MQE INSIGHT

APPENDIX A:

THE MEAT AND POTATOES – A SUMMARY OF THE 'EASY MARKS'

Easy marks - an overview

Further to Golden Rule #3, this Appendix is intended to summarize several areas that would, in our view, constitute 'easy marks' on the MQE in that they:

- Have frequently appeared on past MQE exams (see Section 6);
- Are core/central to business valuation theory and practice; and
- Should be attainable topics that can be converted into marks for most candidates (i.e., the majority of the topics listed below should be relatively straightforward, even in more unfamiliar case settings).

This list of 'easy marks' is not meant to be exhaustive, nor is it intended to serve as a substitute for practicing as many exams as possible under exam-like conditions. (Recall Golden Rule #1.) Nonetheless, if you are able to **develop a consistent, efficient approach to tackling the following topic areas**, you will lock up a decent number of marks and **free up time to tackle more difficult aspects of a case question.**

Note with respect to illustrations contained in Appendix A

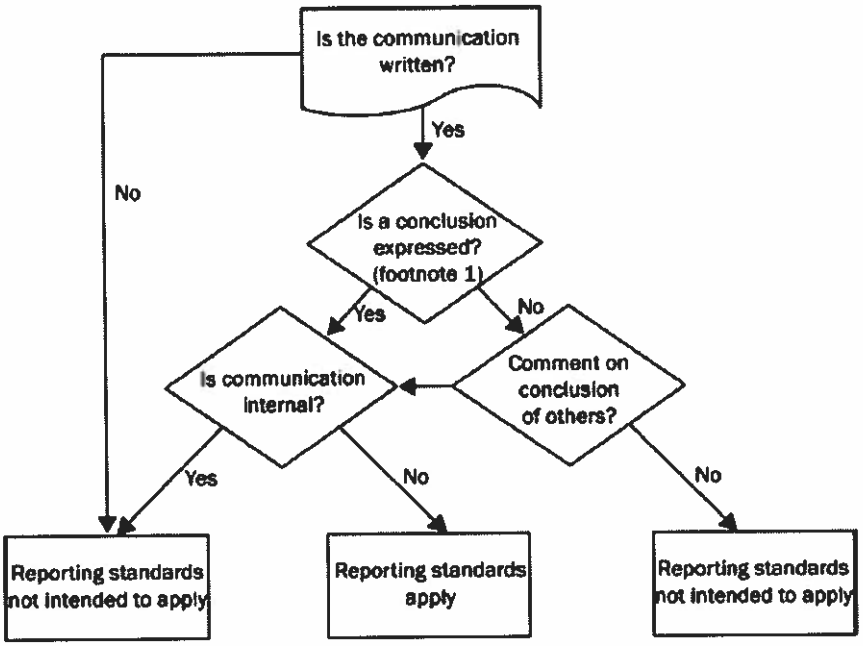
This section provides several **illustrations** to show how a candidate might attempt to structure his or her response when encountering a specific topic. Keep in mind that these illustrations are just that - illustrations; they are not meant to be a "template" but rather a visual aid to assist in helping candidates plan the various components which their responses should include. As you do more exams, you are likely to develop a preference for how to structure responses - whether it is a way to respond under certain approaches (i.e., DCF, capitalized cash flows, etc.) or how to make use of market data provided. As always, never ignore the specifics of the question at hand.

#1: Reporting standards

Knowing whether or not a full report is needed

As discussed elsewhere in the course materials, **the ability to recognize when a formal report is required under CICBV standards is imperative for success on the MQE.** In many cases, the need for a report will be obvious from the question. The question may specifically direct you to a report type in the required (although sometimes, a client may state that they think they need a particular report and it is up to you to question if such a report is doable in the circumstances based on the CICBV Practice and Ethical Standards). Sometimes, the scenario dictates the appropriate deliverable - e.g., based on who the client is and the designated purpose of your analysis and communication. If you have read the question and it is still not evident as to whether or not a formal report is required, go back to first principles and use the following decision tree to determine whether a report would be required under CICBV Practice Bulletin No. 5. For the purposes of the MQE, this decision tree can help in one's approach to writing strategy (i.e., whether writing a report is worth the effort). Also keep in mind that if one of the questions requires a formal comprehensive report, it is unlikely that the Institute will require a comprehensive report again in another question. Once the Institute knows that you understand what goes in a comprehensive report, they have no interest in double-checking if your first response was an accident.

There are just too many things that the Institute wants to test to ensure it only allows qualified and professional valuators through the MQE.



1. An essential component to which the Practice Standards are intended to apply, is the application of professional judgement.

Source: CICBV Practice Bulletin No. 5

Demonstrating knowledge of the Standards

Reporting standards are almost surely going to be tested on the MQE (if a formal report is required, there is likely to be a section of the marking key specifically including marks for reporting standards). However, the marks available for demonstrating knowledge of reporting standards is likely quite limited due to internal maximums. Therefore, the key to scoring well in this area is to **know the reporting standards inside and out** and **know how much depth is needed in each section of the report to score full marks (bearing in mind the concept of internal maximums).**

Some of the standard components of a valuation report are discussed briefly below (but remember, this is not an exhaustive list, and needs to be tailored according to the case facts).

Introduction
Scope of Review
Restrictions

Company Background
Industry Overview (ONLY required for comprehensive reports, though often considered in discount rate risk analysis)
Economic Overview (ONLY required for comprehensive reports)

#2: Key definitions

These terms are likely to appear on the MQE – it is important to be familiar with not only the definitions but how to apply them in a case setting (and incorporate them into a report, where necessary). For a detailed review of these definitions, please refer to Appendix B:

- Fair market value (FMV)
- Fair value (FV)
  - Knowing the difference between FMV and FV
  - Identifying differences between price and FMV (or FV)
- Special purchasers
- Redundant assets

#3: Selecting the appropriate valuation approach

Refresher – Bases vs. Approaches vs. Methodologies

There are two **bases** on which to value a business entity – **going concern** and **liquidation**.

Using a going concern basis, there are three valuation **approaches:**

- Income approach
- Market approach
- Asset-based approach

Under each of the three approaches, there are various **methodologies** which can be selected.

When explaining your selected valuation approach, your response should include all three components (basis, approach, and methodology).

Knowing which basis/approach/methodology to use

Income approach – which is generally the default primary approach. Methodologies include:

- **Capitalized earnings method**
  - Relatively stable business operating profile
  - Historical data available
  - Forecasts/projections are either unavailable or not reliable or relevant
  - Depreciation assumed equal to sustaining annual capex

- **Capitalized cash flow (CCF) method**
  - Generally same concept as capitalized earnings, except where annual sustaining capex is expected to differ from annual depreciation

- **Capitalized EBITDA (or other cash flow proxy) method**
  - Can be used where there is information to arrive at an estimated maintainable EBITDA figure, but where no capex info is provided (or where sustaining capex is assumed to approximate depreciation or where the subject entity is not capital-intensive)
  - May be used where there is no data to independently build up a discount rate for a CCF or DCF method, and where an EV/EBITDA multiple can be derived from market data

- **Discounted cash flow (DCF) method**
  - Generally the go-to approach where financial forecasts/projections are provided, or the inputs to prepare forecasts/projections are provided
  - Appropriate where expected cash flows are expected to be uneven going forward
  - Note that the "C" can be various cash flow proxies (similar to the capitalized cash flow methods) – earnings, cash flow, EBITDA, etc.

- **Relief-from-royalty method**
  - Variant of the DCF, most likely to be tested on the MQE in the context of intellectual property or intangible assets such as trademarks
  - Likely required where royalty data is provided in the question

Market approach – generally default to using the market approach as a secondary methodology or reasonability check on the primary approach/methodology selected.

- However, may use EV/EBITDA multiples derived from comps/transactions where there is no better information available to independently calculate a discount rate for the use for a CCF analysis (see more discussion on discount rates below). This is particularly the case when another question on the exam or another required of the same question has already required a detailed cap rate/WACC determination.

Asset-based approach – generally the default for investment/real estate holding companies.

Putting it together – efficiently documenting the selection of an appropriate valuation basis/approach/methodology and explaining your rationale

Illustration: sample writing style for explaining the selection of a primary valuation methodology for Company X

- Going concern basis (Company X profitable in the past and expected to remain profitable)
- Income approach, CCF method as primary methodology:
  - Mature industry/stable business
  - Historical data available; no forecasts available
  - Depreciation exp. ≠ sustaining capex
- Market approach (comps, transaction multiples) used as secondary methodology to test reasonability of conclusion

#4: Analyzing market data (public company and transaction data) and integrating it into your analysis

Recognizing the different ways in which market data can be integrated into your analysis

There are many ways that market/comp/transaction data can be used in a question. As you read an individual question, pay attention to the different ways in which the market/comp/transaction data can be best (and most efficiently) put to use. Some common uses are set out below:

- Valuation multiples (EV/EBITDA, EV/EBIT, EV/revenue) – two potential uses:
  - Comparing valuation multiples from market data to implied multiples from an income-based approach
  - Deriving EV/EBITDA, EV/EBIT, or EV/revenue multiples to apply to the subject company as a primary approach (less frequent)
- Calculating D/E ratios (or D/C or D/EV ratios) for use in determining the optimal capital structure for a subject company

  - In cases where the question is silent on any other information pertaining to the subject company's optimal capital structure, this is often a good use

- Calculating a beta for a subject company to be used under the CAPM for the purpose of determining a cost of equity

- Calculating normalized working capital levels (potentially to identify any redundant working capital in a subject company)

- Calculating average capital expenditures or other operating metrics relative to sales (less common)

- Analyzing industry profit margins (e.g., EBITDA margins, gross margins, etc.) in order to:
  - Assess a subject company's relative profitability compared to the industry
  - Aid in normalizing earnings/EBITDA (less common)

- Rule-of-thumb/industry-specific valuation metrics
  - Generally, these are used as a sanity check/secondary approach only

Analyzing comparable companies and transactions and concluding whether or not they are comparable

Remember, before you do any sort of quantitative analysis, you must **conclude on which comps (and/or transactions) are comparable and which are not**. The logic for this is simple – it is a lot easier (and faster) to calculate metrics from comps/transactions when the number of comps/transactions has been refined down to a smaller sample size.

Using valuation multiples from guideline public companies and/or transactions as a secondary valuation methodology/check on an income approach valuation

- Calculate implied multiples from primary/income approach method

- Calculate average/median (and consider high and low) of the refined comp set/transaction set (which has already been concluded to be comparable, as discussed above)

- Discuss any differences that need to be considered in reconciling market-based metrics to metrics implied from an income approach
  - Numerous potential factors and private company vs. public company differences

- Conclude whether or not the market data is supportive of the primary valuation conclusion. *[Note: be sure to compare multiples at an appropriate level (i.e., enterprise value from operations, before redundant assets, as comparable multiples will not include redundant assets)].*

#5: Discount rates, capitalization rates, and multiples

Unlevered returns (WACC) vs. levered returns (cost of equity)

Generally, in recent years, the MQE has primarily encouraged the use of unlevered cash flow valuation approaches. However, it is still important to be able to (i) recognize/understand whether cash flows presented are unlevered or levered and (ii) demonstrate the ability to distinguish WACC rates (i.e. blended return on debt and equity) vs. levered returns on equity.

Cost of debt

The question may or may not provide explicit details with respect to an appropriate cost of debt for your subject company. If it does not, do not spend too much time trying to solve for a perfect answer – consider the data points that you do have available and make a reasonable assumption with support. These may include:

- Cost of debt of other entities;
- Actual cost of debt implied from the company's historical F/S;
- Information on credit ratings; and
- The risk-free rate, prime rate provided in question (these will serve as a lower bound; consider what premium would be required given the characteristics of the subject company).

Determining cost of equity – buildup method vs. CAPM

- Generally, use **CAPM** where market data is available to calculate the beta for a subject company.
- Generally, use the **buildup method** where no beta information is available. If the buildup method is used, consider the need for an industry risk premium.

Determining WACC – selecting an optimal capital structure

There are various ways to infer a notional optimal capital structure on the exam:

- Debt/total capital (debt/EV) or debt/equity ratios of comparable companies;
- Assessment of subject company's tangible asset backing/ability to leverage assets;
- Analysis of the company's current capital structure.

Again, do not spend too much time trying to derive a 'perfect' assumption for the optimal capital structure; use the data points that are at your disposal to justify an assumption, and move on. (Remember, markers want to see your thought process as much as they want to see your final answer.)

Discount rates vs. capitalization rates

- **Discount rates** – used to discount cash flows over a finite/discrete cash flow period (i.e., used in the discrete forecast period in a DCF).

- **Capitalization rates** – used to discount cash flows over an indefinite period (i.e., when using a capitalized earnings/CCF method or for use in calculating a terminal value under a DCF method).
    - Key difference: capitalization rates factor in long-term growth, whereas discount rates do not
    - Capitalization rate % = discount rate % – long-term growth rate %

Capitalization rates vs. capitalization multiples

- In general, capitalization multiples = 1/(capitalization rate %)

Independently calculating a capitalization rate/multiple vs. using market multiples

Sometimes there isn't enough data provided to independently calculate a discount rate/capitalization rate/capitalization multiple for a subject company. In this case, look to see if market data is available to derive an EV/EBITDA, EV/revenue or other multiple in order to utilize a market approach. However, as noted above, the income approach is generally the go-to approach on the MQE ... if there is data specifically provided in the question that would be used to calculate a discount rate/cap rate (i.e. government bond yields/risk-free rates, equity risk premia, industry risk premia/discounts, betas), it is generally safer to show your own independent calculation of a discount rate (as there will almost definitely be a section of the marking key available for this, and this is usually an area of significant available marks).

Caveat: you are unlikely to get marks for doing more than one full discount rate/capitalization rate calculation within a single question. Calculating a discount rate is a time-consuming exercise; if you are required to value more than one entity, it is often smarter to do a thorough discount/cap rate analysis for the first entity and then qualitatively adjust or ratchet this discount rate up or down for subsequent entities depending upon the relative risk profiles of the businesses.

Putting it all together: illustration of a potential WACC calculation for the MQE (using CAPM for cost of equity)

	Notes	Low	High	
Cost of equity				
Risk-free rate	N1	3.00%	3.00%	[A]
Equity risk premium	N2	5.00%	5.00%	
Selected beta for subject co	N3	1.00x	1.20x	
		5.00%	6.00%	[B]
Add: size premium	N4	2.00%	2.00%	[C]
Add: company-specific risk premium	N5	2.00%	4.00%	[D]
Cost of equity {[A] + [B] + [C] + [D]}		12.00%	15.00%	
Cost of debt				
Cost of debt (pre-tax)	N6	5.00%	6.00%	
After-tax cost of debt	N7	3.75%	4.50%	
Capital structure	N8			
Debt/total capital		40%	30%	
Equity/total capital		60%	70%	
Calculated WACC		**8.7%**	**11.9%**	

Conclusion: calculated WACC in the range of 9% to 12% (rounded).

Notes:

1 [Risk-free rate generally provided in question; if not, make a reasonable assumption using your knowledge of current government bond yields.]

2 [Equity risk premium is generally provided in the question if an independent discount rate calculation is required. If it is not, a general assumption of 5% is reasonable.]

3 [Beta derived from public companies that have been deemed to be "comparable".]
[Note: if using the build-up approach, consider the need for an industry-risk premium (i.e., if the industry risk is not captured in through the beta as it would be under CAPM.]

4 [Consider size premium if company is significantly smaller than the "comparable" companies.]

5 [List company-specific risk factors supporting your selection of a risk premium/alpha. Examples:

+ve factors (↓ risk)	- positive factor a
	- positive factor b
+ve factors (↑ risk)	- negative factor a
	- negative factor b

6 [State support for cost of debt assumption.]

7 [Tax rate assumption - should be consistent with the rest of the analysis in the question.]

8 [State support for optimal capital structure assumption.]

Illustration: converting a WACC discount rate to capitalization rate/multiple

	Note:	Low	High
Calculated WACC	N1	9.00%	12.00%
Less: long-term growth rate	N2	-2.00%	-2.00%
Capitalization rate		7.00%	10.00%

Conclusion: cap. rate in the range of 7% to 10% (rounded).

Capitalization multiple (1 / capitalization rate)	14.3x	10.0x
Capitalization multiple, rounded	14.0x	10.0x

Conclusion: selected capitalization multiple in the range of 10.0x to 14.0x (rounded).

Notes:

1 [Reference to WACC calculation from above.]

2 [Support for long-term growth rate should link back to case facts.]

#6: Valuation mechanics – CCF or capitalized earnings

If the CCF method is selected as the primary methodology, there is generally a substantial section of the marking key allotted to performing **reasonable** calculations which demonstrate an understanding of the valuation mechanics underlying this methodology.

Normalizing EBITDA or earnings

- Focus on the most material adjustments; beware of internal maximums and don't spend too much time on minor/less significant adjustments
    - Rule of thumb: if there are more than 3 or 4 possible adjustments, focus on the most important 3 or 4

- Conclude on a range of maintainable EBITDA, discretionary cash flow or earnings

Example: Calculating Range of Maintainable EBITDA

	Notes	20XX (Year 1)	20XX (Year 2)	20XX (Year 3)	20XX (Year 4)	20XX (Year 5)
EBITDA as reported		1,100	1,200	1,320	1,450	1,550
Normalization adjustments:						
Adj. for market salaries	N1	50	50	50	50	50
Adj. for market rent	N2	(40)	(40)	(40)	(40)	(40)
Adj. for for non-recurring items	N3	-	-	50	20	100
Normalized EBITDA		1,110	1,210	1,380	1,480	1,660
Weighting		*1*	*2*	*3*	*4*	*5*

Average - 5-year	1,368
Average - 3-year	1,507
Weighted average	1,459

Notes:

1 [Briefly describe adjustment; link to case facts]
2 [Briefly describe adjustment; link to case facts]
3 [Briefly describe adjustment; link to case facts]

Conclusion - maintainable EBITDA: selected a range of $1,368 to $1,507 using the average and weighted average for low and high, respectively.

[Note: there can be several legitimate rationales for selecting a range of maintainable EBITDA so long as they are well explained to the marker. In the context of the MQE, weighted averages can be time-consuming to calculate (especially if writing by hand); the above is shown as an illustration only.]

Apply a reasonable tax rate

- No need to show detailed calculations here so long as the marker can see that you are properly tax-effecting earnings/cash flows
  - Note: this is especially important if writing by hand

Sustaining capex (for CCF)

- Consider gross capex vs. net capex (i.e. net of tax shield) – depending on whether D&A has been considered in income tax calculation *[Note: if a question provides a specific level of sustaining capital expenditure, this is likely a trigger to use the CCF methodology]*

Apply appropriate capitalization multiple

- Either calculated independently (if using an income approach) or derived from market data (if using a market approach) – see previous discussion on discount rates

Putting it together – illustration of a potential CCF analysis for the MQE

	Notes	Low	High		
Maintainable EBITDA		1,507	1,368		
Less: income taxes @ 26.5%	N1	(399)	(363)		
Less: sustaining capex	N2	(100)	(80)		
Add: tax shield on sust. capex	N3	20	16		
Maintainable after-tax discretionary CF		1,027	941		
Capitalization multiple	N7	10.0x	14.0x		
Capitalized CFs		10,274	13,181		
Add: PV of existing tax shield	N4	500	600		
Operating Enterprise Value		10,774	13,781	→	See Note 8
Add: redundant assets	N5	1,000	1,200		
Enterprise Value		11,774	14,981		
Less: debt (@ market value)	N6	(4,000)	(4,000)		
Equity value (en bloc)		7,774	10,981		

Notes:

1 [Brief support for tax rate]
2 [Explain assumption for capex]
3 [Brief tax shield calc]
4 [Brief tax shield calc, or state assumption]
5 [State any assumptions and calculations related to redundant assets]
[Note: there may be multiple redundant assets.]
6 [Explain what has been treated as debt]
[Note: this may not be necessary if the debt amount is obvious and unambiguous.]
7 [Show page reference or schedule reference to where cap. multiple was determined.]
8 [This is generally the figure from which to calculate implied EV/revenue or EV/EBITDA multiples against which to compare comp and transaction multiples (i.e., before redundant assets)].

Conclusion: en bloc equity value in the range of $7,800 to $11,000 (rounded).

#7: Valuation mechanics – DCF

Assessing the reasonability of projections in a DCF

- Sometimes, adjustments to management's cash flow forecasts are directed in the question, but in other cases, it will be up to the exam writer to identify/assess any potential issues undermining the reliability or relevance of management's projections

- In some instances, the Institute will expect the marker to prepare cash flow forecasts/projections by giving underlying assumptions in the question

Terminal value

- Generally calculated using a Gordon Growth multiple [(1 / (discount rate – long-term growth rate)]

- Economic indicators may provide support for long-term growth rate

- Can also use exit multiple (if data provided in question)

Putting it all together – illustration of a potential DCF analysis for the MQE

	Notes	Year 1	Year 2	Year 3	Year 4	Year 5	Terminal
EBITDA		1,400	1,500	1,600	1,725	1,800	
Any required adjustments:							
Adj. #1	N1	-	-	50	-	-	
Adj. #2	N2	100	100	100	100	100	
Adj. #3	N3	(300)	(300)	(325)	(350)	(375)	
Adjusted EBITDA		1,200	1,300	1,425	1,475	1,525	-
Less: taxes @ X%	N4	(318)	(345)	(378)	(391)	(404)	
Less: sustaining capex, net of tax shield	N5	(100)	(100)	(100)	(100)	(100)	
Less: incremental working capital	N6	(15)	(15)	(15)	(19)	(11)	
Net cash flow		767	841	932	965	1,010	
Terminal value	N7						11,218
PV factor - low	N8	0.89	0.80	0.71	0.64	0.57	0.57
PV factor - high	N8	0.92	0.84	0.77	0.71	0.65	0.65

		Low	High
Sum of PV of cash flows		9,570	10,762
Add: PV of tax shield on existing UCC	N9	500	600
Operating enterprise value		10,070	11,362
Add: redundant assets	N10	1,000	1,200
Enterprise Value		11,070	12,562
Less: debt	N11	(4,000)	(4,000)
Equity value (en bloc)		7,070	8,562

Conclusion: en bloc equity value in the range of $7,100 to $8,600 (rounded).

*** See notes on following page.**

Notes:

1 [Briefly explain any adjustments that may be required to forecast provided]

2 [Briefly explain any adjustments that may be required to forecast provided]

3 [Briefly explain any adjustments that may be required to forecast provided]

4 [Brief support for tax rate]
[Note: if doing by hand, you do not necessarily need to show every calculation in the DCF. If using the computer, it may be simpler simply take (1-tax rate%) and apply to EBITDA.]

5 [Explain assumption for capex]
[Note: in order to save time, if you have already shown the full tax shield calculation elsewhere, you can assume a certain percentage of the gross capex relating to the tax shield (i.e., 15% or 20%). This might sacrifice 0.5 to 1.0 mark, but could be worth the time saved.]

6 [Remember to consider incremental working capital requirements in a DCF, and provide brief support for working capital requirements. Often this is done as a % of incremental revenue or based on information provided in the question.]

7 [Show the marker that you know how to calculate a terminal value. If using the Gordon growth formula, clearly state any assumptions with respect to terminal growth. If using a terminal multiple, link this back to your WACC/discount rate analysis or any other data points provided in the question.]

8 [Indicate low and high range of discount rate selected.]
[Note: an alternative here is to use one single discount rate (midpoint of low/high range) and apply a +/- range around the midpoint value calculated in the DCF, e.g. +/- 10%.]

9 [Brief tax shield calc, or state assumption]

10 [State any assumptions and calculations related to redundant assets]
[Note: there may be multiple redundant assets.]

11 [Explain what has been treated as debt]
[Note: this may not be necessary if the debt amount is obvious and unambiguous.]

#8: Conclusion on enterprise value

Once you have arrived at an enterprise value through your primary valuation methodology, clearly indicate to the marker the range of enterprise value amounts arrived at - this should likely be a ½ mark that you won't want to miss out on. (These are typically expressed before consideration of redundant assets, as discussed below.)

Depending on the case facts and capital structure of the subject company, enterprise value may include debt and/or preferred shares.

#9: Identification/appropriate treatment of redundant assets

Redundant assets are assets that could theoretically be stripped from a business without impacting its operations. The value of redundant assets is generally added to operating enterprise value.

Examples

- Real estate (land/buildings)
- Marketable securities
- Loans/receivable balances from related parties
- Redundant cash
- Redundant working capital
- Other capital assets not used/required in the business operations
- Equity-accounted investment (where equity income is not included in maintainable earnings/cash flows)

Consideration of latent taxes and notional disposition costs

- Redundant assets that have a FMV higher than their adjusted cost base (ACB) may be subject to capital gains taxes (and, for depreciable assets, recapture of capital cost allowance) upon a hypothetical disposition

- Need to consider the latent taxes and disposition costs that would result from converting the redundant asset into cash (i.e. notional disposition)
    - Important not to spend too much time on the detailed calculations – can be a time-waster
    - Rule of thumb: where no information provided, discount notional taxes and disposition costs by 50% with respect to uncertainty in timing of a disposition, the potential for tax planning, etc.

#10: Reconciliation of enterprise value to equity value

As simple as this may seem, reconciling between enterprise value and equity value (in particular, common equity value) is a basic concept with which some candidates still struggle. Making an error as simple as this is not an area of the marking key in which you want to miss out (it might also impact your 'professionalism' marks). In reconciling to en bloc equity value, consider the following:

- Quickly scan the balance sheet – have you deducted all sources of structural debt? Are there multiple classes of shares in the company?

Once you have arrived at en bloc equity value (or en bloc common equity value), again, remember to conclude.

#11: Concluding on the value of the specific interest being valued

Allocating value among different classes of shares

If you are being asked to value a single class of shares in a company where there are multiple share classes, consider the following:

- Consider preferred shares – are these relevant in the question? If so, what information have you been provided that would be important to consider in allocating value to preferred shares? (i.e., regular or super voting rights, redemption/retraction features, redemption value, yields on comparable securities, dividend features, participating rights, conversion rights). This is an area that we consider to be 'differentiating' – in that it requires higher level analysis and technical knowledge and generally differentiates writers between those with strong technical knowledge and those that do not.

- Consider voting rights – how would these impact share values?

- If you encounter a situation where there are special securities and it is not entirely apparent how to value them, go back to first principles: think about (1) future cash flows and (2) risk of achieving those cash flows. (This comment is relevant to not just special securities, but also any intangible or tangible asset, liability, etc.)

Reconciliation from en bloc equity value to the value of a partial shareholding, if necessary

If the subject business interest being valued is a partial shareholding in a company, you will need to ask yourself the following questions:

- Does a minority discount apply? (Consider both de jure and de facto control, shareholder register at the Valuation Date – e.g., swing vote and distribution of ownership, terms of shareholder or other agreements, CBCA shareholder provisions, and relationships/voting behaviour with other shareholders.)

- If you are analyzing a shareholding in a thinly traded public company, you will likely need to consider a blockage discount. Is there any trading information to indicate whether the stock has sufficient liquidity for the size of the position, length of time to dispose of the position, volatility of the stock, bid-ask activity, level of unfilled bids, to suggest whether this might be the case? Consider metrics such as put option theory, restricted stock studies, etc.

Restrictions on sale/transfer or lock-up

Sometimes you will encounter situations in which a client or company has received an offer to be acquired by a public company with some portion of the purchase price payable in shares of the acquirer. Often, in these cases, there is reason to question whether the trading price of the acquirer's shares truly reflects FMV. In particular, if there is a lock-up/restriction period or other mechanism which restricts the ability to sell the acquirer's shares, a discount for lack of marketability may be required.

- In some cases, a question may give you data on a put option for the acquirer's stock – this can be used to arrive at a % discount (put option theory).

- In other cases, where no information is given, make a reasonable estimate with support (i.e., restricted stock studies – generally a discount of 25%-35%).

#12: FMV of non-cash consideration

Candidates are often asked to analyze offers which can include many "non-cash" components (i.e., shares of other companies, vendor take-back notes, contingent consideration such as earn-outs, management agreements, etc.)

By definition, FMV is expressed in terms of cash equivalents at the Valuation Date. Accordingly, candidates may be required to "convert" these non-cash components into a cash equivalent in order to analyze them on a FMV basis.

Shares of other companies

Often, MQE present questions in which a client/company/individual receives an offer to acquire a business interest from another company which includes shares of the other company form part of the purchase consideration. The key here is for candidates to determine and indicate to the marker their thought process on whether the share consideration reflects FMV (and, if not, what adjustments/calculations are required to impute the amount on an equivalent FMV basis):

- **Large, widely held and actively traded public companies:** there may be cases where the trading price of these companies should approximate FMV. However, if this is your assumption, clearly state that this is the case (and explain to the marker your logic as to why price = FMV).

- **Thinly-traded public companies:** if trading data is presented for the acquirer, analyze it to see how liquid the stock is. If it trades relatively thinly, then discounts may need to be considered for lack of marketability, illiquidity, and, potentially, a blockage discount.

- **Private companies:** if private Company A is being acquired by another private Company B, then candidates will need to calculate the FMV of Company B in order to assess whether the offer price is reasonable. In this case, look for any metrics/potential indicators of value that may be provided in the question (i.e., recent transactions, ESOP's, etc.).

Vendor take-back/notes payable

If part of the consideration is a note payable, candidates must assess the FMV of that note payable, as the true "market" interest/discount rate appropriate for the risk of the note may be less than the actual interest rate. If this is the case, the FMV of the note may differ from its face value.

- To determine FMV, calculate the present value of the note payments with an appropriate (after-tax) discount rate. Look for indicators in the question which may point toward an appropriate discount rate to use.

Contingent consideration (i.e., earn-outs)

If part of the consideration is contingent in nature (such as an earn-out based on future financial performance), the contingent consideration will need to be 'converted' to FMV. Consider the following when analyzing contingent consideration:

- Based on the case facts provided (qualitative or quantitative), what is the likelihood that the seller will achieve the earn-out targets?

- What is the degree of risk relative to any forecasts? (Compare this to the overall selected discount rate for the subject company as a whole.)

- Based on the above considerations with respect to risk of achievability, what is an appropriate discount rate for the earn-out payments?

- To determine FMV, calculate the present value of the earn-out payments with an appropriate (after-tax) discount rate.

Comparing offer price to FMV of subject company

If the question revolves around a client looking for advice/independent assessment with respect to the FMV of a subject company relative to an offer price, always remember to **compare** the FMV of the business to the FMV of the offer price (adjusted for any non-cash components). Then **conclude** on whether the offer price is above/below the FMV of the subject company and discuss what that means for your client/user.

#13: Tax calculations used in valuations

Tax shield calculations

- Don't need to regurgitate formula; showing the numbers is okay.
- Tax shield formula is shown in Appendix B.

Maintaining consistency between taxable income and tax shield on capex

- If income taxes are being calculated on EBITDA, then any capex deducted should be calculated net of tax shield. For example:

EBITDA	1,000
Less: Income taxes @ 26.5%	(265)
	735
Less: gross capex (Note X)	(100)
Add: tax shield on capex (Note X)	20
After-tax discretionary cash flow	655

- If income taxes are being calculated on EBIT, then any capex deducted should be calculated on a gross basis (as the tax benefit has already been picked up in the income tax calculation. For example:

EBITDA	1,000
Less: D&A	(75)
EBIT	925
Less: income taxes @ 26.5%	(245)
	680
Add back: D&A	75
Less: gross capex	(100)
After-tax discretionary cash flow	655

Taxes arising from the sale of assets vs. the sale of shares

This is one of the most frequently tested areas of the MQE Syllabus when it comes to tax. Candidates are most likely to encounter this topic in cases where a client has an option to either sell assets or shares in a business. In these situations, the goal is to calculate the **after-tax proceeds to the individual** under both scenarios (i.e., sale of assets or sale of shares). In both cases, candidates must consider both applicable taxes at both the corporate and personal level.

[Note: as a valuator, there will likely be other costs of disposition that need to be considered (e.g., commissions, professional fees, severance costs, stub period income/losses, lease termination costs, debt extinguishment

charges, etc.) Such considerations should be taken into account in your response; the following relates to the tax component only.]

Sale of Assets

The general steps to a sale of assets calculation are:

- Determine net proceeds available for distribution, after taking into account corporate taxes resulting from the sale of each asset.
    - This requires a calculation of **business income** and **investment income** from the sale of each asset and the taxes thereon.
    - **Capital dividend account (CDA)** and **refundable dividend taxes on hand (RDTOH)** balances must be considered.

- Determining the personal tax consequences (at the individual level) once the company has distributed the net proceeds calculated above. This includes taxes arising from any **deemed dividends** and **taxable capital gains**.

Corporate Tax Calculations - Sale of Assets

Business income - includes recapture/(terminal loss) from depreciable assets + 50% of the proceeds from the 'sale' of goodwill

Investment income - includes taxable capital gains (i.e., 50% of capital gains)

CDA - 50% non-taxable portion of total capital gains goes into the CDA. 50% of the 'deemed proceeds' of goodwill also go into the CDA.

RDTOH = 26.67% of investment income

Tax consequences are shown below for each of non-depreciable assets, depreciable assets, and goodwill.

Non-depreciable assets (i.e., land)

- Capital gain = proceeds less adjusted cost base (ACB)

- Taxable capital gain = 50% of capital gain (treated as investment income); other 50% goes into CDA

Depreciable assets (i.e., buildings, equipment)

- Capital gain = proceeds less adjusted cost base (ACB)

- Taxable capital gain = 50% of capital gain (treated as investment income); other 50% goes into CDA

- Recapture of CCA = lesser of cost and proceeds - UCC (treated as business income)

- If proceeds < UCC, then the terminal loss = proceeds less UCC (treated as business income/loss)

Goodwill

- Business income = 50% of deemed proceeds; other 50% goes into CDA

Determining Net Proceeds After Corporate Taxes
Gross proceeds from sale of assets
Less tax on business income
Less tax on investment income
Add RDTOH balance (assume that a liquidating dividend will be paid)
= Net Proceeds Available for Distribution to Shareholders

Personal Tax Calculations – Sale of Assets

Deemed dividend = proceeds distributed from the corporation – paid-up capital (PUC)

- Any amount in the CDA can be paid out as a tax-free dividend in order to reduce the taxable portion of the deemed dividend

Deemed Dividend Calculation
Proceeds Distributed to Shareholder
Less PUC
= Deemed Dividend (before CDA usage)
Less CDA
= Deemed Dividend (Taxable)

Sale of Shares

The general steps to a sale of sales calculation are:

- Determine whether the shares will qualify as **qualified small business corporation (QSBC)** shares
  - Consider rules for QSBC eligibility

- Calculate taxable capital gain from sale of shares
  - Taxable capital gain = 50% of (proceeds – ACB)
  - If QSBC shares, shareholder is eligible for a **lifetime capital gains exemption** of $835,716 for the 2017 year (based on 2014 limit of $800,000 indexed to inflation starting in 2015)
    - Then, capital gain = 50% of (proceeds – $835,716 – ACB)

- Calculate tax payable from sale of shares

QSBC Eligibility Considerations

- Shares must be owned by a Canadian resident taxpayer at date of disposition
- Shares must have been held by individual for at least 24 months (or less, if the company is less than 24 months old)
- Over the course of the last 24 months, at least 50% of the FMV of the assets must have been used in Canada in an active business
- At the time of disposition, at least 90% of the FMV of the assets must be in use within Canada in an active business