A ROADMAP TO BETTER UNDERSTANDING THE ISSUANCE AND TRANSFER OF NEGOTIABLE ELECTRONIC WAREHOUSE RECEIPTS IN THE AMERICAN COTTON TRADE

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I. INTRODUCTION

Physical warehouse receipts, which were once the sole means of providing proof of ownership of stored commodities, have become obsolete in the age of instant communication and rapid transactions. Electronic warehouse receipts (EWRs)—digital records, which grant their holder the ability to claim a preferential possessory right to the warehoused goods they identify[1]—are approaching a critical mass and are replacing the use of physical warehouse receipts in American commodities markets.[2] Now the sole means of guarantee as to the quality and quantity of stored cotton, EWRs are enabling agricultural producers, merchants, and traders to function in a sustainable market wherein trust

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1 *See generally* 7 U.S.C.A. § 250 (2000); U.C.C. § 1-201(b)(16) (2013). On the meaning of preferential possessory rights *see* NATLAW, THE NATIONAL LAW CENTER FOR INTER-AMERICAN FREE TRADE, *Principles of Secured Transactions Law in the Americas*, *Principle 2.*

2 *Infra* note 4 and accompanying text.

and professionalism prevail. This is made possible by the systems of verification and regulatory oversight, once thought impossible, which are built into EWRs, and which have created a framework for the reliable collateralization of stored cotton and the free flow of credit. Of course, this simplified overview fails to account for the nuances and complexities that stem from the issuance and transfer of EWRs.[3]

Faced with reams of empirical data supporting the superiority of EWRs, it is not surprising that many industries, exchanges, and even nations are looking for ways to shed their dependence on physical warehouse receipts and to join the ranks of their more forward-thinking contemporaries.[4] Yet still, some agricultural leaders and associations, in the face of their approaching obsolescence, cling to practices of a bygone era. They argue that, despite their shortcomings, physical warehouse receipts are inherently sound, time-tested and insulated from digital failures. This calls us to question how remaining doubt might be conceded.

The new EWR model need only be thoroughly discussed and thoughtfully explained, and any question as to its defensibility, scalability, or applicability to other markets should be answered. Within this new model, developed and employed by the American cotton industry, electronic warehouse receipts are created and issued on a system rooted in cooperative compacts among industry participants.[5] Needless to say, the United States Warehouse Act of 1916 did not contemplate negotiable electronic warehouse receipts.[6] Yet legislative and regulatory bodies have adapted to the needs of the cotton industry and have evolved to accommodate technological advances, resulting in highly successful EWR practices, which have reduced market fraud, lowered transaction costs, and increased access to credit.[7]

To understand how EWRs function, specifically within the U.S. cotton trade, and why they have been so successful, this Article attempts, first, to

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[3] *See generally* William A. Gillon, *Electronic Warehouse Receipts*, SOUTH WEST FARM PRESS (Apr. 12, 2001), http://southwestfarmpress.com/electronic-warehouse-receipts.

[4] *The Peanut Program. Before the Subcomm. on Specialty Crops and Foreign Agriculture Programs of the H. Comm. on Agriculture*, 108th Cong. 50 (2004) (statement of Robert R. Sutter, CEO, North Carolina Growers Association) (testifying that every effort to increase the use of EWRs industry wide is desirable).

[5] Gillon, *supra* note 3 (discussing the development of the cotton EWR system).

[6] *See generally* Philine Wehling & Bill Garthwaite, *Designing Warehouse Receipt Legislation*, FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS 152-58 (2015) http://www.fao.org/3/a-i4318e.pdf (discussing development of warehouse receipt legislation in United States).

[7] *See* Cardno Emerging Markets USA, Ltd., *Dematerialization of Warehouse Receipts in the Commodity Markets*, USAID BUSINESS ENABLING PROJECT (2011), http://www.policycafe.rs/documents/financial/research-and-publications/commodity-market-development/paper-on-warehouse-receipts-and-dematerialization.pdf (discussing the changes in EWR regulation and legislation and the subsequent benefits). *See also* Donald B. Pedersen, *Electronic Data Interchange as Documents of Title for Fungible Agricultural Commodities*, 31 IDAHO L. REV. 719, 735 (1995) (discussing congressional willingness to adapt to the needs of commerce).

highlight the basic mechanics of the cotton industry; second, to explain the processes of creating, issuing, and transferring EWRs; third, to discuss how producers and traders use stored bales of cotton as collateral to perfect loans; and, fourth, to discuss how the new EWR system and the legislative/regulatory system in which it operates have evolved to protect participants and to reduce fraud while lowering transactions costs and increasing access to credit.

II. THE COTTON INDUSTRY

In the realm of agricultural and commodities markets, the U.S. cotton trade is an anomaly. Inhabited by several independent parties—producers, ginners, warehousemen, merchants, and millers—everyone works harmoniously, despite their competing interests.[8] Beginning from the time a cottonseed is planted and ending when a pair of denim jeans is sold, market participants rely on their cohorts to provide market-conforming goods and accurate and dependable information.

Generally speaking, from cottonseed to denim jeans, everything cotton-related begins on a cotton farm. When cotton is harvested,[9] it is bundled into modules weighing up to 25,000 pounds. Farmers individually mark each module with a unique identification number and then send them to a cotton gin.[10] Upon receiving cotton modules, gins act as an agent of the farmer,[11] processing and separating raw cotton fibers from their seeds (ginning the cotton).[12] Ginned fibers are then re-packaged into compressed bales.[13] Similar to cotton modules, bales

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[8] *See* Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation through Rules, Norms, and Institutions*, (John M. Olin Law & Economics Working Paper No. 133, Oct. 27, 2015), http://www.law.uchicago.edu/files/files/133.lb_.cotton.pdf.

[9] *See Cotton: From Field to Fabric*, NAT'L COTTON COUNCIL OF AMERICA, https://www.cotton.org/pubs/cottoncounts/fieldtofabric/harvest.cfm (providing a brief discussion of cotton harvesting).

[10] A "cotton gin," for these purposes, can be expansively defined as the company, organization, institution, or location that gins and bales cotton. The definition of "ginning," however, may be more narrowly defined as the separation of seed and lint. Although the process of ginning cotton is much more complex, any further detail would be beyond the scope of this work. *See* COTTON: ORIGIN, HISTORY, TECHNOLOGY, AND PRODUCTION, 683-707 (C. Wayne Smith & J. Tom Cothren eds., 1999) (providing a more in-depth discussion of the history and process of cotton ginning).

[11] As a practical matter, cotton gins often act as an agent of the farmer, allowing the latter to conduct its operations. Therefore, gins are entrusted to work directly with subsequent parties on behalf of the agricultural producer in matters such as arranging the transportation of cotton bales, marketing the cotton bales, and selling the cottonseeds. Telephone Interview with Mike Taylor, Mktg. Manager, EWR, Inc. (Sept. 10, 2014).

[12] Telephone Interview with Mike Taylor, *supra* note 11, and accompanying text (defining cotton "ginning" for these purposes).

[13] Cotton will remain in this form (bales) from the time it leaves the gin until it

are marked with a unique identifier before they leave a gin. Furthermore, before bales leave a gin, a sample from each bale is sent to a United States Department of Agriculture (U.S.D.A.) Classing Office for testing.[14] Thereafter, bales are sent to a warehouse for safekeeping.[15]

When U.S.D.A. classing offices receive and test a sample of cotton, they examine the physical attributes "that affect the quality of the finished product and/or manufacturing efficiency [of the cotton]."[16] This is accomplished by examining, among other things, fiber length,[17] leaf,[18] micronaire,[19] and strength.[20] After testing a sample, classing offices give the cotton a classification and grade and send that information to the gin of origin.[21] Grading and classification adhere to rigid standards, which enables sellers to market their cotton and allows potential purchasers to accurately estimate its value without having to physically examine the bales.[22]

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reaches a mill to be woven. Each bale and its sample is marked with a unique identifier at this stage. For a better understanding of industry standards governing cotton bales, see generally Nat'l Cotton Council of America, Joint Cotton Industry Bale Packaging Committee, *A Guide for Cotton Bale Standards* (July 2001), https://www.cotton.org/tech/bale/upload/guide-cotton-bale-standards.pdf (describing the gradation of cotton bales).

[14] Federal regulations require that samples of every ginned cotton bale be graded at a federal classing office. 7 C.F.R. §§ 28.907, 28.908 (2009). Note that each sample is marked with a unique identification tag and number, no differently from bales. 7 C.F.R. § 28.908 (2009).

[15] The warehouseman, acting as bailee, stores the bales until they are sold. U.C.C. § 7-102 (AM. LAW INST. & UNIF. LAW COMM'N 2014). *See generally* Drew L. Kershen, *Comparing the United States Warehouse Act and U.C.C. Article 7*, 27 CREIGHTON L. REV. 735, 754-57 (1994) (comparing the relevant warehouse provisions).

[16] Cotton Inc., THE CLASSIFICATION OF COTTON 2 (2013) http://www.cottoninc.com/fiber/quality/Classification-Of-Cotton/Classing-booklet.pdf. For a detailed discussion of the various end uses of raw cotton see generally Cotton's Major Uses, *Cotton: From Field to Fabric*, NAT'L COTTON COUNCIL OF AMERICA https://www.cotton.org/pubs/cottoncounts/fieldtofabric/uses.cfm.

[17] Simply put, fiber length dictates the yarn's strength, which influences the cotton's fitness for milling into a useful yarn. Cotton Inc., *supra* note 16, at 10.

[18] The fiber's leaf grade indicates the amount of leaf remaining in the fiber. Examining the fiber's leaf shows the quality of the ginning, cleaning and drying of the cotton, and also indicates the amount of labor and expense that will be required of a mill to remove the leaf from the fibers. *Id.* at 15.

[19] Cotton fiber's micronaire, "is a measure of fiber fitness and maturity" and affects, among other things, the weaving and dying of yarn. *Id.* at 12.

[20] Fiber strength indicates the fiber's ability to withstand breakage during the manufacturing process, and the strength of the yarn into which it may be woven. *Id.* at 11.

[21] Where bales require special certification for trade on an exchange, this information will be transmitted from the gin to the warehouse to be included in the warehouse receipt. Telephone Interview with Mike Taylor, *supra* note 12.

[22] *See generally* U.S. DEP'T OF AGRIC., AGRIC. MARKETING SERV. COTTON PROGRAM, COTTON CLASSIFICATION: UNDERSTANDING THE DATA 10 (Apr. 2005), http://www.ams.usda.gov/sites/default/files/media/Cotton%20DB%20Understanding%20th

After bales are transported from a gin to a warehouse, warehousemen create and issue an EWR that identifies each bale. When creating EWRs, warehousemen must rely on information provided by gins and classing offices.[23] Once issued, EWRs grant their holder the right to claim the stored bales of cotton, use them as security, or sell them.[24] Where formerly, warehousemen would prepare physical warehouse receipts for every bale of cotton and mail those receipts to their holder,[25] warehousemen now create and issue EWRs using a digital platform designed specifically for the centralization and dissemination of EWRs.[26] An independent third party system called EWR, Inc. (the "system provider") operates the platform, and is licensed by the U.S.D.A. to create and issue EWRs.[27]

The EWR, Inc. platform makes it possible for warehousemen to electronically create and issue EWRs for holders of stored bales of cotton to easily transfer EWRs (electronically) to purchasers of their cotton, for banks to hold a priority security interest in collateralized bales of cotton (*e.g.*, for producers to access credit), and for state and federal regulatory bodies to monitor and audit the issuance and transfer of EWRs (*e.g.*, regulatory oversight). This is all made possible by using a single platform whereon each of the aforementioned parties is a unique user verified by the system provider. Accordingly, there is legitimate and linear control of each EWR, which enables the system provider to prevent tampering with or fraudulent issuance of EWRs.[28] The EWR, Inc. system facilitates these electronic transfers by sending and receiving electronic data files through its online platform, whereupon users send and receive instructions and

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e%20Data.pdf (discussing cotton grading and classification); COTTON: ORIGIN, HISTORY, TECHNOLOGY, AND PRODUCTION, *supra* note 10, at 709-27 (also discussing the grading classing of cotton fibers). *See also* Cotton, Inc., *supra* note 16 and accompanying text.

[23] Warehousemen agree to "accurately provide all required Electronic Warehouse Receipt Data for each bale." EWR, INC., WAREHOUSE (ISSUER) AGREEMENT 1, 3 (2014), http://www.ewrinc.com/cotton/contentPublic/downloads/documents/CottonWarehouseAgreement.pdf (regarding the warehouseman's reliance on information supplied to him). *See infra* notes 27-28 and accompanying text (discussing the warehouse receipt system provider for further clarification on the electronic warehouse receipt system provider).

[24] *See* 7 U.S.C.A. § 250 and accompanying text (giving a basic definition of electronic warehouse receipts and their governing laws).

[25] *See The Peanut Program*, *supra* note 4.

[26] *See generally* EWR, Inc., EWR Cotton Legal Definition, EWR LEGAL DEFINITION 1, (1999), http://www.ewrinc.com/cotton/contentPublic/downloads/documents/1%20-%20EWR%20Cotton%20Legal%20Definition.pdf.

[27] *See* 7 C.F.R. § 735.401 (outlining the regulatory requirements of a electronic warehouse receipt system provider). Furthermore, the same company that developed the EWR, Inc. platform also developed, owns, and operates the Stamp Airmail System. *See infra* note 33 and accompanying text (discussing the Stamp Airmail System). EWR, Inc. also acts as provider for the issuance of electronic warehouse receipts in the peanut and grain industries. *See About EWR, Inc.*, EWR, INC., http://www.ewrinc.com/cotton/aboutUs.aspx (last visited Dec. 14, 2015).

[28] Telephone Interview with Mike Taylor, *supra* note 11. *See also About EWR, Inc.*, *supra* note 27 (discussing the functions of the EWR, Inc. system).

notices respectively. The general sequence which occurs is as follows: (1) the warehouseman receives a digital data file from the gin, which includes the pertinent details regarding the stored bales of cotton; (2) the warehouseman then enters that information (and warehouse-specific information) into the EWR, Inc. system and sends it in the form of a data file to EWR, Inc. (on the system provider's digital platform; this is the creation and issuance of an EWR.); (3) EWR, Inc. then sends the parties (warehouseman, EWR holder, etc.) notice of the issuance of the EWR to which they are a party; and (4) thereafter the EWR may be transferred or canceled. EWR, Inc. is a private company and serves as the main system provider in the U.S. cotton industry, issuing 100% of the EWRs for cotton warehoused in the U.S.

When warehoused bales are sold, warehousemen load them for hauling and cancel the EWRs, at which point bills of lading become the primary document of title for possessory rights over the bales.[29] After being sold, bales are typically sent via ocean carriers to an overseas mill where the cotton is woven and sewn into an end product (denim jeans in our example).[30] It is worth noting that this entire process requires only a short amount of time, and within hours of ginning and baling bales are sent to the warehouse where they are stored.[31]

Having this rudimentary background of how the U.S. cotton industry functions and who its participants are, we can begin a more detailed discussion of the technical details relating to the creation, issuance, and transfer of EWRs.

III. THE AMERICAN ELECTRONIC WAREHOUSE RECEIPT SYSTEM

A. Creation and Issuance

As noted above, when producers package cotton into modules, they label each one with an identification number. This identification number enables receiving gins to physically identify each module and accurately track the data that corresponds to those modules. That is, when producers send cotton modules to a gin, they also send an electronic data file, which includes important information about each module. This producer specific data includes the cotton's seed variety, producer, and field. The transmission of these data files is the first in a series of digital communications that enable warehousemen to gather the information needed to create an accurate and reliable EWR.

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[29] *See infra* note 55.

[30] *See* Cotton Inc., *supra* note 16, and accompanying text (discussing the various end uses of cotton).

[31] As bales arrive at a warehouse, they are typically placed in a staging area before final storage where they remain as the warehouse awaits grade and classification information from the USDA Classing Office. Telephone Interview with Mike Taylor, *supra* note 11.

Recall, before bales leave a gin they are marked with a unique identifier.[32] This identifier is different and distinct from that of cotton modules. The unique identifier used to identify a bale is referred to as its "permanent bale indicator" (PBI). The PBI consists of a physical tag (PBI tag) permanently affixed to each bale (and every sample), and a corresponding PBI number. The PBI is essentially a cotton bale's (or its sample's) fingerprint. Thus, similar to how farms identify departing cotton modules, gins use PBI tags and numbers to physically and digitally identify bales. As each bale and its sample are sent out, gins transmit an electronic data file to the receiving warehouse and classing office, which includes the gin-specific information essential to identifying the cotton. This gin-specific information includes each bale's gin bale number, gin identification number, farm identification number, compression status, measurements, gross weight, tare weight, and net weight.[33] Each bale (or sample, as the case may be) is digitally identified in that data file using its PBI number. Bales are physically identified using a scannable barcode on their PBI tag. This allows the receiving party, a warehouse for example, to easily gather the available data associated with each bale. Lastly, these data files are transmitted using a digital platform called the Stamp Airmail System or, alternatively, may be sent via email.[34]

After classing offices complete their testing on bale samples, they send grading and classification information to the originating gin in the form of an electronic data file. Typically, classing offices transmit these electronic data files using the Stamp Airmail System. Alternatively, classing offices may notify gins of their findings via email or printed documents.[35] Furthermore, classing offices' grading and classification information is also available to bale owners via a U.S.D.A.-maintained database, the Cotton and Tobacco Program's National Database.[36] When gins receive this information they are able to verify that the cotton they processed is within the standards and quality they intended. Gins also

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[32] *Supra* note 13 and accompanying text (discussing cotton bale identification).

[33] A bale's compression status, weight, and size all must conform to specific standards. The industry has adopted standards such as 'Gin U-D' ("Gin Universal Density"), which provides consistency and predictability, making the marketing and sale of cotton bales easier. When a bale of cotton meets Gin U-D standards it weighs 500 pounds, stands 55 inches high, measures 21 inches wide, and sits 33 inches long on its flat side. *See also* U.S. DEP'T OF AGRIC., *supra* note 22 (discussing cotton grading and classification); COTTON: ORIGIN, HISTORY, TECHNOLOGY, AND PRODUCTION, *supra* note 10 (providing a more in depth discussion on the history and process of cotton ginning).

[34] The Stamp Airmail System allows its users to upload bale specific information and share it. Note that this system is separate from the system provider's platform on which EWRs are issued, but it is operated by the same company– providing for the integration of information into the EWR, Inc. system. Telephone Interview with Mike Taylor, Mktg. Manager, EWR, Inc. (July 28, 2015).

[35] *The Classification of Cotton*, *supra* note 16, at 22. If a bale of cotton is certificated then the classing office will notify the warehouse of its classing results. Telephone Interview with Mike Taylor *supra* note 11.

[36] *The Classification of Cotton*, s*upra* note 16, at 22.

provide this information to producers (farmers), who can likewise verify that they have grown and produced cotton consistent with their intended quality. Thus, knowing the exact quality and standards of their cotton, gins and producers are able to estimate the value of bales.

While U.S.D.A. classing offices test and grade bale samples, gins transport bales to a warehouse for safekeeping. When bales arrive at a warehouse, warehousemen scan the PBI tag and physically examine them to verify the accuracy of the data received from the gin. Then, after storing the bales, warehousemen may proceed to create and issue EWRs for the bales. More specifically, to create an EWR, warehousemen enter all of the bale information into the system provider's platform.[37] This includes all of the information received in data files from the gin[38] and classing office,[39] and the details specific to the warehouse, such as the EWR number, the date stored, the net and tare weight as verified by the warehouseman, the format of the warehouse receipt (electric in the case of cotton), and the bale's storage location in the warehouse. Containing this information, an EWR enables its holder to claim the bales it identifies, *and* enables parties in each downstream transaction involving those bales to accurately and reliably identify them and their origins, which fosters confidence and accountability within the trade.[40]

Once all of the relevant and necessary information is entered into the system provider's platform, the warehouseman has created an EWR (a new electronic data file).[41] This file is sent via the Internet to the system provider for processing. Processing includes verification–an instantaneous reconciliation wherein the provider confirms that the electronic warehouse receipt is within certain tolerances and parameters. More specifically, the system provider performs a series of computer-based validation checks on the information contained in the EWR for errors, and validates the holder of the EWR against the user posting the file. Then, the system provider updates the EWR database, at which point confirmations are prepared.[42]

Once completed, the system provider sends confirmation to the warehouse confirming that the files were received and, if valid, that they were processed.[43] Thereafter, the warehouseman may issue the EWR, accomplished by

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[37] This is accomplished by the warehouseman creating an electron data file (the EWR) and submitting it to the system provider (EWR, Inc.) for processing. *About EWR, Inc.*, *supra* note 27.

[38] This information includes the gin ID, gin bale number, the producer, producer's agent (usually the gin), the gin, bank (if applicable), net weight, tare weight, crop year, compression code, tariff paid flags, and further grower information. *See* EWR Cotton Legal Definition, *supra* note 26 (discussing the requirements of a cotton EWR).

[39] This includes the bale specific classing and grading information. *Id.*

[40] *See* 7 C.F.R. § 1427.11 (2008) (setting forth required contents of a cotton warehouse receipt).

[41] *See About EWR, Inc.*, *supra* note 27 (the creation of cotton EWRs).

[42] *Id.*

[43] This confirmation may be sent via fax or email to the warehouseman and all other parties involved. *Id.*

the system provider sending notice to the holder of the EWR and notice to the warehouse, both via fax or email, of the creation and issuance of the EWR to which they are parties. Recall that this EWR now grants its holder all the rights and protections traditionally associated with negotiable warehouse receipts.[44] Note that, typically, the holder[45] of an EWR is the gin of origin, acting as an agent of the farmer.[46] However, the holder could also be the farmer, a draft bank (acting as a third party until payment is collected), a collateral bank (holding the receipt as collateral for the merchant), a merchant, or another individual.[47]

B. Sale and Transfer

After an EWR is issued, the holder markets the bales and negotiates a contract for their sale.[48] When acceptable terms are agreed upon, holders (sellers) enter the transaction details and transfer instructions into the system provider's platform, entering the warehouse ID and EWR number, and entering the new holder's information. Within a few seconds, the system provider gives notice by issuing confirmations to all of the parties, providing proof the change of holdership over the EWR.[49] Accordingly, the new holder would then have all of the rights associated with the EWR.

When the holder of an EWR wishes to move bales outside of a warehouse, as may be the case with the original holder or a purchaser, he sends a shipping order to the warehouse on the system provider's platform, the EWR, Inc. system. Holders facilitate shipping orders by identifying the warehouse ID and EWR numbers on the system provider's platform. When warehousemen receive shipping orders, which include shipping instructions, new holder information, and authorization to release bales, they prepare the bales for shipping and conduct an inspection of the bales to ensure they are as their EWRs represent.[50]

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[44] 7 C.F.R. § 735.303(b)(1) (2012) ("The holder of an EWR will be entitled to the same rights and privileges as the holder of a paper warehouse receipt.").

[45] The holder is the individual or institution with the preferential rights associated with the electronic warehouse receipt. *See eCotton's Electronic Warehouse Receipt Providership System*, eCotton, http://www.ecotton.com/documents/EWR/EwrProvider Overview.pdf (last visited Dec. 14, 2015) (discussing holders of EWRs).

[46] *Id.* ("In the majority of all cases, the gin is made the initial holder of the receipts.").

[47] *See* 7 C.F.R. § 735.3 ("Holder means a person that has possession in fact or by operation of law of a warehouse receipt, USWA electronic document, or any electronic document.").

[48] *See, e.g.*, NAT'L COTTON COUNCIL OF AM., COTTON: FROM FIELD TO FABRIC 4, https://www.cotton.org/pubs/cottoncounts/fieldtofabric/classing.cfm (giving a brief discussion of cotton marketing and sale).

[49] *About EWR, Inc.*, *supra* note 27.

[50] Telephone Interview with Mike Taylor, *supra* note 11.

Then bales are picked up and loaded, typically onto a truck or hauler, for transportation to their next destination.[51] As shipping orders are processed, a new EWR must be issued and the old EWR must be canceled, unless the holder revokes his shipping order.[52] Warehousemen have up to 24 hours to cancel EWRs after bales leave their warehouse.[53] Warehousemen cancel EWRs using the EWR number on the system provider's platform and instructing the system provider to cancel the EWRs.[54] Several things happen simultaneously when bales leave a warehouse. For instance, warehousemen must cancel the EWRs in the EWR, Inc. system. Also, warehousemen must issue an invoice to all parties involved in the transaction, through the EWR, Inc. system, reflecting that the receipt has been canceled. Once these are done, bills of lading become the primary document of title for possessory rights over bales.[55]

C. Payment

As a disinterested third party, the system provider does not manage or facilitate payment in cotton transactions. Rather, settlement, payment, or any other financial exchange between transacting parties is conducted directly between the parties in whatever manner they choose. That being said, some parties may require or elect to use a draft bank. Draft banks act as intermediaries in cotton transactions, protecting sellers and enabling less creditworthy purchasers to transact. In these transactions, a draft bank takes holdership of an EWR from the seller. Both the seller and the buyer confirm the transaction details with the

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[51] Telephone Interview with Danah Leach, Logistics Coordinator, Cargill, Inc. (Aug. 5, 2015). Note that few warehouses have on-sight rail service, thus trucks are the primary mode of transporting cotton from warehouses.

[52] The confirmation that the warehouse receives is a detailed listing of the EWR numbers that should be placed on a shipping order, along with a small comment and control section for shipping instructions (supplied by the shipper). This process can be reversed in case a shipper mistakenly orders the wrong bales for shipment, or a bale is short-shipped. About EWR, Inc., *supra* note 27.

[53] *Id. See also* FARM SERV. AGENCY, ABOUT THE UNITED STATES WAREHOUSE ACT 2, https://www.fsa.usda.gov/Internet/FSA_File/aboutuswa.pdf (last visited July 19, 2015) (providing a brief description of the United States Warehouse Act of 1916).

[54] Note that this process may be canceled in the event the warehouse makes a mistake in prematurely cancelling an EWR or cancels the wrong EWR, but the warehouse's licensing authority must verify each reversal of an EWR cancelation, preventing fraud and theft. *See* About EWR, Inc., *supra* note 27.

[55] Regarding bills of lading, a "door-to-door" multi-modal document is typically used. Thus, where there are multiple modes of transportation required for bales to reach their final destination (truck, rail, ocean carrier, etc., that information is specified in the document), the holder of an EWR (or the buyer of bales as the case may be), typically a cotton merchant, supplies the trucker tasked with transporting the bales with the pertinent information necessary for completing the bill of lading, *e.g.*, the transportation instructions for the bales. *See* Telephone Interview with Danah Leach, *supra* note 51.

draft bank through the EWR, Inc. system. Once all of the transaction details are confirmed, the draft bank facilitates the transaction in accordance with the agreed terms. Thus, the draft bank receives funds from the buyer, releases the funds to the seller, and transfers the EWR to the buyer.

There are more market-standard practices regarding payment in cotton transactions.

When bales are sold, buyers typically guarantee the seller a specific price by contract, and pay that price directly to the seller. Of course this does not specifically account for accrued fees associated with stored bales, including those that arise from the storage and warehousing bales, the use of the Stamp Air Mail system, use of the system provider's platform, the services provided by the gin, and the cost of transportation.

Two common ways these fees are typically paid are as follows. One, the price of the bales may include the cost of EWR, Inc.'s services and Stamp Airmail System, warehousing, and transportation. In these transactions, sellers pay the fee to the respective parties after settlement of the cotton transaction, but before bales leave a warehouse. Alternatively, buyers may assume the fees when purchasing the bales. This method may be preferable for producers financed by the Commodity Credit Corporation, which will not refund warehouse charges paid by a producer.[56]

Curiously, the typical purchase and sale contract used in cotton transactions does not reflect these details. Instead, "parties do business on a smile and handshake," trusting that terms will be fulfilled in accordance with verbal agreements.[57] With respect to ginning and gin fees, farmers frequently have substantial credit with their gin resulting from the gin's sale of cottonseeds.[58] Consequently, farmers pay ginning fees, if any remain, after the gin credits the farmer's account.

IV. COLLATERAL BANKS

In the event bales are used as collateral to perfect a loan, a single warehouse receipt is issued to two parties. A collateral bank, the institution holding a security interest in the stored bales, acts as holder of the EWR, while the owner (using the bale as collateral) acts as a sub-holder of the EWR.[59] The sub-

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[56] 7 C.F.R. § 1427.10(d) (2015).

[57] Telephone Interview with Mike Taylor, *supra* note 11.

[58] Recall the gin, acting as the farmer's agent, sells the farmer's cottonseeds after removing them from the raw cotton fibers during ginning. The value of those seeds, and therefore the amount owed to the farmer, regularly exceeds the fees and costs of ginning (the amount owed to the gin). Telephone Interview with Mike Taylor, *supra* note 11 and accompanying text (discussing the agency relationship between producers and gins).

[59] *E.g.*, GA. COMP. R. & REGS. 80-1-5-.03(1)(b) (2015) (requiring that collateral banks' security title be recorded on electronic warehouse receipts).

holder markets the bales for sale, but the primary holder must approve any changes to the EWR, or any release or shipment of the bales.

Accordingly, collateral banks that act as the holder of an EWR have ultimate authority regarding any transaction involving the collateralized bale. The sub-holder sends a transfer or shipping order in the system provider's platform, which includes transaction specific information, in order to accomplish a sale or transfer of collateralized bales. Then, the system provider sends notice to the primary holder of the EWR for acceptance or rejection of the transfer or shipping order.

Collateral banks give their acceptance or rejection electronically by approving or denying the transaction on the system provider's platform. Where a collateral bank accepts a transfer or shipping order, the system provider will then send confirmation back to the primary holder, as well as to the sub-holder, the purchaser, and the warehouse. Only after receiving this notice through the system provider's platform will warehousemen release a collateralized bale.

V. VERIFICATION AND OVERSIGHT

With respect to verification, I would like to reiterate that before EWRs are issued, EWR, Inc. must first confirm that all of the information therein is within the allowable parameters and tolerances and that all required information is present. This process creates repetitive checks, effectively requiring that information in an EWR meet strict standards of conformity and consistency.[60] In the event an EWR does not meet these tolerances, e.g., the warehouse receipt shows: "bale weight: 400 lbs" and "compression status: Gin U-D" (which should weigh 500 pounds), the system provider will not allow the system to issue the EWR. Instead, it notifies the warehouseman and requires that the EWR meet the necessary tolerances. Similarly, EWR, Inc. will not issue the receipt if information is missing from a required field, such as the warehouse ID.

Regarding regulatory oversight, the legislative framework within which cotton warehouses operate, and under which EWRs are issued, requires any potential system provider to establish diligent measures to prevent fraud or misconduct, and requires participating parties to comply and conform to those systems (in addition to compliance with all other applicable statutes and regulations). It is worth noting that warehouse operators may voluntarily elect to register and license themselves under the United States Warehouse Act, or they may choose to do so under state licensing authorities.[61] Roughly 53% of commercial warehouse space is currently licensed under state licensing

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[60] The system provider runs these reports regularly and independently. The warehousemen also conduct similar reports to check that information is within the appropriate tolerances. Interview with Mike Taylor, *supra* note 11.

[61] 7 C.F.R. §§ 735.100-.112 (2015).

authorities.[62] Whichever scheme a warehouse operator chooses, a cursory review of state and federal regulations will reveal that the language in all of the above is usually very similar if not exactly the same.[63]

Georgia, for example, has extensive rules governing warehousing and warehouse receipts.[64] One regulation promulgated under the Georgia Department of Agriculture provides, "[n]o two warehouse receipts may have the same receipt number."[65] EWR, Inc. has established protocols to prevent this kind of issue, or any other issue addressed in the regulations, from occurring because the state has the authority to audit and monitor the provider—and it does.[66] Another Georgia regulation requires that warehousemen limit their issuance of warehouse receipt numbers to a consecutive allotment provided by the Georgia Department of Agriculture.[67] This provides a reliable measure for redress in the event a duplicate or false warehouse receipt number slips through the cracks. But again, the regulatory oversight has created incentives for the system provider (also operating under the regulations) to implement appropriate preventative measures, such as those discussed in the section on the American Electronic Warehouse Receipt System.

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[62] *Cf.* ABOUT THE UNITED STATES WAREHOUSE ACT 2, https://www.fsa.usda.gov/Internet/FSA_File/aboutuswa.pdf (last visited July 19, 2015) (wherein 47% of all commercial space is presently licensed under the United States Warehouse Act).

[63] *Compare* 7 C.F.R. § 735.403(b) (2015) ("Each provider will grant the Department unlimited, free access at any time to all records under the provider's control relating to activities conducted under this part and as specified in the applicable provider agreement.) *with* GA. COMP. R. & REGS. 40-14-3-.05(4)(c) ("The Provider will grant the Commissioner or his designees unlimited, free access at any time to all records under the Provider's control relating to activities conducted under these Rules and as specified in the Provider Agreement.").

[64] GA. COMP. R. & REGS. at 40-14-3-.05. *Accord* La. Admin. Code tit. 7 134 (2011) (regulations governing warehouses and electronic warehouse receipts), *and* Ala. Admin. Code r. 80-6-5-.06 (2015) (regulations governing warehouses and electronic warehouse receipts).

[65] GA. COMP. R. & REGS. 40-14-3-.05(2)(m). *Accord* 7 C.F.R. § 735.303(b)(5) ("No two warehouse receipts issued by a warehouse operator may have the same warehouse receipt number or represent the same agricultural product lot.").

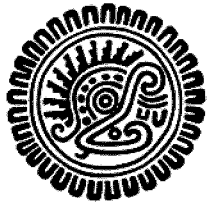
[66] GA. COMP. R. & REGS. at 40-14-3-.05(4)(c) (requiring that every warehouse licensed under the regulation contract with a system provider to "grant the Commissioner or his designees unlimited, free access at any time to all records under the Provider's control relating to activities conducted under these Rules and as specified in the Provider Agreement."). *Accord* § 735.403(b) ("Each provider will grant the [United States] Department [of Agriculture] unlimited, free access at any time to all records under the provider's control relating to activities conducted under this part and as specified in the applicable provider agreement.").

[67] GA. COMP. R. & REGS. at 40-14-3-.05(2)(n); *accord* § 735.303(a)(3) (requiring that warehouses only issue consecutive warehouse receipt numbers provided by the regulatory authority).

VI. CONCLUSION

It should now be clear, as suggested, that the EWR system utilized by the U.S. cotton industry has built-in systems of verification, which are monitored by diligent and effective regulatory oversight. These systems have created a framework for reliable collateralization and the free flow of credit, as well as an environment wherein fraud, mismanagement, and errors are extremely rare. Put differently, the systems (and the regulations under which they operate) have created an environment that enables agricultural producers, merchants, and traders to function in a sustainable market wherein trust and professionalism prevail.[68]

Policymakers, agricultural and commodities associations, and those interested in international economic sustainability should think twice before writing off electronic warehouse receipts. Further, they should look to the systems and practices of the U.S. cotton industry for guidance in the development of a more progressive and trustworthy model, which has the potential to hasten markets, provide credit, and encourage the development of international cooperation.[69] In the wake of the Second Pacific Rim Colloquium for the Harmonization of International Commercial Law, it is abundantly clear that the drafting and adoption of a Trans-Pacific prototype electronic warehouse receipt has the potential to ensure fair representation of all participating nations in international commodities markets, promote more mutually beneficial outcomes for all those who participate, and provide a reliable set of transactional and filing practices.



[68] Please note that detailed discussion of U.C.C. Art. 7 has been intentionally omitted because of limited space. Please see my co-panelist, Prof. Kershen's article, for an in-depth analysis comparing Art. 7 and the U.S. Warehouse Act. *supra* note 15. *See also* Pedersen, *supra* note 7.

[69] *See* Abbey Stemler & Anjanette H. Raymond, *Promoting Investment in Agricultural Production: Increasing Legal Tools for Small to Medium Farmers*, 8 OHIO ST. ENTREPREN. BUS. L.J. 281, 309 (2013) ("Warehouse receipt financing, including the appropriate legislation, regulatory and supervisory oversight, and licensing of warehouses, represents an opportunity to lower the vulnerability of farmers to unfavorable prices and conditions, reduce post-harvest losses and increase the flow of credit into supply chains."). *See also* Henry Gabriel, *Warehouse Receipts and Securitization in Agricultural Finance*, 17 UNIFORM L. REV. 369, 372 (2012) (discussing the conditions precedent to a healthy warehouse receipt market).