based upon volume of flows. It is likely that banks are simply consolidating from multiple to a smaller number of correspondent and respondent links.
- Over the last 15 years, the world has moved to near-zero interest rates. This means that correspondent bank balances are much less valuable than they used to be.
- The Basel Committee rules changes for liquidity and leverage may have had the unintended consequence of making correspondent balances less attractive.
- Correspondent banks may not be shutting off respondent links due to direct AML risks, but in response to the much greater operational costs and paperwork associated with maintaining these links. The Wolfsberg questionnaire, which has expanded greatly over the years, was one example put forward.
- Finally, there is the issue that many respondent banks have seen a reduction in their correspondent links and an increase in service costs, but few respondent banks have failed to maintain at least one suitable correspondent relationship.

Session 3 comprised three papers looking at the economic consequences flowing from AML enforcement. The aggregate findings from these three papers and subsequent discussion is that more robust AML enforcement clearly produces economic effects, but those effects may not fall upon money launderers, and may not fall in the desired direction.

Slutsky, Villamizar-Villegas, and Williams extracted an interesting result from geographic data including nightlight satellite imagery to conclude that a Colombian national effort to suppress money laundering

[2] See the 2020 *Proceedings* document, under the 2020 conference papers tab at bahamasamlconference.com

had failed to reduce cocaine exports. It had however pushed the proceeds of cocaine dealing to other countries, often bordering Colombia, resulting in a fall in Colombian GDP growth.

Buchanan, Shen, and Smith's paper provided an event study on publicly listed casino equities after announcement of money laundering failures or sanctions. This study, contrary to expectations, showed that the casinos announcing such mishaps more often outperformed in subsequent periods.

Morse produced a paper examining the links between black or grey listing of a jurisdiction, and that jurisdiction's trade finance volumes. The empirics in this paper indicate that a grey listed jurisdiction usually suffers a fall in trade finance, and that fall lasts well beyond the removal of the jurisdiction from the grey list.

Session 4 examined jurisdictional AML ratings and rankings. The net result from this session was that not only are the various jurisdictional AML rating and ranking approaches impossible to validate, but they might be actively perverse, in the sense that well-rated regimes are actually the larger risks for money laundering. The United States and the U.K., notionally the two highest ranked countries by the FATF for AML effectiveness, were frequent examples in the formal and informal discussions.

Findley, Nielson and Sharman produced the then-latest paper in a decade-long effort deploying shadow shopping to determine financial institution receptivity to dubious approaches from money launderers. The findings here, consistent with previous efforts, were that there remain a great many corporate and financial services providers who are willing to conduct business with dubious AML counterparties, by facilitating anonymous shell company formation without proper beneficial owner identification. Furthermore, the degree to which this willingness is expressed is the opposite of the conventional "wisdom". International financial centre domiciled entities were the least willing to engage with dubious persons, while OECD countries, led by the United States, were most willing. There was also no apparent risk management: entities were either fully in this business, or fully out.

Boguslavska presented on the Basel AML Index, which is one of the world's leading jurisdictional AML risk rating services. This presentation outlined the weighted input approach, which is based upon expert judgement. Although every effort is taken to produce a good product, the results are sometimes confounded by reality. One example is Estonia's ranking as the world's lowest risk jurisdiction for money laundering, at the same time (it later transpired) that a single Estonian bank branch was processing a quarter of a trillion Euro in anonymous Russian funds.

As noted elsewhere: the lack of reliable data on money laundering incidence makes any model assessing risks or outcomes much weaker.

Littrell and O'Brien compared and contrasted the econometric results associated with sovereign debt rating agencies (Moody's, Fitch, and Standard & Poor's) with the various public and private sector AML jurisdictional risk rating approaches taken by (among others) the FATF, the U.S. State Department, and the Basel AML Index. Rank correlations between the sovereign raters showed near identical results, with correlations on the order of 0.95. Furthermore, each agency produces extensive public data based upon default incidence, which demonstrates that the ratings are by and large ordinarily accurate. By contrast, rank correlations between the AML ratings agencies vary wildly, with the FATF and U.S. INCSR correlations actually negative. In the absence of the equivalent of default data, no more than one of these services can be correct in any practical sense, and it is more likely that none of them are correct.

Session 5 took a more political science turn with Griffin and Soomer presenting on the hegemonic aspects of the international AML framework, in the context of Caribbean di-risking. See the above de-risking discussion, which continued in this session.

Nance and Tsingou presented on international AML governance and de-risking, with the core observation that unintended consequences, or un-regretted consequences, seem common in the framework.

Session 6 included a presentation from Brusso and Gavilan on the Peruvian regulator's use of an internal model to help determine supervisory focus and responses to perceived AML risk among Peruvian banks. This model seems to "work" in the sense that it generates sensible supervisory guidance, but there is no attempt to empirically validate the findings.

Mold presented a highly detailed paper taken from anonymized global bank customer data, which demonstrated that a bank can form robust AML suspicions about customers from looking at transactions. Discussion on this paper indicated one of the conference's collective frustrations: even when an AML actor sees something suspicious, the links to effective action (off goes the report, and nobody hears what happens) are limited. Furthermore, this paper demonstrated that bad actors are actually better at empirical analysis than the "good guys" at this point, because they change their methods faster than those trying to catch them.

The 2021 conference: more frustration, but also more hope

The 2021 conference closely replicated in virtual space the approach taken at the 2020 conference, with two hour sessions normally comprising three papers presented, followed by discussion.

Session 1 comprised three papers deploying "newfangled" empirical approaches. The aggregate message was that, although well short of any comprehensive model on money laundering, modeled empirical tools are emerging that will make AML supervision more efficient and more effective.

Nershi presented on transaction bunching in crypto-currency exchanges, demonstrating that on many exchanges, there is a bunching of transaction amounts just under the required reporting or customer identification limits. This analysis can be used to form a view as to which exchanges are most exposed to volume movement of barely anonymous (and therefore more than barely suspect) funds. More work remains to be undertaken in this space, but there seems a clear path to generating a useful compliance assessment tool.

Pauselli's paper examined the use of fuzzy logic by one FIU in determining where to focus supervisory attention. The fuzzy logic approach outlined here has had, according to Pauselli, good results in practice, but more empirical validation is required.

Finally, Jofre et al.'s work takes a machine learning approach to separating suspicious from less suspicious corporate ownership structures. Similar to Pauselli, the results seem to be helpful in concentrating public agency attention where it is needed, but more validation is necessary.

Session 2 repeated a 2020 theme on jurisdictional assessments for AML risk.

Findley, Nielsen, and Sharman updated their prior work, with results from a massive shadow shopping exercise on thousands of banks and corporate service providers. Past results tended to hold: most recipients either said "no" to every solicitation, or "yes" to all of them, with (thankfully) some evidence of risk sensitivity on approaches redolent of terrorism risk. It is clear from this work that professional money launderers will have no difficulty finding banks to open anonymous accounts, and finding service providers to provide anonymous front companies. Furthermore, these efforts will likely be easier in larger OECD countries, because international finance centres are more resistant to dubious approaches.

Sharman's presentation noted, disappointingly, that in the research team's experience, compliance in this field has not improved over the past decade, and that a compliance/avoid punishment approach by service providers completely dominates any sense of risk judgement.

Ferwerda and Reuter analysed six large country national risk assessments (NRAs) against commonly accepted principles and international standards of risk management. In sum, none of the NRAs were close to international best practice. There is a strong sense that they were only prepared for a FATF review, and otherwise they sit on a shelf. Discussion on this paper suggested that Ferwerda and Reuter might like to have a look at small country NRAs, which might be of higher quality. Among other things, this outcome would suggest that FATF mutual evaluations are more binding on smaller countries than on larger ones.

In the context of the previous five papers presented on this topic in 2020 and 2021, Riccardi's contribution was something of a holy grail. It presented a jurisdictional AML risk assessment model which makes intuitive economic sense, and is validated by a reasonable independent variable, comprising money laundering convictions by country for Italian malefactors. The catch in the Riccardi approach, which is theoretically attractive but suggests jurisdiction rankings are harder than currently thought, is that the model only works from the perspective of any one country, in this case Italy. So the idea that, for example, San Marino is the riskiest AML jurisdiction from an Italian perspective makes perfect sense, but this result would not (necessarily) hold for any other country. Riccardi's work also demonstrated that all the high-risk AML countries from an Italian perspective rank well on FATF and similar lists, and no grey or black list country is a material risk, again from the Italian perspective.

Session 3 offered three perspectives on AML supervision and enforcement.

Moiseianko (with Keatinge) presented a RUSI paper discussing the benefits and risks of beneficial ownership disclosure. There is an increasing consensus that national authorities should have access to data about their citizens' financial and other assets anywhere in the world. Meanwhile, there is a fraught conversation on whether asset registries should be public. Discussion on this point noted that current arrangements have empowered tyrants, and public registries will enable kidnappers, terrorists, stalkers, and other criminals. Against this, the more public the data, the higher quality it will become, and the more pressure will be placed on tax avoiders and other miscreants. This debate clearly has some way to go.

Bartolozzi et al.'s paper discussed optimal design for a national AML supervisor, using an empirical database looking at 71 FIUs. Some interesting findings were obtained, such as the apparent increase in FIU governance power in civil versus common law countries. This work, to repeat a previous and future theme, suffers from the absence of any data proving the actual quality of AML enforcement in any country. The model built here has the same defect as the FATF and other approaches, reflecting the preferences of the standards-builders, rather than a truly validated empirical result. Nonetheless, it presented an interesting perspective on FIU governance.

The Gara et al. paper generated the empirical (and entirely unsurprising) result that increased supervisory attention to AML matters resulted in banks filing more suspicious transaction reports. There is some evidence in the paper that the STRs were not entirely derriere-covering exercises by the banks, but may have had some positive value. But as with Bartolozzi above and such papers generally, the lack of a valid dependent variable means that true validation is not yet possible.

Session 4 provided snapshots on three practitioner approaches to empirical AML.

Mold considerably advanced upon her 2020 offering by demonstrating how dubious wire transfers could signal otherwise illegal forwarding instructions by manipulating the trailing digits in wire transfer messages. This was an impressive feat of teasing out really actionable data from the blizzard of valid transactions flowing through a global bank. Although it was not clear whether the enforcement agencies or the bank made constructive use of the information, it was observed that bad actors changed their behavior when they sensed that they had been spotted. This paper demonstrated the urgent need for banks and regulators to achieve in the big ticket AML space what they are increasingly achieving in the cyber-security space: real time information sharing and near-instant responses.

Littrell presented on how a central bank could use found and cheaply created data sources, such as customs, real estate, and deposit records, to improve a national risk assessment. Broadly, these data sources are reasonably useful at ruling out potential risk sources as too small or too non-threatening in their transaction patterns to warrant inclusion in an NRA. This allows the jurisdiction to then focus more effectively on segments of the economy and financial system that really are risky, and merit the attention. One problem for NRAs is the expectation of an exhaustive list of risks needing attention. Where sensible, it is a better strategy to empirically demonstrate the areas that don't need this attention.

Berry (with Gundur) presented the results from their interview-driven analysis on how low and medium level British drug dealers manage their money. One lesson from this paper is that trying to interdict the lowest level drug proceeds is probably wasted effort, as for the most part those funds are used to make routine cash purchases. Another lesson is that British mid-level drug dealers are quite willing to pay income tax on their earnings, against the benefit of legitimizing these funds. There was also considerable interest in the authors' ability to find willing and reasonably honest interview participants. It turns out that pre-academic experience as a nightclub bouncer can come in handy when undertaking some forms of research.

Session 5 offered observational insights into three aspects of the AML world. Harvey presented a case study on AML efforts in Nigeria. Among other insights was the idea that the relevant agencies would not necessarily share data with each other, lest it be used against them. The case study also covered the idea of AML compliance as a sort of shadow play imposed by the international community, and in general illustrated why imposing the current highly complex AML standards in a developing and challenged country might not be the best strategy.

Barone et al.'s paper examined the nexus between corruption and money laundering, mainly in the European context. The empirical predictive model was remarkably, indeed suspiciously effective, with a 0.94 R-squared. This is a work in progress, but one can see where the authors are headed: a robust empirical link between corruption and AML indicators.

Tsingou's paper constituted an ethnographic study of the international AML community, with a focus upon ACAMS, one of the two major global AML training and certification bodies. In discussion, one of the revealing comments was that the community's outlook in some instances looked more religious than empirical. The world's AML professionals are proceeding with the faith that what they are learning is effective—though sadly all the evidence suggests that current approaches do not do much for actually stopping dirty money. Leaving this aside, however, it is clearly the case that the world needs a trained cadre of AML professionals, and ideally this will develop towards a profession as well as simply a vocation.

The sixth and final session also replicated a 2020 session, discussing economic effects from AML enforcement.

Collin et al. led with an econometric treatment of previous work, examining the effect on cross border payments from FATF grey listing. The previous work suggested an 8 to 10 per cent drop in payment volumes, which is material. With new econometric treatments of difference-in-difference analysis, however, the decrease became much less material, and might be zero. This was a nice work indicating the need to refine past outcomes when better tools come to hand.

Slutsky (for Agca and Zeume) presented a new work examining differences in banking composition in U.S. counties that are classified as high drug enforcement risks, vs. other counties. Their findings were that small bank shares decreased in high-risk counties versus large banks, and that large banks made more secured loans in those counties as a result, with positive impacts on home prices. The authors speculate that increased regulatory paperwork may be driving small banks out of some of these areas. Discussion on this paper challenged some of this work and suggested ways to refine the analysis, but this is another paper demonstrating that increased AML enforcement probably generates unplanned and possibly unwanted economic consequences.

Case-Ruchala and Nance finished the conference with a paper on the effects flowing from FATF blacklists. Similarly to the Collin paper, the authors conclude (in a preliminary study) that economic impacts on measures such as cross border flows may be smaller than originally thought. This led to an extended discussion among the presenters and participants, which more or less concluded that direct economic impacts from FATF grey lists are not as large or obvious as once thought. This led to a questioning of why countries tool grey listing so seriously. Grey-listed country representatives who were present for the discussion pointed out that grey listing created very large discontinuous risks (such as loss of USD clearing access). Hence strenuous efforts were justified to prevent such risks from materializing.

2021 Guest speakers

The 2021 conference benefitted from presentations by representatives from the FATF, the IMF and the World Bank. Elisa de Anda, a senior Mexican official but speaking in this instance as the Vice President of the FATF, updated the group on the FATF's current strategic review and plans more generally. The FATF has yet to share the results of this initiative publicly, but there should be an opportunity for input coming up shortly. There will be a data element in the strategic review. One participant suggestion was that an international database on asset recoveries would be highly useful in improving effectiveness assessments.

Steve Dawe (IMF) and Kuntay Celik (World Bank) spoke on their experience with jurisdictions using empirical approaches to the AML portions of FSAPs, and on creating National Risk Assessments. The joint result from this presentation could be summarised as indicating that there was not nearly enough data at either the jurisdictional or international level and that what data was available is not necessarily used. As results jurisdictions are not notable for robust empirical analysis in their self-assessments of AML risks.

Summing up: Where are we now and where are we going?

Based on the results from the first two conferences, the Central Bank of The Bahamas believes that the international AML community needs to grasp the nettle on the following three points:

1) Measured in economic terms of AML spending versus illicit assets recovered, the world's AML efforts demonstrate low-level success. Almost all illicit funds and assets are proceeding unhindered. There is also no evidence of much (or any) reduction in aggregate criminality.
2) There are few measured economic benefits from the world's AML efforts, but demonstrably large costs.
3) To begin to improve upon the first two points, access to comprehensive and useful AML data must improve dramatically. This would likely require only a small fraction of the financial resources currently expended in the AML industry.

Alongside direct funding of initiatives such as the FATF's and the heavy compliance costs imposed on the world's financial sector and financial consumers, necessary resources must also be dedicated to data and analytic efforts, to guide our expense to an effective conclusion. We expect that the world's empirical AML researchers, both academic and applied, will continue to develop new tools to help us get better at the margin on suppressing financial crime.

Data: the Achilles heel

Across both conferences and most of the papers, there was widespread agreement that AML data availability is fundamentally inadequate. Remarkably, after 30 years of FATF activity, and expenditures amounting to hundreds of billions, we do not know and cannot reasonably estimate:

- The stocks and flows of illicit assets, and the jurisdictions and crime categories involved;
- Whether or not the global AML effort has appreciably reduced any category of crime;
- The amount of illicit assets recovered every year; or
- Any reasonable basis for forming a cost/benefit analysis on the global AML effort, or any substantial segment of that effort.

In empirical terms, there is still much imprecision. This must improve if we are to have any hope of achieving, much less proving, positive economic outcomes from AML efforts. While estimating illegal economic activity is fraught with error, we should not relent. A central estimate of illicit cash flows, even with a large margin of error, gives a basis from which to assess AML effectiveness. The first differences of central estimates, with suitable care, should be considerably less vague. Even if it is difficult to closely estimate illicit assets there should be better progress towards good estimates of illicit asset recoveries.

One particularly frustrating aspect of the current state of AML data is that from the papers presented at the conferences, it has become obvious that there are many useful data sources around the world. However, they are not yet available in any organised or comprehensive way to practitioners or researchers.

Many researchers arrived at these conferences having some sense of missing out on the understanding of whether spending massive amounts of resources and imposing on the financial system's clients and sovereign nations generated proportionate returns for the efforts. What we discovered is that everyone who has studied the issue reaches the conclusion that a reliable cost-benefit function cannot be estimated. Based on three years of searching for empirical estimates the best guess of costs to industry is on the order of "more than $100 billion per annum", while the benefits expressed in illicit funds recovered and crime prevented is on the order of $10 billion. Estimates of the magnitude of annual illicit flows and stock of assets are about $1 trillion and $10 trillion respectively. While these are just estimates they give a reasonable basis for order of magnitude comparisons: the majority of both the stocks and flows of assets are not intercepted, with interception rates possibly as low as 0.1 per cent per annum.

Should AML efforts be subject to cost/benefit economic analysis?

In many instances of criminal justice, economic cost/benefit analysis should not be the leading consideration. In examples such as homicide or sexual assault, law enforcement would not measure success as just the excess of assets recovered over expenses. Some in the AML space will point to the growth in convictions as a success indicator. However, it would be expected that convictions lead to a measurable level of deterrence in the prohibited activities. Moreover, in the case of money-laundering convictions considerable detection is also often the result of other criminal acts to which the financial crimes offense are appended, rather than as a result of direct AML intelligence.

The original and still best rationale for the world to incur all the costs associated with AML is based upon the idea that depriving criminals of the economic benefits of their criminality would ultimately reduce the incidence of the underlying crimes. In this context, AML operators look more like tax agencies than police forces, and would be expected to better justify a financial cost benefit analysis. Hopefully, the FATF's current strategic review will consider some of the above issues. The approach followed for the last thirty years has proven very successful in constraining countries to follow the FATF rules—but much less successful in constraining criminals from continuing to commit crimes.

The Central Bank of The Bahamas intends to continue supporting the world's empirical AML researchers by offering annual editions of our research conference. The Bank looks forwarding to making and renewing contacts with the AML research community in the 2022 and later editions of this conference.

APPENDIX 1: INAUGURAL EMPIRICAL AML RESEARCH CONFERENCE AGENDA, 22—23 JANUARY 2020

HILTON HOTEL, NASSAU, THE BAHAMAS

22 January 2020	
0800	Conference Registration and light breakfast
0830	Welcomes: Pascual O'Dogherty, ASBA, and Kevin Hope, Caribbean Development Bank Conference intent and format, and logistics: Charles Littrell, Central Bank of The Bahamas
0900	**Opening address: "It's all About the Data"** Mike Levi, University of Cardiff
0930	**Session 1: "European Perspectives"** *Dirty Money Pushed and Pulled: A Gravity Analysis*: Valentina Gullo, University of Sussex; and Pierluigi Montalbano, University of Sussex and Sapienza University of Rome *Estimating Cross Border Corporate Ownership*: Alberto Aziani and Michele Riccardi, Universita Cattolica del Sacro Cuore; and Joras Ferwerda, University of Utrecht
1000	Discussant (Allan Wright, Central Bank of The Bahamas) and Discussion
1100	Break
1130	*Terrorist Finance in the Horn of Africa*: Charles Goredema, Informed Solutions to Economic Crime in Africa (ISECA) Respondent: Ricardo Soares de Oliveira, University of Oxford
1200	Lunch

1300	**Session 2: "The Caribbean Story"**
	De-Risking in the Caribbean: A CFATF Perspective: Risha Pragg-Jaggernauth
	Analysis of Money Laundering and Economic Growth in Trinidad and Tobago: Shanice Moses and Lester Henry, University of the West Indies
	The EU Blacklists: Implications for The Bahamas: Allan Wright, Inter-American Development Bank and Central Bank of The Bahamas; and Alicia Nicholls, University of the West Indies
1400	Discussant (Chad Kilbourne, Financial Services Volunteer Corps) and Discussion
1500	Break
1530	**Session 3: "Economic Impacts From the Global AML Architecture"**
	Drug Money and Bank Lending: Pablo Slutzky, University of Maryland; Mauricio Villamizar-Villegas, Central Bank of Colombia; and Tomas Williams, George Washington University
	Are There Positive Effects for Countries That Launder Dirty Money?: June Buchanan, Yun Shen, and Tom Smith, Macquarie University
	International Financial Regulation and Trade Finance: Julia Morse, UCSB
1630	Discussant (Ronen Palan, City University of London) and Discussion on Session 3
1730	Conference Close, Day 1
1830	Cocktails and dinner

23 January 2020	
0800	**Light breakfast available**
0830	Narciso Campos: “**This conference and De-Risking**”
0900	**Session 4: “AML Jurisdiction Ratings and Rankings”** *Banking Bad: A Field Experiment on Regulatory Compliance in the Finance Industry*: Michael Findley, University of Texas, Austin, Daniel Nielson, Brigham Young University, and Jason Sharman, University of Cambridge *The Basel AML Index*: Kateryna Boguslavska, Basel Governance Institute *Comparing Sovereign Debt Ratings to Sovereign AML Ratings*: Charles Littrell and Danae O’Brien, Central Bank of The Bahamas
1000	Discussant (Julia Morse) and discussion
1100	Break
1130	**Session 5: “Perspectives on De-Risking”** *From Hegemony to Hegemony: De-Risking in The Caribbean*: Clifford Griffin, North Carolina State University, and June Soomer, Association of Caribbean States *Who is Driving the Ship? De-Risking and AML Governance*: Mark Nance, North Carolina State University, and Eleni Tsingou, Copenhagen Business School
1230	Lunch

1330	**Session 6: "Using Empirics to assess risk"** *A toolkit for Correspondent Banking Supervision*: Daniel Brusso and Mayra Gavilan, Superintendency of Banking, Insurance, and AFP, Peru *Quantitative Analysis of Adaptive Behaviour to Avoid ML/TF Detection*: Julia Mold, Wells Fargo Bank *Wild West Meets Wild East: Russia and The Bahamas*: Anastasia Nesvetailova, City University of London
1430	Discussant (Kevin Hope, Caribbean Development Bank) and Discussion
1530	Break
1600	**Conference summary: What have we learned, and where to from here?** Rusudan Mikhelidze, OECD Joe Ciccollela, Citi Wealth Management Peter Reuter, University of Maryland
1700	Close, with informal dinner to follow

APPENDIX 2: CONFERENCE SCHEDULE, 2ND INTERNATIONAL RESEARCH CONFERENCE ON EMPIRICAL APPROACHES TO AML AND FINANCIAL CRIME SUPPRESSION

27, 28, 29 January 2021

All times U.S. Eastern (New York/Nassau), and subject to amendment

Wednesday, 27 January

9:30 Conference opening. Welcoming speeches from The Honourable Carl Bethel QC, Attorney-General of The Bahamas, and current Chair of the Caribbean Financial Action Task Force, and John Rolle, Governor of the Central Bank of The Bahamas

9:50 Welcome to conference and guidance on how to participate in the virtual format. Charles Littrell, Central Bank of The Bahamas

10:00 Session 1: New Approaches to AML Empirical Analysis

10:05 *How Strong are Anti-Money Laundering Regulations in Practice? Evidence from Cryptocurrency Transactions.* Karen Nershi, University of Pennsylvania

10:25 *A Fuzzy Logic Application to AML Supervision*. Claudio Pauselli, Financial Intelligence Unit, Bank of Italy

10:45 *Money laundering and the detection of bad entities: a machine learning approach for the risk assessment of anomalous ownership structures*. Maria Jofre, Antonio Bosisio, Stefano Guastamacchia, and Michele Riccardi, Transcrime – Università Cattolica del Sacro Cuore

11:05 Discussant: Mike Levi, University of Cardiff

11:20 Panel and participant moderated discussion

12:00 Session close

12:30 Presentation: "An Update on the FATF Strategic Review", Elisa de Anda, Vice President, Financial Action Task Force

1:00 Session 2: Assessing Jurisdictions for AML Strengths and Weaknesses

1:05 *National Assessments of Money Laundering Risks*. Joras Ferwerda, University of Utrecht, and Peter Reuter, University of Maryland

1:25 *Behavioural Institutionalism: A Global Field Experiment on Regulatory Compliance in the Finance Industry.* Michael Findley, and Daniel Neilson, University of Texas at Austin, and Jason Sharman, University of Cambridge

1:45 *Assessing the risk of money laundering at country level: an empirical approach*. Michele Riccardi, Transcrime – Università Cattolica del Sacro Cuore

2:05 Discussant: Elisa de Anda, FATF

2:20 Panel and participant moderated discussion

3:00 Close

Thursday, 28 January

9:45 Sponsor welcome: Lea Gimenez, Division Chief for the Innovations for Citizens Services (ICS) Division, Inter-American Development Bank

10:00 Conference open, reminder on logistics

10:05 Session 3: AML Supervision and Enforcement

10:05 *For Whose Benefit? Reframing Beneficial Ownership Disclosure Around Users' Needs*. Tom Keatinge and Anton Moiseianko, RUSI

10.25 *Designing the AML Supervisor: Theory, Institutions and Empirics. D.* Bartolozzi, M. Gara, D.J. Marchetti, Financial Intelligence Unit, Bank of Italy; and Donato Masciandaro, Bocconi University and SUERF

10:45 *The Impact of AML Oversight on Banks' Suspicious Transactions Reporting: Evidence From Italy*. M. Gara, F. Manaresi, D.J. Marchetti, and M. Maranucci, Bank of Italy

11:05 Discussant: Suzanne Williams, Federal Reserve Board

11:20 Panel and participant moderated discussion

12:00 Session close

12:30 Session 4: Practitioners and criminals

12:30 *Quantitative Analysis of Adaptive Behaviour – Numeric Codes in Money Laundering Patterns to Obscure Detection*. Julia Mold, Wells Fargo Bank

12:50 *Deploying Opportunistic Data to Improve AML National Risk Assessments*. Charles Littrell, Central Bank of The Bahamas

1:10 *Financial Risk Management Strategies of Small to Medium illicit Enterprises*. Mark Berry, Royal Holloway University of London, and Rajeev Gundur, Flinders University

1:30 Discussant: Clifford Griffin, North Carolina State University

1:50 Panel and participant moderated discussion

2:30 Session close

Friday, 29 January

9:00 Global perspectives on effective AML data deployment

- Steve Dawe, IMF
- Kuntay Celik, World Bank

10:00 Session 5: Empirical Observations on AML Approaches

10:00 *Transnational Criminal Law: A Case Study of the International Anti-Money Laundering Framework as applied in Nigeria, a Case of Smoke and Mirrors*. Jackie Harvey, Northumbria University

10:20 *Corruption and Money Laundering: Scratch My Back, and I'll Scratch Yours*. Raffaella Barone, University of Salento, Donato Masciandaro, Bocconi University, and Friedrich Schneider, Johannes Kepler University

10:40 *Governing Money Laundering Risk Through Improved Professionalization*. Eleni Tsingou, Copenhagen Business School

11:00 Discussant: Tena Prelec, University of Oxford

11:20 Panel and participant moderated discussion

12:00 Session close

12:30 Session 6: Economic Impacts of the International AML Regime

12:30 *The impact of international anti-money laundering blacklists on cross border payments*. Matthew Collin, Brookings Institution, Samantha Cook and Kimmo Soramaki, Financial Network Analytics, and Divyanshi Wadwa, World Bank.

12:50 *AML enforcement, banks, and the real economy*. Senay Agca, George Washington University, Pablo Slutsky, University of Maryland, and Stefan Zeume, University of Illinois

1:10 *FATF Blacklists Don't Work the Way You Think They Do*. Devin Case-Ruchala, University of North Carolina, and Mark Nance, North Carolina State University

1:30 Discussant: Julia Morse, University of California—Santa Barbara

1:50 Panel and participant moderated discussion

2:30 Session close

2:30 Closing perspectives

Peter Reuter, University of Maryland, and chair of the reader panel for this conference.

3:00 Conference close and thanks