

“It’s Like Déjà Vu All Over Again” Valuing a Business in the Post-COVID-19 Pandemic Economy

How do we value a business post COVID-19? How is it possible to develop credible financial forecasts given the uncertainties relating to the impact of the pandemic on the economy and selected industries, as well as the potential depth and duration of the resulting economic recession? These concerns are particularly vexing to many young valuation professionals who have seen a 10-year bull market and have never experienced an economic recession. However, those of you with gray hair realize that we’ve been through periods of uncertainty before, including the 2008-2009 financial crisis, the 2000 Dotcom crash, as well as other similar events, as presented in **Exhibit 1** below.

The malapropism attributed to Yogi Berra, the former manager of the New York Yankees and Baseball Hall of Famer, expresses my

take on this: “It’s like déjà vu all over again.” While certain forces that resulted in the current economic environment are different from those of 2008-2009, there are many similar issues that we have seen before. Somehow, despite the uncertainty, we were able to develop reasonable and credible estimates of value then, and we can do so now. The following presents a summary of key factors a valuation analyst should consider when valuing a business post-COVID-19, as well as guidance to consider in selecting the most appropriate valuation approaches and methodologies.

BRIEF OVERVIEW OF THE COVID-19 IMPACT ON THE U.S. STOCK MARKET AND ECONOMY

The economic impact of COVID-19 can best be illustrated by its effect on the U.S. stock market and



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Gross Domestic Product. The “COVID-19 – A timeline of significant events, including the pandemic’s effect on the U.S. stock market,” prepared by Valuation Products and Services, indicates that on January 16, 2020, the Russell 2000 hit a high of 1,705; on February 12, 2020, the Dow Jones Industrial Average (DJIA) hit a record high of 29,551; and on February 19, 2020, the S&P 500 hit a record high of 3,386. Four days
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EXHIBIT 1

U.S. Market Crashes, Using the S&P 500 Price Index as the Benchmark¹

1929 Crash

Start Date of the Decline	16-Sept-29
S&P 500	31.86
End Date of the Decline	1-June-32
S&P 500	4.40
Decline	-86.2%
Recovery Date	22-Sept-54
S&P 500	32.00
Years to Recover	25.02

1987 Crash

Start Date of the Decline	25-Aug-87
S&P 500	336.77
End Date of the Decline	19-Oct-87
S&P 500	224.84
Decline	-33.2%
Recovery Date	26-July-89
S&P 500	338.05
Years to Recover	1.92

Dotcom Crash

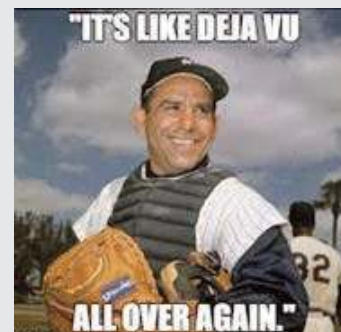
Start Date of the Decline	24-Mar-00
S&P 500	1,527.46
End Date of the Decline	9-Oct-02
S&P 500	776.76
Decline	-49.1%
Recovery Date	30-May-07
S&P 500	1,530.23
Years to Recover	7.18

2008 Crash

Start Date of the Decline	9-Oct-07
S&P 500	1,565.15
End Date of the Decline	9-Mar-09
S&P 500	676.53
Decline	-56.8%
Recovery Date	28-Mar-13
S&P 500	1,569.19
Years to Recover	5.47

Covid-19 Crash

Start Date of the Decline	19-Feb-20
S&P 500	3,386.15
End Date of the Decline	23-Mar-20
S&P 500	2,237.40
Decline	-33.9%
Recovery Date	?
S&P 500	?
Years to Recover	?

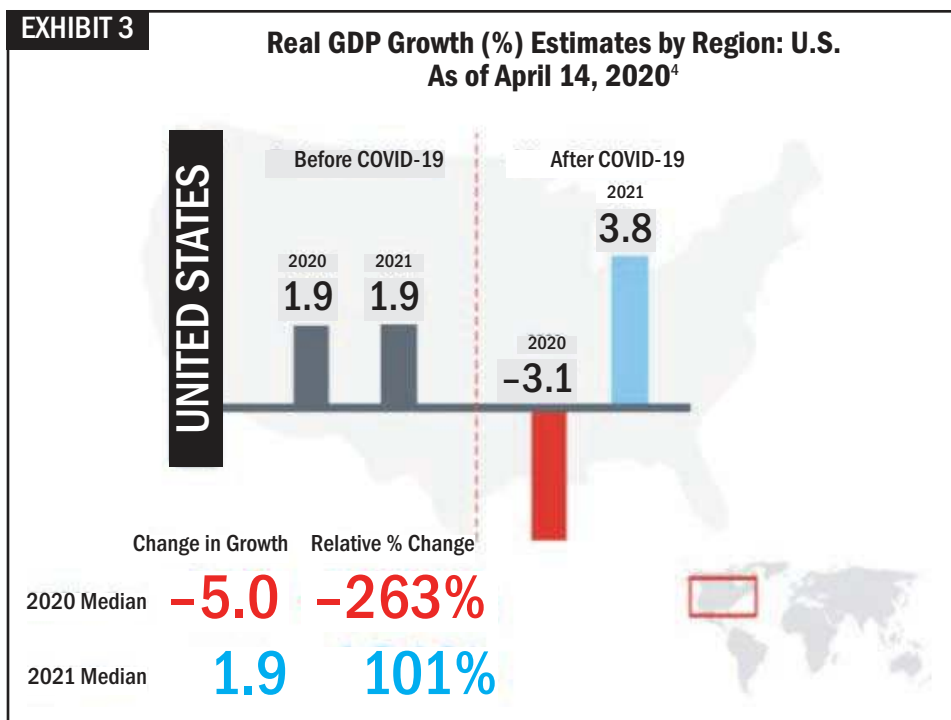
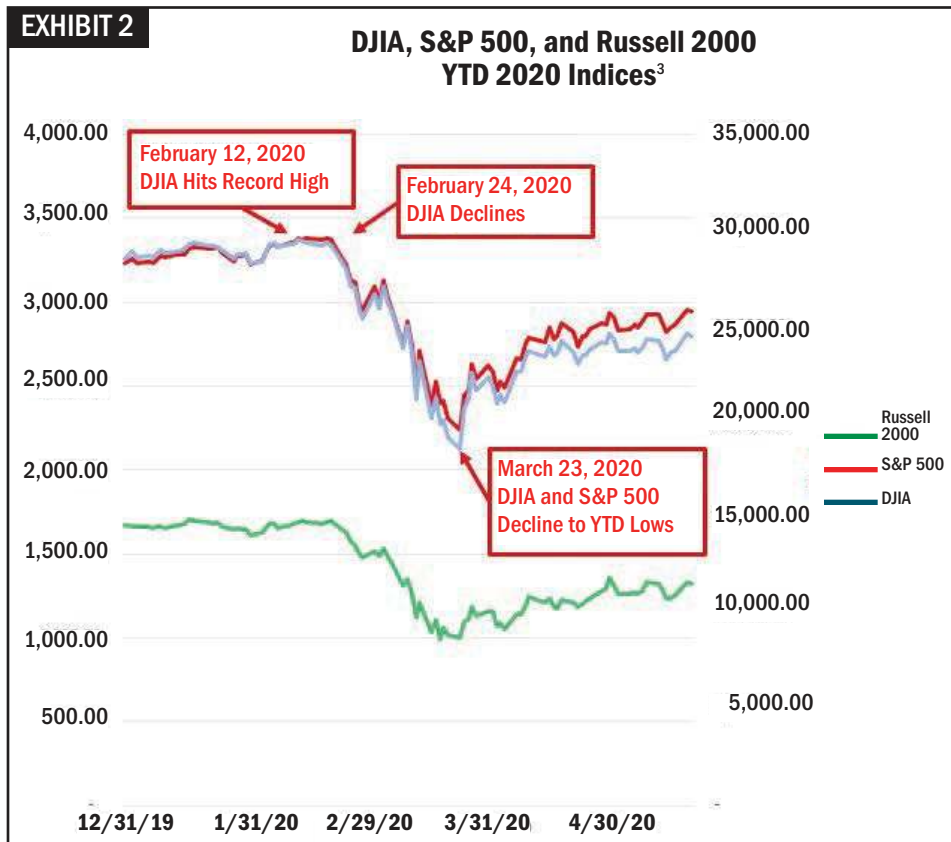


later, on February 23, 2020, Italy experienced a surge in cases and proceeded to lock down towns. The very next day, on February 24, 2020, the DJIA dropped 1,000 points, which was the most significant decline in two years. All three indices continued to decline significantly thereafter. On March 18, 2020, the Russell 2000 declined to 991, a 40.6 percent decline from the price at December 31, 2019. On March 23, 2020, both the DJIA and S&P declined to year-to-date lows, with the DJIA dropping to 18,592—a 34.9 percent decline—and the S&P dropping to a low 2,237—a 30.7 percent decline.² See **Exhibit 2** at right.

COVID-19 has had a significant adverse impact on projections of real U.S. GDP. Prior to the COVID-19 pandemic, Duff & Phelps estimated projected growth in real GDP of 1.9 percent in both 2020 and 2021. Subsequent to COVID-19, estimated real GDP was expected to decline by 5 percent to -3.1 percent in 2020 and then rebound to 3.8 percent in 2021, as shown in **Exhibit 3** at right.

In an effort to reduce the adverse impact of COVID-19 and shore up the U.S. economy, on March 27, 2020, Congress enacted the Coronavirus Aid, Relief, and Economic Security (CARES) Act, H.R. 748. The CARES Act resulted in a fiscal stimulus to the U.S. economy—an unprecedented amount equivalent to 10.8 percent of GDP. The Act also resulted in the U.S. incurring its highest budgetary deficit as a percentage of GDP since World War II. **Exhibit 4** on the next page presents a summary of the CARES Act stimulus package and the impact on the federal budget.

Based on data from Moody's Analytics, Duff & Phelps also prepared revised estimates of post-COVID-19 U.S. real GDP that reflect the impact of the CARES Act. Moody's projects that the



CARES Act will result in reducing the loss in real GDP from -4.83 percent to -2.17 percent in 2020. However, in 2021, real GDP is expected to decline from 4.91 percent to 2.68 percent. See **Exhibit 5** at right.

The adverse impact of the COVID-19 pandemic on the U.S. economy has resulted in a devastating effect on the U.S. workforce as statewide lockdowns and stay-at-home orders have resulted in many businesses terminating employees in an effort to avoid permanent closure. Approximately 36.5 million workers have sought unemployment benefits during the pandemic. As of April 2020, the Department of Labor reported the unemployment rate at a historic 14.7 percent. The job losses resulting from COVID-19 are approximately double those experienced during the financial crisis between 2007 and 2009.⁷

The timing of the events and the selected stock market and economic data presented above are relevant for purposes of determining when the impact of COVID-19 should be considered for valuation purposes, as well for assessing its impact on business viability and projected growth.

THE VALUATION DATE, REPORTING DATE, AND REQUIRED DISCLOSURES

One of the key questions that must be answered when valuing a business is whether the effect of COVID-19 should be considered and/or disclosed in the valuation report. The answer to this question depends on the effective valuation date, what was known or knowable as of the valuation date, and the report issue date. IRS Rev. Rul. 59-60 states that a valuation must be based on the facts available at the valuation date:

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EXHIBIT 4 The Impact of the CARES Act and Federal Finances⁵

Coronavirus Aid, Relief, and Economic Security Act

Amount (\$ bn)	Measure
\$290	One-time stimulus checks amounting to \$1,200 per adult and \$500 per child up to certain income limits
\$260	Enhanced, expanded, and extended unemployment benefits, adding \$600/wk. to every unemployment check for 4 months, expanding program to cover contractors and self-employed and extending program to 39 weeks from 26 weeks
\$510	Loans to distressed businesses, cities, and states. Includes \$29 billion for airlines, \$17 billion for firms deemed important for national security, and \$454 billion as a backstop for loans to other businesses, cities, and states
\$377	Small business relief, largely in the form of "forgivable loans" for spending on payroll, rent, and utilities
\$150	Direct aid to state and municipal governments
\$180	Health-related spending
\$516	Other spending and tax breaks
\$2.283 trillion ~10.8% of GDP	

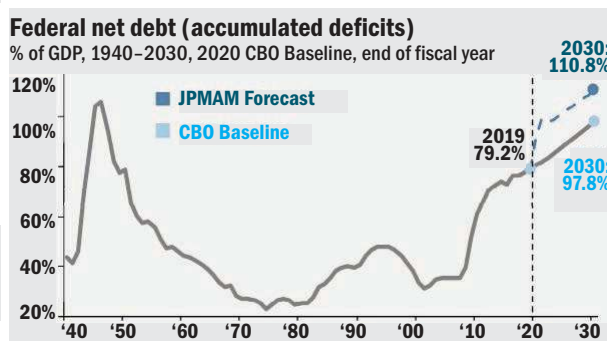
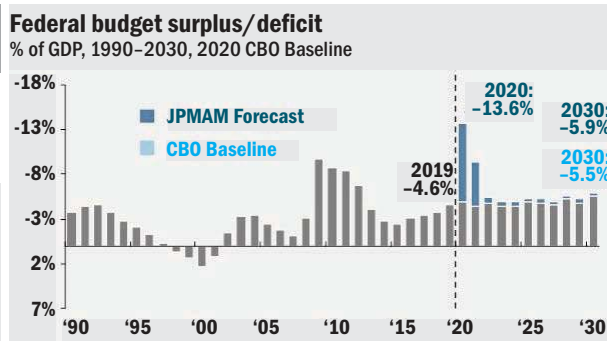


EXHIBIT 5 U.S. Real GDP (Annualized) Growth Estimates for 2020 Before & After Enactment of U.S. Fiscal Stimulus Package (CARES Act) Moody's Analytics' Analysis as of March 31, 2020⁶

Period	Prior to CARES Act (%)	After CARES Act (%)	Net Impact of 2020 CARES Act (%)
Q2 2020	-29.60	-18.33	+11.27
Q3 2020	8.66	10.95	+2.29
Q4 2020	6.69	2.38	-4.31
Q1 2021	8.94	2.60	-6.34
Full Year 2020	-4.83	-2.17	+2.65
Full Year 2021	4.91	2.68	-2.23

Valuation of securities is, in essence, a prophesy as to the future and must be based on facts available at the required date of appraisal.⁸

AICPA *Statement on Standards for Valuation Services No.1 (SSVS)* reiterates this guidance:

Generally, the valuation analyst should consider only circumstances existing at the valuation date and events occurring up to the valuation date.⁹

SSVS further indicates that when an event occurs subsequent to the valuation date, the valuation should not be updated to reflect that event. However, if the event is significant, then the appraiser may elect to make disclosure of the event for informational purposes only:

An event that could affect the value may occur subsequent to the valuation date; such an occurrence is referred to as a subsequent event. Subsequent events are indicative of conditions that were not known or knowable at the valuation date, including conditions that arose subsequent to the valuation date. The valuation would not be updated to reflect those events or conditions. Moreover, the valuation report would typically not include a discussion of those events or conditions because a valuation is performed as of a point in time—the valuation date—and the events described in this subparagraph, occurring subsequent to that date, are not relevant to the value determined as of that date. In situations in which a valuation is meaningful to the intended user beyond the valuation date, the events may be of such nature and significance as to warrant disclosure (at the option of the valuation analyst) in a separate section of the report in order to

keep users informed (paragraphs 52(p), 71(r), and 74). Such disclosure should clearly indicate that information regarding the events is provided for informational purposes only and does not affect the determination of value as of the specified valuation date.¹⁰

Using the known or knowable standard and given the implications of the COVID-19 timeline discussed above, and assuming the company being valued is conducting its business in the U.S., in my opinion (as well as that of James R. Hitchner, the editor of this publication and author of the aforementioned COVID-19 timeline), the adverse impact of COVID-19 on the U.S. market was *known* as of February 24, 2020, the date the DJIA experienced a significant decline based on investor fears that the virus would weaken the U.S. economy. Further, the potential risk that COVID-19 could result in additional adverse effects on the market as of this date was also *reasonably knowable*.

For example, while most statewide lockdowns and stay-at-home orders did not begin in the U.S. until early March, such actions were reasonably foreseeable given how other countries (e.g., China and Italy) had been required to implement similar programs in an effort to contain the spread of the virus. Consequently, for valuations with an effective date prior to February 24, 2020, the adverse impact of COVID-19 would be considered a subsequent event and, therefore, it should not be considered in developing an estimate of value. However, for valuations with an effective date on or after February 24, 2020, the impact of COVID-19 should be considered in developing an estimate of value.

With respect to whether COVID-19 should be disclosed in a report, if the valuation date is

before February 24, 2020, and the report date is on or after this date, then the decision of disclosure is subject to the professional judgment of the appraiser. Alternatively, if the valuation date is on or after February 24, 2020, then there is no issue—the event was clearly known or knowable and should be disclosed in the report. To assist valuation analysts with interpreting the SSVS subsequent event standard, the AICPA SSVS Task Force (comprised of Jim Hitchner, James Alerding, Edward Dupke, Heather Tullar, William Strain, and Mark Smith) has published the “AICPA Subsequent Event Toolkit.”¹¹

PURPOSE OF THE VALUATION

Depending on the purpose of the valuation, consideration of COVID-19 may influence the selection of the valuation date. For example, for estate tax purposes, the Estate has the option of selecting either the date of death or an alternative date of six months following this date as the effective valuation date. Consequently, assuming that the date of death was within six months of the estimated date that COVID-19 impacted the market (i.e., February 24, 2020), and assuming the impact was adverse, then the Estate may wish to elect the alternative date as the effective valuation date in an effort to minimize the estate tax. Similarly, for gift taxes, assuming the impact of COVID-19 was adverse on the value of a business, then, all else being equal, an effective valuation date subsequent to COVID-19 would result in reducing gift taxes.¹² (The uncertainty resulting from a potential change in controlling political parties in the upcoming November elections also makes this an opportune time to make gift transactions). There are numerous other examples where the purpose of the valuation and consideration of COVID-19 may be relevant, *Continued on next page*

including divorce (e.g., the propertied spouse may argue for a post-COVID-19 date in an effort to reduce value, whereas the non-propertied spouse may argue for a pre-COVID-19 date in an effort to increase value), insurance claims (e.g., assessing whether the impact of COVID-19 resulted in a business interruption),¹³ etc.

PREMISE OF VALUE

Given the potential significant adverse implications of COVID-19 on many types of businesses, there is also the question as to whether certain of these will be able to survive. This will require analysts to carefully consider whether a business should be valued as a viable going concern or, alternatively, under a liquidation scenario. For example, even in the best of times, restaurants are probably one of the riskiest businesses. Mandatory government restrictions precluding restaurants from on-premises dining will probably result in the permanent closure of many establishments.

STANDARD OF VALUE

Consideration of COVID-19 will also be relevant for purposes of applying the selected standard of value. For example, fair market value is defined in Rev. Rul. 59-60 as:

The price at which the property would change hands between a willing buyer and a willing seller when the former is not under any compulsion to buy and the latter is not under any compulsion to sell, both parties having reasonable knowledge of relevant facts. Court decisions frequently state in addition that the hypothetical buyer and seller are assumed to be able, as well as willing, to trade and to be well informed about the property and concerning the market for such property.¹⁴

Under this definition, the valuation analyst must consider what a *hypothetical willing buyer would be willing to pay*, as well as what the *hypothetical willing selling would be willing to accept*, in estimating the value of the business given the impact of COVID-19. In other words, the increased risk resulting from COVID-19 that is being transferred from the seller and assumed by the buyer becomes a key factor in estimating the value of the hypothetical transaction.

ANALYSIS OF ECONOMIC AND INDUSTRY CONDITIONS AND GOVERNMENT REGULATIONS

In performing the valuation analysis, a key task is the analysis of the current and expected economic and industry conditions known or knowable as of the effective valuation date. The impact of COVID-19 on the local, regional, and national economic and industry conditions, state and local government regulations resulting in lockdowns and stay-at-home orders, as well as the federal stimulus resulting from the CARES Act, should be considered.

A key consideration will be the expected depth and duration of the economic recession triggered by COVID-19, as well as the time required for recovery. In recent recessionary periods, the decline and recovery have been characterized by a “V” shape with a rapid decline followed by a relatively quick recovery. However, in this instance, some corporate executives are projecting differing scenarios. For example, some project that the decline and recovery will be a “swoosh” shape, with a large decline followed by a slow recovery. Still other analysts are projecting a “W” or wave shape, with an initial recessionary period followed by a brief recovery as businesses reopen, but then another downturn triggered by a second wave of COVID-19-related illnesses resulting from local and state govern-

ments relaxing mandatory stay-at-home requirements and eliminating social distancing followed by another recovery.¹⁵

With respect to the impact on a particular industry, COVID-19 may adversely affect certain industries while benefiting others. For example, those companies in industries that are dependent upon discretionary spending and/or impacted by state and local lockdowns and statewide stay-at-home orders—such as local restaurants and bars, hotels and tourism (Marriott), entertainment (Major League Baseball), airlines (American Airlines), and cruise travel (Carnival Cruise Line)—are subject to relatively higher risk in terms of both viability and growth prospects. Conversely, as consumers seek alternative sources of goods and services, COVID-19 may actually result in a positive outlook for other industries, such as online marketplaces (Amazon) and food delivery services (Instacart). Other companies that are directly involved in producing products to counter COVID-19, such as medical supply companies producing the N95 masks (3M) and biotech companies producing vaccines (Moderna), may also benefit.

ANALYSIS OF FINANCIAL AND OPERATIONAL CHARACTERISTICS OF THE SUBJECT COMPANY

Analysis of a business’ financial and operational characteristics is important for purposes of assessing trends and anomalies in historical operating performance, as well as in helping to identify required normalization adjustments for purposes of determining the “true” economic performance of the business. This information will also serve as a baseline for purposes of assessing whether the business has sufficient financial resources to survive the current adverse conditions, recover, and rebuild.

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For valuations performed post-COVID-19, it will also be important to consider the potential impact of the CARES Act, the federal stimulus package implemented to mitigate the economic effect of the pandemic on businesses.¹⁶ Alternative programs include:

- (1) Small Business Administration's (SBA) Payroll Protection Plan (PPP) loan program
- (2) Economic Injury Disaster Grant/Loan (EIDL)
- (3) Main Street Lending Program.

Issues to consider in assessing the potential impact of the CARES Act include:

- Was the program and expected receipt of funds known or knowable as of the effective valuation date?
- To which program did the business apply for funding?
- When did the business submit its application?
- Has the business received funding or, if not, when does it expect to receive funding?
- What can the funds be used for?
- Will funding in the form of loans be forgiven?
- How should the risk that a loan may not be forgiven be quantified?
- Are the funds taxable?

The AICPA CARES Act Task Force is currently developing a FAQ sheet addressing valuation issues related to the CARES Act and will soon post this to the AICPA Coronavirus Resource Center website.

VALUATION APPROACHES AND METHODOLOGIES

For purposes of a post-COVID-19 valuation—as with any valuation—a valuation analyst should consider the three valuation approaches (income, market, and asset), as well as the related methodologies. The selection of a particular approach and methodology will be

dependent upon the scope of work, as well as the analyst's professional judgement.¹⁷

After having performed a preliminary analysis of the business' historical financial performance and assessing its financial condition, the analyst should first determine whether the business is a viable going concern. If the analyst determines the business is a holding company or is not a viable going concern, then the appropriate valuation approach would be an asset approach. If the business is an operating business and is determined to be a going concern, then the analyst should consider the income, market, and asset approaches and select those considered to be most appropriate.

ASSET APPROACH

In applying an asset approach, the analyst restates the value of the assets and liabilities (which are recorded at historic costs) to current market values and deducts the resulting value of total liabilities from total assets to derive the net asset value. Consideration must also be given to whether unrecorded assets and liabilities exist. Some appraisers do not consider this approach to be appropriate for valuing service-oriented companies, particularly when valuing a minority interest that does not have the ability to liquidate the assets to realize their value. However, in those instances where the value derived using an income or market approach is less than the value realized using an asset approach, the value of the net tangible assets is considered to represent a "floor" value. Any functional and economic obsolescence should also be considered.

INCOME APPROACH

In applying the income approach, there are two common methodologies used in practice. The capitalized cash flow method is used

when net cash flow and growth are assumed to have stabilized. A value is calculated by dividing the expected future net cash flow for a single period by a capitalization rate. The discounted cash flow method is used when net cash flow and growth have not yet stabilized. A value is calculated by projecting net cash flow for each year in a discrete projection period to a point where growth is assumed to stabilize, and then a terminal value for net cash flow for the remaining years into perpetuity is calculated. The present values of each of the projected future net cash flows and the terminal value are then discounted to a present value as of the valuation date using a discount rate.

There are those, including certain courts, that argue it is speculative to project future cash flows and a valuation method relying on such projections is not credible. Those adhering to this school of thought argue that it is therefore more credible to estimate value using historical cash flows and a capitalized cash flow method. However, this logic is fundamentally flawed as both the capitalized cash flow and discounted cash flow methods are based on estimates of expected future results—the key difference between the two methods is simply the future point in time at which projected net cash flow and the rate of growth are assumed to stabilize.¹⁸ **Exhibit 6** on the next page presents two alternative scenarios reflecting differing assumptions about projected net cash flow and the point in time at which growth stabilizes.

In Scenario 1, projected net cash flow and growth are assumed to have stabilized in year one. In this instance, a capitalized cash flow method would be appropriate. In Scenario 2, projected growth and net cash flow are projected to be volatile in years one to five, and

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then stabilize in year six to perpetuity. For purposes of estimating value in this instance, it would be appropriate to develop a financial forecast of net cash flows for the discrete period (represented by years one to five) and the terminal period and use a discounted cash flow method.

Given the expected impact of COVID-19 on future financial results for most businesses, it is highly improbable that net cash flow and growth will have stabilized in the first year. Consequently, in applying an income approach, it will be necessary to use a discounted cash flow method. Use of this method will require that financial forecasts be developed. The school that would argue it is speculative to project future cash flows in any instance would also argue that even if a discounted cash flow were the theoretically appropriate method to use, there is too much uncertainty to permit the development of financial forecasts. However, it is worth noting again the guidance provided in IRS Rev. Rul. 59-60:

Valuation of securities is, in essence, a prophesy as to the future ...¹⁹

In *Valuing a Business – The Analysis and Appraisal of Closely Held Companies*, Shannon Pratt, widely recognized as one of the foremost valuation practitioners, discusses that the development of an estimate of a business’ value is fundamentally dependent on estimates of expected future financial results:

In the simplest sense, the theory surrounding the value of an interest in a business depends on the future benefits that will accrue to its owner. The value of the business interest, then, depends upon an estimate of the future benefits and the required rate of return at which those future benefits are discounted back to present value as of the valuation date.²⁰

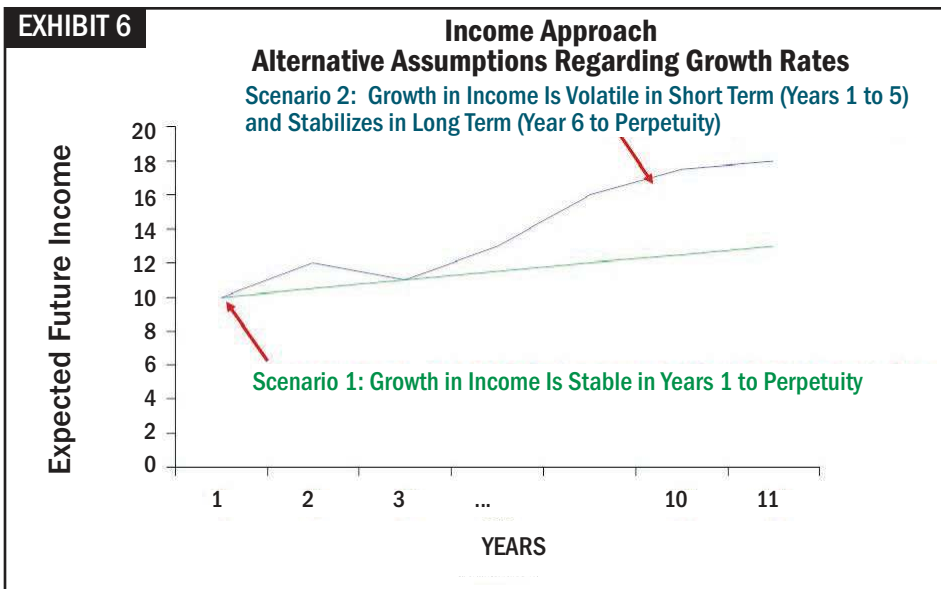


EXHIBIT 7

Income Approach
Scenario Matrix

Scenario	Duration	Adverse Financial Impact
1 - Best Case	Short (6 months)	Slight
1 - Middle Case (Most Likely)	Medium (1 year)	Modest
3 - Worst Case	Long (2 years)	Severe

Unfortunately, we do not have a crystal ball and cannot predict the future with absolute certainty. The only way in which to determine the “true” value of a business is for an actual transaction to occur and, even then, the transacted value may not be indicative of the value for a specific purpose (e.g., the fair market value of a minority interest for estate tax purposes). Consequently, the analyst must rely upon estimates.

For purposes of obtaining financial forecasts, the analyst should consult with management regarding their expectations as they are most oftentimes in the best position to know the company and the industry. However, the analyst should not simply accept the forecasts, but instead should

critique the projections and underlying assumptions for reasonableness.

Oftentimes, if a financial forecast exists, management will have only prepared one scenario that is typically the “most likely” case. Such a forecast *may* be reasonable to rely upon depending on the facts and circumstances. However, in the post-COVID-19 times we are experiencing now where there is significant uncertainty regarding potential outcomes, it may be appropriate to consider requesting that management develop alternative scenarios reflecting differing expectations regarding future results. **Exhibit 7** above is an example of a scenario matrix presenting three scenarios (a best

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case, middle or most likely case, and worst case) and reflecting alternative assumptions regarding the duration of a recessionary period and the impact on financial performance.

Once the scenarios have been identified and alternative forecasts of projected net cash flow developed for each, management should be consulted regarding their assessment of the probability for each scenario and, again, the analyst should critique these for reasonableness.

In theory, the financial forecasts should include estimates of the probability-weighted net cash flows for each year in the forecast. The reason for this is that the distribution of net cash flows may not be symmetrical, but instead skewed. If the distribution of projected net cash flows and probabilities are symmetrical above and below the most likely estimated net cash flow, then the most likely cash flow will be equal to the expected (probability-weighted) value. See Exhibits 8 and 9 at right.²¹

However, if the estimated distribution of projected net cash flows and probabilities are skewed, then the most likely cash flow and expected (probability-weighted) value will differ. See Exhibits 10 and 11 on the next page.²² In this instance, development of alternative scenarios may be useful. It should be noted that the magnitude of the difference between the most likely value and the probability-weighted value is dependent on how much the distribution is skewed. Further, the magnitude will also be significantly affected by the assumptions regarding the projected net cash flows for the terminal period as the present value of the terminal period accounts for the majority of the value in a discounted cash flow model.

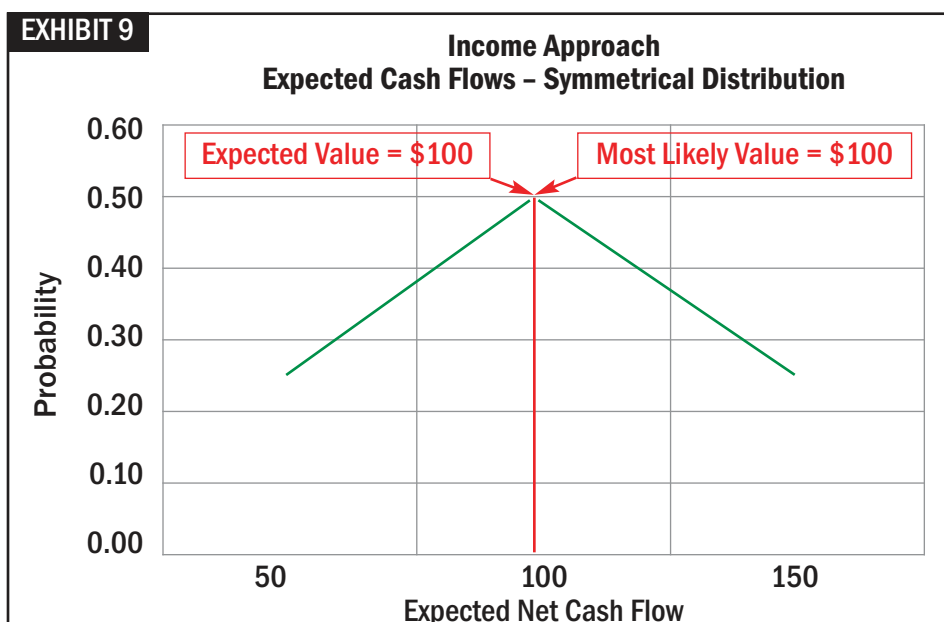
In practice, most forecasts do not include the probability-weighted expected net cash flows for each

EXHIBIT 8

Income Approach
Expected Cash Flows – Symmetrical Distribution

	Projected Net Cash Flow	X	Probability	=	Probability-Weighted Value
Scenario 1 Best Case	\$150	X	25%	=	\$37.50
Scenario 2 Middle Case (Most Likely)	\$100	X	50%	=	\$50.00
Scenario 3 Worst Case	\$50	X	25%	=	\$12.50
	Std. Dev.: 40.82		100%		\$100.00

If the distribution of projected net cash flows and probabilities are symmetrical above and below the most likely net cash flow, then the most likely net cash flow equals the expected (probability-weighted) value.



year. However, the probability-weighted approach is still a useful concept to use for developing alternative forecast scenarios and is often used in practice. There are also those that advocate the use of Monte Carlo statistical simulation techniques for estimating probability-weighted scenarios. However, as noted by Shannon Pratt and Roger Grabowski in *Cost of Capital*: Such techniques are simply a tool. You can assemble more limited scenarios and use such scenarios as tools to transmit information to both operating and executive management, as

well as serve as a basis for a better valuation ... Simple preparation of alternative revenue, expense, and resulting cash flow scenarios can assist the analyst in understanding the expected net cash flows that should be used in any cash-flow-based valuation.²³

Once the financial forecasts have been developed, the analyst must next determine whether to use a direct-to-equity or invested capital model. An invested capital model is more often preferable as it

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allows for increased flexibility in modeling alternative assumptions regarding the proportions of debt and equity in the capital structure.

However, in the event a business is able to obtain funds through one of the CARES Act programs, it may be simpler to use a direct-to-equity model. Another alternative for handling this source of funds is to determine the operating value of the business based on net cash flow excluding the impact of the CARES Act and then separately value the latter and add it to the operating value as a “bolt on.”

The analyst must next estimate the applicable discount rate for purposes of discounting the projected future values to a present value. The discount rate reflects the risk of achieving the expected future cash flows. Whether the discount rate should be increased to reflect additional risk resulting from COVID-19 is a topic of much debate. There is one school that argues that the company-specific risk premium should be increased to reflect increased risk. There is another school that argues for normalizing the risk-free rate to adjust for federal intervention in the markets that are artificially depressing interest rates and also using a conditional/recommended equity risk premium to reflect current market conditions. Whatever alternative is selected, the result should be a discount rate that reflects the risk of achieving the expected future cash flows.

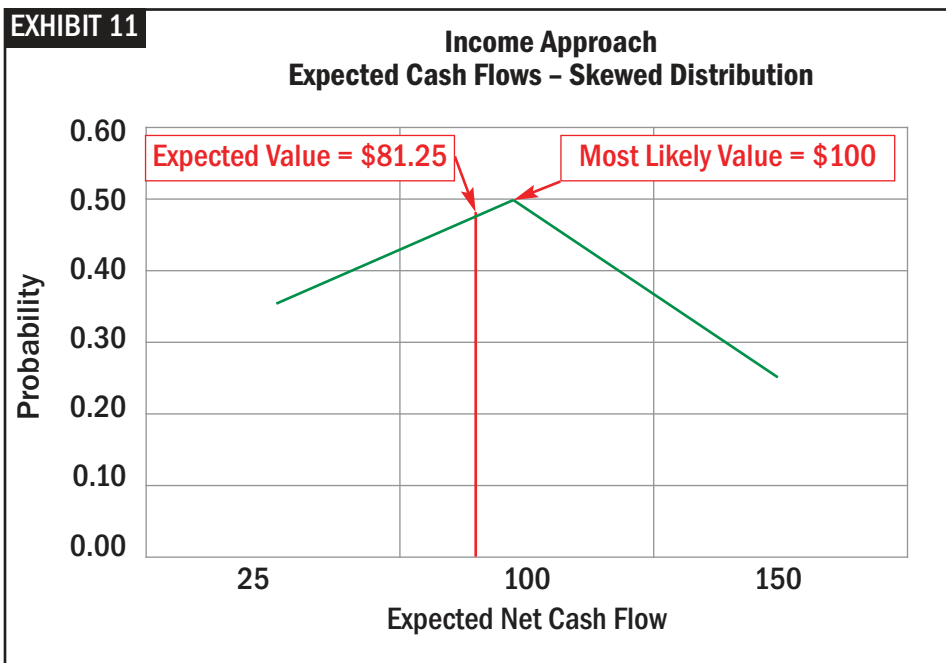
A question often asked when using probability-weighted net cash flows in conjunction with a discount rate is whether one is double counting the estimate of perceived risk. However, as noted by Jeff Balcombe of the BVA Group, LLC, adjustment to the cash flow accounts for the fact that a company may be expected to have a different distribution of cash flow. The adjustment to the discount rate accounts for fact that the standard deviation (measure of

EXHIBIT 10

Income Approach Expected Cash Flows – Skewed Distribution					
	Projected Net Cash Flow		Probability	=	Probability- Weighted Value
Scenario 1 Best Case	\$150	X	15%	=	\$22.50
Scenario 2 Middle Case (Most Likely)	\$100	X	50%	=	\$50.00
Scenario 3 Worst Case	\$25	X	35%	=	\$8.75
	Std. Dev.: 51.37		100%		\$81.25

If the distribution of projected net cash flows and probabilities are skewed, the most likely and the expected (probability-weighted) value will differ.

EXHIBIT 11



dispersion) of the expected future cash flows may differ, i.e., the discount rate is increased to reflect the higher risk of achieving those cash flows.²⁴ In practice, a single discount rate for all scenarios is often used.

MARKET APPROACH

There are also two common methodologies used in applying the market approach. The first method is the guideline public company method, in which the prices at which the stocks of comparable public companies are traded are

used as proxies to value the subject company. In determining whether or not to use this method, consideration must be given as to whether the selected public companies are truly comparable to the subject business in terms of line of business, size, growth, profitability, etc. The second method is the guideline company transactions method, in which actual market transactions are used to determine pricing multiples. This method is subject to the same issue of comparability.

Continued on next page

In both market-based methods, multiples are developed using a measure of value or price in the numerator and an economic income metric in the denominator. Common examples of multiples include Price/Earnings, Market Value of Invested Capital (MVIC)/Earnings Before Interest, Taxes, Depreciation, and Amortization (EBITDA), MVIC/EBIT, etc.

However, in the post-COVID-19 market, use of a market-based multiple is problematic as the values in the numerator and denominator may not reflect the impact of COVID-19. For example, if the guideline public company method is used and the current public company stock price is used as the price metric in the numerator, then this metric may reflect the impact of COVID-19. However, if the denominator reflects historical earnings of the public company, then there is a mismatch between the numerator and denominator, which will result in a flawed result (unless adjusted for) when applied against the subject company earnings (which must also be consistent with the selected multiple). See **Exhibit 12** at right.

There are similar issues in applying the market approach and guideline company transactions method. For example, if the price for a guideline transaction was negotiated prior to COVID-19, then the multiple may not reflect the adverse impact of the pandemic. Consequently, application of this multiple against subject company earnings (with COVID impact) would result in a flawed estimate of value.

Some appraisers have developed various techniques for adjusting the guideline public company multiples and guideline company transaction multiples to address the aforementioned issues. Jim Hitchner presents alternative techniques in the front page article of this issue of *FVLE*. Joseph W.

EXHIBIT 12

Market Approach Multiple

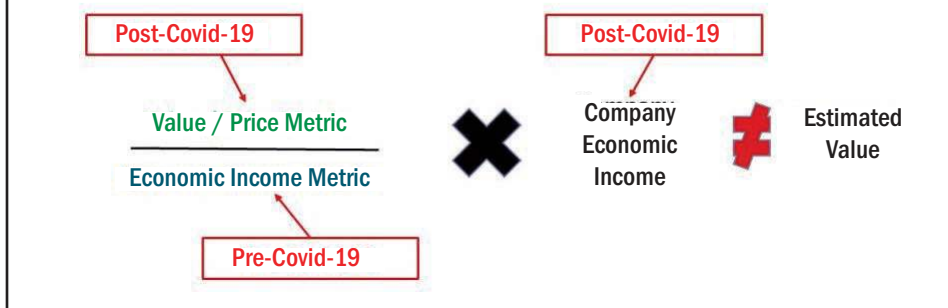


EXHIBIT 13

Two Techniques for Adjusting Guideline Public Company Multiples²⁵

Alternative GPC Method 1. If the valuation date stock price and reported earnings of the GPC reflect the impact of COVID-19, it may be appropriate to conduct the analysis in a manner consistent with the ordinary application of the GPC method. However, if the valuation date stock price reflects the impact of COVID-19 (Affected Stock Price) but the reported earnings used in the calculation of multiples are the Unaffected Earnings (e.g., provided by Dec. 31, 2019 financial statements), the following procedures may be appropriate:

1. Calculate the multiples using the Affected Stock Price and Unaffected Earnings of the GPC. This calculation will provide the "Affected GPC Multiples."
2. Determine whether the earnings of the subject company are the Affected Earnings. If so, adjust the Affected Earnings to quantify the Unaffected Earnings.
3. Apply the Affected GPC Multiples to the Unaffected Earnings of the subject company to estimate the COVID-19 Value of the subject company.

Alternative GPC Method 2. An alternative to the GPC Method 1 is conducted using the following procedures:

1. Calculate the multiples using the GPC stock price unaffected by COVID-19 (Unaffected Stock Price) and the Unaffected Earnings of the GPC. This calculation will provide the "Unaffected GPC Multiples."
2. To quantify the Unaffected GPC Multiples, you will need to select the date of the Unaffected Stock Price to use in the analysis. This date should be different than the valuation date because the valuation date stock price presumably reflects the impact of COVID-19. Potential may include: (1) the Unaffected Stock Price date closest to the valuation date; (2) the date of the financial statements of the GPCs used in the calculation of multiples (under the assumption that the financial information is known or knowable); or (3) the first trading day after the financial statements are publicly disclosed by the SEC.
3. Determine whether the earnings of the subject company are the Affected Earnings. If so, adjust the Affected Earnings to quantify the Unaffected Earnings.
4. Apply the Unaffected GPC Multiples to the Unaffected Earnings of the subject company to estimate the Unaffected Value of the subject company.
5. Conduct an income approach analysis to estimate the COVID-19 Damages of the subject company. Subtract the COVID-19 Damages from the Unaffected Value of the subject company to estimate the COVID-19 Value of the subject company.

Thompson, Daniel R. Van Vleet, William P. McInerney, and David J. Neuzil have also proposed the following techniques, shown in

Exhibit 13 above and in **Exhibit 14** on the next page.
Continued on next page

DISCOUNTS FOR LACK OF CONTROL AND LACK OF MARKETABILITY

Ownership interests include the following characteristics:

- 1) **Minority:** An ownership interest less than 50 percent of the voting interest in a business
- 2) **Control:** The power to direct the management and policies of a business.
- 3) **Marketability:** the ability to quickly convert property to cash at minimal cost.²⁶

Exhibit 15 at right presents the alternative “Levels of Value” that represent these different characteristics. The valuation approaches and methods used to value the business, as well as the types of normalization adjustments made to the financial statements, determine the resulting level of value. Depending on the level of value derived, premiums or discounts may be required to derive the applicable level of value for the ownership interest being valued. For example, if the valuation approach and normalization adjustments made by the analyst result in a control level of value and the ownership interest being valued is a minority, non-marketable interest, then discounts for lack of control (e.g., minority interest) and lack of marketability would normally be deducted.

Typically, control or lack of control is dealt with in the normalization adjustments made to cash flow. COVID-19 has not changed this.

In assessing whether COVID-19 has affected any applicable discount for lack of marketability, Travis Harms of Mercer Capital recently presented a summary of factors for consideration, as shown in **Exhibit 16** on the next page.

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EXHIBIT 14 Techniques for Adjusting Guideline Company Transaction Multiples

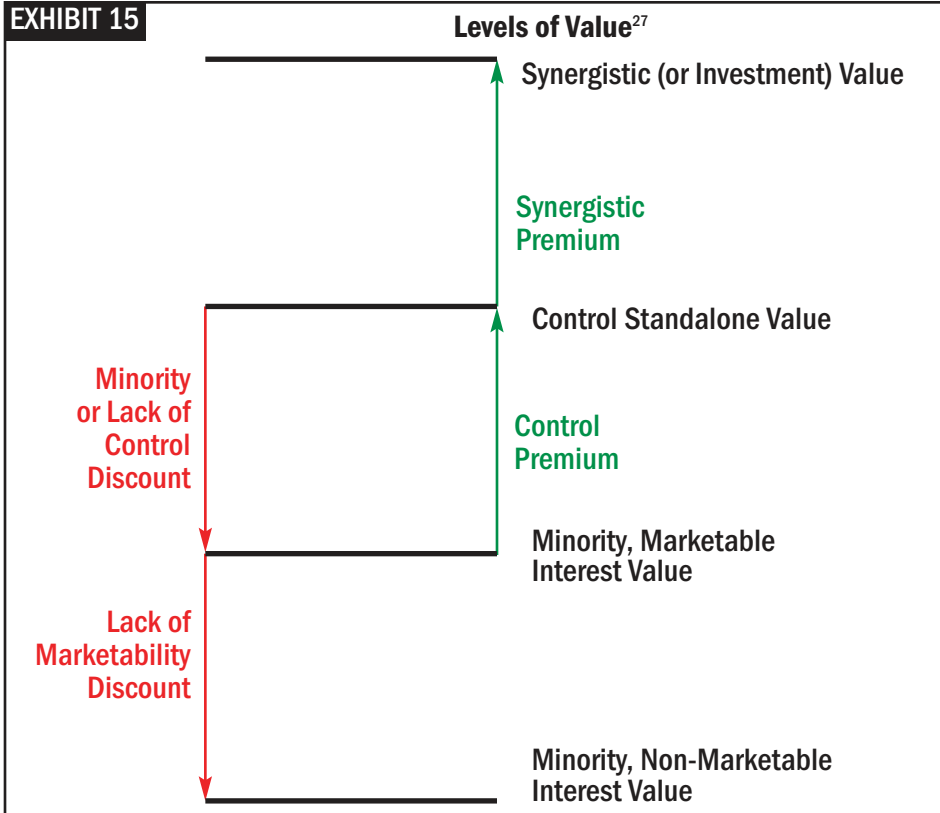
Alternative M&A Method 1. If the purchase price and earnings of the merged or acquired target company (Target) reflect the impact of COVID-19, it may be appropriate to use this information in a manner consistent with the ordinary application of the M&A method. However, if the purchase price of the Target reflects the impact of COVID-19 (Affected Purchase Price) but the earnings used in the calculation of multiples do not (Unaffected Earnings), the following procedures may be appropriate:

1. Calculate the multiples based on the Affected Purchase Price and Unaffected Earnings of the Target. This calculation will provide the "Affected M&A Multiples."
2. If COVID-19 has affected the earnings of the subject company (Affected Earnings), adjust the Affected Earnings to quantify the Unaffected Earnings of the subject company.
3. Apply the Affected M&A Multiples to the Unaffected Earnings of the subject company to estimate the value.


Alternative M&A Method 2. If COVID-19 has not affected the purchase price of the Target (Unaffected Purchase Price) and the Unaffected Earnings of the Target are used in the calculation of the multiples, the following procedures may be appropriate:

1. Calculate the multiples based on the Unaffected Purchase Price and Unaffected Earnings of the Target. This calculation will provide the "Unaffected M&A Multiples."
2. If the earnings of the subject company are the Affected Earnings, adjust the Affected Earnings to quantify the Unaffected Earnings.
3. Apply the Unaffected M&A Multiples to the Unaffected Earnings of the subject company to estimate the value of the subject company as unaffected by COVID-19 (Unaffected Value).
4. Conduct an income approach analysis to estimate the economic damages attributable to COVID-19 for the subject company over a relevant period (COVID-19 Damages).
5. Subtract the COVID-19 Damages from the Unaffected Value of the subject company to estimate the COVID-19 Value of the subject company.

EXHIBIT 15



SUMMARY

In this article, I have identified key factors a valuation analyst should consider when valuing a closely held business in the post-COVID-19 environment. I have also presented guidance in selecting and applying the appropriate valuation approaches and methodologies. The post-COVID-19 environment is constantly evolving, and professional business appraisers will have to stay abreast of the many current developments in order to ensure they are considering all of the information necessary to develop reasonable and credible estimates of value for closely held businesses. 

I wish to thank Jim Hitchner of Financial Valuation Advisors, and Asif Charania, Ethan Hitchcock, and Greg Saunders of Keiter, for reviewing this article and providing their insights. Any errors are solely my own.

¹ Carla S. Nunes and James P. Harrington, "Coronavirus: Cost of Capital Considerations in the Current Environment," Duff & Phelps, April 16, 2020, <https://www.duffandphelps.com/insights/webcasts-and-videos/coronavirus-cost-of-capital-considerations-in-current-environment>.

² James R. Hitchner and Karen A. Warner, "COVID-19 – A timeline of significant events, including the pandemic's effect on the U.S. stock market," Valuation Products and Services, 2020, https://www.valuationproducts.com/wp-content/uploads/2020/04/vps_hitchner-covid-19-timeline.pdf.

³ Yahoo Finance, <https://finance.yahoo.com/>, (accessed May 19, 2020).

⁴ Carla S. Nunes and James P. Harrington, "Coronavirus: Cost of Capital Considerations in the Current Environment," Duff & Phelps, April 16, 2020, <https://www.duffandphelps.com/insights/webcasts-and-videos/coronavirus-cost-of-capital-considerations-in-current-environment>.

⁵ *Guide to the Markets* – U.S. Data are as of March 31, 2020. Source: CBO, J.P. Morgan Asset Management; (Top and bottom right) BEA, Treasury Department. 2020 Federal Budget is based on the Congressional Budget Office (CBO) March 2020 Baseline Budget Forecast. CBO Baseline economic assumptions are based on the Congressional Budget Office (CBO) January 2020 Update to Economic Outlook. Other spending includes, but is not limited to, health insurance subsidies, income security and federal civilian and military retirement. Note: Years shown are fiscal years (Oct. 1 through Sep. 30).

⁶ Carla S. Nunes and James P. Harrington, "Coronavirus: Cost of Capital Considerations in the Current Environment," Duff & Phelps, April 16, 2020, <https://www.duffandphelps.com/insights/webcasts-and-videos/coronavirus-cost-of-capital-considerations-in-current-environment>.

EXHIBIT 16

Factors to Consider in Estimating the DLOM Post-COVID19²⁸

- **Expected holding period.** From the perspective of a hypothetical willing buyer, has the onset of the pandemic changed the expected holding period for the subject interest? If the pandemic has made a near-term sale of the business more likely, the appropriate marketability discount may be smaller. If, instead, the pandemic has extended the period during which the interest is expected to remain illiquid, a larger marketability discount may be indicated.
- **Expected growth in value.** How has the pandemic affected the expected capital appreciation over the anticipated holding period? If the discount rate used in the valuation of the business has increased, the resulting estimate of growth in value is likely higher as well, which may reduce the marketability discount. On the other hand, the crisis situation may increase the agency costs borne by minority investors, which could reduce the expected capital appreciation and increase the marketability discount.
- **Expected interim cash flows.** How will the pandemic influence the subject company's ability or willingness to pay dividends to minority shareholders? If dividends are expected to be cut or suspended, the appropriate marketability discount may increase.
- **Required holding period return.** How has the pandemic affected the return premium investors require for enduring illiquidity? Relative to returns on publicly-traded shares, an increasing premium for illiquidity would contribute to a higher marketability discount, while a lower illiquidity return premium would suggest a lower marketability discount.

videos/coronavirus-cost-of-capital-considerations-in-current-environment.

⁷ Tony Romm, "3 million Americans filed jobless claims last week, pushing eight-week total to 36.5 million," *The Washington Post*, May 14, 2020, <https://www.washingtonpost.com/business/2020/05/14/unemployment-jobless-claims-coronavirus/> (accessed May 20, 2020).

⁸ Rev. Rul. 59-60, 1959-1 CB 237, Sec. 3.03.

⁹ AICPA SSVS No. 1, VS Sec. 100, ¶ 43.

¹⁰ *Ibid.*

¹¹ "AICPA Subsequent Event Toolkit," <https://www.aicpa.org/interestareas/forensicandvaluation/resources/standards/aicpa-vs-section-100-subsequent-event-toolkit-coronavirus.html>.

¹² As is discussed elsewhere in this article, for certain industries, the impact of COVID-19 may actually be positive (e.g., food delivery businesses).

¹³ Most insurance policies have a "force majeure" clause, which is a contractual provision excusing a party's performance obligations when circumstances arise that are beyond the party's control and make performance impossible. Insurers are arguing the COVID-19 pandemic falls under this type of clause. This is a legal matter for the client's attorney to assess.

¹⁴ Rev. Rul. 59-60, 1959-1, CB 237, Sec. 2.02.

¹⁵ Paul Hannon and Saabira Chaudhuri, "Why the Economic Recovery Will Be More of a 'Swoosh' than V-Shaped," *The Wall Street Journal*, May 11, 2020, <https://www.wsj.com/articles/why-the-economic-recovery-will-be-more-of-a-swoosh-than-v-shaped-11589203608> (accessed May 20, 2020).

¹⁶ The Coronavirus Aid, Relief, and Economic Security (CARES) Act, H.R. 748, <https://www.congress.gov/bill/116th-congress/house-bill/748>.

¹⁷ SSVS provides for two alternative scopes of work: a "Calculation Engagement" (i.e., a limited-scope analysis) and a "Valuation Engagement" (i.e., a full-scope analysis). In performing a Calculation Engagement, the analyst and client agree on the most appropriate valuation approaches and methodologies to be used and the extent of procedures to be performed. For a Valuation Engagement, the analyst is required to consider all applicable approaches and methodologies and then

exercise professional judgment in applying those the analyst considers appropriate. AICPA SSVS No. 1, VS Sec. 100, ¶ 21.

¹⁸ In venues where the courts do not accept a discounted cash flow method, an alternative is to first develop an estimate of value using the discounted cash flow method and then, using a capitalized cash flow method, back into the rate of growth that results in a similar value.

¹⁹ Rev. Rul. 59-60, 1959-1 CB 237, Sec. 3.03.

²⁰ Shannon P. Pratt and Alina V. Niculita, *Valuing a Business – The Analysis and Appraisal of Closely Held Companies*, 5th ed. (New York: McGraw-Hill, 2008), p. 56.

²¹ Shannon P. Pratt and Roger J. Grabowski, *Cost of Capital – Applications and Models*, 5th ed. (Hoboken: Wiley & Sons, Inc. 2014), pp. 25-26.

²² *Ibid.*

²³ *Ibid.*, pp. 856-857.

²⁴ James R. Hitchner and Harold G. Martin, Jr., "COVID-19 and Business Valuation - What to do NOW! Valuing Small, Medium, and Large Businesses," Valuation Products and Services webinar, May 14, 2020, <https://www.valuationproducts.com/webinars-past/>.

²⁵ Joseph W. Thompson, et al., "Alternate Valuation Methods in the Era of COVID-19," *Business Valuation Update*, Vol. 26, No. 6, June 2020, <https://www.bvresources.com/articles/business-valuation-update/alternate-valuation-methods-in-the-era-of-covid-19> (accessed May 22, 2020).

²⁶ *International Glossary of Business Valuation Terms* (The C.L.A.R.E.N.C.E. Glossary Project comprised of the following professional organizations: American Institute of Certified Public Accountants, American Society of Appraisers, Canadian Institute of Chartered Business Valuators, National Association of Certified Valuators and Analysts, and The Institute of Business Appraisers, 2001).

²⁷ James R. Hitchner, ed., *Financial Valuation Applications and Models*, 4th ed. (Hoboken: John Wiley & Sons, Inc., 2017), p. 393.

²⁸ Travis W. Harms, "Coronavirus and the Value of Minority Interests in Private Businesses," Association of International Certified Professional Accountants, April 20, 2020.