1. Introduction to Part I

Securities markets provide venues for companies to raise capital by issuing shares and bonds and for interested parties to invest. Over the last few decades, securities markets have transformed into electronic impersonal venues that are more accessible to the public at large.¹ Many of these changes are ‘visible’ to a lay person. Every individual with access to the Internet may easily locate quotes from securities markets, monitor prices of shares, download reports from analysts or watch footage from the NYSE and other exchanges. Anyone can also observe what securities markets ‘are doing’ at any particular moment. Today passive observation through electronic technology has become effortless and practically cost-free.

Securities markets also underwent other critical changes that may be less visible to a lay person. For years, the NYSE, the London Stock Exchange and the Deutsche Börse were traditionally associated in the minds of many with trading floors, populated by brokers wearing uniform-like jackets shouting, running, waving their hands and throwing paper tickets around. Gradually floor trading has been replaced with electronic technologies and now instead of raising their hands, accepting orders and making notes on paper tickets, brokers sit in their offices and execute orders electronically. Investors no longer fax or call their orders to buy or sell securities and brokers no longer call a trader on the floor to execute such orders. Presently investors log-in to their trading accounts such as through the websites of intermediaries and place their orders electronically. The issuance of orders and their execution is practically seamless.

Electronic communication technologies have also impacted the actual settlement of trades, or the processes that occur after the trade is executed, even though the transformation of settlement processes is less

¹ Marek Dubovec, *Securities Holding Patterns and Their Impact on the Rights of Securities Holders: Lessons for Developing Nations*, in *LATIN AMERICAN COMPANY LAW: A COMPARATIVE AND ECONOMIC DEVELOPMENT PERSPECTIVE*, VOL. 1, 213, 214 (Boris Kozolchyk & Francisco Reyes eds., CAROLINA ACADEMIC PRESS, DURHAM, NC, 2013).

visible to the lay person. Investors in Mexico City need no longer worry how their recently purchased IBM certificates will be delivered to them. They no longer should be concerned with what might happen if the certificates are lost or stolen in transit. Electronic communications make the transfer of IBM shares possible by electronic bookkeeping entries to securities accounts maintained by intermediaries. Securities are no longer mailed in envelopes or handed over in face-to-face meetings. In terms of modernization and implementation of new technologies, the back-end transfer functions have been keeping pace with the front-end trading functions in that both have become almost exclusively electronic. That being said, electronic trading with securities is a front-end function and therefore is not the subject of this Part.

This Part of the book examines the transformation from settlement of trades by physical deliveries of certificates to the electronic transfers effectuated by book entries to securities accounts. It analyzes both the 'hardware' (organizational and structural infrastructure) and the 'software' (legal infrastructure) of contemporary securities transfer systems. The discussion of the software component includes an analysis of legal rules applicable to the relationships that form the securities holding systems. The most advanced software components, as they have been formulated to implement the US Article 8 of UCC, are compared with those in the European Union (EU) and Latin America. It will be demonstrated that the EU Member States' frameworks have not been harmonized similarly to the United States' laws. The relevant EU Directives 'fell short of creating a wholly consistent and sound set of legal provisions governing the acquisition, disposition, enforcement, and priority of rights in intermediated securities'.² Latin American laws differ from UCC 8 and the EU legal frameworks in many aspects, including the degree of formalities required for the perfection of security interests.

It will be argued that socio-economic context is an important factor that determines both the legal infrastructure and the functioning of securities holding systems in the specified jurisdiction. Recommendations to implement one or another type of the securities holding systems should not be formulated without understanding the functions of securities markets in those jurisdictions. This is especially true in those

² Luc Thévenoz, *Intermediated Securities, Legal Risk, and The International Harmonization of Commercial Law*, 13 STAN. J.L. BUS. & FIN. 384, 398 (2008). See further CHANGMIN CHUN, CROSS-BORDER TRANSACTIONS OF INTERMEDIATED SECURITIES, A COMPARATIVE ANALYSIS IN SUBSTANTIVE LAW AND PRIVATE INTERNATIONAL LAW 118 (SPRINGER-VERLAG BERLIN HEIDELBERG, NEW YORK, NY, 2012).

economies and cultures where companies may or may not be accustomed to raising funds in capital markets, where investors may or may not trust the market value of securities, and where intermediaries are generally distrusted.

This book seeks to lay out a path to modernization of the legal infrastructure that governs domestic systems for the holding of securities. Such modernization is a necessary step towards achieving harmonization across borders. The international lawmaking community has already undertaken important projects in the area of holding securities to support increasingly globalized markets.³ First, the International Institute for the Unification of Private Law (UNIDROIT) drafted the UNIDROIT Convention on Substantive Rules for Intermediated Securities (the Geneva Securities Convention) that was signed on 9 October 2009.⁴ As stated in the overview of the project, the objective of this Convention was to ‘improve the legal framework for securities holding and transfers, with a special emphasis on cross-border situations’.⁵ This special emphasis was identified because the number of failed deliveries of securities was and remains significantly higher in cross-border transactions as compared to domestic transactions.⁶ Second, the predecessor to the Geneva Securities Convention was a project undertaken by the Hague Conference on Private International Law that resulted in the adoption of the Convention on the Law Applicable to Certain Rights in Respect of Securities Held with an Intermediary (Hague Securities Convention).⁷ The Hague Securities Convention determines the applicable law for rights and obligations

³ Wayne Gray & Robert M. Scavone, *Retreat from a Federal Securities Transfer Presence: Next Stage in the Development of the Canadian Securities Settlement System*, 27 B.L.F.R. 375, 379 (2012).

⁴ The full text of the Geneva Securities Convention and working documents are available at <http://www.unidroit.org/english/conventions/2009intermediatedsecurities/main.htm> (last visited 9 December 2013).

⁵ Given the functional and minimalistic approach taken in the drafting of the Geneva Securities Convention, some authors have criticized it for not providing sufficient predictability and legal certainty. CHUN, *supra* note 2, at 34.

⁶ Explanatory Memorandum to the proposed Regulation on Improving Securities Settlement in the EU and on Central Securities Depositories (CSDs), at 2 COM(2012) 73 final (7 March 2012), available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52012PC0073:EN:PDF> (last visited 9 December 2013).

⁷ The full text of the Hague Securities Convention is available at http://hcch.e-vision.nl/index_en.php?act=conventions.text&cid=72 (last visited 9 December 2013). See also Sandra M. Rocks, *The Hague Convention on the Law*

in relationships based on securities accounts and does not deal with substantive issues related to the holding of securities in accounts with intermediaries. Both of these Conventions reflect the prevailing practice of holding securities in accounts maintained by intermediaries.⁸

The conventional relationship in which the investor holds a certificate and/or was registered on the books of the issuer has been replaced by an intermediated holding structure in which the rights of shareholders are represented by balances on securities accounts. This new pattern of securities holding also impacts the cost of operating in the stock market. Rudimentary clearing and settlement structures for intermediated securities increase the cost in many countries, including those in the Caribbean and Latin America.⁹ In many developing countries, the number of companies listed on the local securities exchanges has dwindled.¹⁰ To stop the outflow of public listings, the Inter-American Development Bank (IADB) recommended the following changes for developing countries:

to establish systems to facilitate the comparison of trade details, clearance and settlement of securities by delivery versus payment (DVP); to implement risk control systems to reduce the operational risk; to create independent central depository systems for the safekeeping, immobilization and dematerialization of securities; and to facilitate the settlement process and other aspects of custody.¹¹

This is a challenge that currently faces many developing countries not only in Latin America but also in Eastern Europe, Africa and Asia. Without a modern infrastructure for the holding and transferring of

Applicable to certain Rights in Respect of Securities Held with an Intermediary, 36 U.C.C.L.J. 1 (2003).

⁸ The two Conventions neither duplicate nor compete against each other. Christophe Bernasconi & Thomas Keijser, *The Hague and Geneva Securities Conventions: a Modern and Global Legal Regime for Intermediated Securities*, 13(3) UNIF. L. REV. 549, 550 (2012).

⁹ Kenroy Dowers, Felipe Gomez-Acebo & Pietro Masci, *Developing a Strategy for Reforming Capital Markets in Latin America and the Caribbean*, in INTER-AMERICAN DEVELOPMENT BANK, FOCUS ON CAPITAL, NEW APPROACHES TO DEVELOPING LATIN AMERICAN CAPITAL MARKETS 8 (INTER-AMERICAN DEVELOPMENT BANK, WASHINGTON, DC, 2003).

¹⁰ See AUGUSTO DE LA TORRE & SERGIO L. SCHMUCKLER, EMERGING CAPITAL MARKETS AND GLOBALIZATION, THE LATIN AMERICAN EXPERIENCE 58 (STANFORD UNIVERSITY PRESS, PALO ALTO, CA, 2007).

¹¹ The IADB found that 19% and 27% (respectively) of companies delisted their shares from the stock exchanges in Brazil and Argentina in 2002. Dowers, Gomez-Acebo & Masci, *supra* note 9, at 12, 23.

securities and interests therein, the liquidity of these domestic securities markets will be negatively affected. Less liquid markets are characterized by the issuance of very few securities, the presence of very few buyers and very low trading volumes. As a result, businesses are not able to raise capital and economic development in these countries languishes.

Establishment of securities holding systems and enactment of the relevant legislation must also address the increasing danger of systemic risk. The 1994 revision of UCC 8 was prompted by considerations to address systemic risk.¹² In this context, Professor Rogers noted that while ‘commercial law cannot protect against the failure of one’s own intermediary; it can help protect against the risk that an investor will suffer as a result of the failure of someone else’s intermediary’.¹³ While investors may manage intermediary risk by due diligence or by taking out insurance against losses, systemic risk is unpredictable and unmanageable by individual investors. Laws already adopted in a number of economies recognize that adequate management and reduction of systemic risk is critical for the efficient functioning of securities markets and their supporting accounts holding systems.¹⁴

This Part seeks to highlight the new concepts of holding securities in accounts with intermediaries and explain the processes and functions involved in the intermediated holding systems. The desire to manage systemic and other risks underlies all these reforms and is relatively well understood. What is missing is the understanding of these related concepts, such as the nature of rights to account-based securities and rights against the intermediary and the form of transfers and their legal nature in addition to other functions that underpin a modern intermediated holding structure.

PROTOTYPICAL TRANSACTION

Before introducing a concise history of securities, one needs to first understand the context in which transactions with securities are executed, the markets where securities are traded and the parties that are involved. Suppose that Brian bought 100 shares of IBM from Steve. The agreement

¹² James S. Rogers, *The Revision of Canadian Law on Securities Holding Through Intermediaries: Who, What, When, Where, How and Why*, CA. BUS. L. J. 49, 65 (2007).

¹³ *Ibid.*

¹⁴ See L. 964, julio 8, 2005, Diario Oficial [D.O.] 45.963 (Colom) art. 1(a)(3).

between Brian and Steve to sell the stock was a front-end trade between two parties. Once Brian and Steve agreed on all of the details of the trade they then met in Brian's office where they exchanged the stock certificates for banknotes. Delivery of the certificates against the banknotes is the back-end function. This transaction involved a trade, that is, an agreement to buy the stock for a certain price, and its settlement, that is, the delivery of certificates in exchange for the banknotes. Only the seller and the buyer themselves are involved.

Presently, this type of transaction would be concluded through intermediaries on a stock exchange such as the NYSE. If Brian wanted to buy 100 shares of IBM, he would not call potential sellers trying to find out who is willing to sell for the price Brian is willing to pay. Instead Brian would instruct his intermediary (e.g., Charles Schwab) to buy the stock for him. Brian would issue a 'buy order' to Charles Schwab to be executed on the NYSE, where IBM shares are traded. For the purposes of this illustration, assume that Steve instructed his intermediary JP Morgan Chase to sell 100 shares of IBM for the market price. Unlike in the first scenario, the transaction now involves four parties: the buyer, the seller and the two intermediaries. Once the trade is completed, Brian and Steve will exchange money for securities. However they will not meet each other to exchange the certificates for cash. Instead Charles Schwab will credit Brian's securities account with 100 IBM shares and JP Morgan Chase will debit Steve's securities account for the 100 IBM shares. Since this transaction was not gratuitous, payment must also be made. Accordingly, Charles Schwab will debit Brian's cash balance on the securities account for the purchase price of the stock and JP Morgan Chase will credit Steve's cash balance on his securities account with the sale price of the stock. Credits and debits to the securities accounts of Brian and Steve are the back-end functions. As discussed below in detail, these entries to Brian's and Steve's accounts do not affect the relationships at the top level between IBM and the CSD or those between the CSD and its participating intermediaries.

The back-end functions may thus involve delivery of tangible assets, such as certificates against banknotes, or transfers of intangible assets made by credits and debits to securities accounts. Contemporary securities markets rely on the latter transfer mechanism – credits and debits to securities accounts maintained by intermediaries for their customers. This illustration of the prototypical transaction and the parties involved is characteristic for most jurisdictions. However, laws governing transactions with securities, their clearing, settlement, holding and transfers differ widely. It would be impossible to cover every type of market and their related legal frameworks in this book. Instead the following

jurisdictions will be referred to throughout this Part and compared with one another when appropriate.

The securities holding system of the United States and its legal infrastructure will be used as the main reference point in this Part because it is one of the most advanced systems in terms of transactional volumes and legal infrastructure. The largest securities exchange of the United States is the NYSE, which trades shares of approximately 8000 issuers from 55 countries, representing almost 40 percent of global trading in shares.¹⁵ In 2011, the DTC, which is the US-based CSD, had US\$ 39.5 trillion worth of securities on deposit.¹⁶

German securities exchanges are also an important player in credit markets. Deutsche Börse Group Frankfurt Stock Exchange is the largest securities exchange in Germany and the third largest in the world with close to 7000 listed companies from over 80 countries.¹⁷ Clearstream Banking Frankfurt is the CSD for securities issued in Germany¹⁸ and in 2011 it had €5.8 trillion worth of international and €5.2 trillion worth of domestic securities on deposit.¹⁹

The technological and legal infrastructure of the US and German securities holding systems will be contrasted with those in developing countries, including Brazil, Mexico, Costa Rica, El Salvador and Slovakia.²⁰ These developing countries typically only host a single nation-wide securities exchange, such as the Bratislava Stock Exchange in Slovakia or the *Bolsa de Valores* in El Salvador. Yet within this category of developing countries two groups must be distinguished: 1) economies in

¹⁵ See NYSE Euronext, *Company Overview*, available at <http://www.nyx.com/en/who-we-are/company-overview> (last visited 9 December 2013).

¹⁶ See DTCC, *Transaction Statistics and Performance*, available at <http://www.weforum.org/industry-partners/depository-trust-clearing-corporation-dtcc> (last visited 10 December 2013).

¹⁷ See Deutsche Börse Group, *Statistics*, available at http://xetra.com/xetra/dispatch/en/kir/navigation/xetra/200_listing/500_statistics (last visited 9 December 2013).

¹⁸ See Clearstream, *CSD Services*, available at http://www.clearstream.com/ci/dispatch/en/kir/ci_nav/1_settlement/025_csd (last visited 9 December 2013).

¹⁹ In 2011, Clearstream Banking Frankfurt settled over 116 million transactions. See Deutsche Börse Group, *Global Presence*, 115–16 (Annual Report 2011), available at http://deutsche-boerse.com/dbg/dispatch/en/binary/gdb_content_pool/imported_files/public_files/10_downloads/12_db_annual_reports/2011/10_complete_version/Annual_Report_2011.pdf (last visited 9 December 2013).

²⁰ DE LA TORRE & SCHMUCKLER, *supra* note 10, at 45.

which securities markets are relatively efficient and growing in significance and 2) economies in which securities markets are in disarray and practically ignored by issuers and investors alike. As a result, the needs of these two groups in terms of establishing a modern securities holding system differ. Slovakia, Brazil and Mexico belong to the first group of developing countries. The Slovakian CSD, *Centrálny Depozitár Cenných Papierov SR* (CSD Slovakia), settled approximately 120 000 transactions in 2011 worth over €40 billion.²¹ In Mexico, the *Bolsa Mexicana de Valores* (BMV) listed shares of 135 companies as of August 2012.²² The Mexican CSD, Indeval, had over 15 billion pesos worth of securities on deposit in 2011 and on a daily basis settled transactions worth in excess of US\$ 270 million.²³ In 2008, the Sao Paulo Stock Exchange Bovespa merged with the Brazilian Mercantile and Futures Exchange (BM&F) to create BM&F Bovespa.²⁴ For 2011, the daily trading volume averaged 6.5 billion real out of which 2.3 billion real was traded by foreign investors.²⁵ As of July 2011, 467 companies listed their shares at BM&F Bovespa.²⁶ Bovespa's CSD, the Brazilian Clearing and Depository Corporation 'CBLC,' had 1.1 trillion real of securities on deposit as of June 2011.²⁷

As highlighted in a working paper published by the International Monetary Fund's (IMF) research staff assessing Central America: '...

²¹ *Centrálny Depozitár Cenných Papierov SR*, Annual Statistics (2011), available at http://www.cdcp.sk/dokumenty/statistika/Statistics_2011_en.pdf (last visited 9 December 2013).

²² See Grupo BMV, *Listado de Empresas Emisoras*, available at http://www.bmv.com.mx/wb3/wb/BMV/BMV_empresa_emisoras/_rid/177/_mto/3/_url/BMVAPP/emisorasList.jsf?st=1 (last visited 9 December 2013).

²³ Indeval, *1 Trimestre* (February 2012), available at http://www.indeval.com.mx/wb3/wb/indeval/archivos_publicos/_vtp/indeval/1c85_boletin/_rid/81/_mto/3/Newsletter_Feb12.pdf?repfop=view&retp=1c85_boletin&repfiddoc=463&repinline=true (last visited 9 December 2013).

²⁴ See BM&F Bovespa, *What the Exchange Does*, available at <http://www.bmfbovespa.com.br/en-us/intros/intro-about-us.aspx?idioma=en-us> (last visited 9 December 2013).

²⁵ BM&F Bovespa, *2011 Annual Report*, 62–4, available at <http://www.bmfbovespa.com.br/en-us/bmfbovespa/download/BMFVOVESPA-Relatorio-Anual-2011.pdf> (last visited 9 December 2013).

²⁶ Patrícia Pellini, *Latin American Roundtable, Stock Exchanges as an Engine for Corporate Governance Improvements: Reaching out to Non-listed Companies* (30 November 2011), available at http://www.oecd.org/daf/cal/corporate_governanceprinciples/49287485.pdf (last visited 9 December 2013).

²⁷ See CBLC in Numbers, available at <http://www.bmfbovespa.com.br/en-us/intros/intro-securities.aspx?idioma=en-us> (last visited 9 December 2013).

private capital markets in several countries are under-developed in terms of size, liquidity, and a number of issues relative to some regional peers ...'.²⁸ In Central America bank loans are the preferred source of financing, with corporate debt second and equity financing a distant third.²⁹ In May 2008 the securities markets of Costa Rica, El Salvador and Panama together traded shares of only seven companies with the total value of trades equaling US\$ 650 000.³⁰ The shares of the 90 companies listed on stock exchanges in these three countries were highly illiquid.³¹ The IMF found that secondary trading was practically non-existent with only 1 to 3 percent of issued shares trading annually.³² From January to the end of August 2012, the Costa Rican CSD, *Central de Valores* (CEVAL), settled transactions worth approximately US\$ 180 million.³³ The Salvadoran CSD, *Central de Depósito de Valores* (CEDEVAL), had just over US\$ 5 billion of securities in its custody as of January 2012.³⁴ This predominantly statistical overview of the selected securities markets and related holding systems is relevant for an understanding of the account-based framework that exists in these economies.³⁵

BRIEF EVOLUTION OF SECURITIES

This section examines the evolution of securities dating back to medieval times when raising capital by issuing securities first became popular. The other two Parts of this book examine the history of money and commodities from the era in which the origins of holding those assets through intermediaries can be traced. Securities entered the scene when medieval

²⁸ Hermant Shah, Ana Carvajal, Geoffrey Bannister, Jorge Chan-Lau & Ivan Guerra, *Equity and Private Debt Markets in Central America, Panama and the Dominican Republic*, IMF Working Paper WP/07/288, 5 (2007).

²⁹ *Ibid.*, at 8.

³⁰ Peter Krupa, *To Build an Equity Market*, CENTRAL AMERICA, Issue 8, 16 (June/July 2008).

³¹ Dubovec, *supra* note 1, at 217.

³² Shah, Carvajal, Bannister, Chan-Lau & Guerra, *supra* note 28, 35.

³³ Bolsa Nacional de Valores, *Actividad de Mercado*, available at <http://www.bolsacr.com/principal/index.php?action=estadisticas-negociacion> (last visited 9 December 2013).

³⁴ CEDEVAL en *Estadísticas*, available at https://www.cedeval.com/estadistica_custodia_local_internacional.php (last visited 9 December 2013).

³⁵ For further information about the Latin American securities markets see Dubovec, *supra* note 1, at 216–17.

governments were looking for sources to finance their military activities.³⁶ Unlike contemporary bonds, the ability of the issuing government or city to service the debt and honor redemption requests in a timely fashion depended primarily on the success of the wars.³⁷ Even though bonds were issued as unsecured promises to pay, the war loot functioned as a quasi security. The marketability of governmental bonds was initially restricted. Bonds were bought by a small number of wealthy individuals who could bequeath or sell them but usually only within the same group of investors. A public market for securities did not exist at this time and no special intermediaries were employed to take custody of the certificates.

Concentration of government bonds in the hands of a chosen few persisted until the sixteenth century. The profile of a typical bondholder changed in the sixteenth century when guilds, ecclesiastical and charitable institutions emerged as the dominant investors.³⁸ Limited circulation and the holding of bonds by a small number of investors were well suited for the then existing transfers mechanism – book entries made by their issuers. Accordingly, when investors decided to sell their bonds they informed the issuer who then recorded the transfer on its books. Transfers of Venetian government bonds completed by book entries laid the foundation for modern securities transfers systems that rely entirely on mechanical credits and debits to securities accounts.³⁹

The strength and reliability of the promise to pay that backed up these bonds led to their transformation into payment instruments. Thus, in addition to being instruments of finance, bonds came to be recognized as the equivalent of cash.⁴⁰ Fixed-rate bonds and shares issued by joint-stock companies in England and the Netherlands were recognized as

³⁶ Some authors trace the first issuance of a security to twelfth century Venice, in which long-term municipal debt was issued: MICHAEL BLAIR QC & GEORGE WALKER, *FINANCIAL MARKETS AND EXCHANGES LAW 7* (OXFORD UNIVERSITY PRESS, OXFORD, UK, 2007).

³⁷ EDWARD J. SWAN, *BUILDING THE GLOBAL MARKET, A 4000 YEAR HISTORY OF DERIVATIVES* 117 (KLUWER LAW INTERNATIONAL, HAGUE, NETHERLANDS, 2000). The nominal interest rate on bonds issued by Italian states between the thirteenth and fifteenth centuries ranged between 2.8% in Genoa, 5% in Venice, and 12% in Florence: WILLIAM N. GOETZMANN & K. GEERT ROUWENHORST, *THE ORIGINS OF VALUE: THE FINANCIAL INNOVATIONS THAT CREATED MODERN CAPITAL MARKETS* 156 (OXFORD UNIVERSITY PRESS, OXFORD, UK, 2005).

³⁸ *Ibid.*, at 158.

³⁹ SIDNEY HOMER & RICHARD SYLLA, *A HISTORY OF INTEREST RATES* 94 (4th edn., WILEY, HOBOKEN, NJ, 2005).

⁴⁰ SWAN, *supra* note 37, at 117.

negotiable by the end of the seventeenth century, and price quotations for such bonds were made available at the Amsterdam and London Stock Exchanges.⁴¹ The establishment of securities markets with readily available prices for negotiable shares and bonds, significantly widened access to credit for companies that used to rely on funding provided by the owners and family members.⁴² Negotiability and the establishment of public securities exchanges attracted investors, who previously had not been able to buy bonds for investment or speculative purposes. The fact that bonds were negotiable bearer instruments equivalent to cash exposed their holders to significant risks, including loss and theft.⁴³

The money-like features, presumed ownership, and full negotiability of these bearer securities that could ultimately be transferred free of defenses eventually led their holders to deposit these securities for safekeeping and custody with specialized intermediaries. The figure of a commercial intermediary thus emerged as a reaction to the gradual development of securities markets. Initially, the function of the intermediaries was to provide safe custody service, similar to the services of warehouse operators. The intermediary was an entity distinct from the issuer of the security, and its main function was to take the security into custody and protect it against the risks of loss and theft. Securities transactions thus experienced an important transformation that introduced a crucial player to the existing relationships between the issuer, investor and transferees – an intermediary. The initial role of the intermediary was to keep the security safe and only later did the intermediary also begin to perform other functions, such as the transfer of rights to securities and provision of loans. Although, the seventeenth century intermediary was a mere safe-keeper, its emergence had a significant impact on the evolution of the securities holding system.

The deposit of securities with an intermediary established a relationship with the holder. This type of relationship was based on a contract of deposit, in which the depositor retained ownership rights and the intermediary became the possessor of the security. The intermediary had a duty to segregate the deposited securities and maintain them as

⁴¹ THOMAS MUNCK, *SEVENTEENTH CENTURY EUROPE* 113 (ST. MARTIN'S PRESS, BASINGSTOKE, UK, 1990).

⁴² *Ibid.*

⁴³ Absence of any identification of the transferor and transferee makes bearer securities excellent mechanisms to hide transactions from governmental authorities. See JAMES S. ROGERS, *THE END OF NEGOTIABLE INSTRUMENTS, BRINGING PAYMENT SYSTEMS LAW OUT OF THE PAST* 50 (OXFORD UNIVERSITY PRESS, NEW YORK, NY, 2012).

identifiable to individual depositors. This type of deposit is known as 'regular' or 'special'. The duties and functions of the intermediary with respect to deposited securities are similar to those of the ordinary warehouseman of commodities. As will be demonstrated in Part II, the relationships between depositors and custodians of other valuable assets, such as gold and money, were also those of owners and bailees (custodians), in which the depositors retained ownership rights in the particular assets. Only later did such custody transform itself into a system whereby money and securities of depositors were allowed to commingle. As a result of such commingling, the traceable ownership rights of depositors were disintegrated and replaced with different rights. Consequently, the nature of deposits of securities, as well as money, made it impossible for individual depositors to assert traceable ownership rights.⁴⁴

Gradually the ownership right of a depositor was transformed into a proprietary interest enforceable against his intermediary.⁴⁵ In contemporary securities holding systems, this proprietary interest is classified differently in various jurisdictions in the catalog of existing property rights and includes a co-ownership right in the pool of fluctuating assets, a co-possessionary right to an immobilized security, and an equitable right that is based on a trust relationship or a security entitlement.⁴⁶ Whereas the right of a depositor of money shed all of its proprietary features, the contemporary right of a security depositor still includes a proprietary element.

⁴⁴ Roman law introduced the concept of an irregular deposit that did not require restoration in specie. Under the irregular deposit, once possession of the asset, such as money, passed to the depository so did its ownership. The depository acquired the right to commingle and re-use the deposited object. *See* J.A.C. THOMAS, *TEXTBOOK OF ROMAN LAW* 278 (ELSEVIER SCIENCE & TECHNOLOGY BOOKS, PHILADELPHIA, PA, 1976).

⁴⁵ Intermediaries also provide individualized custodial services in which the customer retains absolute ownership rights with respect to the deposited securities. *See* German Safe Custody Act, § 2.

⁴⁶ *See* ROY GOODE, HIDEKI KANDA & KARL KREUZER, *EXPLANATORY REPORT ON THE HAGUE CONVENTION ON THE LAW APPLICABLE TO CERTAIN RIGHTS IN RESPECT OF SECURITIES HELD WITH AN INTERMEDIARY* 10 (MARTINUS NIJHOFF PUBLISHERS, HAGUE, NETHERLANDS, 2005).

DEMATERIALIZATION AND IMMOBILIZATION OF SECURITIES

Securities have traditionally been transferred by their physical delivery and/or through entries on the issuer's books. Transfers of securities completed by physical delivery and registration on the issuer's books are suited for closely held securities with only a few investors and for shares that trade only occasionally. Given the small market capitalization and the low volume of trading in the Central American markets, physical transfers of certificates and registration on issuers' books may work well for the relatively occasional transfers of securities. While these modes of transfers should be sufficient to support the low volume of trading, it does not mean that more efficient and less costly mechanisms should not be implemented. The volume of trading is just one aspect that affects the transfer mechanism; efficiency, security, cost and the introduction of electronic securities, along with other related aspects are also equally relevant.

The traditional transfer mechanisms that rely on physical delivery of certificates do not work efficiently for publicly traded securities that change investors frequently. Registration capabilities of issuing companies with thousands of security holders that are located all over the world may not keep up with the large volume of trading. Physical transfers increase transactional costs, often result in late delivery and impede the liquidity of securities.⁴⁷ As the volume of securities trading increases, traditional transfer mechanisms are rendered obsolete.

The Process of Dematerialization

In securities markets, electronic technologies were deployed not only to facilitate trading, but also to make settlement more efficient and less costly. The benefits of fully electronic front-end trading would have been severely undermined if the trades executed on electronic exchanges had to be settled by the manual delivery of certificates. Accordingly, both the front and back-end functions should be dematerialized. In this section dematerialization should not be understood as only a technological

⁴⁷ Investors also face the risk of certificates being lost, stolen, or counterfeited during the course of transport. For instance, in 2004, 1.7 million physical certificates were lost in the United States. See the DTCC, *News and Information for DTCC Customers, Naked Short Selling and the Stock Borrow Program*, Issue Index, March 2005.

transformation but should also be thought of as a legal concept.⁴⁸ The following paragraphs document dematerialization in the United States occurring in the late 1960s, after the increasing volume of securities trading and enduring inefficiencies in settling those transactions led to a 'paper crunch'.⁴⁹ The way that Wall Street was doing business at that time did not differ too much from the ways of the late nineteenth century:

The tape was still a paper tape spewing out from a ticker. Paper stock certificates were stored by each broker, necessitating armies of runners to move them about the Street as they were traded. Brokerages had telephone clerks at the stock-exchange floor. The clerks would write out the orders to buy and sell, which would be phoned in from the headquarters. The clerks would hand them to floor brokers, who would execute the orders and hand the clerk a confirmation, which went back to the back-office to be recorded.⁵⁰

Dematerialization is a process that converts paper certificates into electronic entries. For such transformation to be accomplished, the law must recognize this new breed of electronic securities and adequately protect the rights of those that purchase and take a security interest in such securities. While the form of securities changes, the relationship of the investor against the issuer typically remains unaffected.⁵¹ Upon adoption of dematerialization laws a new form of uncertificated security emerges. This form of security is constituted and evidenced by entries on the issuer's books. Unlike transactions with a security certificate, transfers of uncertificated securities do not require the delivery of writing to the purchaser. However, legal measures related to dematerialization did not

⁴⁸ Ley de Anotaciones Electrónicas de Valores en Cuenta (Law on Electronic Entries of Securities to Accounts) Diario Oficial [DO] 57, 22 March 2002 (El Salvador) [hereinafter Salvadoran Law on Electronic Entries] defines dematerialization as 'a process that results in juridical transformation of securities to annotations in accounts.'

⁴⁹ CARL S. BJERRE & SANDRA M. ROCKS, *THE ABCS OF THE UCC ARTICLE 8: INVESTMENT SECURITIES 2* (2nd edn., AMERICAN BAR ASSOCIATION, CHICAGO, IL, 2004) and DTCC, *A Proposal to Fully Dematerialize Physical Securities, Eliminating the Costs and Risks They Incur*, A White Paper to the Industry, 3 (July 2012).

⁵⁰ John S. Gordon, *The Solution Became the Problem*, BARRON'S, 27 August 2012, at 45.

⁵¹ Jennifer Payne, *Intermediated Securities and the Right to Vote in the UK*, in *INTERMEDIATED SECURITIES, LEGAL PROBLEMS AND PRACTICAL ISSUES* 187, 194 (Louise Gullifer & Jennifer Payne eds., HART PUBLISHING LTD., OXFORD, UK, 2010).

entirely replace certificated and bearer securities and most laws typically continue to recognize and regulate all three types.⁵²

The 1977 revision of the US UCC Article 8 (UCC 8) was based entirely on the idea of dematerialization and envisaged a system where transfers of dematerialized securities would be completed by issuers on their books.⁵³ In Europe, laws providing for dematerialized corporate securities were first adopted in Denmark and France in 1981 and 1982 respectively.⁵⁴ In Central America, Costa Rica provided for electronic securities in the 1998 Law on the Securities Market (*Ley Reguladora del Mercado de Valores*) and El Salvador adopted its law on dematerialized securities, the Law on Electronic Entries of Securities Held in Accounts (*Ley de Anotaciones Electrónicas de Valores en Cuenta*), in 2002 (hereinafter called 'Salvadoran Law on Electronic Entries'). Despite the adoption of these measures many companies in these two countries today still prefer to issue shares in certificated form to monitor the identity of the security holders.⁵⁵ In addition, a number of countries have adopted laws that preclude the issuance of certain types of securities in certificated form.⁵⁶ However, these dematerialization reforms did not lead to the establishment of intermediated account-based systems because the issuer itself remained the entity empowered to complete transfers of uncertificated securities.

Despite the laws' anticipation of the widespread use of dematerialized securities, in the United States the system in which intermediaries maintain accounts for their customers and transfer securities between accounts essentially emerged from the bottom up. The market practice ignored the 1977 revision of UCC 8. As noted by Professor Mooney 'although uncertificated (electronic) securities were seen as a response to the paperwork crunch, the depository system and technology-aided methods of clearance and settlement basically solved that problem even

⁵² See the definition of security in UCC § 8-102(15) (1994) that refers to a security certificate in bearer form, a security certificate in registered form, and a security transfer which may be registered on the books of the issuer.

⁵³ EGON GUTTMAN, *MODERN SECURITIES TRANSFERS*, § 1:8 Statutory Evolution (3rd edn., THOMSON WEST, BOSTON, MA, 2007).

⁵⁴ See Article 94-II of the 1982 Finance Law that became effective in November 1984. Sylvie Hebert, *Certificateless Shares in France*, J.B.L. 60 (1987) and Diana Chan, Florence Fontan, Simonetta Rosati & Daniela Russo, *The Securities Custody Industry*, European Central Bank, Occasional Paper Series No. 68, 8 (August 2007).

⁵⁵ Shah, Carvajal, Bannister, Chan-Lau & Guerra, *supra* note 28, at 92.

⁵⁶ See DTCC, *A Proposal to Fully Dematerialize Physical Securities*, *supra* note 49, at 1.

before the revised UCC 8 was promulgated in the 1990s'.⁵⁷ What emerged in the United States was a system where intermediaries, rather than issuers, recorded the respective transfers on the accounts they maintained for their customers. Issuers' records were being quickly replaced with the accounts of intermediaries as the source of rights and transfers. This market practice necessitated yet another legal development that would establish a framework to recognize the rights created and transferred by book entries made by intermediaries.

Immobilization and Central Securities Depositories

In contemporary markets, most securities have ceased to circulate as certificates and instead are immobilized with intermediaries. Upon depositing securities with an intermediary, subsequent transfers can be completed by entries to the accounts maintained by the intermediary.⁵⁸ This process is similar to the immobilization of banknotes and coins that allows the bank to transfer the funds belonging to the customer by electronic entries to the customer's bank account. Securities may be, and typically are, immobilized in a specially designated institution, known as the CSD, or with a financial institution that offers custodial services to its clients. The process of immobilization at the CSD does not necessarily involve the elimination of certificates.⁵⁹ Securities may be immobilized at the CSD by: 1) deposit of the physical certificate or by 2) the CSD being registered as the security holder on the books of the issuer in a dematerialized form.⁶⁰ The latter has become the more predominant form of immobilization but corporations and financial entities still issue securities in the form of a single certificate that represents the entire issue and that is delivered as such to a CSD.⁶¹

⁵⁷ Charles W. Mooney, *Property, Credit, and Regulation Meet Information Technology: Clearance and Settlement in the Securities Markets*, 55-SUM LAW & CONTEMP. PROBS. 131, 140 (1992).

⁵⁸ Dubovec, *supra* note 1, at 219.

⁵⁹ Benjamin Geva, *Recent International Developments in the Law of Negotiable Instruments and Payment and Settlement Systems*, 42 TEX. INT'L L.J. 685, 688 (2007). The US DTCC annually accepts over 50 000 physical certificates for deposit. See DTCC, *A Proposal to Fully Dematerialize Physical Securities*, *supra* note 49, at 9.

⁶⁰ HANS VAN HOUTTE, *THE LAW OF CROSS-BORDER SECURITIES TRANSACTIONS* 52 (SWEET & MAXWELL LTD., LONDON, UK, 1999).

⁶¹ See JOANNA BENJAMIN, *INTERESTS IN SECURITIES, A PROPRIETARY LAW ANALYSIS OF THE INTERNATIONAL SECURITIES MARKETS* 24 (OXFORD UNIVERSITY PRESS, OXFORD, UK, 2000).

Physical certificates may be immobilized at the CSD in two forms: 1) a jumbo certificate or 2) a global certificate.⁶² The fundamental difference between the two types is that whereas a jumbo certificate may be divided into individual paper certificates upon request of the investors, the terms and conditions of global certificates preclude the possibility of their division into individual securities.⁶³ The jumbo security may also be initially delivered to the CSD in the form of multiple certificates that altogether represent the entire issue. However, the holders of rights to the global certificate may not require their intermediaries or the CSD to issue individual certificates representing any proportions of the global certificate.

As there are different types of securities, there may also be different types of CSDs. Most countries have established a special CSD for corporate (private) securities and another one for government (public) securities. The former take custody of securities issued by private entities such as corporations, banks and insurers. These CSDs are organized as private entities that are independent of the government. In contrast, other CSDs, typically operated by central banks, are organized to take custody of securities issued by governments and their instrumentalities.⁶⁴ In the United States the DTC is the CSD for privately issued securities and the Federal Reserve System is the CSD for government securities. Similarly, in Brazil the Special System for Settlement and Custody (*Sistema Especial de Liquidação e de Custódia*) or SELIC is the CSD for securities issued by both the Brazilian government and *Banco Central do Brasil* and the Brazilian Clearing and Depository Corporation (CBLC) is the CSD for private securities. This duopoly of CSDs also exists in Costa Rica where the National System for Book-Entry Registration of Securities has two components: 1) for public securities managed by the Central Bank of Costa Rica and 2) for private securities managed by authorized private CSDs including CEVAL.⁶⁵ This Part deals only with the depositories of private securities.

CSDs for private securities are typically organized as corporate entities or as banks that are owned by holding companies or securities exchanges.

⁶² See Ley del Mercado de Valores [LMV] (Securities Market Law), art. 282, Diario Oficial de la Federación [DO], 30 December 2005 (Mex.) [hereinafter Mexican Securities Market Law] and Salvadoran Law on Electronic Entries, art. 2(d).

⁶³ GUTTMAN, *supra* note 53, at § 1:9.

⁶⁴ Dubovec, *supra* note 1, at 219–20.

⁶⁵ *Ibid.*, at 220.

Euroclear S.A./NV, a European-based CSD, comprises individual domestic CSDs that are part of the structure under the umbrella parent company – the Euroclear Plc.⁶⁶ The other major European CSD, Clearstream, is wholly owned by the Deutsche Börse.⁶⁷ In the United States, the DTC is a subsidiary of the Depository Trust & Clearing Corporation (DTCC).⁶⁸ DTCC is a holding company that consolidated the DTC, the National Securities Clearing Corporation (NSCC), previously formed by the NYSE, the American Stock Exchange, and the National Association of Securities Dealers. DTCC provides clearing and settlement for equities, corporate and municipal bonds, government and mortgage-backed securities, money-market instruments and over-the-counter derivatives.⁶⁹

CSDs in most developing countries also operate as corporations. The Slovakian CSD is a joint-stock company fully owned by the Bratislava Stock Exchange⁷⁰ and the Mexican CSD, Indeval, is organized as a *sociedad anónima* whose shareholders are stockbrokers, banks, insurance companies and other entities, including the Mexican Stock Exchange.⁷¹ The Brazilian CBLC is a subsidiary of the Bovespa Holding Group, which operates the stock exchange and is owned by its members, including stockbrokers and banks.⁷² In El Salvador, it is a legal requirement for CSDs to

⁶⁶ Euroclear, *Our Structure*, available at <https://www.euroclear.com/en/about/our-structure.html> (last visited 9 December 2013).

⁶⁷ Clearstream, *About Us*, available at http://www.clearstream.com/ci/dispatch/en/kir/ci_nav/about_us (last visited 9 December 2013).

⁶⁸ *About DTCC, The Depository Trust Company (DTC)*, available at <http://www.dtcc.com/about/businesses-and-subsidiaries/dtc.aspx> (last visited 9 December 2013).

⁶⁹ Larry Thompson, *DTCC: An Overview (August 2013)*, available at <http://dtcc.com/~media/Files/Downloads/About/government-relations/LThompson-DTCC-Overview-Aug2013.ashx> (last visited 10 December 2013).

⁷⁰ According to § 99 of the Securities Act, the CSD may not transform into another corporate form. As of May 2012, the Slovakian CSD had 19 participants. Centrálny Depozitár Cenných Papierov SR, *Základné fakty*, available at http://www.cdcp.sk/general/cinnost.php#zakladne_fakty (last visited 9 December 2013).

⁷¹ David F. Muñoz, Arturo Palacios & Miguel de Lascurin, *Modeling, Simulation and Analysis of a Securities Settlement System: The Case of Central Securities Depository of Mexico*, 17(33) J. ECON. FIN. & ADMIN. SCI. 48 (2012).

⁷² Brazilian Clearing and Depository Corporation – CBLC, available at <http://www.brazilcompany.com/html/clbc.html> (last visited 9 December 2013).

be organized as *sociedades anónimas*.⁷³ Finally, the Costa Rican CSD, CEVAL, is a subsidiary of the local stock exchange.⁷⁴

Immobilization of securities is a concept and practice that has been embraced uniformly in the vast majority of economies. Developed, as well as developing, economies have established CSDs for public and private securities. While similarities among these CSDs exist in terms of their structure and organization, many differences may be identified, particularly in the process of transferring and acquiring securities, the nature of the rights thereto, the granting and perfecting of security interests, etc. These and other characteristics and differences are examined below.

THE TYPOLOGY OF DIRECT AND INTERMEDIATED HOLDING SYSTEMS

The corollary to the immobilization of securities is the gradual erosion of the direct relationship between the issuer and the holders of its securities. Intermediaries took on the role of facilitating the enforcement of rights embedded in immobilized securities and thus the nature of holding systems has morphed from direct to the so-called intermediated. In a direct holding system the investor, who is in possession of a security certificate and/or is registered on the issuer's books, may enforce his rights directly against the issuer. The investor is not claiming through an intermediary and therefore the issuer's obligations correspond to the rights of individual investors. Security holders and issuers are in privity. Transfers of securities in a direct holding system are effectuated by delivery of certificates or registration on the issuer's books. In an intermediated holding system the investor is neither in possession of a security nor registered on the issuer's books. The investor does not deal directly with the issuer but instead holds a securities account with an intermediary, which may also be the CSD. Its rights to the security may be enforced through the intermediary. In this case the security holder is not in privity with the issuer but with its intermediary. Transfers of

⁷³ Ley del Mercado de Valores (Securities Market Law), arts. 74–78, Decree 809, Diario Oficial [DO] 73-bis, 21 April 1994 (El Salvador).

⁷⁴ See Bolsa Nacional de Valores, *Subsidiarias de la BNV*, available at <http://www.bolsacr.com/principal/index.php?action=subsidiarias> (last visited 9 December 2013).

securities in an intermediated holding system are completed by book entries to securities accounts maintained by intermediaries for their customers.

Co-existence of Direct and Intermediated Holding Systems

Direct and intermediated holding systems are not mutually exclusive. In most markets a few securities are held directly and the majority is held through intermediaries. Laws governing the holding of securities also reflect the co-existence of these two holding patterns. Even the Geneva Securities Convention recognizes that multiple systems may function in parallel and does not require the contracting states to entirely replace their existing systems with an intermediated holding system. Most laws provide security holders with the right to order their intermediaries to change the holding pattern from intermediated to direct and vice-versa, if available. The holder of a certificated security may endorse a certificate that he is holding directly, place it with an intermediary and receive a credit to his securities account. Conversely, a securities account holder may request that the intermediary debit his account and deliver a security certificate unless the execution of such request is prohibited by the terms of the issuance. This possibility to change the holding pattern is not different than depositing and withdrawing cash from a bank account. The bank account holder may similarly change the holding with respect to his cash from direct to intermediated and vice-versa.

The right to change the holding pattern for securities may be incorporated in the substantive law, such as in UCC § 8-508, the German Safe Custody Act § 7 or Article 56 of the Salvadoran Law on Electronic Entries, which subjects an intermediary to a duty to comply with the account holder's order to change the holding. The right of investors to change the holding pattern may also be included in a subsidiary legislative measure, such as the rules governing operations of the German CSD, Clearstream, that provide for the right of withdrawal of certificates from the central custody.⁷⁵

⁷⁵ Clearstream, Deutsche Börse Group, *General Terms and Business Conditions of Clearstream Banking Aktiengesellschaft*, art. 41 (1 February 2004). For Mexico, see S.D. Indeval, *Reglamento Interior*, art. 23° [hereinafter Indeval Regulations].

Some securities immobilized with CSDs prohibit their re-materialization or transformation from electronic securities to certificates.⁷⁶ Accordingly the duty of the intermediary to change the holding pattern is not absolute, as the terms of some securities provide that the issuer will register only a depository on its books.⁷⁷ In developed economies, such as the United States and Germany, it is not a common practice for investors to request certificates or for issuers to re-materialize electronic securities. However, this remains a practice in some developing countries such as in El Salvador.⁷⁸

This discussion begs the question of whether to reform the existing legal framework for the holding of securities to provide only for the intermediated type of holding, therefore discarding entirely the possibility of holding securities directly. While most of this discussion may suggest that the future lies in intermediated holding, it is expected that many securities will remain directly held. Similarly, there are transactions that are routinely settled by payment in cash. Although this may not be practical, cultural attitudes and local practices are not uniform. It is also possible that technological advances and market practices will make the direct holding of securities once again the norm in the future. Even the Prefatory Note to UCC 8 acknowledges that 'it is not clear whether the long-term evolution will be toward decreased or increased use of direct holdings'.⁷⁹ Finally, strong views to achieve more transparency in securities markets and to be able to identify the ultimate holders of securities are also expected to have a significant influence on the type of holding used in the future. Laws should therefore preserve the flexibility noted above and leave it up to the market to develop the most efficient holding pattern from the bottom-up rather than imposing such a pattern by regulation.

Intermediated Systems and their Variations

While in the not so distant past literature focused primarily on the transformation from direct to intermediated holding systems, recently the spotlight has shifted to focus on the classification of various types of

⁷⁶ Under Depotgesetz (the German Securities Deposit Act), 1 November 1995 (BGB1. S.2512), § 9a(3), the issuer is not obligated to honor the request of an investor to issue a certificate if the securities were issued under such restrictions.

⁷⁷ See Official Comment 1 to UCC 8-508 (1994) on the restrictions that are frequently included in municipal bonds.

⁷⁸ Shah, Carvajal, Bannister, Chan-Lau & Guerra, *supra* note 28, at 92.

⁷⁹ Prefatory Note to UCC Article 8 (1994) Investment Securities, at II. A.

intermediated holding systems and the identification of their intricate features.⁸⁰ The project that led to the adoption of the Geneva Securities Convention gave momentum to this shift towards identification and classification.⁸¹ Structurally, all intermediated holding systems look alike. The securities holding pyramid is composed of the CSD at the top, intermediaries in the middle and accounts holders at the lower-level. However the nature of rights and the individual components of accounts relationships differ significantly. One may distinguish between two fundamental types of intermediated holding systems: 1) indirect and 2) transparent.

While indirect holding systems have uniform features and structures, the typology of transparent holding systems is far from uniform. A typical characteristic of an indirect holding system is that the CSD remains unaware of the identity of particular account holders other than its participating intermediaries. In contrast, in transparent holding systems the CSD preserves a relationship with, and knows the identity of, all account holders. In indirect holding systems, the relationships between the CSD and intermediaries and the relationships between the intermediaries and account holders are independent one from one another. In transparent systems middle-level entities maintain accounts for investors but the purpose of such holding is merely administrative. Only transfers recorded at the CSD level have constitutive effects. This Part of the book refers to these entities as account operators because the securities accounts they maintain and book entries they make neither transfer nor constitute rights to securities. Thus, one needs to distinguish account operators that provide administrative functions in transparent systems, from actual intermediaries that effect transfers of securities in indirect holding systems. In transparent systems only CSDs are actual intermediaries.

⁸⁰ For a discussion of direct and indirect holding systems see BJERRE & ROCKS, *supra* note 49; Philipp Paech, *Harmonising Substantive Rules for the Use of Securities Held with Intermediaries as Collateral: The UNIDROIT Project*, 4 UNIF. L. REV. 1140 (2002); and Steven L. Schwarcz & Joanna Benjamin, *Intermediary Risk in the Indirect Holding System for Securities*, 12 DUKE J. COMP. & INT'L L. 309 (2002).

⁸¹ For a discussion of various types of intermediated holding systems see Working Paper Regarding So Called 'Transparent Systems' prepared by the Secretariat on the Basis of Contributions Submitted by Delegations to the GCE, Doc. 44 (October 2006).

TYPES AND FORMS OF SECURITIES AND FINANCIAL ASSETS

Preceding sections distinguished between directly-held securities and those that are held through intermediaries. Directly-held securities include bearer certificates, registered and uncertificated securities. It will be argued below that while the scope of direct holding systems is based on a closed-end list of securities, the scope of intermediated holding systems is much more flexible.

UCC 8 provides three requirements for a security to fall under the scope of the direct holding rules:

- 1) a security must be represented by a security certificate in bearer or registered form or the transfer of such a certificate may be registered by the issuer;
- 2) it must be one of a class or series or must be, by its terms, divisible; and
- 3) it must be of a type dealt in or traded on securities exchanges or securities markets, or it must be a medium for investment that, by its terms, expressly provides that it is a security governed by Article 8.⁸²

If securities are held through an intermediary, the UCC 8 rules regulating the indirect holding system become applicable and securities qualify as a type of 'financial asset'.⁸³ The definition of a financial asset in conjunction with the definition of a securities account establishes the scope of the UCC 8 indirect holding system.⁸⁴ Professor Rogers noted that the definition of securities account is as critical for the indirect holding system as the definition of security is for the direct holding system.⁸⁵ An instrument may become a UCC 8 financial asset upon the undertaking of the intermediary to the account holder to execute instructions related to the enforcement of the rights embedded in the financial asset.

The UCC 8 category of financial assets includes:

⁸² UCC 8-102(15) (1994).

⁸³ BJERRE & ROCKS, *supra* note 49, at 6–7.

⁸⁴ UCC 8-102, Official Comment 9.

⁸⁵ Rogers, *supra* note 12, at 49 and 59. UCC 8-501(a) (1994) defines a securities account as 'an account to which a financial asset is or may be credited in accordance with an agreement under which the person maintaining the account undertakes to treat the person for whom the account is maintained as entitled to exercise the rights that comprise the financial asset'.

- 1) securities;
- 2) obligations of a person, or shares, participations or other interests in a person or in property, which are of a type dealt in or traded on financial markets or are recognized as a medium of investment; and
- 3) any property that is held by a securities intermediary in a securities account if the securities intermediary has expressly agreed with the other person that the property is to be treated as a financial asset.⁸⁶

The common denominator for all three categories of financial assets is their susceptibility of being credited to and held in a securities account. This attribute of being 'creditable' to a securities account determines whether or not an instrument qualifies as a financial asset under UCC 8. Whether or not an asset is traded on official markets and whether or not it is a debt obligation or a share is irrelevant for the UCC 8 indirect holding rules. Professor Rogers observed that 'the rules of the indirect holding system are rules about how property is held, not what that property is'.⁸⁷ As long as an asset may be credited to a securities account, it will be treated as a financial asset.

A similar distinction between securities and other financial assets has been drawn in EU law. The EU Financial Collateral Directive provides for a concept of financial instrument that includes shares, equivalent securities in companies, bonds, and other forms of debt instruments provided they are negotiable on the capital markets, as well as any other securities that grant the right to acquire shares or bonds.⁸⁸ Similar to the UCC concept of financial assets, the EU's financial instrument includes traditional securities and other assets tradable in capital markets. Unlike UCC 8, the EU Financial Collateral Directive does not provide for any asset to be treated as a financial instrument when the intermediary merely agrees or undertakes to hold it as such. The EU's financial instrument, limited only to those assets that are transferable and of which market value may be easily established, is therefore narrower, less flexible and less accommodative for instruments that may emerge in the future. Even so, it also seems to provide more predictability and clarity than UCC 8.

⁸⁶ UCC 8-102(9) (1994).

⁸⁷ Rogers also stated that 'the indirect holding system rules could just as well apply to a banana as to a bond'. Rogers, *supra* note 12, at 55.

⁸⁸ Council Directive 2002/47/EC on Financial Collateral Arrangements, art. 2(1)(e), 2002 O.J. (L 168) [hereinafter EU Financial Collateral Directive]. See also Council Directive 2004/39/EC on Markets in Financial Instruments, art. 4(2)(14), 2004 O.J. (L 145) [hereinafter MiFID] that defines financial instruments by reference to Section C of Annex I.

Article 2(XXIV) of the Mexican Securities Market Law contains a definition of securities that is very broad and includes a wide variety of financial instruments but limits these instruments to those that are susceptible to trading in securities markets. This qualification is similar to that included in the EU law, which seems to exclude non-financial assets with values that cannot readily be established in the securities market. The Indeval Regulations in Article 1.2 do not provide any specific definition of securities and, instead, refer to the definition included in the Law on Securities Market. The Salvadoran Law does not limit the securities to those that have a financial nature or of which the value must be readily determined. Accordingly, the scope of the Salvadoran intermediated regime is more flexible than Mexico's, which is limited to those assets susceptible to trading in securities markets.

From the previous discussion, it becomes clear that legislation to regulate intermediated holding systems must clearly determine its scope by defining securities, financial assets/instruments and securities accounts. These definitions should be based on the susceptibility of financial assets/instruments to be credited to a securities account. Reliance on a laundry list of various types of securities and other *numerus clausus* enumerations is inapposite in the contemporary marketplace that evolves and changes quickly.⁸⁹ The scope of legislation regulating intermediated holding systems must be determined on the basis of a flexible criterion that would allow ready accommodation of new securities and other financial assets to facilitate their trading and transfers. However, this approach should incorporate an objective criterion that requires assets held in securities accounts to have a financial nature and market-based value.

⁸⁹ The definition of security should be flexible but also ensure legal certainty. Giuliano G. Castellano, *Towards a General Framework for a Common Definition of 'Securities': Financial Markets Regulation in Multilingual Contexts*, 13(3) UNIF. L. REV. 449, 457 (2012).