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The use of virtual currencies in small-value cross-border remittances and its implication

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Abstract

Despite the efforts by regulatory authorities to promote the Fintech start-ups in the heavily regulated cross-border remittance market, its development has been slow and sporadic. The lingering uncertainty stems from a combination of factors: silo-type legacy infrastructures for regulatory oversight, the nascent global guidelines on the use of virtual currencies, and lack of relevant compliance services for start-ups. This paper highlights the glaring gap in regulatory arbitrage between the use of sovereign fiat currency and its digital counterpart for the cross-border value transfer. Developing a balanced ecosystem via relevant legal, supervisory, and regulatory support should be prioritized before situation-driven, fragmented and duplicate regulations are introduced.

Keywords: Cross-border remittances; virtual currency; Bitcoin; Fintech.

JEL Classification: F24, G18, O38

Introduction

Remittance is a significant factor for developing countries as many migrant workers transfer money to their home country. Since financial exclusion can lead to a global risk of income disparity, the development of remittances needs to be emphasized, which would contribute to financial inclusion (Mashayekhi & Branch, 2015). The report by the IFAD (International Fund for Agricultural Development) (2015) perceived remittances as a means to enhance financial inclusion of both remittance senders and recipients, and underscored the importance of maximizing the economic impact of remittances towards sustainable development.

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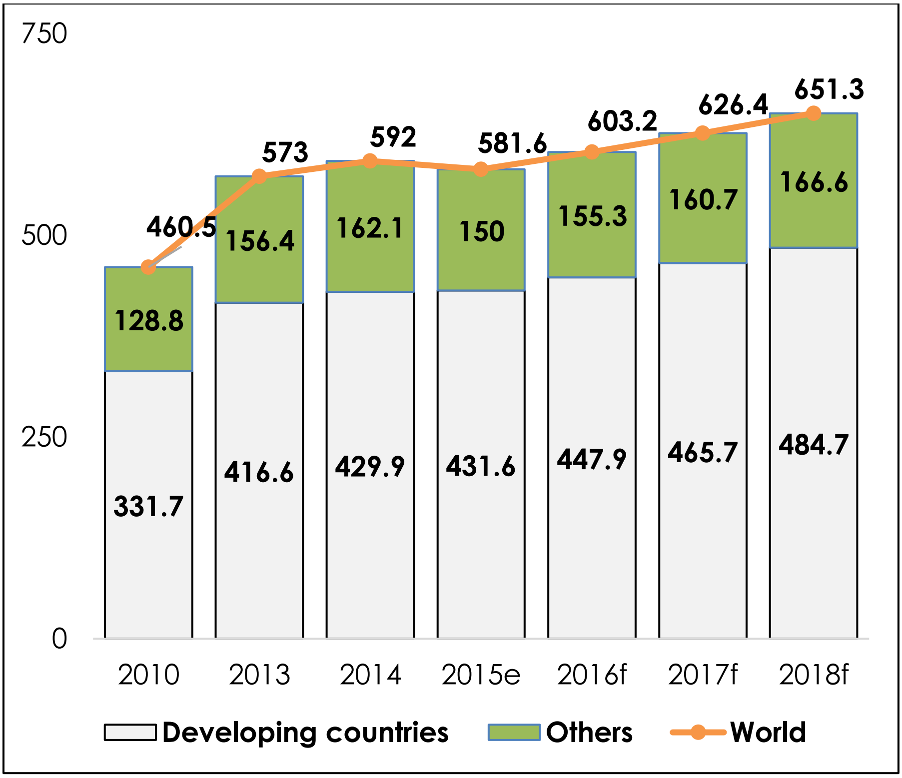
The global remittance market continued to grow as the total amount of cross-border remittances is estimated to be $582 billion in 2015 and the flow to developing countries continues to take up 72 to 74 percent of the total remittance flow (see Figure 1 and Table 1). Many migrant workers transfer money through a variety of remittance service providers such as banks, nonbank financial institutions and money transfer businesses. Nonbank financial institutions include credit unions, savings and loan institutions, post office, and microfinance institutions, whereas money transfer businesses include remittance service providers whose primary service is remittance or is limited to remittance along with foreign currency exchange.

Figure 1. Growth in Cross-Border Remittances[1] ($ billions)



Source: World Bank (2016).

[1] Note: Balance of Payments data have undergone major revisions for past years for certain countries. In particular, the historical data on remittances for 2010, 2013 and 2014 have been revised upwards in many countries.

Table 1. Remittance Flows to Developing Countries ($ billions)

	2010	2013	2014	2015e	2016f	2017f	2018f
Developing countries	331.7 (72%)	416.6 (73%)	429.9 (73%)	431.6 (74%)	447.9 (74%)	465.7 (74%)	484.7 (74%)
East Asia and Pacific	94.1	113.4	121.8	127	131	135.5	140.3
Europe and Central Asia	31.4	47.7	43.4	34.6	36.3	38.3	40.3
Latin America and Caribbean	55.7	61.1	63.6	66.7	69.3	71.9	74.6
Middle-East and North Africa	38.9	48.8	50.8	50.3	51.6	53	54.5
South Asia	82	110.8	115.5	117.9	123.3	129.3	135.8
Sub-Saharan Africa	29.7	34.7	34.8	35.2	36.4	37.7	39.1
Others	128.8 (28%)	156.4 (27%)	162.1 (27%)	150 (26%)	155.3 (26%)	160.7 (26%)	166.6 (26%)
World	460.5	573	592	581.6	603.2	626.4	651.3

Source: World Bank (2016).

Even though nonbank financial institutions and money transfer businesses such as MoneyGram and Western Union started offering lower remittance fees to customers, the World Bank (2017) showed that the cost of sending money continues to be exorbitantly high. While the global average cost of sending remittances of $200, including all fees and charges, remained at 7.45 percent in the first quarter of 2017, remittances costs in developing economies, namely Sub-Saharan Africa, East Asia and the Pacific region, continued to have the highest average cost (see Figure 2). In addition, global banks have been closing the banking accounts of many money-transfer operators (MTOs), complaining that remittance transactions are prone to money laundering and other financial crimes (Ratha, De, Plaza, Schuettler, Shaw, Wyss, & Yi, 2016). Such risk-adverse behavior of banks impedes the efforts to reduce remittance costs and increase access to remittance services.

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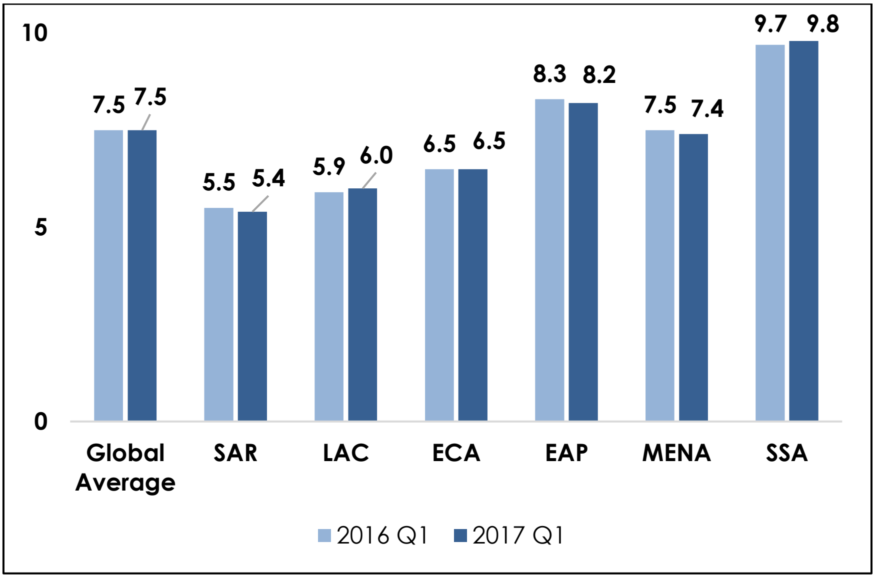
Figure 2. Remittances Costs across Regions[2] (Percent)



Source: World Bank (2017).

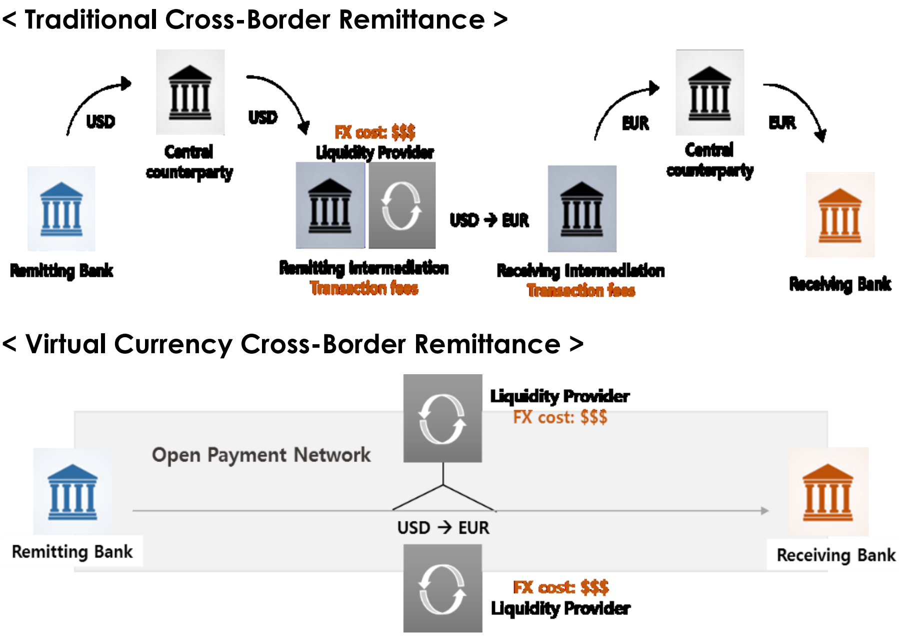
Despite the efforts to decrease remittances costs, those costs act as major impediments to remittance flows (Mashayekhi & Branch, 2015). Existing remittance services that promise to deliver cost-effective methods of sending money overseas are just partial solutions to the problems and, therefore, new methods for better application of remittances are necessary to supplement the weakness of current services. It is important that new entrants into the market are allowed to help reduce remittance costs for most workers who send money back to their home country.

It is not surprising that many Fintech experts saw a great potential use of virtual currencies in cross-border remittance. The application of virtual currencies to cross-border remittance is appealing and innovative as the method allows users to transfer money instantly and free of charge (see Figure 3). In addition, the Fintech firms are expected to use their techniques in promoting financial inclusion mostly via virtual currencies in payment and remittance. For instance, M-PESA of Safaricom, which provides mobile phone banking services, is one of the successful applications of Fintech for financial inclusion. Through allowing customers to transfer cash using their phones, once

[2] Note: EAP = East Asia and Pacific; ECA = Europe and Central Asia; LAC = Latin America and the Caribbean; MENA = Middle East and North Africa; SAR = South Asia region; SSA = Sub-Saharan Africa.

they pay money into the system by handing cash to one of Safaricom's agents, M-PESA is acknowledged as the most successful scheme of its type on earth (T.S., 2015). The application of virtual currencies to cross-border remittance is expected to enhance financial inclusion as it may increase financial accessibility for the unbanked people. To some extent, the expectations are justified since the use of virtual currencies in remittance services allows unbanked people to access financial services with low transaction costs. Due to intrinsic features of virtual currencies such as anonymity, instantaneity, and irrevocability, however, various challenges related to compliance and consumer protection may occur in cross-border remittances.

Figure 3. Cross-Border Remittance Methods by Type



Source: Ripple Labs (2015).

In a related context, we examine potential obstacles that small-value money transfer businesses may encounter as they offer cross-border remittance services by using virtual currencies. Given that cross-border remittance is a practical way to promote financial inclusion globally, particularly in emerging economies, a new and innovative way of sending money overseas without potential risks is surely a welcome choice for most people. However, service providers may have difficulties in encouraging more migrants to use the new method at the moment as most potential clients in developing economies have little understanding about the underlying technology. To handle this potential problem, migrants and remittance recipients need to receive transparent information including the costs associated with each channel, which will allow remitters to choose the most cost-efficient option (Mashayekhi & Branch, 2015). Continual education and awareness programs about various methods of sending money overseas would help them enjoy more variability and efficiency of remittances (Khan, 2016). The SmaRT (Smart Remitter Target) indicator, which aims to reflect the cost that a savvy consumer with access to sufficiently complete information could pay to transfer remittances in each corridor, showed an increase in the first quarter of 2017, compared to the previous year (World Bank, 2017).

In reality, it is shown that most of the alternatives require huge compliance costs associated with KYC-AML (Know Your Customer, Anti-Money Laundering) and prove to be less effective if unacceptable, as they often ignore financial stability guidelines for capital flow across borders. The cost savings feature of remittances via virtual currencies camouflages those huge compliance costs via quick fixes on compliance requirements that are generally applied to traditional money service businesses, since the new entrants cannot afford to subscribe to existing compliance services. Besides, existing firms are often registered as a software development company, and they are not given legal licenses to engage in cross-border remittance. It is clear that in-depth analyses on new methods of cross-border remittance highlight the existing tensions among regulatory and legal framework under various government agencies and the needs to coordinate market signals to promote a viable ecosystem for financial stability and fair competition. As the criteria for distinguishing the different types of players in the payments and remittance ecosystem has been blurred with the emergence of new business models, payment service providers have difficulty in understanding what regulatory rules apply to their businesses (Shook Lin & Bok LLP, 2016). In addition, due to significant differences in the regulatory requirements from one country to another, the International Swaps and Derivatives Association (ISDA) reported that European dealers and banks have moved away from U.S. markets (Trulioo, 2016). By helping this new breed of disruptors in entering a newly developed market for cross-border remittance with relevant supervision and regulation, implications drawn from this study would help promote sustainable financial inclusion for general population.

This paper aims to study current issues and examples of several countries related to the promising use of virtual currencies in cross-border remittances, and suggest improvement plans to make it commonly available across the world, including preparation for standardized regulations that can be applied to every country. Since the issues raised here are relatively new, and not properly defined in conventional perspectives commonly observed in academia, there are not many references to hold on to. However, we could find various analyses on traditional remittance policies in different countries. According to the research by Olowa (2014), which dealt with remittances in Nigeria, the competitive environment for remittances was highly constrained because only one money transfer organization existed in the market and banks were the only entities legally authorized to perform international payments. On the one hand, the Central Bank of the Republic of Kosovo (2013) reported that the remittance industry is likely to ensure safe and efficient service when the general legal framework, where it operates, is sound, predictable, non-discriminatory and proportionate.

Among a few related studies in this field, Middlebrook and Hughes (2013) delineated legal changes in response to the use of virtual currencies in electronic payments and financial services (e.g. FinCen (Financial Crimes Enforcement Network) guidance, CFPB (Consumer Financial Protection Bureau)'s regulation E), and described the case of Liberty Reserve where users were able to use virtual currencies for criminal activities such as money laundering due to the weak identity validation process. In addition, Middlebrook and Hughes (2013) drew on the problem of regulatory ambiguity on virtual currencies, and highlighted potential compliance burdens that emerging businesses may experience when new regulations are introduced. In a similar context, findings in this paper emphasized the glaring arbitrage opportunities that would be created by recalcitrant legal setup, which cannot accommodate new opportunities in a coherent legal framework. Until successive and gradual revisions of existing legacy infrastructures are undertaken, the gap would be exploited by a few entrants to hinder better opportunities for potential new entrants into the remittance market. In this vein, the rest of the paper consists of some of the key issues with cross-border remittances, which are followed by a diagnosis and the conclusion in the final chapter.

Potential Issues in Small-value Cross-Border Remittances

Compliance in Cross-Border Remittances

Many remittance market participants and authorities expected the use of virtual currencies such as Bitcoin in cross-border remittances to enhance efficiency in making transfers, and eventually contribute to financial inclusion. Because of this particular feature, Bitcoin remittance has been hailed rightly or wrongly as the economic choice for most small-value remittance service providers. Due to a

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lack of regulatory guidelines, however, many ignored compliance costs related to the use of virtual currencies in cross-border remittances, thus leading to an inaccurate impact assessment on the market. A more fundamental issue is the absence of clearly-defined legitimate business space of new entrants in the heavily regulated financial industry. This uncertainty about the permitted businesses under the relevant legal framework leads to compliance uncertainty, and most potential entrants are left in limbo, eroding on their paltry capital base. In short, although technological development has allowed the reduction of technical costs in remittances, compliance burden still remains as an unsolved problem in the market, because of either the lack of affordable services or the undefined legitimacy of their businesses. It is surely necessary for new entrants to factor these unaccounted aspects in making business decisions, yet stakeholders in this new market are not in a position to draw consensus or start discussing necessary efforts. No single entity in the public sector can make decisions that cover many sectors, which possibly pertain to very complicated businesses. The concern remains valid since a significant portion of Bitcoin remittance costs is left untouched, as most of the participants have not been properly registered and they mostly avoid reporting their daily activities to the FIU (Financial Intelligence Unit) or other regulatory body on a regular basis (see Table 2). In fact, they operate in a gray area where regulations are virtually absent or simply neglected. This newly created issue from disruptive forces in businesses needs to be monitored properly, but the legacy infrastructures are ill-equipped to deal with such fundamental changes in business landscape.

Let us first look into how the use of Bitcoin or virtual currencies interferes with the AML concerns. In response to terrorist attacks and the heightened attention by international bodies on terrorist financing, many countries emphasized the significance of conducting AML-CFT (Combating the Financing of Terrorism) and CDD (Customer Due Diligence) regulatory requirements. In 2011, the FATF (Financial Action Task Force) announced nine additional special recommendations. Not only banks and other remittance providers, but also small-value money transfer businesses are obliged to follow the FATF recommendations when providing cross-border remittance services (see Table 3). Moreover, the General Principles for International Remittance Services of the Bank for International Settlements (BIS) and the World Bank state that countries should establish a regulatory framework that satisfies internationally agreed standards such as the FATF recommendations. Technological benefits of new remittance services cannot be accommodated to the existing guidelines since a larger body of infrastructures is left unsettled to fit into properly regulated and registered services.

Table 2. Regulatory Responses to Virtual Currency Schemes by Country

Country	Status of Bitcoin / Virtual Currency	Supervision
Czech Republic	Bitcoins are not banknotes, coins, scriptural or electronic money.	No license is required for selling or buying Bitcoins, and these activities are not supervised. License might be needed for trading derivatives with Bitcoin as underlying, managing a fund investing in Bitcoins or transferring funds between buyers and sellers of Bitcoins by the operator of an exchange platform.
Denmark	Bitcoin is not a currency. It does not have any real trading value compared to gold and silver, and thus is more similar to glass beads.	Bitcoin service providers do not need a license. The Danish have stated that regulation of Bitcoin should be organized at European or even global level.
Germany	Bitcoin is a unit of account, not legal tender but a financial instrument.	According to BaFin (the German Federal Financial Supervisory Authority), the usage, buying, selling and mining of Bitcoin does not require a license. Additional services might require a license, though, so Bitcoin start-ups are advised to check this with BaFin on a case-by-case basis.
Spain	Virtual currencies are not considered legal currency, since they are not issued by the government's monetary authority.	Virtual currencies are not currently supervised.
France		Supervisor ACPR (the Autorité de contrôle prudentiel et de resolution) regards Bitcoin exchanges as a form of financial service provision for which a PSP (Prestataire de services de paiement; Payment Service Provider) license is required. The French Banking Federation indicates that wiring revenue from the sale of virtual

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		currency to a personal bank account may require the bank to file a declaration with the French anti-money laundering agency.
Italy	Virtual currencies are not considered legal tender.	A communication has been issued by the Bank of Italy's Supervisory Directorate which endorses the EBA "Opinion on 'virtual currencies'" – this discourages banks and other supervised financial intermediaries from buying, holding or selling virtual currencies.

Source: ECB (2015).

Table 3. FATF Recommendations related to Cross-Border Remittance

Recommendation 1	Risk-based Approach
Recommendation 10	Customer Due Diligence
Recommendation 11	Record Keeping
Recommendation 14	Money or Value Transfer Services
Recommendation 16	Wire Transfers
Recommendation 18	Internal Controls
Recommendation 20	Suspicious Transaction Reporting
Recommendation 35	Sanctions

Source: FATF (2012).

In order to comply with the AML-CFT regulations, financial institutions have built extensive compliance programs through risk management, corporate governance, and monitoring and record-keeping systems. These supportive compliance programs allow financial institutions to follow stringent regulatory requirements such as the KYC rules and Bank Secrecy Act (BSA) in the United States. In the case of the United States, regulatory guidelines are provided from the Office of Foreign Assets Control (OFAC), which help financial institutions broaden their understandings on the current regulatory requirements. Unfortunately, small-value money transfer businesses newly entering the market with insufficient support from regulatory guidelines may find it hard to build strong compliance programs that are at the same level as existing financial institutions. The lack of compliance programs and regulatory guidelines may harm not only customers, but also the development of the Fintech industry, as it fails to grow in a stable and well-established market. As small-value money transfer businesses conduct their businesses without a proper registration, they may bypass suspicious transaction reporting and obligations for CDD in one way or the other, resulting in a high risk of money laundering and terrorism financing. In addition, due to the inherent characteristics of virtual currencies, small-value money transfer businesses providing remittance using such currencies may face challenges. For instance, while anonymity (or pseudonymity) is one of the benefits that virtual currencies have, it also increases risks related to the money laundering and financing of terrorism as the users could take an advantage of the anonymous nature of virtual currencies (when sending money overseas). In short, despite obvious benefits of using virtual currencies in cross-border remittance, there are needs for comprehensive legal and regulatory support for the use of virtual currencies to be taken as a reliable choice. A large gap exists between the reality of many polarized choices and the preparedness of existing legacy infrastructures to accommodate these changes in the desirable direction. Before such a gap is addressed, judgements on the technical features of the new methods ought to be reserved.

Consumer Protection Risks

Although the current consumer protection laws define specific guidelines that money transfer businesses are required to follow, some guidelines and requirements would be incompatible for remittance services when using virtual currencies. Hence, consumers would be exposed to risks due to the unclear legal status of virtual currencies. As a consequence, in 2014, the CFPB (Consumer Financial Protection Bureau) of the United States released a consumer advisory on the risks virtual currencies may pose to consumers. The current remittance transfer rule states that consumers can cancel a transfer within 30 minutes (see Table 4). Due to the inherent features of virtual currencies, however, virtual currency transactions are immutable. Thus, this requirement would be not applicable to remittances that use virtual currencies. As such, there are no clearly established consumer protection guidelines for the Bitcoin remittance service providers with the possible exception of Japan (Japan Payment Service Association, 2016). Unlike most countries which largely adopt a hands-off stance for new technologies and business practices (e.g. the supervisory sandbox approach of the United Kingdom), Japan chooses to take a radical approach toward these issues by allowing authorities to evaluate potential applications on an individual basis.

At this juncture, it needs to be noted that some of the tentative stances of the authorities leave clients unprotected. In particular, virtual currency wallets with private keys are not insured by the government programs, which represent the lack of consumer protection in the use of virtual currencies. In the United States, bank or credit union accounts are secured by the FDIC (Federal Deposit Insurance Corporation) or the NCUSIF (National Credit Union Share Insurance Fund). However, virtual currency wallets are not insured by any such government organizations. Insurance coverage of such

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virtual currency transactions can prove to be tricky due to large price fluctuations — the price of Bitcoin depreciated by 61% within a day in 2013 (CFPB, 2014) — that can make it difficult to calculate the precise coverage (see Figure 4). Therefore, consumers would be exposed to various risks when a small-value money transfer business conducts its operation by using virtual currencies (see Table 5). In addition, the pronounced volatility of Bitcoin prices poses potential threats to clients even though usual cross-border remittances are executed within a short period of time. Some consensus guidelines need to be established to settle cases that involve drastic changes in remittance values across the border.

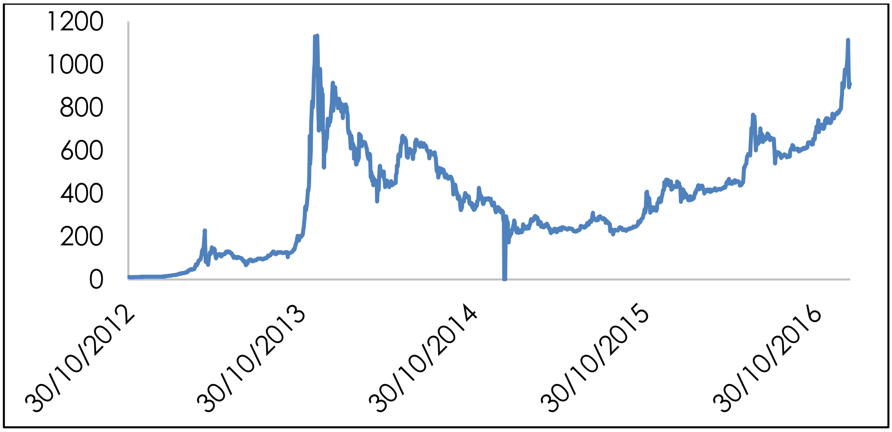
Table 4. Remittance Transfer Rule

Disclosures	• The exchange rate • Fees and taxes collected by the companies • Fees charged by the companies' agents abroad and intermediary institutions • The amount of money expected to be delivered abroad, not including certain fees charged to the recipient or foreign taxes • If appropriate, a disclaimer that additional fees and foreign taxes may apply
Other Protections	• Consumers get 30 minutes (and sometimes more) to cancel a transfer. • Consumers can get their money back if they cancel and companies must investigate if a consumer reports a problem with a transfer. For certain errors, consumers can generally get a refund or have the transfer sent again free of charge if the money did not arrive as promised. • Companies that provide remittance transfers are responsible for mistakes made by certain people who work for them.
Coverage	• More than $15 • Made by a consumer in the United States • Sent to a person or company in a foreign country • Companies: banks, thrifts, credit unions, money transmitters, broker-dealers

Source: CFPB (2013).

As shown in the case of CFPB, some regulatory authorities have released a consumer advisory to help consumers comprehend the risks associated with the use of virtual currencies in cross-border remittances. However, most of these advisories did not specify how consumers could be protected, but rather stated that consumers should be aware and take care of their own risk. Sixty-one percent of respondents to a survey conducted by the Massachusetts Division of Banks and Loan Agencies (2014) have responded that security is an important factor when it comes to the purchase and/or use of Bitcoins (see Figure 5).

Figure 4. Price of Bitcoin (BitStamp USD)



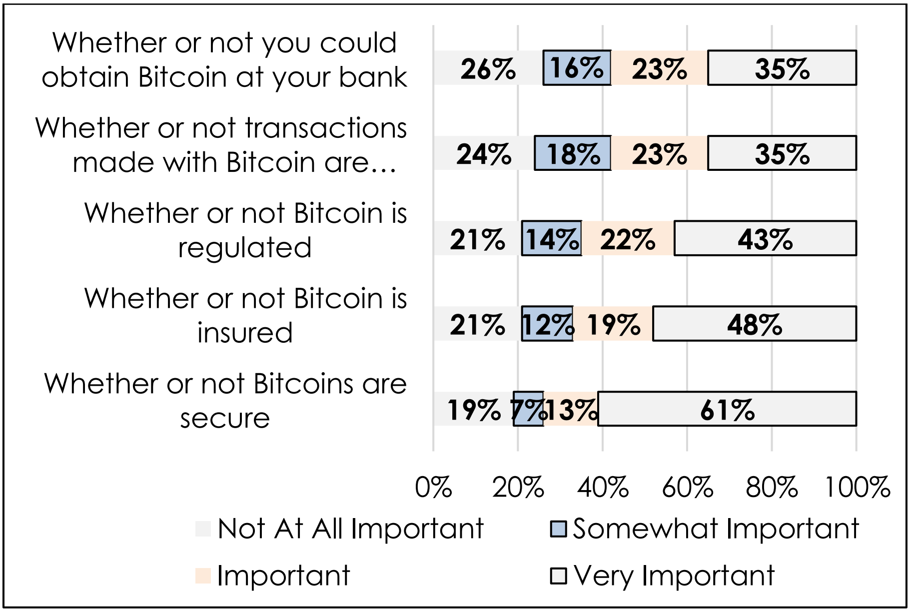
Source: Bitcoincharts (2016).

Table 5. Consumer Risks of Transactions by Virtual Currencies

Loss or theft	Virtual currency can be lost through a security breach, user error, or a technological failure at a virtual currency wallet or exchange. Once lost, virtual currency typically cannot be regained.
Fraud or unauthorized use	Generally, virtual currency can be spent by anyone in possession of the associated ownership credentials. Transactions in most currencies are not reversible, even if the result of fraud or unauthorized use.
Transaction processing error	In the event that a payment is misdirected, an incorrect amount is transferred, or a transaction is not completed in a timely manner due to an error by a virtual currency wallet, exchange, or processor, in most currencies the transaction is not reversible, the error is not correctible, and the consumer has no recourse against the wallet, exchange, or processor.
Failure of a wallet or exchange	No insurance mechanism exists to make account holders whole in the event that a virtual currency wallet or exchange operator fails and accounts become inaccessible.
Inadequate disclosures	Wallets and exchange operators have no obligation to provide disclosures to consumers related to service fees or charges associated with virtual currency transactions, the volatility and unregulated nature of the virtual currency ecosystem, or any of the other risks described in this table.

Source: The Clearing House and ICBA (2014).

Figure 5. Important Factors when Deciding to Purchase or Use Bitcoin



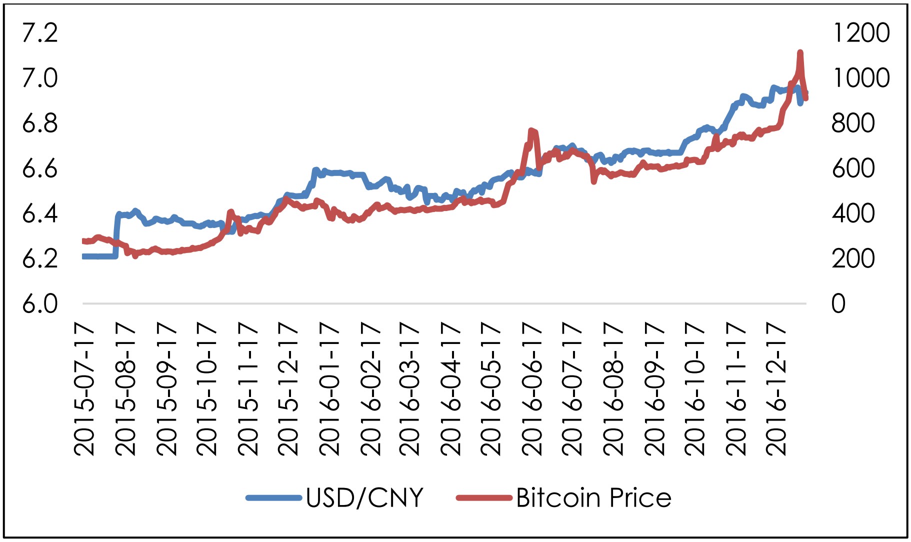
Source: Massachusetts Division of Banks and Loan Agencies (2014).

Hence, the establishment of sufficient guidelines protecting consumers is all the more essential to foster adoption of virtual currencies in the remittance market. Going forward, regulatory authorities should prepare guidelines for virtual currencies and establish a Consumer Protection Act that is pertinent to the use of virtual currencies. This is going to be a simple task, but it is important in order to form a stable and sustainable ecosystem for remittance services. In essence, this remains the core area of the conflict between a decentralized system and a centralized legacy system, where the openness and consensus mechanisms remain the backbone of inherent P2P (peer to peer) services. The fundamental differences need to be resolved through a wider consensus mechanism and technological advances for scalability and interoperability, which implies that any gains from limited participation and the use of closed community resources need to be evaluated in a wider framework. With such inclusive and open efforts, it would be able to create a sustainable remittance ecosystem by protecting rights of diverse stakeholders in the industry.

Exchange Controls and Potential Risks of Capital Outflow

Although the application of virtual currencies may benefit the cross-border remittance market by lowering technical costs, virtual currencies could be misused to take capital out of a country. For instance, Bitcoin has become a popular tool for capital flight among Chinese investors as Chinese Yuan continues to weaken against the U.S. dollar. By using Bitcoins in cross-border remittances, Chinese investors are able to buy them on a local exchange, transfer them to an exchange overseas, and then sell them for the U.S. dollar or other fiat currencies. The correlation between the U.S. dollar to Chinese Yuan Renminbi and the Bitcoin price proves that virtual currency has been used to evade capital controls imposed by the central bank (see Figure 6). In light of such use of Bitcoins as a means of capital flight, it is vital to implement laws or regulations to prevent such actions.

Figure 6. USD to CNY and the Price of Bitcoin



Source: Bitcoincharts (2016) and FRED Economic Data (2016).

Since the 1997-1998 Asian financial crisis, Korean regulatory authorities have mandated a reporting obligation for foreign exchange transactions with the foreign exchange information system. Such foreign exchange liquidity control is regarded as the most critical effort to maintain financial stability. In order to prevent the misuse of virtual currencies, regulatory authorities may enforce a reporting obligation for virtual currency transactions with the foreign exchange information system. The legal status of virtual currencies has not been established in many countries. However, authorities may consider following the case of Kansas, which will be discussed later in this paper, by making virtual currency transactions applicable to the existing Money Transmitter Act or relevant remittance laws and regulations when the transmission is conducted with a sovereign currency.

To sum it up, it seems relevant to regulate Bitcoin exchange with identical supervisory oversight to avoid regulatory arbitrage. At the very least, the authorities can engage in proper transaction monitoring via a reporting system that requires all relevant institutions to report suspicious or fraudulent behavior. Regardless of the legal status of cryptocurrency, virtual currency or digital currency, reporting requirements for supervisory concerns is justified. It also helps attract Fintech start-ups to operate in a supervised setting so that they can start gaining market confidence.

The Current State of Regulation

The Case of Korea: Two-Pillar System

As virtual currency became the key driver transforming remittance services to a great extent, it has alerted many regulatory authorities around the globe. As a result, many countries such as Korea and Japan have revised existing laws and regulations in order to accommodate technological changes in remittances and facilitate the development of the remittance market and the Fintech industry. However, the rate of technological change has been so rapid that most regulatory actions cannot keep pace and they mostly revolve around revisiting existing Enforcement Decree of the Act to accommodate only the essential changes. The current stalemate in the national assembly in Korea poses a real challenge for the authority since there is no responsible body that oversees systemic risks associated with recurrent revision of various regulations without touching on legal and institutional overhaul to accommodate significant changes in our financial ecosystem. Within the existing framework, this paper sheds light on how regulatory authorities in Korea tried to incorporate the application of virtual currencies in cross-border remittances into its coherent legal and regulatory frameworks.

As the financial services industry is undergoing rapid technological transformation, Korean regulatory authorities have shown efforts to revise regulations to cope with disruptive forces of virtual currencies. On March 2016, the MOSF (Ministry of Strategy and Finance) revised the Enforcement Decree of the Foreign Exchange Transactions Act (FETA), allowing non-financial institution to conduct small-value cross-border remittance services through a partnership with a bank. Prior to the revision of the Act, banks were the sole entity allowed to offer cross-border remittance services. Now, customers are able to transfer money up to $3,000 per transaction and $20,000 per year through such authorized nonbank entities. The newly revised Enforcement Decree states that small-value money transfer businesses must form a partnership with a bank and satisfy capital requirements in order to operate business. However, other detailed requirements may differ by partnership agreements between the two parties. This revision was the effort of the Korean regulatory authorities to facilitate the development of Fintech industry by allowing more money transfer businesses to operate in the cross-border remittance market with new technologies, while at the same time benefiting customers with lower transaction fees. On June 2016, the government announced that there will be a further revision of the Enforcement Decree of the Foreign Exchange Transaction Act, authorizing small-value money transfer businesses to operate cross-border remittance services without forming a partnership with a bank (Yoon & Yang LLC, 2016). The revision is currently under discussion at the MOSF.

Although the Korean regulatory authorities have shown various efforts to promote the Fintech and financial services industry, the legal structures for remittance service providers remain largely fragmented. In the case of Korea, such services mainly fall under two regulations: the FETA and the Electronic Financial Transactions Act (EFTA). Since remittance service providers conduct foreign exchange transactions, they are obliged to follow the former. In addition, as their method of business falls under the scope of electronic financial transaction, they are also regulated under the latter regulation as well. What is more is that the regulations are under control of different agencies. The current regulation can be seen as a two-pillar system since the EFTA falls under the jurisdiction of the FSC (Financial Supervisory Commission), whereas the FETA is under the jurisdiction of the MOSF. Hence, there are areas of double scrutiny and some conflicts exist within the relevant legal framework (see Table 6). As a result, it is a challenging task to build united regulatory frameworks for the cross-border remittance market, which would enhance regulatory understandings of market participants. Further, any cross-border remittance involves two parties across the national boundaries such that equivalent license holders are the prerequisites for safe and convenient transactions.

For the successful development of the cross-border remittance market, there are still a number of key issues that need to be resolved – compliance costs, consumer protection and transaction reporting obligations etc. However, under the current dichotomized and fragmented legal framework coupled with the fast pace of technological development, this is a daunting task. For instance, both the FETA, presided by the MOSF, and the EFTA, monitored by the FSC,

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regulate only part of the comprehensive and complicated processes that involve cross-border remittances, exchange into foreign currency and small-value transfer across the border.

Table 6. Duplicated Legal Frameworks for Remittance Services in Korea

Foreign Exchange Transaction Act (MOSF)	Electronic Financial Transactions Act (FSC)
Article 11. Supervision of Business and Regulation of Soundness 1. The Minister of Strategy and Finance may supervise the business of a foreign exchange agency, (including its business office located in a foreign country; hereafter the same shall apply in this Article), and may issue an order necessary for such supervision.	Chapter 5. Supervision of Electronic Financial Business Article 39. Supervision and Inspection 1. The Financial Supervisory Service shall supervise whether financial institutions and electronic financial business operators abide by this Act or an order issued by this Act, under the direction of the FSC.
Article 12. Revocation of Authorization 1. Where a foreign exchange agency falls under any of the following subparagraphs, the Minister of Strategy and Finance may revoke a registration or authorization prescribed in Articles 8 and 9, limit the business of foreign exchange agency (including their business offices) for up to six months, or suspend all or part of the business. 2. The Minister of Strategy and Finance shall, when he/she intends to revoke any registration or authorization pursuant to paragraph (1), hold a hearing.	Article 40. Supervision and Inspection of Financial Institutions, etc. over Affiliations or Outside Orders Article 41. Request for Submission of Materials, etc. by Bank of Korea Article 42. Division of Accounting and Guidance for Sound Management Article 43. Revocation, etc. of Permission and Registration Article 44. Hearings Article 45. Authorization of Merger, Dissolution, Business Closure, etc.
Article 12-2. Penalty Surcharges 1. When the Minister of Strategy and Finance restricts or suspends all or part of the business of a person who has committed a violation falling under any of the subparagraphs of Article 12 (1), he/she may impose a penalty surcharge within the extent of the interest gained from the violation.	Article 46. Penalty Surcharges 1. When a financial institution or an electronic financial business operator falls under any subparagraph of Article 43, the Financial Services Commission may impose a penalty surcharge not exceeding fifty million won in lieu of an order for suspension of business, under the conditions as prescribed by Presidential Decree.
Article 27-29. Penal Provisions	Chapter 7. Penal Provisions
Article 30. Confiscation and Collection in Lieu of Confiscation	Article 49. Penal Provisions Article 50. Joint Penal Provisions Article 51. Fines for Negligence
Article 31. Joint Penal Provisions	
Article 32. Fines for Negligence	

Source: Korea Legislation Research Institute (2016).

However, Bitcoin remittances involve activities not covered by the prevailing legal infrastructure, and there is lax supervision on the limits of remittance, reporting duties, etc. Since the legal status of various virtual currencies has yet to be defined by relevant authorities, imposing legal obligations on these firms, in fact, legitimizes their activities via implicit business licenses. Therefore, the establishment of a streamlined regulatory perimeter among authorities and the proposed revision should be expedited to comprehensively regulate all aspects of cross-border remittances in a coherent legal framework. There are clear limits to regulate increasingly complex activities by continuous revisions of the segmented, disparate Enforcement Decree of the Act. E-money licenses issued by EU countries, as exemplified by the BLENDER of Israel, cover all aspects of remittances as well as lending such that Fintech firms can operate and expand across the globe. For a similar effort to apply e-money licenses of EU countries, the Korean regulatory authorities should seek to provide comprehensive and coherent regulations for remittance operations in order to create a sustainable ecosystem with arising innovative technologies.

The Case of Japan: Payment Services Act

The FSA (Financial Services Agency) of Japan, one of the fastest followers of new technologies, reviewed the Payment Services Act (PSA) to regulate the use of virtual currencies in cross-border remittances. Since this is the first move among advanced economies, we seek to extract relevant implications about a possible stance on Bitcoin remittance. Commencing on April 1, 2010, the FSA amended the PSA of Japan, permitting nonbank financial institutions to operate fund transfer services. In 2016, the PSA was revised further to regulate remittances that use virtual currencies. The newly revised PSA permits the use of virtual currencies in remittances, while it limits the amount to one million yen per transaction. Moreover, as shown in Table 7, remittance service providers, who fall under one of the categories, are obliged to register with the Prime Minister. The PSA does not have a uniform level of minimum capital requirements, as it is uncertain how the market would be developed with new remittance methods in the future. As for consumer protection, the PSA states that virtual currency exchange service providers need to manage information safely and provide information on differences between fiat currencies and virtual currencies as well as the contents of a contract to customers. In addition, virtual currency exchange service providers are obliged to manage assets such as cash and virtual currencies separately. In the case of transaction errors and other transaction-related issues, customers may resolve disputes through the financial Alternative Dispute Resolution (ADR) and send complaints to the Japan Payment Service Association or directly to the Japan Federation of Bar Associations (Japan Payment Service Association, 2016).

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Table 7. A Virtual Currency Exchange Service Provider under the Amended PSA

Purchase, sale or exchange	・A business of establishing a virtual currencies sales office, and conducting sales by currencies or exchange of virtual currencies with other virtual currencies ・A business of establishing and operating an ATM that enables virtual currencies to be realized and withdrawn
Intermediation, brokerage, or agency	・A business of operating an exchange or a matching platform for purchasing, selling or exchanging virtual currencies (Intermediation) ・A brokerage business of purchasing or selling virtual currencies on behalf of a customer's account (Brokerage) ・An agency business of a virtual currencies sales office (Intermediation or agency)
Management	・Receiving deposits from customers in order to broker virtual currencies

Source: Ariyoshi, N., Tanizawa, S., & Katagiri, H. (2016).

The Case of the United States: Money Transmitter Act

In the case of the United States, requirements for a money transmitter license differ from state to state. In general, remittance service providers need to comply with regulatory requirements such as internal controls, record keeping and sanctions under the U.S. Bank Secrecy Act (BSA). The CFPB is in charge of setting up consumer protection guidelines in the United States. In 2013, the CFPB added consumer protection measures to the Dodd-Frank Wall Consumer Protection Act, and nonbank financial institutions and money services businesses are obliged to follow the Act. As mentioned earlier, however, the current regulation on remittances may not be compatible to the use of virtual currencies in remittances due to its intrinsic characteristics. Besides, virtual currencies have not been recognized as money, thus it is unclear how regulations would apply to the use of virtual currencies. Some states have made efforts on providing a guidance for the application of virtual currencies in financial market. On June 2014, the Kansas Office of the State Bank Commissioner (OSBC) released a guidance document to explain whether the Kansas Money Transmitter Act (KMTA) is applicable to the use of virtual currencies in remittance transactions. According to the document, virtual currencies are not considered as money since they are not authorized or issued by any governmental entity. Thus, the transmission of virtual currency is not regulated under the KMTA. However, when a sovereign currency is used in a transaction with virtual currency, the virtual currency transmission would be regarded as money transmission, which can be covered by the KMTA (see Table 8).

Table 8. Guidance on Types of Transactions (Kansas)

Exchange of cryptocurrency for sovereign currency between two parties is not money transmission under the KMTA. This is essentially a sale of goods between two parties. The seller gives units of cryptocurrency to the buyer, who pays the seller directly with sovereign currency. The seller does not receive the sovereign currency with the intent to transmit to another entity.
Exchange of one cryptocurrency for another cryptocurrency is not money transmission. Regardless of how many parties are involved, since cryptocurrency is not considered "money" under the KMTA, no money transmission occurs.
Transfer of cryptocurrency by itself is not money transmission. Because cryptocurrency is not money or monetary value, the receipt of it with the intent to transmit it to another entity is not money transmission. This includes intermediaries who receive cryptocurrency for transfer to a third party, and entities that, akin to depositories, hold cryptocurrencies on behalf of customers.
Exchange of cryptocurrency for sovereign currency through a third party exchanger is generally considered money transmission. For example, most Bitcoin exchange sites facilitate exchanges by acting as an escrow-like intermediary. In a typical transaction, the buyer of cryptocurrency sends sovereign currency to the exchanger who holds the funds until it determines that the terms of the sale have been satisfied before remitting the funds to the seller. Irrespective of its handling of the cryptocurrency, the exchanger conducts money transmission by receiving the buyer's sovereign currency in exchange for a promise to make it available to the seller.
Exchange of cryptocurrency for sovereign currency through an automated machine may or may not be money transmission depending on the facts and circumstances of its operation and the flow of funds between the operator of the automated machine and the customer. For example, several companies have begun selling automated machines commonly called "Bitcoin ATMs" that facilitate contemporaneous exchanges of Bitcoins for sovereign currency. Most such machines currently available, when operating in their default mode, act as an intermediary between a buyer and a seller, typically connecting through one of the established exchange sites. When a customer buys or sells Bitcoins through a machine configured in this way, the operator of the machine receives the buyer's sovereign currency with the intent to transfer it to the seller. This would be considered money transmission under the KMTA and would require licensure. However, at least some Bitcoin ATMs can be configured to conduct transactions only between the customer and the operator or owner of the machine, with no third parties involved. If the machine never involves a third party, and only facilitates a sale or purchase of Bitcoins by the machine's operator directly with the customer, there is no money transmission because at no time is sovereign money received by the owner or operator of the machine with the intent to transfer it to another entity.

Source: Kansas Office of the State Bank Commissioner (2014).

Proposed Approach

With the advent of new methods of sending money overseas, many technical and legal issues have come to light and, require the attention of national authorities as well as global institutions. In order to foster a viable environment in which new entrants can prosper without having negative impact on society, regulatory authorities and market participants should take serious considerations on a legal status of Bitcoin or other digital currencies as well as the provision of affordable market services for KYC/AML requirements. Hence, the

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current legacy infrastructure needs to be made available to potential entrants at reasonable prices via open API (Application Programming Interface). Moreover, global guidelines for money transfer businesses need to be formulated by the current and potential market participants through collaboration with relevant national and international authorities.

An Open Platform for Compliance Services

In order to combat money laundering, terrorism financing and other illicit activities, it is vital to establish sufficient compliance infrastructures. Nevertheless, many small-value money transfer businesses still lack compliance programs, and as a result, fail to adhere to compliance regulations. Due to increasing risks related to money laundering and terrorism financing, complying with AML-CFT regulations became onerous to many financial institutions. As a consequence, financial institutions such as Barclays and HSBC have decided to close the accounts of money transfer operators (see Table 9). Moreover, not only Fintech start-ups, but also current money transfer businesses struggled to follow up with compliance costs. For instance, Western Union spends about 3.7% of its revenues on compliance, and 2,200 employees are dedicated to managing compliance regulations (SaveOnSend, 2016). With growing significance of AML and KYC process in financial transactions, some Fintech start-ups (e.g. Trulioo) have recognized potential opportunities to develop a platform for identity verification by using databases and technologies such as identity verification API.

As for the possible suggestions, the government may consider providing market incentives to incumbents, also known as financial institutions, to help new entrants with compliance services, promoting a more inclusive financial ecosystem. Financial institutions, known as the incumbents, are best equipped to provide necessary legal and regulatory advisory services to potential entrants by sharing their strong regulatory capacity with strong compliance programs. In contrast to the financial institutions, many Fintech start-ups are able to reduce technical cost of remittances but still face challenges on establishing robust compliance programs. As such, the cooperation between these two parties is necessary yet lacking. This can be remedied by providing incumbents with strong tax and financial incentives for possible collaboration.

Table 9. A Trend of De-risking Money Laundering and Terrorism Financing

Bank/Country/Year			Notes
Westpac	Australia	2015	The bank will exit the global remittance market by 31 March 2015. A court ruling extended the closure deadline to 31 March after a group of 20 remitters sued for more time to work out alternative business plans. The decision to shut down the banking of remittance customers was driven by pressure from its corresponding bank in the USA, JPMorgan Chase, which clears US dollar transactions for Westpac. JPMorgan Chase paid a USD 1.7 billion fine in January in the previous year relating to failures in its money laundering controls, and spent a further USD 2 billion to deal with mounting regulatory pressures.
Merchants Bank of California	USA	2015	Closed accounts of all Money Transfer Operators (MTOs) sending money to Somalia after receiving a cease-and-desist order issued by the Office of the Comptroller of Currency (OCC) in June, purportedly due to the bank's failure to appropriately monitor the destination of remitted funds.
Barclays	UK	2013	Closed the accounts of nearly 90% of its UK-based MTOs, despite being the last large bank in the country willing to do business with remitters. In May 2013, Barclays, the last major bank to provide remittance services to Somalia, announced plans to close the accounts of about 250 money transfer businesses, citing concerns about money laundering. In November that year, Dahabshiil won a temporary injunction against the bank at the high court to keep its account, and the lifeline for its customers, open.
HSBC	UK/Global	2012	Following a nearly USD 2bn handed down by US regulators, HSBC took the global decision to exit the money services business sector, giving only 30 days of notice to some MTOs. HSBC was one of the first banks in the UK to formally withdraw from the sector. Similarly, Lloyds Banking Group announced it was not heavily involved in the remittance sector due to risks from the nature of its activities and RBS made the decision to close thousands of foreign currency customer accounts for the same reason.

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Bank/Country/Year			Notes
National Australia Bank	Australia	2013	National Australia Bank, CBA and ANZ remain partially open to the sector on a case-by-case basis although each has been closing remittance accounts, and so has the smaller banks. Almost none of new remittance customers are being taken on. It is estimated that 75% of cent of registered remitters would have been serviced by the big banks a few years ago but it is a much smaller percentage today.
ANZ	Australia	2012	
Common wealth Bank of Australia	Australia	2011	

Source: Attridge (2015).

If the long-term goal of regulatory authorities is introducing new players in the highly regulated market, it is important for the authorities to provide a leveled-playing field, such as a dedicated infrastructure for start-ups or a consortium type of service platform, so that potential entrants are not discouraged from entering the market for fear of prohibitively high compliance costs. Alternatively, instead of promoting a fragmented remittance ecosystem, the government may seek to develop public compliance services through cooperation with the incumbents. As witnessed by successful achievements with various financial infrastructures that are specific to Korea, such as Korea Financial Telecommunications and Clearings Institute (KFTC) and Korea Securities Depository (KSD), which are essentially public institutions, the authorities can incentivize these institutions to provide necessary services for new entrants at nominal costs for their open API services. Through cooperation, financial institutions could be properly compensated by acquiring technological expertise from Fintech start-ups. Since most of them thrive on less than a competitive environment, they need to be mandated to provide services for promoting a competitive and fair environment for all. By providing low-cost public compliance services to small-value money transfer businesses, it would be able to lower entry barriers of the cross-border remittance market and facilitate the market development.

Similar to encouraging financial institutions to offer technical services to Fintech start-ups, the government may lead the market to find a way to offer legal assistance for companies who lack understandings of legal obligations. For instance, the authorities may support the incumbents and Fintech start-ups to form the money transfer business association, which aims to offer guidelines on legal frameworks and any possible disputes to start-up companies, consumers, and other related stakeholders in the market. The association may take an active role in establishing a website, which explains legal frameworks on cross-border remittance services, and providing relevant compliance hotline services for market participants. At its core, collaboration and openness remain the most powerful and essential elements to reach a connected market. This principle equally applies to fostering a more vibrant ecosystem for cross-border remittance.

Indicative Global Guidelines

As virtual currencies are widely used in cross-border remittances, it is essential to establish global regulatory guidelines to enhance market stakeholders' understandings on regulatory frameworks related to new technologies such as virtual currencies. Without global regulatory guidelines for virtual currencies, the cross-border remittance market would suffer serious fragmentation as market participants would be able to capture arbitrage opportunities from regulatory differences between countries. Similar to the Committee on Payments and Market Infrastructures (CPMI), International Organization of Securities Commissions (IOSCO), and the Basel Committee on Banking Supervision (BCBS) of the BIS that are designated for the banking industry, an international organization and guidelines for the Fintech industry need to be established in order to foster financial cooperation between Fintech start-ups, financial institutions and regulatory authorities.

Until now, global guidelines on payment services were mainly formulated by central banks. As most of the technological developments from the Fintech industry support a decentralized financial system, central banks have adapted the laissez-faire approach when regulating virtual currencies. As a result, many central banks have not yet established legislation for virtual currencies, nor showed sufficient efforts to define a legal status of virtual currency, which led to problems when implementing the existing laws and regulations to the use of this new type of currency in cross-border remittances. Above all, the remittance operations involve many disparate players so that it is important to establish multilateral regulatory frameworks on the use of virtual currencies. Hence, global guidelines on the use of virtual currencies in cross-border remittances should be established by scrutinizing various risk factors of the use of virtual currencies. Most of all, consumer protection and financial stability mandate can only be secured with close collaboration among national authorities and the relevant role

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of international financial institutions cannot be emphasized too much. Furthermore, global guidelines should contain coherent explanations on how each of stakeholders would be protected from various risks related to virtual currencies. Establishing internationally agreed standards would reduce regulatory uncertainties on virtual currencies, which may accelerate further development of the industry.

Conclusion

Currently, most financial institutions utilize the SWIFT (Society for Worldwide Interbank Financial Telecommunication) system when conducting cross-border remittances, and central banks usually adopt RTGS (Real-Time Gross Settlement) systems when clearing funds that are transferred between countries. The recent technological progress in the banking industry has allowed Fintech start-ups to develop various solutions to increase the efficiency of financial transactions. One of the most promising areas for Fintech applications is cross-border remittance, where significant cost savings and added convenience and benefits for consumers are hard to ignore. As a result, the use of virtual currencies in cross-border remittances is known as the most practical way to promote financial inclusion in emerging economies. Fintech companies such as Stellar and Ripple have developed a decentralized settlement system which money transmitter businesses could adopt for cross-border remittance services. In addition, the development of digital currencies such as Bitcoin allows users to send funds overseas without having intermediaries. In contrast to the SWIFT and RTGS systems that are commonly used by financial institutions and central banks, the last two options – a decentralized settlement system and the use of digital currencies – are not fully supported by the existing laws and regulations, and leave many pitfalls due to market fragmentation and the lack of clarity from regulatory authorities. The legacy infrastructures, market dominance of existing players, both in market position and requisite financial services availability make the new potential choices for consumers unreliable and incomplete. Further, the laissez-faire approach by most authorities (e.g. regulatory sandbox) only allows untenable and fledgling status for eager participants with scant capital cushion for sustainable funding. With little regulatory oversight, most market participants remain as unregistered or unlicensed, failing to report suspicious transactions or detect illicit activities. The lack of information with regard to legal obligations for each entity on the use of virtual currencies not only harms stakeholders in the industry, but also renders the industry fragmented and unsustainable. As shown, fragmented supervisory guidelines and the lack of relevant compliance services interfere with adopting a new form of value transfer. A new possibility for new remittance methods cannot be even tested in markets because of the lack of proper legal framework and/or relevant compliance services available in the markets around the world. Therefore, it is vital to impose rigorous regulations on the current Bitcoin exchange in order to prevent illicit uses of new technologies and maintain financial stability.

Many regulatory authorities have announced Fintech initiatives to foster innovation in the financial industry. Korea has been pushing hard for its Fintech initiative since 2015. The Enforcement Decree of the FETA was revised by the MOSF, permitting non-financial institutions to operate in the cross-border remittance market by using various methods, including the use of virtual currencies. Despite such efforts, the potential application of virtual currencies to cross-border remittances continues to be vitiated. In addition, laws and regulations are often revised in a hasty manner that Korean regulatory authorities revised the Enforcement Decree of the Act, instead of modifying the existing laws and regulations in order to integrate new technologies into the remittance market. Currently, there is no such global regulatory standard for the cross-border remittance services. Thus, discrepancies in legal systems of countries have increased risks in the cross-border remittance operation. With a recent movement to create a sustainable and secure remittance ecosystem, the authorities face many challenges as they need to establish regulatory frameworks by taking account of economic conditions of a country and complying with the international standards of AML and KYC rules. Hence, it is essential to find a way to reduce compliance costs by fostering a necessary ecosystem to accommodate new entrants lest financial stability and consumer protection be not compromised.

Above all, as the remittance operations involve many disparate players, it is important to establish multilateral regulatory frameworks on the use of virtual currencies. Similar to the FATF, global guidelines for Bitcoin or virtual currency exchanges could be designed to specify risks related to the use of virtual currencies and set minimum standards that countries need to implement. Founding global guidelines would prevent regulatory arbitrage that may arise from the use of sovereign currency and its digital counterpart. Since a new ecosystem, which is also based on a decentralized system, is qualitatively different from the past centralized ecosystem, it is inevitable to form a social consensus before establishing comprehensive regulatory frameworks for a new environment. Therefore, government authorities should encourage market participants to take part in making global regulatory guidelines through discussions and a consensus process. Global guidelines that are established by the private sector initiatives

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and the approval of government authorities would provide transparent conditions for the market, which would foster the balanced development.

In accordance with rigorous regulatory requirements, establishing a robust compliance program is vital when operating cross-border remittance services, regardless of the type of remittance service providers. Small-value money transfer businesses were able to reduce technical costs by using virtual currencies in their operations, but compliance costs remained high. In order to assist small-value money transfer businesses, the government may seek to facilitate collaboration between the incumbents and start-ups. Through open cooperation, the incumbents may provide low-cost compliance services to small-value money transfer services, allowing more small-value money transfer businesses to enter the market. By doing so, the government would be able to accelerate the development of the market and create a successful new ecosystem that is based on extreme connectivity and openness. It is most vivid in the cross-border remittance industries that strive to incorporate Fintech movement as authorities face with increasingly challenging tasks to build the level playing field for potential market participants.

Regardless of the continuous development of technologies, the government should always seek to maintain financial stability and protect consumers in the market. The laissez-faire approach and the government's endeavor to induce the market participation need to adapt to the new landscape. Furthermore, regulatory authorities should not rashly introduce laws and regulations, but establish soled regulatory frameworks by carefully scrutinizing the approach based on profound research. Ensuring solid compliance programs of small-value money transfer businesses and forming global regulatory guidelines would not only secure rights of stakeholders in the cross-border remittance market, but also contribute to financial inclusion as the use of virtual currencies in the remittance market becomes widely accepted.

References

Ariyoshi, N., Tanizawa, S. and Katagiri, H. (2016). *The Essential Points of the Amendments to the Regulation on Virtual Currency Exchange Services.* Japan: Nishimura & Asahi.

Attridge, S. (2015). *Walking a Tightrope: AML/CTF Regulation, Financial Inclusion and Remittances.* Washington, DC: The Commonwealth and La Francaphonie.

Bitcoincharts. (2016). [Chart illustration on the prices of Bitcoin in every two months]. *Pricechart*. Retrieved from https://bitcoincharts.com/ charts/bitstampUSD#rg60ztgSzm1g10zm2g25zv

Central Bank of the Republic of Kosovo. (2013). *Remittances to Kosovo: An analysis of the methods of transfer* [PDF Document]. Retrieved from http://bqk-kos.org/repository/docs/Sistemil Pagesave//Remittances%20to%20Kosovo.pdf

CFPB. (2013). *Summary of the final remittance transfer rule (amendment to Regulation E)*. Washington, DC: CFPB. Retrieved from http://files. consumerfinance.gov/f/201305_cfpb_remittance-transfer-rule_summary.pdf

CFPB. (2014). *Consumer Advisory: Risks to consumers posed by virtual currencies.* Washington, DC: CFPB. Retrieved from http://files. consumerfinance.gov/f/201408_cfpb_consumer-advisory_virtual-currencies.pdf

Corazza, C. and Endo, I. (2016, March 9). Global Remittances Working Group. *The World Bank*. Retrieved from http://www.worldbank.org/ en/topic/ paymentsystemsremittances/brief/global-remittances-working-group

Dexheimer, E. (2013, October 30). Western Union Plunges on Compliance Costs: Denver Mover. *Bloomberg*. Retrieved from https://www.bloomberg.com/news/articles/2013-10-30/western-union-plunges-on-compliance-costs-denver-mover

Dimri, N. (2014, February 11). UPDATE 2-Western Union sees lower regulatory expenses in 2014. *Reuters*. Retrieved from http://www. reuters. com/article/westernunion-results-idUSL3N0LG4GS20140211

European Central Bank. (2015). *Virtual currency schemes –a further analysis*. Frankfurt am Main: ECB. Retrieved from https://www.ecb. europa. eu/pub/pdf/other/virtualcurrencyschemesen.pdf

FATF. (2012). *International Standards on Combating Money Laundering and the Financing of Terrorism & Proliferation,* updated October 2016. Paris, France: FATF. Retrieved from www.fatf-gafi.org/recommendations.html

FinCen. (2013). *Statement of Jennifer Shasky Calvery, Director, Financial Crimes Enforcement Network, United States Department of the Treasury.* Retrieved from https://www.fincen.gov/ sites/ default/files/2016-08/20131118.pdf

FRED, Federal Reserve Bank of St. Louis. (2016). [Chart illustration on China / U.S. Foreign Exchange Rate]. *China / U.S. Foreign Exchange Rate*. Retrieved from https://fred.stlouisfed.org/series/AEXCHUS

International Fund for Agricultural Development. (2015). *The Use of Remittances and Financial Inclusion*. Global Partnership for Financial Inclusion Publications. Retrieved from https://www.gpfi.org/ sites/ default/files/documents/11-The%20Use%20of%20Remittances %20and%20Financial%20Inclusion.pdf

Japan Payment Service Association. (2016). *Q&A Corner (Park, Trans.)*. Japan: Japan Payment Service Association. Retrieved from http://www.s-kessai.jp/consumer/funds_transfer/q_and_a.html

Khan, F. (2016, September 12). Bitcoin—Because its time has come!. Retrieved from https://blog.faisalkhan.com/bitcoin-money-transfers-bitcoin-remittances-764f3e7328d7

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Korea Legislation Research Institute. (2016). *Enforcement Decree of the Electronic Financial Transactions Act*. Retrieved from https://elaw.klri.re.kr/eng_mobile/viewer.do?hseq=39682&type=part&key=8

Korea Legislation Research Institute. (2016). *Foreign Exchange Transactions Act*. Retrieved from https://elaw.klri.re.kr/eng_service /lawView.do?lang=ENG&hseq=38381

Mashayekhi, M., & Branch, C. D. (2015, February). *Remittances and Financial Inclusion*. In 13th Coordination Meeting on International Migration, New York (pp. 12-13).

Massachusetts Division of Banks and Loan Agencies. (2014). *Consumer Survey: Attitude towards Bitcoin and Other Virtual Currencies.* Boston: Commonwealth of Massachusetts, Division of Banks. Retrieved from https://www.csbs.org/regulatory/ep/ Documents/Final%20Report-VirtualCurrencySurvey2014.pdf

Middlebrook, S., & Hughes, S. (2013). *Virtual Uncertainty: Developments in the Law of Electronic Payments and Financial Services.* The Business Lawyer, 69(1), 263-273. Retrieved from http://www.jstor.org. myaccess.library.utoronto.ca/stable/43665660

Money Transmitter Law. (2016). *Money Transmitter Statutes*. Retrieved from http://moneytransmitterlaw.com/state-laws/

Office of the State Bank Commissioner. (2014). *Regulatory Treatment of Virtual Currencies under the Kansas Money Transmitter Act.* Kansas.

Okano, Y. (2016). Virtual currencies: issues remain after Payment Services Act amended. Nomura Research Institute, Ltd., vol.243.

Olowa, O. W. (2014). Remittances and Competition: A Policy Analysis Matrix Approach. Global Journal of Management and Business Research.

Ratha, D., De, S., Plaza, S., Schuettler, K., Shaw, W., Wyss, H., & Yi, S. (2016). *Migration and Development Brief April 2016: Migration and Remittances-Recent Developments and Outlook* (Vol. 26). World Bank Publications.

Ripple Labs. (2015). *Ripple as an Innovative Solution to the Ways We Pay.* San Francisco: Ripple Labs. Retrieved from https://ripple.com/ files/ candian_comment_letter.pdf

SaveOnSend. (2016, December 9). International Money Transfer Services: Lean and Hungry. *SaveOnSend.* Retrieved from https://www.saveonsend.com/blog/money-transfer-services/

Shook Lin & Bok LLP. (2016, September 6). *MAS Proposes Changes to Payments Regulatory Framework and Establishment of a National Payments Council*. Retrieved from https://www.lexology.com/ library/ detail.aspx?g=8ee5964e-b475-4234-8c96-3ac1363ea5f6

T. S. (2015, March 2). *Why does Kenya lead the world in mobile money?*. Retrieved from https://www.economist.com/blogs/ economist-explains/2013/05/economist-explains-18

The Clearing House and ICBA. (2014). *Virtual Currency: Risks and Regulation.* United States.

Trulioo. (2016, January 6). *Why Banks Struggle with Cross-Border Compliance*. Retrieved from https://www.trulioo.com/blog/why-do-banks-struggle-with-cross-border-compliance/

World Bank. (2017). *Migration and Development Brief April 2017: Migration and Remittances-Recent Developments and Outlook*. Retrieved from http://pubdocs.worldbank.org/en/ 9923714927 06371662/MigrationandDevelopmentBrief27.pdf

World Bank. (2017). *Remittance prices worldwide report*. Remittance prices worldwide report; no. 21. Washington, D.C. Retrieved from https://remittanceprices.worldbank.org/sites/default/files/rpw_report_march_2017.pdf

Yoon & Yang LLC. (2016, June 21). *Preannouncement of the amendment of the Foreign Exchange Transactions Act*. Retrieved from https://www.lexology.com/library/detail.aspx?g=ac5a1 a3c-f079-4460-bf51-045275c973da

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