KEEPING WATER UNDER THE KEEL:

Valuation analysts are experts at business valuation; business owners and executives are experts on their companies.

INCREASING BUSINESS VALUE BY DECREASING RISK

SETH WEBBER AND CASEY KARLSEN

As the baby boomer generation retires, the construction industry is being hit by a wave of business ownership transition. Approximately 63 percent of private businesses in the United States are held by baby boomers.[1] These baby boomers are reaching retirement age at a rate of 10,000 per day across the country and transferring business ownership to new parties.[2]

Many construction owners find themselves treading water when it comes to how best to pass on their ownership to the next generation of entrepreneurs. Their exit path may be through a transfer of ownership to family members, management buyout, sale to an employee stock ownership plan (ESOP), sale to a competitor or private equity firm, or initial public offering of stock. As they consider exit paths, business owners and executives typically want to know how much their businesses are worth and how to make them more valuable.

Many business owners and executives think the most effective way to increase business value is to increase income, but this is often not the case. Decreasing a com-

SETH WEBBER *is the principal and head of BerryDunn's Valuation Services Group and provides valuation and consultation to clients in a wide range of industries and for a wide range of purposes, including gift and estate tax reporting, succession planning, mergers and acquisitions, litigation support, and shareholder disputes. Seth is also experienced in strategic planning, mergers and acquisitions planning and execution, and program management. Seth can be reached at* (207) 541-2297 *or* swebber@berrydunn.com.

CASEY KARLSEN *is a senior valuation analyst in BerryDunn's Valuation Services Group. Casey's experience with construction companies and their owners began early on: He was raised by one, framing and painting houses for his father in high school and college. His practice group provides business valuation, consulting, and expert witness services to clients in New England and beyond. Casey's valuation experience includes valuation and economic analysis assignments for the following purposes: merger and acquisition, gift and estate tax reporting, bank financing, litigation support, divorce, and shareholder buyouts. Casey can be reached at* (207) 842-8053 *or* ckarlsen@berrydunn.com.

EXHIBIT 1 After-Tax Cash Flow to Equity

$$\frac{\text{Next Year's After-Tax Cash Flow to Equity}}{\text{(Equity Discount Rate – Growth Rate)}} = \frac{\$6{,}000{,}000}{(18\% - 3\%)} = \$40{,}000{,}000$$

EXHIBIT 2 Example of a Construction Company Build-Up Model Equity Discount Rate

13.77%		2.39%		6.91%		0.76%		3.71%
COST OF EQUITY CAPITAL	=	SPOT 20-YEAR TREASURY YIELD	+	HISTORICAL LONG-TERM (1926 — Present)	+	SIC 15 INDUSTRY RISK PREMIUM	+	DECILE 10A ($185.418m—$321.578m)

pany's risk profile is often an easier way to increase value. The risk profile of construction companies often influences value by 20 percent or more. Business owners often find it easier to mitigate risk factors than to increase income by 20 percent. Additionally, decreasing a company's risk profile often results in increased income, amplifying the increase in value.

The following presents a risk-based approach to increasing business value in the construction industry. First, we provide an overview of how businesses are valued and how company risk affects business value. Next, we identify common risk factors of construction companies that owners and executives can mitigate to help increase business value. Lastly, we offer our thoughts on how to make the most of any support received from outside valuation analysts.

Business valuation overview

There are three business valuation approaches: (1) the income approach, (2) the market approach, and (3) the asset approach. Within each valuation approach, there are multiple valuation methods. Valuation analysts may apply more than one method from more than one approach. We chose to focus on the application of the income approach and the market approach, specifically on how company-specific risk affects value.

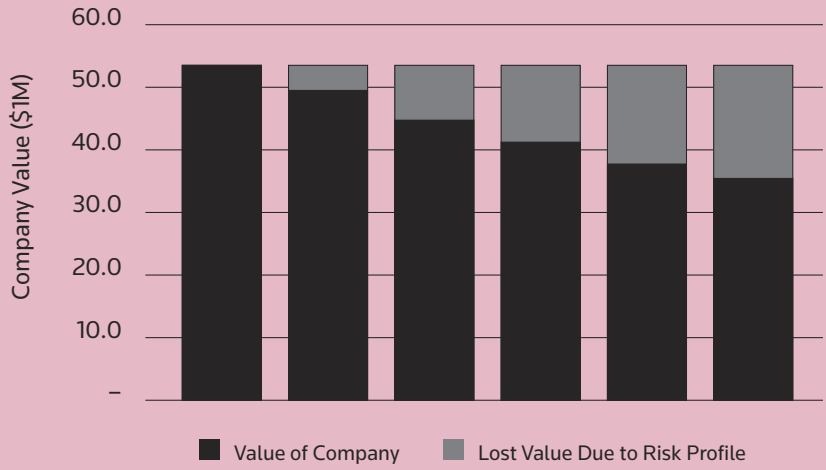
Income approach

The income approach is based on the assumption that the value of a company is a function of future income. A commonly applied income approach method is the discounted cash flow (DCF) method. In the DCF method, valuation analysts discount projected future income from a discrete projection period to present value based on a required rate of return. If the subject company is already growing steadily, analysts may apply an alternative income approach method: the capitalization of earnings method.

The capitalization of earnings method is based on the Gordon Growth Model, which states that the intrinsic value of a stock is equal to the present value of its future dividends. Mathematically, this model equates business value to next year's income divided by the discount rate minus the growth rate (i.e., the capitalization rate).

Consider the following hypothetical example as a simple illustration of the income approach. JEK Construction is a residential construction company with revenue of $200 million. Next year's after-tax cash flow to equity is estimated to be $6

EXHIBIT 3 Effect on Value of Increasing CSRP



million. The owner of JEK Construction is planning to retire and is having her business valued for planning purposes. She retains a qualified valuation analyst for this task.

As part of her analysis, the analyst considers the income approach capitalization of earnings method. She capitalizes after-tax cash flow to equity, indicating a value of $40 million as presented in Exhibit 1.

One of the key inputs to the income approach is the discount rate, or the required rate of return. The required rate of return is estimated based on risk. Investors view a company's risk profile like water under the keel of a boat. If a boat has a lot of room between its keel and the rocks down deep, it can survive tumultuous storms without being dashed to pieces. However, if a boat is in shallow waters, its survival may depend on calm waters or expert knowledge of where the rocks and shoals lie. Similarly, if a business has a high-risk profile, it may be in trouble when difficult times come.

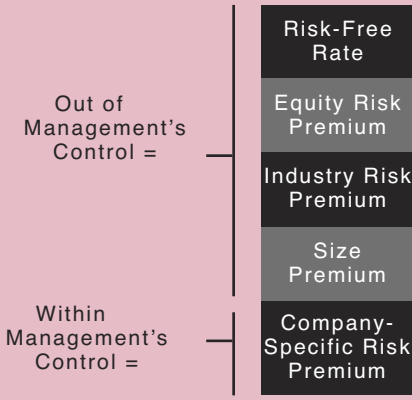
Investors will pay less for investments that may not survive a storm. Accordingly, risky investments command a higher rate of return to incentivize people to invest. As risk goes up, value goes down.

One commonly used resource for estimating equity discount rates is the Duff & Phelps Cost of Capital Navigator. One model to estimate equity discount rates is the build-up model. An example of a construction company build-up model equity discount rate from this database is presented in Exhibit 2 (before consideration of company-specific risk factors).

The risk elements in Exhibit 2 reflect market-wide elements. If the company being valued has the same risk profile as the companies that Duff & Phelps used to estimate this cost of equity capital, the aforementioned discount rate would be appropriate. However, for each element of excess risk, valuation analysts increase the discount rate by adding a company-specific risk premium (CSRP). While the CSRP often ranges from 1 percent to 5 percent, it could be negative, zero, or significantly more than 5 percent, all depending on the facts and circumstances of a particular company. Analysts add the CSRP to the equity discount rate.

For example, if an analyst used the Cost of Capital Navigator to estimate a 13.77 percent equity discount rate and an additional CSRP of 4 percent, he or she may conclude an equity discount rate of approximately 18 percent (the rounded sum of the equity discount rate and the CSRP). In this example, the CSRP would comprise approximately 22 percent of the total risk of the business (4 percent divided by 18 percent).

EXHIBIT 4 Risk Profile Components



As the discount rate increases, the value of the company decreases. The effect on value of increasing CSRP from 0 percent to 5 percent is shown in Exhibit 3. The company value in each scenario is calculated using capitalization of earnings based on equity cash flows.

As shown in Exhibit 3, increasing the CSRP from 0 percent to 5 percent decreases the value of the company from $54.5 million to $37.5 million, a decrease of 31.3 percent.

Consider the impact of company-specific risk on the value of the hypothetical company JEK Construction. The company's risk profile was increased due to dependence on a key customer, lack of management depth, and potential litigation from a poorly performed project. Therefore, the analyst estimated a CSRP of 4 percent, resulting in a cost of equity of 18 percent. As presented in Exhibit 3, if JEK Construction had a CSRP of 0 percent, its value would have been $54.5 million instead of $40 million. In this example, JEK Construction's risk profile decreased the value of the company by approximately 27 percent.

Much of the risk of an investment in a construction company is the result of macroeconomic factors, such as the health of the overall economy, economic fluctuations, and industry-wide trends. These factors are largely out of management's control. However, unlike economic and industry-wide factors, company-specific risk factors are often within a business owner's control, as presented in Exhibit 4.

By reducing the company's risk profile, management can decrease the equity discount rate and increase business value.

Market approach

The market approach is grounded in a direct comparison of the subject entity to the market transactions of similar companies. The two primary market approach methods are (1) the guideline completed transaction method (using prices of recently sold similar companies) and (2) the guideline public company method (using prices of similar publicly traded companies). Both methods derive multiples (e.g., the multiple of value to revenue, operating income, cash flow, or other value drivers) from transactions of interest in companies engaged in the same (or similar) lines of business. After considering the subject company's risk profile, analysts select a multiple(s) and apply it to the subject company's financial metrics to arrive at an indication of value.

For illustrative purposes, consider the following hypothetical example of the previously mentioned JEK Construction valuation. JEK Construction has annual earnings before interest, taxes, depreciation, and amortization (EBITDA) of $8 million. As part of her analysis, the analyst applies the market approach guideline completed transaction method. As part of this method, the analyst considers a multiple of EBITDA. Using the DealStats database through Business Valuation Resources, she identifies transactions and EBITDA multiples from similarly sized companies from the same industry, as presented in Exhibit 5.

Every company has strengths and weaknesses that positively or negatively influence its risk profile. By considering a wide range of transactions, the positive factors of one company that influence a higher multiple may be offset by the negative factors of another company that resulted in a lower multiple. Therefore, in Exhibit 5's data set, the analyst estimates that multiples in the center of the distribution reflect only economic and industry-specific factors. Prior to considering any company-specific risk factors, the analyst estimates an EBITDA multiple of 6.0x.

JEK Construction's risk profile is affected by the previously mentioned dependence on

EXHIBIT 5 Transactions and EBITDA Multiples from Similarly Sized Companies from the Same Industry

Description of Company	Revenue ($)	MVIC Price ($)	EBITDA ($)	MVIC Price / EBITDA
DealStats Database				
Construction Management and General Contracting Firm	386,923,726	82,225,935	17,409,334	4.72x
Residential Home Builder	22,913,341	5,000,000	976,943	5.12x
Builder of Residential Homes	92,006,010	6,234,000	2,066,592	3.02x
Construction and Sales, Single Family Homes	57,123,396	34,600,000	5,431,219	6.37x
Manufactures Single Family Homes, Townhouses, and Condominiums	844,011,000	207,678,120	63,306,000	3.28x
Develops and Builds Planned Residential Communities	82,061,000	65,400,000	5,570,000	11.74x
Construction Services	191,893,000	135,649,000	18,867,000	7.19x
Provides General Contracting, Engineering, and Construction Management Services	644,223,722	53,299,000	7,580,725	7.03x
Minimum	22,913,341	5,000,000	976,943	3.02x
Average	290,144,399	73,760,757	15,150,977	6.06x
Median	141,949,505	59,349,500	6,575,363	5.74x
Harmonic Mean	84,444,864	17,868,562	3,757,110	5.11x
Maximum	844,011,000	207,678,120	63,306,000	11.74x

a key customer, lack of management depth, and potential litigation from a poorly performed project. These factors are not present in the completed transactions that the analyst identified. Therefore, to account for this additional risk, the analyst reduces the estimated EBITDA multiple from 6.0x to 5.0x.

The analyst then applies the EBITDA multiple to estimate the value of JEK Construction as presented in Exhibit 6.

Multiples from the marketplace often vary dramatically, indicating a wide range of potential values. In the preceding example, the EBITDA multiples reported by DealStats ranged from 3.0x to 11.7x. The risk profile of each company, as well as transaction-specific items and the company's outlook, resulted in this wide range of multiples.

As presented, the central multiples were considered to reflect only economic and industry-specific factors. The selected multiple prior to considering JEK Construction's risk profile was 6.0x, while the minimum EBITDA multiple from the data set was 3.0x. Company-specific risk factors, along with transaction-specific items and business outlook, likely account for most of this variance. This considerable reduction in value may have been avoided if management had mitigated some of the company's risk factors.

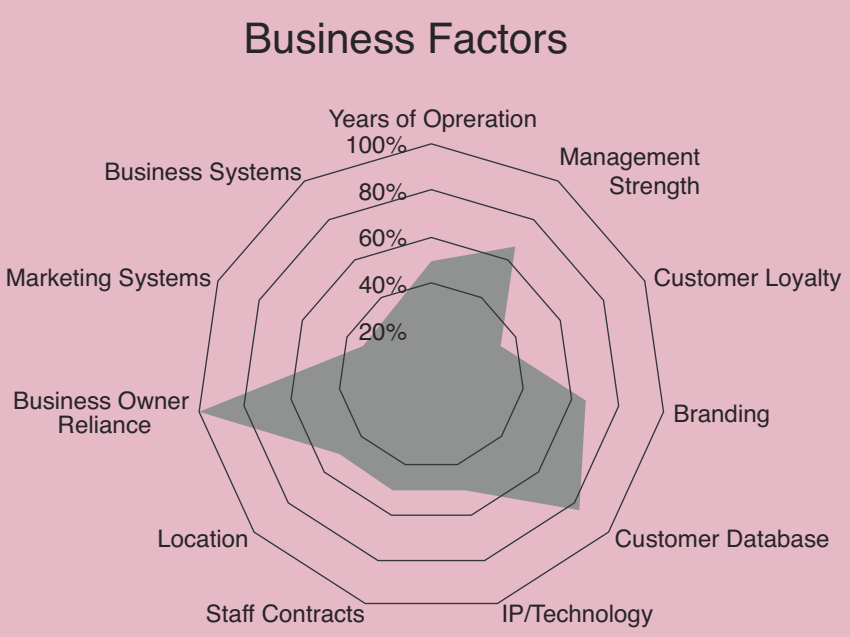
Business valuation summary

As shown, the risk profile of a company has a direct impact on its value. In the income approach, applying a CSRP increases the discount rate and reduces value. In the market approach, analysts select valuation multiples based on a company risk profile. By mitigating these company-specific risk factors, business owners can increase the value of their companies.

EXHIBIT 6 Application of the EBITDA Multiple to Estimate the Value of JEK Construction

Multiple of EBITDA	
DealStats Database	
Company's EBITDA	$10,000,000
Selected Multiple (MVIC/EBITDA)	5.00x
Market Value of Invested Capital	50,0000,000
Interest-Bearing Debt	(8,000,000)
Indicated Value of Equity	$42,000,000

EXHIBIT 7 Example of a MAUS Output Model



Company-specific risk factors

Company-specific risk factors are risk characteristics that are different from the industry-wide factors in the guideline completed transactions, guideline public companies, and/or companies used to estimate discount rates. To avoid double-counting risk, analysts should only estimate a CSRP based on factors that affect the company but not its competitors.

Operational risk factors

The following factors are some of the common risk factors for construction companies.

Management bench strength. Construction company executives and owners are busy. Keeping on top of projects can leave little time to ponder potential issues in the future. One area that is frequently overlooked is the need to continuously train up the next

level of management. If no one is ready to take over when the current managers leave, a company's risk profile increases.

Employee stability. Employee stability is another factor affecting the risk profile. In the current labor market, most construction companies have a difficult time hiring qualified employees. Buyers are aware of constraints in the labor pool. As a result, they may pay less for companies with high turnover. Treating one's employees well can go a long way toward maintaining stability.

Customer concentration. Many companies have gone out of business by becoming overly dependent on a single customer and then losing that customer. While it may seem counterintuitive, businesses may benefit by limiting the amount of work performed for a single client.

Competitive landscape. A competitive landscape may increase company-specific risk if the level of competition is not present across the industry. If a company operates within a narrow geographical area that is subject to unusually high levels of competition, an increased CSRP and lower selected valuation multiples may be appropriate. This risk factor may be mitigated by differentiation of products and services or establishing competitive advantages.

Additional risk factors. IBISWorld is a leading resource of information prepared on an industry-by-industry basis. IBISWorld identified the following "key success factors" for the commercial building construction, industrial building construction, and road and highway construction industries.[3] All of these items represent risk factors — if they are not properly mitigated, the company's risk profile will increase.

- Access to a highly skilled workforce: Construction companies across the country are having difficulty attracting and retaining qualified workers. A risk profile adjustment may be necessary if a company faces greater difficulty accessing employees than other construction companies.
- Ability to successfully negotiate with regulators: The construction industry has multiple layers of building statutes and regulations. Companies need

managers who understand these regulations and can deal with administration and regulatory authorities.
- Ability to compete on tender/ensuring pricing policy is appropriate: Many construction projects are awarded through the tender process. Construction companies have been bankrupted by single projects that they underbid. In order to ensure a steady flow of projects and maintain adequate margins, construction companies must successfully compete on tender.
- Access to high-quality inputs: Maintaining positive relationships with suppliers of high-quality materials is a key factor to success. If a construction company depends only on one supplier, they are at the mercy of that supplier's pricing. Because their success depends on the supplier's existence, they also adopt all the supplier's risk.
- Ability to rapidly expand and curtail operations based on market demand: In the latest economic recession, many construction companies went out of business. The ability to adapt operational activity to market demand was critical to the success of the companies that survived. Demand often changes quickly, and companies that can quickly expand and reduce operations have lower risk profiles.

Additional company-specific risk factors include:

- use of technology;
- legal issues;
- geographic distribution;
- product diversification;
- business owner reliance;
- life cycle of products;
- political factors;
- fixed asset age and condition;
- years in operation; and
- customer loyalty.

Financial risk factors

It is important for business owners to know their businesses' margin for error for being able to continue operations. Financial risk factors help analysts assess how much room for error is available. Consider the previously mentioned analogy comparing risk to water under the keel. Financially sound companies have more water under the keel to weather the lean times, resulting in a lower risk profile. To reduce financial risk, a business should maintain strong profitability, adequate financial leverage, and a sound cost structure.

Profitability. Companies that are more profitable are worth more. That may seem like an obvious statement, but consider this scenario: Company A and Company B are identical except that Company A has a profit margin that is twice as high as Company B's profit margin. Company B is worth $100 million. How much is Company A worth? At first glance, it is tempting to say that Company A is worth $200 million. An inexperienced valuation analyst may rationalize that because a business owner would have twice as much profit as Company A, it should be worth twice as much. However, Company A is likely worth more than twice as much as Company B.

Why is that? Companies that are more profitable have more flexibility to adapt to changing market conditions before losing money. Therefore, they may be less risky and may accordingly command higher market multiples and/or lower cash flow discount rates. Additionally, companies with stable earnings are less risky — and more valuable — than companies with volatile cash flows.

The key takeaway for business owners and executives is to be choosy about projects in today's economy. Choose projects with higher profit margins, even if the volume is lower.

Financial leverage. The amount of financial leverage (or the amount of debt that a company has) affects the risk of a company. Leverage may decrease the "cushion" of a business. That is, debt adds interest expense, which may reduce the margins of a company and make the company more vulnerable to changes in its operating environment. By taking on more debt, the owner commits to paying interest expenses and, as a result, has a higher hurdle of expenses to clear before becoming profitable. In this way, the owner of a business may have less room for error before losing money.

Cost structure. A company's cost structure is another factor that affects a company's risk profile. Cost structure includes two components: fixed costs and variable costs. In general, a high percentage of fixed costs in a company's cost structure increases the risk profile of the company. If sales volume

TO REDUCE FINANCIAL RISK, A BUSINESS SHOULD MAINTAIN STRONG PROFITABILITY, ADEQUATE FINANCIAL LEVERAGE, AND A SOUND COST STRUCTURE.

suddenly drops, the company will have limited ability to adapt quickly and will still have to cover its fixed operating costs. If the business cannot make enough money to cover its fixed costs, it will lose money. However, companies with a variable cost structure will have a greater ability to adapt to a changing business environment. This factor is a constant tension for many companies in deciding what work to do themselves versus relying on subcontractors. It also has implications for strategy: Will the company take an asset-light approach and rent needed equipment or an asset-intensive approach and have equipment available for the right opportunity?

Additional financial metrics. Analysts also use the following financial metrics to assess company risk and select a CSRP and valuation multiples:

- liquidity (e.g., current ratio and quick ratio);
- performance (e.g., return on equity and return on assets);
- turnover (e.g., total asset turnover and working capital turnover); and
- risk of attaining forecasted results.

Valuation analysts assess financial risk factors by reviewing a company's historical performance over a typical business cycle (generally three to five years). Company performance is often compared to industry benchmarks to assess risk. Outperforming the industry benchmarks typically merits a higher multiple/lower CSRP. Conversely, if the subject company performs poorly relative to industry benchmarks, a lower multiple/higher CSRP may be appropriate.

WHEN WORKING WITH THIRD-PARTY VALUATION ANALYSTS, REVIEW THE RISK FACTORS THAT THE ANALYST CONSIDERED WHEN ESTIMATING A CSRP AND VALUATION MULTIPLES.

Business risk models

Analysts use various models to assess business risk. One such model is the exit and succession planning software prepared by MAUS Business Systems (MAUS). The MAUS Business Attractiveness model assists analysts in assessing and diagramming the risk profile of a company. This model was developed to assess business attractiveness to potential acquirers based on common risk factors. Analysts can use this software as part of their assessment of company risk. This model is also a helpful communication tool because it provides a visual representation of a company's risk profile and highlights the areas in which a company can improve.

Using this model, analysts assess a company's risk profile regarding several key factors. MAUS then generates a report that includes a series of diagrams like the one in Exhibit 7. Business attractiveness factors are positioned around the outside of a polygon. If a company performs well regarding a particular factor, a point is plotted toward the outside of the polygon. If the company performs poorly, a point is plotted toward the center of the shape. The points are then connected to visualize a company's risk profile. The larger the shape is, the lower the subject company's risk profile typically is.

It is important to note that the MAUS Business Attractiveness model should not be used to simply calculate a CSRP based on the size of the indicated shape. One of the flaws in formula-based calculations such as this is that they assume all risk factors affect company risk equally. Instead, the MAUS Business Attractiveness model is one tool that analysts can consider when estimating a CSRP and valuation multiples.

The CSRP factors just discussed provide many of the action items that business owners and executives need to increase business value. However, when the business exit comes, independent valuation analysts often value the business, not the owners and executives.

Working with valuation analysts

When working with third-party valuation analysts, review the risk factors that the analyst considered when estimating a CSRP and valuation multiples. Risk factors should be explicitly documented in the analyst's report or included in the analyst's work file.

Valuation analysts are experts at business valuation; business owners and executives are experts on their companies. Analysts may be unaware of certain factors or misunderstand their significance. Make sure the analyst correctly understands the company's risk profile, and make sure that the concluded CSRP and multiples make sense.

As a practical example, an asphalt paving company was being valued for ESOP-related purposes. The asphalt company got almost all of its asphalt from a single supplier. The supplier not only operated asphalt plants but also provided paving services, competing with the subject company. Prior to speaking with management, the valuation analyst was

prepared to assign a high CSRP based on the company's dependence on a supplier/competitor. However, management indicated several mitigating factors: The asphalt supplier made much better margins as a supplier than as a competitor; the asphalt supplier intended to discontinue its paving segment in the near term; and the relationship between the two companies was very deep and tenured. After learning of these factors, the analyst assigned a much lower CSRP. By communicating these factors to the valuation analyst, the business owner was able to preserve a significant component of value.

This example highlights the importance of business owners and executives understanding and agreeing with the analyst's assessment and quantification of a company's risk profile.

Conclusion

Managing construction companies can be a difficult task. There are rocks under the water that threaten business viability and value. To increase business value, keep as much water under the keel as possible. Reducing operational risk and financial risk will increase business value by lowering the discount rate and increasing valuation multiples. As shown in the examples throughout this discussion, a company's risk profile can have quite an impact on value. Mitigating these risk factors will help business owners and executives position their companies favorably as they contemplate transitioning ownership. ■

NOTES

[1] Snider, C.M., "The State of Owner Readiness 2018 North Texas Report," Exit Planning Institute (2018). Available at: https://ox242.infusionsoft.app/app/form/2018-texas-soor-report-ownerreadinesscom?cookieUUID=a86d45fd-5667-4f18-93fb-b1c6b5865864.

[2] Myers, K., "Americans are retiring at an increasing pace," Yahoo Finance, (Nov 21, 2018). Available at: https://finance.yahoo.com/news/americans-retiring-increasing-pace-145837368.html.

[3] Madigan, J., "IBISWorld Industry Report 23622a: Commercial building construction in the US," IBISWorld (April 2019). Available at: https://www.ibisworld.com/industry-trends/market-research-reports/construction/building-developing-general-contracting/commercial-building-construction.html; Madigan, J., "IBISWorld Industry Report 23621: Industrial building construction in the US," IBISWorld (March 2019). Available at: https://www.ibisworld.com/industry-trends/market-research-reports/construction/building-developing-general-contracting/industrial-building-construction.html; Madigan, J., "IBISWorld Industry Report 23731a: Road & highway construction in the US," IBISWorld (Feb 2019). Available at: https://www.ibisworld.com/industry-trends/market-research-reports/construction/heavy/road-highway-construction.html.