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THREE POTENTIAL IMMINENT BENEFITS OF BLOCKCHAIN FOR INTERNATIONAL ARBITRATION: CYBERSECURITY, CONFIDENTIALITY & EFFICIENCY

By Ibrahim Shehata

(A) Introduction:

According to Deloitte, the blockchain technology provides "a way of recording transactions or any digital interaction in a way that is secure, transparent, highly resistant to outages, auditable, and efficient."[1] That's maybe why the interest in the blockchain technology in 2016 alone amassed $1 billion which was invested globally by financial services and technology corporations. These investments are only expected to increase over the next five years.[2] In addition, CoinDesk estimates the annual revenue for enterprise applications of blockchain (usually takes the form of private permissioned blockchain) will increase from approximately $2.5 billion worldwide in 2016 to $19.9 billion by 2025, representing a compound annual growth rate (CAGR) of 26.2%.[3] Such interest shows how much private permissioned blockchain is expected to generate an added business value at an exponential level. As McKinsey reports, private permissioned blockchain will allow dominant players in their industries to "maintain their positions as central authorities or join forces with other industry players to capture and share value."[4] That way, such players can get the value of "securely sharing data while automating control of what

is shared, with whom, and when."[5] In this regard, this article tries to determine whether there would be potential imminent benefits of using the blockchain technology in the current landscape of international arbitration. First, we start by defining the blockchain technology and its types. Second, we ask the fundamental question of whether we actually need blockchain technology at all in international arbitration. Third and finally, we explore the potential imminent benefits of blockchain technology in the field of international arbitration from our perspective; that is 1) cybersecurity; 2) confidentiality; and 3) efficiency.

(B) What is Blockchain and What are its Types?

There have been various definitions offered for the blockchain technology, however, most of them are too technical or too application-specific.[6] For example, Coinbase, the world's largest cryptocurrency exchange, defines blockchain as "a distributed, public ledger that contains the history of every bitcoin transaction."[7] This definition is, however, more suitable for bitcoin rather than the blockchain. Moreover, it is important to point out that bitcoin and cryptocurrencies are merely one type

of application built on top of the blockchain. As will be discussed later, blockchain can be private and confidential and can be used with no need for bitcoin or any cryptocurrency at all. Further, the Oxford English Dictionary provides a broader definition of the blockchain as follows, "a digital ledger in which transactions made in bitcoin or another cryptocurrency are recorded chronologically

read the digital data lodged on the blockchain? This explores the distinction between public and private blockchains. **Second**: Who is authorized to write the digital data lodged on the blockchain? This explores the distinction between permissioned and permissionless blockchains. Accordingly, blockchains could be separated into 4 types as follows:[13]

Public Permissionless	Public Permissioned	Private Permissionless	Private Permissioned
Anyone Can Join & Read the Data (Anonymous Identity)	Anyone Can Join & Read the Data (Anonymous Identity)	Only Participants with Known Identity Can Join & Read the Data	Only Participants with Known Identity Can Join & Read the Data
All of Participants Can Write the Data	Only Pre-Designated Participants Can Write the Data	All of Participants Can Write the Data	Only Pre-Designated Participants Can Write the Data
Data is Transparent	Data is Transparent	Data is Confidential	Data is Confidential
Requires Native Assets (Cryptocurrency)	Requires Native Assets (Cryptocurrency)	Does not Require Native Assets	Does not Require Native Assets
Low Scalability	Moderate Scalability	High Scalability	Very High Scalability

and publicly"[8]. This definition also confuses the fine line between the blockchain technology and cryptocurrencies. Blockchain can be used independently in various business use cases with no need for any cryptocurrencies. Both of these definitions also "highlight the role of a blockchain as a digital ledger,"[9] nevertheless, "the ledger usage is simply a feature of the blockchain but not its essence."[10] The use of ledger feature only relates to "blockchain applications that focus on managing the exchange of value in the case of virtual assets."[11] In addition, Merriam Webster has recently added the word "blockchain" to its dictionary, defining it as a: "a digital database containing information…that can be simultaneously used and shared within a large decentralized, publicly accessible network."[12] The problem with this definition is that it also captures only one of type of blockchain; that is the public permissionless blockchain. A better definition would be a one that captures all types of the blockchain technology as follows:

A database that stores digital information in a highly secure manner through (1) using cryptographic functions to encrypt such information and (2) distributing the database across a number of networks.

This definition tries to highlight the most important feature about blockchain, namely, its extraordinary level of cybersecurity. Additionally, this definition tries to make it clear that the blockchain only concerns the realm of digital data and digital assets; there is no yet a direct connection between the blockchain and the physical world, although there are attempts to connect the digital and physical world via blockchain through the concept of the Internet of Things (IoT).

As for the types of blockchain, they are categorized on the basis of 2 main factors: **First**: Who is authorized to join and

In practice, the most used types of blockchains are either public permissionless blockchains or private permissioned blockchains. Currently, public-permissionless and private-permissioned blockchains are most popular in terms of the number of projects/startups involved and the greatest number of users.[14] That's why we will focus exclusively on these types throughout the remainder of this article.

Public Permissionless Blockchain: A public permissionless blockchain is a blockchain where everyone is able to access and transact with.[15] It's a blockchain where transactions are added only if they are valid. On the public permissionless blockchain, it's secured through the use of cryptography supplemented by economic incentives for the miners.[16] Anyone can be a miner who would be able to validate and publish the transactions on the blockchain.[17] In order to mine new transactions, miners have to commit software and hardware computational resources to solving a problematic cryptographic puzzle.[18] The first miner who solves such puzzle gets a monetary reward (usually a cryptocurrency).[19] Each new solution, along with the verified transactions, constitute the basis for the next puzzle to be solved.[20] Public permissionless blockchains might have the virtue of securing transactions in a trustless manner, however, they show various limitations, especially with respect to application in business use cases.[21] That was the reason for the emergence of private permissioned blockchains that are currently widely used by business enterprises.

Private Permissioned Blockchain: A private permissioned blockchain is a "blockchain where write permissions are kept centralized to one organization."[22] As for read permissions, they are restricted to certain participants. [23] The distinction between public permissionless and private

permissioned blockchains lies in the following factors: [24]

1. Data Reversibility: If one wants to change the data on a certain block (let's call it block (A)) on a public permissionless blockchain, she will have to change the data on all the blocks created since block (A) up till the new block. In order to do so, more than half (51%) of the participants on the public permissionless blockchain have to consent to such a change. Therefore, modifying the content of a block is almost impossible over public permissionless blockchain. [25] As for private permissioned blockchains, participants can "easily come to an agreement [off-the-chain] and modify data content."[26]

2. Data Privacy: Based on the type of the blockchain, the network can be public where anyone – even with anonymous identity - can access it, or private where only certain participants are allowed to join the blockchain. The restricted access on a private permissioned blockchain assures data privacy and confidentiality to its participants.[27]

3. Data Scalability: In public permissionless blockchains, the consensus protocol is essential to ensure the integrity and security of the data lodged on the blockchain. As mentioned above, this requires miners to commit software and hardware computational power to solve a demanding cryptographic puzzle. [28] This makes the public permissionless blockchain have low scalability as they are able to validate only tens of transactions per second.[29] On the other hand, in private permissioned blockchains, "miners or rather validators are preliminary known and trusted to some degree, this process of selection can be lowered in terms of computational power."[30] This reduction of computational complexity in the consensus protocol results directly in an increased scalability in terms of transactions validation. [31] For instance, "the first set of performance reports showing evidence that enterprise platforms such as Hyperledger Fabric, Hyperledger Sawthooth, and R3 Corda can achieve performance in the range of hundreds to thousands of transactions per second, often with sub-second response times." [32]

4. System Responsiveness: Technically speaking, no transaction stored on the Bitcoin blockchain (The most popular example of a public permissionless blockchain) could be considered truly final from a theoretical perspective. That's because any transaction can theoretically be deleted from the blockchain by "reorganizing it starting from the block containing the transaction in question."[33] In this regard, the longest reorganization of the Bitcoin blockchain happened in 2013 and involved 24 blocks; such incident did not relate to a malicious hack but rather a bug in the protocol.[34] Therefore, to consider a transaction to be practically final on the Bitcoin blockchain, one needs to wait for at least 36 confirmations which correspond usually to 6 hours of transaction age.[35] As for private permissioned blockchains, the use of "adapted consensus algorithm…increases the system responsiveness by shrinking waiting time for confirmations."[36]

5. Ease of Updatability: It's quite complicated to synchronize the software over public permissionless blockchains. [37] This is because of the vast amount of anonymous participants in such networks and how this usually result in potential disparities among them. On the other hand, it's quite feasible to synchronize the software over private permissioned blockchains because members know each other and can quickly come to a mutual agreement off-the-chain.[38]

(C) Do We Even Need a Blockchain for International Arbitration?

An arbitration practitioner has recently claimed that: "there are cogent technological reasons which will make it difficult for the management of an arbitration reference to be conducted in a blockchain platform in the foreseeable future." [39] He reasoned by relying upon an unsubstantiated claim that it is "quite slow and expensive to store massive volumes of data on a blockchain ledger." [40] The problem here is the lack of information in the arbitration community about the various types of blockchain. It might be slow and expensive to store digital information on a public permissionless blockchain, but that is definitely not the case on a private permissioned blockchain. The arbitration practitioner was relying in his assessment upon the scalability of public permissionless blockchains such as bitcoin and did not take into consideration the very high scalable private permissioned blockchain that can allow for thousands of transactions per second at a very low cost. [41] The article goes on – and rightly so – to advocate that cloud computing might not have "adequate security protocols which can prevent major cyberattacks in the future." [42] Then, the article advocates for the use of decentralized cloud storage systems and suggests that companies such as Storj, Sia and Filecoin are currently commercializing the use of such systems.[43] This is quite confusing because if you are in the blockchain sphere, you would know that all three companies are in fact blockchain companies.

The only virtue of this article[44] is that it showed how public permissionless blockchain are not suitable to be used in international arbitration. Then, it becomes quite straightforward when it comes to choosing the most suitable blockchain type for international arbitration; that is being the private permissioned blockchain for the following reasons:

1. Private: To ensure the confidentiality that is usually highly regarded by participants in the arbitral process.

2. Permissioned: To ensure that only pre-designated participants have control over the arbitral process (i.e., the arbitral institution before the constitution of the arbitral tribunal, and then the arbitral tribunal itself when conducting the arbitral process)

Therefore, a private permissioned blockchain would be the optimal type of blockchains to be used in international arbitration. The next section will highlight the potential benefits of such type for international arbitration.

(D) Potential Imminent Benefits of the Blockchain for International Arbitration
1. Blockchain & Cybersecurity:

Cyber intrusions into the arbitral process does not imply that

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international arbitration is uniquely vulnerable to data breaches, but only that international arbitration proceedings are not immune to increasingly pervasive cyberattacks against corporations, law firms, government agencies and officials and other custodians of large electronic data sets of sensitive information. This was evidenced in July 2015 when the website of the Permanent Court of Arbitration in The Hague (PCA) was hacked during a hearing of a sensitive maritime border arbitration between China and the Philippines. Despite this malicious attack, arbitral institutions seem to "continue to rely upon relatively insecure storage and communication systems." [45] Evidently, institutional rules are completely silent on cybersecurity as they allow the transfer of data between the participants of the arbitral process by any electronic means. Many arbitral institutions in fact use "unencrypted email and commercially available cloud data repositories." [46]

In *Libananco v Republic of Turkey,*[47] Turkey has admitted to intercepting Libananco's correspondence with its counsel and third parties, as part of a criminal investigation. [48] Further, in an unpublished order in *Caratube International Oil Co. LLP and Devincci Salah Hourani v. Republic of Kazakhstan*[49], the tribunal admitted into evidence certain documents obtained from the public disclosure of documents hacked from Kazakhstan's government computer network.[50] In addition, in the *Conoco Phillips* case[51], the arbitral tribunal had to deal with new evidence presented after the issuance of the award due to information available in *WikiLeaks*.[52] *WikiLeaks* were also addressed in *Opic Karimum Corporation v Venezuela* and *Kılıç v. Turkmenistan*,[53] and were also mentioned in the *Yukos* arbitration.[54]

Law firms, too, are increasingly becoming victims to cyber-attacks.[55] A 200 law firm study conducted by LogicForce (a cybersecurity consulting firm) for the first quarter of 2017 found that all of the surveyed law firms were victims of hacking attempts. [56] What is more peculiar is that that 40% of firms were not even aware of such hacking attempts.[57] In addition, 95% of the law firms were not thoroughly compliant with their cybersecurity protocols

and only 23% had a cyber-attack insurance policy in place.[58] As we have seen in the above cases, hacking sensitive data may result in the acceptance of illegally obtained, or privileged evidence in a way that would undercut the integrity and legitimacy of the arbitral process.[59] Further, since the participants in the arbitral process usually live in different jurisdictions, they will accordingly be subject to different data privacy regimes.[60] Indeed, such jet-setting nature of international arbitration makes it easier to "forget about potential ways client information might be exposed." [61]

According to Deloitte, "while still nascent, there is promising innovation in blockchain towards helping enterprises tackle immutable Cyber Risk challenges such as digital identities and maintaining data integrity." [62] Blockchains could potentially help improve cybersecurity as it can impede fraudulent activities, and detect data tampering based on its underlying characteristics of immutability, data encryption and operational resilience. Accordingly, blockchains – unlike cloud computing - have no single point of failure, which highly decreases the chances of an IP-based DDoS attack disrupting the network operation.[63] If a node (i.e., a computer) is hacked, the lodged data on the blockchain is still accessible via other nodes within the network, since all of them maintain a full copy of the distributed ledger at all times. Such distributed nature of the blockchain solves the Byzantine General's problem of false consensus.[64] Even though the blockchain technology is generally considered to have no single point of failure; private permissioned blockchains with a lower number of nodes would need to make sure that their "network is sufficiently distributed globally and resilient with no single points of failure on an organization or platform level to ensure continuous operation even in the event of a natural disaster or coordinated attack." [65]

Further, blockchain technology is operationally resilient. This is because both public and private blockchain consists of multiple nodes; hence, corporations can make a node practically redundant if it comes under a cyber-attack and be able to continue to operate business as normal.[66] Therefore, even if a major part

of the blockchain network is under attack, the blockchain will continue to operate normally due to the distributed nature of such technology.[67] Despite the above promises of the blockchain technology, it's still important to acknowledge that "blockchain's characteristics do not provide an impenetrable panacea to all cyber ills, to think the same would be naïve at best, instead as with other technologies blockchain implementations and roll outs must include typical system and network cyber security controls, due diligence, practice and procedures."[68]

2. Blockchain & Confidentiality

The Queen Mary University Arbitration Survey of 2018 shows how participants in the arbitral process highly value confidentiality in international arbitration. In fact, 87% of the survey respondents believe that confidentiality in international commercial arbitration is important.[69] Further, most respondents believe that confidentiality in international arbitration should be "an opt-out, rather than an opt-in, feature."[70] In this regard, private permissioned blockchains is the optimal solution to provide a higher level of confidentiality for the participants in the international arbitration process. In essence, private permissioned blockchains could be compared to "organizations intranet pages, where information is only shared and exchanged internally with those who have been authorized to access the site."[71] In any case, to ensure confidentiality, private permissioned blockchains need to be supplemented with "security controls to provide authentication, authorization, and encryption in order to properly protect data access."[72] Consequently, private permissioned blockchains would be able to provide international arbitration with a highly confidential platform and hence minimizing the risk of leaking sensitive data, either to the opposing party or to the public.

3. Blockchain & Efficiency

Judge Holtzmann has said before that: "We must not allow arbitration to be as slow as the sloth or as cumbersome – and therefore as obsolete – as the dinosaur."[73] This quote was mirrored in the most recent Queen Mary University Arbitration Survey of 2018 as it shows that respondents ranked the cost of arbitration as its worst feature (67% of respondents), and lack of speed as its fourth worst feature (34% of respondents).[74] This highlights how far the arbitral process transformed from a cost-effective and a time-efficient dispute resolution mechanism to a "monster" in terms of costs and time spent in such a process. The question is whether the blockchain technology can help with issue? The

answer seems to be that it might do so. McKinsey reports that the blockchain technology initial impact will be to drive operational efficiencies.[75] In this regard, 70% of the value at stake in the short term of adopting blockchain technology is in cost reduction.[76] This is because smart contracts based on the blockchain have the potential to: "deliver costs savings by streamlining back office processes."[77] Moreover, IBM lists as one of the blockchain-based smart contracts' benefits, its ability to reduce the time consumed in dispute resolution by 75%.[78] Accordingly, smart contracts built on the private permissioned blockchain might be able to streamline the administrative and mundane tasks related to international arbitration in a timely, effective and a secure manner. To know the answer exactly to this question, we need to test the use of smart contracts based on a private permissioned blockchain in international arbitration for a period of time to see whether there will be any material efficiency gains.

(E) Conclusion

Unfortunately, arbitral proceedings are still conducted in the "same way as they were 50 years ago. Everyone shows up in one place at an appointed time, for in-person hearings before a panel reading hard-copy documents from A5 bundles."[79] It seems that the international arbitration community is underutilizing the advancements of technology, especially when it comes to securing its sensitive data against cyber-attacks. Another problem is that there are quite many misperceptions about what blockchain actually means and how it can really help the international arbitration community. That's why this article has tried to put the blockchain technology in an objective perspective showing its different types and how private permissioned blockchain would be the optimal choice as a use case in international arbitration.

In conclusion, the blockchain technology is not a panacea for all the technological dilemmas concerning international arbitration. However, the blockchain technology can certainly offer a better platform for international arbitration, at least from a cybersecurity and a confidentiality perspective. Accordingly, it would be highly advisable if the international arbitration community takes the blockchain technology into their consideration and critically assess the potentials and pitfalls of such a nascent and a promising technology.

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[BIOGRAPHIES]

The Founders

PEDRO SOUSA UVA

YAR co-founder Pedro Sousa Uva heads an arbitration and litigation department as Of-Counsel of the Lisbon based full service law firm pbbr.

To date, Pedro has gathered over 15 years of work experience in Dispute Resolution. Before joining pbbr, Pedro handled at Miranda law firm international disputes, often based in former Portuguese colonies in Africa or Asia. Seconded to the London office of Wilmer Hale in 2009/2010 he worked on international arbitration matters alongside a worldwide team of lawyers. Pedro started his career at Abreu Advogados, where he represented foreign and national clients in court and arbitral proceedings for nearly a decade.

Pedro holds a LL.M degree in Comparative and International Dispute Resolution from the School of International Arbitration (Queen Mary University of London). Before graduating in Law at the Lisbon Law School of the Portuguese Catholic University (2003), he studied as a scholarship student International Arbitration at the Katolieke Universiteit Leuven in Belgium in 2001/2002. Pedro is a regular speaker on arbitration events and hosts conferences, including São Paulo, Vienna and Lisbon. Recently, he has one of the invited lecturers for the 7th Post Graduation Course of Arbitration at the University Nova, in Lisbon (2018).

During the last years, Pedro authored several articles on international and national arbitration topics, notably "*International Arbitration Shifting East*", publishedin Iberian Lawer in December, 2017, "*Getting the Deal Through - Arbitration 2016*" (co-author, Portugal; 11th Edition), "*World Arbitration Reporter -2nd Edition*" (co-author, Jurisnet 2014), "*Interim Measures in International Arbitration -* Chapter 30 (Portugal)" (co-author, Jurisnet 2014) and "*Portugal finally approves its new arbitration law*" (co-author, Revue de Droit Des Affaires Internationales / International Business Law, no. 3, June 2012). His dissertation was published in the American Review of International Arbitration under the title "A *Comparative Reflection on Challenge of Arbitral Awards Through the Lens of the Arbitrator's Duty of Impartiality and Independence*".

Pedro co-chaired the Sub40 Committee of the Portuguese Association of Arbitration (APA) since 2013. He is also an active member of the Co-Chairs Circle (CCC). Pedro co-founded AFSIA Portugal (2010), the national branch of Alumni & Friends of the School of International Arbitration (AFSIA).

The idea for YAR was born in London and put into practice by the co-founders Pedro Sousa Uva and Gonçalo Malheiro in January, 2011. It is a pioneer project as it was the first under40 international arbitration review ever made.

[BIOGRAPHIES]

The Founders

GONÇALO MALHEIRO

Gonçalo Malheiro is an associated partner of Abreu Advogados. He focuses his work on Arbitration and Litigation.

With around 20 years of experience, Gonçalo has a broad expertise in handling arbitration, civil, commercial and criminal litigation. He has represented foreign and national clients before Tribunals and Courts.

He has also handled numerous contract disputes including claims arising out of sales of goods agreements, distribution arrangements, unfair competition matters, banking and insurance, real estate, franchising disputes and corporate matters.

Gonçalo completed his LLM at Queen Mary – University of London (School of International Arbitration) and published his dissertation about interim injunctions in Portuguese Arbitration Law and a compared analysis with different jurisdictions.

Before, he already had attended a Summer Course at Cambridge University.

Between 2012 and 2015 he was Chairman of the Young Member Group of the Chartered Institute of Arbitrators and is currently member of the Chartered Institute of Arbitrators.

Gonçalo attended the 1st Intensive Program for Arbitrators organized by the Portuguese Chamber of Commerce and Industry in April 2015.

He has been a speaker in several national and international conferences focused on arbitration.

Besides publishing in English and Portuguese regarding various arbitration matters, Gonçalo is also Co-Founder of YAR - Young Arbitration Review,.

Gonçalo also co-founded AFSIA Portugal (2010), the national branch of Alumni & Friends of the School of International Arbitration (AFSIA), of which he is a member.

Gonçalo published recently articles about arbitration in Portuguese speaking countries and recently about rules of evidence in arbitration for the book "La prueba en el procedimiento arbitral".

[BIOGRAPHIES]

PAULA GIBBS

Paula is a member of Harneys Litigation and Restructuring group in Hong Kong. Her practice focuses on complex multi-jurisdictional commercial disputes including shareholder disputes, fraud claims, insolvency proceedings and enforcement proceedings. She regularly advises on interim relief and enforcement of arbitral awards.

Paula trained as a solicitor at Allen & Overy LLP in London and Singapore. In 2013, she joined the litigation team at Chapman Tripp in Auckland, New Zealand and qualified as a barrister and solicitor in New Zealand in 2015 appearing as sole and junior counsel in the High Court and Court of Appeal of New Zealand.

Prior to joining Harneys in November 2017, Paula gained wide-ranging commercial litigation and arbitration experience including ad-hoc and institutional commercial and investor-state arbitrations under the ICC, LCIA and SIAC Rules. She also gained experience in structured finance including a secondment to Deutsche Trustee Company Limited. Having studied finance for two years, she enjoys working with valuation experts on complex quantum claims in shareholder disputes.

ANINDYA BASARKOD

Anindya Basarkod works at Khaitan & Co Mumbai, in its dispute resolution department, where he is involved in several international and domestic arbitrations. He completed a LL.M.in International Dispute Settlement (MIDS) Geneva. Recently, he published an article called "Arb-Med-Arb: what is it and how can it help the parties to solve their disputes efficiently?" –Global Arbitration News, 20 November 2017.

OLIVER BOLTHAUSEN

Oliver Bolthausen is a German Rechtsanwalt/ Attorney at Law and executive partner at DWF in Germany. His practice focuses in the areas of domestic and international Dispute Resolution (Arbitration, Business Litigation and Mediation).

Oliver has served on arbitration tribunals as chairman and as counsel in arbitration proceedings across a variety of institutions (e.g. ICC, ICSID, ZCC, SCC, DIS….) and is a nominated arbitrator for various organisations. In addition, Oliver advises clients on appeal and international enforcement matters as well as on dispute management strategies. Oliver has significant experience working on complex commercial / contractual disputes and is known for his commercial understanding and creative negotiation capabilities.

Oliver is Head of International Arbitration & Global Disputes at DWF and is a Fellow with the Chartered Institute of Arbitrators (FCIArb) in London.

NIVEDITA SHENOY

Nivedita Shenoy is Member of the Karnataka State Bar Council (India) since August 2010. She studied at New York University School of Law, New York where she completed a LL.M. in International Business Regulation, Litigation & Arbitration in May of 2018. Nivedita is member of Arbitral Women, Alliance for Equality in Dispute Resolution, YSIAC, Young MCIA, Young ITA, American Bar Association and South Asian Bar Association of New York.

IBRAHIM SHEHATA

Ibrahim Shehata is an International Arbitration Lawyer at Shehata & Partners Law Firm in Cairo who has recently graduated with an LL.M Degree at NYU School of Law. In addition, Shehata acts as the Vice President of the Miami Blockchain Group which is focusing on providing innovative technological solutions for the international arbitration community. Shehata also teaches International Arbitration & Civil Procedures as a Junior Faculty Member at Cairo University in Egypt. Shehata's expertise extends to International Commercial Arbitration, Mergers & Acquisitions, Corporate Law, Energy Law, and Project Finance. Shehata tries to guide legal professionals on how to capitalize on the latest technological advances in the fields of Artificial Intelligence and the Blockchain Technology.

ANDRII ZHARIKOV

Andrii obtained his Bachelor in Law degree (with honours) from Taras Shevchenko National University of Kyiv (Ukraine) and LL.M. in International Trade Law (with distinction) from the University of Essex. Following completion of his studies Andrii worked as an associate with leading law firms in Ukraine. He advised mostly foreign clients on various aspects of doing business in Ukraine, but primarily his focus was on international trade, banking law, corporate law, alternative dispute resolution and M&A.

In October 2016 Andrii secured the Dean's ABS Law Scholarship in support of his research project to be conducted at Aston University. His research is centred on the theory of lex mercatoria and specifically its use in the area of trade finance. Much attention in his research is directed to the means of dispute resolution in the field. In particular, he examines Documentary Instruments Dispute Resolution Expertise (DOCDEX) as an innovative dispute resolution system in which trade finance disputes can be resolved without reference to any national law.

Andrii delivers lectures and tutorials within the Commercial Law module and has authored a number of articles in the areas of his interests, which have been published in English, Ukrainian and Russian. One of his latest achievements is winning of the Chartered Institute of Arbitrators Young Members' Group Essay Competition 2017/18, his submission being on the topic of 'Conflicts and Ethics in International Arbitration'.

DUNCAN GORST

Duncan Gorst is an associate at Hengeler Mueller in Frankfurt am Main, where he practices international litigation and arbitration. He is a British national, educated in the UK and Germany, and admitted to the bar in New York. He has worked at international law firms in both the UK and Germany.

CHARLES
H. W. MAK

Charles H. W. Mak is a recent LL.M. Graduate in Arbitration and Dispute Resolution at School of Law, City University of Hong Kong. He holds a LL.B. in Law (Honours) from the University of Sussex and a LL.M. in International Economic Law from The Chinese University of Hong Kong. He is also a Fellow of Royal Asiatic Society of Great Britain and Ireland. His research interests are in the areas of international investment law and commercial law. Charles has published several journal articles and book review on these areas of law.

Previously, Charles served as an intern at Hong Kong International Arbitration Centre and Intellectual Property Department of the Hong Kong Government. Furthermore, Charles has passed the HKIAC Tribunal Secretary Programme and became a HKIAC Accredited Tribunal Secretary since July 2018. Recently, Charles has become a Member of Chartered Institute of Arbitrators officially in September 2018.

AVA
BORRASSO

Ava Borrasso FCIArb of Miami, Florida serves as counsel and arbitrator. With over 25 years of experience, she has acted as lead counsel in complex commercial disputes before the ICDR, AAA, and ICC, as well as before state and federal courts. Before establishing the firm in 2015, she was a partner with a prominent international litigation and arbitration boutique for nearly a decade. She has represented parties in commercial disputes involving international distribution and trade agreements, financial services agreements, fraud and corruption, business torts, construction and real property disputes.

As a Fellow of the Chartered Institute of Arbitrators, a panel member of the ICDR and the AAA commercial panel, and registered ICC member, Ms. Borrasso acts as an independent arbitrator focused on commercial disputes. She has been recognized by Legal500 Latin America for international arbitration, Best Lawyers of America for commercial litigation, and Legal Elite and Super Lawyers for international practice. Ms. Borrasso serves as sole and panel arbitrator in international and domestic arbitrations.

YAEL RIBCO
BORMAN

Yael Ribco Borman is an associate in the International Arbitration practice at Shearman & Sterling.

Yael has advised companies, State-owned entities and States in international arbitrations under the Rules of the ICSID, UNCITRAL, ICC and CRCICA, particularly in disputes related to oil & gas, renewable energies and infrastructure. Her experience includes investment treaty arbitrations under both bilateral and multilateral treaties, as well as commercial arbitrations. Yael has also worked alongside local counsel in setting aside proceedings before domestic courts.

Prior to joining Shearman & Sterling, Yael worked as an associate in a Uruguayan law firm.

CAROLINE DUCLERCQ

Caroline Duclercq mainly acts as counsel and arbitrator in domestic and international proceedings. She assists clients in commercial arbitration matters (distribution, telecommunications, energy, raw materials, joint ventures, sale/purchase agreements industrial/intellectual properties and FIDIC), institutional and ad hoc.

Caroline is a founding member of "Wake up (with) Arbitration!", and co-heads the first French "MOOC in domestic and international arbitration".

Before joining Altana as Of Counsel in 2012, Caroline was Of Counsel at Serge Lazareff. She has been a partner at Altana since 2017.

TALEL ARONOWICZ

Talel is specialized in arbitration and business litigation. She holds a Master in International Law (University of Texas at Austin), a Master 2 in European and International Business Law (Université Paris Dauphine) as well as an LL.M in Comparative and International Dispute Resolution (Queen Mary, University of London). She joined Altana in 2017.

FRANCISCA SEARA CARDOSO

Francisca Seara Cardoso is an Associate in the Litigation and Arbitration Team of Morais Leitão, Galvão Teles, Soares da Silva & Associados (MLGTS) in Lisbon. Her practice focuses on domestic and international arbitration and commercial litigation. She is also a member of Team Genesis, a multidisciplinary team with a particular calling for entrepreneurship and innovation. Francisca is a lecturer on Economic and Business law at Católica Lisbon School of Business & Economics.

Francisca holds an LL.M. degree in Corporate and Commercial Law from the London School of Economics and Political Science (2013/2014). She also attended a Course on Finance for Lawyers (2016), the Advanced Seminar in ICC Arbitration (2017), and is concluding its Advanced Postgraduate Course in Commercial Litigation (2018).

Francisca is qualified to practice law in Portugal and is also a member of the Portuguese Arbitration Association (APA).

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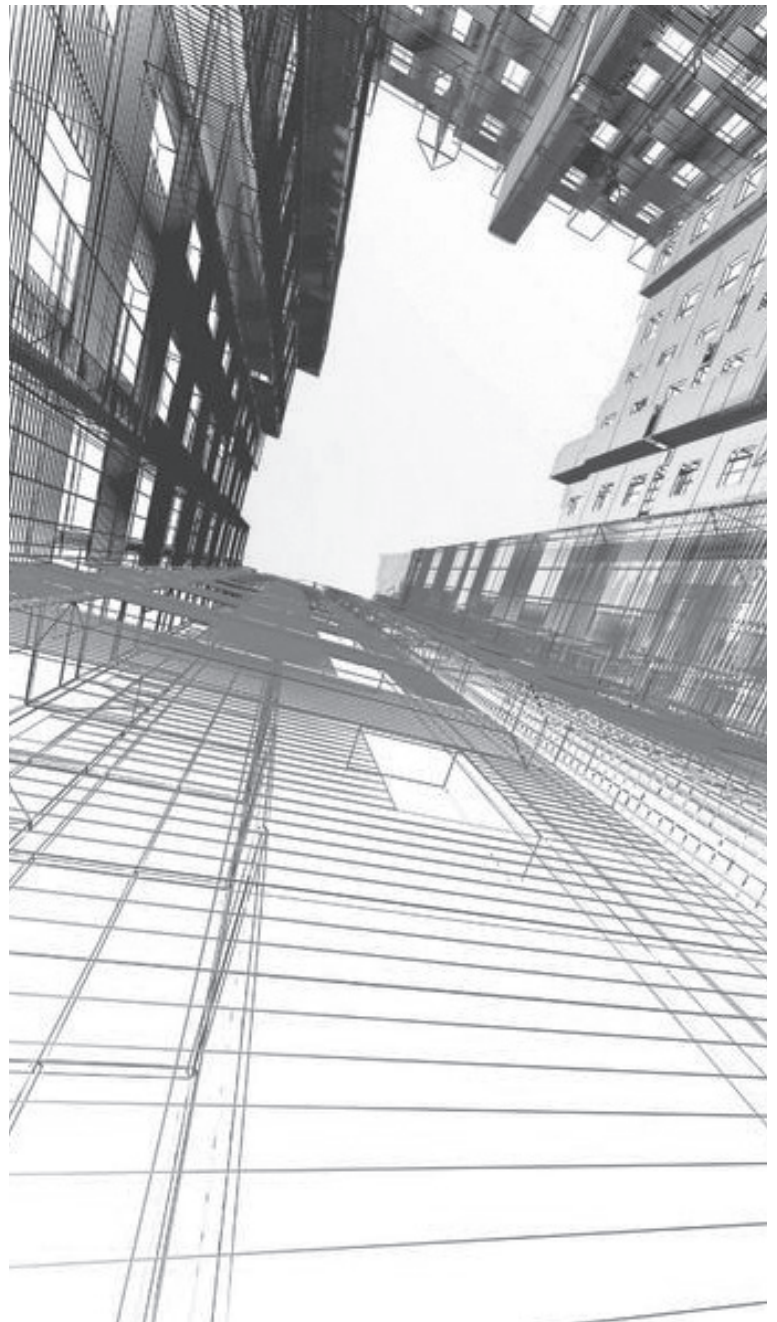
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