THE DEVIL'S ADVOCATE REPORT

April 11, 2022

The Western Union Company

(SELL)

Price:	$19.10	**Ticker:**	WU
52-Week Range:	$15.69-$26.61	**Dividend:**	$0.94
Shares Outstanding:	395.6 million	**Yield:**	4.9%
Market Capitalization:	$7.5 billion		

Data as of April 11, 2022

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HORIZON KINETICS

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The Devil's Advocate Report

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Investment Thesis

The Western Union Company is the world's leading money transfer company – a business it first entered in 1871. The company was initially recommended as a stock to short in August of 2013 at a price of $18.37. At the time of that report, the dividend yield was 2.7% and the P/E was 13x. The yield has now expanded to 4.8% while the P/E has decreased to 10x[1], mainly because the view that Western Union is about to be disrupted has become more mainstream. The money transfer market is undergoing radical changes, as it is quickly transitioning to a digital monetary system. Most of Western Union's profitability is dependent upon the remittances of cash and a network of 600,000 agents worldwide, which necessitate many levels of intermediaries. In a digital economy, it will most likely be unable to compete on price with such a high fixed-cost infrastructure.

Western Union had over $3.0 billion of debt at the end of the most recent quarter and tangible shareholders' equity of negative $2.1 billion. This, and around $4.0 billion in annual operating expenses, make the company highly vulnerable to intensifying pricing pressure in the international remittance market. That is also the reason for why it is not in its best interest to transition to a low-fee online model—its fixed costs are simply too high.

Domestically, money transfers have been essentially costless for a decade through various fintech apps such as PayPal and bank apps such as Zelle. Internationally, though, Western Union has maintained a strong position, since apps such as the aforementioned are unable to compete in the international cash-based remittance market. However, the true threat to Western Union's business model is just emerging, since digital currencies are about to become more viable remittance options. Those include not only Bitcoin, but also its transaction-focused "second-layer" evolution known as the Bitcoin Lightning Network. Also, so-called stablecoins have grown to the point at which the two largest such coins have a combined market capitalization of $132 billion—a 26-fold increase in two years—and stablecoins can be used not just as remittances; they also allow people in high-inflation economies to keep their savings in coins pegged to the US dollar, rather than being debased in their respective national currencies.

Cryptocurrencies can be sent across the world at very low fees and, since they are so-called bearer-instruments, settlement is near instant. That is a substantial upgrade to a system that generally take three days to clear and requires a dozen intermediaries, which all charge a fee. Cryptocurrencies cut out these intermediaries and provide the remittance services essentially free, in addition to being near-instant. These services are just being rolled out, which means that Western Union's operations could soon be disrupted.

Even the central banks of the world are in various stages of introducing their own Central Bank Digital Currencies (CBDCs) which, once they are introduced widely, should be easy

[1] Based on Wall Street's consensus 2022 EPS estimate of $1.96

to send across the world and exchange for other CBDCs. These are expected to be available widely, that is, to the entire population of the states that are introducing them. It has been estimated that 20% of the world's population will use CBDCs within the next two years.[2] All of this should severely reduce the need for cash-based remittances.

Because of these new ways to transfer money, coupled with the fact that a greater percentage of the world's population now have access to either banking services or crypto wallets, Western Union's revenue is in decline and its profit margins are narrowing. Revenues from its Consumer-to-Consumer segment, which is soon to be the company's only segment, since it is in the process of divesting its Business Solutions segment, have decreased by 5% in the past decade[3]. The segment remains profitable, but less so compared to a decade ago.

Western Union's pre-tax domestic profitability declined by 77% between 2008 and 2012—from $416 million to $95 million—and since that time, it has lost a total of $442 million, with only two years (2014 and 2016) producing small positive results. This was mainly the consequence of the domestic market transforming from a cash-based to digital money-based market. Consequently, all of the company's pre-tax income, which has fluctuated between $800 million and $1.0 billion over the past four years, has been generated by the international business operations, which have yet to make the shift to digital to the same degree. Yet, the international pre-tax income in 2021, of $995 million, was virtually unchanged compared to 2010, so there has been essentially no growth even in the international segment.

Because Western Union's core technology is antiquated by modern standards, there is no reason for more advanced fintech companies such as PayPal or Block to acquire the company. The Western Union customer base is, generally speaking, at the lower end of the economic spectrum, and for money transfer and payment services, most of the major companies are interested in attracting higher-end customers.

In addition, smartphone penetration is increasing, the fees associated with mobile money transfer services are being reduced, and cryptocurrencies are becoming viable money transfer mechanisms. It is only a question of time before these services become available for the low-end users in developing market. Therefore, the majority of Western Union's customer base will soon be highly incentivized to seek alternative, lower-cost service providers.

To buy shares of Western Union, one would have to believe that the status quo will remain, that technological progress and the proliferation of international banking services will have no discernible impact on the company and its financial results, and that cryptocurrencies and CBDCs will be universally shunned as a money transfer mechanism. Since that appears unlikely, the sale or short sale of Western Union's shares is recommended.

[2] https://theanchor.io/news/roundup-77/
[3] 2021 relative to 2011

Company Overview

Background

Western Union dominated the telegraph industry in the late 19th century. It was the first communications empire, and set a pattern for American-style communications businesses as they are known today. In 1851, the New York and Mississippi Valley Printing Telegraph Company was founded in Rochester, New York by Hiram Sibley, with the goal of creating one great telegraph system with unified and efficient operations. Meanwhile, Ezra Cornell (who later founded the famous University by that name in Ithaca, New York) was running the New York & Western Union Telegraph Company. Originally fierce competitors, by 1855, both groups were finally convinced that consolidation was their only alternative for progress. The merged company was named The Western Union Telegraph Company at Cornell's insistence. The company proceeded to acquire smaller companies rapidly, and by 1860 its lines reached from the East Coast to the Mississippi River, and from the Great Lakes to the Ohio River. In 1861 it opened the first transcontinental telegraph. The company enjoyed phenomenal growth during the next few years. However, it faced intense competition from several firms, especially the Atlantic and Pacific Telegraph Company, with which it later merged in 1878.

Western Union introduced the first stock ticker in 1866, a standardized time service in 1870 and, in 1871, its money transfer service, based on its extensive telegraph network. In 1879, Western Union left the telephone business, having lost a patent lawsuit with Bell Telephone Company. As the telephone replaced the telegraph, money transfer would become its primary business.

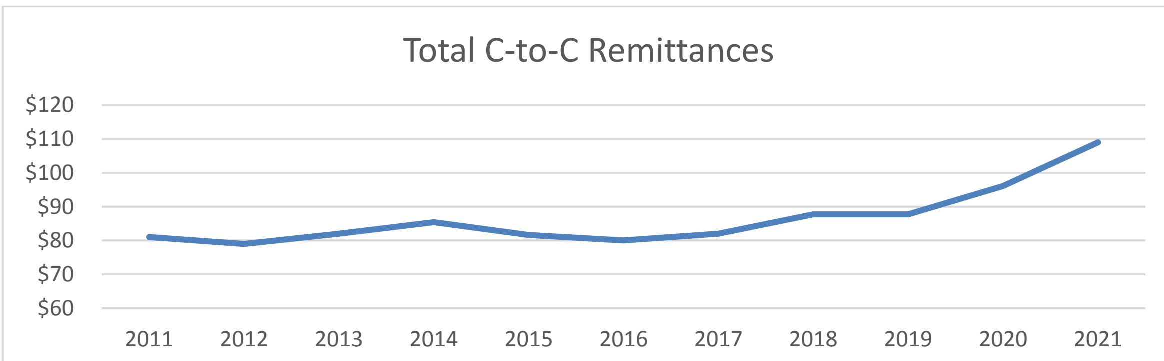
When the Dow Jones Transportation Average stock market index for the New York Stock Exchange was created in 1884, Western Union was one of the original eleven all-American companies tracked. By 1900 Western Union operated a million miles of telegraph lines and two international undersea cables. Much later, Western Union became a part of First Data Corp., and was subsequently spun off from First Data in 2006.

Overview

Presently, the Western Union Company is the world's largest money transfer company, offering its services at approximately 600,000 agent locations in more than 200 countries. The company has approximately a 15% global market share with MoneyGram International Inc. in second place with a market share of approximately 5%.

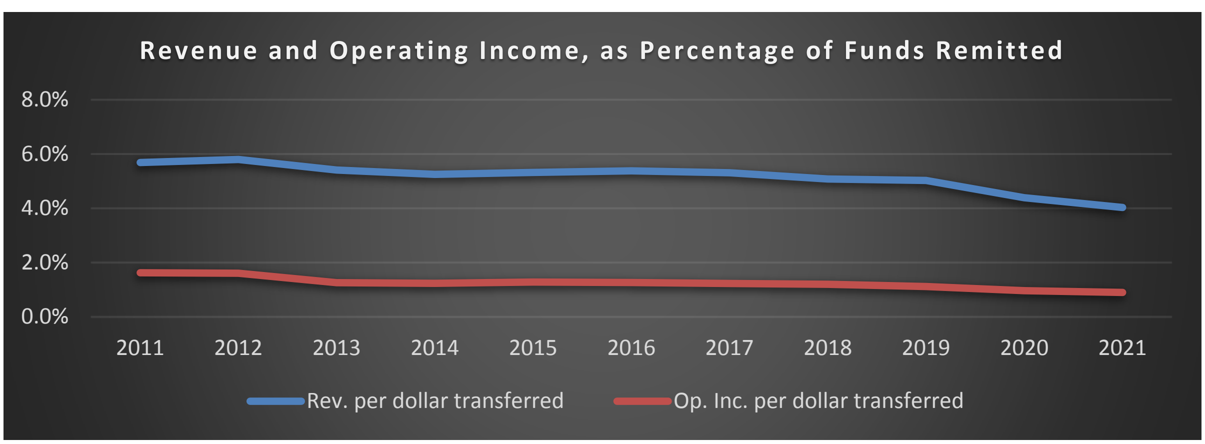
A unique advantage that Western Union has over newer competitors (so-called fintech companies) is that it has already established a market presence in the competitive corridors. Fintech companies have to expand corridor after corridor for compliance and infrastructure purposes and this process is slow and expensive, which affects margins negatively. Also, while newer entrants need to focus on customer acquisition, Western Union can instead convert existing customers to its digital platform in order to better compete with the fintech companies. This is cannibalizing its own operations, and might result in Western Union keeping the customer, but at a considerably lower profit margin[4].

The company currently completes an average of 10 new money transactions per second in its Consumer-to-Consumer segment. That business, which offers consumers the ability to pay bills and make recurring payments to vendors, in addition to transfer money from one location with a Western Union office to another, worldwide, recorded a total of 305.9 million transactions in 2021, transferring $109 billion in customer funds. That dollar amount represents a 35% improvement compared to 2011, which equates to 3.0% per annum:



(In billions)

The average amount per transaction has been relatively unchanged over the past decade, declining slightly, from $359 in 2011 to $356 in 2021. More importantly, the revenues generated by the 35% higher dollar amount transferred declined by 5% during the decade, mainly because of the fact that there were more digital transfers, which carry considerably lower fees (subject to greater competition) and, therefore, most likely are much less profitable. Therefore, Consumer-to-Consumer operating income fell 26% in the past decade:



[4] Western Union does not actually disclose the operating margin for the digital remittance business, so this is an assumption.

In 2011, Western Union converted 5.7% of the funds transferred to revenue, and 1.6% to operating income. By 2021, those percentages had declined to 4.0% and 0.9%, respectively. In other words, a 1.7% decline in the revenue conversion ratio resulted in a 0.7% decline in the operating income conversion ratio. Should that correlation hold, a further decline in the revenue conversion ratio of 1.7%—from 4.0% to 2.3%—would result in the operating income conversion ratio reaching 0.2%, which after (rising) interest expenses could result in a close to a zero net profit margin.

The company's Consumer-to-Consumer (C2C) business accounts for the majority of the overall revenue (87% in 2021). Its Business Solutions segment provided 8% while 'Other[5]' accounted for 5% of the 2021 overall revenues. That said, Western Union is in the middle of a transaction to divest its Business Solutions segment. In March 2022, it announced that the first closing of the divestiture had been completed, with the second (and final) closing expected before the end of the year.

When individuals move around the globe seeking better employment opportunities and a better lifestyle, they often leave behind family members. As these emigrants become more prosperous in their new countries, many will transfer funds back to their home country for their families' needs. Western Union's traditional process to transfer money overseas is simple. A consumer goes to a retail member of the Western Union network, pays for the transfer and a fee in cash or using a bank debit card, and the recipient receives cash at the receiving Western Union network office overseas. The company makes a profit by charging a fee for the transfer service and by offering exchange an exchange rate into the designated foreign currency that is advantageous to the company – i.e., worse for the customer than the official exchange rates. Consequently, relatively small transfer amounts can incur high fees. For example, on the Western Union website, customers can calculate the cost of a cash-pickup transferring $100 from the US to Cambodia, which is quoted as $11.99, or a 12% fee. This particular fee is unchanged from the time or our original report, almost nine years ago.

Western Union's money transfer services are used primarily for transfers when at least one of the two parties involved has no bank account. In fact, approximately 25% of Western Unions customers (originators) do not have bank accounts and probably even fewer recipients (most often in developing countries) have bank accounts. However, the more recent immigrants appear less likely to use Western Union's services compared to the prior generation of immigrants, since bank accounts and credit cards have become easier to obtain. That allows them to consider more inexpensive service offerings than those of Western Union's. In contrast, immigrants who arrived 10-20 years ago were more likely to

[5] Includes revenue from the sale of derivative financial instruments, investment income generated on settlement assets primarily related to money transfer and money order services, and other sources.

completely lack banking products in their home countries and, thus, had little choice but to use Western Union.

In general, Western Union charges the highest remittance fees when the sender is using a credit card and the lowest when a bank account is used. However, the availability of the funds to the recipient seems to be directly correlated to the fees. For example, a $100 remittance to the Philippines takes just minutes if the sender uses a credit card, but then the fee is $9.49 and the exchange rate of 50.68 Peso to the dollar is approximately 2.8% below the official exchange rate of 52.12 Peso to the dollar.[6] If a debit card is used to fund the remittance, the fee is $4.99 and the funds are available in minutes. If a bank account is used, the fee is just $3.99, but it could take four days before the funds are available to the recipient. This is true whether the recipient chooses cash pick up at an agent location or accepts the remittance into a mobile wallet.

The Money Transfer Market

According to World Bank, the remittance market expanded by 7.3% in 2021, to reach approximately $590 billion. In the past decade, the average annual growth rate has been approximately 2.2%. These are the most popular destination regions, and their respective year-over-year growth rates:

In billions	Amount	YoY Change
East Asia and Pacific	$131	-4.0%
Europe and Central Asia	$67	5.3%
Latin American and the Caribbean	$126	21.6%
Middle East and North Africa	$62	9.7%
South Asia	$159	8.0%
Sub-Saharan Africa	$45	6.2%
	$590	

India, Philippines and Mexico account for approximately 22% of the world's inbound volume, while the United States accounts for approximately 24% of the outbound volume in the world, with no other country above 5%. Saudi Arabia, Canada and United Kingdom have almost 5% of outbound volume, while Germany, France, Spain and United Arab Emirates are at 4% each.

The cost of sending $200 across international borders continued to be too high, according to World Bank, averaging 6.4 percent of the amount transferred in the first quarter of 2021. This is more than double the Sustainable Development Goal target of three percent by 2030. It is most expensive to send money to Sub-Saharan Africa (8 percent) and lowest to South Asia (4.6 percent). Not surprisingly, data reveals that costs tend to be higher when

[6] As of this writing, March 28, 2022. Source for official quote: Bloomberg.

remittances are sent through banks than through digital channels or through money transmitters offering cash-to-cash services.

Digital Remittances

Traditionally, the global money transfer business was mainly cash-based, although recently the company had to, in a way, cannibalize its traditional revenues in favor of the faster and less-expensive digital solution in order to keep up with its competitors. This is partly in response to changing consumer preferences and the fact that a greater number of consumers are now banked and, therefore, more prone to send money digitally.

To that end, digital remittances, which initially was done on the website westernunion.com and later also on its app, has expanded from 2% of revenues in 2011 to 24% of revenues now (approximately $1.06 billion). However, the company does not disclose the profit margin it realizes from that revenue channel. Since its remittance fees are considerably lower —for example, the aforementioned $100 remittance from the US to Cambodia would cost just $0.99 if the sender uses a bank account and the receiver can accept the funds into a mobile wallet—it is possible that the digital channel actually processes the majority of Western Union's aggregate amount of remittances sent by its customers, even though those remittances only amount to 24% of overall revenue, and perhaps a negligible amount of operating profits. Since that business is, in effect, cannibalizing the more profitable cash-based business, its growth rate is probably not a positive development for Western Union.

The Business Solutions Segment

As mentioned, Western Union is half-way through the process of selling its Business Solutions division. The buyers are Goldfinch Partners LLC and The Baupost Group LLC, and the price is $910 million. This segment facilitates payment and foreign exchange solutions, primarily cross-border, cross-currency transactions, for small and medium size enterprises, and other organizations and individuals. It accounted for 8% of the overall revenue, at $422 million in 2021, and it had an operating income of $96 million. Thus, it had almost exactly the same operating margin as the Consumer-to-Consumer segment, at around 22.5%. Once this transaction is finalized, Western Union's entire focus will be squarely on cross-border payments. The disposition of the Business Solutions division is perhaps a tacit admission that the deals consummated in 2009, for Custom House (at a cost of $371 million), and 2011, for Travelex Global Business Payments ($956 million), did not provide sufficient synergies. In fact, the selling price now, in 2022, is $417 million less than the cost of acquiring these businesses 13 and 11 years ago, respectively.

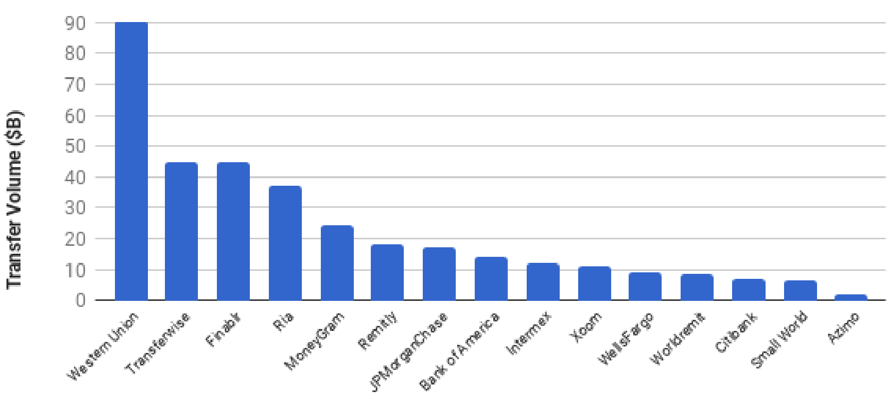
In addition to losing this segment, Western Union recently announced that it will suspend its operations in Russia and Belarus in response to the ongoing crisis in that area of the world. The company does not disclose how large these markets are in terms of revenues.

Intense Competition from FinTech Companies

Since 95% of US households have bank accounts, according to the FDIC, they have a wide selection of financial technology (fintech) companies to choose from, and with a bank account, the charges for money transfers, domestic or international, decline dramatically. Within the US, as well as within many other countries, these services are generally free, but pricing could amount to 10% or more for international transfers.

Transfer fees for Western Union differ based on the amount transferred and destination (inbound corridor). India, Philippines, and Mexico are among the most popular inbound corridors for money transfer activity. These three corridors are also the primary focus for online transfer company Xoom Corp. (which is now owned by PayPal). Xoom charges approximately 1.5%-2.0% for a transfer to India, Philippines is 4%-5% while transfers to Mexico are charged around 2.0%. Some of these charges are fixed, but the majority is based on the amount and baked into the exchange rate. In other words, the exchange rate one receives on Xoom is generally a few percent below the official exchange rate. In addition to Xoom, Western Union's digital service, WU.com, competes in this space, as do Ria, TransferWise, WorldRemit, Remitly and Azimo, among others. In terms of relative size, seveonsend.com offers the following chart:

Money Transfer Providers Cross Border Volumes in the Previous 12 Months



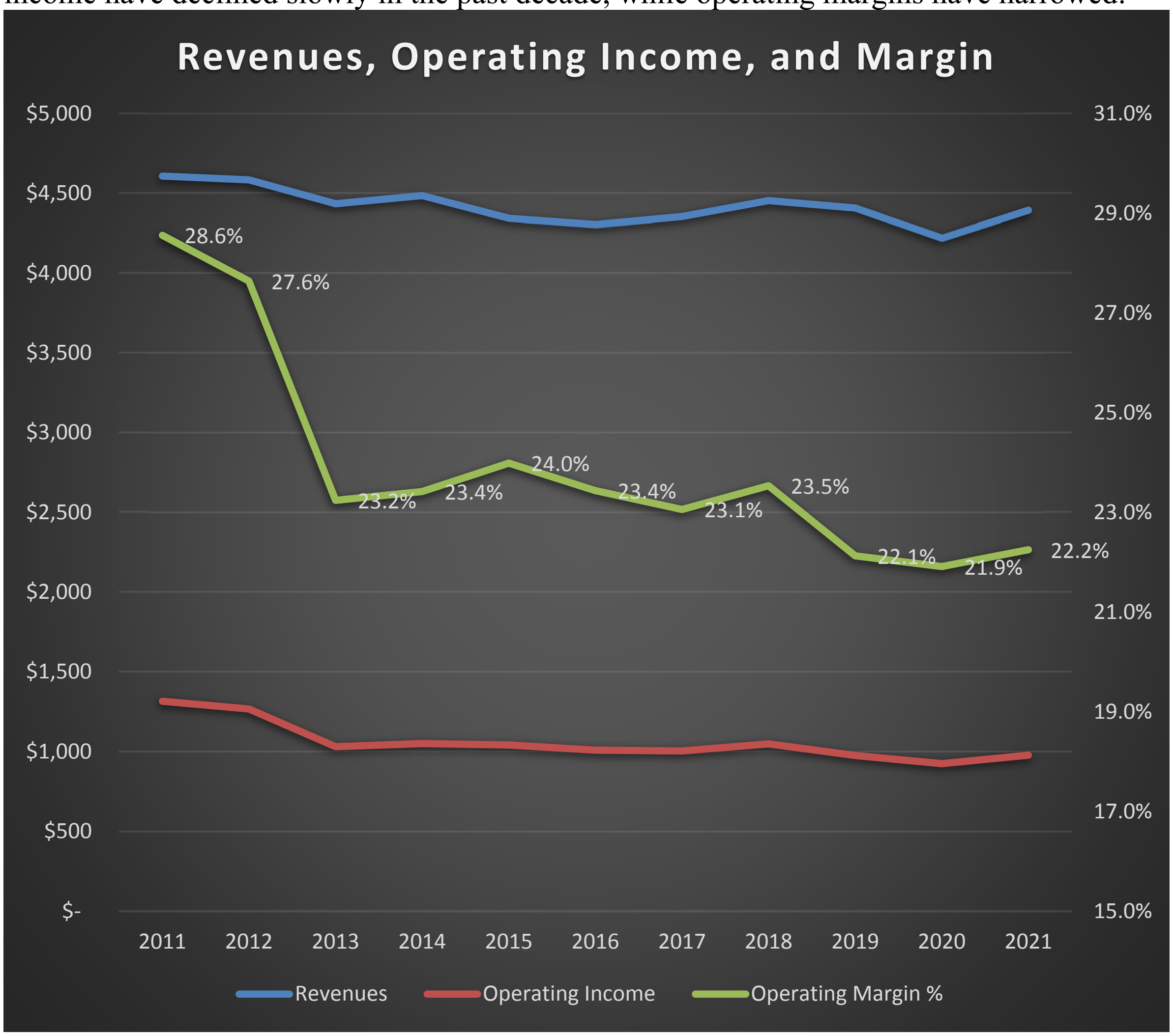
Combined, these 15 providers account for approximately $350 billion in transaction volume, as compared to the $650 billion total global remittance figure, as provided by the World Bank Group. This suggests that there are many smaller providers.

As technological progress is rapid in most developing countries, most recipients will probably have access to the Internet, mobile phones and/or online banking within the next 5-10 years. Some services, such as PayPal, already allow consumers to transfer money internationally for a 0.5%-2.0% fee, as long as the recipient can get an account with PayPal.

Thus, if the new norm will be 2% for international money transfers, and provided Western Union's principal amount transferred will remain unchanged at $109 billion per year, its revenues would decline to $2.2 billion from $4.4 billion in 2021, a reduction of half, if it were to match those rates. With approximately $4 billion in operating expenses, such a price reduction would most likely eradicate the company's entire profitability.

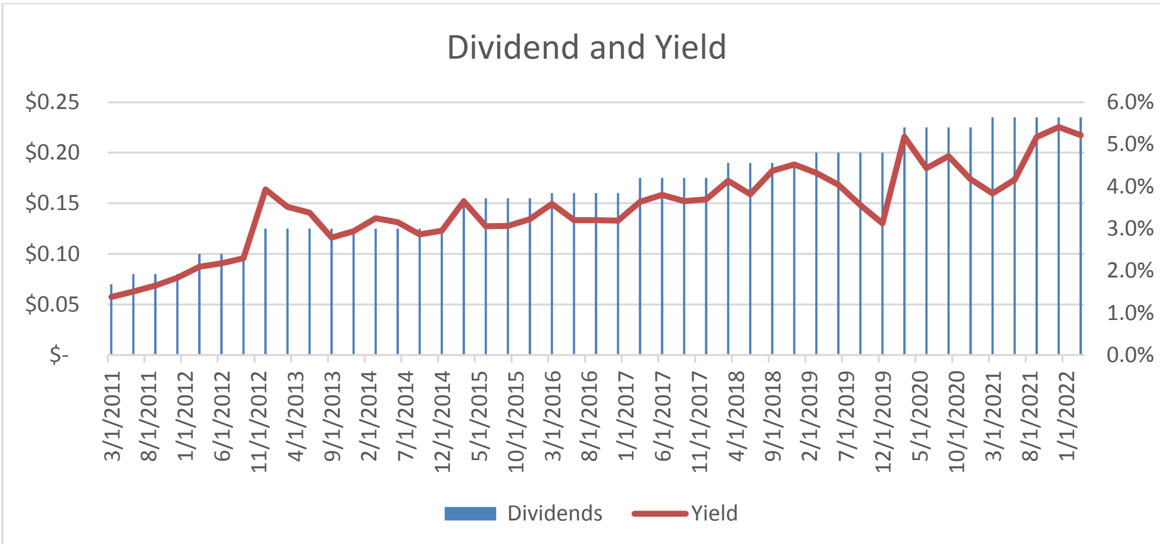
Western Union as a Bond-Substitute

Western Union's revenues have not kept pace with inflation. In fact, revenues and operating income have declined slowly in the past decade, while operating margins have narrowed:



(In millions. Data is for Consumer-to-Consumer segment, which is soon to be the only segment.)

The company has greatly increased its dividend over the past decade, from $0.10 per quarter to $0.24 per quarter, and the yield has expanded from 2.1% to 5.2%:



Since revenues and earnings are stagnant at best, the company could be compared to a bond with a slightly increasing coupon payment in the form of dividend. Consequently, in the absence of growth, the question becomes whether investors will be satisfied with a 4.8% dividend yield that cannot keep up with current inflation and, perhaps, might soon not keep up with the interest on a 10- or 30-year Treasury bond.

Some investors might still believe the Federal Reserve's earlier point of view that inflation is transitory, or its more recent suggestion that it likely to come down in the not-too distant future. However, should they come to believe that the recent inflation is here to stay, the market might begin to discount that 7.9% inflation as 'the new normal'. In that case, bonds and bond-like instruments would need to be repriced to provide a positive real return.

Currently, the 10-year Treasury note yields approximately 2.4%. So, a note with a 2.4% coupon would trade at par if the yield to maturity were 2.4%. However, if interest rates were to increase to 4.4%, the price of that note would decline approximately 17%. For a 30-year bond, the change in yield to maturity from 2.4% to 4.4% would result in a 35% decline in price. Since investors, to a degree, view Western Union as a bond substitute, it is likely that its shares will experience similar declines, should interest rates indeed rise meaningfully.

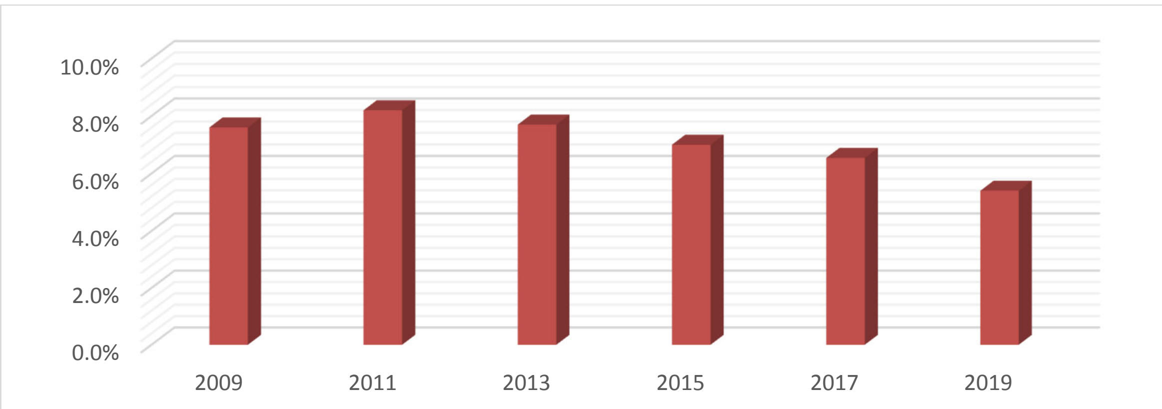
While it is difficult to predict inflation, if the current 7.9% inflation[7] were to persist, the so-called risk-free rate should be similar to this rate, and corporate bond yields should be slightly higher at perhaps 10%. If Western Union's dividend yield were to match such hypothetical corporate bond yields, the shares would trade at around $9.40 ($0.94 dividend, divided by 10%).

[7] As indicated by the most recent reading of the Consumer Price Index (CPI)

An equity, though, does not have the legal claims on an issuer's earnings and assets that a bond does. Presently, the interest coverage remains substantial, at well over 8x. However, with the negative earnings leverage that Western Union faces if the ongoing displacement by the digital transfer competitors continues to reduce the average transfer fee, the shares – if viewed as a bond substitute – should be priced to reflect the yield of a bond at future risk of a credit rating downgrade to below investment grade.

Fewer Unbanked Households

The Federal Deposit Insurance Corporation (FDIC) estimates that 5.4% of US households, or 7.1 million, did not have access to banking services (they were 'unbanked') as of June 2019.[8] This percentage has declined steadily, after reaching 8.2% in 2011:



(Source: FDIC)

The FDIC states that "About two-thirds of the decline in the unbanked rate between 2011 and 2019 was associated with improvements in the socioeconomic circumstances of U.S. households over this period." Consequently, if Western Union depends on the unbanked, which it has done historically, it appears that this target market might continue to shrink over time, which explains why its digital revenues are expanding at the expense of its core cash-based business. This process is further along in the US than in the developing markets to which the funds are primarily sent, although they are following a similar trajectory.

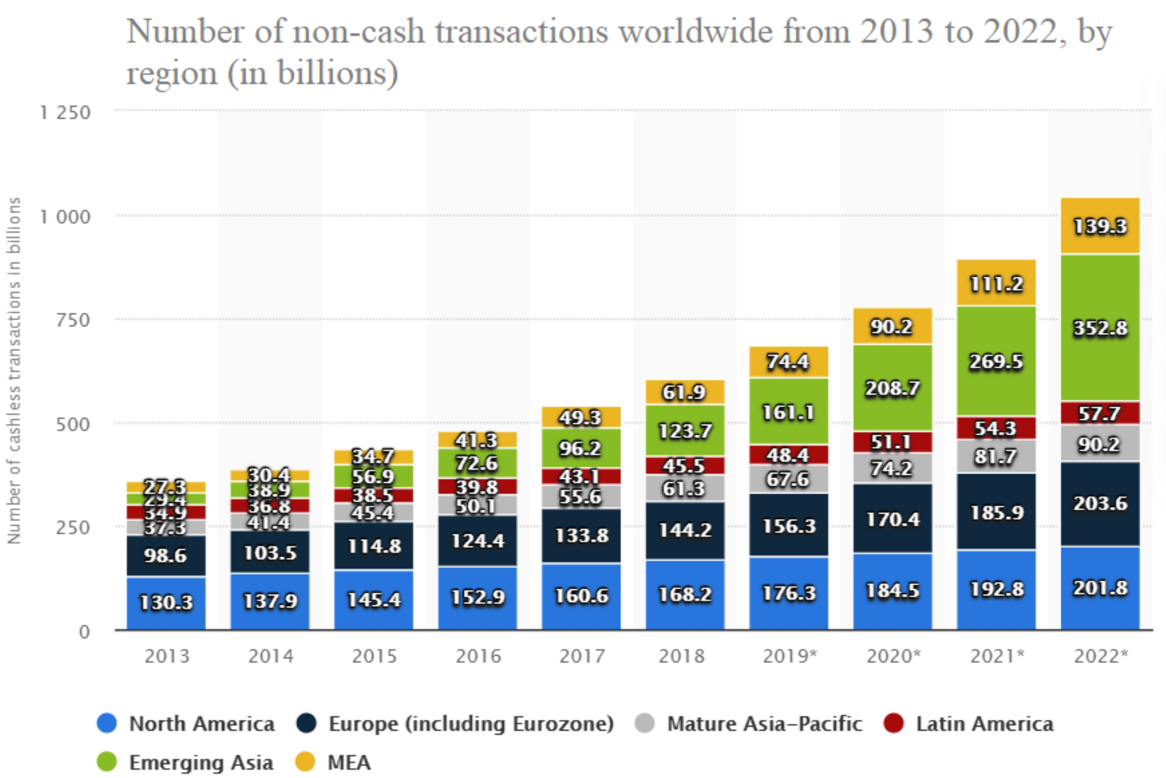
The problem for Western Union is that once people are no longer unbanked, they are no longer forced to choose the company's highest-margin (most expensive) solutions, that is, the cash-based remittance business, but can use digital solutions, of which Western Union is just one of many providers, and not always the lowest-cost provider. Since the pricing for such services appears to be 'a race to zero (profitability)', the company might not have a viable business model once the transition to digital is complete.

[8] https://www.fdic.gov/analysis/household-survey/index.html

Cash Transactions Becoming Increasingly Rare

According to a recent survey by payment processor TSYS, nearly 70% of US consumers prefer to pay with debit or credit cards. Only 14% of interviewed specified cash as their preference. Other territories are further along when it comes to removing cash from their economies. The European Union, for instance, is the third leading region in the world in cashless adoption. A 2018 report from MasterCard indicates a 97% per-year increase in contactless transactions in the EU since 2014. Approximately half of China's population relied solely on cashless transactions, according to a 2020 study by eMarketer. Sweden leads the pack, potentially becoming the first completely cashless nation by March of 2023, according to national research from the Central Bank of Sweden.

Yet, as the chart from Statista below illustrates, the most rapid growth in non-cash transactions over the past decade are observed in Emerging Asia and the Middle East/Africa.



Source: https://zerocap.com/economies-are-going-cashless/

In fact, the number of non-cash transactions in those two segments, combined, exceed all of the non-cash transactions completed in North America and Europe. While there is a considerable difference in the population of the regions being compared, the fact that Emerging Asia and Middle East/Africa are expanding at 25% and 30% per year, respectively, versus around 5% and 10% in North American and Europe, indicates that the gap is closing rapidly. This is an ominous sign for Western Union since a higher degree of digitization (non-cash payments) lead to less demand for its lucrative cash-based money transfer option.

Bitcoin's Lightning Network – A Competitor without Overhead Expenses

A potential disruptor to the entire worldwide remittance business, is the emerging Lightning Network, which can be described as Bitcoin's second layer payment protocol, similar to how the Internet layer is a second layer on the TCP/IP protocol. The Lightning Network was first proposed in 2015, and beta testing, which began in 2018, is still on-going.

Bitcoin itself is a bearer instrument that does not require the trust of a third-party, but the base blockchain is not (by design) optimized to scale for rapid transactions, since it can support just around seven transactions per second. In addition, micro-transactions, such as paying for a cup of coffee, are not something that the Bitcoin blockchain is optimized for, since transaction fees can be high on small amounts, and the transactions cannot be confirmed for several minutes.

The Lightning Network intends to solve both these problems, since it is a decentralized[9], off-chain technology[10], that has the capacity to process tens of thousands of transactions per second, similar to the throughput rates on platforms like the Visa or MasterCard networks. Furthermore, unlike the traditional payment networks, the Lightning Network is 'trustless', which means that there are no intermediaries that will get a percentage of the transaction, nor does it have any employees, offices or shareholders. Therefore, transactions can be processed essentially within a second, and at very low fees.

The Lightning Network can essentially be thought of as a bar tab between counterparties, with the opening and closing of the tab serving as the equivalent of an on-chain bitcoin transaction. The proverbial "bar tab" is constructed using a so-called "2-of-2 multi-signature wallet", which allows for users to take control of their funds in case of a hostile counterparty, all without a central trusted authority.

The Lightning Network has grown significantly since its beta launch in March 2018, partly because developers have focused on making the user experience easier for people without a technology background, so consumer adoption has been positive. To that end, more simple and intuitive mobile wallets have been introduced, including Wallet of Satoshi, Zap, Breez, Blue Wallet, and Éclair. These make it relatively easy to keep a Lightning balance in a mobile wallet and use it to pay for products and services, or send funds to other Lightning

[9] Decentralized means that it is operated by thousands of individual nodes (servers running the software and affirming blockchain transactions), spread out over the world, as opposed to a central entity, like a bank.
[10] Off-chain refers to the fact that transactions on the LN are not entered on the bitcoin blockchain (base layer) until the channel between the agreed-upon parties is closed.

wallets worldwide. Furthermore, in addition to the user experience focus, developers and Lightning Network proponents have spent the past three years improving:

- Network liquidity and resilience
- Protocol and capability development
- Fiat currency to Lightning on-ramps
- Funding new Lightning-focused start-ups
- Consumer and merchant adoption

Once those issues have improved sufficiently, the people of the world will have the opportunity to, for the first time, use an open monetary network that only requires an Internet connection, and to be natively interoperable with everyone else in the world who also uses it. Traditionally, these monetary networks have been proprietary, as opposed to open, and operated by single companies or groups of companies. This includes the Visa monetary network, the Block (formerly Square) monetary network, the SEPA monetary network, the ACH monetary network, and the PayPal network, which do not talk to one another.

The Lightning Network has several advantages over these. Being open source, anyone can design apps (including wallets) or payment services that are compatible with the Lightning Network. Unlike the traditional networks, the Lightning Network can achieve physical bearer instrument clearance without any intermediaries and without any requirements of credit, almost instantly. While a Visa transaction can go through in a second, the actual clearing and settlement can take 1-3 days. The Lightning Network accomplishes its almost instant settlement because it is based on a natively digital bearer instrument—bitcoin—whereas the other networks are based on fiat currencies such as the US dollar.

Consequently, the Lightning Network, when it is fully scaled, will be the fastest, cheapest, most globally available network, since it is the first open monetary network. It will also, thereby, be the most inclusive. As such, it will be a formidable competitor to any financial services company that relies on fee-based transactions. The international money transfer operators with the highest fees, and that includes Western Union, should be disrupted first.

Lightning Network Growth

While the Lightning Network continues to be in beta testing, it has expanded greatly in those approximately four years. Since the last time it was discussed in this publication (July 2021), the number of Lightning Nodes in operation have increased from 23,123 to 35,475 (54% growth), while the number of payment channels have improved from 57,671 to 87,203 (51%)[11]. The network capacity has expanded from 1,883 bitcoin to 3,528 (87%), and the value of those coins have increased from $58 million to $138 million (138%). That is the improvement over the past eight months.

[11] Source: https://1ml.com/. As of 3/15/22

For a longer-term perspective, as of December 2018 (just over three years ago), there were 16,500 channels, 4,300 nodes and $2 million worth of bitcoin capacity in the Lightning Network. Consequently, the growth rates since that time have been 430%, 725%, and 6,800%, respectively.

Obviously, this has to continue to scale in order for the monetary network to compete on a global scale, but if the current rate of expansion were to continue, the network capacity would approach $10 billion in another three years. That may understate the potential, since the growth rates could be accelerating (increasing more logarithmically), once the network effects kick in to a greater degree. The networks effect is known as Metcalfe's Law, which can be explained as a phenomenon whereby increased numbers of participants in the network disproportionately increase the value of a good or service (Investopedia).

While the Lightning Network has been in beta testing, there have been few reasons for consumers and merchants to embrace this technology en masse, but that appears to be changing. For example, Block (formerly known as Square), which is led by Jack Dorsey, recently enabled Lightning payments on its popular Cash App. With this new feature, its users can send Bitcoin to any Lightning, or on-chain, Bitcoin address. Block generates around $8 billion (run-rate) per year in Bitcoin revenue, mainly from users buying and selling bitcoin, and it had 44 million active users as of December 2021. Therefore, this move by Block has greatly improved the network effect of the Lightning Network as a payment/transfer mechanism.

Merchants should be highly motivated to accept such Lightning payments from the Cash App, since the fees are essentially zero compared to the 2%-4% that is regularly charged to payments made through MasterCard, Visa and American Express credit cards. For example, Dunkin Donuts gets charged up to 300 basis points by Visa for final clearance. The Lightning Network charges nothing for final clearance. The intermediaries included for a Visa transaction render it unable to compete on price with the Lightning Network, since it cannot economically provide the service at an expense of just 10 basis points.

Technically, it is easy for merchants to enable Bitcoin Lightning payments through the Cash App —a customer will scan a QR code in a store, or online to make a payment/transfer— and with such a large installed base, merchants should be well incentivized to set up their Bitcoin Lightning channels. Importantly, this is not bound by geography. Someone in India or the Philippines can send their Lightning QR code to their relatives in the US and the transaction would be as fast and inexpensive as for US residents paying for a donut at their local coffee shop.

Also, it is likely that PayPal/Venmo will follow Block's lead and offer its users Lightning transactions, in which case the technology would become mainstream. It should be remembered that PayPal followed the Cash App lead in late-2020 when it began to offer its users the capability to buy and sell Bitcoin in its app. Venmo followed approximately six months later, in April 2021. If PayPal/Venmo were to enable Lightning payments, Apple might feel pressured to support Bitcoin/Lightning payments as well in its Apple Pay app, in which case the network effect could expand exponentially. The number of potential users would go from just thousands last year to perhaps closer to one billion (Cash App has approximately 44 million users, PayPal 426 million, Venmo 75 million and Apple Pay 50 million, and they are all expanding their user bases at double-digit rates).

In El Salvador, over 70% of the population do not have a bank account, which means no access to a monetary network. Approximately 70% of the country's population receives remittance payments and many El Salvadorians rely on payments from family members abroad. Until recently, they had to operate with cash. Furthermore, the country receives approximately $6 billion per year in remittances, according to the World Bank, and this represents around one-quarter of the $24.6 billion Gross Domestic Products (GDP) in 2020. Western Union charges fees of up to 33% for online transfers to El Salvador, which severely reduces the amount customers actually receive. But with Lightning Network, El Salvadorians with a mobile phone and Internet connection now have native access, and can instantly access a monetary network with near-instant physical bearer settlement without any intermediaries

As a result, El Salvadorian President Nayib Bukele estimates that Western Union, MoneyGram, and other remittance service providers collectively could lose $400 million a year in remittance fees.[12] El Salvador's move to adopt Bitcoin as an official currency is the first of what could be many that will follow in their footsteps. For example, Tonga receives over 35% of its GDP via remittance payments, according to IMF. The incentive to dramatically reduce fees, or eliminate them, would provide an immediate boost for the citizenry. For countries that rely heavily on remittances, that is a significant leap forward: when a vast proportion of the population operates outside of the banking system, the Lightning Network promises to promote financial inclusion.

This could be highly disruptive to an entire remittance industry, similar to an international version of Venmo or PayPal, but since fees are approaching zero, the proprietary networks are unlikely to be able to compete. The network effect of the open standard should continue to result in higher usage, which improves the utility of the network which, in turn, attracts more users. Consequently, should the Bitcoin Lightning Network gain a foothold in countries such as India, Mexico and the Philippines, Western Union could relatively quickly lose the majority of its revenues. Therefore, the Lightning Network could be one of the most significant advancements for money as a technology. It will have access to all 8 billion people on the planet, similar to the Internet, and in contradistinction to the proprietary networks of companies such as PayPal and Visa.

[12] www.cnbc.com/2021/09/09/el-salvador-bitcoin-move-could-cost-western-union-400-million-a-year.html

Other pending digital currency displacement risks
It is also possible that stable coins will become a significant means of moving money. Stable coins are pegged to an underlying currency, such as the US dollar, and do, therefore, not fluctuate in value the way Bitcoin does. There are many such stable coin providers, but the two largest—Tether and USC—have a combined $134 billion of coins outstanding. Just like Bitcoin Lightning Network, they can be sent around the world almost instantly and for very low fees.

Lastly, central banks around the world are all in various stages of introducing so-called Central Bank Digital Currencies (CBDCs), with China already in the process of introducing its digital renminbi. The intention is that citizens will pay, receive and send digital representations of their respective country's currency. This could all happen relatively quickly, as a digital dollar might debut within a few years. Any such development would be very disruptive to companies such as Western Union, since CBDC, almost by definition, must be digital and ready to be exchanged and sent abroad, or received from abroad.

Western Union cannot possibly compete with these soon-to-go-mainstream remittance services that are nearly free, when it has to pay salaries for 11,500 employees, in addition to office/leasing costs, agent fees and regulatory/compliance expenses, among many other expenses. Therefore, the crypto/digital currency market has the potential to permanently disrupt cross-border payments to the benefit of both senders and receivers, and particularly the third world who are the overwhelming recipients of these payments.

Valuation

Compared to established Fintech companies
Some market observers might believe that Western Union, because of its transitioning to a more digital money transfer model, should be considered a fintech company, such as Block, Inc. (formerly Square) and PayPal, both of which trade at more around 5x trailing revenues. However, such comparisons disregard the fact that Western Union is not growing its revenues, unlike the two other companies mentioned, which are expected by Wall Street to improve revenues by around 20% in 2023, with earnings expected to expand considerably more rapidly than that. Also, Block and PayPal are mainly payment services companies and offer a wide range of products and services, including cryptocurrency trading for their users.

While it is true that a growing proportion of the remittances facilitated by Western Union are in digital form rather than cash, this is partly the result of consumers having greater access to banking services, as well as computers, Internet access and smartphones. The company's digital business model is in all likelihood considerably less profitable than the cash business[13], so the fact that digital is cannibalizing the cash business is not a positive

[13] The actual profitability of the digital remittance business is not disclosed by the company

development that should result in higher valuation multiples. As the table below indicates, Western Union's revenue- and earnings growth are not comparable to those of Block and PayPal (or, more accurately, there is no growth):

	2018	*2019*	*2020*	*2021*	*2022E*
Block					
Revenues	$3,298	$4,714	$9,498	$17,661	$18,889
EPS	$(0.09)	$0.81	$0.44	$0.33	$1.32
PayPal					
Revenues	$15,451	$17,772	$21,454	$25,371	$29,370
EPS	$1.71	$2.07	$3.54	$4.60	$4.65
Western Union					
Revenues	$5,590	$5,292	$4,835	$5,071	$4,760
EPS	$1.87	$2.46	$1.79	$2.19	$1.94

(Revenues in millions. 2022 estimates based on Wall Street's consensus.)

Rather, companies such as Block and PayPal might expand at the expense of Western Union, particularly as Block now offers Lightning Network transfers/payments and PayPal is likely to follow. Importantly, these services only compete with Western Union's digital remittance business, not the physical cash delivery and physical cash pick up business, which has considerably higher margins, but which is also experiencing intensifying competitive pressure from new digital technologies. Therefore, comparisons to fintech companies are not justified.

Valuation Based on Dividend Yield

Western Union is valued at around 10x the consensus earnings for 2021. It appears that no meaningful growth in revenues or earnings are projected between 2021 and 2023. Yet, the shares yield almost 5%, which makes the stock attractive for dividend-focused investors and ETFs. Perhaps mainly for this reason, the stock is held in more than 100 ETFs, and more than 23% of the shares are held by ETFs alone. For example, it is included as a 2.55% position in the ProShares S&P Technology Dividend Aristocrats ETF (TDV), a 1.18% position in Invesco S&P Ultra Dividend Revenue ETF (RDIV), and a 1.16% position in SPDR S&P Global Dividend ETF (WDIV).[14] This is in addition to other passive strategies/indexation mutual funds, which are generally much greater in terms of assets and exposures compared to ETFs. In fact, 827 institutions hold as much as 105% of Western Unions float. This is only possible because an estimated 13% of the shares are sold short.[15] Insiders, on the other hand, hold just around 0.7% of the shares.

[14] https://www.etfchannel.com
[15] Source: Bloomberg

If it can be accepted that the dividend yield is the main reason investors are attracted to the stock, then Western Union's shares are vulnerable to a meaningful increase in interest rates and inflation. While its revenues have declined steadily for a decade, its expenses would almost certainly rise if inflation were to remain at the recent level of almost 8.0%. All else equal, the company would probably report lower (declining on a year-over-year basis) earnings if that were the case.

In addition to that, as a bond-substitute, its valuation might decline if interest rates were to rise further, and most market observers expect around 8 additional quarter-point interest rate hikes in the Federal Funds rate in the current cycle. If the 10-year Treasury yield, which is presently 2.40%, were to increase by a similar amount, it would yield 4.40% towards the end of 2023. If so, it is highly unlikely that shares of Western Union would yield just 4.8%, which is presently the case. More likely, the shares would trade at a price that gives investors a dividend yield of perhaps 3.0% higher than the 10-year Treasury, which has been the case over the past three years. If so, a dividend yield of around 7.4% could be expected for late-2023, assuming the rate hikes materialize, which is an entirely different debate. Assuming no increase in dividend (since inflation will likely negatively impact its profit margins), the shares would trade at $12.70 to provide such a yield.

Alternatively, if inflation remains at current levels of 7.9%, investors would lose purchasing power unless the dividend yield were higher than that. To get a real return of 2.0%, assuming Western Union continues to be unable to expand its profitability, a 9.9% yield would be required, valuing the shares at $9.50 ($0.94 dividend, divided by 9.9%). These scenarios assume a business-as-usual competitive environment and do not incorporate any market share losses to CBDC/cryptocurrency-based remittance alternatives or further margin erosion from the continued shift in revenue mix to digital transfers.

Valuation of a Deteriorating Business Model

The domestic operations' profitability declined steadily from $416 million in 2008 to a negative $28 million in 2013, and it has never recovered. The international operations appear to be in a similarly unfavorable competitive situation now as the domestic operations were in 2008. Since Western Union generated $831 million in free cash flow in 2021, it is perhaps far-fetched to believe that this will be entirely eradicated in the short-term, although an alternative way to view this is that only a relatively modest reduction in the average remittance fee it charges, from around 4.0% to 3.0%, might result in an approximately 50% decline in operating profit[16], and an even greater impact to net profits, given that the interest expense is not likely to decline. As Western Union's revenue per transaction has declined from 7.1% in 2006 to 4.0% in 2021, a further decline to 3.0% appears to be just a question of time.

[16] Based on the historical relationship between those measures, as discusses above.

If so, once the consensus earnings forecasts begin to decline greatly on a year-over-year basis, the P/E ratio of 10x will probably decline, and the share price would fall faster as a lower P/E estimate is applied to lower earnings. The valuation of a company with rapidly deteriorating business fundamentals usually ends up close to tangible book value, but since the tangible book value of Western Union is sharply negative, it is not applicable as a theoretical floor valuation in this particular situation.

Investment Summary

Western Union's revenues and earnings have declined slightly over the past decade. The reason is mainly that it used to be highly profitable to service the unbanked, largely immigrant, communities since this business was mainly cash-based, and competition was very limited in this segment. Over time, the cash-based business has dwindled, as the formerly-unbanked have gotten better access to banking services, computers and smartphones and, therefore, have started to use digital transfer services, for which there is much greater competition since a global network of physical offices and agents—the former barrier to entry—are no longer required.

As a result, while Western Union converted 7.1% of the total remittance amount to revenues in 2006, this has now declined to 4.0% in the most recent quarter. This is simple a consequence of technological disintermediation. In the digital transfer realm, companies compete almost exclusively based on price, since there is no brand loyalty among the customer base. Thus, even though Western Union offers digital remittance services, these are, in effect, substituting for higher-margin cash-based transfers, and the profit margin of these digital transfer services does not seem to be sufficient to cover the large overhead expenses.

The pandemic has quickened the pace of the digitization of the worldwide economy. In March 2020, the stablecoin Tether (USDT) had a $4.6 billion market capitalization while USD Coin (USDC) had approximately $440 million. Presently, those two stable coins have an aggregate market value of $132 billion—a 26-fold increase in two years. That has outpaced the overall cryptocurrency market, which has expanded 14-fold, from $150 billion to $2.1 trillion over the past two years. In addition, governments across the world are now in the process of introducing Central Bank Digital Currencies (CBDC), a technology that is already operational in certain places, such as China. CBDCs, like stable coins, will undoubtedly be easy to send overseas, and governments would like their entire populations to participate. Consequently, it appears the worldwide economy will be dominated by digital money and, if so, Western Union could shortly find itself obsolete, unable to compete with the considerably lower-priced competing products/technologies.

Perhaps the greatest threat to Western Union's business model, which has yet to fully materialize, is the Bitcoin Lightning Network. It appears to be superior in terms of transaction speed, settlement time and transaction cost. Western Union will essentially be competing against a global computer network that has no employees, no offices, no data centers—no gross- or operating expenses whatsoever. It is all being run by private nodes in a decentralized manner. Since it is open source, users simply need access to an Internet-connected computer or smartphone. Block (formerly Square) is now offering Lightning services to its 44 million users, and bitcoin is already legal tender in El Salvador. Since merchants stand to save the 2%-4% they pay credit card companies, which is an enormous proportion of the typical retailer pre-tax margin, this technology could be adopted quickly.

The percentage of the world that does not have a bank account declines every year. Non-cash transactions are expanding rapidly in Emerging Asia, the Middle East and Africa, which are all important markets for Western Union, and those markets combined now register more non-cash transactions per year than North American and Europe. This development is unfavorable to Western Union since it likely cannot compete in a digital world, due to its high fixed cost of operation, leverage and dependence on a network of 600,000 agents. All digital competitors, so-called fintech companies, generally offer remittances for less than a 2% fee, as compared to the 4.0% average fee Western Union charges.

Ultimately, Western Union seems destined to be disrupted by less expensive digital transfer services that are now in the process of penetrating the global economy. While the shares might appear attractive at 10x consensus 2022 earnings, there is a high probability that earnings will decline, perhaps precipitously, during the next few years, which could result in even lower P/E ratios being applied to lower earnings. The tangible book value of negative $2.1 billion cannot provide a theoretical floor for the valuation. For these reasons, shares of Western Union are hereby recommended for sale and short sale.

THE WESTERN UNION COMPANY
CONSOLIDATED BALANCE SHEETS
(Unaudited)
(in millions, except per share amounts)

	December 31, 2021	December 31, 2020
Assets		
Cash and cash equivalents	$ 1,208.3	$ 1,428.2
Settlement assets	2,843.5	3,821.4
Property and equipment, net of accumulated depreciation of $650.4 and $659.9, respectively	129.4	150.4
Goodwill	2,034.6	2,566.6
Other intangible assets, net of accumulated amortization of $731.8 and $1,044.6, respectively	417.1	505.0
Other assets	737.7	1,024.7
Assets held for sale [a]	1,452.9	—
Total assets	$ 8,823.5	$ 9,496.3
Liabilities and stockholders' equity		
Liabilities:		
Accounts payable and accrued liabilities	$ 450.2	$ 500.9
Settlement obligations	2,843.5	3,821.4
Income taxes payable	870.7	928.9
Deferred tax liability, net	203.8	188.9
Borrowings	3,008.4	3,067.2
Other liabilities	269.4	802.4
Liabilities associated with assets held for sale [a]	821.9	—
Total liabilities	8,467.9	9,309.7
Stockholders' equity:		
Preferred stock, $1.00 par value; 10 shares authorized; no shares issued	—	—
Common stock, $0.01 par value; 2,000 shares authorized; 393.8 shares and 411.2 shares issued and outstanding as of December 31, 2021 and December 31, 2020, respectively	3.9	4.1
Capital surplus	941.0	885.1
Accumulated deficit	(537.2)	(543.1)
Accumulated other comprehensive loss	(52.1)	(159.5)
Total stockholders' equity	355.6	186.6
Total liabilities and stockholders' equity	$ 8,823.5	$ 9,496.3

(a) Includes balances associated with the Company's Business Solutions business, which were held for sale as of December 31, 2021.

THE WESTERN UNION COMPANY
CONSOLIDATED STATEMENTS OF INCOME
(Unaudited)
(in millions, except per share amounts)

	Three Months Ended December 31,			Twelve Months Ended December 31,		
	2021	2020	% Change	2021	2020	% Change
Revenues	$ 1,284.8	$ 1,271.8	1%	$ 5,070.8	$ 4,835.0	5%
Expenses:						
Cost of services	715.3	759.2	(6)%	2,896.4	2,826.5	2%
Selling, general, and administrative	252.7	285.5	(11)%	1,051.3	1,041.2	1%
Total expenses [(a)]	968.0	1,044.7	(7)%	3,947.7	3,867.7	2%
Operating income	316.8	227.1	40%	1,123.1	967.3	16%
Other income/(expense):						
Gain on sale of noncontrolling interest in a private company	—	—	(b)	47.9	—	(b)
Pension settlement charges	(109.8)	—	(b)	(109.8)	—	(b)
Interest income	0.3	0.3	(19)%	1.4	3.2	(57)%
Interest expense	(25.8)	(28.1)	(8)%	(105.5)	(118.5)	(11)%
Other income/(expense), net	(0.6)	(0.3)	71%	(21.7)	3.1	(b)
Total other expense, net	(135.9)	(28.1)	(b)	(187.7)	(112.2)	67%
Income before income taxes	180.9	199.0	(9)%	935.4	855.1	9%
Provision for income taxes	12.1	21.9	(44)%	129.6	110.8	17%
Net income	$ 168.8	$ 177.1	(5)%	$ 805.8	$ 744.3	8%
Earnings per share:						
Basic	$ 0.42	$ 0.43	(2)%	$ 1.98	$ 1.81	9%
Diluted	$ 0.42	$ 0.43	(2)%	$ 1.97	$ 1.79	10%
Weighted-average shares outstanding:						
Basic	400.1	411.7		406.8	412.3	
Diluted	401.7	414.5		408.9	415.2	

(a) For the three and twelve months ended December 31, 2020, the Company incurred $12.0 million and $36.8 million, respectively, of expenses related to its restructuring plan, the majority of which were related to consulting service fees, severance, and other costs. For the three and twelve months ended December 31, 2020, $2.0 million and $4.5 million, respectively, were included within Cost of services, and $10.0 million and $32.3 million, respectively, were included within Selling, general, and administrative.

(b) Calculation not meaningful.

This report was produced by Horizon Kinetics ("HK"). The following persons employed by HK contributed to this report: Murray Stahl, Chairman, Steven Bregman, President, and Peter Doyle, Managing Director. HK is located at 470 Park Avenue South, New York, NY 10016. At the time of this report, there are no planned updates to the recommendations. To the extend HK has provided previous recommendations concerning the same issuer(s) during the preceding 12-month period, such recommendations do not differ from the recommendations contained here.

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