

Application of the Asset-Based Approach to Conclude a Going-Concern Value

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Valuation analysts (“analysts”) are often retained by legal counsel to provide valuation services to industrial or commercial companies, including services related to bankruptcy proceedings. One of the services that analysts may provide in a bankruptcy context is the valuation of the debtor company equity or the debtor company assets. When valuing the debtor company equity or the debtor company assets, the analyst may develop the valuation based on the going-concern premise of value. One generally accepted valuation approach that may be applied to value the debtor company is the asset-based approach. An analyst may apply the asset-based approach to conclude the going-concern premise of value related to the debtor company. This discussion provides guidance with regard to (1) the generally accepted debtor company valuation approaches and methods and (2) the application of the asset-based approach to value a debtor company based on the going-concern premise of value.

INTRODUCTION

The bankruptcy of an industrial or commercial company often involves the valuation of the assets, properties, or business interests included in the bankruptcy estate. For purposes of this discussion, we refer to these industrial or commercial companies as “debtor companies.”

There are numerous reasons why an analyst may be requested to conduct a valuation of the debtor company equity or the debtor company assets. These reasons can include creditor’s rights issues, decisions with regard to debtor company liquidation versus debtor company reorganization, consideration of any proposed plans for reorganization, and so forth.

In the valuation of the debtor company equity or the debtor company assets, an analyst may develop the valuation based on the going-concern premise of value. In developing a business valuation based on

the going-concern premise of value, there are three generally accepted business valuation approaches that can be applied: (1) the income approach, (2) the market approach, and (3) the asset-based approach.

Inexperienced analysts may exclude (or may not even consider applying) the asset-based approach when valuing the debtor company equity. This may be because those analysts do not believe that the asset-based approach is relevant to such a valuation, or because those analysts simply do not know how to properly apply the generally accepted asset-based approach business valuation methods.

Additionally, inexperienced analysts may (incorrectly) assume that the application of the asset-based approach automatically results in a liquidation premise of value. In fact, the asset-based approach can be applied to value the debtor company equity based on a going-concern premise of value.

This discussion addresses the application of the asset-based approach to value the debtor company on a going-concern premise of value in a bankruptcy engagement.

In the following section, this discussion considers the generally accepted business valuation approaches and methods with regard to the valuation of debtor companies. In particular, this discussion focuses on two asset-based approach valuation methods:

1. The asset accumulation (“AA”) method
2. The adjusted net asset value (“ANAV”) method

APPROACHES AND METHODS TO VALUE DEBTOR COMPANIES

There are numerous reasons to estimate the value of a debtor company business, business ownership interest, or security within a bankruptcy context. For example, a closely held debtor company may need to enter into a stock sale transaction either before filing for bankruptcy protection, during the bankruptcy period, or while emerging from bankruptcy.

Such stock sales may involve attempts to raise equity capital (and to avoid insolvency), find strategic partners and other investors, or monetize spin-off opportunities. Factors related to both the level of value and the stock rights and privileges may affect the value of the prebankruptcy debtor company stock.

For any purpose, analysts may consider and apply generally accepted business valuation approaches, methods, and procedures in these debtor company valuations. This section summarizes these generally accepted business valuation approaches and methods.

Generally Accepted Business Valuation Approaches and Methods

The generally accepted valuation approaches are the asset-based approach, the income approach, and the market approach. A summary of these three business valuation approaches is presented below.

Asset-Based Approach

The asset-based approach is based on the principle that the debtor company equity value is equal to the value of the debtor company assets less the value of the debtor company liabilities. The asset-based approach is applied less frequently (compared to the

income approach or market approach) in the valuation of the debtor company.¹

To perform an asset-based approach valuation, the analyst may identify and value the following asset and liability categories: net working capital (e.g., accounts receivable and inventory), tangible personal property (e.g., machinery and equipment), real estate (e.g., land and permits, computer software, and customer relationships), intangible value in the nature of goodwill, contingent liabilities, and recorded liabilities.

The application of the asset-based approach may include the application of the generally accepted property valuation approaches—the income approach, the market approach, or the cost approach—to estimate the value of certain debtor company assets.

Two asset-based approach valuation methods are the AA method and the ANAV method. These asset-based approach valuation methods are addressed later in this discussion.

Income Approach

The income approach is based on the principle that the value of the debtor company business is the present value of the debtor company’s expected future income. The most common income approach valuation methods in a bankruptcy engagement are as follows:

- The direct capitalization method
- The yield capitalization method (also sometimes referred to as the discounted cash flow [“DCF”] method)

In the direct capitalization method, the selected measure of income is projected for a single future period—that is, for a typical “next period” after the valuation date. This projected income is normalized—or stabilized—in order to represent a typical level of income on a forward-looking basis. The objectives of this income stabilization procedure are such that (1) the effects of business cyclicality are reduced, (2) the effect of an abnormal “last period” projection base are reduced, and (3) the effects of nonrecurring or extraordinary income or expense items are eliminated.

The projected income is capitalized by (i.e., divided by) a direct capitalization rate. There are several procedures that may be used for estimating the appropriate direct capitalization rate, but these procedures are beyond the scope of this discussion.

In the yield capitalization method (sometimes called the discounted cash flow—or DCF—method),

the selected measure of income is projected for several years in a discrete projection period. A yield capitalization rate (also called a present value discount rate) for the debtor company is typically estimated as a weighted average cost of capital. The yield capitalization rate is applied to the discrete income projection in order to conclude the present value of the projected income stream.

Next, in the yield capitalization method, a residual value (also called a terminal value) is estimated. The residual value is estimated at the end of the discrete projection period. There are several procedures that may be used to estimate the residual value.

The sum of (1) the present value of the projected discrete period income stream and (2) the present value of the residual value indicates the value of the total unit of operating assets.

Market Approach

The market approach is based on the principle that the debtor company can be valued by reference to pricing guidance extracted from what investors exchange ownership interests in arm's-length transactions for similar investments. Two market approach valuation methods are as follows:

- The guideline publicly traded company ("GPTC") method
- The guideline merged and acquired company ("GMAC") method

In the application of either the GPTC method or the GMAC method, the analyst identifies and analyzes market data regarding (1) GPTC financial fundamentals or (2) GMAC arm's-length transactions, and then extracts pricing multiples to apply to the debtor company financial fundamentals.

The following discussion focuses on the asset-based approach and its application to estimating the value of a debtor company based on the going-concern premise of value.

Application of the Asset-Based Approach to Value the Debtor Company on the Going-Concern Premise of Value

While the income approach and market approach are also commonly applied, the asset-based approach is a generally accepted business valuation approach. It is described in most of the comprehensive business valuation literature. In fact, analysts are typi-

cally required to consider the asset-based approach in their analyses, according to most authoritative business valuation professional standards. In the bankruptcy engagement, the analyst should typically consider the application of the asset-based approach.

Professional standards such as the American Institute of Certified Public Accountants *Statement on Standards for Valuation Services* and the *Uniform Standards of Professional Appraisal Practice* require the analyst to consider applying the asset-based approach in the analyst's valuation development.

In practice, many inexperienced analysts immediately ignore asset-based approach methods because they see it as too difficult to apply. Further, many analysts do not seriously consider the application of the asset-based approach in a bankruptcy engagement because they are not familiar with the procedures necessary to properly apply the asset-based approach valuation methods.

Additionally, the application of the asset-based approach may require estimating a value for each of the assets of the debtor company. This process can be time-consuming and costly to the client. Depending on the ownership interest subject to the valuation, however, the asset-based approach should be given appropriate consideration.

The analyst's selection of the applicable valuation approach is a function of four primary factors: (1) the type of debtor company, (2) the type of subject business interest, (3) the type of subject transaction, and (4) the availability of necessary data.

The asset-based approach typically concludes a marketable, controlling ownership interest level of value. Therefore, the asset-based approach is generally more relevant to the valuation of an overall business enterprise. The asset-based approach is also applicable to the analysis of a debtor company acquisition that is structured as an asset purchase transaction.

In addition, when properly applied using consistent valuation variables, all asset-based approach valuation methods may be used to conclude (1) total business enterprise value, (2) total business asset value, (3) total business owners' equity value, (4) a single class of owners' equity, and (5) a specific block of owners' equity.

There are multiple valuation methods within the asset-based approach. This discussion focuses on the application of two asset-based approach valuation methods:

1. The AA method
2. The ANAV method

Asset Accumulation Method

The AA method can be a time-consuming and complicated asset-based approach valuation method. To apply the AA method, analysts typically begin with the most recent balance sheet of the debtor company. However, the balance sheet of the debtor company serves only as a starting point as each asset is reviewed and likely adjusted. According to *Valuing a Business*:

[t]he value-basis balance sheet may be materially different from the cost-basis balance sheet in two ways: (1) the balances in the asset and liability accounts have been revalued and (2) several new asset and liability accounts may be added.²

It is typical for a debtor company's most valuable assets to be unrecorded assets on the debtor company's cost-based balance sheet. Intangible assets such as the trained and assembled workforce, customer contracts, going-concern value and goodwill, among others, are not typically recorded on a debtor company's balance sheet (unless acquired as part of a business purchase).

In applying the AA method, the analyst will apply generally accepted property valuation methods from the income approach, market approach, and cost approach to estimate the value of the assets of the debtor company.

A summary of the procedures that are typically applied in the AA method follows:

1. Identify all of the debtor company's asset and liability categories.
2. Value all of the identified asset and liability accounts.
3. Calculate the level of value as indicated in the valuation engagement (e.g., equity, market value of invested capital, and others).

The first procedure presented above (identify all asset and liability categories) is fairly straightforward. Typically, the analyst begins with the debtor company's balance sheet to identify both the asset and liability categories. The analyst then notes the certain asset and liability accounts presented on the debtor company's balance sheet. To identify all asset and liability accounts, further due diligence is often required, such as speaking with management and developing an understanding of the debtor company's business.

For instance, if the debtor company is capital intensive, it is likely that most of the assets are tangible assets and can be readily identified by management. However, if the debtor company is a professional services firm, telecommunications firm, or other firm with significant intangible assets, there may be assets of significant value that are unrecorded on the debtor company's balance sheet. These valuable assets may include customer contracts, trademarks or trade names, goodwill, and other intangible assets.

Similar to identifying unrecorded assets, the analyst will have to identify all liabilities, including both recorded liabilities and unrecorded liabilities. Unrecorded liabilities may include contingent liabilities such as those from a pending legal settlement, unrecorded payables (either due to accounting oversight or fraudulent activity), operating leases or capital leases, and other similar liabilities.

When the analyst identifies all of the assets and liabilities of the debtor company, the next procedure is to estimate the value of each asset and liability according to the standard of value for the bankruptcy engagement.

The AA method is typically a more time-consuming valuation method because a value needs to be estimated for each asset and liability. A simplifying assumption is sometimes made by the analyst that unadjusted book value of current assets and current liabilities are representative of the relevant standard of value of these assets and liabilities. Whether this simplifying assumption is appropriate will depend on the facts and circumstances of the specific engagement.

For instance, in the case of a debtor company, the collectability of their recorded accounts receivable may be uncertain. Thus, an analysis of the allowance for doubtful accounts offsetting the total book value of accounts receivable may be appropriate and may be adjusted to reflect additional risk of the creditworthiness of the company's customers.

The following sections present a discussion of the application of the AA method in a bankruptcy engagement.

Current Asset Accounts

Current asset accounts typically include (1) cash and (2) cash equivalents, such as marketable securities. Prepaid expenses, accounts receivable, supplies, and inventory are examples of other current asset accounts.

The account values for current assets do not typically change in a material way under alternative standards of value. Therefore, the analyst may

be able to assume that the current record account balance for each current asset category is equal to the applicable standard of value. However, if there happens to be material differences, the analyst should revalue the materially different current asset accounts.

When estimating the value of accounts receivable, the analyst may create a contra-asset account (e.g., a reserve for uncollectible accounts) to conclude the current value of the asset. The analyst may rely on the age and collectability of the subject receivable when estimating the reserve (or reduction) account. The analyst may apply similar procedures for current asset accounts such as supplies and inventory.

Tangible Real and Personal Property

Tangible assets may include real estate and tangible personal property. Real estate includes land, land improvements, buildings, and building (or leasehold) improvements. Tangible personal property may include machinery and equipment, computer and office equipment, furniture and fixtures, and vehicles.

Depending on the age of the tangible assets, there may be a significant difference between the recorded net book value of these assets and the market value of these assets. If the analyst is experienced in the appraisal of real estate, machinery and equipment, or other real property or tangible personal property, the analyst may revalue these assets of the debtor company. Otherwise, the analyst should rely on property appraisals performed by a qualified real property and/or personal property appraiser.

In the case of land and land improvements, value is commonly based on the generally accepted property valuation method—the market approach, sales comparison method. The value of buildings and building improvements is often based on the generally accepted property valuation method—the cost approach, replacement cost new less depreciation (“RCNLD”) method. Buildings and building improvements may be valued by applying the market approach if sufficiently comparable transactions are available.

Machinery, equipment, and other tangible personal property may be valued by applying the cost approach, RCNLD method. The analyst may test the replacement cost new indications by analyzing recent purchases of sufficiently comparable new tangible personal property if such transactions are available.

Intangible Real and Personal Property

Intangible assets can be categorized as (1) intangible real property or (2) intangible personal property.

Intangible real property includes the following asset categories:³

1. Real property leases
2. Easements and rights of way
3. Air rights, water rights, and surface-use rights
4. Mineral, mining, and extraction rights
5. Building permits and development licenses

Intangible real property assets within each of the intangible real property categories can be valued by applying generally accepted property valuation methods of the cost approach, the market approach, or the income approach.

Intangible personal property includes the following asset categories:⁴

1. Customer-related intangible assets (e.g., customer contracts, customer relationships)
2. Contract-related intangible assets (e.g., licenses and permits, supplier contracts)
3. Employee-related intangible assets (e.g., employment agreements, assembled workforce)
4. Data-processing-related intangible assets (e.g. computer software, automated databases)
5. Engineering-related intangible assets (e.g., engineering drawings, product formulations)
6. Intellectual property intangible assets (e.g. patents, copyrights, trademarks)

Intangible personal property assets within each of the intangible personal property categories can be valued by applying generally accepted property valuation methods of the cost approach, the market approach, or the income approach.

For the valuation of intangible real property and intangible personal property, the analyst may spend as much effort in the identification of the assets as they do in the valuation of those assets. Typically, internally created intangible assets are not recorded on the company balance sheet. Therefore, the analyst must first identify all intangible assets that are owned by the company, and then value each of the identified intangible assets.

Analysts often apply different property valuation methods to value the various categories of intangible assets. For example, computer software is typically valued using the cost approach, RCNLD method. In contrast, trademarks may be valued using the market approach, relief-from-royalty method. Finally, customer contracts may be valued using the income approach, multiperiod excess earnings method.

In a typical AA method application, the analyst may use one or more income approach methods to estimate the value of the company's intangible assets. Most income approach methods include some form of contributory asset charge procedure. The contributory asset charge procedure helps to eliminate the double-counting of intangible asset values. Similarly, most income approach methods include some form of residual value calculation to help avoid undercounting intangible asset values.

Intangible Value in the Nature of Goodwill

Goodwill (or sometimes referred to as intangible value in the nature of goodwill) typically exists in a debtor company operating as a going concern. In the AA method, analysts often apply the income approach, capitalized excess earnings method ("CEEM") to estimate the value of goodwill.⁵

The CEEM is often applicable to the AA method. This is because it relies on values already assigned by the analyst to the company current assets, real property and tangible personal property, and intangible real property and intangible personal property.

In the application of the CEEM, the analyst applies a fair rate of return (commonly the debtor company's weighted average cost of capital) to all of the company identifiable assets. This calculation results in the indicated required earnings for the company. The analyst then compares the company's actual earnings (typically measured as earnings before interest and taxes) to the company's required earnings.

The difference between the required earnings and the actual earnings indicate either excess earnings (if actual earnings exceed required earnings) or an income loss (if required earnings exceed actual earnings). The difference between the required earnings and actual earnings is capitalized into perpetuity as an annuity to estimate the value of goodwill. If this calculated annuity is a negative value, we refer to this as economic obsolescence.

Other Assets

The "other assets" category is primarily comprised of two types of assets: (1) noncurrent financial assets

and (2) excess or nonoperating assets. Typically, the excess or nonoperating assets are tangible assets that are not being used as part of the company's ongoing business operations. Analysts will need to use their professional judgment and expertise to determine whether any of the other assets require a revaluation.

In particular, deferred income taxes may need to be given careful consideration depending on the assumptions of a proposed sale structure or sale of certain assets of the company.

Regardless of the applicable standard of value or premise of value for the particular engagement, the "other asset" category is typically valued based on a net realizable basis. The net realizable basis represents the expected selling price of the asset less the expected costs of disposing of the asset.

Current Liability Accounts

The company current liability accounts often include accounts payable, notes payable, accrued expenses, and income taxes payable. This liability account category also includes the current portion (if any) of the company's long-term debt.

Because all of these liability accounts are typically due in one year or less, there is usually very little revaluation that needs to be performed by the analyst. However, the analyst should include the current portion (if any) of noncurrent liabilities with the long-term liability accounts—then revalue the entire long-term liabilities balance.

Long-Term Liability Accounts

Long-term liabilities are typically recorded on the debtor company's balance sheet. Depending on the purpose of the valuation, revaluation of the long-term liability accounts may be performed in a bankruptcy engagement. The liabilities may be revalued to the amount at which the liability could be extinguished.

The analyst may consider numerous factors in the determination of the current value (as of the valuation date) of the long-term liabilities. These factors may include an analysis of the embedded interest rate versus current market interest rates, the long-term liability time to maturity, debtor company payment history, any prepayment penalties, conversion features, or whether the particular long-term liability is callable.

Significant input from debtor company management, any trustee of the bankruptcy estate, or the company creditors may be helpful in collecting and estimating the inputs needed to estimate the value of the long-term liability accounts.

Contingent Liabilities

Contingent liabilities are not recorded on the company balance sheet. Contingent liabilities may be disclosed in the footnotes to company audited financial statements if they are available. Typically, these disclosures inform the analyst of where to look for contingent liabilities. However, the value of contingent liabilities (if any) is often not disclosed in the footnotes to the company audited financial statements. Moreover, the audited financial statement date may not correspond to the valuation date.

In order to value contingent liabilities in the bankruptcy engagement, the analyst may need to perform a significant amount of due diligence to identify the existence of such contingent liabilities. This due diligence may include interviews with debtor company management, legal counsel for the debtor company, or other parties.

Some examples of contingent liabilities include employee disputes, litigation claims, contract disputes, taxation audits, and regulatory agency reviews. In the case of debtor companies in a bankruptcy context, the existence of contingent liabilities may be more common than for nondebtor companies due to the likely distressed nature of the debtor company operations.

The first step in valuing a contingent liability is the identification of the contingent liability. The second step is to estimate the value of the identified contingent liability. The analyst may use methods such as scenario analysis, decision-tree analysis, and others in order to estimate the value of a contingent liability. These methods all involve the estimation of (1) the amount of the liability payment, (2) the timing of the liability payment, and (3) the probability of the liability payment. The present value of the various payout events is an indication of the contingent liability's value.

Net Asset Value Conclusion

The conclusion of the AA method is the mathematical procedure of calculating the net asset value. At this point in the application of the AA method, the analyst should have valued all of the debtor company asset accounts and all of the debtor company liability accounts. The net asset value is calculated as the total asset value less the total liability value. The net asset value is sometimes also called the total equity value.

The net asset value indication is typically concluded on a controlling, marketable ownership interest level of value. If the engagement calls for the valuation of some ownership interest other than a 100 percent equity interest in the debtor com-

pany, the analyst may have to identify any relevant valuation adjustments. Such valuation adjustments can include a discount for lack of control or a discount for lack of marketability.

Adjusted Net Asset Value Method

The ANAV method is a generally accepted business valuation method. The ANAV method typically concludes a controlling, marketable level of ownership interest. If the objective of the assignment is to conclude a different level of value, an adjustment for a discount for lack of control, a discount for lack of marketability, or both may be appropriate.

Other asset-based valuation methods, such as the previously discussed AA method, involve the discrete valuation of each company asset category and liability category. In contrast, the ANAV typically involves an aggregate valuation of the company's total assets and total liabilities.

First, the application of the ANAV method begins with a review of the company's balance sheet based on generally accepted accounting principles ("GAAP") dated closest to the valuation date.

Second, the analyst identifies and separates any nonoperating or excess assets reported on the GAAP balance sheet. Examples of such assets may include undeveloped land or other assets held for investment purposes. Nonoperating assets may also include the tangible assets of company discontinued operations that are being held for disposal. These excess or nonoperating assets are analyzed separately from the ANAV method valuation of the subject company.

Third, the analyst lists all of the reported account balances for the following categories of business operating assets:

1. Working capital assets (including current assets less current liabilities)
2. Tangible assets (including land, buildings, and equipment)
3. Intangible assets (including any recorded identifiable intangible assets)
4. Other assets (such as deferred income taxes and unconsolidated investments)

The sum of these recorded asset balances represents the amount of the company's total net operating assets. Typically, the total company operating assets are analyzed net of all current liability accounts. However, in the application of the ANAV method, the current portion of long-term debt is typically excluded from the total.

Fourth, the analyst begins the process of performing an aggregate revaluation of all the

company's total net assets. One valuation method that is often used to perform this single collective revaluation of the net operating assets is the CEEM, as discussed previously. The CEEM is applied to conclude intangible value in the nature of goodwill.

The CEEM indicated goodwill value represents the additional value (or negative value) compared to the company's recorded cost-based net operating assets. The CEEM goodwill value in the ANAV method will likely be different from the CEEM goodwill value indicated in the AA method. This is because in the AA method, goodwill is identified as an individual intangible asset. That goodwill intangible asset is quantified after (1) all of the company tangible assets have been revalued and (2) all of the company identifiable intangible assets have been revalued.

In the application of the ANAV method, the CEEM analysis value conclusion represents more than the residual goodwill value. That is, the CEEM analysis value conclusion represents an overall revaluation of all of the recorded balance sheet accounts. For this reason, the CEEM analysis value conclusion is often referred to as the intangible value in the nature of goodwill.

Fifth, the analyst adds the net operating assets balance to the goodwill value balance calculated from the CEEM analysis. This summation represents the current value indicated for all of the company's net assets. The analyst may also subtract the debtor company's long-term debt from the estimated net asset value indication. The value remaining after that subtraction indicates the current value of the company equity.

Sixth, the analyst adds the value attributable to any excess or nonoperating assets to the estimated value of the net operating assets in order to estimate the total value of the business enterprise.

A strength of the ANAV method, compared to the AA method, is that the ANAV method is relatively quick and easy to perform. In addition, the process of the ANAV method is often easier to understand and explain to a client or to the court. The AA method requires multiple approaches and methods to estimate the value of individual assets, which can be complicated and confusing to professionals without a background in business valuation.⁶

CONCLUSION

The asset-based approach is a generally accepted business valuation approach. And, the AA method and ANAV method are both generally accepted asset-based approach business valuation methods.

In a bankruptcy context, the asset-based approach may be applied to conclude the value of the debtor company equity based on a going-concern premise of value.

Many inexperienced analysts avoid using (and may not even consider applying) the asset-based approach to value debtor companies in the bankruptcy engagement. This is because these analysts either do not understand how to properly apply the asset-based approach, or mistakenly believe that it cannot be applied to value the debtor company equity in a bankruptcy engagement.

This discussion provided guidance with regard to (1) generally accepted business valuation approaches and methods and (2) the application of the asset-based approach to value a debtor company based on the going-concern premise of value.

Like all asset-based approach business valuation methods, both the AA method and ANAV method typically conclude controlling, marketable ownership interest levels of value. If the bankruptcy engagement calls for a different level of value, then the analyst may need to consider applying valuation adjustments such as a discount for lack of marketability or a discount for lack of control.

Notes:

1. Israel Shaked and Robert F. Reilly, *A Practical Guide to Bankruptcy Valuation* (Alexandria, VA: The American Bankruptcy Institute, 2017), 29.
2. Shannon A. Pratt, *Valuing a Business: The Analysis and Appraisal of Closely Held Companies*, 5th ed. (New York: McGraw-Hill, 2008), 351.
3. Shaked and Reilly, *A Practical Guide to Bankruptcy Valuation*, 250.
4. Ibid.
5. For a discussion of the capitalized excess earnings method, please refer to: Robert F. Reilly and Robert P. Schweihs, *Guide to Intangible Asset Valuation* (New York: American Institute of Certified Public Accountants, 2014).
6. For additional discussion of the strengths and weaknesses of the adjusted net asset value method, please refer to Scott R. Miller and Robert F. Reilly, "The Asset-Based Approach—The Adjusted Net Asset Value Method," *Willamette Management Associates Insights* (Winter 2018).

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