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MAXIMIZING SHAREHOLDER VALUE? SPOTIFY DIRECT PUBLIC OFFERING

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The typical method of going public has traditionally been an initial public offering (IPO), whereby a company works with an underwriter syndication to establish a price at which shares will be offered to the public before listing them. The purpose of this paper, however, is to evaluate whether IPOs are truly the best method for taking a company public. To answer this question, at least partially, we explore the upsides and downsides of a direct listing using the music streaming company Spotify (NYSE: SPOT) as a case study. Having officially registered to go public with the SEC and direct listed on April 3, 2018 with \$149.01 closing price and a \$26.5 billion market capitalization, Spotify becomes the first major private company to list its shares directly to the public on the NYSE without using an underwriter. Although direct listings come with their fair share of risk, this study suggests that a direct listing can benefit large private companies by eliminating the losses associated with underpricing, offering quick liquidity to the firm and its current shareholders, and decreasing per share dilution. If Spotify's direct listing continues to be successful, it could send ripples across Wall Street and the broader world of tech unicorns that alternative changes how large private companies choose the way of going public.

INTRODUCTION

The purpose of this paper is to examine why a large company like Spotify would want to go with a direct listing, also known as direct public offering (DPO). The IPO market, though down the past half-decade, still represents the most common way to raise capital from investors. Why should Spotify circumvent a system that, although not the most cost-effective method of going public, still works? For small companies that might not be able to afford the heavy fees paid to underwriters for their services, a direct listing might make more sense (and indeed, most companies that have opted for direct listing have been small biotech firms). But for a music streaming giant like Spotify, a company with reported valuations as high as \$23 billion, the cost-minimization argument doesn't really make sense (Reuters, 2017). The short answer seems to come back to the idea of maximizing shareholder value. By taking this approach, Spotify isn't raising any new capital. Instead, current shareholders will have the opportunity to sell their stake (with the exception of Tencent, which is currently in a three-year lockup period). The lack of new shares issued also means no underwriters, something the company itself suggests may lead to a more volatile offering.

Spotify is an online music-streaming app launched by Daniel Ek and Martin Lorentzon in October of 2006. Even though the name Spotify is synonymous with music streaming, the streaming company was actually born of the startup Spotify AB, which was founded in April of 2007 in Stockholm, Sweden. Spotify offers a free and premium version of its service, the free version coming with advertisements and limited skips, while the paid version comes with offline music downloads, no ads, and improved sound quality. The company competes with the likes of Apple Music, Pandora, and SoundCloud for the title of top music streaming service.

A direct listing is, in essence, a way to bypass the middleman. In a traditional IPO the offering company approaches investment banks and asks the bank to help the company issue its shares to the public. The investment bank then goes to institutional investors (mutual funds, pension funds, etc.) and gauges their interest in the company's stock and how much they would be willing to pay for it. The investment bank then puts all of this information together and calculates the price that would result in the maximum number of shares (or the entire offering) being sold. After determining the market value of the company's shares, the investment bank will purchase the shares from the company at a slightly lower price so that the bank can make a profit (the "gross spread") when the bank turns around and sells the shares to the market on the day of the IPO. For this reason, the IPO process is a relatively stable one; investment banks make sure that there are enough buyers of the stock to decrease price volatility, and the issuing company is guaranteed the capital that the bank paid for the shares.

A direct listing, on the other hand, is a significantly more risky strategy. On February 2nd, 2018, the SEC approved the New York Stock Exchange's (NYSE) proposal to allow qualifying private companies to become directly listed on the exchange without an IPO, opening the door for Spotify to go public in a non-traditional way (Brady, Korff, & Zeidel, 2018). In a direct listing, the shares of the issuing company aren't issued through an underwriter; in fact, they aren't 'issued' at all. On the day of the direct listing, employees or private investors who currently hold private shares of a stock that will be directly listed will just be able to trade those shares on public exchanges (if they so choose) at a price assigned by the market. No unowned shares will be listed at the opening of the market. Because of this, there is no capital generated for the company in a direct listing. Therefore, for companies who are going to public markets to raise capital, a direct listing doesn't make much sense. Direct listings are significantly more risky than a traditional IPO because there isn't an underwriter guaranteeing a price for the shares by connecting willing buyers and sellers. This means that a company that has their shares directly listed could see the price per share skyrocket, tank, skyrocket then tank, wind up somewhere in the middle, or not sell at all if there are no willing buyers. This raises the following question: What incentive does a largely successful private company like Spotify have to go against the status quo and go public via the risky route of a direct listing?

As of January 2018, Spotify is the industry leader in the online music streaming business. Spotify had over 71 million monthly active users (MAUs) to its paid streaming service and 159 million monthly active users across both the paid and free versions. This growth shows a steady uptrend in total subscribers over the past three years, and the trend is expected to continue into the future. Spotify's subscriber base dwarfed the next largest competitor, Apple Music, which amassed 36 million paid subscribers (Sisario & De La Merced, 2018). Spotify is available across the globe and is available for most devices, including smartphones, computers, and tablets. Spotify generates nearly all of its revenue through advertisements on its free version and generates revenue from its monthly subscription fees on its premium version. The company pays royalties to the artists who post their music on the service in proportion to the number of total songs streamed on the app, encouraging artists to post their music to the platform. According to Spotify's IPO Registration Statement (Form F-1), revenues were \$2.37 billion in 2015, \$3.6 billion in 2016 and \$4.99 billion in 2017 (SEC, 2018). Despite these revenues, Spotify actually reported a loss of \$1.5 billion in 2017, but \$1 billion of that loss was due to a one-time equity swap with Tencent (SEC, 2018). Valuations still remain optimistic in the \$15-\$20 billion range,

buoyed both by the growth of the music streaming industry, which grew 50% from 2016 to 2017, and by the projected continued increase in the growth of Spotify’s user base (Sisario & De La Merced, 2018).

Figure 1. Global Streaming Music Subscription Market. Source: MIDiA, 2017.

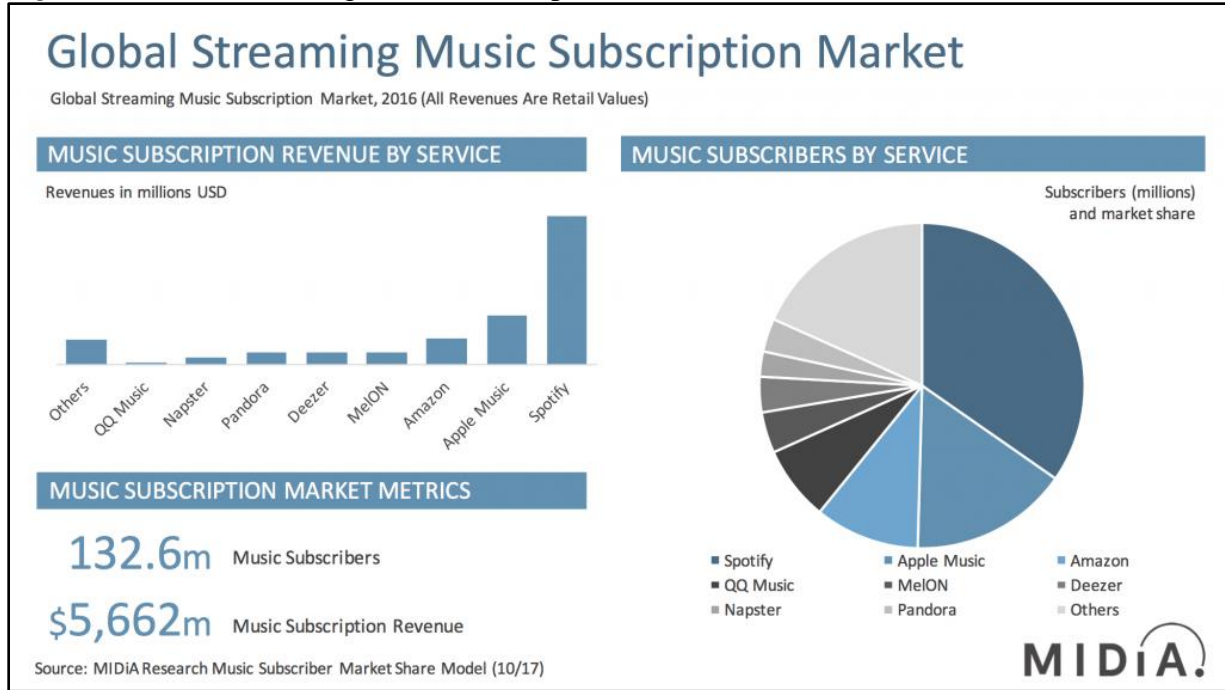


Figure 2. Number of Paying Spotify Subscribers Worldwide. Source: Spotify, 2018.

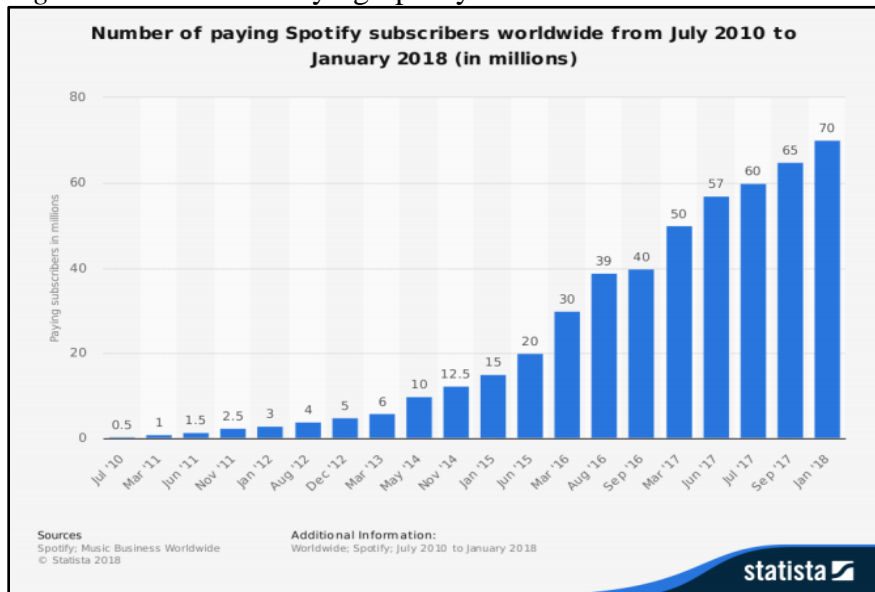
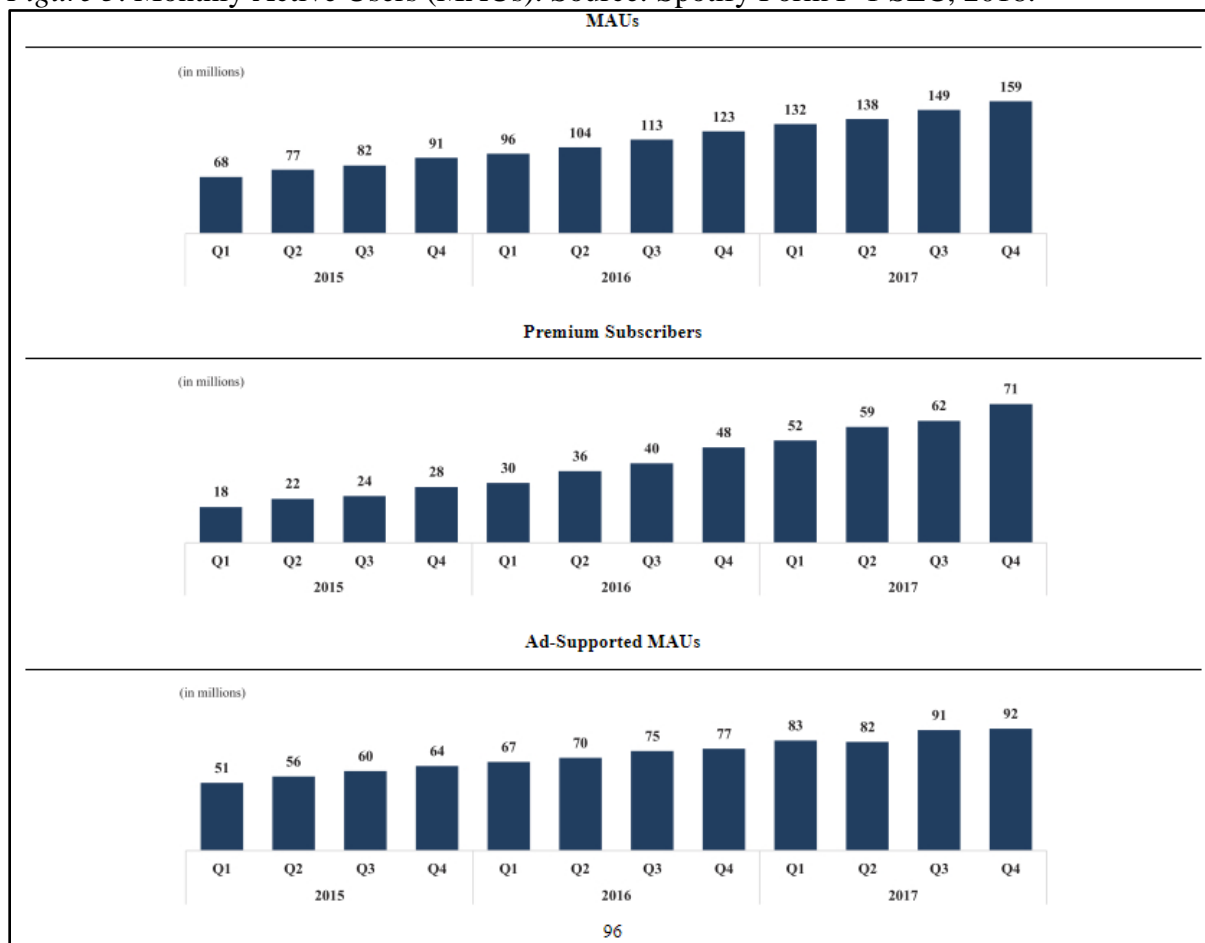


Figure 3. Monthly Active Users (MAUs). Source: Spotify Form F-1 SEC, 2018.



We examine Spotify within the context of direct listing because what Spotify chose is something no other large private company has ever done, and the company's success or failure could send a ripple through Silicon Valley and the larger community of so-called tech "unicorns", or private companies with valuations of over \$1 billion. Not only are direct listings relatively uncommon (only 11 in the past 20 years), but the direct listing of a company as large as Spotify (conservative valuations are between \$15-20 billion) has never been done before. Among the 11 companies to be directly listed in the past 20 years, the median market cap was only \$530 million (Pozen, Rajgopal, & Stoumbos, 2017). Why a company as big as Spotify would choose to go off the path when it comes to public offerings was an interesting question that we attempt to answer in this paper.

The Issue with Issuing

IPOs and the Underpricing Problem

The end goal of any successful IPO is to maximize the amount of capital raised from investors so that the company can take that capital and use it to fuel future development and growth. To achieve this goal, the issuing company obviously wants to sell their stock to the market at the highest possible price at which investors are willing to buy. Even though the

investment bank will buy the shares from the issuing company at a slightly lower price than it will turn around and sell those shares to the market, the gross spread that the underwriter earns on a given IPO is around 7% (Chen & Ritter, 2000). In the end, the gross spread the underwriter earns is a direct cost of a public issuance of shares, one of the inherent costs of going public. Problems arise when indirect costs exceed the direct costs of an issue, and one of the biggest indirect costs an issuing company can be exposed to is underpricing. The underpricing phenomenon has been documented in numerous empirical studies (see, for instance, Beatty & Ritter, 1986; Daily, Certo, Dalton, & Roengpitya, 2003; Ritter & Welch, 2002 among others.)

Underpricing, at its core, is when an investment bank (underwriter) buys shares from the issuing company, sells those shares to the market, and then the value of those same shares closes at a significantly higher price on the first day of trading. This obviously creates a problem for the issuing company because significant underpricing of shares means that the company could have raised more capital per share for its stock from the investment bank. If the volume of shares issued is large enough, the issuing company can lose out on a lot of capital simply because the investment bank didn't price the shares correctly. From 1970 to 2000, the average underpricing on the day of an IPO was 31.37 percent (Kim, Paulia, & Saunders, 2003). Over the last 50 years, IPOs have been underpriced by 16.8 percent on average, amounting to \$125 billion in value that issuing companies left on the table (Ritter, 2004). For the issuing company, losing out on a such a large amount of capital can be a big deal. A perfect example is LinkedIn, who went public through an IPO in May of 2011 using Bank of America and Morgan Stanley as underwriters. Over the course of the first day of trading, LinkedIn saw its stock price rise by 90 percent on the day of the IPO, from \$45 per share to over \$80 per share (Blodget, 2011). In this case, the underpricing of LinkedIn's stock lost LinkedIn \$175 million (Blodget, 2011). But why?

One theory for the widespread underpricing of IPOs involves the idea of informational asymmetry, as proposed by Kevin Rock (Rock, 1986). This theory rests on the idea that there are two types of investors who require different returns. The uninformed investor, the theory goes, will bid on all IPOs, without regard to the ability of the stock to deliver returns that beat the market average. The informed investor, on the other hand, will only bid on IPOs that they think will provide returns that are better than the market. This means that only uninformed investors will bid on weak IPOs, and when the returns aren't sufficient, they will leave the market, leaving only the more picky informed investors to bid on IPOs (Rock, 1986). The problem that the uninformed investor experiences in this situation is a variant of adverse selection known as the 'winner's curse', which describes a situation where an investor who gets their entire order filled for a 'hot' IPO will experience poor returns (Levis, 1990). This is because the informed investor won't bid on a bad IPO, lowering demand for the shares and allowing the uninformed investor to have their entire order filled. In essence, the uninformed investor 'wins' by getting their entire order filled, but because their entire order was filled, demand must have been low, which means that the stock must not provide good returns, or else demand would have been higher. If demand had been high, the uninformed investor wouldn't have gotten their order filled. With the uninformed investors out of the market, the underwriter needs to bring the uninformed investor back to the market to create a market for the shares and sell the entire IPO issue. The underwriter needs the uninformed investors to be willing to buy the stock because informed investors don't exist in a large enough quantity to buy the entire issue, which causes illiquidity. To prevent this issue, the underwriter lowers the price to below market value, to the point where the uninformed

investor recognizes an opportunity to earn a return and bids on the stock, allowing the underwriter to sell the entire issue. This lower issue price is one theory as to why underpricing happens.

An interrelated theory is the changing risk composition hypothesis (Ritter, 1984). This theory argues that riskier IPOs will be underpriced by more than 'safe' IPOs because underpricing occurs as a way to encourage investors to buy risky IPOs. To buy a more risky (high beta) stock, the Capital Asset Pricing Model (CAPM) states that investors will need a higher expected return in order to be convinced to buy. The more risk an investor takes on, the higher the return they should receive in return. If more IPOs are considered 'risky' in terms of expected return, underwriters will underprice the shares to raise the expected return and thus induce more investors to buy. Such a hypothesis would explain why IPO underpricing has been on the uptrend over the past 25 years, from 7% from 1980-89, to 15% from 1990-98, to 12% in the post-dot.com crash years of 2001-03 (Loughran & Ritter, 2004). Also, see Figure 4 that illustrates the average first day return and aggregate money left on the table from Jay Ritter's website (2018) and see Figure 5 for slightly decreased IPO volume in recent years.

Another explanation for underpricing is that before the offer price is established, underwriters communicate with big institutional investors to gauge the level of interest in the stock and to gather opinions about a suitable price. Underpricing is a way that the investment bank can reward these investors for truthfully revealing what they think the stock is worth and the number of shares they would like to buy (Sherman, 2005).

A final reason for underpricing is that the underpricing is a kind of insurance for the investment banks. Conceivably, an investment bank could be sued successfully by angry customers if it consistently overpriced securities. Underpricing guarantees that, at least on average, customers will come out ahead. Tinic (1988) develops and tests the hypothesis that underpricing serves as a form of insurance against legal liabilities and the associated damage to the reputation of the investment banker.

While we can't know the true motive behind Spotify electing to go public via a direct listing instead of a traditional IPO, it is safe to assume that avoiding the underpricing problem at least factored into their decision. In addition, because Spotify does neither hire underwriters to set the issue price nor to sell the new issues, they do not need to invoke another mechanism of the over-allotment allocation or green shoe provision.

Figure 4. Average First Day Return and Aggregate Money Left on the Table. Source: IPO Statistics for 2017 and Earlier Years. IPO Data. Ritter, 2018.

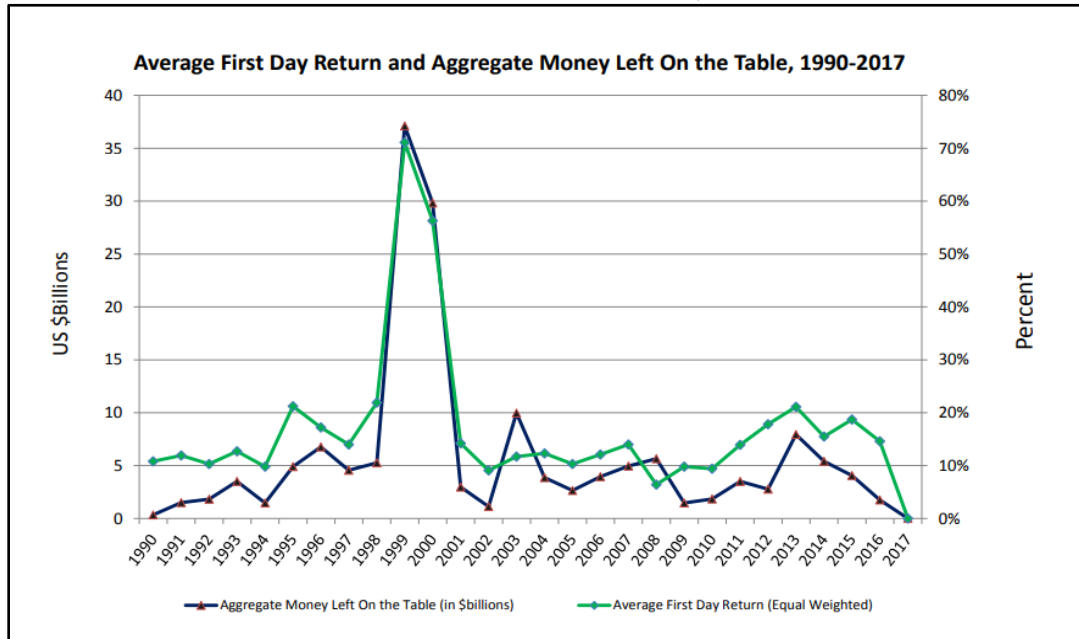
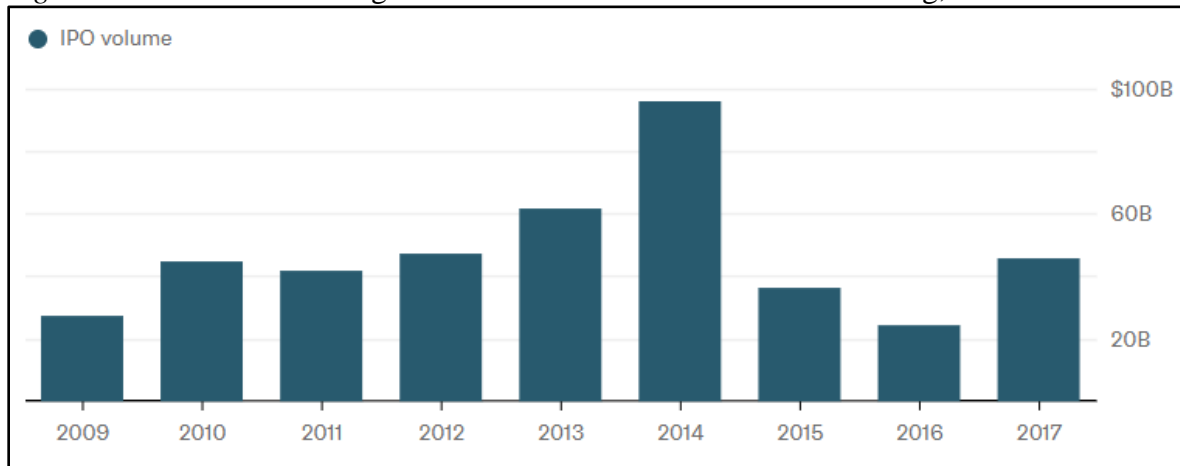


Figure 5. IPO Volume during the 2009-2017 Period. Source: Bloomberg, 2018.



Can Direct Listing Avoid the Underpricing Problem?

On a fundamental level, it would seem that a direct listing would avoid the underpricing problem inherent to underwritten IPOs because market forces will determine the price of the stock. Unlike an IPO, direct listings don't involve selling shares to an underwriter who then sells the shares to the market. With a direct listing, privately held shares of a company just become publicly tradable on the day of the offering, which eliminates the chance that the underwriter didn't price the shares correctly. It would seem that the issuing company can't lose any value with a direct listing because the price determined by the market is the price at which the shares are sold.

Direct listing should resolve the problems posed by the information asymmetry theory. Underpricing occurs with information asymmetry because the underwriters need to drum up support for the IPO, so they price the stock lower to entice the uninformed investor with a superior return. A direct listing should avoid this problem for two reasons. The first is that there is not an underwriter trying to drum up support for the IPO, so they can't purposely underprice the stock to assure that enough investors and institutions purchase shares. The second reason goes hand-in-hand with the first reason. In a direct listing, no new shares are issued, so there is no need to drum up support to sell new shares because there are no new shares to be sold.

The risk composition hypothesis also doesn't seem to apply in a direct listing scenario for the same reasons as the information asymmetry theory. The risk composition hypothesis rests on the assumption that underwriters need to underprice the shares at the opening of the market in order to convince investors to purchase shares of a risky IPO and sell the entire issue. With a direct listing, there are no shares for sale because all of the shares were already owned by private investors prior to becoming publicly traded, so there is no incentive to underprice in order to sell more shares. There is also no 'opening' price set during a direct listing because the price is determined by market forces from the get-go, as opposed to the initial price being set by an underwriter. This should indicate that underpricing is not possible with a direct listing because all market information is factored in from the start and no one (i.e, the underwriter) has advanced information. This also means that there is no concrete way to determine if the stock was 'underpriced' when it was issued because all prices are set by the market, not individual or groups of underwriters.

Spotify's case is slightly different because they will enlist the help of Morgan Stanley (in accordance with NYSE regulations) as an advisor to consult with the designated market makers of the NYSE in helping to set the opening price of the shares based on the number of buy and sell orders placed on the exchange. This means that Spotify's stock price will not be set by truly pure market forces, but rather by the number of buy and sell orders on the exchange as guided by Morgan Stanley. Morgan Stanley will simply help to collect the total number of buy and sell orders to determine what the starting price should be. Since Morgan Stanley will not be underwriting the shares or making a profit off of selling them to the market, the underpricing hypotheses still do not appear to apply to Spotify (Castillo, 2018).

Despite what common sense might say, it's hard to gauge whether the underpricing effect figures into the price of directly listed stocks simply because there is less data available. The companies that have traditionally gone public via direct listing have been small biotech firms with smaller market caps or companies concerned about insufficient liquidity in the IPO process. Over the last 20 years, 11 companies have gone public via direct listing, with a median market cap of \$530 million (Pozen, Rajgopal, & Stoumbos, 2017). However, it stands to reason that by virtue of the fact that there is not an outside third party setting the initial price of newly issued stock, it is harder (if not impossible) for a stock to be underpriced. Whether such a line of thinking can apply to the direct listing of a large company like Spotify remains to be seen.

The Shareholder Value Question: Is A Direct Listing Better for Spotify's Shareholders?*Dilution and Direct Listing*

Direct listing could be the most efficient anti-dilution measure seen to date. Although the majority of dilution is seen traditionally in early investors, the benefit provided to equity holders by a direct listing is substantial. In a traditional IPO, a company typically sells a set number of existing shares as well as a substantial amount of newly issued shares. Issuing these new shares dilutes the equity position of the current stakeholders. However, this is normally disregarded because the act of going public raises the value of the preexisting equity position enough to where the dilution is counterbalanced by an increase in share value and in turn total position value.

Spotify's approach is different because their capital structure allows them to directly list all of their current shares, providing both sufficient volume and allowing the company to not issue any additional shares. Supply is then capped, which allows for all current holders to maintain their same amount of equity and capitalize on any price increase as a result of public demand. Not only does this allow shareholders to maintain their equity but it also allows major stakeholders to keep control of the company without needing to purchase more shares to obtain extra votes.

When looking at Spotify's F-1 filing we are provided with information on the holdings of shares by officers and executives. From this information, we are able to look into an alternative dilution factor, that being the exercising of stock options, restricted stock units, and warrants. The shares of existing stockholders will not be diluted upon opening but will see some dilution when these options are exercised. As is shown in Table 1 Panel B, Spotify has the ability to issue an additional 10,300,840 shares, which represents a 6.16 percent increase in total shares (SEC, 2018). Table 1 Panel B then outlines the potential dilution scenarios that could take place before any options are exercised, if all options are exercised, or if all but that individual's options are exercised. The greatest dilution that could be seen would be experienced by Daniel Ek if all options are exercised except his own. In this scenario, Ek sees a percent ownership decrease of 0.721 percent, which amounts to a loss of 144.2 million at a \$20 billion valuation. However, if Ek exercises his own options he could alternatively increase his percent ownership by 1.55 percent, which represents a gain of 310 million dollars at the same 20-billion-dollar valuation (SEC, 2018).

Table 1.

Stock Ownership of Spotify

Panel A: Dual Class Structure of Spotify

Name	Ordinary Shares		Beneficiary Certificates ⁽⁷⁾		Percent of Total Voting Power
	Number	Percent	Number	Percent	
Daniel Ek ⁽¹⁾⁽⁵⁾⁽⁶⁾	46,792,520	25.7%	162,274,000	42.8%	37.3%
Martin Lorentzon ⁽²⁾	23,612,720	13.2%	216,927,200	57.2%	43.1%
Sony Music Entertainment International Ltd ⁽³⁾	10,164,560	5.7%	—	—	1.8%
Entities affiliated with TCV ⁽⁴⁾	9,616,720	5.4%	—	—	1.7%
Tiger Global ⁽⁵⁾	12,183,440	6.9%	—	—	2.2%
Tencent ⁽⁶⁾	13,352,440	7.5%	—	—	2.4%

Panel B: More Detailed Stock and Option Ownership

Name of Beneficial Owner	# of shares owned	max shares	% of ordinary shares*	% of ordinary shares**	% of ordinary shares***	# of shares underlying options	Restricted stock units****	Warrants
Daniel Ek	41,763,280	47,087,240	24.969%	26.519%	24.248%	523,960		4,800,000
Martin Lorentzon	21,692,720	23,617,320	12.970%	13.301%	12.351%			4,600,192,000
Barry McCarthy	142,680	1,797,640	0.085%	1.012%	0.081%	1,654,960		
Katarina Berg	12,840	136,800	0.008%	0.077%	0.007%	116,080		7,880
Seth Farbman		245,400	NIS	0.138%	NIS	231,680		13,720
Alex Norström	47,560	422,280	0.028%	0.238%	0.027%	371,400		3,320
Gustav Söderström	17,800	626,000	0.011%	0.353%	0.010%	596,360		11,840
Christopher Marshall	5,240	18,640	0.003%	0.010%	0.003%			13,400
Shishir Mehrotra	99,560	104,160	0.060%	0.059%	0.056%			4,600
Heidi O'Neill		3,320	NIS	0.002%	NIS			3,320
Ted Sarandos	3,760	13,680	0.002%	0.008%	0.002%			9,920
Thomas Staggs	31,040	35,640	0.019%	0.020%	0.017%			4,600
Cristina Stenbeck		4,600	NIS	0.003%	NIS			4,600
Padmasree Warrior		4,600	NIS	0.003%	NIS			4,600

*before options using # of ordinary shares = 167,258,400
** If all options exercised
*** If all options exercised except their own
**** Vesting stock options
NIS = no initial shares

Note. Tables adapted from Spotify Form F-1 SEC, 2018.

Due to the possible gains or losses, these officers and executives could end up in a game theory situation where individuals who exercise their options first would receive the greatest payout. However, if they wait and collectively exercise their options, Spotify founders and employees could receive the greatest collective payout. Due to this situation Spotify's major shareholders may create internal restrictions on the selling of shares or create an internal sell price for sell orders. This could negate the game theory aspect and create a beneficial situation for all shareholders.

Spotify's Dual Stock Structure and Control Rights

Another interesting aspect of Spotify's direct listing is the voting and control rights that will be associated with the public listing of the company's existing shares. In another abnormal move, Spotify's co-founders Daniel Ek and Martin Lorentzon have opted to maintain majority control over the company through the use of a dual class stock structure.

A dual class stock structure is a system in which a company will have two separate classes of stock (often Class A and Class B), each with different voting power. Class A shares may be given to executives and founders of the company, giving them more voting power per

share of stock so as to allow them to steer the company in the direction they think is best. Class B shares are often issued to the general public and carry limited voting rights. For example, Class A shares may have 5:1 voting rights, meaning that holders of Class A stock get five votes for each share of stock they have in the company. Class B shares, on the other hand, may only have 1:1 voting rights, meaning that holders of Class B stock only get one vote per share of stock. This idea of a dual class structure fundamentally runs counter to the idea that those who provide the capital (outside investors) should have a say in how the company is run. Nevertheless, for better or worse, the splitting of ownership into two separate classes of stock allows one group to exercise majority control over how the company operates today and in the future.

The dual class structure, while still uncommon among the majority of U.S. public companies, has grown in popularity over the past few years, with major tech companies like Alphabet (Google) and Facebook opting to issue two different classes of stock. Spotify, on the day its shares went public of April 3, 2018, becomes the next big tech company whose founders have opted to maintain majority control.

In Spotify's case, founders Daniel Ek and Martin Lorentzon own 25.7 percent and 13.2 percent of total shares, respectively, while retaining 80.3 percent of the voting power (SEC, 2018). Because Ek and Lorentzon own nearly 40 percent of the company but retain 80 percent of the voting power, the two founders have approximately 2:1 voting rights (see Table 1 Panel A).

While a dual class structure has its fair share of benefits, namely the maintenance of control for the founders and the ability for the founders to be forward-thinking without fear of being ousted by outside shareholders in a proxy fight, such a structure could have downsides, especially as it relates to the price of the stock. Maintaining a stock price that is both high and stable is especially important for Spotify because of their direct listing, which eliminates the price floor set by an underwriter and exposes the stock to increased volatility. With this in mind, Spotify will want to do everything it can to keep its stock price at a stable (and preferably high) level. A dual class stock structure won't help Spotify in this regard. One of the downsides of a dual class structure is that it potentially decreases the value of the shares that don't have voting rights. For Spotify, there is less value in the common ('Class B') stock because the stock comes with fewer voting rights, so investors can't exercise control over the company in which they invested. This could potentially lead to a situation where Spotify's share price is lower simply by virtue of the fact that the common shares don't come with sufficient voting rights.

These aren't issues without precedent either. When SnapChat went public in March of 2017, the company only offered non-voting shares of common stock to the public, allowing co-founders Evan Spiegel and Bobby Murphy to maintain complete control over decisions affecting the direction of the company. As has been well documented, Snap's stock price plummeted from the \$17 IPO price down to \$11.83 in August of 2017 (Balakrishnan, 2017). One of the reasons for the price drop may have been the fact that the S&P refused to list Snap's dual-class, non-voting shares on their indices, meaning that Snap missed out on the demand for its shares that is usually generated by index funds. While this decline in value can't be entirely attributed to the lack of voting rights for common shares, the control structure of Snap's shares certainly played a role. Whether the issues Snap faced will manifest themselves with Spotify remain to be seen, but

Ek and Lorentzon are clearly taking a risk by maintaining such a large portion of their company's voting power.

Spotify is obviously willing to take on the risks of a lower priced stock in order for its founders to reap the benefit of having near total autonomy when it comes to making decisions about the current and future direction of the firm. With a dual stock structure, Ek and Lorentzon are assured that no one else (whether that be VC firms or a collection of activist common stock owners) can change the direction of the firm or oust the founders. If Ek and Lorentzon ceded their majority voting rights, giving those rights to investors, then the two co-founders may be forced to make decisions that are good for shareholders in the short term but are bad for or don't fit with the long-term goals that Ek and Lorentzon have for Spotify. Essentially, Ek and Lorentzon are allowing themselves to have a long-term perspective by maintaining majority voting rights in their company, instead of having to act in the short-term interest of shareholders.

Liquidity and Direct Listing

The question of liquidity as it relates to direct listings is an interesting one. Liquidity is one of the major reasons a private firm decides to go public (be it via IPO or otherwise) because it allows current shareholders to sell their shares and cash out. Cashing out allows private investors to finally realize a return on their investment by selling their shares to the investing public or institutional investors. For early private investors, cashing out can be quite lucrative if the shares in the issuing company are bought early on in the startup lifecycle. For this reason, liquidity is one of the major selling points of becoming a publicly traded company.

There isn't much of a difference between a traditional IPO and a direct listing in terms of the investor's ability to cash out, so long as there is demand for the shares. But therein lies one of the biggest risks of a direct listing as opposed to a traditional IPO. With a traditional IPO, the underwriter drums up support for the issuing company's shares and makes sure that there is a liquid market where shares can and will be bought and sold. This means that private holders of an issuing company's shares will, if the underwriter did their job correctly, have no problem selling their shares if they so choose. However, because there is no middleman connecting the buyers and sellers of a direct listing beforehand, there is no guarantee that there will be willing buyers or sellers of the stock, potentially resulting in illiquidity. If demand for the shares is low enough, there is no way for investors to sell their shares or cash out. This potential lack of liquidity represents one of the greatest risks associated with a direct listing because it prevents private investors from realizing a return on their investment.

For Spotify, the liquidity issue is a little bit different because the company's direct listing has been heavily publicized and the company has been wildly successful in private markets. Sky high valuations and high expectations of future success means that Spotify should have no trouble finding willing buyers. Many of Spotify's private investors, including private-equity firms TPG and Dragoneer, are expected to buy shares of Spotify once its shares become public, meaning that Spotify shouldn't have liquidity issues on the buy-side too much. Interestingly, Spotify may have the opposite problem: not enough willing sellers. Some investment banks have approached current private shareholders of Spotify stock offering to buy at the company's current \$20 billion valuation, but the shareholders declined (Farrell, 2018). The \$20 billion

valuation comes from an equity swap agreement between Spotify and Tencent that valued Spotify at \$20 billion (Farrell, 2018). This indicates that current Spotify shareholders don't believe in the accuracy of private valuations and want to see where the market prices the shares before selling them. Current owners of Spotify stock may be right to hold the shares until they can be properly valued by the market considering that the company was valued at \$6 billion in late 2016 before rising to \$12 billion in 2017 and \$15 billion by late 2017 (Farrell, 2018). If this uptrend continues, Spotify stockholders are right to wait for higher valuations. Because of the fact that Spotify's private investors seem to want to hold on to their shares, a directing listing would maximize the value of those shares by preventing possible IPO underpricing while also providing liquidity for those investors wishing to cash out their stake in the company. To help ensure that there is sufficient liquidity for Spotify's shares as well as to guide the company through the process of going public, Spotify has hired Goldman Sachs, Morgan Stanley, and Allen and Company as advisors (Castillo, 2018).

In the event that Spotify's private shareholders use the company's direct listing as a chance to take advantage of the sudden liquidity of their shares and cash out, early investors in the company stand to become extremely wealthy (assuming the company's current \$20b valuation holds). The two co-founders, Martin Lorentzon and Daniel Ek, will see their investments appreciate by 32,000% and 65,000%, respectively (Turula, 2017). Northzone and Creandum, two Swedish venture capital firms who funded Spotify's Series A round, saw their investments appreciate to \$740 million and \$370 million respectively (Turula, 2017). The Swedish pension funds who invested \$160 million in Spotify now own stock that has more than doubled in value (Turula, 2017). All told, some 50-plus individual investors and private equity firms invested in Spotify's business, and all of them stand to benefit from the increased liquidity that allows them to realize a return on their investment as a result of the direct listing (Crunchbase, 2017).

Spotify has been giving its employees stock options in addition to a salary, and the direct listing will also allow those employees to take advantage of their sudden liquidity to generate some extra income if they so choose. As of December 2017, Spotify had issued 1,723,080 shares via employee stock options, representing 1.03 percent of the total 167,258,400 shares outstanding (SEC, 2018). A direct listing provides Spotify with additional freedom in terms of how the company compensates its employees (using options instead of taking cash out of net income) and gives those employees the freedom to sell their ownership whenever they want.

Directly listing shares on the NYSE also avoids the problem of a lockup. In a traditional IPO, people who are holding the stock before it goes public (private investors) are forbidden from trading the stock for anywhere from 90 to 180 days after the issuing company goes public. With a direct listing, there is no such lockup period since all of the shares are already owned. This results in quicker liquidity for the issuing company's existing shareholders (assuming the shares can be successfully sold to willing buyers).

VALUATION

In 2015, the Swedish music streaming service was valued at an estimated \$8.5 billion, though private trading of its shares last year reportedly gave it a valuation of roughly \$19 billion.

The direct listing will likely value the company at \$21 billion to \$25 billion, according to a PitchBook calculation (Clark, 2018).

Spotify's valuation in private markets varies anywhere from \$15 billion to \$23 billion, depending on who you ask and what methodologies are used to calculate those private valuations. One of the more interesting indirect private valuations of Spotify came from an equity swap between the Spotify and the Chinese investment firm Tencent and its subsidiary Tencent Music Entertainment Group (TME). In early December of 2017, the two companies announced joint equity investments in the other firm. Spotify would acquire shares representing a minority stake in TME, receiving cash in return, and TME will acquire shares representing a minority stake in Spotify, receiving cash in return. Tencent made its own investment by purchasing secondary shares from existing Spotify investors at a \$20 billion valuation. The joint investments between Spotify and TME joined the two largest music streaming platforms in the world. According to Spotify's SEC F-1 filing, Tencent owns 13,352,440 shares, which amounts to a 7.5 percent stake in the company and gives Tencent 2.4 percent of total voting rights. (SEC, 2018).

While the majority of Spotify's private valuations have been overwhelmingly positive, it is worthwhile to look at the other side of the coin as well. Is Spotify overvalued? The positive valuations for Spotify are based on the assumption of future profitability. The word 'future' is key in these valuations because the company is far from profitability as it currently stands, although Spotify claims that they can make positive free cash flow (FCF) in their own FCF projections prepared by EDGAR Online, Inc. in Table 2. In fact, Spotify has had negative net income since 2015, posting increasing losses of (\$257) million, (\$584) million, and (\$1.5) billion in 2015, 2016, and 2017, respectively (SEC, 2017). These net losses came despite the fact that revenue grew from \$1.94 billion in 2015 to \$4.09 billion in 2017 (SEC, 2017). The fact that net income still remains negative in the face of rapidly increasing revenue is a concerning trend that illustrates the fact that Spotify's valuations may be too optimistic. However, Spotify has used a significant amount of capital to fund R&D and marketing, both of which are expenses that will either decrease in the future (in the case of R&D) or can be easily decreased (in the case of marketing expenses). Even with such generous assumptions for Spotify's future profitability, the fact remains that it is notoriously difficult to turn a profit in the online music streaming industry, as companies like SoundCloud can attest. Even if investors operate under the assumption that Spotify will eventually become profitable, it is hard to argue that the mounting net losses shouldn't be concerning to investors considering buying stock once the company goes public.

Table 2.

Free Cash Flow Projection by SPOTIFY TECHNOLOGY S.A.

EBITDA:	Year ended December 31,				
	2013	2014	2015	2016	2017
	(in € millions)				
Net loss attributable to owners of the parent	(63)	(188)	(230)	(539)	(1,235)
Finance income/(costs)-net	(37)	(9)	(10)	186	855
Income tax expense	2	6	5	4	2
Depreciation and amortization	10	19	30	38	54
EBITDA	(88)	(172)	(205)	(311)	(324)
Free Cash Flow:					
	Year ended December 31,				
	2013	2014	2015	2016	2017
	(in € millions)				
Net cash flows (used in)/from operating activities	(25)	(74)	(38)	101	179
Capital expenditures	(34)	(16)	(44)	(27)	(36)
Change in restricted cash		(4)	(10)	(1)	(34)
Free Cash Flow	(59)	(94)	(92)	73	109

Note. Date Filed: Apr 03, 2018. Created by EDGAR Online, Inc.

In Table 3, we derived our own enterprise value for Spotify under our own set of assumptions to see if we could get a valuation that is close to Spotify's realistic valuations in private markets. Following Leach and Melicher (2018), we calculated Spotify's enterprise value under three assumptions about future growth from 2018 to 2022 (average, pessimistic, and optimistic), each using a weighted average cost of capital (WACC) of 19 percent as stated in the Spotify's Form F-1. The first set of assumptions assumed an average growth rate of 28 percent from 2018 to 2020 (which is roughly in line with the company's current free cash growth rate), 25 percent from 2021 to 2022, and a constant 18 percent growth rate thereafter. Our constant growth rate of 18 percent was high because we wanted to account for the fact that we only projected free cash flows five years into the future, which would cause a lower enterprise value, as well as the fact that Spotify is expected to become profitable soon. Taking these cash flows and discounting them at 19 percent yielded an enterprise value of \$18.33 billion. Our second set of assumptions assumed a more pessimistic situation in which Spotify continues to run a net loss. For the pessimistic situation, we assumed a growth rate of 20 percent from 2018 to 2020, 15 percent from 2021 to 2022, and a 10 percent constant growth rate thereafter. This yielded an enterprise value of \$1.82 billion. Our third set of assumptions assumed an optimistic growth rate of 40 percent from 2018 to 2020, 30 percent from 2021 to 2022, and a constant growth rate of 18.5 percent thereafter. This yielded an enterprise value of \$36.25 billion. So, our free cash flow valuation suggests the wide range of \$1.82 billion to \$36.25 billion. Our un-tabulated results based on bootstrapping using 10,000 experimental iterations suggest that Spotify's market

capitalization ranges somewhat narrower range between \$18.97 billion to \$28.37 billion with an average of \$24.47 billion.

Table 3.
Free Cash Flow Enterprise Value Estimates

	Free Cash Flows (millions of dollars)							Terminal Value	
	2017 (from form F-1)	2018	2019	2020	2021	2022			
Growth Rate Assumption #1: Average: 28% from 2018 to 2020, 25% in 2021 and 2022, 18% thereafter	\$109.00	\$139.52	\$178.59	\$228.59	\$285.74	\$357.17	\$42,146.20		
Growth Rate Assumption #2: Pessimistic: 20% from 2018 to 2020, 15% in 2021 and 2022, 10% thereafter	\$109.00	\$130.80	\$159.96	\$188.35	\$216.60	\$249.10	\$3,044.50		
Growth Rate Assumption #3: Optimistic: 40% from 2018 to 2020, 30% in 2021 and 2022, 18.5% thereafter	109	152.8	213.84	299.096	388.8248	505.47224	\$59,645.72		
Weighted Average Cost of Capital is 19%, as given in Form F-1									
Enterprise Valuation Cash Flow									
Enterprise Value in Average Growth Scenario		\$117.24	\$128.11	\$135.85	\$142.49	\$149.67	\$17,661.34	Enterprise Value:	\$18,332.50
Enterprise Value in Pessimistic Growth Scenario		\$109.92	\$110.84	\$111.77	\$108.01	\$104.38	\$1,276.80	Enterprise Value:	\$1,820.72
Enterprise Value in Optimistic Growth Scenario		128.2352841	150.8850519	177.4862964	193.8947775	211.8178242	\$35,394.72	Enterprise Value:	\$36,257.02

In fact, on April 3, 2018 when Spotify actually went public through direct listing, Spotify enjoyed a successful Wall Street debut, garnering a \$26.5 billion valuation (Shaban & Merle, 2018). Spotify's initial market capitalization of \$26.5 billion stacks up against the largest VC-backed IPOs since 2010 only after Facebook of initial market capitalization of \$81.3 billion (Clark, 2018). Spotify's \$149.01 closing price was about 13 percent more than the \$132 reference price, i.e., estimated suggested price, set by the New York Stock Exchange, which was based on how the stock traded on private markets before public trading began. Spotify's stock started the day off strong at \$165.90 and experienced stable trading before falling later in the day. Analysts had anticipated volatility and perhaps irregularities during Spotify's market debut because the company chose an unusual path to go public (Shaban & Merle, 2018).

RISKS

Direct listings are clearly a more-risky course of action in regards to large private companies going public, otherwise more large companies would buck the trend and go with a direct listing. In Spotify's case, the risks are magnified because the company would have had, in all likelihood, an extremely successful IPO if it chose to go that route, but the benefits are also magnified. In Spotify's case, the company's management team clearly decided that the potential benefits of a direct listing outweighed the risks. But the risks of a direct listing, especially with such a high-profile company like Spotify, are still worth considering.

The biggest risk of a direct listing that doesn't exist with a traditional IPO is the potential price volatility. With the help of an investment bank drumming up support for the issue by publicizing the upcoming listing and connecting buyers and sellers, the issuing company can be fairly certain that they will see a nice price increase on the first day of public trading. Even in the event that the price falls, the issuing company can rest easy knowing that they were guaranteed a certain amount of capital with the price the underwriter paid to acquire the shares. With a direct listing, there is no such guarantee. The performance of the stock is not engineered by an investment bank, instead, it is left completely to the mood of the market. If the market decides that Spotify share are worthless, the price will reflect that, and there's no investment bank with a green shoe provision that can dampen volatility or save the price of the shares. Unlike other risks

of a direct listing, which a large and popular company like Spotify can mitigate, price uncertainty remains an unavoidable consequence of choosing a direct listing.

Another risk of a direct listings in general is a potential lack of demand. Because there is no investment bank to connect buyers and sellers, there is a chance that the market for the shares will be illiquid if there are no buyers. However, this seems unlikely for a company with as much visibility and as popularity as Spotify, who figures to generate as much hype with their direct listing as other companies generate with a traditional IPO. As stated previously, there seems to be no shortage of buyers for a company whose valuation has surged to \$20 billion in the past three years. Even if there were a shortage of buyers, Spotify's three advising investment banks would hopefully navigate the company through those troublesome waters.

For Spotify specifically, there is also the risk that the company's sky-high valuation and high demand could lead to a situation where the stock opens at a value that is significantly overpriced. To this end, there is a chance that Spotify falls victim to long-term post-direct listing underperformance because the company can't become sufficiently profitable to meet its private valuations. It is conceivable that outside investors, believing in Spotify's rising \$20 billion valuation, put in buy orders that drive the stock price skywards, only to see Spotify fail to become profitable in a few years, leading to a significant decrease in the future share price. In this case, the original private shareholders of Spotify benefit by selling at a valuation they know to be overvalued, and the new buyer, not having the same information as the insider, buys an overvalued stock. If Spotify can't replicate their market valuation in public markets, the hype created on the day of the direct listing would gradually disappear, causing the stock price to start high before slowly falling back towards a lower and more proper valuation (similar to our 'pessimistic' to 'average' valuation in Figure 7). Because Spotify has gone public very recently of April 3, 2018, it is difficult to tell whether or not the company is overvalued, but an analysis of the potential effects of overvaluation is something any potential Spotify investor should consider.

In addition, according to financial statements released in association with its F-1 filing, Spotify lost \$1.5 billion in 2017, up from \$584 million in 2016 and \$257 million in 2015, despite a massive increase in revenue from \$3.1 billion to \$4.98 billion. Furthermore, Spotify also has ongoing legal battles with rights holders, such as a \$1.6 billion lawsuit currently aimed at the company from high-profile music publisher Wixen Publishing (Castillo, 2018). It's also seen numerous longtime executives exit over the past year, most recently chief content officer, Stefan Blom (Hall, 2018).

Are these risks outweighed by the benefits of a direct listing? Ultimately, that decision rests on Spotify's management team. The decision to go public is clearly the right one; the company's valuation is substantially high, subscribers and revenue are climbing steadily, and the music streaming industry is only going to get bigger, but the jury is still out on the decision to go with a direct listing over the long term. In the end, the only way to know for certain whether Spotify made the right decision is to wait and see on the many years to come after the company went public.

DISCUSSION AND CONCLUSIONS

The pros of a direct listing include: the ability to raise capital from the company's own existing community (including non-wealthy investors) without issuing new equity, cost savings by bypassing underwriters, the ability to utilize stock to complete acquisitions and stock options to attract and retain employees, enhanced credibility and providing early investors with liquidity. The cons of a direct listing include: the process has substantial cost which may significantly reduce the effective capital raised, like any financing, it takes management time and attention from business operations, there may be ongoing financial and legal reporting requirements, and there could be unknown price volatility and related liquidity risk. While Spotify's decision to go public via a direct listing is a big corporate decision for Spotify, the impact of the success or failure of the company's direct listing will be felt for years after the day that the bell at the NYSE rings in Spotify's first day of public trading.

Spotify is the first tech 'unicorn' to go public via a direct listing. A company of Spotify's size has never gone public through a direct listing before, and the company's success or failure will set a precedent for other large private companies looking to go public. If Spotify's direct listing is successful, the company has exposed the potential weaknesses in the traditional IPO process, and other private companies will follow Spotify's lead. If the direct listing fails, then private companies will continue to go with the traditional IPO route to sell their shares to the public. For companies that need to raise capital from public markets, a traditional IPO will remain as only viable option. But the fact remains that Spotify has developed an alternative model whereby a company raises all of its capital in private markets and trade in public markets, largely bypassing the underwriting process. The only cost that Spotify will incur for the direct listing will be the preparation of necessary documentation, which the company did by filing their Form F-1 in late February of 2018. The SEC registration fee alone cost Spotify \$124,500 (SEC, 2018).

If Spotify is going with a direct listing to avoid the downturn in the IPO market, the company is making its move at the right time. But even though the IPO market has been trending downward over the past half-decade, the IPO market tends to be cyclical, so there is no telling if the current downturn in the IPO market will continue (Gandel, 2018). Regardless of what the future of the IPO market holds, companies are clearly becoming more aware of the shortcomings in the traditional IPO process, and Spotify is the first glaring example of such a line of thinking. Spotify can clearly spot the trend, but the question remains if other companies will follow suit.

We wonder how applicable this direct listing method will be to other firms, or technology firms, in particular. A recent Wall Street Journal article by Driebusch and Farrell (2019) reports that Slack Technologies Inc. selected the New York Stock Exchange for the direct listing of its shares, being the second-time unicorn user of its unorthodox direct public offering. As Slack Technologies, decided to follow Spotify's example, it is important to notice that Spotify's direct public offering provides a very unique set of circumstances. Unlike other private companies, Spotify was extremely successful at raising capital in private markets and established a sustainable revenue-generation model that is allowing the company to go public without the need for capital from public markets. In fact, significant differences exist in the number of users of Slack Technologies (estimated to be less than one million paid users) versus Spotify (an

estimated 70 million paid users). These differences would potentially be expected to lead to a lower market value for Slack Technologies. Airbnb, another unicorn, that recently sold common shares at a price that values the home-rental startup at roughly \$35 billion, was reportedly considering a direct listing (Konrad, 2019). Finally, as a potential indication of success of the method, the market price of Spotify has traded in a fairly narrow range since the launch, providing investors with steady return and less than expected variability over the time period since the launch. If these patterns continue over the long term and achievable by other firms, the direct listing method may become more prevalent.

There is the potential for a lot of value to be lost in the IPO process and there may just be an alternative way to go public if the situation is advantageous. However, no large private company, before Spotify, has had the courage to risk their company to prove just how much value is lost in the IPO process. Spotify, in their quest to maximize shareholder value, may have indirectly started a movement that might change the way that some of large private unicorn companies go public, although direct public offering per se may not be a major threat to the traditional IPO for majority of technology firms.

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